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A perspective review on the policy, practice and challenges of embracing e-governance in Uganda

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Abstract

Purpose: Regarding the efficacy of e-governance in a developmental state, the central demand is whether the policy and practice of e-governance has, as espoused and executed, been effective in Uganda? In a bid to address this touchy demand, it would at the outset be indispensable to develop some cognizance of the anatomy and challenges hindering its efficacy in developmental governance. E-governance policy, as a universal idea of modern governments encapsulate a system by facilitating the numerous functions and activities of Ministries, Departments and Agencies. This article wishes to evaluate a selection of functions, in the public sector, that encountered a digital migration to e-governance in terms of their effectiveness as developmental state functions.

Methodology: This study was entirely based on a review of literature on e-governance covering specific aspects of policy and practice in Uganda, the region and other places outside the continent.

Findings and unique contribution to theory, policy and practice: This study offers the policy context of e-governance along with debates on the effectiveness of selected functions in a developmental state. The article centres on the efficacy of e-governance operation within a rather multifaceted environment. Consequently, the authors suggest that research on e-governance can be embraced as a means, by government, to improve both the policy and practices at both central government and local government levels.

Keywords: *e-governance policy, e-governance practice, e-payroll, citizen engagement*

INTRODUCTION

With increasing use of the internet internationally, different elements of e-governance are becoming very competitive. They have become necessary for the new and existing public and private processes aspiring to engage in the various issues of governance and businesses in achieving and sustaining the quality of service delivery or competitive advantage within the government or industry. It is being argued that for the government to remain relevant in meeting the ever-changing needs of citizens, it must understand the influence of using novel systems especially the different components of e-governance. Since e-governance entails government, internet and communication technologies, organisations and society (Kompella, 2020), its primary goal is to deliver community service to the citizenry in the most efficient and timely manner. Thus, the benefit of effective service delivery is the ability to maintain an appropriate service channel seeing that e-governance is one factor to attaining an efficient service delivery. In spite of everything, a study conducted in China shows that public services appear to be delicately tied to people's everyday lives and by itself they can not only meet community needs but likewise improve the standards of living (Li et al., 2022). By implication, better public services play an essential part in socioeconomic welfare, and communities, businesses and corporations could gain from it. Consequently, this article focuses on the efficacy of e-governance in selected segments of the public sector in Uganda.

The main motivation of this study spins around the view that a deeper awareness of e-governance in terms of its effectiveness, benefits and challenges can facilitate policy analysts, academics and policy implementers to take a thorough and timely audit of the most appropriate mechanisms of its espousal. Consequently, this focus is expected to lead to strategic structural adjustments with a view of enhancing both governance processes and the quality of public service delivery in the developmental state of Uganda and other nations with similar socioeconomic environments. Regardless, the growth and expansion of globalisation is assumed to have steered modernisation in a number of aspects stretching from industrial transformation, information communication technologies (ICTs), novel transport systems (air, water, rail and road), inventive agricultural practices (also known as smart farming technologies), to mention a few. As a consequence, that growth transcended into e-processes and systems in both the public sector and the private sector as a means to achieve effectiveness and efficiency.

The term e-governance encompasses a strategic shift from analogue to digital (also known as the digital migration) in the management and implementation of organisational

processes, activities and procedures. This change appears to be applicable at every stage of an organisation and at every phase of the policy, that is, from policy formulation, policy implementation to policy monitoring.

THEORETICAL FRAMEWORK

This study is based on the three e-governance models as suggested by Singh and Medhavi (2021: 719) viz.; government to citizens (G2C), government to government (G2G), and government to business (G2B).

To begin with, the G2C model assumes that citizens visit the link and choose the type of services they want to use, thus, strengthening the bond between the government and its citizens (Robbes, Torres-Albero & Villarino, 2022). The types of services offered by this model include:

- a) Payment of online bills (including mobile payments) such as electricity and water (Nguyen et al., 2022);
- b) Online filling of complaints over poor quality services, dearth of an essential service or need for desired adjustments, for example, at the Police or Local Government office;
- c) Availability of any kind of online information such as information on economic forecasts, information on elections, and information on epidemics;
- d) Online registration (including online sharing) of applications such as national passports, employment opportunities, births or deaths, and business projects; and,
- e) Copies of land-record such as purchase, sale, or change of ownership.

