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An analysis of African E-Government Development: Trends and Challenges.

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Résumé

Les projets de gouvernement électronique dans les pays africains sont souvent confrontés à des défis de financement, en se basant sur l'aide des donateurs, ce qui conduit à leur interruption faute de financement dédié, entravant les améliorations progressives. Cet article tente de donner un aperçu de la dynamique du gouvernement électronique en Afrique. En effet, nous utilisons le concept d'échec de l'e-gouvernement dans cet article comme l'incapacité d'un système à atteindre des objectifs prédéfinis ou des avantages non anticipés. La modernisation de l'État en Afrique rencontre divers obstacles. Cependant, le succès des initiatives de l'e-gouvernement nécessite des approches sur mesure qui reconnaissent les différences contextuelles. La méthodologie utilisée dans cet article utilise une approche comparative afin de comprendre la problématique du gouvernement électronique en Afrique. Dans cet ordre, l'EGDI nous aide à souligner l'évolution et les défis des pays africains dans la numérisation. Cet article montre que l'évolution de l'e-gouvernement dans les pays africains est confrontée à des défis tels que l'infrastructure inadéquate, l'engagement politique et la littératie numérique. Les tendances de la numérisation en Afrique révèlent dans cet article des disparités, avec près de deux tiers des pays ayant des valeurs EGDI moyennes et 30 % ayant des valeurs EGDI élevées. Cependant, aucun pays n'atteint le groupe EGDI très élevé, mettant en évidence les défis persistants. De manière encourageante, il y a une baisse de la représentation africaine dans les groupes EGDI faibles et moyens, indiquant des tendances positives en matière de gouvernance numérique. Les défis dans le développement du gouvernement électronique, en particulier dans les pays à faible revenu et à revenu intermédiaire inférieur, sont liés à un investissement inadéquat. Malgré ces obstacles, des progrès tangibles ont été réalisés mais l'Afrique reste confrontée à des défis tels que l'interopérabilité, la cybersécurité, les services de ville intelligente pour le développement urbain et le rôle croissant de l'intelligence artificielle.

Mots-clés : Gouvernement électronique, Gouvernance numérique, Afrique, Service public, Droit public, Gouvernance, Politique administrative, Réforme, Fracture numérique.

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Abstract:

E-government projects in African countries often face funding challenges, relying on donor aid, leading to discontinuation without dedicated funding, hindering incremental improvements. This paper tries to give an overview on the dynamic of e-government in Africa. Indeed, we use the concept of e-government failure in this paper as the inability of a system to achieve predefined goals or unanticipated benefits. The modernization of the state in Africa faces various obstacles. However, success in e-government initiatives requires tailored approaches that acknowledge contextual differences. The methodology in this paper uses a comparative approach in order to understand the problematic of e-government in Africa. In this order, the EGDI helps us to underline the evolution and the challenges of African countries in digitalization. This paper shows that the evolution of e-government in African countries, facing challenges like inadequate infrastructure, political commitment, and digital literacy. Digitalization trends in Africa reveal in this paper disparities, with almost two-thirds of countries having middle EGDI values and 30% having high EGDI values. However, no countries reach the very high EGDI group, highlighting the ongoing challenges. Encouragingly, there's a decline in African representation in low and middle EGDI groups, indicating positive trends in digital governance. Challenges in e-government development, particularly in low-income and lower-middle-income countries, are rooted in inadequate investment. Despite these hurdles, tangible progress has been achieved but Africa still facing challenges such as interoperability, cybersecurity, Smart City services for urban development, and the growing role of Artificial Intelligence.

Keywords E-government, Digital governance, Africa, Public service, Public Law, Governance, Administration policy, Reform, Digital Gap.

