CHALLENGES AND OPPORTUNITIES IN IMPLEMENTING DIGITAL TRANSFORMATION IN NIGERIAN PUBLIC SERVICE

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Abstract
In the age of rapid technological advancements, digital transformation has become a defining force reshaping global sectors. The Nigerian public service, as a fundamental element of the country's administrative framework, is no exception. This study delved into the multifaceted challenges and opportunities that arise when implementing digital transformation in the Nigerian public service. Despite its importance, the public service has long grappled with inefficiency, corruption, and service delivery issues. Digital transformation, facilitated by technologies like AI and data analytics, presents a solution to these problems. This research adopted a qualitative approach, gathering data from secondary sources including journals and online resources while using Technology Acceptance Model (TAM), originally proposed by Davis in 1989 as a guide. The study focused on the integration of digital technologies in administrative processes and examined its dimensions in the contemporary context. Digital transformation offers the Nigerian public service numerous advantages, including streamlined service delivery, transparency, data-driven decision-making, citizen engagement, remote access, and cost savings. However, several barriers impeded its adoption. Infrastructure deficit in rural areas limits equitable access to digital services. A lack of digital skills among employees and leadership gaps hinder seamless integration. Frequent power outages disrupt digital initiatives, while political dynamics, inadequate policies, and resistance slow progress. Theft and vandalization of infrastructure exacerbate challenges. To advance digital transformation in Nigeria, a comprehensive approach is required. Prioritizing telecommunications and internet infrastructure in rural areas, establishing training programs, investing in reliable power supply, creating secure digital databases, formulating supportive policies, and enhancing security measures around critical infrastructure are essential steps. Successful implementation of these recommendations can pave the way for improved efficiency, transparency, and service delivery in the Nigerian public service, while also serving as an example for similar endeavors in the region.
Keywords: *Digital transformation, public service, infrastructure, Nigeria.*

Introduction

In an era characterized by rapid technological advancements, digital transformation has emerged as a pivotal force reshaping various sectors worldwide (Verhoef et al., 2021). The Nigerian public service, as a critical component of the country's administrative framework, is no exception to this paradigm shift. This research aims to delve into the multifaceted challenges and opportunities that arise in the context of implementing digital transformation within the Nigerian public service. The Nigerian public service is a cornerstone of the country's governance structure,

responsible for the implementation of policies, public service delivery, and administrative functions at various levels of government (Oyedele, 2015; Bello, 2021). However, despite its significance, the public service has faced long-standing challenges related to inefficiency, corruption, bureaucratic bottlenecks, and inadequate service delivery. These challenges have impeded Nigeria's socio-economic progress and undermined citizens' trust in government institutions. Digital transformation, driven by technological innovations such as artificial intelligence, data analytics, and cloud computing, has emerged as a potential solution to these issues (Wu et al., 202; Akter et al., 2022). Through the integration of digital technologies into administrative processes, the public service could streamline operations, enhance transparency, and improve service delivery. Nevertheless, Abdulkareem (2015) argued that the adoption of digital transformation in the Nigerian public service has been met with several obstacles, ranging from technological barriers to resistance to change within bureaucratic structures.

The motivation behind this research stems from the pressing need to enhance the efficiency, transparency, and effectiveness of the Nigerian public service. The current state of affairs in the Nigeria public service, characterized by bureaucratic bottlenecks and inadequate service delivery, calls for innovative solutions that can address these systemic issues (Asaju and Ayeni, 2021). Digital transformation, with its promise of process optimization and data-driven decision-making, presents an enticing prospect for catalyzing positive change. The unique socio-economic and political context of Nigeria adds another layer of significance to this research. According to West Africa Gateway (2012), Nigeria is not only Africa's most populous country but also one of its largest economies. As such, the successful implementation of digital transformation in the Nigerian public service has the potential to set a precedent for other countries in the region, demonstrating how technology can be leveraged to address governance and service delivery challenges.

While the global discourse on digital transformation has gained significant traction, there remains a research gap concerning its implementation within the specific context of the Nigerian public service. Existing literature has explored digital transformation in various sectors and countries, but there is a dearth of comprehensive studies that specifically examine the challenges and opportunities unique to Nigeria's administrative landscape. This research aims to address this gap by providing an in-depth analysis of the intricacies involved in implementing digital transformation in the Nigerian public service. This paper seeks to contribute to the existing body of knowledge by offering a nuanced understanding of the challenges and opportunities associated with digital transformation in the Nigerian public service. By identifying and dissecting the barriers that impede the effective adoption of digital technologies, the research can offer insights into potential strategies for overcoming these obstacles. Similarly, by highlighting the specific advantages and

opportunities that digital transformation presents, the study can guide policymakers and administrators in harnessing these technologies to drive positive change.

