



# Digitalization and Public Value Co-Creation in Public Sector Organizations

## *The Citizens as Co-Creators*

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### Abstract

Public value co-creation emerged as a perspective that takes public service delivery beyond effectiveness and efficiency to the services that involve different actors which meet the citizens' satisfaction and expectation. This development has necessitated the adoption of several strategies by governments aimed at achieving this goal. Arising from this understanding, this paper's objective rests upon the exploration of the correlation between digitalization and public value co-creation in public sector organizations viewing the citizens as co-creators. Utilizing secondary sources of data, the paper compellingly argues that the citizens could participate more actively and effectively in digitalization driven public value co-creation in public sector organizations. However, it is highlighted in the study that digital divide is a potential obstacle which could undermine the role of citizens towards digitalization driven public value co-creation in public sector organizations. As a panacea, the paper recommends for decentralization of digital governance so as to provide majority of the citizens (especially those at the remote areas) the opportunity to participate in the public value co-creation processes.

### Keywords

digitalization, public value co-creation, public organization, service delivery

### 1 Introduction

The quest for public service that satisfies the people is gaining momentum across the world as citizens are no longer interested only in services delivered to them but most importantly the level to which those services meet their expectations and satisfaction. Therefore, it suffices to argue that public value co-creation perspective emerged to strongly encourage public sector management to refocus from efficient service delivery to satisfactory public service involving other relevant actors. This suggests a paradigm shift from within the boundary of organization to that of society at large and by extension explains the growing interest in public value co-creation as a way achieving the above objective. The concept of co-creation has grown significantly and is gaining attention in many fields such as public management (Ansell & Torfing, 2021; Torfing et al., 2019; Torfing & Sørensen, 2019; Bryson et al., 2017). It is a perspective originated from marketing where it was

viewed as a process whereby customers collaborate with service providers or suppliers in creating value (Vargo & Lusch, 2004). Arguably, public value co-creation goes beyond effective public service delivery to the involvement of other relevant actors (citizens and private sector) as well as the satisfaction of the people. These services should be sustainable, effective and efficient; and most importantly meet the citizens' expectation (Ofoma & Adeiza, 2023).

While the discourse on public value co-creation has continued, digitalization has arguably come to the fore as a driving force for the achievement of organizational (both public and private) objectives; thereby further exposing the failure of New Public Management reforms in meeting the expectations of the people in public service delivery. This suggests the growing concern about digital government in public value perspective (Cordella & Bonina, 2012). The wide spread of digital tools has encouraged the movement from better service delivery to public services that satisfy citizens; hence the strong basis for public value co-creation as the primary objective of digital initiatives of government. Unlike the New Public Management that considers digitalization as a tool for administrative efficiency, public value thesis has a wider coverage that goes beyond service delivery to fulfilment of societal objectives (Bannister & Connolly, 2014; Cordella & Bonina, 2012). As a result of the digital revolution, information sharing and access among citizens has changed dramatically. Providing services that meet the needs of the citizens may not be practicable without leveraging digital tools that are springing up (Ehiane et al., 2019).

However, it is argued that the adoption of digital tools in public service is not foolproof as it could pose certain challenges especially to the citizens. For instance, digital operations in Nigeria are threatened by fraudulent and criminal activities that put personal information and security under serious attack (Fatile, 2012; Kazeem, 2011). The pulling down of Mobile ID app (a digital tool) that was meant to generate digital National Identification Number of a successfully enrolled citizens by National Identity Management Commission was due to concerns bothering on security and privacy (Eke et al., 2022). Notwithstanding, it is contended that public value co-creation perspective has established a strong context within which the important role of public servants and digital reforms can be reconsidered from a value oriented point of view (Bannister & Connolly, 2014; Cordella & Bonina, 2012; Pang et al., 2014; Rose et al., 2015) that may result in scholarly investigations both within public administration and the related disciplines. Existing studies primarily center on political and administrative methods of measuring public value rather than on public value expressed by the citizens. Though, the centrality of the citizens at the concept of public value co-creation is widely accepted (Moore, 1995; Bozeman, 2007; Bozeman, 2019; Meynhardt, 2009; Nabatchi, 2012; Osborne et al., 2021). Panagiotopoulos et al. (2019) argue that a lot of relevant interrogations around public value theory have been made but understanding and ascertaining the effect of digital government measures on public value co-creation is largely underexplored. This scholarly lacuna is buttressed in the article by Criado and Gil-Garcia (2019, 439) that "the impact of technologies to foster public value creation using open data and transparency websites, crowdsourcing and participation platforms, smart city sensors, or social media technologies, among others, remains broadly unexplored from the perspective of public sector management". Furthermore, Almeida et al. (2018), Sicilia et al. (2019), and Ansell and Torfing (2021) argue that there is limited research on approaches of public service co-creation as well as its execution process leading to the desired results in the context of digitalization. Similarly, Rodriguez Muller et al. (2021) infer that there is insignificant research interrogating the processes and results of public service co-creation. These illuminate the novelty of this particular study that probes the influence of digitalization on public value co-creation in public sector organizations seeing the citizens as co-creators.

