

ASSESSING POLICY COMPLIANCE IN TERMS OF TECHNOLOGICAL INFRASTRUCTURE ROLLOUT: LESSONS FROM TREASURY SINGLE ACCOUNT IN ZAMBIA

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ABSTRACT

Policy implementation challenges in governance is not a new phenomenon for developing countries due to micro and macro-economic shocks such as the country's unsustainable debt stock, the current 'war' in Ukraine, the 2019 coronavirus crisis and the 2008 credit crunch.

Zambia's Information and Communication Technology (ICT) rollout comprises a number of key stakeholders which impede policy execution examples being government technocrats, politicians, the local authorities and the traditional leadership.

The purpose of this paper is to come up with validated solutions concerning the architectural deployment of IFMIS as a

TSA system using available dimensions and network infrastructure as demonstrated under the Gartner Maturity and Balance Scorecard Models.

The failure to execute public policy pronouncements has had a negative impact on service delivery such as the Government wide area network which embraces ICT as a platform for electronic governance and the subsequent rollout of IFMIS which is strongly regulated under the Public Finance Management Act.

Keywords: Integrated Financial Management Information System (IFMIS), Gartner Maturity Model, Public Financial Management Act, Information and Communication Technology, Smart Zambia Institute

INTRODUCTION

The Zambian Government has implemented the Integrated Financial Management Information System (IFMIS) across its entire line Ministries, Provinces, and Spending Agencies as its sole accounting system and IFMIS was adopted because of numerous benefits envisaged from its effective use. Assessing policy compliance in terms of technological infrastructure rollout - Lessons from Treasury Single Account in Zambia is associated to the Treasury Single Accounting (TSA) System because of the expected benefits of integrated financial planning, implementation and control of public expenditure.

This research project has tried to investigate the factors which have influenced the slow policy compliance in terms of technological infrastructure rollout countrywide. In particular, the study sought to establish through hypothesis testing, major factors which may have hampered effective implementation of technological infrastructure the case of the Integrated Financial Management Information System in the Zambian public sector. The study recommended that the Government employs a change agent to oversee the implementation of Public Policy pronouncements and the key personnel experts undergo on the job training in order to improve their skills and capabilities to appreciate mapping policy arguments.

The research established that policy compliance is affected largely by resistance, lack of capacity building and poor Government reform agenda. The paper also established that senior management support is not given the much needed attention and therefore lacking and top management does not provide motivation to the user. The human capacity and technical knowhow of the policy experts was found to be low in the policy making process and the laissez-faire evaluation of policy performance and directives. The TSA is an essential tool financial management, accounting and reporting through consolidation of the Central Governments' cash resources, to ensure effective aggregate control over government cash balances.

LITERATURE AND THEORETICAL REVIEW

Background and implications of Policy on IFMIS rollout

The introduction of the TSA as a preferred mechanism and policy was aimed at improving service provision in the public sector financial management through improved accountability, transparency and integrity. The coming on board of the IFMIS the expectations were that the Treasury will make substantive savings of resources which will be channeled to other competing and priority sectors of the economy such as health, education, agriculture among others sectors.

The Government of the Republic of Zambia (GRZ) through Smart Zambia Institute embarked on reforms to improve public financial management by migrating from the traditional 'manual' decentralized accounting system to the Treasury Single Account through the Integrated Financial Management Information System (IFMIS) being a deliverable component under policy performance.

Policy analysis which requires multidisciplinary framework is partly descriptive. Therefore, the connectivity of TSA by Smart Zambia Institute which relies heavily on asymmetric digital subscriber base which is a technology driven infrastructure has to some extent improved service delivery following the implementation of TSA all Ministries, Provinces, Spending Agencies (MPSAs).

The Public Reform Programme to answer problems faced with 'manual' financial management system which was launched in Zambia in 1993 was meant to contribute towards efforts of Government in improving the capacity to efficiently and effectively mobilise public resources through improved revenue and expenditure management and to further strengthen overall financial accountability and prudence (Office of the Auditor General, 2017).

