

Leveraging Technology to Bridge the Policy Innovation Gap in Developing Countries: Enhancing Service Delivery and Public Engagement.

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ABSTRACT

This study explores how technology adoption can facilitate innovative policy solutions in developing countries. Three research questions guided the investigation: how technology facilitates policy development, barriers hindering technology adoption, and successful strategies for overcoming these limitations. In-depth qualitative literature review was carried out into understanding the intricate relationship between technology adoption and policy innovation in developing countries. The findings demonstrate the potential of e-governance platforms and data analytics for improved service delivery, public engagement, and data-driven decision-making. However, challenges including organizational inertia, financial constraints, and limited digital infrastructure hinder progress. The study recommends strategies for overcoming these limitations. These include enhancing public sector capacity for innovation through targeted training and performance-based incentives. Leveraging public-private partnerships through innovation challenges and social impact bonds can further stimulate innovation. Finally, successful local adaptation of global policy solutions requires collaboration between public and private sectors. By addressing these challenges and harnessing the potential of technology, developing countries can create a more efficient, transparent, and citizen-centric governance system.

Keywords: Technology adoption, policy innovation, developing countries, public engagement, service delivery

1.1 Introduction

Policy innovation in public administration refers to the development and implementation of new and creative approaches to address public policy challenges (Georghiou et al., 2014). These innovations can take various forms, including the adoption of new technologies, the introduction of new programs or initiatives, and the implementation of new strategies or approaches to improve the delivery of public services and enhance governance. Additionally, policy innovation in public administration involves learning from global practices and adapting them to local contexts (Casier, 2018).

The goal of policy innovation is to find effective and efficient solutions to complex societal problems, improve public services, and promote economic and social development (Riau & Rukin, 2020). This can be achieved through the exploration of new ideas, collaboration with various stakeholders, and the use of evidence-based decision-making. This helps create a more inclusive and responsive public administration system that can effectively address the needs and aspirations of citizens (Riau & Rukin, 2020).

By promoting policy innovation, public administrators, can stay at the forefront of societal challenges and better serve the public. For example, one area of policy innovation in public administration is the use of technology to enhance public demands in the implementation of e-governance platforms (Casier, 2018). These platforms allow citizens to access government services and information online, leading to increased convenience, efficiency, and transparency in public administration. Examples of technology used for e-governance include online tax filing systems, digital payment platforms, and mobile applications for accessing government services. Other examples include chatbots, artificial intelligence, and big data analytics to improve decision-making processes and service delivery in areas such as healthcare, transportation, and environmental management.

Although, the implementation of policy innovation in public administration is not without its challenges (Obwegeser & Müller, 2018). These challenges can include resistance to change, limited resources, lack of political support, and bureaucratic hurdles (Casier, 2018). However, with proper planning, stakeholder engagement, and capacity building, these challenges can be overcome. Some case study examples of countries where the use of technology has proven its efficacy towards public service delivery include Singapore, Estonia, and South Korea (Leão & Canedo, 2018). Other countries include the United States, Canada, and the United Kingdom (Maramura & Thakhathi, 2016).

One of the key challenges in implementing policy innovation in public administration is navigating the legal framework (Georghiou et al., 2014). Public administrators must ensure that any innovation in public administration complies with existing laws and regulations (Leão & Canedo, 2018). Furthermore, they must also navigate the complexities of public procurement processes, which can often hinder the adoption of innovative solutions (Casier, 2018). In the context of developing nations, implementation of policy innovation in public administration can be particularly challenging due to limited resources, lack of technological infrastructure, capacity constraints, intricate socio-political environments, and administrative practices inherited from colonial eras or rooted in traditional structures. For example, in Nigeria, South Africa, Kenya, India, and many other developing countries, efforts are being made to overcome these challenges through partnerships with international organizations, capacity-building initiatives, and investments in technological infrastructure. Yet most developing nations still struggle to meet the evolving needs of their citizens, simply because, they are faced with the challenge of adapting global practices to meet the demands of the 21st century.

