

# The Faltering Start of Digital Transformation of Public Services in Developing Countries

Mohammed Saaida<sup>1\*</sup> & Shaban Jamal Ayyat<sup>2</sup>

<sup>1</sup>Associate Professor at Department of International Relations and Diplomacy, Faculty of Administration Sciences and Informatics, Al-Istiqlal University, Jericho – Palestine. **ORCID:** <https://orcid.org/0000-0001-7488-9832>

<sup>2</sup>Faculty of Administration Sciences and Informatics, AL- Istqlal, Jericho, Palestine. Chief of Staff, Office of the President Al Istiqlal University (Palestinian Academy for Security Sciences). **ORCID:** <https://orcid.org/0009-0007-5836-1318>

DOI:10.5281/zenodo.17087293

## ARTICLE INFO

### Article history:

Received : 30-08-2025

Accepted : 04-09-2025

Available online : 09-09-2025

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**Citation:** Saaida M. & Ayyat S. J. (2025). The Faltering Start of Digital Transformation of Public Services in Developing Countries. *IKR Journal of Arts, Humanities and Social Sciences (IKRJAHS)*, 1(4), 177-192.



## ABSTRACT

## Original research paper

The research examines how digital transformation is implemented, its effects, and strategic adaptation in the public sectors of developing countries. It highlights how online technologies reshape public administration by increasing efficiency, enhancing transparency, and delivering citizen-focused services, while also supporting national development. The study also explores the role of digital public services in economic growth, employment, innovation, improved governance, and reducing digital exclusion. Persistent issues such as weak infrastructure, limited digital skills, regulatory barriers, and fragmented IT systems obstruct effective implementation. Drawing on international examples, the paper identifies key success factors: strategic leadership, process standardization, centralized IT control, capacity building, stakeholder engagement, and public-private collaboration. Cultural, organizational, and behavioral changes in governance are also integral to digital transformation, which extends beyond operational improvements. By analyzing implementation strategies, performance tools, and experiences of smaller municipalities, the study contributes to a theory of digital transformation tailored to the specific contexts of developing countries. This approach emphasizes institutional capacity, social inclusion, agility, and long-term adaptability for sustainable and effective transformation.

**Keywords:** Digital Transformation, Public Sector, Developing Countries, Governance, Implementation Challenges, Strategic Adaptation.

\*Corresponding author: Mohammed Saaida

Associate Professor at Department of International Relations and Diplomacy, Faculty of Administration Sciences and Informatics, Al-Istiqlal University, Jericho – Palestine.

## Introduction

Digital Renovation of public services became one of the defining forces that has changed the way people are governed, how the administration is run, and how citizens take part in this process. This transition is especially high in developing nations, where there are chances to enhance the efficiency of the administration and help attain the national development goals. In essence, digital transformation makes the delivery of the public services more efficient through better administration, transparency, and citizen values. In addition to operations enhancement, it promotes sustainable economic

development, inclusive governance and is consistent with the other national policy objectives.

Nonetheless, the implementation of digital transformation in the developing world is a complicated task that requires proper contextual assessment. They are fragmented IT infrastructure, interoperability, limited financial and human resources and issues on sustainability and institutional resistance. Though an effective key to the success is the adoption of the suitable technology, standardization of processes, centralization of IT management, interconnectivity of systems, and the spirit of the collaboration between the public and the private side, these technical factors are not

enough. Transformation of the organization, culture as well as behavior play equally important roles in modernizing of the governance of the public sector. Also, the ability to see and measure digital results has always been an issue, especially in cases when benefits are either slight, or long-term. An example case study of an integrated ICT centralized infrastructure, India depicts the extent to which strategic integration can possibly change the overall performance of the administration and provide lessons that can be transferred to other developing environments.

This core issue behind the study however is on how the efficiency gains, long-term effects and value garnered by the digital public services in developing countries will be measured. Although digital systems are likely to result in smoothness in operations, less administrative burden, and faster service delivery, the level to which these advantageous effects will be achieved and what it will mean to governance has to be executed systematically. Wider evaluations should not only be quantitative in terms of technical outputs, the social, institutional, and economic sectors of effect ought to be taken into account.

To answer these questions, the research is carried by the author on the basis of comprehensive context sensitive research design in which theoretical questions are also combined with empirical events. It aims at getting to know how the application of digital transformation can be effectively designed, quantified and planned towards differentiation of the governance environments of developing nations which are quite varied. Based on international and comparative trials and case studies of countries India, Ghana, Zimbabwe and Indonesia, the work identifies success parameters and situational variables that define digital results. It suggests an integrative theoretical model that brings together the strategies of digital change, generating public value, organizational change, and capacity of governance.

The study has a mixed-methods approach methodologically. Quantitative instruments refer to efficiency indices and econometric methods, by measuring longitudinal trends of performances, to difference-in-differences, panel data analysis, and regression approaches. These are supplemented by qualitative approaches, such as stakeholder survey and expert interviews, to be able to capture inside information of the public servants, citizens, and policy experts. Special emphasis is placed on the experience of small municipalities and resource-poor environment, which becomes a testing ground of adaptive innovation. Overall this method and triangulation approach offer a multidimensional perspective on the opportunities and constraints of digital transformation and by the end of this approach will form a strong and practical theory that takes lavish consideration of the institutional realities of the Global South.

## Literature Review:

Digital transformation (DT) has become one of the pillars of reform in the sphere of the public sector globally and

especially in developing countries. founded as a process based on technology that can help optimize efficiency, transparency and citizen interaction, DT encroaches beyond the upgrades and also covers the restructuring of relevant organizations, reform of regulatory framework, and practices of cultural adaptation (Engkus, 2025; Pyzyuk, 2024). Researchers think that in order to access the possibilities of DT, citizens have to ensure the flexibility of their administrations and adopt innovation (Anggara et al., 2024). However, underdeveloped regions still suffer due to constraints to development, such as poorly integrated infrastructures and lack of skills, as well as poor digital governance (Syed et al., 2022; Rosita et al., 2024). Research indicates that digital programs have potential to increase the speed of transactions, lessen burdens and facilitate inclusion (Desai & Manoharan, 2024; Gondo & Suwaryono, 2024), although the results are not always equally distributed as a result of infrastructure inequality, political will, and citizen readiness (Junaidi, 2024; Latupeirissa et al., 2024). The successful DT needs step-wise, contextual approaches, strengthening capacities, and participatory governance (Koech & Bett, 2023).

