Effects of e-Government Adoption on Public Service Organization Performance in Developing Countries. A Case of Kenyan Public Service

Gideon Mutayi Wandabwa

Training Department, Kenya School of Government, Kenya

Abstract:

Background: The term e-government has become popular, especially in recent years. Governments around the world have sought to integrate technology into the way they operate and the way they serve their citizens. A number of countries in the developing world are in the process of implementing e-Government initiatives to help improve service delivery and provide better opportunities for their citizenry with the objective of improving governance.. The study's objective was to establish how e-Government adoption contributes to public service organizations' performance in developing countries specifically focusing on Process efficiency and effectiveness, compliance with government policies and Service Quality and Accessibility. The study was anchored on two theories; Technology acceptance Model (TAM) and Social Systems theory. They are best suited for this study because they collectively explain how individual acceptance of e-Government technologies (TAM) and broader organizational and social dynamics (Social Systems Theory) influence the performance of public service organizations in developing countries like Kenya.

Materials and Methods: The study adopted a survey research design. The population for this study was Kenyan civil servants who are implementers and users of government services through e-government initiatives. The study adopted non-probability/non-random sampling technique, which selected samples based on convenience and availability. Questionnaires with open and close-end questions and Likert scales were used as the research instruments which were administered through various channels and collected after due completion by the respondents. The collected data was cleaned, coded and analysed using Jeffreys's Amazing Statistics Program (JASP) and Statistical Package for Social Scientists (SPSS). Frequencies, percentages, means, standard deviations, t-tests and ANOVA analysis were done.

Results: The results from the study indicated that Business process efficiency and Effectiveness, compliance with Government policies; Service Quality and Accessibility were significant factors of performance in public sector Organization in Developing Countries

Conclusion: The study concluded that e-government adoption has a positive influence on business process efficiency and effectiveness, public service quality, accessibility, and compliance with government policies in public service delivery.

Key Words: e-Government; Public Service; efficiency and effectiveness; Government policies; Service Quality and Accessibility.

I. Introduction

The world, is progressively embracing digital technology and estimates published by statistica indicates that Internet users across the globe stands at 5.18 billion users which translates to about 65% of the world population (Ani, 2023) The inevitability of information and communication in today's world cannot be overstated and governments all around the world have used ICT and other new approaches to provide citizens with information and services in current times (Chan, et al, 2021 p.877). All around the world, the quest to improve government service delivery is becoming an important agenda for most governments and this is necessitated by the ever changing needs and demands of the citizens (Kosec, & Wantchekon, 2020, p.125). Information and Communications Technology (ICT) and precisely the Internet has opened new working models and possibilities for the government

The new trends on e-government has been the evolution towards the provision of integrated public services online through, one Government service portal allowing access to a range of public services (Kassen 2023, p. 69-82). It is further noted that this approach makes it easier for people to interact with public administration and get satisfactory and all-inclusive feedback to their needs Mulyadi, Suwaryo, & Sagita,(2023, p.3116-3129). E-government therefore strives to improve the bond between citizens and their government (Twizeyimana Andersson, 2019, p.170). E-Government Services also aims at making public service delivery more effective, accessible and responsive to people's needs (Li & Shang, 2023). It also aims at expanding participation in decision-making processes and making public institutions more citizen-centric transparent and accountable (Grigalashvili, 2022 p.193). Compared to other African nations like South Africa and Nigeria, Kenya's e-government adoption faces unique institutional barriers—such as fragmented bureaucratic structures and inconsistent policy enforcement—coupled with cultural challenges like public skepticism and diverse local attitudes toward technology. Additionally, while some neighboring countries

have leveraged centralized support and cohesive digital strategies, Kenya's variegated social fabric and historical governance issues exacerbate the digital divide and hinder the integration of e-government services (Kamau, 2022; Ndung'u & Makokha, 2021).

II. Material And Methods

The study adopted a survey research design. The design was suitable for this study since it involved the collection of data from a sample through a set of questions tailored for the purpose (Story & Tait 2019, p. 192-202). It also allowed a number of methods to recruit respondents, gather data, and utilize various data collection methods. (Good fellow 2023, p.38-48). The Research design took two approaches; qualitative or quantitative (Mehrad, & Zangeneh (2019, p. 1-7). This approach was appropriate for this study because it helped to bring out the respondents feelings and behavior towards e-government adoptions initiatives and facilitated testing of the research hypothesis (Fischer, Boone,& Neumann 2023, p. 28-59).

Study Design: Survey research design

Study Location: Kenyan Public Service.

Study Duration: September to November 2023.

Sample size: 138 Civil Servants

Sample size calculation: In this study, a number of critical factors were considered when calculating the sample size from the study population. The significance level (α), effect size (|ρ|) power of test (1-β), and type of statistical analysis (Kang, 2021, p. 18). The above parameters were implemented using G-power (Kang, H. (2021) where the effect size (|ρ|) was 0.05 (giving a larger effect), the Significance Level (α) was 0.05), the Power of test (1-β) was 95%, which is the minimum accepted level of power and total number of tested predictors were 5 resulting to a total sample size of 138. (Verma, et al. 2020)

Subjects & selection method: The population for this study were Kenyan civil servants at both national and county level of government who are implementers and users of government services through e-government initiatives.

Inclusion criteria:

1. Civil Servants
2. Either Gender
3. Aged ≥ 18 years
4. All Management Levels

Exclusion criteria:

1. Non-Civil Servants
2. Aged < 18 years

Statistical analysis

The researcher utilized structured questionnaires with open and closed ended questions and Likert scales to collect primary data to answer the research questions. Data analysis was done using statistical and logical techniques to answer the research questions and test the research hypothesis (Wickham, & Wickham, 2016, p.189-201.)The researcher analysed data collected using t-test,ANOVA (Baždarić, et al 2021), p.47) and descriptive methods (Keller, 2022,). For descriptive statistics, measures of central tendency including frequencies, mean, percentages and measures of dispersion such as standard deviation were done to analyze the effects and behaviors of the independent variables (e-Government) towards the dependent variable(Organizational Performance) (Mishra, et al 2019, p.67).   On the other hand, t-test analysis (Müller 2023, p. 1-46.) aided the researcher to establish the significance of the variables and ANOVA were used to determine if there is any difference between the variables.

III. Result

Personal attributes of the respondents were as follows; regarding gender of the respondents, 41.4 percent were Female and 58.7 percent were male respectively. On the age of the respondents, 39.1 percent were between 31-40 years, 39.1 percent between 41-50 years, 15.0 percent above 50 years and 6.8 percent between 18-30 years. The respondents were drawn across the public service with 39.9 percent being from state cooperation/Parastatals, 34.6 percent County Government and 25.6 percent from National government. The results on respondent's level in their organization showed that, 69.2 percent were in middle level management, 18.8 percent operational and 12.0 percent top management. On the highest level of education, 41.4 percent had Master's degree, 41.4 percent bachelor's degree, 9.8 percent diploma, 3.0 percent postgraduate diploma, 2.3 percent PhD and 2.3 percent certificate. On the duration of adoption and use of e-government services, 42.9 percent of the respondents indicated between 5-10 years, 37.6 percent more than 10 years and 19.6 percent less than 5 years.
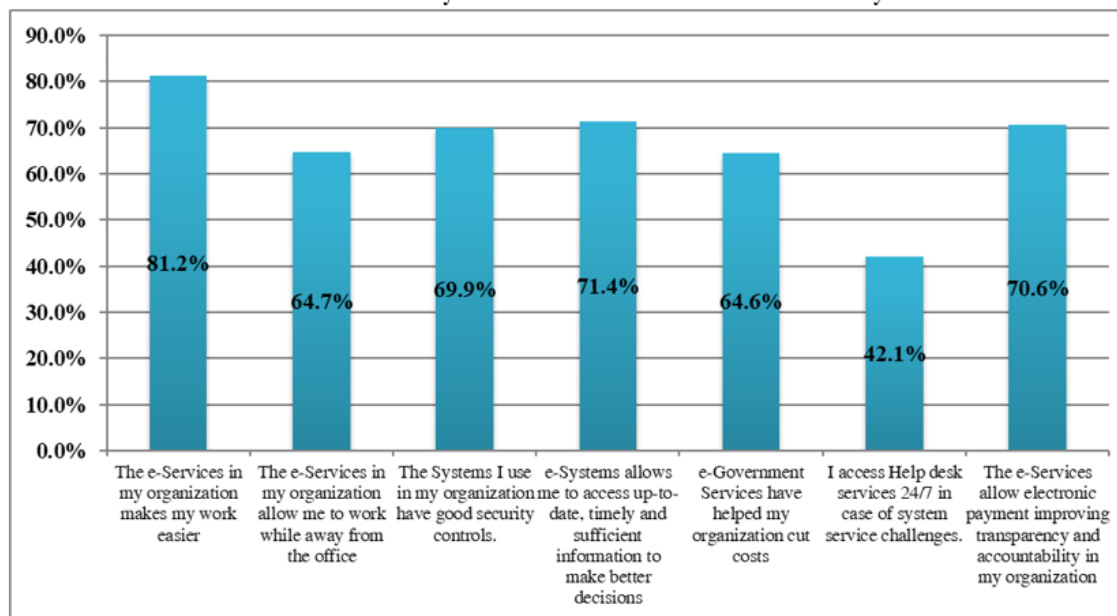
Fig. 1: E-Government on Business Process Efficiency and Effectiveness

The results of e-government adoption on business Process Efficiency and Effectiveness in Public Service delivery showed that, 81.2 percent of the respondents agreed that e-services in their organizations have made work to be easier. 64.7 percent of the respondents agreed that e-government adoption allowed them to work from any location away from office, 69.9% agreed that the systems have good security control mechanisms, 71.4 percent agreed the e-Systems allows them to access current, timely and sufficient information for better decision making. On whether e-government has helped organizations to cut on costs, 64.6 percent agreed that it has, while 42.1 percent agreed that they have access to 24/7 help desk and 70.6 percent of the respondents agreed that e-services have improved transparency and accountability in their organizations through electronic payment systems.
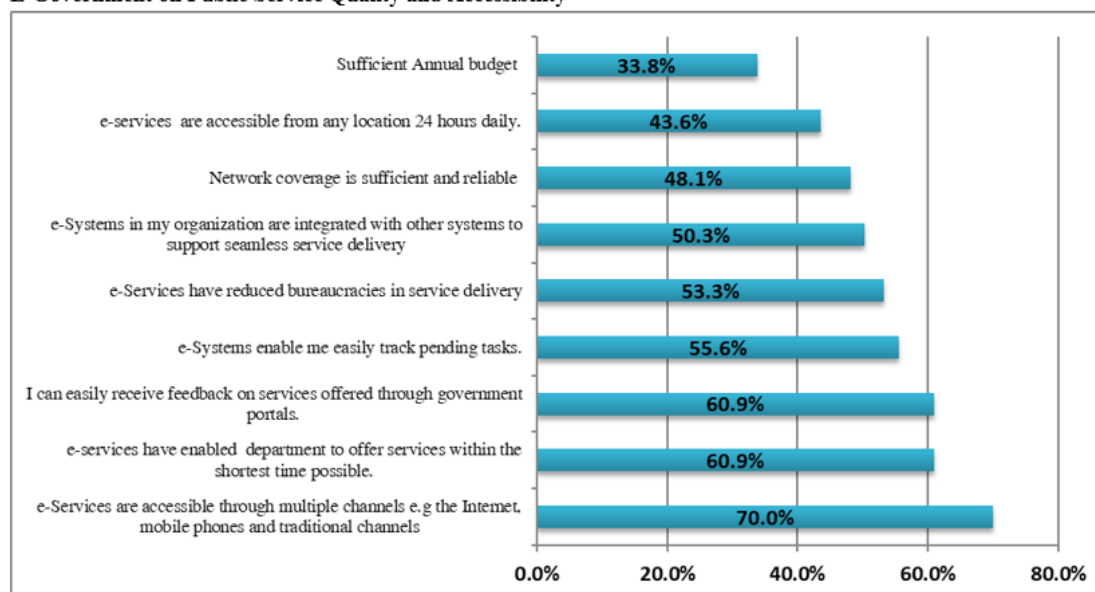

