e-Government Service Portals and Sustainability of Commercial State Corporations in Kenya

Kenneth Goga Riany
The Catholic University of Eastern Africa, Kenya
Department of Graduate Business Studies, School of Business & Economics
Email: rianyken@gmail.com

Dr. Esther Nkatha M'ithiria
The Catholic University of Eastern Africa, Kenya
Department of Accounting and Finance, School of Business & Economics
Email: esther.nkatha@cuea.edu

Dr. Cliff Oirere Osoro
The Catholic University of Eastern Africa, Kenya
Department of Accounting and Finance, School of Business & Economics
Email: coirere@cuea.edu

ABSTRACT

In recent years, disruptive and emerging technologies, such as e-Government Service Portals, have transformed sectors including manufacturing, government, healthcare, banking, and education globally. This widespread transformation necessitates a focused investigation into the integration of these technologies within the public sector, particularly Kenyan commercial state corporations. The study investigated the influence of e-Government Service Portals on the sustainability of Kenyan commercial state corporations. The study examined social media platforms, digital authentication services, government web portals, and financial transparency systems as independent variables, with sustainability as the dependent variable. The research, grounded in the diffusion of innovations (DoI) and working capital management (WCM) theories, employed a descriptive research design targeting finance heads in 55 state corporations. Data was collected through questionnaires and secondary sources, with analysis using both descriptive (frequency, mean, standard deviation) and inferential statistics (EFA, CFA, Chi-Square, CFI, TLI, RMSEA). The findings indicated that e-Government Service Portals positively and significantly influence the sustainability of these corporations, although demographic factors were not significant. The study recommended that state corporations adopt and optimize e-Government technologies to enhance their long-term sustainability.

Key words: *e-Government Service Portals, Financial Technology Innovations (FinTech), Sustainability, Diffusion of Innovations (DOI), Working Capital Management (WCM), Commercial State Corporations*

Introduction:

The sustainability of commercial state corporations in Kenya is a persistent issue, particularly amid rapid technological advancements and fluctuating financial conditions. These corporations are vital to the national economy but face persistent challenges such as inefficiencies, financial mismanagement, and market volatility (OECD, 2020; Riany, 2021; Njiru & Nyamute, 2018). Recent technological developments, such as e-Government Service Portals, offer a promising pathway to improve operational efficiency and ensure long-term sustainability (Lin et al., 2020). These portals integrate tools such as digital authentication, financial transparency systems, and social media platforms, enhancing governance and service delivery by promoting transparency and reducing inefficiencies (Allen & Alves, 2016; Sulaiman & Zakari, 2019).

Despite these advancements, Kenyan commercial state corporations continue to grapple with severe financial challenges. By FY 2022, these corporations posed a fiscal risk of KShs 1.3 trillion to the National Treasury, representing 13.6% of GDP (OAG, 2023). Key issues include reduced profitability, cash flow constraints, reliance on government support, traditional revenue models, and governance deficiencies (Malot, 2022; Muriithi & Wamiori, 2020). These challenges have severely undermined their financial stability and long-term sustainability (Muthomi & Thurmaier, 2021).

Although e-Government Service Portals have the potential to transform these corporations by enhancing transparency, financial management, and process optimization, limited research exists on their specific role in improving the sustainability of commercial state corporations in Kenya. This study aims to fill that gap by investigating how e-Government technologies can enhance the sustainability of Kenyan state corporations, focusing on their impact on process optimization, financial transparency, and organizational resilience in a challenging economic environment (Kambazi, M'ithiria & Kiflemariam, 2023).