As part of policy performance, this development meant increased research and development in ICT and its related activities and this means exponential growth in financial reporting through TSA may be anticipated in neglected remote and rural parts of the country such as local authorities which are yet to be introduced on the IFMIS platform once regulations and architecture infrastructure is put in place.

Besides IFMIS system, Smart Zambia Institute designs other observed outcomes include e- voucher system, Zambia Land Information Management System, Zambia Integrated Agriculture Management Information System, Electronic Government Procurement System (e-GP), Payroll Management and Establishment Control System including e-payslip system, integrated e-government email facilities, among others systems some of which are expected to sit on the Government Service Bus platform.

Policy challenges from the Executive

The GRZ is cognizant of the fact that corporate governance is the principal driver of corporate accountability and transparency hence the importance of policy compliance. ZICTA manages the country telecommunication infrastructure and has since embarked on the digital migration programme as part of the process of enhancing ICT.

The deployment of e-governance framework in the public sector gives an assurance to connect better with citizenry, in view of the fact that critical thinking entails that policy analysts must seldom permit generalization of policy causation and thus increase confidence in the public participation in the leadership decision making, and better the efficiency and effectiveness of service provision and information dissemination (Patra, 2017).

Challenges of e-government in Zambia, include concentration of development along the line of rail and the capital city, meaning that towns in rural and remote parts do not have the facilities associated with technological innovations and thus lagging behind.

Electronic Government

IFMIS is an expensive system to manage particularly on capital expenditure, operational expenditure and SAP licences including challenges of redundant user accounts on the system numerous MPSAs arising from human capital turnovers such as transfers, promotions, retirements, and resignations posing a statistical risk of redundant accounts on the TSA system.

Electronic Government (e-Government) may be defined as the government's use of ICT, in order to maximize accessibility and service provision of information to the citizens, business stakeholders, employees, and government entities (Layne, 2001).

This is concept refers to the process of e-service delivery by Government using the electronic infrastructure such as internet, e-mail, and electronic document management system (Ministry of Communications and Transport, 2003).

The role and importance of IFMIS in Sustainable Development

Zambia is a least developing country and like other developing countries information and communication technology is a challenge which demands huge funding in order to reach sustainable and maturity levels.

The IFMIS reforms in Zambia provides integrated analysis aimed at facilitating the implementation and improving the acquisition, utilization, and conservation of public financial resources for cost effective public service delivery, transparency, improved accountability, and poverty alleviation to which this objective has been attained.

This is attested to by the reduced number of audit queries, increased transparency of financial reporting and management in the Ministry of Finance and National Planning. Digital platforms and services have enabled countless innovations that helped mitigate the health, social and economic costs of the tragedy, and build resilience against future crises (International Telecommunication Union, 2021).

Electronic payment systems provides good reasons for believing the warrant and thus the cornerstone of e-Commerce development in the country by ensuring convenience and flexibility when undertaking commercial transactions and trade (Ministry of Communications and Transport, 2003). Numerous policy arguments have been brought on board by the Executive carrying debates about ICT infrastructure rollout policies in the areas of TSA and IFMIS.

This system is a highly integrated platform which harmonizes financial management, reporting, accounting, keeping of financial and non – financial management records such as procurement, time efficiency of processing transactions and increased reliability in accordance with the generally accepted accounting principles with a view to enhancing efficiency and effectiveness in the processing of GRZ transactions, the Treasury implemented the TSA.

RESEARCH METHODOLOGY

The Gartner e-Government Maturity Model

The paper takes into consideration the Gartner e-Government Maturity Model to measure maturity of ICT systems such as the IFMIS system, the integrated government email system, the Payroll Management and Establishment System, and other captioned system towards materialization into e-Government maturity model culminating into meta ethnography approach and systematic review which may be used to substantively analyse challenges which may be encountered when embarking on countrywide TSA rollout and interpret the results using qualitative synthesis methodology.

What is the Gartner e-Government Maturity Model?

The Gartner e-Government Maturity Model ranks data analytics maturity placed on a system's ability to not merely provide information, but also to instantaneously aid in decision-making. More mature analytics systems can allow IT teams to predict the impact of future decisions and arrive at a conclusion for the optimal choice.