Conceptual Clarifications

The concept of Digital transformation and Nigerian Public service

Kraus et al., 2022) defined digital transformation as a profound integration of digital technologies, processes, and strategies into all aspects of an organization's operations, leading to fundamental changes in how it delivers value to stakeholders. It involves the adoption of innovative digital tools, automation, data analytics, and reimagined processes to enhance efficiency, effectiveness, and user experience. Digital transformation is a profound and multifaceted evolution that entails the seamless infusion of digital technology across every facet of a business, resulting in a sweeping overhaul of operational methodologies and the very manner in which value is bestowed upon customers. Beyond being a mere technological transition, it constitutes a paradigmatic cultural shift that compels organizations to embark on an unceasing journey of questioning conventional norms, conducting audacious experiments, and embracing failure as a stepping stone towards growth and innovation (Enterprisers Project, 2016). In essence, digital transformation signifies more than the mere adoption of new tools and systems; it embodies a holistic alteration of the organizational DNA. It mandates a reimagining of established business models, processes, and strategies, thereby fostering an environment that thrives on flexibility, adaptability, and rapid responsiveness to the ever-changing demands of the digital age. Through this metamorphosis, companies transcend traditional boundaries, leading to enhanced customer experiences, optimized operational efficiencies, and the unearthing of novel avenues for value creation.

In the study conducted by Fitzgerald et al. (2014), the concept of digital transformation is illuminated as a strategic utilization of emerging digital technologies. These technologies encompass a spectrum of innovations, ranging from social media and mobile technology to analytics and embedded devices. Through their seamless integration into existing business frameworks, these digital advancements empower organizations to achieve profound and impactful enhancements. These improvements encompass a myriad of dimensions, including but not limited to enriched customer experiences, the optimization of operational processes, and the cultivation of innovative business models. By harnessing the potential of digital transformation, enterprises can navigate the dynamic landscape of the digital age and position themselves at the forefront of competitiveness and innovation. Digital transformation refers to a multifaceted phenomenon that arises from the synergistic impact of various digital innovations. These innovations give rise to new participants and configurations of participants, as well as fresh organizational structures, operational methods, core principles, and underlying convictions. As a result, this comprehensive change can either disrupt, endanger,

supplant, or enhance the prevailing norms and regulations that govern operations in entities, interconnected networks, sectors, or domains (Hinings et al., 2018).

In the perspective presented by Nadkarni and Prügl (2021), they conceptualize digital transformation as a profound process characterized by the profound impact digital technologies can exert on various facets of a company. They emphasize that this transformation encompasses not only the integration of digital tools but also encompasses the fundamental alteration of a company's business model, its range of products and services, as well as the very structures that underpin its organizational framework. In essence, Nadkarni and Prügl's viewpoint portrays digital transformation as a holistic and dynamic evolution driven by the potential of digital technologies to reshape every aspect of how a company operates, interacts with its environment, and delivers value to its stakeholders.

Public service, as delineated by Oyedele (2015), assumes a pivotal role as the principal apparatus within government responsible for orchestrating and executing the intricate web of public policies. This pivotal function is actualized through the intricate process of transforming the abstract designs and agendas of the government into tangible manifestations of public welfare—namely, essential public goods and services meticulously fashioned to cater to the needs and aspirations of the populace at large. In essence, public service becomes the conduit through which the governmental vision transmutes into palpable societal betterment, thereby cementing its status as an indispensable cornerstone of effective governance and societal progress. Also, public service encompasses all government agencies, ministries, and departments responsible for delivering public services and executing government policies. It serves as a critical interface between the government and citizens, addressing various needs such as education, healthcare, infrastructure, and public administration.