The G2G model assumes the need for shared information within government entities, departments and local governments seeing that sharing of information between the various spheres of government, the departments and organisations is key to the success of governance. The types of information enshrined in the G2G are:

- a) Sharing security information (such as radicalism, kidnappings, assassination and violence) between agencies such as the defence forces, the police and internal/external security organisations for consistency, harmony and effective coordination (Gao et al., 2022).
- b) Finance and budget work (regarding annual or quarterly projections of different economic indices such as inflation, economic growth, economic depression)

between the three arms of state, namely executive, judiciary and legislature as well as other key players in the economy such as the National chamber of commerce, the manufacturers' association, the national investment authority, the national planning authority and the national coalition of civil society organisations.

- c) Exchange of selected (non-classified) government documents such as those concerning national economic outlook, the socio-demographic dynamics (including the health status, life expectancy, progress on the nation's quality of education, shifts in age bracket dominancy and statistics on unemployment and or under-employment.

The G2B model presupposes that as the relationship between the private sector and the public sector (often known as public-private relationships [PPP]) grows, the quality of citizen satisfaction and investor approval improves proportionately (Karaba et al., 2022). This has proved significant, almost in every sector; whether in the water sector (Rahman et al., 2022), or municipal waste management (Asidu-Ayeh et al., 2022), or environmental management (Gao, Ozturk & Ullah, 2022:1). Consequently, key information, which require information sharing includes:

- a) Collection and or electronic payment of taxes (in terms of time and available options) with a view of improving government efficiency as well as enhanced citizen satisfaction (Denison, Hackbart & Yusuf, 2013);
- b) Payment of every kind of bills (water, energy, medical, transport and education) and penalties (such as traffic offences and several pronouncements arising from cases under the mandate of a relevant court of law);
- c) Rejection and approval of various applications related to business such as procurement and supplies, building and construction; and,
- d) Inspection or evaluation of factories/industries on selected parameters such as quality of products, levels of sanitation and safe disposal of waste as a means to ensuring effective pollution mitigation and or controls.

As mentioned earlier, e-governance is key in every sector and process. The concept, e-governance denotes the usage of internet technologies as a way to exchanging info, delivering key services and dealing with residents, companies, and other arms of government (Agaodi, 2022). As a result, a convergence of technologies such as processors, the internet, portable telephony, and diverse automated applications improved the

movement of info, its availability and distribution. We delve into, its efficacy through the e-payroll initiatives.

Statement of the problem

Despite the advances made in recent years, in several government ministries, departments, agencies and local governments in a number of developing countries including Uganda appear to be struggling to take advantages of the capabilities afforded by technologies, technological skills, and reforms in public service delivery to improve the quality of services as well as the processes involved (Suri, 2022; Hussain, Talpur & Humayun, 2022; Bhuvana & Vasantha, 2022). Public officials have to work with a variety of stakeholders and increasing internet usage means stakeholders are increasingly interested or demanded to obtain key services using online platforms. Associated challenges such as concerns with usage and dearth of infrastructure (Verma, Singh & Bharti, 2022); socioeconomic, religious, and technological limits, as well as privacy and security implications (Agrawal, Khan & Ansari, 2022) are also rapidly expanding because of the e-governance growth and expansion and so the process of public service delivery is becoming more of a challenge with several inconsistencies as well as the frequency of changes in technologies for attending to citizens' needs and priorities. To better appreciate these challenges, there is need for us to take a shot at the key achievements made thus far while at the same time unlocking the ensuring challenges before, we can provide a logical way forward.

METHODOLOGY

This study took a desk review of available literature on Uganda, the east African region, African and beyond regarding selected dynamics of e-governance. Previous literature review focussed on the term 'e-governance', theoretical issues of e-governance, the policy and practice of e-payroll and citizen engagement, the challenges involved and way forward. Obtainable literature appears to focus mainly on the operational performance of e-governance. Very limited literature focuses on the practices of e-governance in Uganda. Considering the just-noted knowledge gaps, this study aims to deconstruct the efficacy of e-governance in Uganda. Given the objective, this study aims to answer two questions, namely: (a) what is the efficacy of e-payroll in Uganda? And (b) what is the efficacy of citizen engagement in Uganda? To answer the stated questions, secondary literature was consulted.