The Government's e-portal maturity model may be said to be a set of stages ranked from basic to advanced ones which decides the maturity of the electronic government e-portal. The main advantage of the Gartner Maturity Models is to offer a way to rank e-government portals.

This is one of a kind studies premised on assessing implementability of policies in this regard the operationalization of the Treasury Single Account in all corners of the country looking at challenges faced standardizing government platforms. The Gartner e-Government Maturity Model will in the long run strengthen the country's argument that e-government services are a necessary tool for behavioural acceptance by citizens and for the prosperous public service delivery (Chohan, 2020) as demonstrated by the intensified awareness on e-governance.

This study further assesses the effect of the TSA policy effect on the information and communication technology of the country in embracing the IFMIS system to the Government Ministries, Provincial Administrative Government Offices, Districts Government Offices, Colleges of Education, and Grant Aided Institutions with a view to optimizing the efficient service delivery, human capital resources and improved work performance in the country.

The design of e-government projects is motivated by e-government maturity models, called stage models and in considering the complexity and the general enormity of e - government programmes this is often assimilated in stages (Joshi. P.R., 2018). The non-policy compliance and the failure to fulfill stage models remains high due to inherent economic risks.

The effect of non – policy compliance

The current regulatory framework as regards telecommunication and broadcasting is archaic and is slowly becoming unsustainable considering that we now live in a technologically fast paced world and these instruments ought to be meeting the country's expectations and desires when it comes to appreciating and assessing new desires brought about by the convergence of services. An extract from the Auditor General's Report for on Parastatals, 2017, pp. 36 reads:

Inadequate Information Processing Facilities

'A review of records at the Kabwe Lands Regional Office revealed that four (4) computers and processors used for the Zambia Integrated Land Information Management System (ZILMIS) operations valued at a total cost of K42,000 were stolen by unknown persons in April, 2017.

"As of April 2018, the Kabwe Office had only one computer for ZILMIS operations which was shared by other five officers for processing ZILMIS transactions such as creation, general inquiry, receipting, printing invitations to treaty and offers, demand notices, among others".

"The lack of adequate ICT equipment hampered operations at the Regional Office of Kabwe, Central Province of Zambia, as the officers had to give each other turns to use one computer at the office resulting in operational inefficiencies and a backlog of unprocessed transactions".

Lack of Information Communication Technology (ICT) Policy

The Local Authorities are still operating stand-alone accounting packages such as in this case "Dove accounting system for payroll management and Financial Management System (FMS) for financial reporting". "However, it had not adopted any ICT policy to guide the acquisitions and management of these systems. (Report of the Auditor General on the Accounts of Local Authorities for the financial years ended 2015, 2016 and 2017)".

It is argued that e-government research suffers from definitional vagueness of the e-government concept, oversimplification of the e-government development processes within complex political and institutional environments, and various methodological limitations (Yildiz, 2007).

Political will and the concept of e-governance

Following the liberalization of the country's economy in 1991, significant progress has been made in commercializing the airwaves through enhanced liberal policies to see to it that there is meaning growth in the information and communication technology sector. In as much as the industry is currently growing very fast, making significant contribution to the country's trade and investment, in terms of devolution with TSA.

The concept of e-governance makes use of ICT and particularly the internet to enhance government operations, by effectively engaging with the citizens of the nation, and service provision central government services such as the IFMIS system on the TSA portal (Shailendra C. & Palvia, 2022).

RESULTS

This study has contributed to literature in appreciating the bottlenecks which are associated with policy inconsistencies between the political leadership and the technocrats in making land mark decisions and life changing pronouncements such as reforms which go with digitization and the recent enactment of the Electronic Government Act whose main goal is to develop ICT, human capital and advanced solutions for a better Government.

The Ministry of Local Government and Rural Development, Constituency Development Fund, Guidelines Manual of the CDF Fund of 2018 does not make mention of a recommended financial system for uniformity and as Government is awaiting substantive rollout of TSA countrywide.

