

Government Expenditure on Digital Economy and GDP Growth in Nigeria

Ojie Martin Michael¹, Etokakpan, Enobong Udom¹ and Haruna Sezuo Adamu²

¹Department of Banking and Finance, University of Calabar, Calabar, Nigeria

²Department of Accounting, University of Calabar, Calabar, Nigeria

ABSTRACT

The study examines government expenditure on digital economy and GDP growth in Nigeria. The specific objectives were to: examine the effect of government expenditure on ICT infrastructure, government expenditure on digital education, government expenditure on e-government service, government expenditure on Research and Innovation. Data were sourced using the central bank statistical Bulletin. Multiple regression technique was used in the study. Based on the analysis, it was found that government expenditure on ICT infrastructure and government expenditure on digital education have a negative effect on GDP growth, while government expenditure on e-government services, government expenditure on Research and Innovation have positive effect on GDP growth. The study recommended that there should be availability and quality of ICT infrastructure to determine the pace of digital transformation and the capacity of businesses, households, and institutions to participate effectively in the digital economy. Government expenditure on digital education should be expanded through initiatives aimed at integrating ICT into educational systems and improving youth technological empowerment. Finally, e-government should be encouraged in improving governance quality and facilitating economic development.

Keywords: Government expenditure, digital economy, GDP growth, ICT infrastructure, digital education, e-government service, Research and Innovation.

Introduction

In developing economies such as Nigeria, the digital economy has become an important instrument for economic diversification and sustainable development. Nigeria's increasing population, expanding internet penetration, rapid growth of mobile technology, and the emergence of fintech companies have accelerated the transition toward a more digitally driven economy. The Federal Government of Nigeria has recognized the strategic importance of digital transformation through the introduction of various policies and programs aimed at improving ICT infrastructure, promoting digital literacy, enhancing e-government systems, strengthening cybersecurity, and supporting innovation and entrepreneurship.

One of the major policy frameworks introduced in this regard is the National Digital Economy Policy and Strategy (NDEPS), which was designed to position digital technology as a critical driver of national development and economic growth (Federal Ministry of Communications and Digital Economy, 2020). Through these initiatives, the government seeks to create a digitally inclusive economy capable of generating employment opportunities, improving public service

delivery, and stimulating GDP growth (World Bank, 2021). One of the major components of government expenditure on the digital economy is investment in ICT infrastructure. ICT infrastructure includes broadband networks, telecommunications facilities, internet connectivity systems, fiber-optic installations, mobile communication towers, and data management systems. Adequate ICT infrastructure facilitates digital communication, electronic commerce, online education, and remote business operations, thereby improving productivity across various sectors of the economy.

Studies have shown that countries with advanced digital infrastructure experience higher economic growth due to increased efficiency, innovation, and technological diffusion (Pradhan et al., 2021). Another important aspect of government expenditure on the digital economy is investment in digital education and skills development. Digital education involves the acquisition of technological competencies and ICT-related skills necessary for participation in the digital economy. Government investments in ICT training, e-learning systems, coding programs, digital literacy initiatives, and innovation hubs are expected to improve human capital development and increase labor productivity.

According to Ibrahim and Hassan (2023), e-government initiatives in Nigeria have improved transparency, increased tax compliance, and enhanced operational efficiency within public institutions. Aghion et al. (2019) emphasized that innovation and technological advancement are major determinants of long-term economic growth because they stimulate industrial transformation and knowledge creation. However, inadequate funding, policy inconsistency, weak institutional support, and limited technological expertise continue to constrain digital innovation and cybersecurity development in Nigeria. This study therefore seeks to examine how government expenditure on ICT infrastructure, digital education, e-government services, research and innovation, influences GDP growth within the Nigerian economy.

Theoretical framework

This study is anchored on two major theories considered highly relevant to the subject matter, namely the Endogenous Growth Theory and the Keynesian Theory of Public Expenditure.