Fig. 2: E-Government on Public Service Quality and Accessibility

Fig. 2 shows that, 33.8 percent of the respondents agreed that their departments have sufficient ICT annual budget, 43.6 percent on the other hand agreed that e-services are accessible from any location 24 hours daily with 48.1 percent agreeing that the network coverage is sufficient and reliable. On E-Systems integration, 50.3 percent of the respondents agreed that systems are integrated and support seamless services across organizations. 53.3 percent agreed that e-government adoption has reduced service level bureaucracies in their departments and 55.6 percent agreed that they are able to track pending tasks. On whether the respondents could easily receive feedback on services rendered, 60.9 percent agreed, while 60.9 percent agreed that e-services

have enabled their organizations to reduce service delivery turnaround time and 70.0 percent agreed that e-services are accessible through multiple channels.
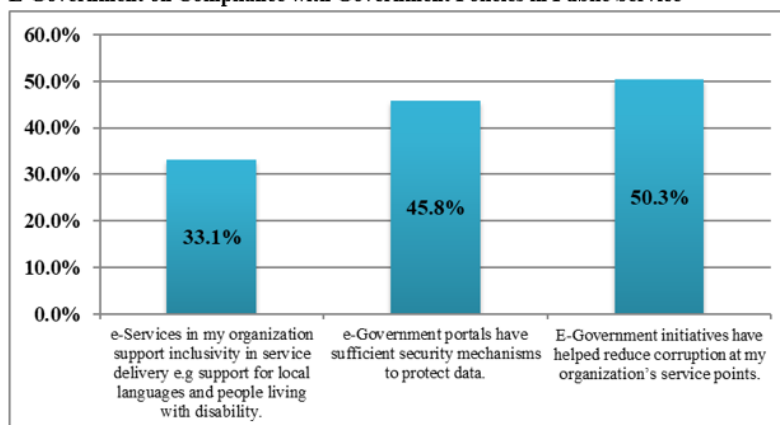

Fig. 3: E-Government on Compliance with Government Policies

The study findings on e-government adoption and compliance with government policies in public service indicated that 33.1 percent of the respondents agreed that e-services support inclusivity while 45.8 percent agreed e-government portals have sufficient security mechanisms to protect data and 50.3 percent agreed that the e-government initiatives have reduced corruption at government service points.

Fig. 4: Public Service Performance and Service Delivery

On general performance and service delivery 72.2 percent of the respondents agreed that E-Systems have improved business process efficiency and effectiveness in public service organizations while 74.4 percent were in agreement that e-services have generally improved public service quality and accessibility. Further, 66.9 percent of the respondents' agreed that e-government initiatives in government departments support compliance with public policies.

Fig. 5: Levels of Performance before and after E-Government Implementation

The overal results indicates agreement of respondents with improvement of performance after e-government implementation. 73 percent agreed that e-services support inclusivity, 72.9 percent enhances information security, 82.4 percent facilitate access to information while 71.4 percent agreed that e-government facilitates and supports public participantion, 65.6 percent agreed that e-government initiatives ha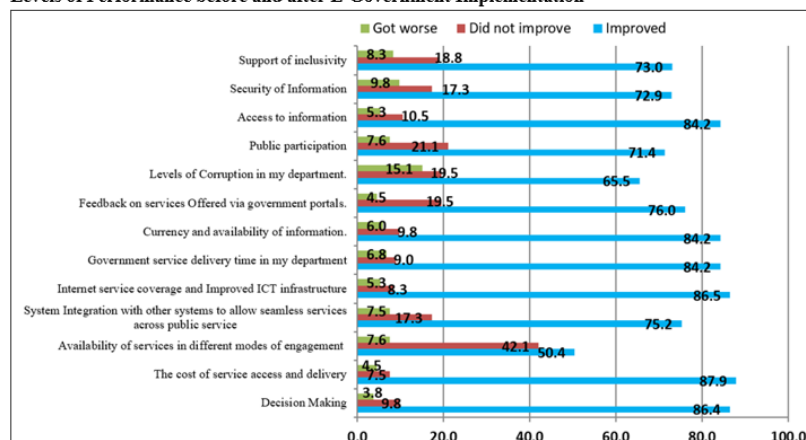ve reduced corruption in their departments, 76 percent agreed that it supports access to feedback from service seekers and 84.2 percent agreed that e-government facitates access to and to current information. Futhermore, 84.2 percent agreed that e-government services have reduced service turn around time, 86.5% improved internet coverage and ICT infrastructure and 75.2 percent indicated that there is improved system integration after e-government implementation in their departments. 50.4 percent agreed that e-systems in their agencies support availability of services in different mode of engagement and 87.9 percent also agreed that e-government reduced cost of service access and delivery and 86.4 percent of the respondents indicated that e-government implementation has helped improve decision making.

TABLE I
LEVELS OF VARIANCE IN PERFORMANCE EXPLAINED BY PREDICTORS

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.731ª	.534	.523	0.732

The study sought to establish the percentage of variance in the dependent variable that is explained collectively by the independent variables. The R-squared results showed the strength of the relationship between the dependent variable (Performance) and the independent variables (efficiency and effectiveness, service quality and accessibility and compliance with government policies). The R-Squared results were 53.4 percent showing that good proportion of the variation in the dependent variable is predicted by the independent variable. This is as indicated in Table 1 above.

TABLE II
LEVELS OF USER PERCEPTION TOWARDS E-GOVERNMENT ADOPTION

	Mean	Std. Deviation
Efficiency and Effectiveness	3.707	1.057
Service quality and accessibility	3.331	1.005
Compliance with government policies	3.128	0.957
Performance	3.692	1.060
Change after implementation of e-government	1.301	0.627

The results shows positive response on adoption of e-government initiatives in public sector organizations. The results showed agreement with Efficiency and Effectiveness with a mean of 3.707 and standard deviation of 1.057, Service quality and accessibility with a mean of 3.331 and standard deviation of 1.005, Compliance with government policies with gave a mean 3.128 and standard deviation 0.957, performance a mean 3.692 and standard deviation 1.06 and change after implementation of e-government with mean 1.301 and standard deviation of 0.627.
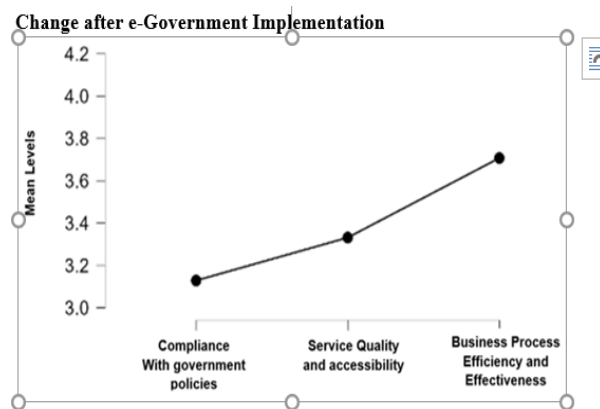
Fig. 6: Change after e-Government Implementation

Fig. 6 shows an Interval plot for the three performance dimensions against their mean levels. The Fig. indicates that there is a positive significant change in performance after adoption of e-government initiatives in the public sector agencies. The results above indicate that compliance with government policies and service quality and accessibility have roughly the same positive change while Business Process Efficiency and Effectiveness slightly higher positive change.

Fig. 7: Change after e-government adoption across Management levels

Fig. 7 compares user perception after e-government adoption across the three levels of management in public sector organizations. The results showed positive agreement across management levels. The middle level of management in government organizations had a mean chang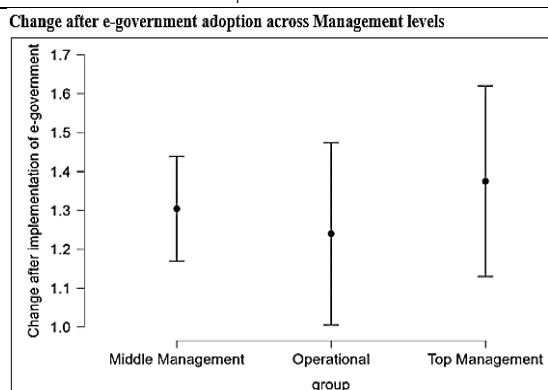e of 1.3, Operational level 1.25, while Top management had 1.39. This clearly indicates that the operational level of management had slightly lower positive change after implementation of e-government initiatives.

TABLE III
SIGNIFICANCE TEST ON THE THREE PERFORMANCE DIMENSIONS

	t	df	p
Efficiency and Effectiveness	40.431	132	< .001
Service quality and accessibility	38.205	132	< .001
Compliance with government policies	37.703	132	< .001

The study sought to find weather there was significance difference found between the three performance dimensions (Efficiency and Effectiveness, Service quality and accessibility and Compliance with government policies). This was done to ensure the three variables are statistically different. The student t-test for the significance test of the three performance dimensions showed that all the three dimensions; Efficiency and Effectiveness, Service quality and accessibility and Compliance with government policies were significant. The results as indicated in table 5 above.

TABLE IV
EFFECTS OF E-GOVERNMENT ADOPTION BASED ON PERFORMANCE DIMENSIONS

Cases	Sum of Squares	df	Mean Square	F	p
Performance dimensions	13.725[a]	2[a]	6.862[a]	19.283[a]	< .001[a]
Dimensions ✳ Management levels	0.516[a]	4[a]	0.129[a]	0.363[a]	0.835[a]
Residuals	92.531	260	0.356		

Repeated measures ANOVA was used to determine if there was any significant difference between different groups (performance dimensions and Management levels).The results on repeated ANOVA test shows that performance dimensions test value $p(0.001) < 0.05$ is significant. This means that the performance dimensions are statistically different hence have influence on the dependent variable. The combined effect of performance dimensions and management levels, $p(0.835) > 0.05$ is not significant. This means the performance perception across levels of management is not significantly different since all were positive. The results and indicated in table 4 above.