Arowolo (cited in Osawe, 2015) presents a comprehensive perspective on the concept of Public Service. Within this framework, Public Service is defined as a vital component or department situated within the executive branch of government. Its core mission revolves around facilitating the formulation and execution of government policies. Unlike profit-driven entities, Public Service operates with a distinct objective: to provide indispensable services to the populace. This characterization underscores the primary purpose of Public Service as being oriented towards the welfare and well-being of the citizens it serves, contributing to the betterment of society as a whole. Shittu (2020) emphasized the encompassing essence of public service, defining it as the collective array of actions and provisions carried out within a governmental context, aimed at serving the greater good of society. This broad spectrum of activities operates within the domain of the public, and its overarching objective is to advance the well-being and interests of the populace at large. The scope of these services ranges from the safeguarding of

citizens through policing and defense, to the enhancement of quality of life through the provision of essential services such as healthcare and education. In essence, public service stands as the bedrock upon which a functional and responsive government builds its commitment to societal welfare.

Spicker (2009) presented a thought-provoking argument that seeks to redefine the conventional understanding of public services. Contrary to the prevailing notion that public services solely reside within the public sector due to instances of "market failure," Spicker introduced a paradigm shift by emphasizing that their essence transcends this narrow categorization. He posited that evaluating public services through the same lens as market-based provisions is fundamentally flawed. Spicker identified four pivotal characteristics that collectively shape the nature of public services. Firstly, their existence is rooted in policy objectives, reflecting deliberate societal choices rather than mere market dynamics. Secondly, their primary function is to cater to the needs of the public, exemplifying a commitment to enhancing the welfare of citizens. Thirdly, these services exhibit a redistributive quality, consciously aiming to address disparities in access and opportunity. Perhaps most notably, Spicker introduced the concept of public services as a trust, underscoring their role as custodians of societal well-being. This unique characteristic sets them apart from profit-oriented endeavors. Consequently, the operational dynamics of public services differ significantly, encompassing distinct priorities, cost considerations, capacity management, and outcomes assessment when compared to profit-driven enterprises.

Marshall and Murtala (2015) provided a comprehensive definition of Public Service as outlined in section 277 (91) of the 1979 Constitution of the Federal Republic of Nigeria, which has since been transitioned into section 169 of the 1999 Constitution. This definition encompasses a wide spectrum of governmental entities and institutions. These include not only the civil service, comprised of ministerial departments, but also extend to encompass various statutory corporations or parastatals. Additionally, the definition encompasses core pillars of governance, such as the judiciary and the legislature, which play pivotal roles in upholding the rule of law and democratic processes. Furthermore, the scope of the definition encompasses educational institutions that are significantly government-owned at the State, Local, and Federal levels. This extends the umbrella to cover establishments that contribute to the nation's educational development. Notably, entities that are either wholly or predominantly owned by the government at different tiers, including State, Local, and Federal levels, are enveloped within this definition. This incorporates a range of organizations, thereby recognizing their significance in the public service landscape. Expanding the horizon of the definition, it includes integral law enforcement bodies like the Nigeria Police and the Armed Forces, reflecting their vital roles in safeguarding national security and maintaining order. Finally, the definition acknowledges the impact of governmental control by incorporating

organizations where either Federal or state governments possess controlling shares or interests. This acknowledgment underscores the broader spectrum of government involvement in various sectors of the nation's socio-economic landscape.

Theoretical Underpinning

This study adopted the Technology Acceptance Model (TAM), originally proposed by Davis in 1989, provides a structured framework for understanding and predicting individuals' intentions to use a new technology. TAM is rooted in the idea that people's perceptions of a technology's usefulness and ease of use significantly influence their decision to adopt and use that technology. In the context of digital transformation in the Nigerian public service, TAM can serve as a valuable lens for examining how individuals within the public service organization perceive and accept the new digital tools and systems being introduced. In the context of the Nigerian public service, employees and stakeholders will likely consider whether the digital transformation initiatives will lead to improved service delivery, streamlined processes, and better decision-making. The research can delve into how these perceived usefulness factors are influenced by specific challenges and opportunities unique to the Nigerian context. It considers the user-friendliness, simplicity, and accessibility of the technology. In the context of the Nigerian public service, where digital literacy levels might vary, understanding how employees perceive the ease of use of new digital tools is crucial. The research can explore how challenges such as lack of digital skills or complicated user interfaces impact the perceived ease of use and subsequent technology adoption. TAM acknowledges that external factors beyond perceived usefulness and ease of use also influence technology adoption. These factors include individual characteristics, organizational support, and facilitating conditions. In the context of the Nigerian public service, external variables could include the availability of training and support, top-down leadership commitment, and the alignment of digital initiatives with the broader organizational goals. Exploring how these external factors interact with challenges and opportunities will provide a comprehensive understanding of the technology adoption process. For each identified challenge and opportunity in the implementation of digital transformation in the Nigerian public service, TAM can be applied to analyze its impact on perceived usefulness and ease of use. For instance, the challenge of inadequate technological infrastructure could lead to lower perceived ease of use, hindering adoption. Alternatively, an opportunity like enhanced service delivery through digital platforms could increase the perceived usefulness, facilitating adoption.

