



THE VITAL ROLE OF INFORMATION PRODUCTS IN NIGERIA'S ECONOMIC DEVELOPMENT

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Abstract: Information products have gone beyond ordinary products to products of emphasis, information controls the world, no wonder the leading countries in the world today are those that invested in information communication technology, (ICT). The shift in information products promotes innovation in a variety of industries, increases market transparency, and aids in the effective sharing of knowledge. They help organizations reach new markets, optimize operations, and make well-informed decisions by improving information accessibility. This paper therefore examines the important role that information products can place in the current Nigerian economy which is filled with a high level of unemployment rate, key economy sectors where they become indispensable tools in enhancing the efficiency in productivity, challenges and way forward in order for the nation to move in direction that other leading countries of the world are moving.

Keywords: Information products, economic development, key sectors, significance of information products, challenges of information products.

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Introduction

Nigeria, the most populous country in Africa, has a middle-income, emerging market and mixed economy with expanding financial, service, entertainment, manufacturing, communication and technology. Despite this, the nation is confronted with formidable developmental obstacles, such as elevated rates of joblessness, pervasive impoverishment, and insufficient infrastructure. 'Although Nigeria boasts the biggest population and economy in Africa, the majority of its citizens have limited options. A lack of entrepreneurial opportunities and inadequate job development hinder the assimilation of the 3.5 million Nigerians who join the workforce annually, leading several individuals to choose emigration in pursuit of improved prospects. With an estimated 87 million Nigerians living below the poverty line, the country is home to the second-largest impoverished population in the world behind India. The anticipated 2023 poverty rate is 38.9%, (World Bank, 2024)." To advance societal development, information is essential (Elavazhagan, n.d). Information products include software, digital services, online platforms, data analytics, and more including software, platforms, data on these issues can promote economic growth.

Information products promote innovation in a variety of industries, increase market transparency, and aid in the effective sharing of knowledge. They help organizations reach new markets, optimize operations, and make well-informed decisions by improving

information accessibility. This shift is visible in industries like finance, where mobile banking services improve financial inclusion, and agriculture, where digital platforms give farmers vital market information , (World Bank, 2019; Oyelaran-Oyeyinka & Lal, 2006).

Furthermore, by offering strong data analytics and e-governance solutions, information goods aid government efforts in the creation and execution of policies. In the end, they contribute to socio-economic development by playing a critical role in enhancing public administration and service delivery (Heeks, 2002). Nigeria is trying to diversify its economy and become less dependent on oil, hence it is critical to use information goods. Notwithstanding the potential advantages, a number of obstacles, such as a lack of digital literacy, inadequate technology infrastructure, and regulatory barriers, limit the use and effect of information goods in Nigeria (Akinyemi & Mushunje, 2019). To maximize the financial advantages of information products, it is crucial to comprehend these obstacles and devise solutions.

The objectives of this article are in threefold: to elucidate the various types and functions of information products, to highlight their transformative Impacts on Nigeria's economy, and to propose strategic measures for overcoming the existing barriers to their effective use. In doing so, this article seeks to underscore the critical need for a robust information product ecosystem that supports sustainable economic development in Nigeria.

Nigeria Current Economic Overview

According to World Bank (2024), Nigeria's economy expanded broadly and steadily between 2000 and 2014, averaging over 7% yearly growth. This growth was made possible by macroeconomic improvements, first-stage structural initiatives, and favourable international conditions. But between 2015 and 2022, growth rates fell and GDP per capita flattened as a result of distortions in monetary and exchange rate policy, rising fiscal deficits brought on by reduced oil production and an expensive fuel subsidy program, a rise in trade protectionism, and external shocks like the COVID-19 pandemic. In February 2024, the country's inflation hit a 24-year high of 31.7% due to weak economic fundamentals, which along with slow development has forced millions of Nigerians into poverty.

The nation has been seeking drastic reforms to restore macroeconomic conditions for stability and growth since an administration transition in May 2023. The fuel fiscal subsidy was removed in part, and the FX reforms brought about the unification of the FX markets and the creation of an exchange rate that reflects the market. In order to mitigate the inflationary impact of these policies on the most susceptible, the government has been reaching out to 15 million households with temporary cash transfers which have no significant effect. Additionally, efforts are being undertaken to concentrate the Central Bank of Nigeria (CBN) on its primary duty of preserving price stability and to tighten monetary policies.