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Introduction

E-government has gained significant attention in Africa. Indeed, African countries seek to leverage information and communication technologies (ICTs) to transform their operations and interactions with citizens, businesses, and other government entities. The development of the continent and the democratization of African countries need strong institutions. In fact, the use of ICTs in African administrations can be a way to transform and to enhance their efficiencies. The African Union High-Level Panel on Emerging Technologies (APET) is encouraging the implementation of e-government services. Enhancing the use of digital technologies in African governments is the target of many policies in regional and national levels. There is three keys of the use of e-government services focusing on Government-to-Government (G2G), Government-to-Business-and-Citizen (G2BC), and Government-to-Citizen (G2C) activities. E-government systems are utilizing ICT tools such as digital technologies and internet-based applications to enhance access and delivery of basic services to citizens and businesses across all governmental departments. All these efforts in digital transformation conducted by services should also closely correlate with the socio-economic activities of the population to accomplish the aspirations of the African Union's Agenda 2063 and the United Nations' Sustainable Development Goals. The collaboration with different actors to achieve the process of e-government reforms in Africa is supported by the UN Economic Commission for Africa, Smart Africa, AUDA-NEPAD, Regional Economic Communities, African Development Bank, Africa Telecommunications Union, Africa Capacity Building Foundation, International Telecommunication Union and the World Bank. Therefore, pursuing digital transformation without the appropriate institutional support, funds, regulations, policies and strategies can lead to job losses, increased inequality, and data privacy and security issues.

The objective of this paper is to understand the challenged of e-government in Africa. The adoption of e-government varies across the African countries, depending on factors such as awareness and budget allocation. While some countries, such as South Africa, Mauritius, Tunisia and Morocco have made significant progress with good quality technical implementation and clear political vision, others may face limitations due to lack of resources, political instability, or weak government vision. In fact, countries in Africa have made significant improvements in their telecommunications infrastructure, building a solid foundation for accelerating the transition to digital government. However the digital divides persist and it’s a source of many challenges for African governments. Special attention and assistance should be given to African low-income and lower-middle income countries and countries in special situations.

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Based on African Union Executive Council Decisions related to ICT, ECA Resolution (812 – XXXI)[1] onthe African Information Society Initiative and the Smart Africa Board meeting held on the margins of the32nd African Union Assembly of Heads of State and Government, on 2019, highlighted the need for the ICT sector to lead the process, the AU Commission undertook to develop a comprehensive Digital Transformation Strategy for Africa. Indeed, despite the potential benefits of e-government initiatives in African countries, including improved governance, enhanced public services, and progress towards achieving the Sustainable Development Goals (SDGs), there are significant challenges that hinder their successful implementation. These challenges include varying levels of internet access and adoption, cultural transformation of public services, promoting citizen participation, and improving the quality and quantity of public data. In 2023, 50 out of 54 countries in Africa (home to 95 per cent of the region's population) have EGDI values below the global average.

This paper is structured in three parts. The first part underlines the concept and the definitions of e-government. In fact, the term "e-government" has evolved over time, with diverse definitions reflecting its multifaceted nature. The second part of this paper explains the methodology used. We use in our comparison between African countries, in this paper; the EGDI is a comprehensive survey that provides an assessment of e-government development worldwide. It takes into account the online presence and e-government policies of all United Nations Member States, evaluating how e-government strategies are applied in different sectors for delivering essential services. The third part, is dealing with the challenges facing African countries and the trend of EGDI. In fact, in Africa, achieving digital transformation by 2030 relies on policy reforms, collaboration in ICT regulatory measures, and the creation of an enabling environment. E-government and Open government are seen as strategic solutions to help African countries achieve Sustainable Development Goals, reduce socio-political risks, and enhance government performance through transparency, public participation, and accountability for successes and failures. This paper examines the challenges faced by African countries in implementing e-government initiatives and highlights how e-government can be a strategic solution to achieve the Sustainable Development Goals (SDGs).

1. Literature review: e-government in developing countries

The term "e-government" emerged in the late 1990s in the state of Florida, USA, and was officially introduced at a conference in Italy in 2001. There are two distinct definitions of e-government, with one emphasizing the intensive use of information technologies across

[1]EX.CL/Dec.739(XXII), EX.CL/Dec.545(XVI), EX.CL/Dec.613(XVIII), EX.CL/Dec.835(XXV), EX.CL/Dec.987(XXXII)

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government functions and the broader goals of public service delivery, managerial efficiency, and democratic values. The other definition focuses on the transmission of government information via the internet to citizens and businesses, as well as between government agencies. David Brown (2005) argued that electronic government "encompasses all government roles and activities, shaped by information and communications technologies (ICTs). Going well beyond analogies to e-commerce, it encompasses the four domains of governance and public administration: the state's economic and social programs; its relationships with the citizen and the rule of law (e-democracy), its internal operations and its relationship with the international environment.