Public value is crucial in reviewing digital reforms with a focus placed on efficiency in operations, as well as in regard to societal, economic, and administrative value (Scupola & Mergel, 2021). According to Zakiuddin et al. (2024), this includes four dimensions of values namely citizen (accessibility and quality), economic (efficiency and opportunity), administrative (transparency and accountability) and societal (inclusivity and sustainability). According to empirical evidence, in the example of India, Morocco and Indonesia, e-tax platforms, land registries and mobile payments enhance satisfaction, transparency, and performance (Aayale & Seffar, 2021; Desai & Manoharan, 2024). Nevertheless, a lack of equity and disparity in access, especially to rural or lower-income areas, still exists (Idrus et al., 2024; Abed et al., 2024), earning this argument the claim of equity-based policy.

Digitalization is often hindered by organizational resistance and inertia (Nawaz et al., 2025). As the scholars emphasize, DT needs the culture of innovation, openness, and life-long learning (Pyzyuk, 2024; Engkus, 2025). A leader has to provide a vision, encourage teamwork, and address any displacement fears (Aryatama et al., 2024). Cross-natal research proves that the leadership, digital literacy, and change management investments are associated with more effective reforms (Doan et al., 2025; Gusman, 2024). Due to co-production, involving citizens, employees and the business world in the design of services, trust, credibility and usability are improved (Scupola & Mergel, 2021; Alojail & Khan, 2023).

The governance issues also limit the implementation of DT by the developing countries. There is a consistent set of problems related to infrastructure gaps, digital illiteracy, regulatory rigidity and financial constraints mentioned in the literature (Syed et al., 2022; Rosita et al., 2024). In its turn,

governments resort to phases and public-private collaboration to cope with complexity (Junaidi, 2024; Nielsen & Jordanoski, 2023). Having looked at case studies of Paperless Port in Ghana and centralized ICT in India, it can be seen that leadership, interoperable systems, and capacity building are key enablers (Senyo et al., 2021; Verma et al., 2023). Failure to reform is usually due to the tact of silos, lack of leadership, and lack of sustainability planning (Syed et al., 2022; Lipchanskaya et al., 2024).

As a result of realizing that there is institutional variation, literature in the recent past supports the application of context-sensitive theories of digital governance. By doing so, Zeng et al. (2024) present the Pressure-Action-Resources (PAR) model, according to which DT can be described as outlined by pressures, availability of resources, and resilience. The comparative studies have proven the prevalence of the issue of resource limits but the results vary depending on the maturity of the institution, historical legacies and political stability (Smotritskaya, 2021; ElMassah & Mohieldin, 2020). Researchers also advise matching DT tests to the Sustainable Development Goals (SDGs) in order to measure wider effects (Yilmaz 2025, Abed et al. 2024).

DT is hard to measure in information-lean settings because its efficiency and effect are difficult to measure. Scholars offer the mixed-methodologies that combine quantitative (balance speed, cost savings, usage of services) and qualitative (citizen satisfaction, perceived service quality) indicators (Aryatama et al., 2024; Jiang et al., 2024). The longitudinal and difference-in-differences studies are useful in detecting permanent treatment effects that land registration may have in the field of finance and health (Ha, 2022; Desai & Manoharan, 2024). UN e-Government indices and public value frameworks allow the standardized measures (Zakiuddin et al., 2024).

The literature considered confirms the multidimensional conceptual framework of this research through the existence of an emphasis on the concept of digital transformation, the process of value creation by the state, organizational change, the capacity of governance and the characteristic dependence on the environment of the study. This evidence demonstrates not only a promising nature of digital governance in developing countries but also the persistence of the obstacles to this process. It sets the tone of the need of dynamic, inclusive and evidence based DT strategies which are based on local realities though adhered to international best practice.

## Conceptual Framework:

The research is grounded upon the multidimensional approach that investigates the influence, implementation, and strategic tailoring of the digital transformation in the context of the public sectors of the developing world. It uses theoretical insights on digital transformation, public value, organization change and governance capacity to provide an integrated perspective through which to examine the

opportunities and threats that are defining digital public administration renewal.

Digital transformation can be conceptualized based on the idea of a technology-intensive, strategic process which is geared towards enhancing the efficiency of the public sector, transparency, service delivery and citizen engagement with new and advanced digital tools and platforms. It is not just change on a technological level but on an organizational (restructuring), regulatory reform, and cultural adjustment level that involve changes to the behavior of leaders, competencies of employees, and the way citizens operate (Engkus, 2025; Pyzyuk, 2024).

The framework highlights such key success drivers of change in developing nations as the adoption of contemporary technologies, standardization of processes, centralization of IT management, comprehensive stakeholder participation, and influential political-administrative leadership (Koech & Bett, 2023; Nielsen & Jordanoski, 2023). Similarly, it indicates that to achieve inclusive and sustainable outcomes, the process of capacity building, infrastructure investment, and integration of SDGs should continue all the time (Abed et al., 2024; Yilmaz, 2025).

One of the pillars is public value creation, that is societal, administrative and economic advantages realized through digital initiatives. These dimensions of the public value are (1) citizen value enhanced service quality and access, (2) economic value efficiency and business opportunities, (3) administrative value transparency and performance, and (4) societal value inclusivity, sustainability, and governance legitimacy (Scupola & Mergel, 2021; Zakiuddin et al., 2024). The framework presupposes contextual, multi-path understanding since there are different institutional settings and it is possible to recognize them. It also implies the Pressure-Action-Resources (PAR) model (Zeng et al., 2024) that explains the trends of digitalization in the context of the impact of pressures on institutions, the resources, and the adaptability. This is why there are differences in terms of governance, infrastructure, literacy rate of the workers and the preparedness of the citizens which influence the capacity to design a reform, its pace and impact.

The framework is based on the comparative case studies in India, Ghana, Zimbabwe, and Indonesia (Desai & Manoharan, 2024; Aayale & Seffar, 2021; Senyo et al., 2021). In these examples, phased approaches, publicPolice-private partnerships, and flexibility in law and administration are identified as critical management resources related to transformation and resource limits.

Last but not least, the framework has performance measurement and assessment processes. It advocates mixed-methods solutions such as combination of efficiency indices, econometric analysis, and surveys of stakeholders to evaluate operational benefits as well as long-term public value (Aryatama et al., 2024; Jiang et al., 2024). This will make reforms to be monitored, modified and to be aligned to development priorities. The framework is about introducing digital transformation as a dynamic, context-sensitive, value-

creating process. It highlights the inter-relationship between technology, governance, socio-political background and expectations of the citizenry towards bringing out successful and sustainable changes.

## **Overall Impact and Value of Digital Transformation Digital Transformation's Impact on Public Services in Developing Countries:**

Demanding changes brought about by digital metamorphosis significantly overhaul the production of the public services in the developing countries, and the consequences persisted. Such transformation will change the way the government provides services where it incorporates state of the art digital technologies to improve the ease and efficiency of operations, and citizen interaction. Digital transformation in developing countries has made it easy to deliver services because there is increased efficiency and transparency in administration, and value created to the service to the citizens. Using digital tools introduces less bureaucracy, less wastage of resources, greater responsiveness, which enhances service delivery and access under the best quality.