The policy, practice, challenges and way forward of e-payroll in Uganda

The policy and practice of e-payroll

The importance of having a well-managed payroll in every single organisation, be they public or private, is central in guaranteeing a harmonious relationship between an employer and an employee. This notion is so central that any organisation, with employees, should have a payroll management process established; and so, an effective and efficient payroll practice guarantees that an employee is remunerated correctly and reliably since it provides an organisation with the opportunity to focus on other facets of management. The thinking behind an effective payroll is that an employer needs to systematically appreciate how to prepare a payroll, how to hold back monies from each salary cheque as well as guaranteeing that monies for standard taxes are forwarded to the right government authority. This appreciation, as mentioned by Herrera-Idárraga, Garlati-Bertoldi & Torres (2022), is key because there have tended to be wage differentials based on rural-urban divide or skill variance or size of city. Seeing that answerability and effectiveness have come to be the significant terminologies in the public sector, managing the payroll is taken to be an essential element of a developmental state (Pan & Patel, 2022). Global practices have revealed that one way of realising a progressive payroll is through digital migration from the old-fashioned service delivery systems (Pate, Moyer, Gorucu & Bendixsen, 2020) and management functions, including payroll system to an electronic payroll system (Paddison & Walmsley, 2018). Recent studies, such as Gritsenko and Indukaev (2021), suggest a direct relationship between use of digital technology in democratic governance and increased efficiency in public administration.

An employer can be liable for ensuring mandatory deductions from an employee's salary and remitting ordered premiums for insurance to respective companies as well as depositing monies into employee retirement accounts or to designated contributions. As stated by Westerberg (2022) a payroll deduction is an alternate means to moderate organisations' labour overheads in a formal situation leading to lesser costs. Payroll administration can generate an enormous load and undesirable pressure on organisation managers, whether for-profit or not-for-profit, small-scale or large-scale, as a lost target or inappropriate filing of duties can bring about penalties or prison time. As a consequence, such issues can be circumvented by means of a payroll software, which automates the entire procedure (a cloud-based payroll management system) and guarantees confidence between an employer and an employee (Odun-Ayo & Aina, 2020). In a conference paper, it was noted that such a system is one of the key formal means envisioned to facilitate organisations in alleviating mistakes, enhance acquiescence, and render timely services

(Bello & Thomas, 2022). Certainly, e-payroll brings with it easy-to-use possibilities, which support organisations to preserve control over payroll processes while at the same time enforcing to deeper flexibility compared to the traditional payroll system.

The word e-payroll denotes to a payroll that is administered by electronic means (electronic payroll). As stated by Wibawa, Wira et al. (2022), this would occasion going paperless as well as being ecologically cognisant as an effective tool for enforcing a robust internal control system. The e-payroll would likewise embrace information admittance, which is the phase in the payroll procedure when an employee's time is entered on the system (Yusof, 2021). Consequently, the capacity to achieve this over the web tends to make a distinction between an e-payroll and other payrolls given that an e-payroll procedure involves the operator choosing between direct payment and finance cards for their workforce. This route is paperless, a component of green economics, and ecologically pleasant. The significance of a paperless e-payroll service manager is technologically savvy as well as easy both to use and traverse an application on their computer. In spite of everything, public organisations in Uganda were recently required to espouse e-pay structures due to the financial results, savings, and improved efficacy of using e-payroll technology for government payrolls. Nonetheless, latest rules put prominence to yet another migration from the Integrated Personnel and Payroll System (IPPS) to the Human Capital Management (HCM); this has not kept up with advances in payroll system technology thus putting public officials at risk of missed salaries for several months with no reimbursement. As claimed by Bakhramovna and Muzafar o'g'li (2022), this is not a new system given that it has become trendy for innovative high-tech enterprises in the digital economy. On the whole, HCM can bolster a country's human capital (Maltseva et al. (2021). While this is attained through an automated data gathering, storage and analysis, when the Ministry of Public service of Uganda was migrating to the HCM, every public organisation was expected to conform to set administrative guidelines from the Ministry of Public Service (Masele & Kagoma, 2021). As a result, several public officials went without salaries for up to three months and no one was bothered to give clarity on what had gone wrong neither what would be done to reverse the situation in the soonest.