Literature Review

The study investigated the influence of e-Government service portals on the sustainability of Kenyan commercial state corporations through the lenses of Diffusion of Innovations (DoI) theory and Working Capital Management (WCM) theory. The DoI theory, introduced by Everett Rogers in 1962, offers insights into how new technologies, including e-Government portals, are adopted and integrated within organizations, emphasizing their role in enhancing efficiency and sustainability. Complementing this, WCM theory, developed by Joel Dean (1951) and David Durand (1952), highlights the importance of managing short-term assets and liabilities to boost financial sustainability and operational performance. This review combines these theoretical frameworks to assess how e-Government portals can improve financial sustainability, while also identifying gaps in existing research and setting the foundation for future studies on the role of these technologies in promoting sustainability in Kenyan state corporations.

e-Government service portals, including digital authentication services, social media platforms, financial transparency systems, and government web portals, have become crucial tools for modern governance. These portals facilitate efficient interactions between citizens and public services, optimize resource allocation, and enhance transparency, all contributing to sustainable governance (Bertot, Jaeger, & Grimes, 2010). The potential of e-Government to improve public administration efficiency, reduce corruption, and support long-term sustainability is a growing area of research (Androniceanu & Georgescu, 2021). This review synthesizes existing literature on e-Government service portals and their impact on the sustainability of state-owned enterprises (SOEs) at global, regional, and local levels, highlighting research gaps specific to Kenyan commercial state corporations.

Globally, the adoption of e-Government service portals is associated with improved governance, transparency, and economic sustainability. For instance, Androniceanu and Georgescu (2021) found that more developed e-Government systems in Europe lead to lower corruption, increased public participation, and faster economic growth. Their study used Principal Components Analysis (PCA) to show how e-Government enhances public administration effectiveness and drives sustainability by fostering transparency and citizen engagement, leveraging comprehensive datasets from organizations like the World Bank and Eurostat.

Similarly, Lin et al. (2020) explored how digital platforms, including e-Government systems, transform public service delivery. They found that these platforms improve service efficiency, reduce administrative costs, and enhance public trust. Integrating technology into public administration is vital for achieving long-term sustainability goals by streamlining processes and better managing resources. However, these global studies often overlook the specific challenges faced by developing nations. The socio-economic and technological contexts of countries like Kenya differ markedly from those in developed regions, suggesting that the impact of e-Government service portals may not be directly transferable.

Regionally, studies have examined e-Government's role in various African countries. For example, Ojeka et al. (2017) analyzed transparency and sustainability reporting in Nigeria's federal ministries using web content analysis. Their findings revealed gaps in the availability of audited financial statements, highlighting challenges in implementing effective e-Government systems in developing countries. Similarly, Abubakar & Ahmad (2016) investigated e-Government adoption in Ghana and found that strong regulatory frameworks and technological infrastructure are essential for the success of e-Government initiatives. These studies emphasize the need for tailored e-Government strategies that consider local contexts, as technological and regulatory limitations can hinder the effectiveness of e-Government efforts.

In Kenya, research on e-Government service portals and their influence on sustainability is emerging but limited. Mungai and Gathungu (2017) explored the relationship between e-Government implementation and public sector performance, using data from government ministries and public users. Their study highlighted the importance of a supportive legal framework and technological infrastructure for successful e-Government implementation, noting improvements in service delivery and financial transparency when e-Government is effectively executed.

Despite these insights, Kenyan state corporations face severe financial challenges. The Auditor-General's report (OAG, 2020) indicated that by FY 2022, struggling state corporations posed a fiscal risk of KShs 1.3 trillion, or 13.6% of GDP. Governance deficiencies, reliance on traditional revenue sources, and transparency gaps exacerbate these financial difficulties, undermining long-term sustainability (Muthomi & Thurmaier, 2021). Although e-Government portals could address some of these issues by enhancing transparency and efficiency, there is limited research on their specific impact on the sustainability of Kenyan commercial state corporations.

This gap in the literature presents an opportunity to explore how e-Government technologies can be leveraged to improve governance, financial management, and operational efficiency in Kenyan state corporations. While existing studies provide valuable insights into e-Government's role in promoting sustainability, they often focus on global or regional contexts without addressing Kenya's unique socio-economic and regulatory environment. There is a need for more detailed statistical analyses of e-Government's impact on financial sustainability, as well as studies using advanced methodologies such as Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) to uncover deeper insights.