Thus, effective public administration requires a shift towards empowering local governments to make decisions and manage resources closer to the people they serve, promoting transparency and accountability, building a professional public service based on skills and qualifications, and leveraging information technology to improve efficiency, service delivery, and information access for citizens. By embracing these principles and adapting administrative practices to their specific contexts, developing countries can create a more responsive, efficient, and citizen-centered public administration system. This, in turn, fosters sustainable development and improves the lives of their citizens (UN DESA, 2018; World Bank, 2017). This study aims to contribute to a deeper understanding of the factors that influence, facilitate, and hinder policy innovation in public administration, particularly in developing countries. The findings can inform policymakers, public administrators, and researchers in developing effective strategies to promote a more innovative and responsive public sector that can address the evolving needs of citizens in a globalized world.

Research questions

From the above discussion, the following research questions emerged:

1. In what ways does the adoption of technology facilitate the development and implementation of innovative policy solutions in areas like service delivery and public engagement?
2. What are the factors hindering the capacity of developing countries in adopting technology for policy innovation?
3. What successful strategies can be adopted by developing countries to overcome these limitations?

1.2 Purpose of the study

The main purpose of this paper is to critically examine how technology can help developing countries create better policies for public services and engagement. In particular, the study:

1. Analyze ways through which the adoption of technology can facilitate the development and implementation of innovative policy solutions in areas like service delivery and public engagement;
2. Examine factors hindering the capacity of developing countries in adopting technology for policy innovation; and
3. Explore successful strategies can be adopted by developing countries to overcome these limitations

The paper is divided as follows: Section 2 offers a scholarly examination of the literature pertaining to the role of technology in facilitating policy innovation in developed countries. It also describes factors hindering the capacity of developing countries in adopting technology for policy innovation. Section 3 presents the theory upon which the paper was anchored. Section 4 is on the methodology deployed. Section 5 highlights the results and findings of the paper. Section 6 concludes the paper. Finally, section 7 provides recommendation.

2.0 Literature review

2.1 The role of technology in facilitating policy innovation

The landscape of public administration is undergoing a significant transformation fueled by the adoption of new technologies. This review explores how technology, particularly e-governance platforms and data analytics tools, can act as catalysts for developing and implementing innovative policy solutions in areas like service delivery and public engagement.

E-governance platforms

E-governance platforms provide online portals for citizens to access government services, information, and resources (Casier, 2018). This shift towards digital service delivery offers several advantages that facilitate policy innovation. E-platforms increases efficiency and convenience by automating tasks, such as permit applications, license renewals, and benefit enrollment, reducing processing times and administrative burdens (Dunleavy et al., 2009). This allows governments to allocate resources more effectively and frees public servants

from routine tasks to focus on policy that is more complex like designing targeted social programs or creating regulations that address emerging challenges. Additionally, citizens can access services 24/7, enhancing convenience and citizen satisfaction (Jaeger et al., 2018).

Improved transparency and accountability is another benefit that comes with E-governance. E-governance promotes transparency by making government data and information more readily available to citizens (Janowski, 2011). Public budgets, legislative records, and performance metrics can be easily accessed online, fostering greater public scrutiny and holding governments accountable for their actions. Additionally, online platforms can facilitate two-way communication between citizens and policymakers. Public forums, comment sections, and online surveys can be utilized to gather citizen feedback, allowing for more participatory policy development that incorporates the needs and concerns of the public.

E-platforms can leverage user data to tailor services and information to individual citizen needs (Wirtz et al., 2016). For instance, unemployment benefits applications can pre-populate with relevant employment history from tax records, streamlining the process. Social welfare programs can be better targeted based on individual needs identified through online applications. This personalization can enhance the effectiveness of policy interventions by ensuring they reach the intended beneficiaries and provide the most relevant support.

Data analytics

Data analytics allows governments to collect, analyze, and interpret vast amounts of data related to policy implementation and citizen behavior (Chen et al., 2019). This new capacity offers significant benefits for policy innovation. Data analytics empowers policymakers to base decisions on real-time data and trends rather than solely on anecdotal evidence or intuition (Heeks, 2008). Analyzing crime statistics, for example, can help identify high-crime areas where preventative measures or increased police presence might be needed. This leads to more evidence-based and data-driven policy solutions that address the root causes of social problems, ultimately leading to better outcomes.