Consequently, the paper is organized as follows: The next section centers on methods followed by review of literature on digitalization and public value co-creation. The subsequent section presents an insight on the discourse while the next section of the study focuses on digital divide as a potential pitfall, ensuing concluding remarks.

## **2 Methods**

The study made use of secondary sources of data such as newspapers, journal articles, books etc. Therefore, the information could be generated from public organizations, international organizations, highly respected journal outlets such as the ones published by Taylor & Francis, Elsevier, Sage, etc.

## **3 Literature review**

### **3.1 Digitalization: Concept and issues**

Concepts are foundations upon which research is built to the extent that lack of their clarification will result in ambiguity (Adcock & Collier, 2001). These (concepts) are not just components of a theory but also instruments for gathering fact and repository of data. In order words, concepts drive research (Sartori, 1970, quoted in Ejiofor, 2024). Accordingly, digitalization as a concept can be viewed as changing a model of or in an organization which results in creating new services or products, altering the actors of value creation process as well as adapting to the processes, setting, or ecosystems so as to apply digital tools (Henriette et al., 2016; Legner et al., 2017; Parviainen et al., 2017).

Digitalization is changing our environment in such a manner that new opportunities and challenges are introduced for organizations operating in this dynamic environment (Tilson et al., 2010; Brennen & Kreiss, 2016; Esposito De Falco et al., 2017; Lindgren et al., 2019). This transformation is so prevalent that it includes changes affecting individual duties, organizational models, new interactions, digitization of existing processes and cutting-edge panacea that better meet the satisfaction of the people. Digitalization is by no means a futuristic prediction rather a component of how organizations operate presently (Ford, 2015). Automation, big data analytics, connectivity and digital interfaces are just a few of the fields where solutions incorporating digitalized technologies are becoming more prevalent (Brynjolfsson & McAfee, 2014). These solutions have been demonstrated to have impacts on operations management both within and across organizations (Agrifoglio et al., 2017).

It suffices to contend that the emergence of digitalization as a prominent strategic tool for organizations is not surprising but being progressive in digital direction is rarely uncomplicated (Legner et al., 2017; Zangiacomini et al., 2020). Digitalization does not only affect the process, settings and society but also shape the players or actors in the system. Specifically, present tasks may be affected (Parviainen et al., 2017; Henriette et al., 2016), therefore, organizations must realize and analyze the importance of new technical know-how needed to fill the vacuum in the environment to fully reap the benefits of digitalization. Those with substantial organizational expertise who are not familiar with growing digital technologies and digitalized processes face a skill gap due to new individual requirements. Tensions may also arise if the IT department is not in sync with the rest of the organization (Kohli & Johnson, 2011) since it plays a crucial

role in providing the expertise required to implement a digital strategy to other organizational departments.

Building on this critical analysis suggests the indispensability of digitalization in modern organization. Arguably, digitalization provides an avenue where organizations thrive stronger to meet the needs and satisfactions of the people or citizens. While leveraging digitalization, they (organizations) must be adaptive to accommodate the alteration accompanying digitalization.

### **3.2 Public value co-creation**

The concept of public value co-creation is becoming more significant in the design and provision of public services (Moore, 1995; Ansell & Torfing, 2021; and Soorensen et al., 2021) and it could be described as a process through which public, private sector and citizens collaborate to address a common challenge through effective exchange of information, ideas, skills and resources which improve value in public service delivery. Meanwhile, identifying the point of divergence between co-creation and co-production is often confusing which leads to the use of the concepts interchangeably. Therefore, this paper is motivated to draw the line of difference between the two concepts by arguing that co-production differs from co-creation as the former places lesser importance on value creation (Torfing et al., 2019; Voorberg et al., 2015). Furthermore, it could also be confusing to establish the difference between public value co-creation and perspectives on network governance as well as collaborative governance. Both co-creation and collaboration lays emphasis on the significance of multi-stakeholder collaboration but using distinct approaches (Torfing et al., 2019). In this context, Ansell and Gash (2008) argue that collaborative governance entails collective decision-making process aimed at executing government policies; unlike co-creation that attempts to connect collaboration to innovation to encourage metamorphic problem-solving strategy between different stakeholders (public officials, citizens and private sector) (Ansell & Torfing, 2021; Torfing et al., 2019).

