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Chapter 12

A post-digital analysis of Africa's digital transformation and governance

Hossana Twinomurinzi

Abstract

A pressing challenge identified in Africa's digital transformation is the uneven distribution of digital governance research and resources across the continent. This chapter addresses this challenge by providing a comprehensive analysis of Africa's digital transformation and governance through a post-digital lens, which examines the impact and deeper meanings of a seamless integration of ubiquitous digital technologies into everyday life. A big data topic modelling method, Latent Dirichlet Allocation, and qualitative thematic analysis were used to analyse the data. The main areas that emerged were policy and regulation, security, algorithmic oversight, and strategic technology integration. The post-digital lens revealed the deep integration of digital technologies into socio-economic and political structures, challenging traditional views that treat these technologies as separate entities. The findings also reveal significant progress in Africa's digital governance, yet highlight substantial gaps, particularly in areas such as policy coherence, digital literacy, and the management of digital public goods. The chapter offers valuable contributions to both theory and practice, recommending that digital technologies should be embedded within legal and operational frameworks to enhance governance outcomes. The chapter also provides practical recommendations for policymakers and practitioners, including the need for adaptive regulatory strategies, human-centred security designs, and the promotion of socio-technical systems that are culturally relevant. By aligning with the goals of the call for papers, this chapter not only advances the academic discourse on Africa's digital governance but also provides actionable insights for fostering a more inclusive and sustainable digital future for the continent.

Introduction

Digital transformation (DX) has emerged as a critical driver of change in the 21st century, profoundly impacting governance structures across the globe. From enhancing public service delivery to fostering socio-economic development, the adoption of digital technologies offers opportunities for governments to operate more efficiently and transparently. Digital governance, often defined as the use of digital tools and technologies to support the functions

and processes of government, is now a central theme in public administration (Mergel et al., 2019). Globally, countries are increasingly investing in digital infrastructure, data analytics, and e-governance platforms to streamline services, reduce corruption, and engage citizens more effectively in the democratic process (United Nations, 2020). The rapid integration of technologies such as artificial intelligence (AI), big data and the blockchain has not only transformed the way governments interact with citizens but also how they manage resources, deliver services, and ensure accountability (Misuraca & Viscusi, 2014).

However, the journey towards digital governance is fraught with challenges, especially for developing regions such as Africa. While the global north has made significant strides in implementing digital governance frameworks, African countries face unique obstacles. These challenges include inadequate digital infrastructure, limited digital literacy, and the need for culturally sensitive approaches that respect the diversity of the continent (Gillwald et al., 2021; Twinomurinzi & Gumbo, 2023). Moreover, the complexities of governance in Africa are compounded by issues such as political instability, corruption and centralised power structures that may resist the decentralising force of digital technologies (Heeks, 2017). Adding to these challenges, Twinomurinzi and Gumbo (2023) highlight deeper underlying structures, including economic power dynamics, infrastructural disparities and potential neocolonial influences that shape DX in Africa. The uneven distribution of digital governance research across the continent, with South Africa dominating and other nations being underrepresented, reflects these underlying disparities. Additionally, issues such as data sovereignty concerns and the absence of AI in much of the DX discourse further complicate the integration of digital technologies in governance. These factors emphasise the importance of addressing the socio-political and economic structures that influence DX in Africa, rather than merely focusing on observable phenomena.

Despite these complexities, there is growing recognition that DX is vital for Africa's socio-economic development. The continent must therefore chart its own path towards digital governance; one that not only aligns with its unique cultural and socio-political context, but also addresses the deeper structural challenges that hinder progress (Twinomurinzi & Gumbo, 2023).

Within this context, this chapter engages on the research question: *How can African countries effectively integrate and govern digital technologies to enhance public service delivery and*

foster socio-economic development, while addressing the unique cultural, sustainability, and decentralisation challenges specific to the continent?