These effects can be seen in empirical results in Zimbabwe and Morocco, as digital platforms have automated tax and land administration, making the process much faster and trustworthy (Gondo & Suwaryono, 2024; Aayale & Seffar, 2021). Accessibility and transparency have been expanded due to E-governance projects and mobile applications that put citizens in an easier position to utilize the services as well as make the officials accountable (Idrus et al., 2024; Latupeirissa et al., 2024). Digital infrastructure in India has furthered the inclusion of finance and health to portray how digital tools create value and help in socio-economic development of this region (Desai & Manoharan, 2024).

Nevertheless, the issues of digital divide, data security, and change resistance are still prevailing despite those developments. These problems threaten to isolate disadvantaged groups and bring about fair accessibility questions (Latupeirissa et al., 2024; Idrus et al., 2024). The leadership, stakeholders involvement and capacity building should be strong to effect transformation. The challenges are to be addressed with tailored strategies which take into consideration local socio economic and cultural contexts.

In general, digital transformation does have powerful potential of making the public administration efficient, transparent, citizen-friendly. However, the effective attainment of these benefits is subject to removal of barriers to inclusivity and implementation issues to ensure that digital advancement is realized in the form of fair, lasting contribution of public value in the developing world.

## **Digital Transformation for National Development:**

Digitalization of public services has the potential to contribute greatly to the development agendas of a nation in third world countries as it enables growth beyond enhanced administration. This transformative capability grants governments the opportunity to take strategic advantage of the digital technologies power to vastly hasten socio-economic growth and achieve overall priorities. Governments can use digital tools to localize and accelerate action on the critical United Nations Sustainable Development Goals (SDGs) including enhancing education (SDG 4), creating innovation (SDG 9), and promotion inclusive growth. Digital spaces increase equity in quality education and health care, economic opportunities, and social inclusion, especially among underserved and marginalized groups (Abed et al., 2024; Saini & Kharb, 2025; Yildmaz, 2025; Kolesnik et al., 2023). Increased data accuracy In addition to creating a more accurate picture of the problem, more data collection and analysis will allow improving policy planning and resource distribution, making strategies relevant to the local requirements.

Digital transformation promotes environmental sustainability through smarter resources management and the promotion of green technologies. The programs assist in strike the right balance between economic growth and ecological conservation (Yilmaz, 2025). Digitalization increases global competitiveness and builds a basis of long-term sustainability by modernizing the economy and promoting innovation, as well as uplifting digital skills of the workforce (Antoniuk & Davydenko, 2024). Nevertheless, these contributions will only be successful with the help of supportive policies, intense infrastructure investment, and bridging of the digital divide. Digital access and service should be based on equal access to prevent further inequality. Comprehensive plans to fill the connectivity, literacy, and affordability net is a must.

In general, the digital relationship is an engine of sustainable, inclusive, and broad-based national development. At its best, it gives the governments the powers to achieve a variety of goals concurrently, which contributes to socially equitable and sound growth.

## **Approaches and Challenges of Implementing Digital Transformation in Developing Countries:**

Digital transformation is a significant growth and modernization opportunity in developing countries, but implementation occasionally must persevere through country-specific challenges that are quite unique. These efforts are geared towards raising the standard of governance, service delivery as well as economic inclusion using developed technologies. Nevertheless, obstacles regularly appear in the form of poor infrastructures, skills shortage, organizational inertia, and complicated regulatory environments that may block any advancement and limit the efficacy of change.



Such an approach can be applied to cities and organizations, where digital projects often are implemented in stages, with smaller projects (e.g., smart city pilot programs) being built up and followed by larger projects (the integration of several systems) (Junaidi, 2024). This incremental practice assists them in dealing with complexity and working within limits of available resources. To bring change, a good leader and the vision are a must, more so in the public and private sectors. The leaders have to support the change, promote digital openness, and back the environment, which is innovative and adaptive (Conde & Wasiq, 2021). Partnership between the government and the private sector also helps ensure fill-ins in the terms of expertise, finance, and infrastructure creating a stronger ecosystem so that changes become sustainable.

Multiple obstacles still stand on the way of digitalization in developing countries. Limited infrastructure, which includes a patchy internet connection, electricity, and adequate equipment are obstacles from execution. There is the overall lack of digital skills in workers, leaders and civil servants, which forms long-term bottlenecks of implementation (Rosita et al., 2024). The source of internal resistance in many cases is the ingrained bureaucratic cultures, digital mind dieting and fear of job displacement. Regulations, such as out-of-date laws, the lack of policies and the presence of too many procedures, curtail the innovation and restrain successful projects scaling (Syed et al., 2022). Another big challenge is financial constraints, such as insufficiency of funding and lack of adequate maintenance planning. Lack of coordination, poor and divided leadership, and an absence of strategic planning more often than not fail various initiatives tried within the public sector (Rosita et al., 2024).

The experiences of real life provide some ideas on how to defeat these challenges. The experience of development of the smart city in Pune (India), Da Nang (Vietnam) and Mexico City demonstrates the viability of launching reforms on a departmental basis and then expanding in accordance with the experience gained. In a parallel manner, to combat the infrastructure and regulatory challenges, the African business shows its resilience and flexibility via designing new ways of operating locally (Junaidi, 2024; Rosita et al., 2024). The examples indicate that flexible, context sensitive plans that consider regional constraints and opportunities need to be employed.

Finally, the process of digital transformation in third world or developing countries is a lengthy process with an intricate nature that is influenced by factors at the national and local levels. A sustainable development requires effective leadership, well drafted planning, consistent capacity building, and the need to deal with the regulatory and infrastructure constraints that exist. To be successful, strategies need to be based on context that takes into account the realities in each country in terms of governance and social economic situations.

## Enabling Digital Public Services: Success Factors for Developing Countries:

The process of digital transformation of the public sector is contingent upon some key issues, the first one being the use of new technologies. This comes with the use of enhanced digital applications and channels in the delivery of services and responsiveness of the public sector. In complement of this transformation, the process will be an imperative to standardization processes in streamlining workflow and provide efficiency, consistency, and scalability in the range of services (Nielsen & Jordanoski, 2023). IT management is of essence too by being centralized in an attempt to manage digital resources without causing redundancy as well as ensuring greater security and integration of the system to operate smoothly (Koech & Bett, 2023).

In order to make successful transformation, the combination of leadership, a centralized IT infrastructure, and capacity-building measures, not only have to be synergetic but must also be sensitive to the local contexts as outlined in the previous section.