In the relation with the international domain, international institutions tried to give a clarified definition to the conception of e-government. Indeed, according to the OECD e-government "refers to the use by the governments of information and communication technologies (ICTs), and particularly the Internet, as a tool to achieve better government", while Digital Government (DG) "refers to the use of digital technologies, as an integrated part of governments' modernization strategies, to create public value. It relies on a digital government ecosystem comprised of government actors, non-governmental organizations, businesses, citizens' associations and individuals, which supports the production of and access to data, services and content through interactions with the government" (OECD 2014, p. 6). For the World Bank, "E-Government" refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. Therefore, e-government, for the UN is defined as the use of ICTs to effectively and efficiently deliver government services to citizens and businesses, aiming for public ends through digital means. It involves the application of ICTs in government operations, with the goal of reducing financial costs, transaction times, and improving work flows and processes across different government agencies.

The concept of e-government failure is the inability of a system to achieve predefined goals or unanticipated benefits (Yildiz, 2007). Focusing on literature related to e-government in developing countries, it notes that failures are common in both e-government and general information systems within these nations. The review spans the last ten years due to the relatively new nature of the field. Emphasizing the specific exploration of e-government failures in developing countries, the paper refers to studies highlighting the general failure of information systems in these contexts. Heeks (2003) asserts that a significant percentage of e-government implementations in developing countries are total or partial failures. Ciborra (2005)

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suggesting that the motive for adoption of e-government, often linked to achieving good governance. He argues that e-government alone may not lead to the expected benefits in developing countries, emphasizing the need for political and social changes alongside technological implementation. Ciborra contends that a more developed economy or specific governance reforms should precede successful e-government implementation in these regions. Additionally, raises concerns about e-government being used as a tool of control by the West in weak states, potentially impacting international security. In fact, the challenges and limitations of e-government in developing countries, questioning its effectiveness without concurrent political, social, and economic transformations. In other words, Ciborra (2005) highlights the gap between public and private sectors, emphasizing the need for a paradigm shift from citizens to customers. However, e-government projects operating as monopolies face challenges in accommodating market mechanisms. Failures in developing countries also result from country context gaps, using off-the-shelf solutions, causing design-reality gaps due to differences in working cultures, skills, and infrastructure. Poor IT infrastructure in developing countries further impedes e-government implementation, requiring technological infrastructure development for equal citizen access (Dada, 2006).

The challenge in developing countries often stems from a significant disparity between the current and future e-government systems, marked by gaps in physical, cultural, and economic contexts between software designers and the implementation environment (Heeks, 2002). Heeks (2003) identifies archetypal situations of design-reality gaps, categorized as Hard-Soft Gaps, Private-Public Gaps, and Country Context Gaps:

Hard-Soft Gaps: This involves the disparity between the technological aspects (hard) and the social context (soft), encompassing people, culture, and politics. The challenge lies in aligning the actual technology with the complex reality of the social environment where the system operates.

Private-Public Gaps: This gap emerges from differences between private and public sectors. Systems designed for one sector might not effectively function in the other due to gaps between private sector-oriented designs and the complex reality of the public sector.

Country Context Gaps: Attempting to implement e-government systems designed for developed countries in developing nations leads to this gap. It arises from the mismatch between a system designed for one country and the nuanced reality of a developing country where the system is deployed.

Heeks' conceptual framework provides a lens through which literature on the failure of e-government in developing countries can be analyzed. Ciborra's perspective, emphasizing the

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gap between the existing political situation and the requisite conditions for successful e-government, aligns with Heeks' framework. The literature, organized based on Heeks' archetypes, explores the factors contributing to e-government failures in developing countries. This paper contributes by applying Heeks' classification model to current e-government projects in developing countries, offering insights into the reasons behind project failures and enhancing the understanding of these complex challenges. However, the term "e-government" has evolved over time, with diverse definitions reflecting its multifaceted nature. Scholars, institutions, and governments worldwide have provided varied perspectives, emphasizing the use of information and communication technologies (ICTs) for efficient government operations, enhanced citizen engagement, and improved service delivery.