The Zambia Daily Mail (March, 2022) recently reported that despite the United Party for National Development (UPND) having being in power from 2021, some civil servants were still behind in assimilating and interpreting the UPND masterplan. The Vice President W.K. Mutale Nalumango in the same publication informed Parliament that Government is still trying to bring civil servants to meeting observed policy outcomes in accordance with the government's vision.

This is further demonstrated by the lack of an approved ICT Strategic Plan at Copperbelt University according to the Report of the Auditor General on the Accounts of Parastatals Bodies and Other Statutory Institutions for the Financial Year Ended 31st December, 2017, pp.6 as per following extract:

Lack of an Approved ICT Strategic Plan

“According to COBIT APO 02.05, an organisation should define the strategic plan and road map in co-operation with relevant stakeholders on how IT-related goals will contribute to the enterprise strategic goals”. “The plan should describe how IT will support IT enabled investment programmes, business processes, IT services and IT assets”.

“However, it was observed by the Auditor General that as at 31st October, 2018, Copperbelt University, a grant aided institution under the Ministry of Education was operating without an approved ICT Strategic Plan”.

“It was therefore difficult to establish whether IT investments and activities such as procurement of computers and accessories and maintenance of management systems were being driven by a clear business objective in the Strategic Plan”.

The identification of over critical components is growingly difficult when taking into consideration multiple simultaneous failures and this is by and large difficult when transacting with failures of numerous components with synergistic consequences, for instance out turns that cannot be calculated by summing up the effects of the individual failures (H Jönsson, 2008).

This is further, demonstrated by the former Presidents address to the third session of the twelfth National Assembly as per extract under Par. 130,132,140,143 which underscores the importance of electronic payroll management system among other technological innovation by Smart Zambia Institute as follows:

Mr. Speaker,

140. “Government is making steady progress in the implementation of the national decentralization policy”. “The objective of the policy is to devolve some central government functions to the local authorities with matching resources”.

The main advantage of co-creation is that its effects are multidimensional in addressing economic problems arising from stringent austerity measures, political challenges manifested as a lack of legitimacy and alienation of citizens, and provision of public services that satisfy citizens' needs (Jukić, 2022).

The long term gain from connecting governance ICT infrastructure and the local authorities with IFMIS is a serious reduction in financial mismanagement, misapplication of funds and increased accountability, this is the more important reason of policy compliance and execution to be extended to all corners of government operations.

Consultative meetings with key stakeholders whether be it at MPSAs or national bodies like the Zambia Institute of Chartered Accountants, Central Bank of Zambia and the Zambia Revenue Authority, other appointed officials among others need to be strongly embraced to reflect on corporate governance, organisational strategy and performance measurement.

This study has further demonstrated that stringent application of laws such as the Public Finance Management Act requires careful research and development prior to enactment because there is no uniformity and consistence in the use of internal control tools and measures across the board.

Other critical success factors

With TSA the IFMIS system had delivered sufficient value to the payment system including Microsoft outlook, the Government is currently embarking of the digitization of the national registration identity cards which will increase the maturity levels of the policy informational transforms.

Currently, Government has moved away from the usual unprofessional yahoo, Gmail addressing system, to official integrated email system and this is decreasing paper based transactions to e-business. Government has a success factor deployed a Government-Wide Area Network (GWAN) and shared services to improve internal collaboration and efficiency in its operations (Smart Zambia Institute, 2019).

Government has made significant investment in ensuring that the requisite ICT infrastructure is in place. The infrastructure deployed so far includes the electronic and online platforms, national datacenters and broadband networks (Smart Zambia Institute, 2019). The Ministry of Finance and National Planning (MoFNP) is now in a better position to provide accurate and consistent financial information as a result of the introduction of TSA and this has demonstrated stewardship and financial accountability.

These applications include the Electronic Cabinet (e- Cabinet); Zambia Integrated Agriculture Management Information System; Electronic Payslip System; Treasury Single Account; Consolidated Immigration System; Electronic Government Procurement System, Tax Online Administration, Patents and Company's Registration, among others (Smart Zambia Institute, 2019).