Technology and processes aside, effective leadership and a vision are the major factors in transforming and maintaining the same. The leaders are required to nurture an innovative culture that supports experiments, embraces changes, and introduces continuous improvement in the context of a public institution (Aryatama et al., 2024; Hai et al., 2021). These efforts are supplemented by solid infrastructure: stable internet, latest hardware and flexible software. Other needs, which are of high importance, relate to capacity building through specific training and the development of digital skills at all levels of the public sector and successful implementation and long-term sustainability.

Valuable stakeholder involvement is another key requirement. This involves engagement of citizens, employees, and partners in the private sector in the co-design to build digital services and engage them in feedbacks. An enabling regulatory environment should also be in place-revising policies and regulation to support digital innovation, safeguarding personal data and maintaining ethical benchmarks. Governance and participation, combined, base digital reforms on the credence and validity of the populace.

To continue transforming and to bring value to the business, it is imperative to focus on the improvement of the process and technological development. These two pillars constitute the operative foundation of the successful long-term digitalization. In the meantime, direction and shared ownership are achieved through the vision, leadership, governance, and cooperation of stakeholders (Koech & Bett, 2023).

To achieve inclusivity and long-term and equitable outcomes, capacity building, and intervention in the digital divide is an ongoing process. Through the development of the digital competencies of the employees in the public sector and offering more people the tools and services, governments can

guarantee even distribution of the benefits to all the demographics (Nielsen & Jordanoski, 2023). Resource and expertise gaps can also be solved through public-private partnerships which present strategic solutions. These partnerships help innovation, hasten implementation and enhance performance with collaboration and investment of resources and understanding.

To sum it up, the success of the digital transformation in the sphere of public services is determined by the strike balance between technology adoption, standardization of the processes, IT management, leadership with the vision, and consistent capacity building in the sphere of public services in the developing countries. All these fundamental components will be complemented by robust infrastructures, inclusive participations and partnerships to create effective, transparent, and citizen-friendly systems of service delivery prepared to take on any governance challenges.

## **Digital Transformation Challenges in Developing Countries' Public Sectors:**

Developing countries are encountering extremely major and joined issues of digital change in their official goods. Such challenges are both institutional and social as well as technical and impact on the pace, penetrability and permanence of the reforms. They consist of disjointed IT solutions, the absence of interoperability and the inability to preserve digital operations (Abdullah et al., 2021).

**Background** The predominance of fragmented IT systems is one of the main challenges. Isolated, department-based technologies are frequently adopted by the public agencies and lead to redundancy, inefficiencies, and parochial coordination of services. This is made even poorer by the fact that there can be no interoperability established among the other systems- different systems cannot share data or communicate with one another (Syed et al., 2022; Junaidi, 2024). The consequence is fragmented information, laborious dittoes and reduced pace, precision and service delivery.

One more dilemma is the way to sustain digital activities. The governments are limited by poor infrastructure, power supply and funds to sustain, renew and expand the services. The obstacles also hamper development because of corporate and cultural slip-ups. Quite often, reforms are slowed down or even initiated by the reluctance to reform, poor digital literacy of the workforce, and unacceptable leadership. Inadequate governance of the data and the cybersecurity system exposes systems to vulnerability and negates the confidence that citizens place on it (Doan et al., 2025; Shibambu, 2024). The transformation is not very inclusive in that the issues such as the remaining digital divide especially in the rural settings limit access to tools, services and connectivity.

In order to solve these difficulties, nations should focus on standardization and integration. Fragmentation can be solved, and there can be a coordinating effect, as well as increased

service efficiency, with interoperable and standardized platforms. Capacity building is also vital, i.e., developing digital literacy among the public servants, creating reform-oriented leadership (Doan et al., 2025; Junaidi, 2024). Investment in infrastructure is also a base case: modernizing infrastructure, maintaining a stable energy supply and the growth of low-cost internet access in underrepresented areas. Lastly, the coordination of the stakeholders is important. Cooperation between agencies, the business and civil society harmonize the focus areas, as well as, exchange knowledge and maximize available resources in a bid to have a sustainable change.

In conclusion, the main obstacles to digital transformation in the sphere of the public sector in the developing countries are fragmented systems, low interoperability, and wounded sustainability. Responding to these demands, there were co-ordinated approaches based on the issues of integration, capacity building, infrastructure and inclusive governance. These strategies are fundamentals in the provision of sustainable, equal and citizen-based public services.

## **Lessons from Centralized ICT Infrastructure for Developing Countries:**

ICT infrastructure that suggests a centralized approach like in India has been seen to facilitate speed of transactions as well as service delivery immensely. This model has lessons to other developing countries that require their public administration to be modernized. The interoperability, harmonious investments, and inclusive digital policies will allow the counties to implement the successful aspects of centralized ICT systems in their contexts.

Organized public-private investment is one of the strategies. The shared capital investment also contributes towards acceleration and ensures that the urban-rural population can appreciate the benefits of the digital advances (Verma et al., 2023). Such things as interoperability and standardization are not less important. The setting of common rules and the creation of interoperating platforms will prevent the lack of ecosystem and inefficiency and enable the exchange of smooth transactions in the sphere of administrative and financial services.

Affordable access and inclusion, which is also achieved with the help of policies, are vital. Platform use is usually increased by subsidized access, digital literacy programs, and reaching out to marginalized groups. Emphasis on mobile ICT infrastructure is particularly effective considering the contexts of the developing countries. Low-resource environments have proven to have had the maximum impact on productivity and transaction speed due to mobile networks (Verma et al., 2023). Fiscal policies and business empathic environment also contribute towards fast absorption of ICT and innovation. However, as centralized IT platforms are needed to face interoperability, local customization and

inherent stakeholder requirements should be taken into consideration during their implementation.

A number of practical steps are necessary in order to apply these lessons. Nations are required to coordinate investments between the governments and the non-governmental organizations in order to ensure that funding is harmonized in order to create flexible as well as sustainable infrastructure. Interoperability should be encouraged by formulating and implementing strict rules of data transfer and convergence between departments and services. Developing mobile-centric solutions is a more efficient solution that governments should consider in most cases because governments can take advantage of the available (mobile and other) networks, which can be more reachable and affordable (Verma et al., 2023; Goel & Vishnoi, 2022). In addition to infrastructure, constant practice at raising the levels of digital literacy between citizens and officials. Social policies that ensure such transformations are affordable and accessible to disadvantaged population increase the extent to which transformation is equitable.

Learning the experience of the centralized ICT model in India, the developing nations can speed up the digital transformation by a well- strategic investment in the interoperable, inclusive, and mobile-centric infrastructure. Good partnership between the two sectors coupled with the enabler policies accelerate transaction time, growth, the effectiveness and fairness of public service performance.