TABLE V
EFFECT OF E-GOVERNMENT ADOPTION BASED ON USER'S MANAGEMENT LEVELS

Cases	Sum of Squares	df	Mean Square	F	p
Management levels	5.015	2	2.507	1.073	0.345
Residuals	303.772	130	2.337		

The study sought to establish whether the performance perception were different across user's management levels in government agencies using ANOVA tests. The results on the effects of e-government adoption between subjects showed that there is no significant change difference in performance due to e-government adoption based on perceptions from the three levels of management$(p(0.345) > 0.05)$.

TABLE VI
POST HOC COMPARISONS ON PERFORMANCE DIMENSIONS AFTER
E-GOVERNMENT ADOPTION

		Mean Difference	SE	t	p holm
Compliance	Quality	-0.159	0.095	-1.681	0.094
	Efficiency	-0.570	0.095	-6.018	< .001
Quality	Efficiency	-0.411	0.095	-4.337	< .001

To ascertain exactly which of the three performance dimensions differ from each other, **Post Hoc analysis was done to identify which groups differ from each other among the three dimensions** (Efficiency and Effectiveness, Service quality and accessibility Compliance with government policies).The results showed that Efficiency and Effectiveness $(p(0.001) < 0.05)$ is significant. This means that among the three performance dimensions, only Efficiency and Effectiveness is significantly different.

IV. Discussion

The overall results showed that e-government adoption has positive influence on business Process Efficiency and Effectiveness in Public Service delivery. This was evident with high levels of agreement by the majority of the respondents positively demonstrating that e-services in their organizations have made work easier (81.2%), allowed them to work from any location away from office (64.7%), supports access to current, timely and sufficient information for better decision making (71.4%) and provides appropriate security control mechanisms to protect organizational data (69.9%). These findings are in agreement with studies by Kasemsap (2020), and Mensah (2019) that e-Government has a positive and significant effect on the efficiency and effectiveness in public sector organizations. This findings means that adoption of e-government in the public service can positively influence public service delivery by enhancing government processes and improving the general productivity of employees. In addition, improved efficiency and effectiveness in public service delivery can translate to better customer service motivating majority of the citizenry to utilize the e-services due to improved public trust. On the contrary the results showed low access to 24/7 help desk. This can be attributed to the fact that most developing countries especially Kenya has not embraced 24 hour working system thereby lacking overnight support personnel. This limits access to support services by government employees thus affecting general service delivery. This corresponds with a study by Nokele, and Mukonza (2021, 98-117) which indicated that one of the underlying factors affecting e-service delivery is availability of customer support and this has a direct effect on e-service utilization.

The findings also indicated that e- government adoption has a positive influence on service quality and accessibility. The respondents positively indicated that they could easily receive feedback on services rendered (60.9%), reduced service delivery turnaround time (60.9%) and service accessibility through multiple channels (70.0%). However, a significant number expressed low levels of agreement on ICT annual budget allocations (33.8%), 24 hours service access (43.6%) and sufficient and reliable network infrastructure (48.1%). The study findings are in agreement with a study conducted in Kenya to ascertain the effectiveness of budgeting process in Kenya, which indicated that in many government institutions in Kenya, the budgeting process in not participatory and is marred with a number of challenges hence the user input and needs are always not considered(Touchton & Wampler 2023, p. 1-16). Comparable results were also obtained by a study done by Mohammad (2020) which indicated that e-Government services have a positive bearing on service accessibility thus enhancing transparency and accountability in service delivery which contributes to public trust. Similarly, studies by Nawafleh (2020, p. 17-35), Aljukhadar, et al. (2022) and Li, (2020) indicated that e-Government plays a key role in improving the quality of service delivery thus supporting the user intention to continuously access and use the services. Furthermore, the above studies indicated that e-government initiatives play a mediating role to ensure better service quality. These results implies that improved public trust on government agencies, continued reliance on e-services, improved public acceptance of government services and reduced resistance on the use of online services can be attributed to improved public service quality and accessibility as a result of e-government adoption. This is also attributed to the fact that e-government initiatives enables government employees to easily receive feedback on services rendered, access services through multiple channels and reduced service turnaround time hence serving the public in a better way.

The results also implies that a significant hindrance to service quality and accessibility in public service agencies is low funding, lack of 24 hours service access and unreliable network infrastructure.

Lastly. The study's results indicate that e-government adoption has positive influence on Compliance with Government Policies. The results are complemented with a number of studies. A Study on the "contribution of e-Government initiatives in warranting effectiveness and corruption control in government" indicated that e-government initiatives have positive effects. (Agbozo et.al, 2019, p.53-60) The same is evident in a study by Park and Kim (2020, p.691-707) which indicated that e-government support anti-corruption efforts. However, these studies noted that the successful effort to reduce malpractice in government institutions is dependent on the effectiveness of the countries legal framework and showed interdependence between rule of law and the development of e-government systems to enhance effectiveness in service delivery. These results implies that even though adoption of e-government initiatives has improved compliance with government policies in public service by reducing levels of corruption, providing sufficient security of data and support for inclusivity, these vices continue to be rampant in public sector organization because of weak legal frameworks. This is further echoed in studies conducted by Sadik-Zada, Gatto, & Niftiyev,

(2022 p. 1-17), Adam (2020) and Arayankalamet al. (2021) which explored the existing relationships between e-Government implementation and levels of dishonesty in delivery of public services in developing countries. This means that e-government adoption has enhanced compliance with government policies and support for rule of law by providing supporting tools and mechanisms in public service delivery. However, the low agreement levels indicate the minimal rates of compliance meaning that despite the efforts, incidences of corruption, data security breach and low levels of inclusivity are still evident in public sector organizations in developing countries. The findings also finds the affirmation in the Technology Acceptance Model where TAM acts a benchmark for development and implementation of e-systems that meet the needs of the users by aiding in the understanding of the user preferences and perceptions in compliance with existing legal frameworks. This means, by investing in e-Government systems that comply with TAM requirements, government agencies in developing countries can have systems that provide services that are within the legal confines of host institutions and ultimately lead to policy compliance and improved service delivery and performance. The study findings are also in agreement with the Social systems theory because e-Government has the ability to support and enforce the relationships between government agencies and citizens to foster policy compliance.

V. Conclusion

The study concluded that e-government adoption has positive influence on business Process efficiency and effectiveness in public service delivery. This is demonstrated by the study results which indicated that e-government makes work easier, Facilitates employee telecommuting, supports better decision making by providing access to timely and sufficient information and ensures information security. The study further concluded that e-Government adoption has enhanced government processes and improves the general productivity of employees through better customer service hence motivating citizens to utilize the e-services due to improved public trust.

Secondly, the study concluded that e-government adoption has a positive influence on public service quality and accessibility through improved feedback mechanisms, reduced service delivery turnaround time and service accessibility through multiple channels. Furthermore, e-Government adoption in public sector organizations has enhanced public service quality and accessibility through network sufficiency and coverage, service user-friendliness and availability from any location, availability of easily accessible records of unfinished tasks, system integration with other systems and reduced bureaucracies.

Lastly, the study concludes that e-Government adoption positively influences compliance with government policies in public service in developing countries. However, there were low levels of compliance with government policies due to weaknesses in the legal framework with loopholes that allow some levels of malpractice such as corruption, data breach, and low levels of inclusivity. The study therefore concluded that successful efforts to reduce malpractices in government institutions is not only dependent on e-Government initiatives but also effectiveness of the country's legal framework and change of attitude among civil servants.

VI. Suggestions for Further Research

This study's conclusions provided important information and revelations relating to performance of public sector organizations supported by e-Government initiatives. However, further studies can be extended to cover more performance variables and metrics and also expand the research scope to cover other developing countries, developed countries, private sector and the citizen perspective to establish if there is coherence. Comparative studies can be done in other developing countries given the fact that work environments, infrastructure and legal frameworks differ from one country to another. Furthermore, different countries are at different levels of e-government implementation.

References

1. Abusamhadana, G. A., Bakon, K. A., & Elias, N. F. (2021). E-Government in Ghana: The benefits and challenges. Abusamhadana, GAO, Bakon KA, & Elias NF (2021)" E-Government in Ghana: The Benefits and Challenges." Asia-Pacific Journal of Information Technology and Multimedia, 10(1), 124-140.
2. Adams, S. O., & Paul, C. (2023). E-government development indices and the attainment of United Nations sustainable development goals in Africa: A cross-sectional data analysis. European Journal of Sustainable Development Research, 7(4).
3. Al Mudawi, N., Beloff, N., & White, M. (2020). Issues and challenges: Cloud computing e-government in developing countries. International Journal of Advanced Computer Science and Applications, 11(4), 7-11.
4. Aljukhadar, M., Belisle, J. F., Dantas, D. C., Sénécal, S., & Titah, R. (2022). Measuring the service quality of governmental sites: Development and validation of the e-Government service quality (EGSQUAL) scale. Electronic Commerce Research and Applications, 55, 101182.
5. Adam, I. O. (2020). Examining E-Government development effects on corruption in Africa: The mediating effects of ICT development and institutional quality. Technology in Society, 61, 101245
6. Abusamhadana, G. A., Bakon, K. A., & Elias, N. F. (2021). E-Government in Ghana: The benefits and challenges. Abusamhadana, GAO, Bakon KA, & Elias NF (2021)" E-Government in Ghana: The Benefits and Challenges." Asia-Pacific Journal of Information Technology and Multimedia, 10(1), 124-140.
7. Adjei-Bamfo, P., Maloreh-Nyamekye, T. and Ahenkan, A. (2019), "The role of e-government in sustainable public procurement in developing countries: a systematic literature review", Resources, Conservation and Recycling, Vol. 142, pp. 189-203, available at: https://doi.org/10.1016/j.resconrec.2018.12.001.

8. Adu, K. K., Patrick, N., Park, E. G., & Adjei, E. (2018). Evaluation of the implementation of electronic government in Ghana. Information polity, 23(1), 81-94.

9. Agbozo, E., & Spassov, K. (2018, April). Establishing efficient governance through data-driven e-government. In Proceedings of the 11th international conference on theory and practice of electronic governance (pp. 662-664).

10. Agbozo, Ebenezer, and Benjamin K. Asamoah. "The role of e-government systems in ensuring government effectiveness and control of corruption." R-Economy. 2019. Vol. 5. Iss. 2 5.2 (2019): 53-60.

11. Al Raee, M., Ritzen, J., & de Crombrugghe, D. (2017). Innovation policy & labour productivity growth: Education, research & development, government effectiveness and business policy. The UNU-MERIT working paper series, 2017-19.

12. Alharbi, A. S., Halikias, G., Rajarajan, M., & Yamin, M. (2021). A review of effectiveness of Saudi E-government data security management. International Journal of Information Technology, 13, 573-579.