DISCUSSION

The Government of the Republic of Zambia through Smart Zambia Institute has a robust plan to transform the manner and ways it is interacting and providing services to its citizens, the business community and Government to Government through Ministries, Provinces, Spending Agencies (MPSAs).

The implementation of the study results will ensure that e-Government service delivery is brought closer to the people in a friendlier manner than what is currently obtaining, increased transparency, in an effective and efficient mechanism, in a more convenient and cost reflective manner that is when and once the holistic implementation of the electronic governance is completely installed and fully operationalized in all corners of the Republic.

The digital divide on the other hand is separating cities along the line of rail with those in rural and remote areas of the country and remains very high. It is hoped that with the recent realignment of the Ministry of Housing and Rural Development will culminate into newer opportunities for the local authorities were ICT and TSA is concerned and this is the same with economic zones and or countries facing similar economic uncertainties.

The lack of TSA at local government authority level comes with its own challenges and this is demonstrated besides other Ministries in the same dilemma of course not to do with CDF. *Refer to Table 1.* Further, Government through Smart Zambia Institute working with the Private Sector has embarked to address various projects and is also planning to intensify awareness on e-governance issues in institutions of learning such as schools and colleges (Chulu, 2022).

Given the crosscutting nature of ICT, all line ministries, legislators, traditional leaders, co-operating partners, public sector, private sector, civil society and individuals are key stakeholders to the policy making process (Ministry of Communications and Transport, 2003).

The former President Edgar C. Lungu, made the following important policy pronouncement during the official opening of the third session of the twelfth National Assembly regarding the Vision 2030 and the quest to achieve a smart Zambia:

Mr. Speaker,

127. "In line with our vision 2030 and our quest to achieve a smart Zambia, government is modernizing the public service". "In this regard, we have made progress in the implementation of the e-government system".

Mr. Speaker,

58. "Currently, access to electricity stands at the national average of 31 percent. This is unacceptable". "I therefore direct the Ministry of Energy to do more to ensure greater access to electricity by our population countrywide".

Mr. Speaker,

59. "Government is making steady progress to meet the growing demand of electricity which is expected to reach the peak demand of 3,000 megawatts by 2021".

Financial management and accounting vulnerabilities seem to be the norm for institutions not yet on TSA but operate various standalone accounting packages such as Navision Finance, Dove, SAGE Pastel, Palmsoft and Baxtel accounting software which are neither integrated nor exported at the end of the financial year to the main IFMIS System through the Ministry of Finance and National Planning. *Refer to Table 2.*

Computer equipment and lack of effective ICT infrastructure in a number of provinces and districts to support e-Commerce in MPSAs is a stumbling block to development and decentralization in as far as policy pronouncements on achievement of government as a platform is concerned.

Smart Zambia Institute has observed that the uptake of electronic government system has faced some challenges; for instance, it is a known fact that through illiteracy some people don't want to adjust but there are also incidents of greediness demonstrated by the resistance to change from manual to automated but people would prefer manual since they are easy to manipulate and that there are no trails once a crime is committed (Chulu, 2022).

CONCLUSION

The results demonstrate that the Government is encouraged to carry out research based policy formulation other than the usual top down approach which on a number of occasions face resistance and misinterpretation. That way IFMIS connectivity and ICT rollout will be able to reach all corners of government departments in Zambia.

The introduction of GSB by Smart Zambia Institute, has seen an extensive increase in reported revenues generated as a result of Smart Zambia connecting a number of MPSAs on the GSB portal. The collection of revenues is now being generated through one treasury account at the Central Bank removing the middle man in this case the commercial banks.

Cabinet Office through Smart Zambia Institute should ensure to constitute multidisciplinary teams such as District Commissioners, Districts Heads of Government Departments, Council Secretaries, and Heads of Institutions not forgetting the Traditional Leadership whenever there are such complex tasks such as the ICT infrastructure rollout.

These are the teams through the Provincial Permanent Secretary who will be expected to drive action in addressing critical policies such as the IFMIS and ICT rollout in this case to the local communities that they reside unlike the common centralized decision and enforcement making. The MoFNP must provide an enabling environment through budgeting commitments to fund the critical policy directives by the Executive and other Senior Government designations such as the Secretary to the Cabinet and at the same time Cabinet Office should encourage continuous policy monitoring and evaluation taking into account key stakeholder views and observations.