Materials and methodology

The study adopted a qualitative research approach, delving into an exploration that is both innovative and enlightening. Gathering data through secondary sources, encompassing a spectrum of pertinent journals and the vast expanse of internet resources, the research is intricately designed to unveil challenges and opportunities

in implementing digital transformation in Nigerian public service. In a stride toward progress, this study focuses on the integration of digital technologies and tools, unearthing insights that transcend the conventional and venture into the realms of the contemporary, all while shedding light on the different dimensions that underlie this critical facet of governance.

Benefits/opportunities that digital transformation presents

Digital transformation in the Nigerian public service offers several advantages and opportunities that can significantly improve efficiency, transparency, and service delivery. Here are six key points highlighting these benefits:

1. **Efficient Service Delivery:** Adopting digital technologies can streamline bureaucratic processes and reduce manual paperwork, leading to quicker and more efficient service delivery. Citizens can access government services online, reducing the need for physical visits and saving time for both the public and government officials.
2. **Transparency and Accountability:** Digital platforms enable real-time data collection and reporting, enhancing transparency and accountability in the public service. This can help minimize corruption, as transactions and interactions are recorded electronically and can be audited more easily.
3. **Data-Driven Decision-Making:** Digital transformation allows for the collection, analysis, and utilization of vast amounts of data. Nigerian government agencies can use this data to make informed decisions, identify trends, and allocate resources more effectively, leading to better policy formulation and implementation.
4. **E-Governance and Citizen Engagement:** Digital platforms provide opportunities for greater citizen engagement and participation in governance. Online portals, social media, and mobile apps can facilitate communication between citizens and government, enabling feedback, suggestions, and collaboration on various initiatives.
5. **Remote Access and Inclusion:** Digital services can reach remote and underserved areas of Nigeria, bridging the digital divide and ensuring that all citizens have access to government services. This can lead to more inclusive development and equitable distribution of resources.
6. **Cost Savings:** Over time, digital transformation can result in significant cost savings. Reductions in paperwork, streamlined processes, and optimized resource allocation can lead to more efficient resource use, ultimately saving taxpayer money.

Embracing digital transformation in the Nigerian public service has the potential to revolutionize governance, improve service delivery, enhance citizen engagement, and promote more accountable and transparent government operations. However, it's essential to ensure proper cybersecurity measures, infrastructure development, and capacity building to maximize the benefits of this transformation.

Barriers that impede the effective adoption of digital technologies in Nigeria

In any transformation that is deeply rooted, the process of transition is invariably accompanied by challenges and obstacles, much like how our eyes guide us through the intricacies of our traditional practices. As we endeavor to shift towards a digital paradigm, the same holds true. This shift is met with resistance from a fraction of individuals who persistently question its viability. Certain segments of the population remain hesitant to align themselves with governmental initiatives aimed at ushering in this digital era. This interplay between change and resistance underscores the complex nature of cultural evolution and its interaction with contemporary technological advancements.

One of the challenges facing digital transformation in Nigeria is chronic infrastructural deficit in Rural Areas. The existing infrastructural deficit within rural areas compared to their urban counterparts is a glaring concern, particularly in regions where the rural populace accounts for over 60 percent of the total population. This discrepancy in infrastructural development raises pressing questions about equitable access to essential amenities and services. Notably, the imbalance is starkly evident in the telecommunications sector, where a significant number of telecom base stations are concentrated in urban locales, leaving rural regions grappling with inadequate or even nonexistent telecommunication facilities (Abdulkareem, 2015). An analysis of internet usage in Nigeria reveals a disheartening reality, characterized by a disparity between urban and rural regions. This inequity is rooted in various factors, including the aforementioned infrastructural limitations. According to a comprehensive study conducted by the Nigerian Communication Commission in 2011, only a mere 17 percent of rural communities possessed access to internet facilities, juxtaposed with a significantly higher 79 percent in urban centers (Abdulkareem, 2015).