Nigeria must maintain the reform momentum to fully benefit from it. While the oil sector is expected to stabilize, the non-oil economy will grow steadily but slowly as the initial shock from the reforms wears off and macroeconomic conditions improve. Structural changes will be necessary for higher growth rates. Liberalization of exchange rates ought to support external and fiscal balances. As a result of exchange rate stabilization and tighter monetary policies, inflation is predicted to progressively decline. Because of this, it is anticipated that poverty rates will rise in 2024 and 2025 before levelling off in 2026, submitted World Bank (2024). There are significant risks to Nigeria's future, particularly if reforms falter or are undone. Risks include the failure to address imbalances in the price of gasoline, to increase non-oil income, and to tighten monetary policies in a relatively modest manner. Economic recovery would also be further hampered by growing insecurity, unfavourable climate shocks, and public outcry with inflation.

Overview of Information Products

Information products are created by carefully selecting, acquiring, evaluating, analysing, synthesizing, restructuring, and packaging information from various sources. These products highlight different attributes of the items they feature and promote their use and sale. Typically issued by industrial, commercial, public service, or similar organizations, these products serve as promotional material for a targeted audience.

Information products encompass a broad spectrum of tools and resources that provide valuable data and insights for decision-making. These products are integral to the digital economy and include digital databases, market research reports, data analytics tools, and more. Information products include sources of knowledge contents and information that are available in both electronic and non-electronic formats, such as interactive video,

movies, audio digital products, online publications, public domain and commercial online databases accessible via the internet, and other databases accessible through different private network providers; these include textbooks, encyclopaedias, almanacs, handbooks, dictionaries, thesauruses, patent information, journals, and so on (Kumar, 2014). In Nigeria, the development and utilization of these information products have been evolving, reflecting the global trends towards data-driven decision-making and digital transformation.

Types of Information Products

- **Digital Databases:** These are collections of structured data that can be accessed, managed, and updated electronically. In Nigeria, digital databases are used in various sectors such as healthcare, education, and finance. Examples include patient records in hospitals, academic resources in universities, and financial data in banks. Resources from digital libraries' databases significantly contribute to fostering a culture of research in higher education. Understanding intellectual progress, research productivity, planning, and user information needs identification are made possible by the usage of digital databases Muhammad, R., Zheng, J. & Khurshid, A. (2019).

By assessing user database resource consumption and research efficacy, this study aims to support management in creating a superior academic policy.
- **Market Research Reports:** These reports provide detailed analysis and insights into specific markets. They are crucial for businesses seeking to understand market trends, customer behaviour, and competitive landscapes. Nigerian businesses increasingly rely on market research to inform their strategies and operations.
- **Data Analytics Tools:** These tools help in processing and analysing large datasets to extract meaningful insights. In Nigeria, data analytics is used in sectors like agriculture to predict crop yields, in retail to analyse consumer trends, and in finance to manage risks.
- **E-Learning Platforms:** These platforms offer digital educational content and resources, facilitating remote learning and skill development. In Nigeria, e-learning platforms have gained prominence, especially in the wake of the COVID-19 pandemic, enabling continuous education despite physical barriers.
- **Financial Analytics Tools:** These tools provide insights into market trends, investment opportunities, and financial health. They are used by financial institutions and investors in Nigeria to make informed investment decisions and manage portfolios.

Historical Context and Evolution of Information Products in Nigeria

The development of information products in Nigeria reflects both global technological trends and specific local influences. Historically, the availability of reliable information was restricted due to inadequate infrastructure and low digital literacy levels. However, notable advancements have occurred in recent years:

Digital Infrastructure: Enhancements in internet connectivity and mobile technology have significantly broadened access to digital information products. The widespread adoption of smartphones and affordable internet plans has made these products more available to a broader audience. Akinwale, Akeem. A. (2010).

Government Initiatives: Various government programs aimed at boosting digital literacy and promoting e-governance have significantly contributed to the growth of information products. Initiatives focused on digital education and the creation of digital libraries have been particularly effective. Ministry of Communication Technology (2012).

Private Sector Innovation: Nigerian tech startups and established companies have been pivotal in creating and implementing innovative information products. From financial technology solutions to agricultural technology platforms, the private sector has been crucial in advancing digital transformation named, Information Technology Development Agency (NITDA) (2019).

Significance of Information Products in the Nigerian Context

According to Nlerum, P. A., Eleje, C. B. (2022), information products in Nigeria are not just tools for business efficiency; they are enablers of broader socio-economic development. They provide critical data that helps bridge information gaps, promote transparency, and enhance decision-making across various sectors. By facilitating access to accurate and timely information, these products empower individuals, businesses, and government agencies to make informed decisions, thereby driving economic growth and development.