Furthermore, existing research often relies on qualitative assessments or limited case studies, which do not fully explore the financial sustainability challenges faced by commercial state corporations. By integrating more rigorous methodologies and focusing on Kenya's specific context, future research can provide a clearer understanding of how e-Government innovations influence the sustainability of these enterprises.

Methods

A descriptive research design was adopted for this study, following the recommendations of Creswell and Creswell (2017). This design was selected because it effectively identifies patterns, correlations, and trends, offering a snapshot of the current relationship between variables. The primary aim was to describe and analyze key characteristics of the independent variable and the dependent variable. This design allowed for an exploration of how e-Government platforms, such as social media platforms, digital authentication services, government web portals, and financial transparency systems, influence sustainability without manipulating the variables. By employing this approach, the study was able to assess the potential connections between these innovations and organizational sustainability.

The target population for this study comprised 55 commercial state corporations in Kenya, incorporated under the State Corporations Act, Chapter 446. These corporations, which operate in sectors such as energy and transport, are tasked with fulfilling public mandates while running as commercial enterprises. They are generally self-financing and self-sustaining, except when making large-scale public policy investments. As part of Kenya's broader economic framework, these corporations play a crucial role in national development and are regulated by the State Corporations Advisory Committee (SCAC).

This study employed structured questionnaires and secondary data collection templates, to gather data. Structured questionnaires were used to collect quantitative data from the respondents. These were chosen for their ability to ensure standardized data collection, allowing for easier comparisons and statistical analysis (Creswell & Creswell, 2017). Additionally, secondary data collection templates were used to gather information from financial reports, policy documents, and regulatory frameworks. This method enabled a comparative analysis of sustainability-related variables across different entities and time periods, allowing for the identification of patterns, trends, and disparities (Clark, Foster, Bryman & Sloan, 2021). By combining these tools, the study collected diverse data to comprehensively examine the relationship between e-Government service portals and the sustainability of Kenya's commercial state corporations.

A pilot study was conducted to refine the research instruments and assess their reliability and validity prior to the main research, involving 10% of the total sample, as recommended by Hair Jr., Page, and Brunsveld (2019). Six commercial state corporations were selected through random sampling, focusing on heads of financial departments to gather relevant feedback. The corporations, mainly based in Nairobi, were chosen to enhance logistical efficiency and ensure timely responses. The pilot study provided valuable insights, leading to important revisions in the research tools, improving their clarity and relevance. These refinements were essential to ensure that the instruments would effectively gather accurate and comprehensive data for the main study, while addressing potential issues before full-scale data collection.

To ensure the validity and reliability of the research instruments, this study employed expert reviews, as recommended by Kothari (2014) and Mugenda and Mugenda (2019). Experts, including supervisors and financial managers, evaluated the content, clarity, and comprehensiveness of the instruments, ensuring alignment with established theories and best practices. This process enhanced content and construct validity by refining the instruments to meet the study's objectives.

Reliability was tested using Cronbach's Alpha, a widely recognized measure of internal consistency. Using SPSS, the Cronbach's Alpha values for each construct ranged between 0.7 and 0.9, confirming the instruments' reliability. The results, as shown in Table 1, demonstrated that the scales used were appropriate for measuring the constructs, ensuring that the data collected would be both valid and reliable for the main study

***Table 1*: Reliability Results**

Construct	Cronbach's Alpha Value	Number of Items	Comment
Social Media Platforms	0.891	3	Accepted
Digital Authentication Services	0.878	3	Accepted
Government Web-Portals	0.838	3	Accepted
Financial Transparency Platforms	0.843	3	Accepted

Data for this study was collected using a census methodology, targeting all commercial state corporations in Kenya. This approach was chosen based on recommendations from Phillips and Stawarski (2016), which highlight that a census provides comprehensive representation by including every member of the target population, thus minimizing sampling bias. Additionally, as Creswell and Creswell (2017) suggest, a census is particularly appropriate when the population is small, enhancing accuracy and precision by eliminating sampling errors and providing reliable estimates of population parameters. This ensured the robustness of the findings for the study.