The chapter makes a significant contribution to the ongoing discourse on digital governance in Africa by providing a post-digital analysis of how digital technologies are being integrated into governance frameworks across the continent. Post-digitalism moves beyond the novelty of the adoption of digital technologies to a recognition of their seamless integration into daily life and their profound yet subtle influence on social, cultural and political processes (Cramer, 2015; Fawns et al., 2023). The findings highlighted the critical need for future research to engage with the socio-technical implications of digital transformation. This perspective encourages a shift from simply replicating existing governance practices using digital tools, to reimagining and innovating new forms of governance that are more participatory, transparent and responsive to the diverse needs of African citizens. Such an approach demands that digital technologies be understood not merely as technological solutions but as integral components of the broader societal, cultural and political contexts in which they are deployed. In addressing these challenges, the chapter outlines practical recommendations and identifies areas where further research is essential. By advancing our understanding of how digital technologies can be better integrated into governance, this chapter contributes to the development of more resilient, equitable, and contextually appropriate governance frameworks for Africa's digital future.

The remainder of the chapter is structured as follows: First, the methodology used in the study is detailed. This is followed by the results and findings, presenting the key themes and patterns identified. Next, the discussion section interprets these findings through a post-digital lens, focusing on their implications for governance in Africa. Finally, the conclusion highlights the chapter's contributions to knowledge and practice, offering practical recommendations and directions for future research.

Methodology

The methodology for the thematic analysis of the document was structured to ensure a thorough and systematic exploration of the selected content. The chapters analysed in this chapter were chosen based on their inclusion in a peer-reviewed book series, initiated through a formal call for papers focused on Africa's digital transformation and governance. This

initial call, issued by the Wits Faculty of Commerce, Law and Management, invited cross-disciplinary contributions that addressed critical dimensions of Africa's digital governance. This approach is acceptable because it guarantees that the text selected for analysis has been not only peer-reviewed but also aligned with a thematic focus. By analysing chapters that have already been vetted through a scholarly process, the study ensures that the content is both credible and pertinent to the research questions being addressed.

The process began with an extensive data collection and preparation phase, during which the text was meticulously extracted from its original digital Word format. This preparatory step involved the careful removal of all non-textual elements, such as images and tables, to create a clean dataset that was optimally suited for qualitative analysis (Braun & Clarke, 2006). The text was then formatted appropriately, laying the groundwork for the subsequent analytical phases. The initial phase of analysis involved coding, where key terms and phrases relevant to overarching themes such as digital governance, technology adoption and policy implications were identified. These terms were chosen as preliminary indicators of the thematic structure within the document, highlighting specific areas that warranted further in-depth analysis. This initial coding process was essential for identifying the focal points of the document and setting the stage for more refined analysis (Miles et al., 2014).

To enhance the initial coding and uncover broader thematic categories, a Latent Dirichlet Allocation (LDA) model was employed. This Big Data computational tool played a crucial role in clustering related keywords, thus enabling the identification of more comprehensive and overarching themes (Blei et al., 2003). The LDA model was particularly effective in revealing deeper insights that were not immediately apparent from the initial coding alone, providing a deeper understanding of the text. Following the computational analysis, the preliminary codes were systematically reviewed and grouped into coherent thematic categories. These categories were substantiated by narrative content drawn directly from the document, ensuring that the themes were robust and well-supported by the text. Each theme was meticulously crafted to align with the grouped codes, with particular emphasis on how these themes reflected the complex discussions within the document on the impacts and policy implications of digital technologies in governance (Creswell & Poth, 2017). The final themes were richly described, with each theme connected back to the document’s content to ensure a rigorous interpretation that accurately reflected the discussions on digital governance