The Constitution of the Republic of Uganda of 1995 outlines the procedures for an efficient, receptive, and effective public service. This structure, provides additional elements of a progressive payroll structure (Nkoumou Ngoa & Lemven Wirba, 2021). This system is devoted to ensuring that every public official, in every Ministry, Department, Agency, and Local Government executes their part with the aim of enhancing efficient

service delivery to the people of Uganda. In spite of that provision backed by a broad legal and policy context, in addition to the assurances made to uncompromising service delivery such as education and healthcare, the government of Uganda experience of a devoted civil service has not yielded the projected results of better-quality service delivery or improved confidence between the public and public officers and representatives (Mwesigwa & Oladapo, 2021). Instead, the public has continued to demonstrate frustration with the quality of service delivered at both the central and local government levels by way of mounting community-level demonstrations and violence in the various media platforms (Mwesigwa, 2021:). Analytically, an enormous variance remains visible between the objectives of such strategies and the actual practice.

As stated by Nguimkeu & Okou (2021), the query now raised is whether embracing e-payroll system brings with it any positive consequences despite the underlying difficulties such as dearth of internet services, slow internet speed and internet connectivity. One of the key motives for the rejoinder may be sheltered up in the view that Uganda's Ministry of Public Service along with its sister Ministries, Agencies, departments and Local Governments, have failed to appreciate the fact that Uganda is not just a low-developing nation but suffers from numerous inter-regional disparities in terms of enabling infrastructure and minimum skill set (Brett, 2022; Basheka, 2017). In addition, government expects every public official to have their own PCs or tablets and it is not willing to compensate those employees when they use their own gadgets to do government work. In fact, senior government bureaucrats appear to make it a requirement for every public official to own a smart phone but there is no budget for procuring such equipment nor loading MBs for the lower cadres save for the senior ones who even earn huge sums of monies in addition to what they siphon from the public coffers (Ssenyonga & Hecker, 2021). Despite these undertones, the e-payroll is credited for making processes stress-free in terms of rationalised procedures and speed; better efficiency in terms of processes; inspiring personnel growth given the automatic reporting mechanisms; and, lessening the degree of human blunder since it takes less time to recognise discrepancies with payroll software compared to the old-style paper-based payroll structure (Christpher, Moses, Muhindo & Komunda, 2022; Komakech, Obici & Mwesigwa, 2021). These strengths combined permit continuous access to the system anytime and any day, enhanced proficiencies in the payroll procedure, improved payroll document safety, expediency, and decreased usage of paper.

Achievements of the e-payroll

Available studies, such as Oghuvbu, Gbervbie & Oni (2022) have revealed that e-

governance has a lot of potential for the country, including giving information on job openings, e-police system, a medium for information transmission, and economic development, among other features. Studies reveal the benefits of e-governance in terms of: It facilitates the delivery of government services to citizens, business and industry. It provides information to government and the public at low cost with great ease of use. The administration of e-governance makes the Government accountable as all Government data and information is available online. The main advantages are as follows: a) Fast, Convenient and Cost-Effective Service Delivery b) Transparency, Accountability and Reduced Corruption c) Increased Participation by People (Singh & Medhavi, 2021). In a study that aimed to compare municipal e-governance performance on a global basis, a path analysis found that Internet usage significantly impacted a city's e-governance performance, along with the mitigating influences of education and economic status (Manoharan, Zheng & Melitski, 2017). These were consistent with previous innovation diffusion research that suggests website performance and global e-governance are following a logistical or s-shaped curve.

Challenges to the e-payroll adaptation in Uganda

A number of challenges have been associated to the e-payroll system across a number of countries:

To begin with, the issue of stakeholder involvement in affairs that affect them (directly or indirectly) seeing that the e-governance implementation strategies have been awash with notable concerns follows a top-bottom approach. A study conducted in Bangladesh by Baroi and Shawkat (2021) reveals that e-governance was less appropriate and less effective in enhancing the participation of stakeholders in service delivery. Uganda's e-payroll system appears to be riddled with a similar posture and a number of stakeholders remain at the receiving end with the only participation probably visible during capacity building workshops held to induct members on the *modus operandi* of the system. These findings appear to corroborate with the outcomes of interviews with government officials and citizen focus group discussions in a south-eastern city of USA (Tang, Hou, Fay & Annis, 2021), which established that despite the fact that e-governance was regarded, by both the government and citizens as an innovative two-way communication tool that encourages citizens to report service problems and facilitates service improvement; the app's potential of being an open dialogue and social space to engage citizens in a full range of co-production activities has not yet been adequately realised.