Information products are pivotal to Nigeria's journey towards a knowledge-based economy. They hold the potential to transform various sectors by providing the necessary data and insights for informed decision-making. Understanding their types, evolution, and significance provides a foundation for exploring their roles in Nigeria's economic development, submitted, Nigeria Country Commercial Guide (2023). Nigeria, as one of the largest economies in Africa, stands at a pivotal juncture in its development journey. With a diverse and rapidly growing population, the nation's economic landscape is marked by both significant opportunities and formidable challenges. In this context, the role of information products ranging from digital databases and market research reports to advanced data analytics tools have become increasingly vital. Information products are instrumental in driving economic development by enhancing business decision-making, fostering innovation, and improving efficiency across various sectors. They provide crucial insights that empower businesses, government bodies, and individuals to make informed choices, thereby stimulating growth and development. As Nigeria continues to integrate into the global digital economy, the importance of these information products cannot be overstated (Agboola 2022).

(This article aims to explore the indispensable role of information products in Nigeria's economic development. It will provide an overview of these products, examine their impact on key economic sectors, and identify the challenges hindering their development and utilization. Through detailed case studies and policy recommendations, the article will offer a comprehensive analysis of how information products can be leveraged to catalyze

economic growth in Nigeria.) I doubt if we need this clause again, revisit.

The Role of Information Products in Economic Development

Information products, encompassing data, software, digital content, and online services, have become pivotal in driving economic development. These products not only enhance productivity and innovation but also create new business opportunities and improve governance. Understanding their roles requires examining how they contribute to different aspects of the economy. Roles of information products covers:

Enhancing Productivity and Efficiency

Through data-driven decision making, automation and artificial intelligence, information products enhance production of good and services in more effective and efficient ways.

- **Data-Driven Decision Making:** Information products enable data-driven decision making, which can significantly improve efficiency and productivity in various sectors. By analyzing large datasets, businesses can identify trends, optimize operations, and forecast demand more accurately. This reduces waste, lowers costs, and increases profitability. For instance, Adaga, Okorie, Egieya, Ikwue, Udeh, C. DaraOjimba, and Oriekhoe (2023) highlight how data analytics and big data can transform traditional business models, leading to more informed strategic decisions.
- **Automation and Artificial Intelligence:** Automation through software and AI technologies is revolutionizing industries by performing repetitive tasks more efficiently than humans. This frees up human resources for more complex and creative tasks, thereby boosting overall productivity. According to Marianne, S. (2024), automation and AI can drive economic growth by enhancing labour productivity and creating new types of jobs.

Fostering Innovation and New Business Opportunities

Through entrepreneurship, start-ups, intellectual property and digital goods, information products foster innovation and new business opportunities.

- **Entrepreneurship and Start-ups:** The digital economy has lowered the barriers to entry for new businesses. Information products, such as cloud computing services, e-commerce platforms, and mobile applications, provide entrepreneurs with the tools to start and scale their businesses quickly and at a lower cost. This democratization of technology fosters innovation and entrepreneurship, leading to job creation and economic diversification (Daraojimba, Abioye, Bakare, Mhlango Onunka, and Daraojimba, 2023).
- **Intellectual Property and Digital Goods:** Information products often involve intellectual property, such as software, digital media, and online services, which can be monetized in various ways. These products can be replicated at low marginal costs, allowing businesses to scale rapidly and reach global markets. Brynjolfsson and McAfee (2014) discuss how digital goods and services

contribute to economic growth by enabling new business models and revenue streams.

Improving Governance and Public Services

Information products play this role through e-government and digital public services and smart cities and infrastructure.

- **E-Government and Digital Public Services:** Information products play a crucial role in improving governance and public services through e-government initiatives. These initiatives use digital tools to enhance the efficiency, transparency, and accessibility of government services. By implementing e-government platforms, countries can reduce bureaucratic inefficiencies, improve service delivery, and increase citizen engagement (Tejedo-Romero, Araujo, Tejada and Ramírez 2022).
- **Smart Cities and Infrastructure:** Smart city technologies, which rely on information products such as sensors, data analytics, and IoT devices, are transforming urban infrastructure. These technologies improve resource management, reduce environmental impact, and enhance the quality of life for residents. Clement, Ruyschaert and Crutzen (2023) note that smart cities can drive sustainable economic development by leveraging information products to address urban challenges.

Information Products and Key Economic Sectors

Information products have become indispensable tools in enhancing the efficiency, productivity, and overall performance of key economic sectors in Nigeria. Their roles are evident in agriculture, healthcare, education, finance, and public administration, where they provide critical data and insights that drive growth and development.