## **Making Digital Transformation Impacts Tangible in Developing Countries:**

One of the major issues is how to ensure that the efforts to transform environments in developing nations yield fruits that are easily noticeable and evident since realizing the full potential of such initiatives may demand time. Digital reforms are usually far-reaching, and not all results can be instant. Studies emphasize strategic measures to speed up the realization of outcomes and therefore they are quick and noticeable to stakeholders and the community.

Another important plan is matching local and sustainable objectives and digital initiatives. Projects that have incorporated the community priority areas with the Sustainable Development Goals become pertinent, thus making its developments measurable and comprehensible to both regulators and those being served. The role of stakeholders is critical as well; engaging the communities, local leaders, and end-users at the earliest stage increases adoption and helps it deliver solutions that meet real-life demands (Alojail & Khan, 2023; Abed et al., 2024). The notion of reflecting local interests and desires builds confidence in the society towards digitally driven and driven change via government.

The bit-by-bit narrow implementation process is a sure way to make an impression a reality. Implementation of smaller yet high-impact projects to create wins initially (i.e., digital

payments or representation of particular e-governance services) can help to create momentum and gain trust among institutions and citizens (Alojail & Khan, 2023). Its strong processes of data gathering and tracking can ensure that there is constant monitoring and sharing of performance data and so the achievements will be made visible and the policy can be altered within a short time. Financial support, technical assistance and training are the necessities to ensure that the project does not stagnate.

The use of case studies focuses more on localizing the digital space. By customizing projects to the needs, capabilities and conditions of communities the influences can be observed, measured, and be significant. The need to work out to how operational efficiency can be brought to the forefront of consideration can help them realize better results quickly, thus boosting the confidence in what is seen as reform (Junaidi, 2024). Conformity to the idea of sustainability makes transformation more solid and increases public value in the long-term.

Any efforts aimed at digital transformation need to be tailored, locally dialed down to see quick results monitored intimately, and strongly supported in order to make tangible changes; otherwise, they are a waste of time. Inclusion of stakeholders and linking reforms to larger developmental agendas will mean that even a small progress becomes visible, meaningful, and that they become a source of momentum toward increased, sustainable, scalable progress.

## **Organizational and Cultural Change in Public Sector Digitalization:**

Public sector digitalization requires organizational and cultural shifts first and foremost in a developing country and it can be referred to as the change in the behavior of the various people involved in the operations of the sector such as the leaders, the citizens and every state employee. Such alterations are as important as technology qualifying as supporting resilience, establishing the trust, and promoting innovation making initiatives work and bring value (Engkus, 2025, Ayyat & Safieh, 2025). In a state of affairs where organizational norms and societal attitude have not been countered even with high-end technologies, there is a possibility that technologies will not perform, or meet, expectations in the social setting.

Resistance can only be conquered through organizational and cultural change. The bureaucratic culture is well ingrained and hence transformation is severely hampered by fear of losing employment (Nawaz et al., 2025). To counter these, effective communication, apparent leadership and participatory change control are the key factors in ensuring buy-in and ensuring follow through on reform initiatives.

The culture of innovation and learning is also needed in digitalization. The organization that cherishes flexibility, transparency, and lifetime learning promotes a transformation since it embraces experimentation and cuts down on the fear

of making mistakes. This increases leadership and promotes employee receptivity to new approaches to work (Pyzyuk, 2024). On top of the inner transitions, the transformation of behavioral shifts by the actors in society is essential. To achieve success and satisfaction in digital services, a new system needs to be modified by the workers and the platforms have to be trusted and utilized by citizens. The stakeholder engagement, literacy, and trust will make adoption and sustainable effects.

There must be cross-departmental cooperation. You can break silos and instead foster collaboration between departments, which improves implementation speed, minimizes the resistance, and guarantees the integration of public service delivery. This kind of collaborative environment encourages sharing of these knowledge and innovative thinking which are the key to breaking the barriers and maintaining the reform.

These changes are supported by a number of tools. Real-time assessment of readiness and flexibility is provided by dynamic cultural analysis. Digital cultural index is a measure of competence and institutional support of change (Bencsik, 2024). Innovation comes with leadership training and the continued skills training revolutionizing and making resistance and the digital environment easily achievable by employees.

Finally, digital transformation in the public sector is built on organizational and cultural change goals in the sense of openness, collaboration and adaptability. These changes mean that technology utilization will cause real and sustainable changes in service delivery to the benefit of citizens and will make the government more efficient.

## **Efficiency and Performance Measurement Efficiency and Transaction Speed in Public Administration Digitalization:**

Due to its assumed efficiency and a more rapid throughput of transactions, an efficient and faster pace of transaction processing is widely related to digital transformation of the public administration in the developing countries. The enhancements have seen digitalization being given a priority in the reformation agendas of the sector with an objective of bringing in modernization of the service delivery functions and administration. The transformations in the advantageous, however, depend on local capabilities and the quality of implementation as the institutional environment and infrastructure has distinctive effects (Nielsen & Jordanoski, 2023; Abdilhafez et al., 2024). Nevertheless, through a mix of qualitative adaptive and quantitative techniques, a measure of understanding about the effects of a digital transformation can be forthcoming.

Digitalization means that governments will be operating efficiently by automating their processes and optimizing on

costs. Digital systems have reduced paperwork and automation of routine duties thereby decreasing administrative expenses and enhancing speed in the provision of services (Gusman, 2024). Digital platforms ensure better coordination of the activities of various government departments to eliminate redundancy and to ensure that delays are kept to the bare minimum. One of them is the higher degree of transparency and accountability; easier to monitor and check the processes, enhanced digitalization limits corruption and improves the administrative effectiveness.

The effect it has on the transaction speed is usually direct. Morocco case study and Indonesia case studies illustrate that digital public services support citizens and the businesses performing tax payment operations and land registration several hundred times faster versus several days the businesses had to spend before. Accessibility of online platforms 24 hours and 7 days a week gets rid of bottlenecks created by restricted working hours making it more convenient to the population (Aayale & Seffar, 2021). Digitalization also discards bureaucracy by removing unnecessary actions, further speeding up the transactions and making interaction with the government services simpler by the user.

These improvements in efficiency and speed are affected by a number of factors. Good infrastructure, such as powerful internet and electricity is non-negotiable in the accomplishment of the advantages of digitalization. Similarly, individuals at the government organization and even the citizens need digital literacy and training to make new systems work efficiently. Transformation success is dependent on institutional readiness, which is characterized by leadership commitment and a strategic view on the digital (Nielsen & Jordanoski, 2023; Aayale & Seffar, 2021; Gusman, 2024). On the other hand, socioeconomic differences might impose access and decreased troops, which minimises and limits the emphasise of the endeavours.

Essentially, digital transformation of the public administration offers significant efficiency in developing regions and quicker transactions, particularly in countries with good infrastructure, training, and support institutions. However, the size of such gains hinges on the ability to deal with the complex issues of technology, skills, and governance, thus comprehensive planning and implementation are inevitable in ensuring long-term sustainable digital reform.