13. Alharmoodi, B. Y. R., & Lakulu, M. M. B. (2020). Transition from e-government to m-government: challenges and opportunities-case study of UAE. European Journal of Multidisciplinary Studies, 5(1), 61-67.

14. Aljukhadar, M., Belisle, J. F., Dantas, D. C., Sénécal, S., & Titah, R. (2022). Measuring the service quality of governmental sites: Development and validation of the e-Government service quality (EGSQUAL) scale. Electronic Commerce Research and Applications, 55, 101182.

15. Абдулла, Н. Н. (2021). Factors Affecting the Adoption of E-Government in Public Sector Organizations of Kurdistan Region. Аспекти публічного управління, 9(2), 15-27.

16. Almukhlifi, A., Deng, H., & Kam, B. (2019). e-Government adoption in Saudi Arabia: The moderation influence of transparency. Journal of Advances in Information Technology, 10(1).

17. Almukhlifi, A., Deng, H., & Kam, B. (2019, April). Critical factors for the adoption of e-government in developing countries: validation of a measurement model. In Proceedings of the 12th International Conference on Theory and Practice of Electronic Governance (pp. 397-407).

18. Al-Qaysi, N., Mohamad-Nordin, N. & Al-Emran, M. Employing the technology acceptance model in social media: A systematic review. Educ Inf Technol 25, 4961–5002 (2020). https://doi.org/10.1007/s10639-020-10197-1.

19. Al-Refai, M. S. (2020). The impact of e-government on economic growth in GCC countries. International Review, (1-2), 18-26.

20. Alryalat, M. A. A., Rana, N. P., Sahu, G. P., Dwivedi, Y. K. & Tajvidi, M. (2017). Use of social media in Citizen-Centric Electronic Government Services: A literature analysis. International Journal of Electronic Government Research (IJEGR), 13(3), 55–79. DOI10.4018/IJEGR.2017070104 2.4.1 e-Government on Service Quality and Accessibility.

21. Alsarraf, H. A., Aljazzaf, S., & Ashkanani, A. M. (2022). Do you see my effort? An investigation of the relationship between e-government service quality and trust in government. Transforming Government: People, Process and Policy, 17(1), 116-133.

22. Amankwah, A. (2022). Trust In E-Government Adoption in Sub Saharan Africa: Understanding Trust in E-Government Adoption by Citizens (Tertiary Students) Of Ghana (Master's thesis, University of South-Eastern Norway).

23. Andrews, R., & Entwistle, T. (2014). Public service efficiency: Reframing the debate. routledge.

24. Androniceanu, A., & Georgescu, I. (2021). E-Government in European countries, a comparative approach using the Principal Components Analysis. NISPAcee Journal of Public Administration and Policy, 14(2), 65-86.

25. Ani Petrosyan (2023). Number of internet and social media users worldwide as of April 2023: https://www.statista.com/statistics/617136/digital-population-worldwide/.

26. Anwar, K. (2017). Leading Construction Project Teams: The Effectiveness of Transformational Leadership in Dynamic Work Environments in Kurdistan. International Journal of Advanced Engineering, Management and Science, 3(10), 239925.

27. Aoko (2022)An Analysis of the Right of Refugees to Access Public and Private Services in Kenya

28. Arayankalam, J., Khan, A., & Krishnan, S. (2021). How to deal with corruption? Examining the roles of e-government maturity, government administrative effectiveness, and virtual social networks diffusion. International Journal of Information Management, 58, 102203.

29. Arwati, D., & Latif, D. V. (2019). Public Trust and Financial Transparency of E-government implementation in Bandung City. Journal of Economics, Business, and Government Challenges, 2(2), 136-143.

30. Arayankalam, J., Khan, A., & Krishnan, S. (2021). How to deal with corruption? Examining the roles of e-government maturity, government administrative effectiveness, and virtual social networks diffusion. International Journal of Information Management, 58, 102203.

31. Ashaye, O. R., & Irani, Z. (2019). The role of stakeholders in the effective use of e-government resources in public services. International Journal of Information Management, 49, 253-270.

32. Bayaga, A., & Ophoff, J. (2019, September). Determinants of e-government use in developing countries: the influence of privacy and security concerns. In 2019 Conference on Next Generation Computing Applications (NextComp) (pp. 1-7). IEEE.

33. Baždarić, K., Šverko, D., Salarić, I., Martinović, A., & Lucijanić, M. (2021). The ABC of linear regression analysis: What every author and editor should know. European science editing, 4.

34. Bednar, P. M., & Welch, C. (2020). Socio-technical perspectives on smart working: Creating meaningful and sustainable systems. Information Systems Frontiers, 22(2), 281-298.

35. Bekmukhambetova, A. (2021). Comparative analysis of change management models. Corvinus University of Budapest, Business and Management, 8.

36. Benaida, M. (2023). e-Government Usability Evaluation: A Comparison between Algeria and the UK. International Journal of Advanced Computer Science and Applications, 14(1).

37. Bosio, E., Hayman, G., & Dubosse, N. (2023). The Investment Case for E-Government Procurement: A Cost–Benefit Analysis. Journal of Benefit-Cost Analysis, 1-27.

38. UN DESA:https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2016-Survey/Executive%20Summary.pdf.

39. Bisogno, M., Cuadrado-Ballesteros, B., & Santis, S. (2022). Do e-government initiatives and e-participation affect the level of budget transparency?

40. Bloomfield, J., & Fisher, M. J. (2019). Quantitative research design. Journal of the Australasian Rehabilitation Nurses Association, 22(2), 27-30.

41. Bozhikin, I., Macke, J., & da Costa, L. F. (2019). The role of government and key non-state actors in social entrepreneurship: A systematic literature review. Journal of cleaner production, 226, 730-747.

42. Bwana, R. (2023). Kenya's Digital Identity Revolution: Balancing Progress and Human Rights. Available at SSRN 4513860.

43. Castro, C., & Lopes, I. C. (2022). E-government as a tool in controlling corruption. International Journal of Public Administration, 1-14.

44. Chan, F. K., Thong, J. Y., Brown, S. A., & Venkatesh, V. (2021). Service design and citizen satisfaction with e-government services: a multidimensional perspective. Public Administration Review, 81(5), 874-894.

45. Chen, T., Guo, W., Gao, X., & Liang, Z. (2021). AI-based self-service technology in public service delivery: User experience and influencing factors. Government Information Quarterly, 38(4), 101520.

46. Cheptoo, K. P., & Obare, R. M. (2023). A Framework for Electronic Document Management in the Implementation of E-Government in Kenya.

47. Ciesielska, M., Rizun, N., & Chabik, J. (2022). Assessment of E-government inclusion policies toward seniors: A framework and case study. Telecommunications Policy, 46(7), 102316.

48. Cortés-Cediel, M. E., Cantador, I., & Bolívar, M. P. R. (2021). Analyzing Citizen Participation and Engagement in European Smart Cities. Social Science Computer Review, 39(4), 592–626. https://doi-org.pxz.iubh.de:8443/10.1177/0894439319877478.

49. Cox, A. M., Pinfield, S., & Rutter, S. (2019). Extending McKinsey's 7S model to understand strategic alignment in academic libraries. Library Management, 40(5), 313-326.

50. D. M. Sihotang et al., "A Systematic Literature Review of Barriers and Drivers E-Government in Developing Countries: TOE Framework Perspective," 2022 Seventh International Conference on Informatics and Computing (ICIC), Denpasar, Bali, Indonesia, 2022, pp. 1-6, doi: 10.1109/ICIC56845.2022.10006942.

51. Demir, E., Kocaoglu, B. (2019). Maturity assessment in the technology business within the Mckinsey's 7S framework. Research Journal of Business and Management (RJBM), V.6(3), p.158-166.

52. Driss, O. B., Mellouli, S., & Trabelsi, Z. (2019). From citizens to government policy-makers: Social media data analysis. Government Information Quarterly, 36(3), 560-570.

53. Dhaoui, I. (2022). E-government for sustainable development: Evidence from MENA countries. Journal of the Knowledge Economy, 13(3), 2070-2099.

54. Dipura, 1990), D. (2022). Benefits of Key Performance Indicators (KPI) and Proposed Applications in the Defense Industry: A Literature Review. International Journal of Social and Management Studies, 3(4), 23-33.

55. Ebru Gökalp & Veronica Martinez (2022) Digital transformation maturity assessment: development of the digital transformation capability maturity model, International Journal of Production Research, 60:20, 6282-6302, DOI: 10.1080/00207543.2021.1991020.

56. Ephraim Chidama, Y., & Ononiwu, C. G. (2021). Empirical Study of Sustaining the Actualized Value Propositions of Implemented E-Government Projects in Sub-Saharan Africa. arXiv e-prints, arXiv-2108.

57. eGovernment Benchmark 2017, Taking stock of user-centric design and delivery of digital public services in Europe, Final Insight Report - Volume 1, A study prepared for the European Commission DG Communications Networks, Content & Technology. The European Commission, 2018.

58. Elkhan Richard Sadik-Zada, Andrea Gatto & Ibrahim Niftiyev (2022) E-government and petty corruption in public sector service delivery, Technology Analysis & Strategic Management, DOI: 10.1080/09537325.2022.2067037.

59. El-Ebiary, Y. A. B., Kanaan, A. G., Pathmanathan, P. R., Alawi, N. A., Hatamleh, A., Jusoh, J. A., ... & Bamansoor, S. (2021, June). E-Government and E-Commerce Issues in Malaysia. In 2021 2nd International Conference on Smart Computing and Electronic Enterprise (ICSCEE) (pp. 153-158). IEEE.

60. ElKheshin, S. A., & Saleeb, N. (2020). Assessing the adoption of e-government using TAM model: case of Egypt. International Journal of Managing Information Technology (IJMIT), 12(1), 1-14.

61. Erumban, Abdul A. & Das, Deb Kusum, 2016. "Information and communication technology and economic growth in India," Telecommunications Policy, Elsevier, vol. 40(5), pages 412-431.

62. Fauzi, A., Wandira, R., Sepri, D., & Hafid, A. (2021). Exploring Students' Acceptance of Google Classroom during the COVID-19 Pandemic by Using the Technology Acceptance Model in West Sumatera Universities. Electronic Journal of e-Learning, 19(4), 233-240.

63. Firoozeh Haddadi and Tahere Yaghoob(2014) Key indicators for organizational performance measurement. Management Science Letters 4 (2014) 2021–2030

64. Fischer, H. E., Boone, W. J., & Neumann, K. (2023). Quantitative research designs and approaches. In Handbook of research on science education (pp. 28-59). Routledge.

65. Florina, P. (2017). Elements on the Efficiency and Effectiveness of the Public Sector. Ovidius University Annals, Economic Sciences Series, 17(2), 313-319.

66. Frankfurter, Z., Kokoszka, K., Newhouse, D., Silwal, A. R., & Tian, S. (2020). Measuring Internet Access in Sub-Saharan Africa.

67. Gaber, S. A., & Kazim, B. (2019). A Proposed Road Map To Enhance E-Government Services: Kuwait Case Study. International Journal of Advanced Research and Publications, 3(12).