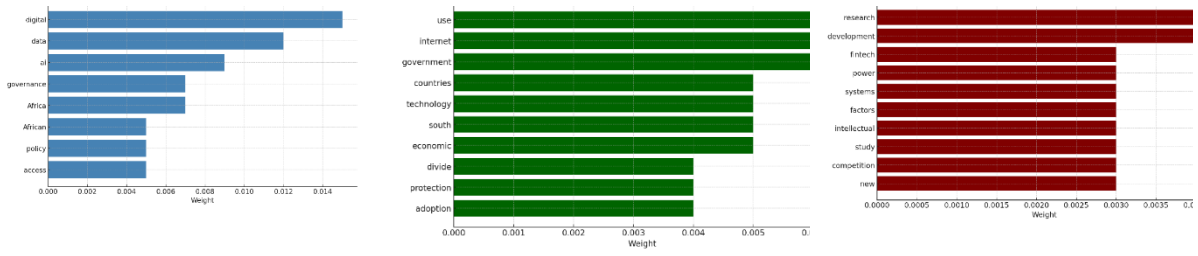
and its implications. This methodological approach facilitated a structured and detailed exploration of the text.

Latent Dirichlet Allocation method

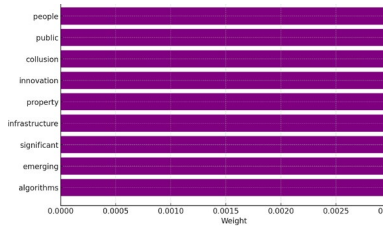
The data-cleaning process began by collating the results, findings, discussion and conclusions sections from each chapter into a single document. This approach was deemed appropriate as the chapters were all related to the same overarching topic, allowing for better differentiation between themes due to the varied vocabulary and richer contexts present in each section. The text was transformed to lowercase, a step taken to reduce dimensionality and enhance topic coherence. Further preprocessing included the removal of extra white spaces, ensuring a clean and uniform corpus for analysis (Bird et al., 2009). The pre-processed text was then vectorised into a document-term matrix using the Count Vectorizer from the Scikit-Learn library, with English stop words removed to emphasise more meaningful terms. This matrix was limited to the top 1 000 features, based on term frequency, to maintain focus on the most relevant words across the document (Pedregosa et al., 2011). An LDA model with an initial five components was then fitted to this matrix, a decision aimed at providing a broad overview of the thematic content without excessive granularity. After several iterations and refinements, removing keywords and recursively running the LDA, we settled on the final model, which successfully extracted seven coherent topics. For each identified topic, the ten most significant words were extracted, offering a concise snapshot of the thematic elements within the document. These topics were then used for thematic analysis employing a closed coding approach, from which brief narratives for each theme were derived. The entire process was conducted using Python's *gensim* library within the openly accessible Google Colab environment, ensuring both efficiency and reproducibility in the analysis (Rehurek & Sojka, 2010).

Results and findings

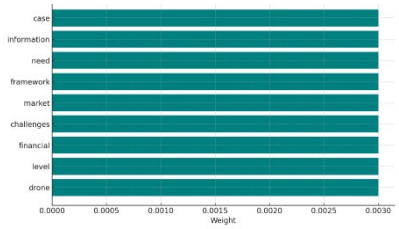
Table 1. Results of Latent Dirichlet Analysis



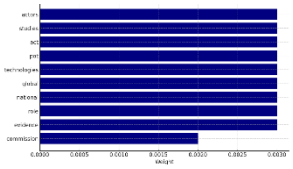
Topic 1 (AI Governance and Policy in Africa): Digital, data, AI, governance, Africa, African, policy, access



Topic 2 (Technology Adoption and Economic Divide): Use, internet, government, countries, technology, south, economic, divide, protection, adoption



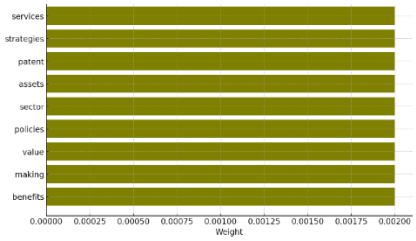
Topic 3 (Fintech, Competition and Intellectual Power): Research, development, fintech, power, systems, factors, intellectual, study, competition, new



Topic 4 (Public Innovation and Emerging Algorithms): People, public, collusion, innovation, property, infrastructure, significant, emerging, algorithms