## **Measuring Long-Term Efficiency in Public Sector Digital Transformation:**

Information on long-term efficiency improvements in the event of digital transformation of the public sector in developing countries cannot be fully quantified and analyzed because much data is unavailable and because of situational limitations. These challenges make it hard to take a regular



measure of outcome and geographical generalization of results. It is required to measure these improvements through a holistic approach employing a combination of quantitative indicators, qualitative evaluation and longitudinal studies and adapted to the specific social, economic and institutional findings of the individual setting.

There are a number of ways to measure these efficiency improvements. One of the most utilised methods includes the performance measures and aggregate measures. Comprehensive effects of digital public services on civilization are captured by indices of changes in employment, exports, turnover, productivity, and emissions (Ha, 2022). In areas where little data is available, the case study and analysis of themes deliver useful in-depth qualitative knowledge to understand the transformation process, and discover locality specific enablement, challenges, and impacts.

To do so in more detail, longitudinal methods and econometric methods trace developments over time and attribute to efficiency some of the effects of digital transformation. Studies have used a difference-in-difference, panel data and regression modeling to assess the impacts of digital reforms on the efficiency of land use, resource distribution or service performance in the long term (Aryatama et al., 2024). Also, a survey of the stakeholders and interviewing experts leads to perceived benefits and hindrances in the operations whose measurement might be inaccurate by quantitative procedures.

An efficient measurement stands in need of integration of quantitative and qualitative data. Mixed-methods methods give a more balanced image, in areas where there is limited statistical records. It is also important to contextualize metrics, by adjusting the indicators to the local policy priorities, as well as the sector specific concerns like energy efficiency or lower times of service delivery. Long-term studies have to be found as well as measurements that are repeated to capture sustained impact rather than short-term bias (Aryatama et al., 2024; Jiang et al., 2024). It is vital to solve the digital divide problems, since the lack of accessibility and competencies may bias not only the efficiency increases, but also the proper measure of its increase.

In a nutshell, the efficiency of digital transformation in the public sector may be measured using composite indices, case studies, econometric analysis, and input of stakeholders in the third-world countries. Although mixed-methods, holistic in nature, based on local contexts and monitored over time, it will help to cover data gaps and make the insights meaningful and available to policymakers, administrators, and development planners.

## **Electronic vs. Paper-Based Transactions in Developing Countries:**

The benefit of electronic transaction is that it is more efficient than a traditional paper-based method in the developing

countries based on the fact that it is fast, less expensive and convenient. Such gains however cannot be realized with mere digitization; this needs good infrastructure, clear regulatory requirements, as well as strong readiness by users. In absence of these, there is a risk of digital systems recreating or even exacerbating the constraints of manual processes without resolving them.

The speed of processing in electronic transactions is much higher than that of the paper-based transactions; which might take days and sometimes hours. Electronic operations have also a lower cost of operation and material compared to those heavy operations of paper material, labor, and handling (Khan, 2022; Suwardi, 2023). To make the operations easy, electronic systems offer 24-hour access and remote operation, whereas paper-based systems cannot be used around the clock or even not in the office (Suwardi, 2023). Regarding security, electronic dealings, which are properly secured, are in most cases more secure but paper records may be lost, stolen, or missed by a human being. Electronic systems are also scalable, and the possibility of handling large volumes is not a problem since manual processes might limit capacity and area of operation.

In order to realise actual effectiveness the following conditions should be present. Electronic transactions also require a robust digital framework, where the internet is stable, electricity available at all times, and payment system safe from fraudulent activities. The whole legal framework should have a well-defined set of standards, legal policies, and protection of consumers to create confidence and operate transparently without abuse (Khan, 2022). User education and digital literacy is of the essence as well; ordinary citizens as well as the employees of the government should be properly trained and hired to develop capacities and be able to access digital services. This requires an uninterrupted monitoring and assessment to rectify technical issues, avoid incidences of fraud, manage risk and align services with requirements of users. Inclusivity should also rank high whereby the digital divide should be invaded to ensure rural and marginalized groups exploit and enjoy these systems.

To conclude, electronic transaction has definite benefits compared to those that are done on papers in the developing countries, but their benefit is not felt when there is no sound infrastructure, regulation, education of the user and policies are inclusive. Going IT without systematic backing, may just install inefficiencies deeper. Four pillars of integrated, adaptive implementation are needed to achieve sustainable increases in transactional efficiency by addressing technical, institutional, and social obstacles to the full potential of the digital with maximum optimization.

## **Public Value and Accelerated Development Creating and Measuring Public Value in Digital Transformation:**

The effective ways of developing and assessing the public value of the governance of the developing countries in terms of outcomes that are important to citizens, economy, the administration of the state, and society are possible because of the digital transformation. This has been accompanied by the need to focus the digital initiatives with the expectations and development priorities to make services efficient, equitable and socially impactful. Strategies put in place are the design of user-centric services, encouragement of transparency in government work, and employment of powerful frameworks to gauge the effect of being multidimensional.

Digital transformation adds value on matter of citizen by providing quality information, convenient e-services, openness and equity. These aspects make the citizens more satisfied and trust the government. Economically, digitalization stimulates the growth by increasing its efficiency and reducing the costs of its operations due to new sources of business and improved access to information as well as streamlined processes (Scupola & Mergel, 2021; Pappas et al., 2023). It demonstrates the unified social and economic position of the digital services inclusion in developmental objectives.

The digital transformation can increase the level of efficiency, transparency, and accountability of administration in terms of efficient working process, efficient knowledge management, and performance tracking (Zakiuddin et al., 2024). The changes ensure delivering goods and services to the people in a responsive and transparent way by reducing delays and enhancing coordination of the activities. Digital projects are also beneficial socially since it assists in maintaining and developing the welfare of the people by increasing access to services and its responsiveness to the different needs of society.

There are some methods to measure this public value. The frameworks focus on the attributes of information quality, functionality, efficiency, openness, equity, and trust as its governance is based on public value. Toolkits of performance can equip stage-by-stage digital assessment and developmental consequences (Idowu et al., 2021; Zakiuddin et al., 2024). Scales and indices such as UN E-Government Index to measure the results of work in the fields of the citizen, economy and administration will be a quantitative tool in the form of scales and indices of public value. The survey of stakeholders and co-production projects collect the direct feedback of the citizens and business to assess the perceived value and inform the service improvements.

To achieve the actual definition of public value in digital transformation, governments should draft services, which are inclusive and efficient besides being transparent. They must also use both universal frameworks and metrics to monitor and report the effect on every aspect: citizen, economic, administrative, and societal. This integrated system creates credibility, pushes boundaries and fosters responsibility and responsiveness in the online century.