68. Gacitúa, R., Astudillo, H., Hitpass, B., Osorio-Sanabria, M., & Taramasco, C. (2021). Recent models for collaborative e-government processes: A survey. IEEE Access, 9, 19602-19618.

69. Galushi, L. T., & Malatji, T. L. (2022). Digital Public Administration and Inclusive Governance at the South African Local Government, in Depth Analysis of E-Government and Service Delivery in Musina Local Municipality. Academic Journal of Interdisciplinary Studies, 116-126.

70. Gajendra, S., Xi, B., & Wang, Q. (2012). E-government: Public participation and ethical issues. Journal of e-Governance, 35(4), 195-204.

71. Ghareeb, A. M., Darwish, N. R., & Hefney, H. A. (2019). E-government adoption: literature review and a proposed citizen-centric model. Electronic Government, an International Journal, 15(4), 392-416.

72. Glyptis, L., Christofi, M., Vrontis, D., Del Giudice, M., Dimitriou, S., & Michael, P. (2020). E-Government implementation challenges in small countries: The project manager's perspective. Technological Forecasting and social change, 152, 119880

73. Gökalp, E., & Martinez, V. (2021). Digital transformation capability maturity model enabling the assessment of industrial manufacturers. Computers in Industry, 132, 103522.

74. Gomez, L. E., & Bernet, P. (2019). Diversity improves performance and outcomes. Journal of the National Medical Association, 111(4), 383-392.

75. Goodfellow, L. T. (2023). An overview of survey research. Respiratory Care.

76. GOV.UK, "Government Transformation Strategy", (2017),

77. Granić, A., & Marangunić, N. (2019). Technology acceptance model in educational context: A systematic literature review. British Journal of Educational Technology, 50(5), 2572-2593.

78. Grigalashvili, V. (2022). E-government and E-governance: Various or Multifarious Concepts. International Journal of Scientific and Management Research, 5(01), 183-196.

79. Gu, E., Meng, T., Wang, H., & Zhang, A. (2023). E-Government Use, Perceived Transparency, Public Knowledge of Government Performance, and Satisfaction with Government: An Analysis of Mediating, Moderating, and Framing Mechanisms Based on the COVID-19 Outbreak Control Survey Data from China. Social Indicators Research, 1-46.

80. Güldenur AYDIN (2019): Research journal of politics, economics and management The Applicability of Balanced Scorecard in Public Sector: The Case of Ombudsman Institution1.

81. H. Looks, E.-M. Schön and J. Thomaschewski, "Agile Projekte in öffentlichen Verwaltungen - Eine Bestandsaufnahme", Mensch und Computer 2018 - Usability Professionals. Bonn: Gesellschaft für Informatik e.V. Und German UPA e.V, pp. 415-426, 2018.

82. Han, J. H., & Sa, H. J. (2021). Acceptance of and satisfaction with online educational classes through the technology acceptance model (TAM): The COVID-19 situation in Korea. Asia Pacific Education Review, 1-13.

83. Han, Y., & Guo, Y. (2022, January). Literature Review of the Concept of "Internet governance" based on the Background of E-Society. In Proceedings of the 2022 13th International Conference on E-Education, E-Business, E-Management, and E-Learning (pp. 611-618).

84. Hänninen, R., Taipale, S., & Luostari, R. (2021). Exploring heterogeneous ICT use among older adults: The warm experts' perspective. New media & society, 23(6), 1584-1601.

85. Hariguna, T., Ruangkanjanases, A., & Sarmini. (2021). Public behavior as an output of e-government service: the role of new technology integrated in e-government and antecedent of relationship quality. Sustainability, 13(13), 7464.

86. Haryanti, T.; Rakhmawati, N.A.; Subriadi, A.P. The Extended Digital Maturity Model. Big Data Cogn. Comput. 2023, 7, 17. https://doi.org/10.3390/bdcc7010017.

87. Hassan, A. S., & Anwar, R. M. (2021). Impact of E-Government on Organizational Performance in Developing Countries: The Mediating Role of Information Quality. Information Technology & People, 34(3), 936-957.

88. Henriquez, V., Moreno, A. M., & Gutiérrez, S. (2023). Organizational training in agile settings under the lens of CMMI V2. 0. Journal of Software: Evolution and Process, 35(9), e2502.

89. Hervani, A. A., Nandi, S., Helms, M. M., & Sarkis, J. (2022). A performance measurement framework for socially sustainable and resilient supply chains using environmental goods valuation methods. Sustainable Production and Consumption, 30, 31-52.

90. Hochstetter, J., Vásquez, F., Diéguez, M., Bustamante, A., & Arango-López, J. (2023). Transparency and E-Government in Electronic Public Procurement as Sustainable Development. Sustainability, 15(5), 4672.

91. Hruba, A., & Vasquez, M. C. S. (2023). Nordic Roadmap toward an EU-Wide and Seamless Cross-Border Cooperation on Judicial Matters. Digital Development of the European Union: An Interdisciplinary Perspective, 199-218.

92. Hofmann, S., Madsen, C. Ø., & Distel, B. (2020). Developing an analytical framework for analyzing and comparing national e-government strategies. In Electronic Government: 19th IFIP WG 8.5 International Conference, EGOV 2020, Linköping, Sweden, August 31–September 2, 2020, Proceedings 19 (pp. 15-28). Springer International Publishing.

93. Hope, T. M. (2020). Linear regression. In Machine Learning (pp. 67-81). Academic Press.

94. Hristov, I., & Chirico, A. (2019). The role of sustainability key performance indicators (KPIs) in implementing sustainable strategies. Sustainability, 11(20), 5742.

95. Hruba, A., & Vasquez, M. C. S. (2023). Nordic Roadmap toward an EU-Wide and Seamless Cross-Border Cooperation on Judicial Matters. Digital Development of the European Union: An Interdisciplinary Perspective, 199-218.

96. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/5901 99/Government_Transformation_Strategy.pdf.

97. Hu, G., Yan, J., Pan, W., Chohan, S. R., & Liu, L. (2019). The influence of public engaging intention on value co-creation of e-government services. IEEE Access, 7, 111145-111159.

98. Huda, M. N., Kurniasari, E. N., & Ruroh, S. M. (2022). A systematic literature review of E-government evaluation. Journal of Local Government Issues, 5(1), 32-48.

99. Ida, F., & Annisa, L. (2021). Implementation of E-Government as a Public Service Innovation in Indonesia. Вестник Российского университета дружбы народов. Серия: Государственное и муниципальное управление, 8(1), 72-79.

100. Indrayani, R. (2019). Pengukuran Kualitas Pelayanan Jasa Pendidikan Tinggi Terhadap Kepuasan Mahasiswa Pts x.

101. Innovation Science and Technology-Africa. (2016). Retrieved on 11.7.23 from http://www.istafrica.org/home/default.asp?page=doc-by-id&docid=5181.

102. Jääskeläinen, A., Sillanpää, V., Helander, N., Leskelä, R. L., Haavisto, I., Laasonen, V., & Torkki, P. (2020). Designing a maturity model for analyzing information and knowledge management in the public sector. VINE Journal of Information and Knowledge Management Systems, 52(1), 120-140.

103. Jahidi, I., & Budiati, A. (2019, August). The Improvement of E-administration in Indonesia: An analysis based on U theory. In First International Conference on Administration Science (ICAS 2019) (pp. 543-547). Atlantis Press.

104. Jameel, A., Asif, M., & Hussain, A. (2019). Good governance and public trust: Assessing the mediating effect of E-government in Pakistan. Lex Localis, 17(2), 299-320.

105. Johnson, J. L., Adkins, D., & Chauvin, S. (2020). A review of the quality indicators of rigor in qualitative research. American journal of pharmaceutical education, 84(1).

106. Jung, C., & Schindler, D. (2023). Efficiency and effectiveness of global onshore wind energy utilization. Energy Conversion and Management, 280, 116788.

107. Kakwezi, P., & Nyeko, S. (2019). Procurement processes and performance: Efficiency and effectiveness of the procurement function. International Journal of Social Sciences Management and Entrepreneurship (IJSSME), 3(1).

108. Kalogiannidis, S., Chatzitheodoridis, F., Papaevangelou, O., & Mavrommati (2023) A. Management Information Technology and Quality Service Delivery in Government Institutions.

109. Kang, H. (2021). Sample size determination and power analysis using the G* Power software. Journal of educational evaluation for health professions, 18.

110. Kasemsap, K. (2020). The roles of business process modeling and business process reengineering in e-government. In Open Government: Concepts, Methodologies, Tools, and Applications (pp. 2236-2267). IGI Global.

111. Kassen, M. (2016), E-Government in Kazakhstan: A Case Study of Multidimensional Phenomena, Routledge, London and New York, NY.

112. Kassen, M. (2023). Covid-19 Pandemic and Digital Public Awareness Platforms: Strategies, Solutions, and Tools of Communication and e-Government Data Management. Preservation, Digital Technology & Culture, 52(2), 69-82

113. Keller, G. (2022). Statistics for management and economics. Cengage Learning

114. Kesharwani, S. (2020). E-service quality in banking industry-a review. Global Journal of Enterprise Information System, 12(2), 111-118.

115. Khan, A.H. (2018). Administrative Efficiency and Effectiveness with the Application of E-Government: A Study on Bangladesh Public Administration. In: Saeed, S., Ramayah, T., Mahmood, Z. (eds) User Centric E-Government. Integrated Series in Information Systems. Springer, Cham. https://doi.org/10.1007/9783-319-59442-2_6.

116. Khatib, O. (2023). Digital Illiteracy and its Impact on Digital Transformation Maturity in Palestinian Public Universities. International Journal of Education and Learning Systems, 8.

117. Knill, C., & Tosun, J. (2020). Public policy: A new introduction. Bloomsbury Publishing.

118. Knox, C. and Janenova, S. (2019), "The e-government paradox in post-Soviet countries", International Journal of Public Sector Management, Vol. 32 No. 6, pp. 600-615.

119. Kyakulumbye, S., Pather, S., & Jantjies, M. (2019). Towards design of citizen centric e-government projects in developing country context: the design-reality gap in Uganda.

120. Kosec, K., & Wantchekon, L. (2020). Can information improve rural governance and service delivery? World Development, 125, 104376.

121. Lai, C. H., & Huili Lin, S. (2017). Systems theory. The international encyclopedia of organizational communication, 1-18.

122. Lakens, D. (2022). Sample size justification. Collabra: Psychology, 8(1), 33267.

123. Land, F. (2018), "Management information systems: the technology challenge", in N. F. Piercy (Ed.), Management Information Systems, Taylor and Francis Group. London. p. 47.

124. Lapuente, V., & Van de Walle, S. (2020). The effects of new public management on the quality of public services. Governance, 33(3), 461-475.

125. legislation.gov.uk, The Public Sector Bodies (Websites and Mobile Applications) Accessibility Regulations, (2018), http://www.legislation.gov.uk/uksi/2018/852/made.