Government needs to take keen interest in using the balance scorecard for the public sector for performance measurement and performance management. It can be seen that currently government has introduced performance contracts for Senior Managers which is a good indicator and it is hoped that with this introduction policy directives and pronouncements will be given priority.

REFERENCES

- Chohan, S. H. (2020). Synthesizing e-government maturity model: a public value paradigm towards digital Pakistan. *Transforming Government: People, Process and Policy*, 14(3), 495-522. doi:Retrieved from <https://doi.org/10.1108/TG-11-2019-0110>
- Chulu, K. (2022, March 15). Zambia Daily Mail. *HH Pens ICT Deal*, 26(63), pp. 1-12. Retrieved from www.daily-mail.co.zm
- H Jönsson, H. J. (2008). Identifying critical components in technical infrastructure networks. *Proceedings of the Institutions of Mechanical Engineers, Part O, Journal of Risk & Reliability*, 222(2), 235-243. doi:<https://doi.org/10.1243/1748006XJRR138>

- Hornstein, H. (2015). The integration of project management and organizational change management is now a necessity. *International Journal of Project Management*, 33(2), 291-298. doi:<https://doi.org/10.1016/j.ijproman.2014.08.005>.
- International Telecommunication Union. (2021). *Measuring digital development Facts and figures*. Geneva: ITUPublications.
- Joshi. P.R., & I. (2018). Sustainability. *E-Government Maturity Model for Sustainable E-Government Services from the Perspective of Developing Countries*, 1-28. doi:Retrieved from doi:10.3390/su10061882
- Jukić, T. e. (2022). rganizational maturity for co-creation: Towards a multi-attribute decision support model for public organizations. *Government Information Quarterly*, 39(1), n.d. doi:<https://doi.org/10.1016/j.giq.2021.101623>.
- Layne, K. &. (2001). Developing fully functional E-government: A four stage model. *Government Information Quarterly*, 18(2), 122-136. doi:[https://doi.org/10.1016/S0740-624X\(01\)00066-1](https://doi.org/10.1016/S0740-624X(01)00066-1).
- Ministry of Communications and Transport. (2003). *National Information and Communication Technology Policy*. Lusaka: Ministry of Communications and Transport.
- Moullin, M. (2009). Nursing Management. *Public Sector Scorecard*, 16(5), 26-31.
- OAG. (2020). *REPORT OF THE AUDITOR GENERAL ON THE AUDIT OF ACCOUNTS OF LOCAL AUTHORITIES FOR THE FINANCIAL YEAR ENDED 31ST DECEMBER 2020*. Lusaka: Office of the Auditor General.
- Office of the Auditor General. (2017). *Report of the Auditor General on the Accounts of the Republic for the Financial Year Ended 31 December, 2017*. Lusaka: Office of the Auditor General.
- Patra, P. R. (2017). E-governance service deployment: an empirical study with structural equation model. *International Journal of Information and Communication Technology*, 528-538.
- Shailendra C. & Palvia, J. (2022). E-Government and E-Governance: Definitions/Domain Framework and Status around the World. *Computer Society of Doha*, 1-12.
- Smart Zambia Institute. (2019). ELECTRONIC GOVERNMENT MASTER PLAN 2018 – 2030. In G. o. Zambia, *MASTER PLAN 2018 – 2030* (pp. 1-64). Lusaka: Smart Zambia Institute.
- Styrin, E. e. (2022). Government as a platform: Intergovernmental participation for public services in the Russian Federation. *Government Information Quarterly*, 39(1), n.d. doi:<https://doi.org/10.1016/j.giq.2021.101627>.
- Yildiz, M. (2007). E-government research: Reviewing the literature, limitations, and ways forward. *Government Information Quarterly*, 24(3), 646-665. doi:<https://doi.org/10.1016/j.giq.2007.01.002>.
- Yin, R. (2018). *Case Study Research and Applications : Design and Methods*. London: SAGE Publications, Inc.