To add-on, e-payroll is riddled with issues of dearth of compatibility in a number of aspects since not every payroll process and or activity can be handled successfully using available applications. For instance, a study conducted in 15 western African states, by Akpan-Obong, Trinh, Ayo and Oni (2022) reveals that certain dimensions of governance fail to correlate with e-governance. While certain government indicators appear to correlate positively with each other, this is not true when it comes to effective management of the e-payroll especially in a country (Uganda) where governance indicators continually call for governance indicators to correlate positively with each other as a way of reinforcing the critical role of traditional institutions of governance in realising good governance.

Also, the e-payroll is criticised over its inadequate ability to enhance harmony among the different stakeholders; instead, it reinforces an abnormally wider social distance between employees, government and other stakeholders through the context of digitisation and innovation. A similar trend was reported in a study regarding interaction of e-governance and e-government (Umbach & Tkalec, 2022); the findings suggested that e-governance performance factors overly sensitive to context, and evaluation of e-governance limited to specific tools, instruments and contexts. These findings do not appear to be peripheral to Uganda similar tools, instruments and contexts riddle the e-payroll system with a number of complaints remaining louder than the acclaimed system in every sector, including the pensioners. As a consequence, studies (such as Pour, Sherkat & Asarian, 2022) suggest low levels of acceptance in other nations such as Iran.

In addition, the e-payroll system appears to be linked to minimum levels of knowledge information communication and technology, the legal framework and infrastructure. Given that studies on similar African nations (such as the one conducted by Oghuvbu, Gbervbie & Oni [2022] in Nigeria) suggest that low knowledge of ICT, insufficient legal framework, and inadequate infrastructure obstruct the efficient adoption of e-governance in the country. Unfortunately, a separate study (Ali, 2021) suggests that a successful e-governance regime needs to be cost-effective, easy and dependable to be maintained yet recent technologies (in the case Uganda and other similar nations) are inadequate to cover the entire need of e-payroll. As such, legal issues related to the implementation of the e-payroll in Uganda attracts legal issues ranging from what obtainable studies (Wierzbowski, Galán-Vioque, Casado, Grzywacz and Sokołowski (2021) call correct to incorrect requiring either improvement or change.

From the evidence adduced above, it is clear that the Uganda's e-payroll is still far from achieving an absolute acceptance and perfection in terms of efficiency, privacy,

human connections and security (Drolet, 2020) regardless of the abundant progress registered thus far.

The future of E-payroll in Uganda

It remains unclear whether the future of e-payroll will be brighter than it is today given that there are a number of glaring issues which need to be address. These include technological lapses, skill gaps, willingness and readiness to adopt. Also, the fact that digitisation means lesser opportunities for the corrupt to continue with their dirty practices suggest that the same elements are likely to fail it in the near future. This is mainly trues on the grounds that recent institutions, at both global and national level, are turning to the hands of mafias who shroud actions may not succeed under e-governance initiatives in the future.

CONCLUSION

The overall findings of this study lead to the conclusion that EICS technology is a vital component in the performance of an e-retailer compulsory for it to be competitive in the market. The EICS inventory control competency empowers e-retailers to achieve their inventory objectives. In the e-retailing sector, e-retailers, such as the selected e-retailer for this study, benefit from the up-to-date technology, inventory control competency and expertise, associated with EICS. The benefits include eliminating inventory shortage, improving inventory replenishment efficiency, enhancing inventory turnover and maximising customer service, satisfaction and loyalty. These benefits help to reduce risks, relating to operating costs. Designing the right system to meet the business's needs, changing from the previous system to the new EICS, and customisation of the new system were the main challenges, faced during the adoption of the technology. In summary, the utilisation of customised EICS improves the competency of inventory control performance to help an e-retailer achieve competitiveness. Based on the findings of this study, the following recommendations are made as a framework for adopting EICS to improve inventory control performance in e-retailers and help them achieve competitiveness.