Performance measurement and evaluation is another critical aspect that comes with data analytics. Data analytics allows for the creation of robust performance metrics to track the effectiveness of policy interventions (Denhardt et al., 2007). By analyzing data on program participation rates, service delivery times, and citizen satisfaction levels, policymakers can identify areas where policies are falling short and adapt them accordingly. This data-driven approach allows for continuous improvement and innovation in policy design and implementation. By analyzing historical data and identifying patterns, governments can use data analytics to predict future trends and potential risks (Chen et al., 2019). For instance, analyzing weather patterns and historical disaster occurrences can help predict areas at risk for flooding, allowing for proactive policy measures.

2.2 Impediments to policy innovation in public administration

The successful adoption of innovative policy solutions within public administration is a complex undertaking. Several factors can act as significant impediments to this process, hindering progress and limiting the potential for positive change. This review examines the key challenges posed as organizational inertia, resource constraints, political dynamics, and bureaucratic structures.

Organizational inertia

Public administrations are often characterized by a preference for the status quo and a resistance to change (Walker, 1978; Goodsell, 2007). This inertia can stem from established routines, risk aversion, and a lack of incentives for innovation (Sørensen & Torfing, 2017). Bureaucratic inertia can manifest in several ways, such as a focus on precedent and established procedures, a lack of tolerance for failure, and a reluctance to invest in untested solutions. Additionally, public sector unions can sometimes act as a force for inertia, resisting changes that might affect their members' jobs or working conditions.

Resource constraints

Public administrations frequently operate under tight budget limitations and limited human resources (Osborne, 2006). This scarcity can hinder the investment required for pilot programs, training, and infrastructure development necessary to implement innovative solutions (Hood, 1995). Resource constraints can force public administrators to prioritize core service delivery over potentially risky innovations. Furthermore, a lack of qualified personnel with the skills and expertise necessary to implement innovative solutions can further impede progress.

Political dynamics

Policy innovation can be a politically charged endeavor. Politicians may be hesitant to support innovations that carry potential risks or could alienate their constituents (Howlett et al., 2011). Additionally, partisan gridlock and the need for political consensus can further hamper the adoption of innovative solutions (Ansell & Goulbourne, 2010). Political considerations can also lead to short-termism in policymaking, hindering investments in innovations that may have long-term benefits but require upfront costs.

Bureaucratic structures

Public administrations often have rigid hierarchical structures and complex approval processes (Weber, 1946). These structures can stifle creativity and impede the swift implementation of innovative solutions (Pollitt et al., 2004). Bureaucratic silos, where departments function with limited communication and collaboration, can further hamper innovation efforts (Christensen & Eyring, 2011). Additionally, a lack of clear performance metrics and a culture of blame can discourage public servants from taking risks and exploring innovative approaches.

2.2.1 Barriers to policy innovation in developing countries

Developing countries often exhibit a strong desire to implement innovative policy solutions to address pressing social and economic challenges. However, their capacity for such innovation can be hampered by a confluence of factors. This review explores three key impediments: limited financial resources, a lack of robust technological infrastructure, and entrenched legacy administrative practices.

Limited financial resources

Developing countries frequently struggle with constrained public budgets, limiting their ability to invest in the crucial resources that fuel policy innovation (Osborne, 2006). This financial scarcity creates a cascading effect. Testing and refining innovative policy approaches for instance, often necessitates dedicated funding for pilot programs and feasibility studies. Limited resources can force policymakers to adopt unproven solutions, potentially leading to wasted funds and failed implementations (Howlett et al., 2011). This can be akin to launching a new social program without first conducting a pilot to assess its effectiveness and refine its delivery mechanisms.

Again, implementing innovative policies frequently demands specialized skills and knowledge among public servants. However, resource constraints can stifle investment in training programs and capacity building initiatives, hindering the workforce's ability to effectively translate policy designs into action (UNDP, 2019). For instance, a policy aiming to leverage big data analytics to predict crime outbreaks would require upskilling law enforcement personnel in data analysis techniques. Without proper training, such policies may struggle due to a lack of human capital equipped to handle the complexities of the new approach.

Technological infrastructure development is another factor that could posed as a challenge due to its associated financial demands. Building and maintaining robust technological infrastructure for e-governance platforms and data analytics tools requires significant investment. Limited resources often force developing countries to rely on outdated technologies, constraining the potential for innovation (Heeks, 2010). This can be a major barrier to policies that rely heavily on digital platforms for service delivery, citizen engagement, or data collection.