Topic 5 (Frameworks for Market and Financial Challenges): Case, information, need, framework, market, challenges, financial, level, drone

Topic 6 (Global and National Roles of Technology): Actors, studies, act, pot, technologies, global, national, role, evidence, commission



Topic 7 (Strategies for Patents and Asset Management): Services, strategies, patent, assets, sector, policies, value, making, chapter, benefits

Table 2. Thematic analysis using LDA topics and closed coding

Theme	**Code (and occurrences)**	**Brief narrative**

Policy and Regulation	Patent (52), sector (34), value (34), services (31), strategies (30), assets (29), policies (29), making (28) and benefits (27)	This theme reveals the comprehensive regulatory frameworks that shape sector policies and strategies, emphasising patent protection and strategic asset management. It offers a view into how these frameworks facilitate value creation and effective service provision, ensuring that sectors operate within well-defined legal and operational boundaries. The focus on benefits highlights the positive outcomes of adhering to these policies.
Security and Challenges	Provide (59), works (48), sector (34), value (34), approach (32), strategies (30), assets (29), making (28), human (26) and based (26)	This theme focuses on the measures required to secure assets and ensure the efficacy of strategic approaches, highlighting the importance of human-centred designs in security systems. It explores the challenges of maintaining operational integrity and protecting sensitive information within a volatile technological landscape. There is a commitment to delivering secure and reliable services.
Political and Algorithmic Oversight	Patent (52), assets (29), political (27), platforms (26), human (26), areas (24), usage (23) and algorithmic (25)	This theme captures the complexities of political influence and the complexities of algorithmic deployments in governance. It focuses on the oversight mechanisms required to ensure ethical use of technologies, emphasising the integration of algorithmic processes within traditional political frameworks. Discussions around patents and platforms suggest a critical examination of intellectual property rights and their deployment across digital arenas.
Strategic Technology Integration	Tech (221), patent (52), specific (31), services (31), strategies (30), making (28), big (27), platforms	This theme emphasises the strategic integration of technology within services and sectors, focusing on leveraging technological advancements to enhance service delivery and improve sectoral performance. It addresses the challenges of integrating big data and tech platforms to develop new business models and

	(26), human (26) and areas (24)	streamline operations, highlighting the transformative potential of technology in business and governance.

Qualitative thematic analysis

We also separately employed Braun and Clarke's (2006) thematic analysis framework, following their open coding regime to systematically analyse the selected text. The process began with familiarisation; the text was read multiple times to gain a deep understanding of the content. Next, initial codes were generated by systematically identifying and labelling key features of the data that appeared relevant to the research questions. These codes were created inductively, meaning they were grounded in the data rather than being predetermined. After coding, the codes were collated into potential themes by examining the patterns and relationships between them. This step involved grouping related codes to form broader, overarching themes that captured the essence of the data. The themes were subsequently reviewed and refined, ensuring they were coherent and distinct from one another. Any codes that did not fit neatly into any particular theme were re-evaluated or discarded. Once the themes were finalised, we crafted a narrative around them, ensuring that each theme was supported by the data and related directly to the research objectives. This narrative was designed to reflect the nature of the discussions within the selected text, providing a rich and detailed account of the key issues identified during the analysis. The final step involved defining and naming the themes, ensuring they captured the scope of the data and provided clear insights into the topic under investigation (Table 3).