126. Lemke, F., Taveter, K., Erlenheim, R., Pappel, I., Draheim, D., & Janssen, M. (2020). Stage models for moving from e-government to smart government. In Electronic Governance and Open Society: Challenges in Eurasia: 6th International Conference, EGOSE 2019, St. Petersburg, Russia, November 13–14, 2019, Proceedings 6 (pp. 152-164). Springer International Publishing.

127. Lemke, F., Taveter, K., Erlenheim, R., Pappel, I., Draheim, D., & Janssen, M. (2020). Stage models for moving from e-government to smart government. In Electronic Governance and Open Society: Challenges in Eurasia: 6th International Conference, EGOSE 2019, St. Petersburg, Russia, November 13–14, 2019, Proceedings 6 (pp. 152-164). Springer International Publishing.

128. Lessa, L. (2019), "Sustainability framework for E-Government success: feasibility assessment", Paper presented at the Proceedings of the 12th International Conference on Theory and Practice of Electronic Governance (ICEGOV'19), Melbourne.

129. Li, T., Higgins, J. P., & Deeks, J. J. (2019). Collecting data. Cochrane handbook for systematic reviews of interventions, 109-141.

130. Li, Y., & Shang, H. (2020). Service quality, perceived value, and citizens' continuous-use intention regarding e-government: Empirical evidence from China. Information & Management, 57(3), 103197.

131. Li, Y., & Shang, H. (2023). How does e-government use affect citizens' trust in government? Empirical evidence from China. Information & Management, 60(7), 103844.

132. Lindgren, I., Madsen, C. Ø. Hofmann, S., & Melin, U. (2019). Close encounters of the digital kind: A research agenda for the digitalization of public services. Government information quarterly, 36(3), 427-436.

133. Liu, T., Yang, X., & Zheng, Y. (2020). Understanding the evolution of public–private partnerships in Chinese e-government: four stages of development. Asia Pacific Journal of Public Administration, 42(4), 222-247.

134. Lulaj, E., Zarin, I., & Rahman, S. (2022). A novel approach to improving e-government performance from budget challenges in complex financial systems. Complexity, 2022, 1-16.

135. Lulaj, E., Zarin, I., & Rahman, S. (2022). A novel approach to improving e-government performance from budget challenges in complex financial systems. Complexity, 2022, 1-16.

136. Lyzara, R., Purwandari, B., Zulfikar, M. F., Santoso, H. B., & Solichah, I. (2019, January). E-government usability evaluation: Insights from a systematic literature review. In Proceedings of the 2nd International Conference on Software Engineering and Information Management (pp. 249-253).

137. M. A. Sarrayrih and B. Sriram, "Major challenges in developing a successful e-government: A review on the Sultanate of Oman," J. King Saud Univ. - Comput. Inf. Sci., vol. 27, no. 2, pp. 230–235, 2015

138. M. K. Sharma and K. S. Vaisla, "Towards Cloud Supported E-Governance Services Delivery Model," 2014 Fourth International Conference on Communication Systems and Network Technologies, 2014, pp. 537-539, doi: 10.1109/CSNT.2014.113.

139. M. M. Nielsen, "Governance Lessons from Denmark's Digital Transformation", ACM Int. Conf.Proceeding Ser., pp. 456–461, (2019).

140. M. M. Rantanen, J. Koskinen and S. Hyrynsalmi, "E-Government Ecosystem: A new view to explain complex phenomenon," 2019 42nd International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO), Opatija, Croatia, 2019, pp. 1408-1413, doi: 10.23919/MIPRO.2019.8756909.

141. Maryam A.,Obaid A. (2021).Change Management And Its Obstacles In Light Of "ADKAR Model" Dimensions From Female Teachers Perspective In Secondary Schools In Dammam In Saudi Arabia Vol 20 (Issue 3): pp2454-2475.

142. MacLean, D., & Titah, R. (2022). A systematic literature review of empirical research on the impacts of e-government: a public value perspective. Public Administration Review, 82(1), 23-38.

143. Maharaj, M. S., & Munyoka, W. (2019). Privacy, security, trust, risk and optimism bias in e-government use: The case of two Southern African Development Community countries. South African Journal of Information Management, 21(1), 1-9.

144. Majerova, I. (2019). E-government as a smart solution for public administration: A case of visegrad group. Balkans Journal of Emerging Trends in Social Sciences Balkans JETSS, 2(2), 115-123.

145. Manda, M. I., & Ben Dhaou, S. (2019, April). Responding to the challenges and opportunities in the 4th Industrial revolution in developing countries. In Proceedings of the 12th international conference on theory and practice of electronic governance (pp. 244-253).

146. Manoharan, Aroon P.; Melitski, James; Holzer, Marc (20 January 2022). "Digital Governance: An Assessment of Performance and Best Practices". Public Organization Review.

147. Marcela Presecan (2021) Five Levels of Organizational Maturity: Performance Management Perspective: https://www.performancemagazine.org/five-levels-of-organizational-maturity-performance-management-perspective/

148. Marikyan, D. & Papagiannidis, S. (2023) Technology Acceptance Model: A review. In S. Papagiannidis (Ed), TheoryHub Book. Available at http://open.ncl.ac.uk / ISBN: 9781739604400.

149. Maulana, R. Y., & Bafadhal, F. (2020, May). Provision of Access to Information Services Based on E-Government in the Village Government. In Tarumanagara International Conference on the Applications of Social Sciences and Humanities (TICASH 2019) (pp. 219-223). Atlantis Press.

150. Mellouli, M., Bouaziz, F., & Bentahar, O. (2020). E-government success assessment from a public value perspective. International Review of public administration, 25(3), 153-174.

151. Mensah, R., Cater-Steel, A., & Toleman, M. (2021). Factors affecting e-government adoption in Liberia: A practitioner perspective. The Electronic Journal of Information Systems in Developing Countries, 87(3), e12161.

152. Mensah, I. K. (2019). Impact of government capacity and E-government performance on the adoption of E-Government services. International Journal of Public Administration.

153. Mehrad, A., & Zangeneh, M. H. T. (2019). Comparison between qualitative and quantitative research approaches: Social sciences. International Journal For Research In Educational Studies, Iran, 5(7), 1-7.

154. Meru, A. K., & Kinoti, M. W. (2022). Digitalisation and public sector service delivery in Kenya. In Digital Service Delivery in Africa: Platforms and Practices (pp. 229-248). Cham: Springer International Publishing.

155. Mishra, S. S., & Geleta, A. T. (2020). Can an E-government system ensure citizens' satisfaction without service delivery?. International Journal of Public Administration, 43(3), 242-252.

156. Mishra, P., Pandey, C. M., Singh, U., Gupta, A., Sahu, C., & Keshri, A. (2019). Descriptive statistics and normality tests for statistical data. Annals of cardiac anaesthesia, 22(1), 67.

157. Mohammadi, M. K. (2022). Factors influencing the adoption of e-government websites in Afghanistan from the citizens' perspective. The Electronic Journal of Information Systems in Developing Countries, 88(5), e12216.

158. Mohanad Ali Kareem, Zeena Jabber Haseeni 2015. E-Government and Its Impact on Organizational Performance: International Journal of Management and Commerce Innovations Vol. 3, Issue 1, pp: (664-672.

159. Mohrman, S. A., & Bartunek, J. M. (2023). How Can ODC Help Accomplish a Sustainable Future? A Joint Reflection. Research in Organizational Change and Development, 30, 1-26. doi:https://doi.org/10.1108/S0897-301620220000030003.

160. Moldogaziev, T. T., & Resh, W. G. (2016). A systems theory approach to innovation implementation: Why organizational location matters. Journal of Public Administration Research and Theory, 26(4), 677-692.

161. Moonti, R. M. (2019). Regional Autonomy in Realizing Good Governance. Substantive Justice International Journal of Law, 2(1), 43-53.

162. Mohammad, A. H. (2020). The Effects of Usability and Accessibility for E-Government Services on the End-user Satisfaction.

163. Mousa, S. K., & Othman, M. (2020). The impact of green human resource management practices on sustainable performance in healthcare organisations: A conceptual framework. Journal of Cleaner Production, 243, 118595.

164. Moons, K., Waeyenbergh, G., & Pintelon, L. (2019). Measuring the logistics performance of internal hospital supply chains–a literature study. Omega, 82, 205-217.

165. Muafi, M., Gusaptono, R. H., Effendi, M. I., & Novrido, C. (2021). The information technology (IT) adoption process and e-readiness to use within Yogyakarta Indonesian small medium enterprises (SME). International Journal of Information and Communication Technology Research to Use within Yogyakarta Indonesian Small Medium Enterprises (SME), 2(1), 29-37.

166. Mukamurenzi, S., Grönlund, Å. & Islam, S. M. (2019). Improving qualities of e-government services in Rwanda: A service provider perspective. The Electronic Journal of Information Systems in Developing Countries, 85(5), e12089.

167. Mukhoryanova, O. A., Novikova, I. V., Rudich, S. B., & Bogushevich, E. V. (2016). E-Government in the Western European Countries, Asia and in the USA. Indian Journal of Science and Technology, 9(16), 1-13.

168. Mukwenda, H. T. (2019). Adaptation of the ADKAR Model to the Management of the Higher Education Student Loan Scheme in Uganda. Makerere Journal of Higher Education, 11(1), 45-57.

169. M'murithi, A. M. (2020). E-Government Adoption and Customer Satisfaction of Business Community in Garissa Township, Kenya (Doctoral dissertation, Garissa University).

170. Müller, U. K. (2023). A more robust t-test. Review of Economics and Statistics, 1-46.

171. Mulyadi, A. M., Suwaryo, U., & Sagita, N. I. (2023). The Quality of E-Government in Population Service in Bandung 2021. Al Qalam: Jurnal Ilmiah Keagamaan dan Kemasyarakatan, 17(5), 3116-3129.

172. Mustaf, A., Ibrahim, O., & Mohammed, F. (2020). E-government adoption: A systematic review in the context of developing nations. International Journal of Innovation: IJI Journal, 8(1), 59-76.

173. Mustafa, D., Farida, U., & Yusriadi, Y. (2020). The effectiveness of public services through E-government in Makassar City. International Journal of Scientific & Technology Research, 9(1), 1176-1178.

174. Nam, H., Nam, T., Oh, M., & Choi, S. (2022). An Efficiency Measurement of E-Government Performance for Network Readiness: Non-Parametric Frontier Approach. Journal of Open Innovation: Technology, Market, and Complexity, 8(1), 10.

175. Nam, T. (2019). Does e-Government raise effectiveness and efficiency?: Examining the cross-national effect. Journal of Global Information Management (JGIM), 27(3), 120-138.

176. Nam, T. (2019). Does e-Government raise effectiveness and efficiency?: Examining the cross-national effect. Journal of Global Information Management (JGIM), 27(3), 120-138.

177. Nawafleh, S. (2020). The implementation of e-government and the trust of citizens in public sector performance: the mediating role of service quality. International Journal of Public Sector Performance Management, 6(1), 17-35.