Endogenous Growth Theory

The theory was primarily developed by Paul Romer (1986, 1990), Robert Lucas (1988), and other modern growth economists as a response to the weaknesses and limitations of the neoclassical growth model developed by Solow (1956). The neoclassical growth model explained economic growth mainly through the accumulation of physical capital, labor expansion, and exogenously determined technological progress. However, the model failed to adequately explain the actual sources of long-term economic growth, particularly the role of innovation, knowledge creation, technological advancement, and human capital development. Consequently, proponents of the Endogenous Growth Theory argued that technological progress and economic growth are

generated internally within an economy through deliberate investment decisions, policy actions, research activities, education, and innovation systems rather than through external or unexplained forces. A major proposition of the Endogenous Growth Theory is that government policies and public expenditure play a crucial role in stimulating economic growth.

Keynesian Theory of Public Expenditure

The theory was developed by the British economist John Maynard Keynes in 1936 following the publication of his seminal work, *The General Theory of Employment, Interest and Money*. The theory emerged during the period of the Great Depression, a time characterized by severe unemployment, declining production, low investment, falling incomes, and widespread economic instability across many countries. Prior to the emergence of Keynesian economics, classical economists strongly believed that economies naturally adjust themselves through market forces without the need for significant government intervention. Classical theory maintained that supply creates its own demand and that economic equilibrium would always be restored automatically through price and wage adjustments. However, the persistent economic crisis of the 1930s exposed the inability of market forces alone to revive economic activities and restore full employment, thereby creating the need for a new economic framework capable of explaining the role of government intervention in stimulating economic growth.

Literature Review

In both developed and developing nations, governments increasingly recognize that investment in digital infrastructure and technological innovation is no longer optional but rather a strategic necessity for national development. In Nigeria, the transition toward a digital economy has become more pronounced due to rapid globalization, increasing internet penetration, financial technology expansion, and the growing dependence on digital communication systems in both private and public sectors. Consequently, government expenditure on digital economy initiatives has attracted significant attention among policymakers, researchers, and development institutions because of its perceived capacity to stimulate economic growth, increase employment opportunities, enhance productivity, and improve the efficiency of public administration. The digital economy encompasses economic activities driven by digital technologies such as broadband internet, electronic commerce, artificial intelligence, cloud computing, mobile applications, fintech systems, cybersecurity frameworks, and digital governance structures.

According to Bukht and Heeks (2018), the digital economy refers to economic systems in which digital computing technologies form the primary foundation of production, distribution, exchange, and consumption activities. Similarly, the Organization for Economic Cooperation and Development (OECD, 2020) described the digital economy as an interconnected environment where digital technologies support economic interactions, institutional efficiency, innovation, and business development. In the Nigerian context, the Federal Government introduced the National Digital Economy Policy and Strategy to accelerate digital transformation and position technology

as a major contributor to national economic growth (Federal Ministry of Communications and Digital Economy, 2020).

Government expenditure on the digital economy refers to public sector financial commitments directed toward the development and expansion of digital infrastructure, digital literacy programs, e-government systems, technological innovation, cybersecurity protection, and digital financial services. The theoretical justification for such expenditure is rooted in Keynesian economic theory, which argues that government spending can stimulate economic activities, increase aggregate demand, and promote national income growth, especially when investments are channeled into productive sectors of the economy. In modern economies, digital investments are increasingly considered productive expenditures because they facilitate innovation, reduce transaction costs, improve communication systems, expand market access, and support industrial competitiveness.

The World Bank (2021) emphasized that digital technologies contribute significantly to economic growth by improving efficiency, enhancing access to information, and increasing opportunities for entrepreneurship and innovation. Likewise, Aghion et al. (2019) argued that technological advancement and digital transformation are among the strongest drivers of long-term economic growth because they improve production processes, stimulate industrial development, and encourage knowledge-based economic activities. In Nigeria, the growing importance of the digital economy is evident in the expansion of electronic banking systems, online business operations, digital government services, mobile communication networks, and fintech innovations, all of which have increased the relevance of government spending in this sector.