Voorberg et al. (2015) infer that co-creation includes co-design, co-initiation and co-implementation between public service and other relevant stakeholders such as the citizens and private sector. The interrogation of co-creation processes fundamentally entails the consideration of several crucial factors. Usually, particular attention is paid to the participating players, their methods, the platforms on which they interact, the purposes of the co-creation activities, and the issues that influence public value propositions and results (Bryson et al., 2017). A broad spectrum of private and public players, including citizens, and civil society organizations constitutes the actors (Torfing et al., 2019; Torfing & Sørensen, 2019). Their approaches differ and are driven by their kind, duties and objectives. Previously, it was determined that certain public sector practices were crucial for the creation and co-creation of public value. These practices include policy analysis, design and evaluation, leadership, deliberation and dialogue, institutional and organizational design, formal and informal democratic processes, and strategic management (Bryson et al., 2015). Arenas could be viewed as platforms where actors get involved in collaborative problem-solving through negotiation and joint effort. These platforms are viewed as generative establishments which encourage co-creation (Ansell & Torfing, 2021). Torfing et al. (2019) argue that co-creation processes in arenas have the potential to enhance outcomes, modify the comprehension of challenges, and generate novel solutions. It is also crucial for actors to recognize and express interdependencies in co-creation projects to understand how dependent they are on one another to accomplish their own objectives (Ansell & Torfing, 2021).

Premised on the above interrogation is an inference that reveals that providing services which meet public value goes beyond the participation of public actors (public officials) to

include other relevant actors such as private sector and citizens. Consequently, the next section attempts to establish the correlation between digitalization and public value co-creation by way of pinning it down to citizens involvement.

### **3.3 Digitalization and public value co-creation: Bringing the citizens on board**

Public value co-creation perspective essentially underscores the major function of public sector organization which is to influence organizational structures that encourage the creation of spaces for different actors to participate collectively and innovatively towards addressing public problems (Ansell & Torfing, 2021; Cordella & Paletti, 2019; Torfing et al., 2019). While interrogating the significance of co-creation, Ansell & Torfing (2021) submit that the adoption of co-creation as a fundamental tenet of governance can offer public sector organizations much-needed opportunities for mobilizing resources, particularly in light of general European trends towards reduced public spending combined with lofty goals and a bevy of complex contemporary issues and challenges (Hendricks et al., 2021; Metzger & Lindblad, 2024).

Flowing from the above deconstruction is the understanding that co-creation as a perspective is a process involving at least two actors (public, citizen or/and private, etc.) aimed at collaboratively improving the production of public value by addressing a challenge or carrying out a task through brainstorming or exchange of resources or skills.

Public value co-creation should aim at innovating public service provision through the construction of a sustainable ecosystem in which various categories of stakeholders (especially citizens) are involved in the programming and planning of public policies, the design and delivery of public services, as well as in the processes of resource allocation, reporting, and evaluation of the use of public resources. Adopting these lenses, the responsibility for generating value no longer falls exclusively within the purview of public sector organizations (PSOs) as endorsed by the product dominant logic. Instead, such responsibility stems from multi-stakeholder collaboration, where public sector organizations and citizens co-create value through the integration of their mutual resources (Kudo et al., 2022, 2).

Hence, co-creation is predicated on the idea that value is produced not just by the random events that impact the citizens' broader life experiences but also by the dynamic and variable acts carried out by subjects, citizens, and public sector organizations (Cui & Aulton, 2023).

Strengthening this submission, Voorberg et al. (2015) argue that the degree of citizens' involvement in the design and processes of public service delivery is becoming increasingly important when developing responsive and innovative services. In fact, the citizens are seen by policy makers as *sine qua non* condition and foundation upon which social innovation in the bureaucracy is built. "The growth in popularity of citizen engagement initiatives, such as community development committees, citizen satisfaction surveys, public consultations, participatory planning, budget consultations and social audits, is a reflection of the crucial contribution that citizens in developing countries can make to the solution of specific problems in the delivery of public services by engaging constructively with state actors" (United Nations Development Programme, 2016, 1). This leads to a better socially-inclusive and satisfactory service delivery; as policy-making co-created platforms are workable initiative that revives the connection between citizens and government above transactional and service-oriented strategy for creating public value. The platforms are structures that enable participants (for

instance users, citizens, providers) to carry out a variety of tasks, frequently establishing de facto standards for decision-making as well as forming the whole ecosystems for cooperation (Ansell & Torfing, 2021).

Arguably, there is a growing interest in the nexus between digitalization and citizens-government interactions; changing from elderly rehabilitation robots through the use of social media platforms to citizens providing information aimed at designing and implementing public service. Accordingly, it is believed that new technological tools will be advantageous to co-creation by improving the processes as well as fundamentally changing the way the citizens influence public services (Lember, 2018). It is anticipated that digital tools will enhance the capacities of individuals and groups and significantly expand the prospects for more individualized and demand-driven public services (Noveck, 2015; Meijer, 2012) thereby strengthening the legitimacy of the government (Kornberger et al., 2017).