Table 3. Thematic Analysis using Braun & Clarke's (2006) open coding method

Theme	**Code (and occurrences)**	**Brief narrative**
Digital Governance	Digital (12), government (8), adoption (5), technology (5)	This theme explores the implications of digital technologies on governance structures. It highlights the adoption challenges faced in integrating digital systems into traditional governance frameworks, drawing attention to the crucial role of technology in streamlining processes and enhancing accessibility and transparency.
Social and Economic	Economic (9), development	Focused on the impact of technological advancements on socio-economic growth, this theme examines how

Development	(7), infrastructure (5), significant (3)	infrastructure development contributes to economic stability. It considers the significant barriers that hinder equitable development, emphasising the need for comprehensive strategies to enhance social welfare.
Policy and Regulation	Policy (6), public (5), protection (4), regulation (3)	Engaging with policy-making and regulatory frameworks, this theme discusses the necessary adjustments in public policies and regulations to safeguard citizen interests in the digital era. It addresses the complexities of data protection and the importance of robust legal frameworks to manage emerging technologies.
Access and Inclusion	Access (5), public (5), internet (4), significant (3)	Highlighting issues of digital access and inclusion, this theme examines the disparities in internet accessibility, especially among underprivileged groups. It advocates for significant efforts to enhance public access to digital resources, thereby promoting inclusivity in the digital landscape.
AI and Data Utilisation	AI (5), data (4), use (3), new (3)	This theme covers the utilisation of AI and data analytics in decision-making processes. It reflects on how data-driven approaches can lead to innovative solutions and the creation of new methodologies for handling vast amounts of information, thus improving efficiency and effectiveness in various sectors.

Synthesising the thematic analyses

LDA, as a topic-modelling method, provides a high-level overview of the dominant patterns and themes in data, clustering words into meaningful topics. In contrast, the Braun & Clarke (2006) thematic analysis engages the narrative more deeply, offering a deeper understanding of how themes manifest from the data. This dual approach ensured that the themes are not only statistically significant and contextually rich, but also offer a layered means of validation. For example, while LDA identified AI governance and policy as a dominant theme, Braun & Clarke's (2006) analysis elaborated more deeply on how AI is being

integrated into decision-making processes and the ethical concerns surrounding its use. The synthesis of these two perspectives provides a more comprehensive view of how AI governance can be approached in Africa, offering both a broad pattern and a detailed exploration of its implications.

Both the LDA and the qualitative thematic analysis identified three similar themes; Policy and Regulation, Security and Challenges, and Strategic Technology Integration. The correspondence with these themes demonstrates the importance of the centrality of regulatory frameworks in shaping digital governance outcomes, and the importance of policy adjustments and regulation in safeguarding citizen interests.

Despite the complementarity of methods, they also highlight areas of difference that merit further methodological investigation. LDA's computational approach, for instance, clusters keywords based on co-occurrences but lacks the ability to interpret the deeper socio-political dynamics. In contrast, Braun & Clarke's method offers insight into the socio-technical challenges, such as the inclusivity of digital governance and the cultural relevance of technology adoption.

Discussion using a post-digital theory lens

We adopted a post-digital lens in the analysis of the content on digital transformation and governance, aligning our approach with the intent of the book as outlined in the call for papers (Karuri-Sebina & Armstrong, 2023). This lens not only enabled us to offer informed recommendations but also helped in identifying critical gaps and proposing areas for further research. The post-digital perspective recognises that digital technologies have become so integrated into everyday life that they are no longer viewed as separate or distinct entities. Instead, these technologies are seen as inherent components of social, economic, and political frameworks, shaping and being shaped by human activities and interactions (Cramer, 2015; Ndaka, 2024; Govender & Zhou, 2024).

In this context, the post-digital approach goes beyond the traditional focus on digital adoption and implementation. It emphasises the need for strategies that embed digital technologies deeply within all societal structures, recognising their ubiquity and transformative potential. This perspective is particularly relevant for the study of digital governance in Africa, as it demands a comprehensive understanding of how digital tools and platforms are integrated

into governance processes; not just as add-ons, but as fundamental components that influence decision-making, policy development, and public engagement (Mayayise, 2024). By applying a post-digital lens, we were able to explore how digital transformation in governance can be more effectively embedded into the socio-political and economic fabric of African nations (Plantinga, 2024). This approach also allowed us to critically assess the extent to which current digital initiatives align with the broader goals of sustainable development and inclusive growth, as highlighted in the call for papers (Mangundu, 2024).