Government Expenditure on ICT Infrastructure and GDP Growth

Government expenditure on ICT infrastructure constitutes one of the most significant dimensions of digital economy development because digital infrastructure forms the foundation upon which modern technological systems operate. ICT infrastructure includes broadband networks, internet connectivity systems, telecommunications facilities, fiber-optic cables, mobile communication towers, data centers, satellite systems, and digital communication technologies that facilitate information exchange and economic interactions. In many developing countries, including Nigeria, the availability and quality of ICT infrastructure determine the pace of digital transformation and the capacity of businesses, households, and institutions to participate effectively in the digital economy. Consequently, governments invest heavily in ICT infrastructure to improve communication efficiency, stimulate innovation, expand access to digital services, and support economic modernization.

Empirical literature has consistently demonstrated that investment in ICT infrastructure positively influences economic growth through various transmission mechanisms. According to Vu (2019), ICT infrastructure enhances labor productivity, increases business efficiency, facilitates technological diffusion, and strengthens industrial competitiveness, thereby contributing

significantly to GDP growth. Similarly, Pradhan et al. (2021) argued that internet penetration and broadband expansion promote economic integration, improve access to information, and stimulate electronic commerce activities, all of which contribute to national economic performance. The International Telecommunication Union (ITU, 2022) further noted that countries with strong ICT infrastructure tend to experience faster economic growth because digital connectivity encourages innovation, supports entrepreneurship, and improves financial inclusion.

In Nigeria, government expenditure on ICT infrastructure has increased considerably over the years due to the recognition of technology as a critical instrument for economic diversification beyond the oil sector. Public investments have been directed toward expanding broadband coverage, improving telecommunications systems, and promoting internet accessibility across urban and rural communities. Research conducted by Adeyemi and Olalekan (2022) revealed that government spending on telecommunications infrastructure significantly improved productivity within the banking, educational, and commercial sectors of the Nigerian economy. Furthermore, ICT infrastructure development supports the growth of digital platforms, e-commerce activities, remote work systems, and online educational services, thereby contributing to employment creation and economic expansion. The World Bank (2021) observed that digital infrastructure investment reduces operational inefficiencies, lowers transaction costs, and facilitates access to regional and international markets, which collectively enhance GDP growth. Ndukwe and Iwuamadi (2023) argued that although government spending on ICT infrastructure has improved digital connectivity in some regions, infrastructural deficiencies continue to hinder inclusive participation in the digital economy. These limitations reduce the overall contribution of ICT investments to sustainable GDP growth and underscore the need for more effective policy implementation and increased infrastructural funding.

Government Expenditure on Digital Education and Skills Development and GDP Growth

Government expenditure on digital education and skills development represents another critical aspect of digital economy investment because human capital development is essential for maximizing the benefits of technological advancement. Digital education expenditure includes public investments in ICT training programs, digital literacy initiatives, e-learning systems, coding academies, technology-oriented educational reforms, innovation hubs, and vocational technology programs designed to equip individuals with digital competencies required in modern economies. The increasing automation of industries and the expansion of knowledge-based economic activities have made digital skills indispensable for productivity, employability, and entrepreneurship. Theoretical and empirical literature strongly supports the relationship between digital education and economic growth.

In the digital economy, technologically skilled individuals are more capable of utilizing innovative tools, adapting to technological changes, and contributing to organizational efficiency. Van Laar et al. (2020) emphasized that digital competence enhances creativity, problem-solving ability,

communication efficiency, and innovation, which are essential for economic competitiveness in the modern world. Likewise, the United Nations Conference on Trade and Development (UNCTAD, 2021) maintained that countries that prioritize digital literacy and technology education are better positioned to achieve sustainable economic growth because digitally skilled populations contribute to industrial innovation and entrepreneurial development.