This paper is therefore led to posit that citizens can be mobilized using digital tools such as Facebook, Whatsapp, Instagram and Twitter among others. This submission is accentuated in the opinion of Meijer (2012) that studies have examined the extent to which digital tools such as social media could be deployed to engage the citizens more directly in crimes detection. Those findings have seemingly shown that digital instruments will certainly create more important role for citizens. For law enforcement agencies such as police, Twitter and related apps serve as alerting and correspondence tools. These can be complemented with analytical tools that interpret the vast amounts of information gathered from social media. Undoubtedly, these technologies facilitate the development of novel forms of interactions between law enforcement personnel and the citizens (Grimmelikhuijsen & Meijer, 2015). Citizens have a role in the production of public value (Campanale et al., 2021; Moore, 1995; Salemans & Budding, 2022) by striking a balance between the three types of interests which are self-interest, public interest and procedural interest. The above interest imply capturing the reason for public sector organizations to deliver quality services at affordable prices to the citizens and customers; emphasizing the social implications of public organizations by way of providing taxes and legitimacy for common good activities which enhance the citizens standard of living (and have an inherent capacity to re-distribute content); and highlighting the importance of justice and observance of procedure in the manner in which people are able to influence public decision and even individual services (Talbot, 2011). By utilizing digital technologies to the fullest, the citizens can truly become an actor and in collaboration with administrative officers, can co-create public services that meet their needs and aspirations (European Commission, 2019).

The ability to collect relevant data on, for example, pollution or the use of public spaces can provide citizens with a strong basis for co-creating new solutions with policymakers, giving them a seat at the table. As such, sensing technologies can empower citizens and give them the opportunity to become part of the decision-making process. Data collected from or by citizens adds public value. For example, data on people's transportation and parking choices does so if joined up with mobile pollution data and if used to co-create behavioural changes (Lember et al., 2019, 1674).

Digitalization could enhance the implementation of co-creation. Unlike before, interacting or reaching out to the citizens both collectively and individually is now easier for administrators using high digital tools (Steen et al., 2018). Involving the citizens in the design and delivery of public services opens up governance space, strongly encourages transparency and makes the people more confident in the system; thereby addressing the fundamental finding made in the

study by Adeyemo (2011) and Chiemeké and Ewwiekpaefe (2011) that Nigerian citizens have negative perceptions about government as a result of the antecedents of the political class and government institutions

The unprecedented global political consciousness witnessed among the citizens especially the African youths is a pointer to the impact the citizens could make on service delivery processes if digitally involved. The increasing interest among the citizens in deploying digital technologies in probing the activities of public officials also demonstrates the extent their mobilization and participation can impact on service delivery that meets their satisfaction. While corroborating this assertion, United Nations Development Programme (2016, 1) posits that “Reform-minded public officials may take advantage of citizen engagement in a variety of ways: to elicit information, ideas and other contributions directly from the citizens, support public sector innovations and entrepreneurship, defend the public interest from political clientelism, strengthen the legitimacy of the state in the eyes of citizens and bolster public sector accountability and governance”. This suggests the digitalization driven significant correlation between the citizens and co-creation as the latter is widely seen as a process that adds public value by integrating the citizens in design and delivery of services (Cluely et al., 2023).

### **3.4 Digital divide as a potential pitfall**

The above explorations paint a picture of positive outcomes of digitalization impacting on public value co-creation through the citizens’ participation. However, it is contended that public value co-creation in digital context is not flawless as digital divide could constitute a major challenge. Contributing to this discourse, Xu and Tang (2020); Huang and Yu (2019) and Clark et al. (2013) submit that the application of digital technologies for public value co-creation is hampered by digital inequality. Buttressing this point, Ofoma (2021) observes the discrepancy in the use of digital technologies among Nigerian citizens linking it to gaps in education and income among others. In third world countries, the gap existing in digital access to information and communication between the wealthy and the poor is significant (Venkatesh & Sykes, 2013). However, this does not in any way rule out the existence of digital divide in developed countries as Barrantes and Cozzubo (2019), Hargittai et al. (2019), Schehl et al. (2019), and Seifert et al. (2017) unanimously assert that there is digital inequality in developed economies specifically between the old and young populations. Significant urban-rural digital inequality is one of the major challenges facing remote rural areas in European economies (European Commission, 2021). Beyond common gap in access, inequality can manifest in digital skills and competency and this is described as second-level digital divide (Friemel & Signer, 2010). Consequently, this digital divide becomes a barrier to the inclination and capacity of the citizens to participate as co-creators, thereby resulting to the dependency of a particular set of citizens as active co-creators which in turn leads to unrepresentative outcomes (Linders, 2012).