Policy and regulation

The theme of *Policy and Regulation* emerged strongest, highlighting the role of comprehensive regulatory frameworks in shaping sector policies and strategies. The frequent occurrence of codes such as Patent (52), Sector (34), and Policies (29) suggests a focused discussion on the legal and operational boundaries within which digital technologies operate in governance (Ouma, 2024). From a post-digital perspective, the emphasis on patent protection and strategic asset management reflects the necessity for embedding digital tools within legal frameworks to facilitate value creation and effective service delivery (Mahleza & Khalifa, 2024).

However, while these frameworks are crucial, the post-digital lens encourages us to consider the dynamic nature of digital technologies, which often outpace regulatory developments (Mahleza & Khalifa, 2024). The static nature of traditional regulatory approaches may not adequately address the fluidity and rapid evolution inherent in digital environments. Therefore, there is a need for adaptive regulatory strategies that not only safeguard intellectual property but also accommodate the emergent properties of digital technologies as they interact with various socio-political contexts (Mayayise, 2024; Gillwald et al., 2021).

Security and challenges

Security and Challenges were also prominent, with codes such as Works (48) and Human (26) pointing to the measures required to secure assets and ensure the efficacy of strategic approaches. The post-digital perspective emphasises that security is not merely a technical issue but a socio-technical one that requires human-centred designs (Govender & Zhou, 2024). This view is critical in a digital governance context, where the protection of sensitive information and the maintenance of operational integrity are paramount (Mahleza & Khalifa, 2024). The challenges identified in maintaining security within a volatile technological

environment highlight the importance of developing resilient systems that can adapt to the unpredictable nature of digital threats (Mangundu, 2024). The post-digital approach also urges us to consider how security measures impact human behaviour and societal trust. For example, the implementation of algorithmic oversight in governance, as discussed in the chapters, raises ethical concerns about privacy and the potential for bias in automated decision-making processes (Mangundu, 2024). Addressing these challenges requires a holistic approach that integrates technical solutions with ethical considerations, ensuring that security measures do not undermine the broader goals of inclusive and equitable governance.

Political and algorithmic oversight

The theme of *Political and Algorithmic Oversight*, with codes such as Political (27), Platforms (26, and Algorithmic (25), captures the complexities of integrating digital technologies into governance frameworks. The post-digital perspective encourages us to view these technologies not as neutral tools but as entities deeply embedded in political and social processes. The oversight mechanisms necessary to ensure ethical use of technologies must account for the power dynamics and potential biases that can arise when algorithms are deployed in governance (Mahleza & Khalifa, 2024). This theme also suggests the importance of critically examining intellectual property rights and their deployment across digital arenas (Ouma, 2024). In the African context, where there is a risk of neocolonial influences through the centralisation of digital power outside the continent, it is essential to promote local governance structures that can assert control over digital resources (Twinomurinzi & Gumbo, 2023). The post-digital approach thus advocates for decentralised and context-sensitive governance models that empower local communities and prevent the dominance of external entities in shaping Africa's digital future (Ndaka, 2024).

Strategic technology integration

The theme of *Strategic Technology Integration*, highlighted by codes such as Tech (221), Services (31) and Big (27), reflects the transformative potential of technology in enhancing service delivery and improving sectoral performance. The post-digital perspective views this integration as a crucial step in reimagining governance models that are more responsive, transparent and participatory (Mangundu, 2024). However, the post-digital lens also cautions against viewing technology as a panacea. The strategic integration of digital tools must be accompanied by a critical evaluation of how these technologies are embedded within existing social and economic structures. For instance, while big data and tech platforms offer

opportunities for innovation, they also pose risks related to data privacy, ethical use, and the potential for exacerbating existing inequalities (Govender & Zhou, 2024). The discussion on drone governance in healthcare (Mangundu, 2024) illustrates the need for governance frameworks that balance innovation with accountability, ensuring that technological advancements do not compromise societal values or human rights.