Lack of robust technological infrastructure

Developing countries frequently lack a strong foundation in information and communication technology (ICT) infrastructure (World Bank, 2019). This digital chasm can hinder policy innovation in several ways. E-governance platforms and online service delivery may not reach all citizens due to inadequate internet access and low computer ownership rates. This can exacerbate existing inequalities and limit the effectiveness of innovative policies (Heeks, 2010). For example, a mobile health program designed to deliver remote consultations may be rendered ineffective if a significant portion of the target population lacks access to mobile technology.

The lack of robust IT infrastructure can impede the collection, storage, and analysis of large datasets, hindering the use of data analytics for evidence-based policymaking and performance measurement (Chen et al., 2019). This can make it difficult to track policy outcomes, identify areas for improvement, and refine interventions over time.

The issue of cybersecurity threat is one area that cannot be ignored. Without robust cybersecurity measures, developing countries implementing data-driven policies face increased vulnerability to cyberattacks, potentially jeopardizing citizen privacy and data security (West, 2014). This can create a climate of fear and distrust, discouraging citizens from engaging with digital platforms and hindering the potential benefits of e-governance initiatives.

Legacy administrative practices

Public administrations in developing countries may be characterized by rigid bureaucratic structures and a preference for established routines (Goodsell, 2007). This ingrained inertia can create resistance to novel policy solutions.

3.0 Theoretical Framework

This inquiry is firmly rooted in the seminal work of Everett Rogers, particularly within the framework of the Diffusion of Innovations Theory expounded in 1962. This theoretical construct provides a systematic exploration into the mechanisms underlying the dissemination of novel concepts and technologies throughout societal structures.

Rogers' (1962) Diffusion of Innovations Theory delineates a coherent trajectory for the adoption of innovations, often represented graphically through a diffusion curve. This curve illustrates distinct phases:

Firstly, the phase of Knowledge entails individuals becoming cognizant of the innovation. Subsequently, during the Persuasion phase, individuals formulate opinions regarding the innovation's utility. Then, in the Decision phase, individuals elect to embrace or rebuff the innovation. Following this, the Implementation phase sees individuals actualizing the innovation, while the Confirmation phase involves seeking validation of the innovation's benefits to reinforce their decisions.

Central to the Diffusion Theory are several pivotal factors. These include communication channels, elucidating the avenues through which information regarding the innovation is propagated; social systems, encompassing the sway of societal norms, networks, and opinion leaders; and innovation attributes, including characteristics such as relative advantage, compatibility, complexity, trial ability, and observability.

In the realm of public administration, particularly concerning policy innovation, the Diffusion of Innovations Theory furnishes an invaluable analytical framework. It facilitates comprehension of the progression of adoption across various echelons, ranging from global paradigms to local implementations. Additionally, it sheds light on the determinants shaping decision-making processes, inclusive of communication modalities, social frameworks, and perceived innovation attributes. Furthermore, it offers insight into the intricate dynamics underpinning policy implementation endeavors, encompassing challenges and opportunities attendant to adapting global innovations to local exigencies.

Notwithstanding its influence, the Diffusion Theory has garnered criticism for its perceived shortcomings. Critics, exemplified by Van de Ven (1986), contend that its linear depiction fails to encapsulate the iterative and nonlinear nature characterizing actual adoption dynamics. Moreover, the theory's emphasis on individual decision-making may obfuscate broader structural influences such as power dynamics, political imperatives, and resource constraints.

Nonetheless, within the ambit of policy innovation research within public administration, the Diffusion Theory retains its salience. By leveraging this framework, scholars can discern the principal stakeholders implicated in the adoption process, discerning both proponents and detractors. They can also explore the manner in which global best practices are

communicated to local governance entities. Moreover, they can appraise pertinent factors, including the perceived advantages and compatibility of innovations within local contexts. Finally, they can study the nuanced dynamics governing implementation endeavors, and the concomitant efforts to reconcile global mandates with local exigencies.

In summation, the Diffusion Theory furnishes a structured lens through which to apprehend the diffusion and uptake of policy innovations within public administration. Despite acknowledged limitations, the theory engenders invaluable insights into the iterative processes, influential factors, and attendant challenges inherent in transposing global policy paradigms into efficacious local enactments.