## **4 Conclusion**

This paper is a deliberate investigation aimed at finding out the impact of digitalization on public value co-creation in public sector organizations looking at the citizens as co-creators. In an attempt to achieve this objective, the key variables of the study which are digitalization and public value co-creation were conceptualized and related issues examined critically. Putting up a comprehensive discourse on the main issue, the paper strongly established that the citizens

could participate more actively and effectively in digitalization driven public value co-creation in public sector organizations. Notwithstanding, digital divide was identified as a major challenge to the above. As a panacea, the paper therefore suggests for decentralization of digital governance which will provide majority of the citizens (especially those at the remote areas) the opportunity to participate in the public value co-creation processes.

## References

- Adcock, R., & Collier, D. (2001). Measurement validity: A shared standard for qualitative and quantitative research. *American Political Science Review*, 95(3), 529–546. <https://doi.org/10.1017/S0003055401003100>
- Adeyemo, A. (2011). E-government implementation in Nigeria: An assessment of Nigeria's global e-gov ranking. *Journal of Internet and Information System*, 2(1), 11–19. <https://doi.org/10.5897/JIIS.9000007>
- Agrifoglio, R., Cannavale, C., Laurenza, E., & Metallo, C. (2017). How emerging digital technologies affect operations management through co-creation. Empirical evidence from the maritime industry. *Production Planning & Control*, 28(16), 1298–1306. <https://doi.org/10.1080/09537287.2017.1375150>
- Almeida, G., Cappelli, C. Maciel, C., & Machecha, Y. (2018). Co-production of digital services: Definitions, frameworks, cases and evaluation initiatives-findings from a systematic literature review. In A. Ko, & E. Francesconi (Eds.), *Electronic government and the information systems perspective* (pp. 3–19). Springer. [https://doi.org/10.1007/978-3-319-98349-3\\_1](https://doi.org/10.1007/978-3-319-98349-3_1)
- Ansell, C., & Gash, A. (2008). Collaborative Governance in Theory and Practice. *Journal of Public Administration Research and Theory*, 18(4), 543–571. <https://doi.org/10.1093/jopart/mum032>
- Ansell, C., & Torfing, J. (2021). *Public Governance as Co-creation. A Strategy for Revitalizing the Public Sector and Rejuvenating Democracy*. Cambridge University Press. <https://doi.org/10.1017/9781108765381>
- Bannister, F., & Connolly, R. (2014). ICT, public values and transformative government: A framework and programme for research. *Government Information Quarterly*, 31(1), 119–128. <https://doi.org/10.1016/j.giq.2013.06.002>
- Barrantes Cacaes, R., & Cozzubo Chaparro, A. (2019). Age for learning, age for teaching: The role of inter-generational, intra-household learning in internet use by older adults in Latin America. *Information, Communication & Society*, 22(2), 250–266. <https://doi.org/10.1080/1369118X.2017.1371785>
- Bozeman, B. (2007). *Public Values and Public Interest: Counterbalancing Economic Individualism*. Georgetown University Press. Online: <https://www.jstor.org/stable/j.ctt2tt37c>
- Bozeman, B. (2019). Public values: Citizens' perspective. *Public Management Review*, 21(6), 817–838. <https://doi.org/10.1080/14719037.2018.1529878>
- Brennen, J. S., & Kreiss, D. (2016). Digitalization. In K. B. Jensen, R. T. Craig, J. D. Pooley, & E. W. Rothenbuhler (Eds.), *The International Encyclopedia of Communication Theory and Philosophy* (pp. 556–566). Wiley&Sons. <https://doi.org/10.1002/9781118766804.wbiect111>
- Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress and prosperity in a time of brilliant technologies*. WW Norton & Company.