## Digital Public Services as a Catalyst for Development in Developing Countries:

The use of digital services in the public sector is a well-known stimulus of the development in the third world. There is always evidence that online government services are capable of improving an economy, generate more employment opportunities, innovation, and foster responsiveness in government. But the scope and rate of these gains notably relies on pre-conditions like infrastructure, education, and the quality of institutions, among others, and it is here where readiness in context is imperative to success.

Digital service exports boost the economic prosperity of the country as far as the long-term effects on the GDP of a country is concerned. Small rises in export have the potential to E| raised per capita GDP in developing markets (Mulenga & Mayondi, 2022). However, most of these countries are not keeping pace with developing and mature economies regarding digital trade and achievement of these discoveries. This is a vacuum that implies an improvement of digital trade capacity building and institutional framework.

The digital transformation also leads to an advantage in terms of employment in services. The better infrastructure is associated with increased employment in the service sector especially in areas where there is good education and governance. These gains however are affected by macroeconomic instability and poor institutions hence the need of governance and education reforms to facilitate job creation.

Electronic government services also stimulate business and innovation via stimulation of entrepreneurship, growth of online commerce and innovation ecosystems. Digital transformation increases chances of inclusivity and access to the global markets in most African countries (Portion et al., 2023). However, the infrastructure shortages and the digital divide restrict full advantages, especially to the marginalized and the underserved sectors.

Digital public services also enhance the satisfaction of the citizens, reduce expenses, and reduce bureaucracy in terms of efficiency. They make them more transparent and involved in processes that result in development and strengthening of the public institutions (Anggara et al., 2024). Willingness to pay the digital services is seen in the citizens of developing countries because it happens to demonstrate demand and perceived value. However, the benefit tends to be restricted to the digitally literate and working populations, with no change to the distribution of power and resources.

Even then issues still remain. Digital services are most effective where the level of infrastructure, education and governance is good. Less educated and rural populations are the ones that tend to benefit less, which underlines the importance of targeted investment, inclusive policies, and flexible strategies that will not further widen the disparities (Mulenga & Mayondi, 2022). The failures in implementation are also common owing to organizational, cultural, and

leadership hindrances to adoption and integration of digital systems.

To sum up, there is a great opportunity with digital public services to facilitate development in the developing nations due to the impetus on economic growth, job creation, innovation, as well as efficiency. To achieve and fairly distribute these returns, governments would need to address problems when it comes to infrastructure, education, and institutional capacity, creating the basis of sustainable and inclusive digital transformation.

## **Digital Transformation Strategies in Developing Countries' Public Administrations:**

The strategies of digital transformation in the public administration of developing countries differ greatly, depending on local priorities, the status of the institutions and their capacity, as well as composite socio-economic backgrounds. These variations play out in the locus of digitalization initiatives, the plasticity of legal frameworks, the level of centralization and presence of local versus national projects. A closer networking examination of individual projects displays the similar types of success elements and varied demands, thus confirming how situationally hybrid circulation can be the main generating component of changing courses.

One of the strategic differences is related to either platformization or integration. Other nations, including Ghana, are aiming to transform their infrastructures through digital platformization, e.g. by introducing paperless port infrastructure, to skip over legacy infrastructure and drive faster transformation with a focus on interoperability and customer-focused design. The rest of them are concerned with the development of an integrated digital environment in the country to integrate governments, enterprises, and citizens (Demidov & Lukashov, 2021). This divergence bears on the fact that governments take different tracks, depending on their comparative institution capacity and their infrastructural entry points.

Approaches to legal systems and regulation are different as well. There are various approaches in the legal policies of the BRICS countries, which are used to implement the concepts of the digital paradigm in constitutions and follow flexible regulatory frameworks. The broad path might be changed at both central and municipal levels, with the localized digitalization being accomplished by so-called smart city efforts (Lipchanskaya et al., 2024). In transition economies, one can observe clusters of advancement along the lines of digital maturity, but those deal with similar problems of resource scarcity and insufficient institutions. At the same time, some proposals focus on localization and compliance with SDGs, orienting the use of digital tools to local needs and investing in the data infrastructure and human capital.

Empirical evidence is found in the form of a project case study. The example of Paperless Port in Ghana also shows that digital platforms offer timely support in achieving efficiency in operations, but only with the involvement of the institutions and other stakeholders (Senyo et al., 2021). Conversely, project failures in Sri Lanka prove that their large scale failure rates are frequently caused by the organizational paralysis, cultural retention and ineffective leadership, which explains the importance of integrating planning and change management (Syed et al., 2022). Similarly, the examples of effective local projects that are connected with the SDGs demonstrate that viability is based on the compatibility of the initiatives with community needs, sustainable financing, and building digital literacy (ElMassah & Mohieldin, 2020). These instances assure the fact that technical solutions are still not enough without political will, social approval, and capacity building.

Drawing a conclusion, it is possible to note that the strategies of digital transformation in the developing nations are naturally different with a variety of legislative, institutional, and developmental backgrounds. Effective programs are always based on effective leadership, the involvement of stakeholders, the existence of flexible legal frameworks, and their integration with the local requirements. It is essential to learn lessons regarding both success and failure in order to improve the process of effective, inclusive and sustainable use of digital public administration.

## **Toward a Context-Sensitive Theory of Digital Transformation in Developing Countries:**

To elaborate a theory of digital transformation in the public administration of the developing countries, the frame that encompasses the specificities of the pressures, capabilities, institutional maturity, and developmental phases of the developing countries should be used. Current models are not very adequate and this is because they tend to exclude individual drivers, barriers and pathway depending on context. An interdependent nature of dynamics surrounding digital transformation consequently necessitates a tailored framework addressing the same within such contexts.

A contextual theory must start with identification of numerous paths and dynamic forces. Digital transformation is not linear nor consistent, thus, it is not possible to follow the specific path as shaped by citizen demand, intergovernmental competition, resource limitation, and strategic decision (Zeng et al., 2024). Models like the Pressure-Action-Resources model have proven that data capabilities and technology management are still important, but their combination and character could be made to vary and change according to each situation. The exterior shocks of life these paths so frequently follow may grind with blinding speed-political upheavals, health emergencies, etc., and demand of a theory such adaptability as will admit of such upheavals.

Second, institutional and developmental context has to be viewed as a critical outcome determinant in the theory. Performance, speed, and orientation of digital programs are dictated by the systems of governance, maturity of an institution as well as resources that are available in a country (Zeng et al., 2024). However, despite the fact that parallel processes of digitalization are common in both developing and transition economies, capacity and historical legacies continue to play the defining role. The change in progress is influenced by the macro conditions like legal framework and policies, micro factors like leadership and organizational culture, and technical aspects such as infrastructure and skills relating to each other in the process.