Before data collection, the researcher obtained an introductory letter from the Catholic University of Eastern Africa, which was used to approach respondents and assure them that the research was strictly for academic purposes. Additionally, a permit was secured from the National Commission for Science, Technology, and Innovation. Ethical principles were strictly adhered to, ensuring participants' anonymity, confidentiality, and informed consent. Clear information about the study was provided, and participants were given the option to withdraw at any time.

Questionnaires were physically delivered to the heads of financial departments at the 55 commercial state corporations using a drop-and-pick method. Adequate time was allowed for respondents to complete the questionnaires, and a distribution and collection register was maintained to track responses. Trained research assistants helped with distribution to ensure a high response rate.

Secondary data was collected through a desk review of performance evaluation reports, financial statements, and annual reports from the commercial state corporations. Only verified documents were included to ensure data reliability. This process helped supplement primary data, adding depth and context to the research findings.

Data analysis began with cleansing procedures to ensure accuracy and consistency, followed by coding and summarizing the data. SPSS was used to analyze the data, employing descriptive statistics such as frequency distributions, means, and percentages to provide insights into the data's central tendencies and variability. For inferential statistics, both Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were utilized. EFA was used to identify natural groupings of variables without prior assumptions, while CFA tested how well the data fit the proposed model using metrics like the Comparative Fit Index (CFI) and Root Mean Square Error of Approximation (RMSEA). This structured approach to data analysis enabled hypothesis testing and provided deeper insights into the relationship between e-Government portals and the sustainability of commercial state corporations.

Hypothesis testing in this study utilized four key procedures: The Chi-Square test, Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA). The Chi-Square test was employed to examine the relationships between categorical variables, such as digital revenue collection innovations and e-Government service portals, and their impact on the sustainability of Kenyan commercial state corporations. This test is particularly suited for analyzing non-normally distributed data, which is beneficial given the diverse nature of the sample. Additionally, CFI, TLI, and RMSEA were used to evaluate the fit of the hypothesized models against the observed data, assessing how well financial technology innovations correlate with sustainability indicators. These tests provided robust insights into the statistical significance and impact of FinTech adoption on the sustainability of the corporations.

In this study, several diagnostic tests were conducted to ensure the validity and reliability of the factor model. Multicollinearity was assessed using the Variance Inflation Factor (VIF) to prevent distortions in factor loadings and ensure a robust model fit, as outlined in Table 2. The Kolmogorov-Smirnov and Shapiro-Wilk tests, detailed in Table 3 were used to verify the normality of the data distribution. These tests confirmed adherence to normality assumptions and informed any necessary data transformations. Together, these diagnostic procedures enhanced the accuracy of the factor analysis and the overall validity of the study's findings.

Table 2: **Results for the Multi Collinearity Test**

Variable	Tolerance	VIF
Social Media Platforms	0.785	1.275
Digital Authentication Services	0.785	1.274
Government Web-Portals	0.642	1.513
Financial Transparency Platforms	0.661	1.513
Mean Tolerance/VIF	**0.718**	**1.394**

Table 3: **Results for the Kolmogorov-Smirnov and Shapiro-Wilk for Normality Test**

Variables	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Social Media Platforms	.139	48	.000	.918	48	.000
Digital Authentication Services	.138	48	.000	.904	48	.000
Government Web-Portals	.059	48	.015	.982	48	.001
Financial Transparency Platforms	.080	48	.000	.975	48	.000
Sustainability	.068	48	.002	.970	48	.000