- Bryson, J., Crosby, B. C., & Bloomberg, L. (Eds.) (2015). *Public value and public administration*. Georgetown University Press.
- Bryson, J., Sancino, A., Benington, J., & Sørensen, E. (2017). Towards a multi-actor theory of public value co-creation. *Public Management Review*, 19(5), 640–654. <https://doi.org/10.1080/14719037.2016.1192164>
- Campanale, C., Mauro, S. G., & Sancino, A. (2021). Managing co-production and enhancing good governance principles: insights from two case studies. *Journal of Management and Governance*, 25(1), 275–306. <https://doi.org/10.1007/s10997-020-09508-y>
- Chiemeke, S., & Ewwiekpaefe, A. (2011). A conceptual framework of a modified unified theory of acceptance and use of technology (UTAUT) model with Nigerian factors in E-commerce adoption. *Educational Research*, 2(12), 1719–1726. Online: <https://tinyurl.com/2hyue94e>
- Clark, B. Y., Brudney, J. L., & Jang, S. (2013). Coproduction of government services and the new information technology: Investigating the distributional biases. *Public Administration Review*, 73(5), 687–701. <https://doi.org/10.1111/PUAR.12092>
- Cluley, V., Parker, S., & Radnor, Z. (2023). Editorial: Public value for all? Considering the parameters of public value co-creation. *Public Money & Management*, 43(1), 1–3. <https://doi.org/10.1080/09540962.2022.2140900>
- Cordella, A., & Bonina, C. M. (2012). A public value perspective for ICT enabled public sector reforms: A theoretical reflection. *Government Information Quarterly*, 29(4), 512–520. <https://doi.org/10.1016/j.giq.2012.03.004>
- Cordella, A., Paletti, A., & Shaikh, M. (2017). Public value and co-production: Reconfiguring service delivery. *Academy of Management Proceedings*, 2017(1), 10577. <https://doi.org/10.5465/AMBPP.2017.132>
- Cordella, A. & Paletti, A. (2019). Government as a platform, orchestration, and public value creation: The Italian case. *Government Information Quarterly*, 36(4) 101409. <https://doi.org/10.1016/j.giq.2019.101409>
- Criado, J. I., & Gil-Garcia, J. R. (2019). Creating public value through smart technologies and strategies: From digital services to artificial intelligence and beyond. *International Journal of Public Sector Management*, 32(5), 438–450. <https://doi.org/10.1108/IJPSM-07-2019-0178>
- Cui, T., & Aulton, K. (2023). Conceptualizing the elements of value in public services: Insights from practitioners. *Public Management Review*, 1–23. <https://doi.org/10.1080/14719037.2023.2226676>
- Ehiane, S. O., Adejuwon, K. D., & Goyayi, M. L. J. (2019). Revolutionising public service delivery through digital governance: Assessing the government to citizens (G2C) scenario in Nigeria. *AFFRIKA: Journal of Politics, Economics and Society*, 9(1), 5–29. <http://dx.doi.org/10.31920/2075-6534/2019/9n1a1>
- Ejiofor, P. E. (2024). Hobsbawm on rebellion in the postcolony: The political economy of armed conflicts in Northern Nigeria. *Review of African Political Economy*, 51(179), 61–87. <https://doi.org/10.62191/roape-2024-0007>
- Eke, D., Oloyede, R., Ochang, P., Borokini, F., Adeyeye, M., Sorbarikor, L., Wale-Oshinowo, B., & Akintoye, S. (2022). Nigeria's digital identification (ID) management program: Ethical, legal and socio-cultural concerns. *Journal of Responsible Technology*, 11, 100039. <https://doi.org/10.1016/j.jrt.2022.100039>
- Esposito De Falco, S., Renzi, A., Orlando, B., & Cucari, N. (2017). Open collaborative innovation and digital platforms. *Production Planning & Control*, 28(16), 1344–1353. <https://doi.org/10.1080/09537287.2017.1375143>