REFERENCES

Agaodi, C.O. (2022). E-governance and fight against corruption in Nigeria: the issues and challenges. International journal of innovative legal & political studies, 10(2), 1-9.

- Agrawal, A., Khan, R.A. & Ansari, M.T.J. (2023). Empowering Indian citizens through the secure e-governance: the digital India initiative context. In: Dutta, P., Bhattacharya, A., Dutta, S. & Lai, W.C. (Eds.). *Emerging technologies in data mining and information security: advances in intelligent systems and computing*, 1348(3-11), Springer, Singapore. https://doi.org/10.1007/978-981-19-4676-9_1
- Akpan-Obong, I.P., Trinh, P.M., Ayo, K.C. & Oni, A. (2022). E-governance as good governance? Evidence from 15 West African countries. *Information technology for development*. Doi: [10.1080/02681102.2022.2123770](https://doi.org/10.1080/02681102.2022.2123770)
- Ali, A.I.M. (2021). E-governance system challenges and cloud computing benefits in e-governance. *Technium: Romanian journal of applied sciences and technology*, 3(11), 19-31. <https://techniumscience.com/index.php/technium/article/view/5263>
- Asiedu-Ayeh, E., Guabgyu, C., Obiora, C.S. & Asiedu-Ayeh, O.L. (2022). Assessing social responsibility initiatives for public-private partnership success based on multi-criteria decision making: evidence from municipal solid waste management in Ghana. *Journal of environmental planning and management*. Doi: [10.1080/09640568.2022.2082929](https://doi.org/10.1080/09640568.2022.2082929)
- Bakhramovna, I.A. & Muzafar o'g'li, M.M. (2022). Transformation of the human capital management system of innovative high-tech enterprises in the digital economy. *EPRA international journal of economics, business and management studies (EBMS)*, 9(8), 43-8.
- Baroi, S.H. & Alam, S. (2021). Operationalising the Right to information Act through e-governance in Bangladesh: challenges and opportunities. *International journal of public administration*, 44(8), 685-98. Doi: [10.1080/01900692.2020.1747489](https://doi.org/10.1080/01900692.2020.1747489)
- Basheka, B.C. (2017). Public administration and corruption in Uganda. In *Public administration in Africa* (pp.45-81). Routledge.
- Belo, M.I. & Thomas, D.R. (2022). Potentials of block chain technology for payroll systems. 24th proceedings of the southern association for information systems conference, Myrtle beach, SC, USA march 18th-19th.
- Bhuvana, M. & Vasantha, S. (2022). Determinants of e-governance health care services requirements and rural citizen satisfaction. In *Managing disruptions in business* (317-34). Palgrave Macmillan, Cham.
- Brett, E.A. (2022). Rebuilding public authority in Uganda dualist theory, hybrid social orders and democratic statehood. *World development*, 159, 106055.