2. The Challenges of E-government in Africa

2.1. Problematic and Methodology:

The landscape of public law has shifted from a State-centric focus to prioritizing individual rights and freedoms. Comparative public law, aided by comparative law methodologies, has become a crucial decision-making tool in public law courts, offering a tangible understanding of legal systems across countries (Van Hoecke, 2004). In administrative law, understanding the differences and analogies between legal orders is vital for approximating rights, especially in administrative domains. This paper focuses on the significant differences in state theory and administrative law among African countries, using the EGDI index to conduct a comparative analysis. While e-government projects hold promise for transforming governance, the legal framework is essential for their implementation, aligning with constitutional principles and ensuring rights and responsibilities are upheld (Rarhoui 2023). The EGDI serves as a valuable tool for measuring and comparing e-government development progress, emphasizing the importance of not just technological aspects but also countries' capacity to participate in the information society.

The disparity in EGDI between wealthier and lower-income nations, particularly in Africa, highlights a significant digital divide. The average EGDI for least developed countries, particularly in Africa, is considerably below the global average, emphasizing the need for targeted efforts to bridge these disparities. The study acknowledges the evolving understanding of e-government potential and technology, distinguishing the EGDI as a comparative framework that accommodates different approaches over time. This underscores the importance of a nuanced, context-specific approach in promoting effective e-government outcomes globally.

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2.2. Analyze and discussion of results:

E-government projects in developing countries face funding challenges, often relying on donor aid, leading to discontinuation when financing ceases. Unlike private sector IT investments, these projects may lack dedicated funding and encounter an 'all or nothing' approach, hindering incremental improvements. Governments' preference for large, politically motivated projects increases failure risks. The Digital Divide persists, exacerbating disparities in developing countries. High telecommunication costs nullify cost reduction benefits, prompting consideration of low-tech solutions compatible with existing infrastructure. Bridging gaps is crucial for successful e-government implementation, requiring a nuanced approach with incremental improvements, citizen-centricity, and a focus on contextual realities.

E-governance initiatives in African countries were launched from 2000-2010, facing challenges like ICT infrastructure, political commitment, and digital literacy. Despite obstacles, tangible progress has been made, and potential for further digitalization exists. The importance of proper strategies and regulations at the initial stages to avoid future challenges and ensure consistent digitalization. Interoperability and cybersecurity are crucial for successful e-government systems. Urban development and Smart City services are essential for addressing infrastructure pressures due to urbanization. Artificial Intelligence technologies offer benefits in healthcare, agriculture, and education, but concerns about data privacy and security persist. Internet of Environment solutions can monitor climate change and population pressures. The evolution of e-governance initiatives in Africa has shifted towards more tailored and sovereign systems, with a growing trend of intra-African initiatives for knowledge exchange (Maslov A. et al. 2023).

In Africa, achieving digital transformation by 2030 relies on policy reforms, collaboration in ICT regulatory measures, and the creation of an enabling environment. Governments are urged to adopt regulatory frameworks that encourage innovation and enable digital transformation, emphasizing political commitment, policy stability, private sector investment, regulatory best practices, and stimulating demand for digital solutions.

The African Union aims to establish a secure Digital Single Market by 2030, promoting free movement aligned with AfCFTA. The goal includes empowering all individuals with affordable, secure digital access and smart devices, fostering online engagement with 30% of content developed locally. To bridge infrastructure gaps, a digital sovereignty fund will ensure inclusive broadband investment. Harmonizing policies and enacting laws for cyber security, data protection, and digital transformation is central. E-government and Open government are strategic for implementing the 17 SDGs, reducing risks, and enhancing government