- Agriculture:** In the agricultural sector, information products such as digital databases, mobile applications, and data analytics tools play a crucial role in improving productivity and sustainability. Chhachhar and Hassan (2013) state mobile phones and related technologies have significantly enhanced farmers' access to market information, weather forecasts, and agricultural best practices. These tools help farmers make informed decisions about crop management, pest control, and resource allocation, leading to increased yields and reduced losses. Furthermore, data-driven platforms enable better supply chain management and market access, helping farmers achieve better prices for their products (Chhachhar and Hassan 2013).
- Healthcare:** The healthcare sector in Nigeria benefits greatly from information products such as electronic health records (EHRs), telemedicine platforms, and health information systems. These tools improve patient care by providing healthcare providers with real-time access to patient data, facilitating accurate diagnoses and effective treatment plans Ugwu, et al (2024). Telemedicine platforms, in particular, have expanded access to healthcare services in remote and underserved areas, addressing disparities in healthcare access and improving health outcomes Ugwu et al (2024). Additionally, health information systems enable

better disease surveillance and management, contributing to improved public health interventions.

- Education:** E-learning platforms and digital educational resources have revolutionized the education sector in Nigeria. These information products provide students and educators with access to a vast array of learning materials, enabling personalized and flexible learning experiences Eze, Chinedu-Eze and Bello (2018). During the COVID-19 pandemic, the importance of these tools became even more pronounced as schools transitioned to online learning environments. E-learning platforms support continuous education by offering interactive courses, digital libraries, and assessment tools, thereby enhancing the quality of education and bridging the educational gap in remote areas (Rafiq, Iqbal and Afzal 2024).
- Finance:** In the finance sector, information products such as financial analytics tools, market data platforms, and investment research reports are essential for informed decision-making and risk management. These tools provide financial institutions and investors with insights into market trends, investment opportunities, and economic indicators, facilitating strategic planning and investment decisions Brightwood (2024). In Nigeria, the adoption of fintech solutions has accelerated financial inclusion, providing underserved populations with access to banking and financial services, Maurice, E. C. (2024). Digital payment systems, mobile banking, and microfinance platforms are examples of information products that have transformed the financial landscape.
- Public Administration:** Information products are critical in enhancing transparency, efficiency, and accountability in public administration. E-governance platforms, government databases, and open data initiatives enable citizens to access public records, participate in governance processes, and hold government officials accountable (Bertot et al., 2010). In Nigeria, these tools have improved service delivery and reduced corruption by promoting transparency in government operations. E-governance platforms also streamline administrative processes, making government services more accessible and efficient for citizens (Bertot et al., 2010).

Challenges in the Development and Utilization of Information Products

Despite the significant potential of information products to drive economic development in Nigeria, several challenges hinder their development and utilization. These challenges include; infrastructure deficits, digital literacy and skill gaps, data privacy and security concerns, and the high cost of quality information products. Addressing these challenges is crucial to fully leveraging the benefits of information products in Nigeria.

- **Infrastructure Deficits:** One of the primary challenges is inadequate infrastructure, particularly in rural and underserved areas. Reliable internet access, electricity, and other essential services are often lacking, which hampers the development and utilization of digital information products (Gillwald, Moyo, & Stork, 2012). The lack of robust digital infrastructure limits the reach and effectiveness of

information products, making it difficult for many Nigerians to access and benefit from these tools. As noted by A4AI (2020), the cost and quality of internet connectivity in Nigeria remain significant barriers to digital inclusion and the widespread adoption of information products.

- **Digital Literacy and Skill Gaps:** Another significant challenge is the low level of digital literacy and skills among the population. Many Nigerians lack the necessary skills to effectively use information products, which limits their utility and impact (Hargittai, 2010). Digital literacy encompasses not only basic computer skills but also the ability to critically evaluate and use digital information effectively. Without adequate digital literacy, individuals and organizations cannot fully exploit the potential of information products for decision-making and innovation. This skills gap is further exacerbated by insufficient training and educational opportunities in digital literacy (UNESCO, 2018).
- **Data Privacy and Security Concerns:** Data privacy and security are critical concerns that affect the development and utilization of information products. The increasing reliance on digital information products raises the risk of data breaches, cyberattacks, and unauthorized access to sensitive information Cremer, Sheehan, Fortmann, Kia, Mullins, Murphy, Materne (2022). In Nigeria, the regulatory framework for data protection is still evolving, and many organizations lack robust cybersecurity measures Adelokun (2024). Concerns about data privacy and security can undermine trust in information products, discouraging their adoption and use. Addressing these concerns requires comprehensive data protection regulations and the implementation of robust cybersecurity practices.
- **High Cost of Quality Information Products:** The high cost of developing and accessing quality information products is another challenge. Many high-quality information products, such as market research reports and advanced data analytics tools, are often priced beyond the reach of small and medium-sized enterprises (SMEs) and individual users Dwivedi, Y. K. et al. (2021). This cost barrier limits the ability of many Nigerians to leverage these tools for economic development. Additionally, the development of high-quality information products requires significant investment in technology, skilled personnel, and infrastructure, which can be a barrier for local developers and startups (Babina, Fedyk, He and Hodson (2024).