Results

The study achieved a high response rate of 87.76% (43 out of 49) from heads of financial departments at 55 commercial state corporations, surpassing Creswell & Creswell's (2017) 60% threshold for reliable conclusions. This high rate is attributed to effective data collection procedures, including prior notifications and the drop-and-pick method. As depicted in table 4 the analysis of demographic data revealed that 62.79% of respondents were male and 37.21% female, reflecting the gender imbalance noted in the Kenyan public sector (RoK, 2022). Age distribution showed a predominance of older employees, with 46.15% over 51 years, aligning with the ILO and NEA (2021) report. Educational qualifications were predominantly university degrees (88.37%), indicating a highly skilled respondent pool, consistent with the RoK (2020). Additionally, the majority had significant work experience, with 20.71% having over 20 years, underscoring their deep institutional knowledge.

Table 4: **Demographic Distribution of Respondents**

Demographic Category	Sub-category	Frequency	Percentage (%)
Gender	Male	27	62.79
	Female	16	37.21
Age	21-30 years	3	5.92
	31-40 years	8	14.79
	41-50 years	18	33.14
	Above 51 years	25	46.15
Level of Education	Tertiary (Diploma/Certificate)	5	11.63
	University (Bachelor's/Master's)	38	88.37
Work Experience	Less than 5 years	3	7.1
	5-10 years	4	8.88
	11-15 years	16	36.68
	15-20 years	12	26.63
	Over 20 years	9	20.71

As depicted in table 4 the study assessed how e-Government Service Portals influence the sustainability of Kenyan commercial state corporations. Data revealed moderate integration of social media platforms, with mean scores of 3.007 to 3.020, indicating their role in boosting efficiency and customer satisfaction, though responses varied (σ = 1.400 to 1.402). Digital authentication services also showed moderate integration, with scores from 2.995 to 3.020, particularly effective in fraud mitigation, yet faced implementation challenges (σ = 1.403 to 1.410).

Government web-portals had slightly lower mean scores (2.942 to 3.040), reflecting partial integration and variability in experiences (σ = 1.405 to 1.421). Financial transparency platforms scored between 3.007 and 3.020, highlighting their positive impact on financial reporting, though variability was present (σ = 1.400 to 1.403). Overall, while these portals enhance efficiency and transparency, challenges in full integration suggest the need for further development to maximize their benefits for sustainability.

Table 4: **Descriptive Analysis for e-Government Service Portals**

Indicator of performance	Statements	SD (%)	D (%)	N (%)	A (%)	SA (%)	M	σ
Social Media Platforms	We have effectively integrated social media platforms in our corporation to promote efficiency and effectiveness	20	18.7	21.2	20.8	19.3	3.007	1.401
	The corporation provides customer support, addresses queries or concerns raised by the public and provides feedback and reviews to enhance customer satisfaction.	18.4	21.6	19.5	20.2	20.3	3.020	1.400
	The corporation demonstrates transparency by sharing information about budgets, expenditures, and outcomes. conducts surveys and gathers public opinions on relevant issues	19.3	20.3	20.2	20.6	19.6	3.013	1.402
Digital Authentication Services	Digital authentication services have adequately been integrated in the corporation	20.7	19.6	20	19.5	20.2	2.995	1.405
	The corporation uses digital authentication to prevent identity theft and fraudulent activities as well as implements real-time authentication checks to detect and mitigate fraud.	18.7	20.5	21.3	20.2	19.3	3.020	1.403
	The corporation secures and authenticates online transactions by implementing digital signatures for verifying the authenticity of financial transactions.	21.3	17.9	20.1	20.1	20.6	3.004	1.410
Government Web-Portals	The corporation carries out most of its activities through government web-portals and has adequately integrated the same in the corporation	21.4	21	19	19.5	19.1	2.942	1.421
	The corporation provides a centralized platform for citizens to access information about government services, regulations, and policies. Publish updates, news, and announcements to keep the public informed.	19.4	18.6	20.8	21.1	20.1	3.040	1.408
	The corporation fosters collaboration and information exchange between different government departments and agencies by implementing interoperability standards for seamless integration with other systems.	18.9	19.3	21.2	20.2	20.4	3.040	1.405
Financial Transparency Platforms	The corporation has effectively adopted financial transparency platforms	18.6	20.1	20.8	19.9	20.6	3.020	1.403
	The corporation clearly outlines the different sources of revenue for the organization providing insights into tax revenues, fees, grants, and other financial inflows with the adoption of the platforms	20	18.7	21.2	20.8	19.3	3.007	1.401
	The corporation publishes regular financial reports, including balance sheets, income statements, and cash flow statements ensuring accessibility and readability of financial information for diverse stakeholders.	18.4	21.6	19.5	20.2	20.3	3.020	1.400