4.0 Methodology

In-depth qualitative literature review was carried out into understanding the intricate relationship between technology adoption and policy innovation in developing countries. The analysis focuses on scholarly works that explore the experiences and perspectives of various stakeholders involved in this dynamic in developed countries. By examining qualitative data, the review aims to gain a comprehensive understanding of the opportunities and challenges associated with leveraging technology for innovative policy solutions for African countries.

5.0 Results

5.1 Technology adoption and policy innovation in governance

Empirical literature reviewed showed that the adoption of e-governance platforms and data analytics tools facilitated innovative policy solutions in service delivery and public engagement. Here is a review of empirical findings that highlight these connections.

E-governance platforms enhanced efficiency and accessibility

Studies by Moon (2002) and Ebrahim, et al. (2017) showed that e-governance platforms streamlined service delivery processes. Thus, citizens were able to access government services online 24/7, reducing wait times and long commutes. This was particularly beneficial for geographically dispersed populations and those with limited mobility.

E-governance platforms improved transparency and accountability

Research by Banerjee and Duflo (2011) revealed that online platforms increased transparency in service delivery. As a result, citizens could track the status of their applications or access information on government programs, fostering greater accountability from public institutions.

E-governance platforms targeted service delivery

E-governance platforms can be leveraged for more targeted service delivery, as highlighted by Albuquerque, et al. (2011). Data collected through online interactions can be used to personalize services and identify populations requiring additional support. For instance, a social welfare program could utilize an e-governance platform to identify and target geographically isolated communities with limited access to resources.

Data-Driven Decision Making

Research by Lee et al. (2017) and Grimmelikhuijsen et al. (2019) emphasizes on the value of data analytics in informing policy decisions. By analyzing large datasets collected through e-governance platforms and other digital channels, governments can gain valuable insights into citizen needs and preferences. This data-driven approach can inform the development of more targeted and evidence-based policy solutions.

Predictive Analytics for Proactive Policy

Studies by Chen et al. (2015) and Johnston et al. (2017) discovered the potential of data analytics for proactive policymaking. By analyzing trends and patterns, they showed that governments could anticipate emerging issues and develop preventative measures. For instance, real-time data on traffic flow could be used to predict congestion hotspots and implement dynamic traffic management strategies.

Citizen Engagement and Co-creation

Research by Macintosh et al. (2012) suggested that data analytics could be used to enhance citizen engagement in policymaking. Online surveys and forums can be used to gather citizen input and gauge public sentiment on potential policy solutions. Data analysis of this feedback can inform policy design and foster a sense of co-creation between citizens and government.

5.2 Barriers to policy innovation in public administration in developing countries

Organizational inertia

Scholars like Rainey (2009) and Brewer and Goldsmith (1998) documented the prevalence of risk aversion and a preference for established routines within bureaucracies. This ingrained conservatism lead to resistance towards untested policies, acting as a significant barrier to innovation. Consider a public health department accustomed to traditional vaccination campaigns. When presented with a proposal for a mobile app delivering personalized vaccination reminders and real-time immunization tracking, organizational inertia might manifest as resistance to adopting this app. The department might favor established outreach methods and fear potential technical glitches with the new technology.

Financial constraints

Research by Osborne (2006) and Howlett et al. (2011) underscores how limited financial resources stifled innovation. Budgetary constraints for instance can restrict investment in crucial areas like pilot programs, training for public servants, and the technological infrastructure needed to implement innovative policies. In a similar fashion, studies by the World Bank (2016) highlight how budgetary constraints in developing countries restrict investments in critical areas. These areas include pilot programs, capacity building for public servants, and the technological infrastructure needed to implement innovative policies. This lack of resources stifled creativity and experimentation, hindering the development and testing of new approaches (Mosse, 2005).

Prioritization challenges

Developing countries often face difficult choices when allocating scarce resources. Basic needs like healthcare and education often take precedence, leaving limited funding for innovative policy initiatives in other areas (Mosse, 2005). A developing country might struggle to implement a policy promoting remote learning through video conferencing platforms due to a lack of funds. Insufficient resources for purchasing tablets for students in underserved communities and inadequate internet bandwidth in rural areas can significantly impede such a policy's reach and effectiveness.

Aid dependence and conditionalities

Foreign aid can be crucial for development projects in developing countries. However, research by Boyce (2007) points out that aid often comes with conditionalities that may not align with the specific needs and contexts of the recipient country. This external influence can potentially hinder the pursuit of locally driven policy innovation.