- European Commission (2019). *Digital government: Co-creating innovative public services for citizens and business*. Online: <https://digital-strategy.ec.europa.eu/en/node/1425/printable/pdf>
- European Commission (2021). *A long-term vision for the EU's rural areas*. Online: <https://tinyurl.com/49r2uubp>
- Fatile, J. (2012). Electronic governance: Myth or opportunity for Nigerian public administration? *International Journal of Academic Research in Business and Social Sciences*, 2(9).
- Ford, M. (2015). The rise of the robots: Technology and the threat of mass unemployment. *International Journal of HRD Practice, Policy and Research*, 1(1), 111–112. Online: <https://tinyurl.com/fx93cpjf>
- Friemel, T. N., & Signer, S. (2010). Web 2.0 literacy: Four aspects of the second-level digital divide. *Studies in Communication Sciences*, 10(2), 143–166. <https://doi.org/10.5167/uzh-44984>
- Grimmelikhuijsen, S. G., & Meijer, A. J. (2015). Does Twitter increase perceived Police legitimacy? *Public Administration Review*, 75(4), 598–607. <https://doi.org/10.1111/puar.12378>
- Hargittai, E., Piper, A. M., & Morris, M. R. (2019). From internet access to internet skills: Digital inequality among older adults. *Universal Access in the Information Society*, 18(4), 881–890. <https://doi.org/10.1007/s10209-018-0617-5>
- Hendricks, A., Lacoere, P., van der Krabben, E., & Oorschot, C. (2021). Limits of negotiable developer obligations. *Sustainability*, 13(20), 11364. <https://doi.org/10.3390/su132011364>
- Henriette, E., Feki, M., & Boughzala, I. (2016). Digital transformation challenges. *MCIS 2016 Proceedings*, 33. Online: <http://aisel.aisnet.org/mcis2016/33>
- Huang, B., & Yu, J. (2019). Leading digital technologies for coproduction: The case of visit once, administrative service reform in Zhejiang Province, China. *Journal of Chinese Political Science*, 24, 513–532. <https://doi.org/10.1007/s11366-019-09627.w>
- Kazeem, A. (2011). *Legal aspects of e-payment in government*. Nigerianlawguru.com.
- Kornberger, M., Meyer, R. E., Brandtner, C., & Höllerer, M. A. (2017). When Bureaucracy Meets the Crowd: Studying “Open Government” in the Vienna City Administration. *Organization Studies*, 38(2), 179–200. <https://doi.org/10.1177/0170840616655496>
- Kudo, H., Macinat, M. S., Marsilio, M., Polzer, T., Ruggiero, P., & Testarmata, S. (2022). Governance challenges in public value co-creation: The interplay among actors, values and results. *Journal of Management and Governance*, 2(7), 1–4. Online: <https://tinyurl.com/2uz46r7n>
- Legner, C., Eymann, T., Hess, T., Matt, C., Bohmann, T., Drew, P., Madche, A., Urbach, N., & Ahlemann, F. (2017). Digitalization: Opportunity and challenge for the business and information systems engineering community. *Business & Information Systems Engineering*, 59(4), 301–308. <https://doi.org/10.1007/s12599-017-0484-2>
- Lember, V. (2018). The Increasing Role of Digital Technologies in Co-Production and Co-Creation. In T. Brandsen, B. Verschuere, & T. Steen (Eds.), *Co-production and Co-creation: Engaging citizens in public services* (pp. 115–127). Routledge. <http://dx.doi.org/10.4324/9781315204956-16>
- Lember, V., Brandsen, T., & Tönurist, P. (2019). The potential impacts of digital technologies on co-production and co-creation. *Public Management Review*, 21(11), 1665–1686. <https://doi.org/10.1080/14719037.2019.1619807>
- Linders, D. (2012). From e-government to we-government: Defining a typology for citizen coproduction in the age of social media. *Government Information Quarterly*, 29(4), 446–454. <https://doi.org/10.1016/j.giq.2012.06.003>

- Lindgren, L., Østergaard Madsen, C., Hofmann, S., & Melin, U. (2019). Close encounters of the digital kind: A research agenda for the digitalization of public services. *Government Information Quarterly*, 36(3), 427–436. <https://doi.org/10.1016/j.giq.2019.03.002>
- Meijer, A. J. (2012). Co-production in an information age: Individual and community engagement supported by new media. *Voluntas*, 23(4), 1156–1172. <https://doi.org/10.1007/s11266-012-9311-z>
- Metzger, J., & Lindblad, J. (2020). Introduction: A practice-centered approach to dilemmas of sustainable urban development. In J. Metzger, & J. Lindblad (Eds.), *Dilemmas of sustainable urban development: A view from practice* (pp. 1–20). Routledge.
- Meynhardt, T. (2009). Public value inside: What is public value creation? *International Journal of Public Administration*, 32(3–4), 192–219. <https://doi.org/10.1080/01900690902732632>
- Moore, M. H. (1995). *Creating public value: Strategic management in government*. Harvard University Press.
- Nabatchi, T. (2012). Putting the public back in public values research: Designing participation to identify and respond to values. *Public Administration Review*, 72(5), 699–708. <https://doi.org/10.1111/j.1540-6210.2012.02544.x>
- Noveck, B. S. (2015). *Smart citizens, smarter state. The technologies of expertise and the future of governing*. Harvard University Press.
- Ofoma, C. (2021). Digitalization driven public service and service delivery: The Nigeria's experience. *Journal of Public Administration, Finance and Law*, 2021(22), 73–80. <https://doi.org/10.47743/jopaf-2021-22-05>
- Ofoma, C., & Adeiza, U. S. (2023). Workforce diversity and public service delivery. *Public Administration and Regional Studies*, 16(2), 43–61. Online: <https://tinyurl.com/d6x723e8>
- Osborne, S. P., Nasi, G., & Powell, M. (2021). Beyond co-Production: Value creation and public services. *Public Administration*, 99(4), 642–657. <https://doi.org/10.1111/padm.12718>
- Panagiotopoulos, P., Klievink, B., & Cordella, A. (2019). Public value creation in digital government. *Government Information Quarterly*, 36(4), 101421. <https://doi.org/10.1016/j.giq.2019.101421>
- Pang, M.-S., Lee, G., & DeLone, W. H. (2014). IT resources, organizational capabilities, and value creation in public-sector organizations: a public-value management perspective. *Journal of Information Technology*, 29(3), 187–205. <https://doi.org/10.1057/jit.2014.2>
- Parviainen, P., Tihinen, M., Kaarianinen, J., & Teppola, S. (2017). Tackling the digitalization challenge: How to benefit from digitalization in practice. *International Journal of Information Systems and Project Management*, 5(1), 63–77. <http://dx.doi.org/10.12821/ijispm050104>
- Rodriguez Muller, A. P., Casiano Flores, C., Albrecht, V., Steen, T., & Cromptvoets, J. (2021). A scoping review of empirical evidence on (digital) public services co-creation. *Administrative Sciences*, 11(4), 130. <https://doi.org/10.3390/admsci11040130>
- Rose, J., Persson, J. S., Heeager, L. T., & Irani, Z. (2015). Managing e-Government: value positions and relationships. *Information Systems Journal*, 25(5), 531–571. <https://doi.org/10.1111/isj.12052>
- Salemans, L., & Budding, T. (2022). Operationalizing public value in higher education: The use of narratives as an alternative for performance indicators. *Journal of Management and Governance*, 26(2), 337–363. <https://doi.org/10.1007/s10997-021-09596-4>
- Sartori, G. (1970). Concept Misformation in Comparative Politics. *American Political Science Review*, 64(4), 1033–1053. <https://doi.org/10.2307/1958356>