Third, the theory has to link in social, economic and inclusion objectives with administrative effectiveness. Digital transformation must not only be used to optimize operations only, but it must help to serve the larger goals, including social equity and financial inclusion (Smotritskaya, 2021). This involves addressing the problem of literacy shortages, the infrastructural gaps and the changes in regulatory requirements with an eye on ensuring that reforms do develop the countries in a fruitful and fair manner.

Lastly, the theory in question should provide ways of measurement and strategic learning. In order to stay relevant, it must facilitate the review of the availability and use of the services, measuring their implications on the governance and society. Based on these insights one is able to constantly make adjustments in strategies in order to counter changing risks, changing demands and developmental progression.

To sum up, an effective theory of digital transformation in developing nations has to be dynamic, path-ambiguous and highly context-sensitive. It has to encompass institutional, technological and social aspects although it is promoting adaptive governance as the countries pass through various phases of digital and institutional development.

## Digitalization Lessons from Smaller Municipalities for Developing Countries:

Sometimes smaller municipalities, like the ones in Hungary, struggle with the challenge of digitalization severely due to lack of resources, institutional capacity, and infrastructure. The experiences shared can be used to inform like circumstances in developing nations and are, therefore, an advantage to making digital change a success in terms of its persistence and its achievements. The investigation of how the resource-limited governments operate digital projects enables the identification of practices that can be transferred to other considerations in the Global South.

The major problem in such municipalities is poor infrastructure. The most important lesson is the need to invest in the formation of the basic and stable ICT infrastructure and internet connection first rather than engaging in more complex projects. Digital skills and administrative capacity gap is another issue of concern. The solution to this should

involve investing additional funds into the digital training of both staff and leaders of municipal agencies and maintain open learning and the ability to adapt to new realities institutionally (Mashau & Kroeze, 2023). Devoid of such premises, the digitalization initiatives are likely to perform inferiorly or abysmally fail.

Major barrier is posed by financial limits. The way to overcome these requirements is by forming a partnership, whether they are public-private, inter-municipal, or with NGOs to consolidate resources and ensure they have outside funding. Chaotic or departmental projects tend to be inefficient and result in minimal deliverable. Hence, strategic digital plans should be argued out to avoid flashy actions and encourage teamwork across departments. The power to change also slows progress because of resistance to change (Nel-Sanders & Malomane, 2022). Communicating about the benefits of the doing, engaged stakeholders early, and providing them with ongoing support reduce the risk of resistance and gather all the necessary buy-in. To eliminate the digital divide, the underserved regions should also be targeted, and the provision of services should be made representative and equal.

There are various best practices that are essential in implementing these lessons in the developing countries. Before any given initiative is undertaken, a digital readiness assessment is to be conducted on infrastructure, skills and preparedness of an organization (Lipchanskaya & Shindina, 2025). Strategic planning should be based on phased realistic road maps that should be locally oriented. The emphasis should be made on collaboration; it will be achieved through the cooperation with other municipalities, the engagement of the private sector, and civil society allowing the sharing of resources and the learning, as well (Schachtner & Baumann, 2025). The capacity building should be a continuous process wherein the transformation should be sustained in the long run through constant staff training and leadership development.

Wary of the experiences of smaller municipalities, developing countries can work out the more realistic, inclusive, and resilient bids on digitalization. Otherwise, infrastructure, skills, partnerships, and staged implementation are the major aspects to overcome typical barriers and succeed in the long-term digital transformation. Such local knowledge balances national-strategy activities as evidence suggests that both top-down infrastructure and bottom-up innovation are worthy of scalable digital transformation.

## Conclusion:

The digital transformation can be viewed as a groundbreaking force in terms of the state of the public sector in developing nations to initiate any tangible prospects of improvement in administrative efficiency, transparency, value delivered to the citizens, and general performance of the governance on the whole. That said, this paper affirms that as exciting as digitalization may be, insofar as becoming a driver of



economic growth, contributing to the achievement of sustainable development objectives, and leading to innovation, the effective actualization of digitalization must address a multifaceted, seemingly inexorable array of ongoing institutional, infrastructural, and socio-cultural challenges.

The analysis highlights that successful digitalisation is not only anchored in the adoption of technology but also good leadership, process standardisation, centralised control of IT, public-private partnership and the ability to build capacity in an encompassing manner. Further, organizational and cultural change is essential to achieve success because bureaucracies do not move easily without requiring the support of a high proportion of institutional and citizen views.

The empirical knowledge gained through several case studies shows that gradual, contextually sensitive strategies, which correspond to the local development objectives and good governance practices, have a significant chance of transforming the transparency and relevance of digital reforms and their sustainability to a much greater extent. Experience gained with centralization of ICT infrastructures and smaller and resource-constrained municipalities also depict ways in which targeted, participatory and sequentially structured initiatives create tangible, quantitative constructive matter.

Notably, the conceptual discourse has been boosted by this study through proposing a contextual theory of digital transformation in the context of developing countries. This model embraces dynamic, multi-path process that is influenced by institutional maturity, constraints within resources, demand by citizens and shocks. It incorporates social equity and sustainability goals in its internal agenda of administrative modernization so that the realization of digital transformation projects leads to operational efficiency as well as developmental advancement.

Digital transformation proves both its ability to support the immediate needs of the population and influence the future directions of government due to a short-term impact of improving effectiveness of services and a long-term one on institutional resilience and inclusive development.

Altogether, Digitalisation of the public administration of the developing countries can be successful when it integrates strategic visions, participatory implementation, and dynamic governance measures. The continuous improvement will require the improvement in digital divide, the regular evaluation of performance outcomes and improvement in strategies that are needed to face the changing challenges of governance and society. Such a combined, context-informed strategy makes digital public services an incubator of modernization and driving force of inclusive national growth on a sustainable basis.

The study reached to two main recommendations that would efficiently help in overcoming the central issue:

## **Prioritize Capacity Building and Digital Literacy:**

One of the common challenge included in the document is the lack of digital skills and digital illiteracy both of the staff in the public sector and of the citizens. Thus, an essential advice is to invest hefty funds into a constant capacity-building program and digital literacy training of all stakeholders. This will aid in bridging the current gap in skills, reduce the level of resistance to change, and see successful adoption and use of digital public services and services will be more equitable and efficient in their delivery.

## **Foster Strategic Partnerships and Centralized IT Management for Interoperability:**

The document has cited disintegrated IT systems and inability of interoperability as some of the greatest barriers to effective digital transformation. In this regard, one important suggestion is to promote strategic partnership between the public and the private sectors and introduce centralized IT control. Such teamwork and centralised coordination is critical in formulating streamlined, interoperable digital platforms. The measure will assist in attaining elimination of duplication of efforts, improving the level of security, smooth transfer of data between government departments, and, promote speedy provision of robust and scalable digital public services.

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