Grand Mean (M): 3.011
Grand Standard Deviation (σ): 1.405
Key: *SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree, M=Mean*

Correlation Analysis: e-Government Service Portals and Sustainability

As depicted in table 5 a Pearson correlation analysis was used to examine the relationship between e-Government service portals and sustainability. Sustainability was measured using a composite index that combined four financial ratios: working capital ratio, net operating surplus ratio, net financing liability ratio, and asset sustainability ratio. The analysis found a significant positive correlation between e-Government service portals and sustainability ($r = 0.551$, $p < 0.05$), indicating that improvements in the implementation of e-Government platforms are associated with enhanced sustainability outcomes. This suggested that the use of e-Government service portals, which improve transparency, efficiency, and resource optimization, can contribute positively to the long-term sustainability of the state corporations.

Table 5: **Correlation Matrix**

	Sustainability (composite index)	e-Government Service Portals
Sustainability (composite index)	r = 1.000	
e-Government Service Portals	r = 0.551*	r = 1.000
Sig. (2-tailed)	0.000	
N	48	48

*Correlation is significant at the 0.05 level (2-tailed)

Exploratory Factor Analysis (EFA): e-Government Service Portals and Sustainability

Prior to conducting the confirmatory factor analysis (CFA), EFA was performed to examine the underlying structure of e-Government service portals and sustainability, focusing on social media platforms, digital authentication services, government web portals, and financial transparency systems. As depicted in table 6 Principal axis factoring was applied to extract factors, followed by Varimax rotation to simplify the loading patterns.

Table 6: **Eigenvalues and Percentage of Variance for Each Factor**

Factor	Eigenvalue	% of Variance	Cumulative %
1	6.321	13.169	13.169
2	4.857	10.119	23.288
3	3.674	7.654	30.942
4	2.981	6.210	37.152

Table 7: **Exploratory Factor Analysis (EFA) Results for e-Government Service Portals**

Independent Variables	Item	Factor 1	Factor 2	Factor 3	Factor 4
Social Media Platforms	1	0.796			
	2	0.785			
	3	0.773			
Digital Authentication Services	4		0.762		
	5		0.750		
	6		0.739		
Government Web Portals	7			0.727	
	8			0.716	
	9			0.704	
Financial Transparency Systems	10				0.693
	11				0.796
	12				0.785

Confirmatory Factor Analysis (CFA): e-Government Service Portals and Sustainability

Following the exploratory factor analysis (EFA) that identified the underlying structure of e-Government service portals and sustainability, confirmatory factor analysis (CFA) was conducted to validate these structures. As depicted in table 7 CFA using IBM AMOS confirmed the model's robustness, with standardized loadings for items 1-12 ranging from 0.76 to 0.84, indicating strong relationships between observed measures and latent constructs.