- Schehl, B., Leukel, J., & Sugumaran, V. (2019). Understanding differentiated internet use in older adults: A study of informational, social, and instrumental online activities. *Computers in Human Behavior*, 97, 222–230. <https://doi.org/10.1016/j.chb.2019.03.031>
- Seifert, A., Doh, M., & Wahl, H.-W. (2017). They also do it: Internet use by older adults living in residential care facilities. *Educational Gerontology*, 43(9), 451–461. <https://doi.org/10.1080/03601277.2017.1326224>
- Sicilia, M., Sancino, A., Nabatchi, T., & Guarini, E. (2019). Facilitating co-production in public services: Management implications from a systematic literature review. *Public Money and Management*, 39(4), 233–240. Online: <https://oro.open.ac.uk/60508/>
- Sørensen, E., Bryson, J. & Crosby, B. (2021). How public leaders can promote public value through co-creation. *Policy & Politics*, 49(2). <https://doi.org/10.1332/030557321X16119271739728>
- Steen, T., Brandsen, T., & Verschuere, B. (2018). The Dark Side of Co-Creation and Co-Production. Seven Evils. In T. Brandsen, B. Verschuere, & T. Steen (Eds.), *Co-production and Co-creation: Engaging citizens in public services* (pp. 284–293). Routledge. <http://dx.doi.org/10.4324/9781315204956-45>
- Talbot, C. (2011). Paradoxes and prospects of public value. *Public Money and Management*, 31(1), 27–34. <https://doi.org/10.1080/09540962.2011.545544>
- Tilson, D., Lyytinen, K., & Sørensen, C. (2010). Research commentary—digital infrastructures: The missing is research agenda. *Information Systems Research*, 21(4), 748–759. <https://doi.org/10.1287/isre.1100.0318>
- Torring, J., & Sørensen, E. (2019). Interactive political leadership in theory and practice: How elected politicians may benefit from co-creating public value outcomes. *Administrative Sciences*, 9(3), 51. <https://doi.org/10.3390/admsci9030051>
- Torring, J., Sørensen, E., & Røiseland, A. (2019). Transforming the public sector into an arena for co-creation: barriers, drivers, benefits and ways forward. *Administration & Society* 51(5), 795–825. <https://doi.org/10.1177/0095399716680057>
- United Nations Development Programme (2016). *Citizen engagement in public service delivery. The critical role of public officials*. Online: <https://tinyurl.com/yckb77mb>
- Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68(1), 1–17. <https://doi.org/10.1509/jmkg.68.1.1.24036>
- Venkatesh, V., & Sykes, T.A. (2013). Digital divide initiative success in developing countries: A Longitudinal field study in a village in India. *Information Systems Research*, 24(2), 239–260. <https://doi.org/10.1287/isre.1110.0409>
- Voorberg, W. H., Bekkers, V. J. J. M., & Tummers, L. G. (2015). A systematic review of co-creation and co-production: Embarking on the social innovation journey. *Public Management Review*, 17(9), 1333–1357. <https://doi.org/10.1080/14719037.2014.930505>
- Xu, C. K., & Tang, T. (2020). Closing the gap or widening the divide: The impacts of technology-enabled coproduction on equity in public service delivery. *Public Administration Review*, 80(6), 962–975. <https://doi.org/10.1111/puar.13222>
- Zangiacomì, A., Pessot, E., Fornasiero, R., Bertetti, M., & Sacco, M. (2020). Moving towards digitalization: A multiple case study in manufacturing. *Production Planning & Control*, 31(2–3), 143–157. <https://doi.org/10.1080/09537287.2019.1631468>