Another barrier is that a significant portion of individuals who are tasked with executing crucial responsibilities often lack the essential competencies required for the job, especially in the realm of digital skills. Within this group, there exists a subset that does not possess a background in information technology, necessitating the implementation of comprehensive training programs (Oye cited in Nwozor et al. 2022; Abdulkareem, 2015). Essentially, the requirement to be adaptable to the prevailing technological advancements prompts the need for training interventions. In essence, this translates to the imperative of equipping certain individuals with the requisite proficiencies to harmonize with contemporary trends. However, the challenge goes beyond mere skill acquisition. The underpinning element that orchestrates successful digital transformation is effective leadership. A critical evaluation of the landscape reveals that the entirety of the digital transformation paradigm pivots on astute leadership. The question arises: do we have access to individuals equipped with the insightful acumen essential for steering this transformation forward? The prevailing reality points to the fact that a substantial

number of both leaders and employees are bereft of the indispensable leadership aptitudes necessary for this endeavor. This scarcity of leadership competencies underscores a looming predicament—the scarcity of intellectual capacity needed to catalyze profound change. According to Oye (cited in Nwozor et al. 2022), the predicament is compounded by the observation that the individuals accountable for spearheading this transformation are deficient in the quality of empathy. The profound challenge here is their inability to effectively rally individuals and foster a shared understanding of the rationale behind these transformative efforts. The prevailing situation indicates that these leaders lack the skill to connect with their teams on a level that engenders a collective comprehension of the need for change. Consequently, a deficit of empathetic leadership further complicates the ongoing global challenge of instigating sufficient intelligence and capability to usher in a new era of transformation.

Persistent Power Failure is a barrier that casts a shadow over the seamless realization of e-government initiatives in Nigeria is the unrelenting challenge of inconsistent power supply. This ceaseless struggle with power outages poses a significant impediment to the unhindered success of digital governance implementation across the nation. The unfortunate reality is that power blackouts have transformed into a distressingly commonplace occurrence, infiltrating and affecting the fabric of Nigerian cities, towns, and even remote villages (Abdulkareem, 2015). These pervasive disruptions cast a pall over the efficacy of Information and Communication Technology (ICT) systems, undermining their capacity to function robustly and efficiently. The critical synergy between digital governance and reliable power supply is crucial for the harmonious functioning of e-government mechanisms, making the persistent energy deficiency a substantial roadblock to the aspirations of a technologically-driven governance model. Within this landscape of unreliable power, telecommunication infrastructure emerges as a prime illustration of the quandary at hand. In a proactive response to the erratic energy situation, telecommunication companies have resorted to the deployment of power generating plants as a viable alternative power source to fuel their indispensable equipment. These backup generators, while serving as a lifeline for maintaining connectivity, inadvertently contribute to the burgeoning operational costs borne by these corporations. The intricate interplay between procurement, maintenance, and fueling of these power-generating apparatus places a substantial financial burden on the telecommunication companies, an encumbrance that ultimately trickles down to the end-users and consumers of their services.

When discussing the dynamics of change within the realm of human beings, there emerges a complex interplay between the inclination for change and the propensity for resistance. This dichotomy is particularly pronounced in the context of Nigeria's contemporary civil service landscape. In this setting, the prevailing inclination often leans towards maintaining the existing status quo (Oye cited in Nwozor et al. 2022).

The average civil servant in Nigeria today, driven by a variety of factors, tends to exhibit resistance to transformative shifts. Central to the reluctance for change are multifaceted challenges that act as formidable obstacles. These challenges are manifold, with one of the foremost impediments being the absence of a robust and all-encompassing database dedicated to the public service domain. The lacuna in reliable information infrastructure further compounds the issue. It is observed that civil servants frequently engage in the manipulation of information, even when it pertains to their own records. A striking manifestation of this phenomenon becomes evident in discussions concerning retirement age. A considerable number of civil servants resort to the continuous manipulation of their recorded years of service and birth dates in a bid to align these details with their personal preferences and desires. This prevailing practice significantly exacerbates the challenges that afflict the public sector.