Political influences

Work by Zahariadis (2014) and Marsh et al. (2005) explored how political ideologies, short electoral cycles, and special interest groups can influence policy choices. Policy innovation might be discouraged if it conflicts with established political agendas on the other hand, faces strong opposition from powerful interest groups. For example, a proposal for a congestion pricing scheme to reduce traffic in a major city might face resistance from political actors who fear losing support from constituents opposed to the policy's potential impact on driving costs.

Bureaucratic structures

Research by Goodsell (2007) and Christensen et al. (2011) identified how rigid hierarchical structures and siloed departments within bureaucracies can impede collaboration and coordination, which are crucial for implementing complex policy initiatives. In relation to Goodsell (2007) and Christensen et al. (2011), Research by Evans and Rauch (2000) and Meier (2007) describes how rigid hierarchical structures and departmental fragmentation within bureaucracies in developing countries can hinder collaboration and coordination, both crucial elements for effective policy innovation. Legacy practices that emphasize top-down decision-making may suffocate creativity and limit the upward flow of ideas within the administrative system. A policy aiming to tackle youth unemployment might struggle to gain traction if there is a lack of coordination between the ministries of education, labor, and social services. This departmental fragmentation can hinder the development of a holistic and integrated approach to youth unemployment.

Connectivity issues

Research by Heeks (2008) and Waverman et al. (2017) highlights the significant challenge of limited internet access and unreliable connectivity in many developing countries. This lack of robust infrastructure can impede the implementation of e-governance platforms and data-driven policy solutions that rely on digital connectivity.

Digital divide

Studies by Warschauer (2004) and Espejo (2018) emphasized on the digital divide within developing countries. This refers to the disparity in access to technology and digital literacy skills between different populations. The digital divide can exacerbate existing inequalities and limit the reach of technology-driven policy innovations.

Technical expertise gap

Research by Avgerou (2012) and Heeks (2016) points to the lack of technical expertise in some developing countries. This expertise is necessary to manage and maintain the complex technological infrastructure required for policy innovation. The absence of such expertise can create challenges in implementing and scaling up new technology-based solutions for policy purposes.

5.3 Successful strategies for overcoming resource constraints and cultivating policy innovation in developing countries

Enhancing Public Sector Capacity for Innovation

Targeted training and skill development

Equipping public servants with the necessary skillsets is critical. Studies by Chaudhuri et al. (2015) and Luna-Arocas et al. (2017) demonstrated the effectiveness of training programs in design thinking, data analysis, and project management. These skills empower public servants to approach policy challenges with greater creativity and problem-solving capabilities. Additionally, fostering creativity and critical thinking through innovation boot camps or exchange programs with developed nations can further enhance this capacity.

Mentorship and knowledge transfer

Mentorship programs that pair experienced public servants with younger counterparts can significantly accelerate the integration of innovative practices. Research by Fernandez-Valdés et al. (2017) in Spain highlights the success of such programs in fostering a learning environment and knowledge transfer within administrations.

Performance management systems with innovation incentives

Revamping performance management systems to reward and recognize innovative work is crucial. Research by Ryu et al. (2018) suggested that such systems could motivate public servants to experiment with new approaches to policy challenges.

Leveraging Public-Private Partnerships (PPPs) for Policy Innovation

Innovation Challenges and Prizes

Beninger's (2018) study explores the case of the Philippines, where innovation challenges were used to incentivize the private sector to develop solutions for disaster risk reduction. This approach leverages private sector inventiveness and adaptability to address pressing public policy issues

Social Impact Bonds (SIBs)

Cumming et al. (2013) analyze SIBs used in the UK to finance social programs. These partnerships attract private sector investment while encouraging evidence-based policy development focused on achieving predetermined outcomes.

Local Adaptation of Global Policy Innovations for Effective Implementation

Understanding policy transfer mechanisms

Selecting appropriate global policy innovations for adaptation requires careful consideration of transfer mechanisms. Dolowitz and Marsh (2000) differentiate between coercion, emulation, and competition. Emulation, inspired by successful examples in other developing countries, and competition, driven by benchmarking against peers to attract foreign investment, can be more effective for developing countries than top-down coercion from international institutions.