178. Nassaji, H. (2020). Good qualitative research. Language Teaching Research, 24(4), 427-431.

179. Nirmal Kumar Betchoo & bookboon.com (2016) Public Sector Management: A Millennial Insight 1st edition.

180. Nkanata, M. G., & Ocholla, D. N. (2022). Contextualizing Huduma Centres E-government Initiative in Kenyan Public Service Delivery. Mousaion, 40(4).

181. Nokele, K. S., & Mukonza, R. M. (2021). The Adoption of E-Government in the Department of Home Affairs– Unpacking the Underlying Factors Affecting Adoption of E-Government within the Selected Service Centres in Limpopo Province, South Africa. African Journal of Governance and Development, 10(1),

182. Nurdin N., Helana S. and Rosemary S. 2019 A social system for sustainable local e-government.

183. Nurdin, N., Scheepers, H., & Stockdale, R. (2022). A social system for sustainable local e-government. Journal of Systems and Information Technology, 24(1), 1-31.

184. Nurdin, N., Scheepers, H., & Stockdale, R. (2022). A social system for sustainable local e-government. Journal of Systems and Information Technology, 24(1), 1-31.

185. Ochara, N. M. (2010). Assessing irreversibility of an E-Government project in Kenya: Implication for governance. Government Information Quarterly, 27(1), 89-97.

186. Odeh, G. (2021). Implementing Mckinsey 7S Model of Organizational Diagnosis and Planned Change, Best Western Italy Case Analysis. Journal of International Business and Management, 11(4), 01-08.

187. Olaniyi, Evans (2018, p. 278-279). Digital Government: ICT and Public Sector Management in Africa. School of Management Social Sciences, Pan-Atlantic University, Lagos, Nigeria.

188. Ongena, G., & Ravesteyn, P. (2020). Business process management maturity and performance: A multi group analysis of sectors and organization sizes. Business Process Management Journal, 26(1), 132-149

189. Onitsuka, K., Hidayat, A. R. T., & Huang, W. (2018). Challenges for the next level of digital divide in rural Indonesian communities. The Electronic Journal of Information Systems in Developing Countries, 84(2), e12021.

190. Osah, J., & Pade-Khene, C. (2020). E-government strategy formulation in resource-constrained local government in South Africa. Journal of Information Technology & Politics, 17(4), 426-451.

191. Othman, M. H., Razali, R., & Nasrudin, M. F. (2020). Key factors for e-government towards sustainable development goals. Int. J. Adv. Sci. Technol, 29(6), 2864-2876.

192. Owusu, A., Akpe-Doe, C. E., & Taana, I. H. (2022). Assessing the effectiveness of e-government services in Ghana: A case of the registrar general's department. International Journal of Electronic Government Research (IJEGR), 18(1), 1-23.

193. Palaco, I., Park, M. J., Kim, S. K., & Rho, J. J. (2019). Public–private partnerships for e-government in developing countries: An early stage assessment framework. Evaluation and program planning, 72, 205-218.

194. Pandey, D. & Richal, N. (2020). Information Technology Spillover and Organizational Performance. International Journal of Recent Technology and Engineering, 8(4), 30-36.

195. Panom Gunawong & Ping Gao (2017) Understanding e-government failure in the developing country context: a process-oriented study, Information Technology for Development, 23:1, 153-178, DOI: 10.1080/02681102.2016.1269713.

196. Poneman, D. (2023). Nuclear power in the developing world. Taylor & Francis.

197. Prokopenko, O., Shmorgun, L., Kushniruk, V., Prokopenko, M., Slatvinska, M., & Huliaieva, L. (2020). Business process efficiency in a digital economy. International Journal of Management (IJM), 11(3).

198. Park, C. H., & Kim, K. (2020). E-government as an anti-corruption tool: Panel data analysis across countries. International Review of Administrative Sciences, 86(4), 691-707.

199. Paramitha T, Diana K. (2020) ADKAR Model to Manage Organizational Change.

200. Pasquetto, I. V., Borgman, C. L., & Wofford, M. F. (2019). Uses and reuses of scientific data: The data creators' advantage.

201. Patience I. Akpan-Obong, Mai P. Trinh, Charles K. Ayo & Aderonke Oni (2022) E-Governance as good governance? Evidence from 15 West African countries, Information Technology for Development, DOI: 10.1080/02681102.2022.2123770.

202. Powell, J. (2018). An introduction to systems theory: from hard to soft systems thinking in the management of complex organizations. Complexity and Healthcare Organization, 43-58.

203. Putri, M. E., Sensuse, D. I., Mishbah, M., & Prima, P. (2020, January). E-government inter-organizational integration: Types and success factors. In Proceedings of the 3rd International Conference on Software Engineering and Information Management (pp. 216-221).

204. Putri, N. A., Aristio, A. P., & Junaedi, L. (2022). Putri. Ladis International Journal on WWW/Internet, 20(1).

205. R. Gacitúa, H. Astudillo, B. Hitpass, M. Osorio-Sanabria and C. Taramasco, "Recent Models for Collaborative E-Government Processes: A Survey," in IEEE Access, vol. 9, pp. 19602-19618, 2021, doi: 10.1109/ACCESS.2021.3050151.

206. Quaye, J. D., & Sneiders, E. (2020, April). E-government adoption: The role of perception of digital technology in the public service of Ghana. In 2020 Seventh International Conference on eDemocracy & eGovernment (ICEDEG) (pp. 225-230). IEEE

207. R. Meiyanti, B. Utomo, D. I. Sensuse and R. Wahyuni, "e-Government Challenges in Developing Countries: A Literature Review," 2018 6th International Conference on Cyber and IT Service Management (CITSM), Parapat, Indonesia, 2018, pp. 1-6, doi: 10.1109/CITSM.2018.8674245.

208. Rasool, T., Warraich, N. F., & Rorissa, A. (2020). Citizens' assessment of the information quality of e-government websites in Pakistan. Global Knowledge, Memory and Communication, 69(3), 189-204

209. Rasull, Ashty & Jantan, Amer & Ali, Mass & Jaharuddin, Nor & Mansor, Zurain. (2019). Benefit and Sacrifice Factors Determining Internet Banking Adoption in Iraqi Kurdistan Region. Journal of International Business and Management. 1-2o. 10.37227/jibm.2020.65.

210. Reddick, C.G., 2018, 'Foreword', in K.J. Bwalya, The e-Government Development Discourse: Analysing Contemporary and Future Growth Prospects in Developing and Emerging Economies, pp. xxiv–xxix, AOSIS, Cape Town. https://doi.org/10.4102/aosis.2018.BK71.00f.

211. Reijers, H. A. (2021). Business Process Management: The evolution of a discipline. Computers in Industry, 126, 103404.

212. Reyes Plata, J. A., & Galindo Pérez, M. C. (2020). Access to basic services: from public benefit practice to a sustainable development approach. In Sustainable cities and communities (pp. 1-10). Cham: Springer International Publishing.

213. Rodríguez-Hevía, L. F., Navío-Marco, J., & Ruíz-Gómez, L. M. (2020). Citizens' involvement in E-government in the European Union: The rising importance of the digital skills. Sustainability, 12(17), 6807.

214. Ronchi, A. M. (2019). e-Services. Springer International Publishing.

215. Rosenfeld, B. (2023). Survey research in Russia: in the shadow of war. Post-Soviet Affairs, 39(1-2), 38-48.

216. Samsor, A. M. (2021). Challenges and Prospects of e-Government implementation in Afghanistan. International Trade, Politics and Development, 5(1), 51-70.

217. S. Al-Shuaili, M. Ali, A. A. Jaharadak and M. Al-Shekly, "An Investigate on the Critical Factors that can Affect the Implementation of E-government in Oman," 2019 IEEE 15th International Colloquium on Signal Processing & Its Applications (CSPA), Penang, Malaysia, 2019, pp. 75-79, doi: 10.1109/CSPA.2019.8695988.

218. S. Trendall, "Streamlined GDS service standard removes need for ministerial tests", (2019), https://www.civilserviceworld.com/articles/news/streamlined-gds-service-standard-removes-need- ministerial-tests.

219. Sabir, S., Rafique, A., & Abbas, K. (2019). Institutions and FDI: Evidence from developed and developing countries. Financial Innovation, 5(1), 1-20.

220. Sabir, S., Rafique, A., & Abbas, K. (2019). Institutions and FDI: evidence from developed and developing countries. Financial Innovation, 5(1), 1-20.

221. Sadik-Zada, E. R., Gatto, A., & Niftiyev, I. (2022). E-government and petty corruption in public sector service delivery. Technology Analysis & Strategic Management, 1-17.

222. Salloum, S. A., Alhamad, A. Q. M., Al-Emran, M., Monem, A. A., & Shaalan, K. (2019). Exploring students' acceptance of e-learning through the development of a comprehensive technology acceptance model. IEEE access, 7, 128445-128462.

223. Samsor, A. M. (2021). Challenges and Prospects of e-Government implementation in Afghanistan. International Trade, Politics and Development, 5(1), 51-70.

224. Sari, D. I. P., Widjajani, R., & Noor, T. (2022). Implementation of E-Government in Improving Public Service: The Policy of the Directorate General of Taxes at the South Malang, in Indonesia.

225. Sari, Y., & Aydin, B. (2023). The Impact of E-Government Services on Organizational Performance: A Case Study in Turkey. Government Information Quarterly, 40(2), 101642.

226. Schroeder, K., Lampietti, J., & Elabed, G. (2021). Policies to maximize the gains made through digital technologies. What's Cooking: Digital Transformation of the Agrifood System (pp. 157–188). https://doi.org/10.1596/978-1-4648-1657-4_ch7.

227. Shah, I. A., Wassan, S., & Usmani, M. H. (2022). E-Government Security and Privacy Issues: Challenges and Preventive Approaches. In Cybersecurity Measures for E-Government Frameworks (pp. 61-76). IGI Global.

228. Sigwejo, A., & Pather, S. (2016). A Citizen-Centric Framework for Assessing E-Government Effectiveness. The Electronic Journal of Information Systems in Developing Countries, 74(1), 1–27. DOI: 10.1002/j.1681-4835.2016.tb00542.

229. Sihotang, D. M., Yudhistira, B. A., Nugroho, W. S., Wibowo, W. C., Sensuse, D. I., & Hidayanto, A. N. (2022, December). A Systematic Literature Review of Barriers and Drivers E-Government in Developing Countries: TOE Framework Perspective. In 2022 Seventh International Conference on Informatics and Computing (ICIC) (pp. 1-6). IEEE.

230. Silva, P. (2015). Davis' technology acceptance model (TAM)(1989). Information seeking behavior and technology adoption: Theories and trends, 205-219.

231. Singh, H., Grover, P., Kar, A. K., & Ilavarasan, P. V. (2020). Review of performance assessment frameworks of e-government projects. Transforming government: People, process and policy, 14(1), 31-64.