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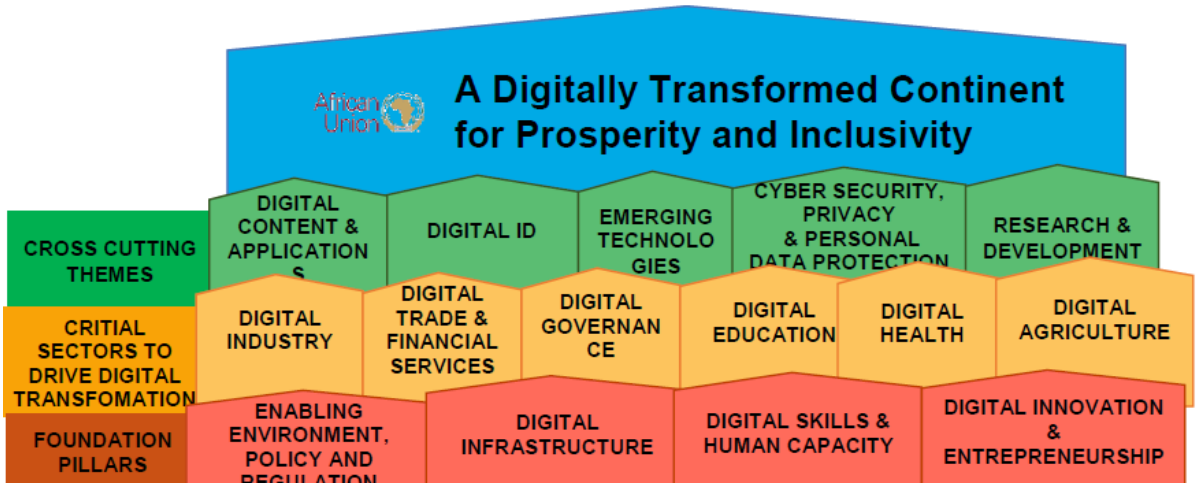
performance through transparency, public participation, and accountability. Innovations giving citizens a say in governance can drive progress in sustainable development.

Figure 1: Objectives of the Digital Strategy for Africa



Source:The Digital Transformation Strategy for Africa (2020-2030).

In regional terms, Europe has the highest average EGDI value (0.8305), followed by Asia (0.6493), the Americas (0.6438), Oceania (0.5081), and Africa (0.4054).Over the last two decades, internet penetration in Africa has surged tenfold, outpacing the global average of a threefold increase. Regional bodies, supported by international development organizations, have implemented strategies prioritizing digital government to transform sub-Saharan economies. This approach has led to improved efficiency and the sharing of best practices, contributing to steady progress in the UN's e-government and e-participation metrics.

The E-Government Development Index (EGDI) scores in sub-Saharan Africa have nearly doubled from 0.2 in 2003 to 0.3914 in 2020, indicating progress in digital government performance. Despite gains, these scores consistently fall below the global average, with disparities in transformation across countries. Leading nations like Kenya, Mauritius, Rwanda, Seychelles, and South Africa outpace smaller economies. While digital government is crucial for economic growth, sub-Saharan Africa integrates it into broader digital economy strategies, impacting resource allocation. Successful implementations, such as Namibia's Nam-X e-government system, exist, but challenges persist. Supranational bodies and NGOs prioritize digital transformation, with initiatives like the UN Economic Commission for Africa's resolution and the African Union's Digital Transformation Strategy. Collaboration with the private sector is crucial for digital infrastructure development.

In sub-Saharan Africa, obstacles like low internet access, legislative gaps, and a digital skills shortage impede whole-of-government transformation. Despite challenges, investing $100

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billion in hard infrastructure could achieve universal broadband access, supporting initiatives like the African Continental Free Trade Area. Governments should connect digital services, establish data protection regulations, and enhance digital capabilities through investments. Inclusive digital ID systems are crucial for serving the "invisible billion" without basic credentials. The goal is a comprehensive digital government transformation in the region.

The UN E-government Survey 2022 highlights South Africa, Mauritius, Seychelles, and Tunisia as digital transformation leaders, excelling in online services, telecom infrastructure, and human capacity. Cote d'Ivoire, Rwanda, and Zambia enter the high E-Government Development Index group. South Africa stands out, with most high EGDI countries being upper or lower-middle-income. Despite improvements, the digital divide persists, driven by high mobile broadband costs. Challenges, including high data costs, persist in South Africa. Despite a 9% increase in online services for vulnerable populations since 2020, gathering sufficient investment for e-government development remains a challenge. The UN emphasizes strategic planning and increased investment for long-term national digital transformation in Africa, accelerated by COVID-19 responses focusing on distance learning, vaccination services, telehealth, and online scheduling for medical tests.