Multi-stakeholder collaboration

Research by Leach et al. (2007) and Alsop et al. (2008) highlights the importance of including civil society organizations, community leaders, and the private sector in the adaptation process. A collaborative approach ensures that adapted policies are inclusive, responsive to local needs, and have greater ownership among stakeholders.

6.0 Conclusion

In conclusion, technology presents a potent instrument for developing countries to bridge the digital divide and achieve transformative governance. Embracing innovative approaches, overcoming existing barriers, and fostering collaboration between public and private sectors are crucial steps for developing countries to leverage technology in creating a more efficient, transparent, citizen-centric, and ultimately, more prosperous future. However, realizing this vision necessitates a multi-faceted strategy.

First and foremost, investment in robust digital infrastructure is paramount. Expanding internet access, particularly in underserved rural areas, and ensuring reliable connectivity are essential. Bridging the digital divide not only empowers citizens to actively participate in e-governance initiatives but also unlocks opportunities for remote learning, telemedicine, and e-commerce, ultimately fostering broader socioeconomic development.

Secondly, a focus on cultivating digital literacy skills within the citizenry is essential. Equipping citizens with the necessary capabilities to navigate online platforms and critically evaluate information is crucial for maximizing the benefits of technology-driven policy solutions. Educational programs and targeted public awareness campaigns can play a vital role in achieving this goal.

Thirdly, fostering a culture of innovation within the public sector is critical. This requires not only targeted training programs for public servants in design thinking, data analysis, and project management, but also a paradigm shift within public administrations, encouraging experimentation and calculated risk-taking. Establishing innovation labs, hosting hackathons

focused on specific policy challenges, and fostering knowledge-sharing platforms with developed countries can further stimulate creative problem-solving approaches.

Finally, international cooperation plays an indispensable role. Developed nations can significantly support developing countries by sharing best practices, providing technical assistance, and facilitating knowledge transfer related to technology adoption and policy innovation. Additionally, international organizations can play a crucial role in promoting responsible and inclusive technology adoption, ensuring that these advancements benefit all segments of society and contribute to the achievement of the Sustainable Development Goals.

By bridging the digital divide, investing in digital literacy, fostering a culture of innovation in governance, and leveraging international cooperation, developing countries can harness the power of technology to address complex challenges, empower citizens, and create a more equitable and sustainable future.

7.0 Recommendations

1. There is need to prioritize in the expansion of internet access and ensuring reliable connectivity, especially in neglected rural areas. This will pave the way for e-governance initiatives like online service delivery, remote learning opportunities, telemedicine services, and e-commerce platforms. These advancements collectively will contribute to broader socioeconomic development across the nations in Africa.
2. There is need to implement educational programs and targeted public awareness campaigns to equip citizens with the necessary skills to navigate online platforms confidently. These skills will include the ability to critically evaluate information encountered online. By empowering citizens with digital literacy, African nations can maximize the positive societal impact of technology-driven policy solutions.
3. A culture of innovation should be foster within public administration by providing targeted training programs for public servants. These programs should equip them with valuable skills in design thinking, data analysis, and project management. Additionally, encourage a shift in mindset within government agencies, promoting calculated risk-taking and experimentation.
4. Consider establishing innovation labs to spearhead creative problem-solving approaches. Organize hackathons specifically focused on tackling pressing policy challenges.
5. There is need to establish knowledge-sharing platforms to foster collaboration and learning exchange with developed countries.
6. There is also the need to utilize innovation challenges to incentivize the private sector to actively participate in developing solutions for pressing policy issues. This will foster collaboration and leverages the private sector's ingenuity and adaptability. Social impact bonds can also be implemented to attract private sector investment in social programs with predetermined outcomes. These partnerships create a win-win scenario for both public and private sectors, ultimately benefiting society as a whole.
7. Ensure successful adaptation and implementation of global policy innovations by involving civil society organizations, community leaders, and private sector entities throughout the process. This collaborative approach will ensure that policies are inclusive, responsive to the specific needs of local communities, and have a greater sense of ownership among stakeholders.
8. Encourage developed nations to share best practices and provide technical assistance to developing countries. This can involve facilitating knowledge transfer related to

technology adoption and policy innovation. International organizations can play a crucial role in promoting responsible and inclusive technology adoption. By ensuring that these advancements benefit all segments of society, they can contribute significantly to achieving the Sustainable Development Goals, creating a more equitable and sustainable future for all.

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