Government expenditure on digital education in Nigeria has expanded through initiatives aimed at integrating ICT into educational systems and improving youth technological empowerment. Programs involving digital classrooms, online learning platforms, coding competitions, and ICT skill acquisition schemes have been introduced to prepare the workforce for the demands of the digital economy. Studies by Okoye and Ezejiofor (2022) found that digital skills acquisition significantly enhanced entrepreneurial activities and employment opportunities among Nigerian youths, particularly within the fintech and e-commerce sectors. Additionally, digital education contributes to the emergence of software development firms, online businesses, and technology startups that stimulate GDP growth through innovation and productivity enhancement. However, despite increased government efforts, the Nigerian educational system continues to face numerous challenges that undermine the effectiveness of digital education expenditure.

Inadequate funding, insufficient ICT facilities, poor internet connectivity, limited access to computers, and shortage of qualified ICT instructors remain significant barriers to digital literacy development. Ogunleye and Adewale (2021) argued that the unequal distribution of digital resources between urban and rural schools exacerbates educational inequality and limits broad-based participation in the digital economy. These challenges suggest that while government expenditure on digital education has the potential to promote GDP growth, the effectiveness of such expenditure depends largely on policy consistency, infrastructural adequacy, and institutional capacity.

Government Expenditure on E-Government Services and GDP Growth

Government expenditure on e-government services refers to public investment directed toward the digitization of government operations and service delivery systems. E-government involves the application of digital technologies to public administration processes with the objective of improving efficiency, transparency, accountability, and accessibility of government services. Examples include electronic tax systems, digital procurement platforms, online business registration systems, electronic identity management systems, and automated administrative procedures. In contemporary economies, e-government has become an important mechanism for improving governance quality and facilitating economic development. The literature indicates that e-government systems contribute significantly to economic growth by reducing bureaucratic inefficiencies, minimizing corruption, improving institutional performance, and enhancing investor confidence. According to the OECD (2020), digital governance systems improve public sector efficiency by simplifying administrative procedures, reducing delays, and enhancing service

accessibility. Majeed and Malik (2021) further argued that e-government enhances institutional effectiveness and encourages private sector participation by creating a more transparent and predictable business environment. Efficient public administration reduces operational costs for businesses and encourages domestic and foreign investments, thereby stimulating GDP growth.

Research conducted by Ibrahim and Hassan (2023) revealed that e-government initiatives significantly improved tax administration, reduced processing time for business registration, and enhanced revenue generation within the Nigerian economy. Furthermore, electronic governance systems improve transparency and accountability by minimizing human interference in administrative processes, thereby reducing opportunities for corruption and financial leakages. Nevertheless, several challenges continue to hinder the effectiveness of e-government expenditure in Nigeria. Poor digital literacy, inadequate cybersecurity systems, unstable internet connectivity, resistance to technological change, and insufficient technical expertise remain major obstacles to successful implementation. Adebayo and Yusuf (2022) noted that despite significant government investments in digital governance, many public institutions still struggle with outdated systems and inefficient technological frameworks. These challenges reduce the potential impact of e-government expenditure on GDP growth and highlight the importance of strengthening institutional capacity and technological infrastructure.

Government Expenditure on Research and Innovation in Technology and GDP Growth

Government expenditure on research and technological innovation is widely recognized as a fundamental driver of long-term economic growth and industrial transformation. Research and innovation expenditure includes public funding for scientific research institutions, technology incubation centers, software development projects, artificial intelligence initiatives, digital entrepreneurship programs, and innovation-driven industrial policies. In the digital economy, innovation serves as a catalyst for productivity enhancement, industrial competitiveness, and economic diversification. The theoretical foundation for innovation-driven growth is rooted in Schumpeter's Innovation Theory, which argues that technological innovation stimulates economic development by introducing new products, production methods, and market opportunities (Schumpeter, 1934). Modern growth theories also emphasize the role of knowledge creation and technological advancement in improving productivity and sustaining long-term economic expansion.