Digital governance

The theme of *Digital Governance*, with codes such as Digital (12) and Government (8), describes the implications of digital technologies on governance structures. The adoption challenges faced in integrating digital systems into traditional governance frameworks are particularly pronounced in the African context, where infrastructural disparities and limited digital literacy present significant barriers (Mayayise, 2024). From a post-digital perspective, the integration of digital technologies into governance must go beyond mere adoption. It requires a rethinking of governance practices to align with the realities of a digital society. This includes developing new governance models that are not only technologically advanced but also culturally and contextually appropriate. The need for inclusive governance that addresses the digital divide and ensures that all citizens can participate in the digital economy is critical for achieving sustainable development and social equity in Africa (Govender & Zhou, 2024).

Social and economic development

The theme of *Social and Economic Development*, highlighted by codes such as Economic (9) and Development (7), explores the impact of technological advancements on socio-economic growth. The post-digital perspective emphasises that economic development in the digital age cannot be separated from social considerations (Plantinga, 2024). The integration of digital technologies must be accompanied by efforts to enhance digital literacy, address infrastructure gaps, and ensure that the benefits of digital transformation are equitably distributed (Ndaka, 2024). In the African context, where socio-economic disparities are pronounced, the post-digital approach advocates for comprehensive strategies that prioritise social welfare and inclusive growth. This includes addressing the barriers that hinder equitable development, such as limited access to digital resources and the centralisation of digital power. By embedding digital technologies within broader socio-economic frameworks, African nations can leverage these tools to drive sustainable development and improve quality of life for all citizens (Mangundu, 2024).

Access and inclusion

The theme of *Access and Inclusion*, with codes such as Access (5) and Public (5), highlights the disparities in internet accessibility, especially among underprivileged groups. The post-digital perspective recognises that access to digital technologies is a fundamental right in the modern world, and efforts must be made to ensure that all citizens have equal access to these resources. In line with the call for papers, which emphasised the need for inclusive digital governance, this theme advocates for significant efforts to enhance public access to digital resources (Govender & Zhou, 2024). This includes developing policies and initiatives that address the digital divide, promote digital literacy, and ensure that digital transformation benefits all segments of society. The post-digital approach also encourages the exploration of innovative solutions that can bridge the gap between urban and rural areas, ensuring that digital technologies contribute to inclusive growth and social equity (Mayayise, 2024).

AI and data utilisation

Finally, the theme of *AI and Data Utilisation*, with codes such as AI (5) and Data (4), covers the use of AI and data analytics in decision-making processes. The post-digital perspective views data as a critical asset in the digital age, with the potential to drive innovation and improve efficiency across various sectors (Ndaka, 2024). However, the use of AI and data also raises ethical concerns, particularly those related to privacy, bias, and the potential for misuse (Govender & Zhou, 2024). The post-digital approach emphasises the need for governance frameworks that address these concerns, ensuring that AI and data-driven solutions are deployed responsibly and in ways that align with societal values (Mangundu, 2024). In the African context, where the deployment of AI technologies is still in its early stages, it is crucial to develop governance mechanisms that can anticipate and mitigate the risks associated with these technologies, while also harnessing their potential to drive socio-economic development (Mahleza & Khalifa, 2024).

Conclusion

This chapter set out to explore digital transformation and governance in Africa through a post-digital lens, aiming to address the complex socio-technical dynamics that shape the continent's digital landscape. By systematically analysing selected content from various chapters using both thematic analysis and Latent Dirichlet Allocation (LDA), the chapter uncovered key themes and insights that contribute to a deeper understanding of how digital

technologies are integrated into governance frameworks in Africa. Additionally, the chapter aimed to align its findings with the goals of the call for papers, which emphasised the importance of exploring Africa's digital transformation through a critical, cross-disciplinary approach (Karuri-Sebina & Armstrong, 2023).