- Christopher, F., Moses, N., Muhindo, M.E. & Komunda, T.R. (2022). Employee training and organisational performance: a case study of African college of commerce and technology in Kabale district, south western Uganda. Chapter one, 6(5), 1-7.
- Denison, V.D., Hackbart, M. & Yusuf, J. (2013). Electronic payments for state taxes and fees. *Public performance & management review*, 36(4), 616-36. Doi: [10.2753/PMR1530-9576360406](https://doi.org/10.2753/PMR1530-9576360406)
- Drolet, A.C. (2020). Globalisation and the challenges of public administration: governance, human resources management, leadership, ethics, e-governance and sustainability in the 21st century. *International review of public administration*, 25(2), 145-9. Doi: [10.1080/12294659.2020.1769325](https://doi.org/10.1080/12294659.2020.1769325)
- Gao, B., Ozturk, I. & Ullah, S. (2022). A new framework to the green economy: asymmetric role of public-private partnership investment on environment in selected Asian economies. *Economic research – Ekonomska Istraživanja*. Doi: [10.1080/1331677X.2022.2094441](https://doi.org/10.1080/1331677X.2022.2094441)
- Gao, X., Oiu, M., Wang, Y. & Wang, X. (2022). Information security investment with budget constrain and security information sharing in resource-sharing environments. *Journal of operational research society*. Doi: [10.1080/01605682.2022.2096506](https://doi.org/10.1080/01605682.2022.2096506)
- Gritsenko, D. & Indukaev, A. (2021). Digitising city governance in Russia: the case of the ‘active citizen’ platform. *Europe-Asia studies*, 73(6), 1102-124. Doi: [10.1080/09668136.2021.1946013](https://doi.org/10.1080/09668136.2021.1946013)
- Herrera-Idárraga, P., Garlati-Bertoldi, P.A. & Torres, J.D. (2022). Urban wage gaps in Colombia and the impact of a national payroll tax policy. *Regional studies*, 56(3), 489-503. Doi: [10.1080/00343404.2021.1908535](https://doi.org/10.1080/00343404.2021.1908535)
- Hussain, M., Talpur, M.S.H. & Humanyun, M. (2022). The consequences of integrity attacks on e-governance: privacy and security violation. In *Cybersecurity measures for e-government frameworks* (141-56). IGI Global.
- Karaba, F., Roehrich, K.J., Conway, S. & Turner, J. (2022). Information sharing in public-private relationships: the role of boundary objects in contracts. *Public management review*. Doi: [10.1080/14719037.2022.2065344](https://doi.org/10.1080/14719037.2022.2065344)
- Komakech, E., Obici, G. & Mwesigwa, D. (2021). Efficacy of inspirational motivation on the performance of public health workers in mid-north Uganda. *Annals of human resource management research*, 1(2), 85-97.

- Kompella, L. (2020). Socio-technical transitions and organisational responses: insights from e-governance case studies. *Journal of global information technology management*, 23(2), 89-111. Doi: [10.1080/1097198X.2020.1752082](https://doi.org/10.1080/1097198X.2020.1752082)
- Li, L., Zhang, X., Chen, Y., Wu, G. & Liu, B. (2022). Equity analysis of public service delivery among regions from temporal and spatial perspectives. *Regional studies*. Doi: [10.1080/00343404.2022.2110228](https://doi.org/10.1080/00343404.2022.2110228)
- Maltseva, D., Safonova, O., Dedul, A., Petrunina, M. & Tepina, S. (2021). Youth policy in the human capital management system: Russian practice. In *E3s web of conferences* (vol. 311). EDP sciences.
- Manoharan, P.A., Zheng, Y. & Melittski, J. (2017). Global comparative municipal e-governance: factors and trends. *International review of public administration*, 22(1), 14-31. Doi: [10.1080/12294659.2017.1292031](https://doi.org/10.1080/12294659.2017.1292031)
- Masele, J.J. & Kagoma, R.S. (2021). Usefulness of human capital management information systems on payroll reliability among public universities in Tanzania. *Public money & management*, 1(9). Doi: [10.1080/09540962.2021.1906579](https://doi.org/10.1080/09540962.2021.1906579)
- Mwesigwa, D. & Oladapo, I.A. (2021). Accountability: a necessity to pro-poor service delivery in municipal councils in Uganda. *Journal of governance and accountability studies (JDAS)*, 1(1), 43-54. Doi: <https://doi.org/10.35912/jgas.v1i1.33>
- Mwesigwa, D. (2021). Public service delivery in Uganda: a reconsideration of grand corruption. *Dynamics of politics and democracy*, 1(1), 1-13. Doi: <https://doi.org/10.35912/DPD.v1i1.400>
- Nguimkeu, P. & Okou, C. (2021). Leveraging digital technologies to boost productivity in the informal sector in sub-Saharan Africa. *Review of policy research*, 38(6), 707-31.
- Nguyen, L., Dwivedi, K.Y., Yan, W., Aw, C.E., Lo, P. & Ooi, K. (2022). Unlocking pathways to mobile payment satisfaction and commitment. *Journal of computer information systems*. Doi: [10.1080/08874417.2022.2119444](https://doi.org/10.1080/08874417.2022.2119444)
- Nkoumou Ngoa, G.B. & Lemven Wirba, E. (2021). Gender disparities in Ugandan urban market: an analysis of the gender wage gap. *Labor history*, 62(5-6), 781-800.
- Odun-Ayo, I. & Aina, A. (2020). Development of a cloud-based payroll management system. Conference: covenant – international conference on African development issues (C-ICADI). September.