Table 1: Countries in Africa with the highest EGDI values

Country	**Rating class**	**EGDI Rank**	**Subregion**	**OSI**	**HCI**	**TII**	**EGDI (2022)**	**EGDI (2020)**
South Africa	HV	65	Southern Africa	0.7487	0.7733	0.6850	0.7357	0.6891
Mauritius	HV	75	Eastern Africa	0.6282	0.7733	0.7588	0.7201	0.7196
Seychelles	H3	85	Eastern Africa	0.4424	0.7758	0.8198	0.6793	0.6920
Tunisia	H3	88	Northern Africa	0.6031	0.6911	0.6646	0.6530	0.6526
Morocco	H2	101	Northern Africa	0.4721	0.6350	0.6676	0.5915	0.5729
Egypt	H2	103	Northern Africa	0.5730	0.6375	0.5579	0.5895	0.5527
Ghana	H2	106	Western Africa	0.5361	0.6176	0.5934	0.5824	0.5960

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Cabo Verde	H2	110	Western Africa	0.4965	0.6507	0.5507	0.5660	0.5604
Algeria	H2	112	Northern Africa	0.3743	0.6956	0.6133	0.5611	0.5173
Kenya	H2	113	Eastern Africa	0.6821	0.5641	0.4305	0.5589	0.5326
Gabon	H2	116	Middle Africa	0.3578	0.6706	0.6279	0.5521	0.5401
Botswana	H1	118	Southern Africa	0.2740	0.6932	0.6814	0.5495	0.5383
Rwanda*	H1	119	Eastern Africa	0.7935	0.5322	0.3209	0.5489	0.4789
Cote d'Ivoire*	H1		Western Africa	0.5467	0.5748	0.5186	0.5467	0.4457
Namibia	H1		Southern Africa	0.4316	0.6516	0.5133	0.5322	0.5747
Zambia*	H1		Eastern Africa	0.4414	0.6744	0.3909	0.5022	0.4242

Source: United Nations 2020 and 2022, E-government survey.

* Countries that moved from the middle to the high EGDI group in 2022.

The 2022 Survey's highlights the impact of e-government information services on development, noting their limited impact on streamlining government processes, citizen feedback, and worker efficiency. While Africa shows positive digitalization trends, challenges persist, including a digital divide exacerbated by the high cost of mobile broadband subscriptions. The report underscores the persistent challenges linked to inadequate investment in e-government development, particularly in low-income and lower-middle-income countries. Out of the 54 countries in Africa, only four surpass the global average EGDI value of 0.6102, with many others registering notably lower EGDI values. Despite improvements in telecommunications infrastructure in some African nations, providing a robust foundation for advancing digital government initiatives, challenges persist. Notably, the cost of mobile broadband subscriptions as a percentage of per capita gross national income remains considerably higher in Africa compared to other regions, hindering the progress of e-government development efforts.According to The United Nations E-government Survey 2022,

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the regional average EGDI value for Africa is 0.4054, which is well below the global average of 0.6102. Almost two thirds of the countries in Africa (59 per cent) have middle EGDI values, and close to a third (30 per cent) have high EGDI values.

The United Nations E-Government Survey 2022 reports that Africa's regional average EGDI value is 0.4054, considerably below the global average of 0.6102. Almost 59% of African countries have middle EGDI values, with 30% having high EGDI values. While no country in Africa falls into the very high EGDI group, there is an encouraging decline in African representation in low and middle EGDI groups. South Africa, Mauritius, Seychelles, and Rwanda lead in e-government development, showcasing progress driven by long-term digital strategies aligned with national policies and SDGs. Despite challenges, these countries are actively extending internet accessibility, promoting sustainable infrastructure, and prioritizing digital literacy for comprehensive SDG achievement.[2]