According to Aghion et al. (2019), countries that invest heavily in research and innovation experience higher growth rates because innovation enhances industrial efficiency, promotes entrepreneurship, and facilitates the creation of high-value economic activities. In Nigeria, government expenditure on digital innovation has contributed to the rapid expansion of fintech companies, technology startups, and digital entrepreneurship ecosystems. The Nigerian fintech industry has become one of the fastest-growing sectors in Africa, attracting significant domestic and international investments. Studies by Eze and Nwankwo (2023) found that government support for digital innovation stimulated entrepreneurial activities, increased employment

opportunities, and improved the contribution of the technology sector to national GDP. Innovation expenditure also promotes the development of locally generated technological solutions capable of addressing socio-economic challenges within the

Nigerian economy. Akinwale and Grobler (2020) argued that insufficient investment in research and development limits Nigeria's capacity to compete effectively in the global digital economy. Consequently, sustained government commitment to innovation financing and policy stability remains essential for maximizing the contribution of technological research to GDP growth.

Empirical Review

Pradhan, Arvin, Hall, and Nair (2021) examined the relationship between ICT infrastructure and economic growth using panel data from 49 developing countries covering the period between 2000 and 2018. Employing panel cointegration and causality techniques, the study found that internet penetration, mobile subscriptions, and broadband expansion significantly increased economic productivity and GDP growth. The study concluded that ICT infrastructure improves communication efficiency, promotes innovation, facilitates international trade, and enhances industrial competitiveness.

Vu (2019) investigated the contribution of ICT infrastructure to economic growth in emerging economies using cross-country regression analysis. The study revealed that countries with higher levels of digital connectivity experienced stronger economic performance due to improvements in productivity, business efficiency, and technological diffusion. The study further emphasized that public investment in digital infrastructure creates opportunities for electronic commerce, online financial transactions, and innovation-driven economic activities capable of stimulating national output growth. In the African context, the African Development Bank (2022) reported that increased government investment in broadband infrastructure and internet accessibility significantly improved digital participation and economic inclusion across several African economies.

Adeyemi and Olalekan (2022) examined the impact of government expenditure on telecommunications infrastructure and GDP growth in Nigeria using time series data spanning from 1995 to 2020. The study employed the Ordinary Least Squares (OLS) estimation technique and found that government investment in telecommunications systems and broadband infrastructure had a positive and statistically significant effect on GDP growth. The study observed that improved digital connectivity enhanced productivity within sectors such as banking, commerce, education, and public administration. However, the researchers also identified persistent challenges such as poor electricity supply, inadequate rural internet penetration, and high broadband costs as factors limiting the effectiveness of ICT expenditure in Nigeria.

Van Laar, Van Deursen, Van Dijk, and De Haan (2020) conducted a study on digital skills and labor productivity in European economies. Using survey analysis and econometric modeling, the study found that digital competencies significantly improved innovation capacity, employability, and organizational productivity. The researchers concluded that countries that prioritize digital education are more likely to achieve sustainable economic growth because technologically skilled populations support industrial innovation and knowledge-based economic activities. Likewise, the United Nations Conference on Trade and Development (UNCTAD, 2021) reported that investment in digital literacy and technological training contributes significantly to economic competitiveness and industrial modernization in developing economies.

In Nigeria, Okoye and Ezejiofor (2022) investigated the effect of digital education and ICT skills development on economic productivity using survey data collected from tertiary institutions and technology training centers. Employing regression analysis, the study found that government expenditure on ICT education significantly enhanced youth employability, entrepreneurship development, and technological innovation. The researchers observed that digital skills acquisition contributed to the growth of online businesses, software development, fintech operations, and electronic commerce within the Nigerian economy. Furthermore, the study noted that digital education reduced unemployment by equipping individuals with competency required for participation in the modern labor market.