The intricate interplay between politics and policies presents a formidable barrier on the path to achieving optimal results through digitalization (Signore cited in Nwozor et al., 2022). As Nigeria earnestly strive to initiate transformative endeavors, a stark reality emerges—certain government officials stand as obstacles to the seamless realization of these ambitions. Their reluctance to facilitate the successful implementation of digitalization initiatives serves as a stark limitation to our progress. In this intricate landscape, it becomes increasingly evident that our endeavors to digitize are not being complemented by the formulation of essential and appropriately robust policies. We embark on the journey of digitization without simultaneously crafting the necessary frameworks to effectively guide these aspirations. The imperative of government policies, harmonized with the digital age, remains largely unmet, casting shadows on our otherwise promising goals.

The relentless march towards IT infrastructural development in Nigeria has been persistently hindered by a recurring and concerning issue – the rampant theft and vandalization of internet and telecommunication equipment. This regrettable phenomenon, particularly prevalent within the conflict-prone regions of the North East and South-South geopolitical zones of Nigeria, casts a shadow of setback over the otherwise promising progress of the nation's technological advancement. The theft and vandalization of crucial internet and telecommunication equipment stand as formidable barriers that impede the nation's stride towards digital transformation. The intricate web of connectivity that forms the backbone of modern information and communication systems is systematically compromised as these essential components fall victim to criminal acts. Instances abound where critical infrastructure, essential for seamless communication and connectivity, falls prey to the hands of opportunistic criminals, exacerbating the challenges faced by a nation aspiring to leverage technology for development. An illustrative example of this disturbing trend unfolded in 2012, underscoring the gravity of the situation. MTN Nigeria, the country's largest telecommunication company, bore the brunt of this

menace, suffering over seventy (70) incidents of facility vandalization within a single year Daily (Independent cited in Nwozor et al., 2022). These incidents ranged from the theft of vital equipment to the deliberate destruction of infrastructure, leaving an indelible mark on the operational capacity of the company and by extension, the connectivity options available to the citizens of Nigeria.

Conclusion

The implementation of digital transformation in the Nigerian public service offers the promise of addressing persistent challenges and capitalizing on new opportunities. The public service, crucial for governance, faces issues such as inefficiency, corruption, and service gaps. Digital transformation, driven by technology, can streamline operations, enhance transparency, and improve service delivery. However, barriers exist. Infrastructure gaps, especially in rural areas, hinder equal access to digital services. Limited digital skills among officials, coupled with leadership gaps, impede integration. Unstable power supply undermines digital efforts. Political dynamics, inadequate policies, and resistance slow progress. Equipment theft disrupts IT infrastructure. Tackling these issues requires investing in infrastructure, providing training, fostering strong leadership, crafting effective policies, and combating theft. Commitment to digital transformation can lead to an efficient, transparent public service, setting an example for the region. By embracing digital opportunities, Nigeria's public service can overcome challenges, contributing to the nation's progress in the digital era.

Recommendations for advancing digital transformation in Nigeria

Advancing digital transformation in Nigeria requires a multi-faceted approach that involves government initiatives, private sector engagement, infrastructure development, education and skills enhancement, and regulatory reforms. Here are some recommendations to consider:

1. Prioritize building telecommunications and internet infrastructure in rural areas by partnering with private companies and communities. Offer incentives for investment in underserved regions and explore satellite and wireless technologies for wider coverage.
2. Establish comprehensive training programs to equip individuals, including non-IT professionals, with essential digital skills. Provide leadership training focused on effective communication and empathy to foster understanding and support for digital changes.
3. Invest in reliable power infrastructure and promote renewable energy sources. Create policies encouraging energy-efficient practices and technologies to reduce dependency on backup generators.
4. Develop a secure digital database for public services to prevent manipulation of personal records. Implement strict penalties for falsifying information to enhance transparency.

5. Collaborate with experts and stakeholders to formulate policies supporting digital transformation. Communicate the benefits of digitalization through awareness campaigns to foster policy adoption.
6. Enhance security measures around critical infrastructure through technology, community involvement, and stricter penalties for theft and vandalization.