The seven countries falling into the low EGDI group in 2022 are classified as either Least Developed Countries (LDCs) or Landlocked Developing Countries (LLDCs). Among them, six are situated in Africa, namely the Central African Republic, Chad, Eritrea, Niger, Somalia, and South Sudan. Strikingly, these African nations were already part of the low EGDI group in 2020, indicating persistent challenges in advancing their digital governance initiatives. The remaining country in the low EGDI group for 2022 is an LDC located in the Americas — Haiti. The changes in EGDI values from 2020 to 2022 underscore the dynamic nature of digital governance efforts globally. While some countries have made significant strides, challenges persist for others, particularly in Africa, necessitating concerted efforts to bridge the digital divide and ensure inclusive and sustainable development in the digital era. Africa, despite its immense potential and growing technological landscape, grapples with persistent challenges in the realm of e-government development. The key hurdle lies in inadequate investment, particularly in low-income and lower-middle-income countries, which constitute a staggering 85 percent of the regional total. Of these countries, two-thirds fall under the categories of Least Developed Countries (LDCs), Landlocked Developing Countries (LLDCs), and/or Small Island Developing States (SIDS), highlighting the widespread nature of the issue.

African nations face unique circumstances, with 39 out of the 91 countries worldwide categorized as being in special situations, further complicating their e-government

[2]https://desapublications.un.org/sites/default/files/publications/2022-09/Report%20without%20annexes.pdf

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development. The challenges are particularly pronounced among LDCs, which exhibit the lowest Electronic Government Development Index (EGDI) and subindex values. The average EGDI value for this group stands at a modest 0.3233, emphasizing the uphill battle these nations face in advancing their digital governance initiatives.

Small Island Developing States (SIDS) in Africa encounter their own set of challenges, reflected in an average EGDI value of 0.3872. While Mauritius excels with the highest OSI value, and Seychelles leads in Telecommunication Infrastructure Index (TII), these islands face unique hurdles in leveraging digital technologies for governance.

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Conclusion

The African continent grapples with persistent challenges in e-government development, marked by a digital divide exacerbated by high mobile broadband costs. Despite notable progress, the E-Government Development Index (EGDI) scores consistently lag below the global average. The African continent experiences a dynamic landscape in e-government development, marked by both progress and persistent challenges. Despite notable strides, the E-Government Development Index (EGDI) scores for African nations remain consistently below the global average, reflecting a digital divide exacerbated by the high costs of mobile broadband subscriptions. While leading nations such as South Africa, Mauritius, Seychelles, and Rwanda demonstrate successful digital governance strategies, smaller and less developed economies face substantial hurdles.Digitalization trends in Africa reveal disparities, with almost two-thirds of countries having middle EGDI values and 30% having high EGDI values. However, no countries reach the very high EGDI group, highlighting the ongoing challenges. Encouragingly, there's a decline in African representation in low and middle EGDI groups, indicating positive trends in digital governance.

Challenges in e-government development, particularly in low-income and lower-middle-income countries, are rooted in inadequate investment. Six Least Developed Countries (LDCs) consistently fall into the low EGDI group, pointing to persistent obstacles. Crucial opportunities for transformation include building inclusive digital ID systems and addressing barriers like low internet access, insufficient legislative frameworks, and a digital skills gap.

The United Nations E-government Survey 2022 stresses the need for strategic government planning and increased investment to foster long-term national digital transformation in Africa. Despite challenges, the continent has witnessed a 9% increase in online services for vulnerable populations since 2020. Overcoming barriers, fostering inclusivity, and leveraging technology are crucial for comprehensive digital government transformation.

To address these challenges, concerted efforts are needed from governments, international organizations, and the private sector. Strengthening institutional capacities, fostering regional collaborations, prioritizing digital infrastructure development, and addressing economic constraints are paramount. Widespread internet access and effective delivery of e-government services necessitate addressing infrastructure gaps, particularly in rural and remote areas.

In conclusion, while Africa faces significant e-government development challenges, strategic and collaborative efforts can drive transformative change. Addressing root causes, fostering innovation, and promoting inclusive policies can empower African nations to harness the potential of digital governance for sustainable development and bridge the digital divide.

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