232. Singh, S., Sahni, M. M., & Kovid, R. K. (2020). What drives FinTech adoption? A multi-method evaluation using an adapted technology acceptance model. Management Decision, 58(8), 1675-1697.

233. Sittrop, D., & Crosthwaite, C. (2021). Minimizing risk—the application of kotter's change management model on customer relationship management systems: A case study. Journal of Risk and Financial Management, 14(10), 496

234. Soliman, M., & Ali, M. (2021). Exploring the Impact of E-Government Adoption on Organizational Performance: An Empirical Investigation in Egypt. International Journal of Information Management, 58, 102358.

235. Soumia, A., & Amine, R. M. (2023). A Method for Evaluation of e-Government systems information Agility: Case of e-Algeria.

236. Sreenivasan S, Kothandaraman K. Improving processes by aligning Capability Maturity Model Integration and the Scaled Agile Framework. GBOE. 2019;38(6):42–51. https://doi.org/10.1002/joe.21966.

237. Stoica, M., & Ghilic-Micu, B. (2020). E-government in Romania–A case study. Journal of e-Government Studies and Best Practices, 1-12.

238. Story, D. A., & Tait, A. R. (2019). Survey research. Anesthesiology, 130(2), 192-202.

239. Stratton, S. J. (2021). Population research: convenience sampling strategies. Prehospital and disaster Medicine, 36(4), 373-374.

240. Stratton, S. J. (2021). Population research: convenience sampling strategies. Prehospital and disaster Medicine, 36(4), 373-374.

241. Sultan, E. W. A. M. (2022). Key Performance Indicators (Kpis), Key Result Indicator (Kris) and Objectives and Key Results (OKRS). Arabian Journal of Business and Management Review (Kuwait Chapter), 11(4), 147-157.

242. Tan, S. Y., & Taeihagh, A. (2020). Smart city governance in developing countries: A systematic literature review. Sustainability, 12(3), 899.

243. T. Aguiar, S. Bogea Gomes, P. Rupino da Cunha and M. Mira da Silva, "Digital Transformation Capability Maturity Model Framework," 2019 IEEE 23rd International Enterprise Distributed Object Computing Conference (EDOC), Paris, France, 2019, pp. 51-57, doi: 10.1109/EDOC.2019.00016.

244. Teater, B. (2019). An Introduction to Applying Social Work Theories and Methods 3e. McGraw-Hill Education (UK).

245. Teichert, R. (2019). Digital transformation maturity: A systematic review of literature. Acta universitatis agriculturae et silviculturae mendelianae brunensis.

246. Tejedo-Romero, F., & Araujo, J. F. F. E. (2020). E-government-enabled transparency: The effect of electoral aspects and citizen's access to Internet on information disclosure. Journal of Information Technology & Politics, 17(3), 268-290.

247. The European Commission, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: EU eGovernment Action Plan 2016-2020, accelerating the digital transformation of government, Brussels. The European Commission, 2016.

248. Thitinan, T. S., & Chankoson Khunanan, S. (2022). Modelling the impact of e-government on corruption for the COVID-19 crisis. International Journal of eBusiness and eGovernment Studies, 14(3), 26-45.

249. Tomas A, Silvia Gom, Paulo R. and Miguel (2019) Digital Transformation Capability Maturity Model Framework.

250. Touchton, M., & Wampler, B. (2023). Participation, Development, and Accountability: A Survey Experiment on Democratic Decision-Making in Kenya. American Political Science Review, 1-16.

251. Transparency International.2022.Corruption Perception Index 2021. Berlin: Transparency International.https://images.transparencycdn.org/images/CPI2021_Report_EN-web.pdf.

252. Trawick, S., & Carraher, T. (2023). Contextualising Kotter's 8-step model to a sustainable digital transformation: A qualitative study from the perspective of organisational change.

253. Tree, K. P. I. (2023). Key Performance Indicator (KPI).

254. Trevisan, F. (2022). Beyond accessibility: Exploring digital inclusivity in US progressive politics. New Media & Society, 24(2), 496-513.

255. Turnip, A. K., H. Lubis, S. H., & Lubis, M. S. (2018). A review of ICT in government bureaucracy: Psychological and technology skill perspectives, Int. J. Civ. Eng. Technol, 9(9), 1309–1319.

256. Twizeyimana, J. D., & Andersson, A. (2019). The public value of E-Government–A literature review. Government information quarterly, 36(2), 167-178.

257. Uhl, Axel & Born, Matthias & Koschmider, Agnes & Janasz, Tomasz. (2016). Digital Capability Framework: A Toolset to Become a Digital Enterprise. 10.4324/9781315577166-2.

258. Umbach, G., & Tkalec, I. (2022). Evaluating e-governance through e-government: Practices and challenges of assessing the digitalization of public governmental services. Evaluation and program planning, 93, 102118.

259. UN DESA, "UN E-government survey 2016: E-Government in Support of Sustainable Development", New York: UN DESA, (2016).

260. Un E-Government Survey 2016. E-Government in Support of Sustainable Development, UN E-Government Knowledgebase, 2016.

261. UNCTAD. (2021). The Least Developed Countries in the Post-COVID World: Learning from 50 Years of Experience.

262. United Nations (2021): Assessing public participation in policy-making process.https://www.undp.org/sites/g/files/zskgke326/files/2022-06/undp_ge_dg_par_assessing-public-participation_research_phase%202_eng.pdf

263. United Nations. (2018). Gearing E-Government to Support Transformation towards Sustainable and Resilient Societies. United Nations E-Government Survey 2018, 7–20,

264. Valer-Limaco, G., Delgado-Arenas, R., Delgado-Corazao, S., Marroquín, N. C., & Farfán-Pimentel, J. F. (2022). E-Government in the Peruvian Public Management System: A Theoretical Analysis. NVEO-NATURAL VOLATILES & ESSENTIAL OILS Journal| NVEO, 1789-1796.

265. Varpio, L., Paradis, E., Uijtdehaage, S., & Young, M. (2020). The distinctions between theory, theoretical framework, and conceptual framework. Academic Medicine, 95(7), 989-994.

266. Van Ryzin, G. G. (2011). Outcomes, process, and trust of civil servants. Journal of Public Administration Research and Theory, 21(4), 745-760.

267. Vatankhah, A., Kim, M. J., & Li, Y. (2022). Examining the Relationship between E-Government Services and Organizational Performance: The Mediating Role of Innovation Capability. Government Information Quarterly, 39(4), 101717.

268. Verma, J. P., Verma, P., Verma, J. P., & Verma, P. (2020). Use of G* power software. Determining Sample Size and Power in Research Studies: A Manual for Researchers, 55-60.

269. Vorm, E. S., & Combs, D. J. (2022). Integrating transparency, trust, and acceptance: The intelligent systems technology acceptance model (ISTAM). International Journal of Human–Computer Interaction, 38(18-20), 1828-1845.

270. W. M. Al-Rahmi et al., "Integrating Technology Acceptance Model with Innovation Diffusion Theory: An Empirical Investigation on Students' Intention to Use E-Learning Systems," in IEEE Access, vol. 7, pp. 26797-26809, 2019, doi: 10.1109/ACCESS.2019.2899368.

271. Wairiuko, Jennifer, Nyonje Raphael &, Omulo, Elisha. (2018) ICT Infrastructure and Adoption of E-government for Improved Service Delivery in Kajiado County, Kenya. European Journal of Business and Management 10(30), 205-221.

272. Wang, J. (2016). The Rise of Singapore as International Financial Centre: Political Will, Industrial Policy, and Rule of Law. In Hu, J., Vanhullebusch, M., & Harding, A. (Eds.), Finance, Rule of Law and Development in Asia: Perspectives from Singapore, Hong Kong and Mainland China (pp. 3–17). Leiden/Boston: Brill Academic Publishers.

273. Weerakkody, V., El-Haddadeh, R., Sivarajah, U., Omar, A., & Molnar, A. (2019). A case analysis of E-government service delivery through a service chain dimension. International Journal of Information Management, 47, 233-238.

274. Wickham, H., & Wickham, H. (2016). Data analysis (pp.) Springer International Publishing.

275. World Bank (2015). E-Government https://www.worldbank.org/en/topic/digitaldevelopment/brief/e-government.

276. World Bank: ICT for Greater Development Impact: World Bank Group Strategy for Information and Communication Technology, 2012–2015. World Bank, Washington, DC (2012). https://openknowledge.worldbank.org/handle/10986/27411.

277. WorldBank, (2017). Doing Business Report. Retrieved on 4.10.19 from https://www.doingbusiness.org/en/reports/globalreports/doing-business-2017.

278. Yasuoka, M., Meyerhoff Nielsen, M., & Iversen, K. E. (2022). The exercise of mandate–how mandatory service implementation promoted the use of e-government services in denmark.

279. Y. Jinhua, L. Yong and Z. Peng, "E-government Evaluation Based on Citizen Satisfaction and its Implementation," 2010 International Conference on E-Business and E-Government, 2010, pp. 535-538, doi: 10.1109/ICEE.2010.143.

280. Yera, A., Arbelaitz, O., Jauregui, O., & Muguerza, J. (2020). Characterization of e-Government adoption in Europe. Plos one, 15(4), e0231585.

281. Yera, A., Arbelaitz, O., Jauregui, O., & Muguerza, J. (2020). Characterization of e-Government adoption in Europe. Plos one, 15(4), e0231585.

282. Yerina, A., Mazurenko, O., & Demydiuk, O. (2021). Benchmarking E-government: Current trends and digital barriers to development. International Journal of Innovative Technologies in Economy, (3 (35)).

283. Yulianti, R., & Fuad, A. (2019, November). E-Government Based Public Information Servicesin the Framework of Public Information Openness. In International Conference on Democratisation in Southeast Asia (ICDeSA 2019) (pp. 340-343). Atlantis Press.

284. Yunis, M., El-Kassar, A., & Tarhini, A. (2017). Impact of ICT-based innovations on organizational performance: The role of corporate entrepreneurship, Journal of Enterprise Information Management, 30 (1), 122-141.

285. Yusuf, I. M., Astuti, R. S., & Afrizal, D. (2021, November). The Role of Collaborative E-Government in Surabaya Intelligent Traffic System. In The 1st International Conference on Research in Social Sciences and Humanities (ICoRSH 2020) (pp. 775-781). Atlantis Press.

286. Zabukovšek, S. S., Bobek, S., Tominc, P., & Štrukelj, T. (2021). E-Government. Social Responsibility and Corporate Governance: Volume 2: Policy and Practice, 263-289

287. Zhao, H., Ahn, M. J., & Manoharan, A. P. (2021). E-government, corruption reduction and the role of culture: A study based on panel data of 57 countries. International Journal of E-Planning Research (IJEPR), 10(3), 86-104.

288. Zubir, M. H. H., & Abdul Latip, M. S. (2023). Factors affecting citizens' intention to use e-government services: assessing the mediating effect of perceived usefulness and ease of use. Transforming Government: People, Process and Policy.