Suggested Way Forward on Challenges of Information Products

- **High Cost of Quality Information Products:** There are some reasons why high-quality information products are so expensive, such as expenses related to production, distribution, and research & development. Governments and international organizations should look into supporting open-access approaches and funding the production of knowledge to lessen this difficulty. Shared infrastructure and resources could potentially result in cost savings through public-private partnerships. Furthermore, implementing machine learning (ML) and artificial intelligence (AI) can reduce operating expenses by

automating the production, distribution, and curation of information Yaiprasert and Hidayanto (2024). Furthermore, raising user awareness of alternate, less expensive information access platforms can assist users in finding premium material at more reasonable prices Tomczyk, Buhalis, Fan and Williams (2022).

- **Data Privacy and Security Concerns:** Data security and privacy issues are common in today's digital economy because of the rise in cyberattacks and data breaches. Organizations should establish stronger data protection mechanisms, such as encryption, multi-factor authentication, and frequent security audits, to solve these challenges. To guarantee that user data is not misused, governments should impose stronger data protection regulations, such as the General Data Protection Regulation (GDPR) in Europe Ducato (2020). In addition, before using digital platforms, people should be informed about safe online conduct and the significance of comprehending privacy policies Barth, Ionita and Hartel (2022). Institutions can strengthen their capacity to safeguard user data by investing in cybersecurity training and ethical hacking expertise.
- **Infrastructure Deficits:** Distribution of information products is hampered in many areas by inadequate infrastructure, such as erratic electrical supplies, constrained internet connectivity, and antiquated technology. Governments should prioritize funding ICT infrastructure to remove these obstacles, especially in rural underserved areas, Emile and Mbungu (2023). International cooperation funded by international development organizations like the World Bank or UN may be able to give underdeveloped nations the capital they need to upgrade their technology infrastructure. Furthermore, in locations with erratic electricity supplies, using renewable energy sources, such as solar energy, could offer sustainable options for powering information goods Tambari, Dioha and Failler (2020). Moreover, it is imperative to utilize mobile technologies, given their demonstrated efficacy in providing information services in areas with restricted fixed infrastructure (Ilako 2013).
- **Lack of Awareness and Education Regarding Information Product Use:** In addition to the technological and financial difficulties, there are frequently knowledge and education gaps on the proper use of information products that are readily available. This may reduce the potential advantages that these goods may provide. This problem demands a multifaceted solution to be solved. First and foremost, digital literacy programs ought to be a part of educational institutions to provide people with the tools they need to find information and assess it critically. According to Borawska (2017), awareness campaigns have the potential to educate communities on the value and accessibility of information goods for both personal and professional growth. Lastly, developing more user-friendly platforms can help close the gap between users and high-quality information by lowering the technical skills needed to access it (Pratama and Cahyadi 2020).

Conclusion

Information products are integral to modern economic development, enhancing productivity, fostering innovation, and improving governance. This calls for the development and utilization of information products in Nigeria. Information products in Nigeria are hindered by several significant challenges, including infrastructure deficits, digital literacy and skill gaps, data privacy and security concerns, and the high cost of quality information products. Addressing these challenges is essential to fully realizing the potential of information products to drive economic development in Nigeria. By leveraging these products, Nigeria can drive economic growth, create new business opportunities, and improve public services being the most populous country in Africa, with a huge natural resource base and a diverse economy. Despite this, the nation is confronted with formidable developmental obstacles, such as elevated rates of joblessness, pervasive impoverishment, and insufficient infrastructure. Information products which include software, digital services, online platforms, data analytics, and more are becoming more and more important in today's digital age for tackling these issues and promoting economic growth. As technology continues to evolve, the role of information products in economic development is likely to expand, offering even greater potential for positive impact. The earlier the nation realised this, the better.

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