Majeed and Malik (2021) analyzed the effect of e-government systems on economic development in selected developing countries using panel regression analysis. The study found that digital governance significantly improved institutional efficiency, reduced corruption, enhanced public service delivery, and increased investment inflows. The researchers concluded that countries with advanced e-government systems tend to experience higher levels of economic productivity and business competitiveness.

Ibrahim and Hassan (2023) examined the impact of government expenditure on e-government systems and public sector efficiency using secondary data obtained from government agencies and the Central Bank of Nigeria. Applying econometric analysis, the study revealed that expenditure on digital governance platforms significantly improved tax revenue generation, business registration processes, and administrative transparency. The study concluded that e-government systems contribute positively to GDP growth by improving institutional performance and facilitating ease of doing business. Nevertheless, the researchers identified challenges such as cyber insecurity, resistance to technological change, poor digital literacy, and inadequate technological infrastructure as major constraints affecting the successful implementation of e-government initiatives in Nigeria.

Aghion, Akcigit, and Howitt (2019) examined the relationship between innovation expenditure and economic growth across developed and developing countries. Using endogenous growth

modeling, the study found that investment in research and development significantly increased productivity and industrial performance. The study concluded that technological innovation serves as a critical engine for long-term economic growth because it facilitates the creation of new products, services, and production techniques.

In the Nigerian context, Eze and Nwankwo (2023) investigated the influence of government support for digital innovation on economic development. Using survey and secondary data analysis, the study revealed that public investment in innovation hubs, fintech ecosystems, startup incubation programs, and software development initiatives significantly enhanced entrepreneurial activities and employment generation within Nigeria's technology sector. The researchers further observed that technological innovation contributed to economic diversification by reducing dependence on crude oil revenue and promoting knowledge-based industries. However, the study also noted that inadequate research funding, policy inconsistency, weak institutional support, and limited technological expertise continue to hinder innovation development in Nigeria.

Kshetri (2021) examined the economic implications of cybersecurity investment in developing economies and found that effective cybersecurity systems significantly improved digital financial activities, online commercial transactions, and electronic banking operations. The study argued that cybersecurity investment reduces financial losses associated with cybercrime and enhances investor confidence in digital markets. Similarly, the International Monetary Fund (IMF, 2022) emphasized that cybersecurity is essential for maintaining financial stability and protecting digital infrastructures from disruptions capable of undermining economic growth.

Udo and Effiom (2023) investigated the impact of cybersecurity expenditure on digital banking operations and electronic commerce activities. Using descriptive and inferential statistical techniques, the study found that government investment in cybersecurity infrastructure significantly improved public confidence in digital financial services and online transactions. The study concluded that cybersecurity systems are essential for sustaining the growth of Nigeria's digital economy because cyber threats and online fraud discourage participation in electronic commerce and fintech activities. However, the study identified inadequate technical expertise, weak regulatory enforcement, and increasing sophistication of cybercriminal activities as major challenges facing cybersecurity development in Nigeria.

Demirgüç-Kunt, Klapper, Singer, Ansar, and Hess (2020) conducted a global analysis of digital financial inclusion and economic development. The study found that mobile banking services and electronic payment systems significantly improved financial participation and reduced poverty levels in developing economies. Similarly, Salami and Adegbite (2022) examined the relationship between digital financial inclusion and GDP growth in Nigeria using econometric analysis. The study revealed that government support for fintech systems, mobile banking, and electronic payment infrastructure significantly increased commercial activities and improved small business

performance. The researchers concluded that digital financial inclusion contributes positively to economic growth by facilitating financial accessibility and enhancing economic participation among previously excluded populations.