The chapter makes several key contributions to knowledge in the field of digital governance. It identifies the central variables – such as digital governance, socio-technical integration, policy and regulation, and strategic technology adoption – that are critical to understanding digital transformation in Africa. By applying a post-digital lens, the chapter challenges traditional perspectives that view digital technologies as separate entities. Instead, it argues that these technologies are deeply embedded within broader social, economic and political contexts, shaping and being shaped by them. This perspective is particularly relevant in the African context, where digital governance must navigate a complex landscape marked by infrastructural disparities, socio-political challenges, and diverse cultural norms.

The findings of this chapter have practical implications for policymakers, practitioners and other stakeholders involved in digital governance in Africa. The thematic analysis and LDA modelling revealed several critical themes – Policy and Regulation, Security and Challenges, Political and Algorithmic Oversight, Strategic Technology Integration, Digital Governance, Social and Economic Development, Access and Inclusion, and AI and Data Utilisation – that provide a comprehensive framework for understanding the practical challenges and opportunities of digital governance.

Regulatory frameworks interact with digital technologies to shape governance outcomes. The emphasis on comprehensive regulatory frameworks, as revealed in the Policy and Regulation theme, points to the need for robust legal structures that can accommodate the dynamic nature of digital technologies. Practitioners are encouraged to develop adaptive regulatory strategies that balance the need for innovation with the protection of intellectual property and the safeguarding of public interests.

It is similarly critical to integrate human-centred designs into security systems for maintaining operational integrity in a volatile technological landscape. This approach not only protects sensitive information but also ensures that security measures are socially equitable and culturally appropriate, aligning with the broader goals of inclusive governance.

As digital technologies continue to reshape the world, it is imperative that African nations develop governance models that are not only technologically advanced, but also culturally sensitive, and sustainable in the long term.

Recommendations

The chapter makes the following recommendations:

Integrate digital processes in everyday governance

Encourage the seamless integration of digital technologies into everyday governance processes. This involves transitioning from viewing digital solutions as external tools to recognising them as intrinsic components of governance structures, thereby enhancing efficiency and transparency in public administration.

Holistic digital education

Expand the scope of digital literacy programmes to foster a holistic understanding of digital technologies that encompasses not only technical skills but also critical thinking about digital ethics, data privacy, and the socio-economic impacts of digitisation. This approach will help cultivate a digitally savvy citizenry equipped to participate fully in a post-digital society.

Promote socio-technical systems

Foster the development of socio-technical systems that blend technology with social needs and practices. Support initiatives that not only create digital solutions but also ensure these solutions are culturally and contextually appropriate for various African communities, enhancing their relevance and adoption.

Gaps and recommendations for further research

Cultural and digital integration

The global literature often overlooks the deep cultural effects of how digital technologies are integrated and perceived in different African contexts. More studies are needed that address the intersection of technology with local customs, languages and social norms.

Sustainability of digital initiatives

There is limited research on the sustainability of digital initiatives and their long-term impact on traditional practices and local industries. Understanding the enduring effects of these technologies is crucial in a post-digital context where technology and society are inextricably linked.

Decentralisation of digital power

The centralisation of digital design and governance, typically outside Africa, remains underexplored. There is a critical need for literature that discusses the decentralisation of digital power and that promotes local governance of digital resources, ensuring that digital strategies are developed within Africa by Africans.

Interdisciplinary approaches to digital studies

Advocate for interdisciplinary research that combines insights from technology, anthropology, sociology and political science to explore how digital technologies are reshaping African societies. Such studies should focus on the hybrid spaces where digital and traditional practices coexist and influence each other.

Impact of digital technologies on social structures

Investigate how digital technologies are transforming traditional social structures, roles and interactions within communities. Research should particularly focus on how these changes affect governance, civic engagement and societal norms in a post-digital era.

Ethics and governance of emerging technologies

Examine the ethical implications and governance challenges of emerging digital technologies within the African context, such as AI, blockchain and IoT. This research should explore how these technologies can be governed to ensure equitable benefits and mitigate risks such as privacy violations and social displacement.

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