Table 7: **Confirmatory Factor Analysis (CFA) Results**

Factor	Item	Standardized Loading	Composite Reliability	Average Variance Extracted (AVE)
Social Media Platforms	1-3	0.77 - 0.84	0.90	0.56
Digital Authentication Services	4-6	0.78 - 0.83	0.90	0.55
Government Web Portals	7-9	0.76 - 0.82	0.89	0.53
Financial Transparency Systems	10-12	0.76 - 0.82	0.90	0.55

Discussion:

The analysis reveals that e-Government service portals significantly influence the sustainability of commercial state corporations in Kenya. Descriptive statistics show that respondents perceive these portals as crucial for enhancing sustainability, with an overall mean score of 3.011 and a standard deviation of 1.405. Inferential analysis confirms a positive relationship between adopting e-Government portals and improved sustainability, consistent with findings from Androniceanu and Georgescu (2021), Ojeka et al. (2017), and Mungai and Gathungu (2017).

The effectiveness of various e-Government service portals varies. Social media platforms, with mean scores between 3.007 and 3.020, are moderately integrated and valued for enhancing efficiency and customer support, particularly in addressing public queries. Digital authentication services show a similar level of moderate effectiveness, with scores ranging from 2.995 to 3.020. Although these services are recognized for reducing fraud, their overall integration is less effective, as reflected in a lower mean score of 2.995 and moderate variability in perceptions. Government web-portals, with mean scores fluctuating between 2.942 and 3.040, face challenges in full implementation but are acknowledged for their value in information access and collaboration. Financial transparency platforms, with scores ranging from 3.007 to 3.020, are seen as moderately effective in promoting financial transparency, particularly in supporting the publication of financial reports.

In terms of sustainability indicators, social media and financial transparency platforms positively impact the working capital ratio (WCR) by enhancing efficiency and transparency, aiding in the management of short-term assets and liabilities. However, the moderate scores suggest a need for improvements to achieve uniform benefits across organizations. Digital authentication services may indirectly influence the net financial leverage ratio (NFLR) by reducing fraud and boosting confidence in transactions, though their lower integration ratings limit their effectiveness. Government web-portals, despite implementation challenges, have the potential to improve the net operating surplus ratio (NOSR) through better information access and collaboration, highlighting the need for more effective implementation strategies. Financial transparency platforms enhance the asset sustainability ratio (ASR) by promoting responsible financial accounting, but intermediate scores indicate that further optimization is required.

The findings support the Diffusion of Innovations (DoI) theory, suggesting that innovations with clear advantages facilitate adoption. However, challenges such as integration and training present obstacles that contradict the theory's expectation of smoother adoption. From the Working Capital Management (WCM) theory perspective, social media and financial transparency tools align with the theory's emphasis on efficient asset and liability management, though the mixed effectiveness and varied adoption of other tools like digital authentication services and web-portals challenge the theory's expectation of uniform benefits. Overall, e-Government service portals have significant potential to enhance financial management and sustainability in Kenyan commercial state corporations. Addressing integration challenges and optimizing these tools will be crucial for maximizing their benefits and aligning more closely with theoretical expectations.

Conclusion:

This study is significant for its insights into how e-Government service portals influence the sustainability of commercial state corporations in Kenya. As public sector entities increasingly adopt digital technologies, understanding their role in enhancing operational efficiency, transparency, and sustainability is crucial. The research highlights that e-Government portals, especially social media platforms and financial transparency tools, positively influence the management of working capital and improve transparency. These technologies streamline operations, enhance asset and liability management, and support sustainable practices, which are essential for the long-term sustainability of state corporations.

However, the study also reveals challenges, notably with the integration of government web-portals and digital authentication services. Despite their benefits, such as improved security and fraud prevention, inconsistent effectiveness and partial adoption limit their potential. Addressing these integration issues and providing comprehensive training are critical for maximizing the advantages of these tools. This finding emphasizes that while e-Government innovations offer significant promise, overcoming implementation hurdles is necessary to fully leverage their benefits.