Methodology

The study adopted an ex-post facto research design, leveraging secondary time-series data to examine historical relationships, which is apt for causal inference in macroeconomic contexts where experimental controls are infeasible. Data are sourced from secondary sources. The period of study was 2010 to 2025. The secondary sources include the Central Bank of Nigeria (CBN) Statistical Bulletin. Ordinary least Square of multiple regression was employed in the study. In order to test the hypothesis, the variables shall be built into a functional relationship. The functional relationship between the variables is expressed as:

$$\text{GDPGR} = f(\text{ICTINF}, \text{DED}, \text{EGS}, \text{REIM})$$

GDPGR = GDP growth rate

ICTINF = ICT infrastructure

DED = digital Education,

EGS = e-government service

REIM = Research and Innovation

These variables are in their Econometric form:

$$\text{GDPGR} = b_0 + b_1\text{ICTINF} + b_2\text{DED} + b_3\text{EGS} + b_4\text{REIM} + u$$

Where;

Dependent variable = Gross Domestic Product Growth rate

Independent variables = ICTINF, DED, EGS, REIM

Regression constant = b_0

Unknown parameters = $b_1 - b_4$

Stochastic Error Term = μ

Results and Findings

The regression result of government expenditure on digital economy and GDP growth in Nigeria.

Dependent Variable: GDPGR				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.884465	0.256868	15.12240	0.0000
ICTINF	-0.288245	0.109474	-2.632994	0.0149
DED	-0.005563	0.001454	-3.825258	0.0009
EGS	0.025172	0.102796	0.244874	0.8087
REIM	0.054453	0.014003	3.888763	0.0007
R-squared	0.773229	Mean dependent var		3.779028
Adjusted R-squared	0.714071	S.D. dependent var		0.225880

S.E. of regression	0.120784	Akaike info criterion	-1.188670
Sum squared resid	0.335539	Schwarz criterion	-0.861724
Log likelihood	24.83005	Hannan-Quinn criter.	-1.084077
F-statistic	13.07061	Durbin-Watson stat	1.317841
Prob(F-statistic)	0.000002		

Source: E-views 7.1

This is given by the high value of the R-squared of 0.7732 (77.32 per cent) and the adjusted R-squared of 0.7140 (71.40 per cent). According to the adjusted R-squared, about 71 per cent of the systematic variations on the growth of the economy has been explained by changes in government expenditure. In the same vein, the high value of F-statistics (13.0706) shows that the overall model is statistically significant. The overall significance of the short-run model implies the joint significance of all explanatory variables in explaining short-run changes on the growth of the economy. Further examination of the result shows that there is no problem of autocorrelation in the model. This is so because the Durbin-Watson (DW) statistic value of 2.03 falls within the acceptable region of no autocorrelation. From the policy stance, this means that the finding of this study can be applied for policy purposes in the Nigerian economy. The study found that government expenditure on ICT infrastructure and government expenditure on digital education have negative effect on GDP growth while government expenditure on e-government service, government expenditure on Research and Innovation have positive effect on GDP growth.

Conclusion

The study examines government expenditure on digital economy and GDP growth in Nigeria. Digital economy has become an important instrument for economic diversification and sustainable development. The Federal Government of Nigeria has recognized the strategic importance of digital transformation through the introduction of various policies and programs aimed at improving ICT infrastructure, promoting digital literacy, enhancing e-government systems, strengthening cybersecurity, and supporting innovation and entrepreneurship. In Nigeria, the transition toward a digital economy has become more pronounced due to rapid globalization, increasing internet penetration, financial technology expansion, and the growing dependence on digital communication systems in both private and public sectors.

Recommendations

1. There should be availability and quality of ICT infrastructure to determine the pace of digital transformation and the capacity of businesses, households, and institutions to participate effectively in the digital economy.
2. Government expenditure on digital education should be expanded through initiatives aimed at integrating ICT into educational systems and improving youth technological empowerment.
3. E-government should be encouraged in improving governance quality and facilitating economic development.

4. Government should invest heavily in research and innovation experience higher growth rates because innovation enhances industrial efficiency, promotes entrepreneurship, and facilitates the creation of high-value economic activities.

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