- Oghuvbu, E.A., Gberevbie, D.E. & Oni, S.O. (2022). E-governance in Nigeria: challenges and prospects. *RUDN journal of public administration*, 9(2), 189-99.
- Paddison, B. & Walmsley, A. (2018). New public management in tourism: a case study of York. *Journal of sustainable tourism*, 26(6), 910-26. Doi: [10.1080/09669582.2018.1425696](https://doi.org/10.1080/09669582.2018.1425696)
- Pan, P. & Patel, C. (2022). Formal accountability, perceived accountability and aggressive reporting judgments. *Accounting and business research*, 52(1), 67-93. Doi: [10.1080/00014788.2020.1836469](https://doi.org/10.1080/00014788.2020.1836469)
- Pate, M.L., Moyer, N., Gorucu, S. & Bendixsen, C. (2020). JA: 2021-22. Digital migration: will digital technologies transform hazard risk assessment among an emerging agricultural workforce? *Journal of agromedicine*, 25(3), 248. Doi: [10.1080/1059924X.2020.1765573](https://doi.org/10.1080/1059924X.2020.1765573)
- Pour, M.J., Sherkat, M.H. & Asarian, M. (2022). Citizens' intention to use e-governance in Iran. The challenge of e-governance implementation. *Electronic government, an international journal*, 18(3), 293-322.
- Rahman, Z.H., Miraj, P., Andreas, A. & Perdana, R. (2022). Research trends, themes and gaps of public private paternship in water sector: a two decade review. *Urban water journal*, 19(8), 782-97. Doi: [10.1080/1573062X.2022.2088393](https://doi.org/10.1080/1573062X.2022.2088393)
- Robbles, M.J., Torres-ALbero, C. & Willarino, G. (2022). Inequalities in digital welfare take-up: lessons from e-government in Spain. *Policy studies*, 43(5), 1096-111. Doi: [10.1080/01442872.2021.1929916](https://doi.org/10.1080/01442872.2021.1929916)
- Singh, K.S. & Medhavi, S. (2021). E-governance in Uttar Pradesh: Concept, initiatives and challenges. *International journal for research in applied science & engineering technology (IJRASET)*, 9(III), 718-24.
- Ssenyonga, J. & Hecker, T. (2021). Job perceptions contribute to stress among secondary school teachers in southwestern Uganda. *International journal of environmental research and public health*, 18(5), 2315.
- Suri, P.K. (2022). Effectiveness of strategy implementation and e-governance performance. *Evaluation and program planning*, 92, 102063.
- Tang, T., Hou, J., Fay, L.D. & Annis, C. (2021). Revisit the drivers and barriers to e-governance in the mobile age: a case study on the adoption of city management mobile

- apps for smart urban governance. Journal of urban affairs, 43(4). 563-85. Doi: [10.1080/07352166.2019.1572455](https://doi.org/10.1080/07352166.2019.1572455)
- Umbach, G. & Tkalec, I. (2022). Evaluating e-governance through e-government: practices and challenges of assessing the digitization of public governmental services. Evaluation and program planning, 93, 102118.
- Verma, S.K., Singh, V. & Bharti, A.K. (2022). Computational model for visualisation of risk, challenges and barrier in implementation of e-governance in Nepal. Journal of optoelectronics laser, 41(8), 783-89.
- Westerberg, H.S. (2022). Are payroll tax cuts absorbed by insiders? Evidence from the Swedish retail industry. Applied economics, doi: [10.1080/00036846.2022.2104802](https://doi.org/10.1080/00036846.2022.2104802)
- Wibawa, H., Wira, et al. (2022). Analysis of the effect of e-accounting and e-payroll on the effectiveness of internal control. International journal of informatics, economics, management and science (IJIEMS), (S.L), 1(1), 78-101. Doi: <https://doi.org/10.52362/ijiems.v1i1.706>.
- Wierbowski, M., Galán-Vioque, R., Casado, E.G., Grzywacz, M. & Sokolowski, M.M. (2021). Challenges and prospects of e-governance in Poland and Spain. Electronic government, an international journal, 17(1), 1-26.
- Yusof, A. (2021). EPF unveils e-payroll, well-received by 600 SMEs. New straits times, 1.