Furthermore, the study underscores the transformative potential of e-Government portals in advancing transparency and accountability. The effective use of digital tools represents a shift towards more transparent and efficient public resource management, which is especially pertinent in Kenya where issues like corruption and financial mismanagement have historically plagued the public sector. By optimizing these tools, commercial state corporations can improve their operational efficiency, build public trust, and support sustainable development.

The study also highlights the broader implications for financial sustainability. Enhanced information access, better collaboration, and increased financial transparency contribute to improved asset management and operational efficiency. These elements are vital for the sustainability of commercial state corporations, which must navigate evolving technological landscapes while remaining accountable to the public. The findings offer valuable insights for optimizing e-Government tools to achieve greater sustainability, underscoring their importance in advancing public sector performance and contributing to national development goals

References

Allen, M. R. I., & Alves, M. M. A. (2016). *How to improve the financial oversight of public corporations*. International Monetary Fund.

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.

Clark, T., Foster, L., Bryman, A., & Sloan, L. (2021). *Bryman's social research methods*. Oxford University Press.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Hair Jr, J., Page, M., & Brunsveld, N. (2019). *Essentials of business research methods*. Routledge.

Kambazi, B., M'ithiria, E. N., & Kiflemariam, A. (2023). Financing Decisions and Financial Sustainability of Social Service Projects: The Case of the Dominican Region of Rwanda and Burundi. *International Journal of Finance*, *8*(4), 77-95.

Kothari, C. R. (2014). *Research methodology: Methods and techniques*. New Age International.

Lin, K. J., Lu, X., Zhang, J., & Zheng, Y. (2020). State-owned enterprises in China: A review of 40 years of research and practice. *China Journal of accounting research*, *13*(1), 31-55.

Malot, K. (2022). *5th KIPPRA Annual Regional Conference Theme: Foundations for a Sustainable Economic Transformation in Kenya*, Kenya Institute for Public Policy Research and Analysis. Kenya.

Mugenda, O., & Mugenda, A. (2019). *Research Methods: Quantitative and Qualitative Approaches.* Nairobi: Act Press

Mungai, A. N., & Gathungu, J. (2017). E-government strategy implementation and performance of the public sector in Kenya. *International Academic Journal of Human Resource and Business Administration*, *2*(3), 301-338.

Muriithi, J., & Wamiori, G. M. (2020). Effect of Integrated Financial Management Information System (IFMIS) On Financial Performance of County Government in Kenya. *International Journal of Advanced Research and Review* 5(11), 54-79

Muthomi, F., & Thurmaier, K. (2021). Participatory transparency in Kenya: Toward an engaged budgeting model of local governance. *Public administration review*, *81*(3), 519-531.

Njiru, J. N., & Nyamute, W. (2018). The effect of organizational structure on financial performance of commercial state corporations in Kenya. *International Journal of Finance and Accounting,* 3(2), 72-87.

OECD (2020), OECD Business and Finance Outlook 2020: *Sustainable and Resilient Finance*, OECD Publishing, Paris.

Office of the Auditor General (2020). *Report of the Auditor General for the Financial Year 2020*. Retrieved from https://www.oagkenya.go.ke

Ojeka, S., Iyoha, F., Ayo, C., Gberevbie, D., & Bisi, O. (2017). e-Governance and Public Sector Financial Disclosures: Analysis of Government Agencies in Nigeria. *Journal of Internet Banking and Commerce*, *22*(1).

Phillips, P. P., & Stawarski, C. A. (2016). *Data Collection: Planning for and Collecting All Types of Data*. John Wiley & Sons.

Riany, K. G. (2021). Organizational structure and the performance of state corporations in Kenya. *European Business & Management*, *7*(6), 206-215.

Sulaiman, M., & Alhaji Zakari, M. (2019). Financial sustainability of state waqf institutions (SWIs) in Malaysia. *Journal of Islamic Accounting and Business Research*, *10*(2), 236-258.