References

Shittu, A. K. (2020). Public Service and Service Delivery. Global Encyclopedia of Public Administration, Public Policy, and Governance,1-8. doi: 10.1007/978-3-319-31816-5_4005-1

Marshall, J. B. & Murtala, A. M. (2015). Public service in Nigeria- an overview of functions and code of conduct. *Global Journal of Politics and Law Research,* 3(1)61-69. https://www.eajournals.org/wp-content/uploads/Public-Service-in-Nigeria-An-Overview-of-Functions.pdf

Osawe, C.O (2015). Nigerian public service performance in a dysfunctional ecology: Issues, challenges and the way forward. Review of Public Administration and Management, 3(7): 45-57. https://www.arabianjbmr.com/ pdfs/ RPAM_VOL_4_7/5.pdf

Nadkarni, S. & Prügl, R. (2021). Digital transformation: a review, synthesis and opportunities for future research. *Management Review Quarterly,* **71**, 233–341. https://doi.org/ 10. 1007 / s11301-020-00185-7

Hinings, B., Gegenhuber, T., Greenwood, R. (2018). Digital innovation and transformation: An institutional perspective. *Information and Organization*, 28(1), 52–61.

Fitzgerald, M., Kruschwitz, N., Bonnet, D. & Welch, M. (2014). Embracing digital technology: A new strategic imperative. *MIT Sloan Management Review*, 55(2), 1.

Oyedele, S. O. (2015). The Nigerian public service and service delivery under civil rule. *Journal of Public Administration, Finance and Law,* 7: 33-43. https:// www.jopafl.com/uploads/ issue7/ the_ nigerian_public_service_and_service_delivery_under_civil_rule.pdf

Bello, M. F. (2021). Good governance and civil service accountability in Nigeria: Problems and Prospects. http://dx.doi.org/10.2139/ssrn.3860781

Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda, *Journal of Business Research*, 122: 889-901, https://doi.org/ 10.1016 /j.jbusres. 2019.09.022.

Wu, M., Kozanoglu, D. C., Min, C., Zhang, Y. (2021).Unraveling the capabilities that enable digital transformation: A data-driven methodology and the case of artificial intelligence. *Advanced Engineering Informatics*, 50. https://doi.org/ 10.1016/ j.aei.2021.101368.

Akter, S., Michael, K., Uddin, M. R., McCarthy, G., Rahman, M. (2022). Transforming business using digital innovations: the application of AI, blockchain, cloud and data analytics. Annals of Operations Research, DOI: 10.1007/s10479-020-03620-w

Abdulkareem, A. K. (2015). Challenges of e-government implementation in the Nigerian public service. Journal of Writing in Creative Practice 1(4):45-56.

https://www.researchgate.net/ publication/292151098_Challenges_of_E-Government_Implementation_in_ the_Nigerian_ Public_Service

West Africa Gateway (2012). Nigeria. https://www.oecd.org/swac/publications/Nigeria_e-version_en_light.pdf

Asaju, K. & Ayeni, E. (2021). Public Bureaucracy and National Development in Nigeria: Issues and Challenges. *Nigerian Journal of Administrative and Political Studies*, 5(1): 69-90. https:// www.researchgate.net/ publication/ 355820608_ Public_ Bureaucracy_and_National_Development_in_Nigeria_Issues_and_Challenges

Enterprisers Project (2016). What is digital transformation? https://enterprisersproject. com/what-is-digital-transformation

Kraus, S., Jones, P., Kailer, N., Weinmann, A., Chaparro-Banegas, N., & Roig-Tierno, N. (2021). Digital Transformation: An Overview of the Current State of the Art of Research. *SAGE Open, 11*(3). https://doi.org/10.1177/21582440211047576

Spicker, P. (2009). The nature of a public service. OpenAIR@RGU. http://openair.rgu.ac.uk

Sadiq, O., Hack-Polay, D., Fuller, T. & Rahman, M. (2022). Barriers to the Effective Integration of Developed ICT for smes in rural nigeria. *businesses*, *2*, 501-526. https://doi.org/10.3390/businesses2040032

Onwuegbuna, G., Etim, E. and Fatile, J. (2022). Impact of the 'New Normal'–Induced Digital Transformation on Public Service Delivery and Governance in Nigeria: Challenges and Opportunities, Ogunyemi, K. and Onaga, A.I. (Ed.) *Responsible Management of Shifts in Work Modes – Values for a Post Pandemic Future, Volume 1*, Emerald Publishing Limited, Bingley, pp. 197-215. https://doi.org/10.1108/978-1-80262-719-020221016

Nwozor,A., Ake, M., Oluwakemi, O.J., & Tijesunimi, A/ R. (2022). Digital Transformation and the Fight against Corruption in Nigeria's Public Sector. *PERSPEKTIF*, 11(3): 850-858. DOI: 10.31289/perspektif.v11i3.6449