

# INFLUENCE OF INFORMATION TECHNOLOGY INFRASTRUCTURE ON THE GROWTH OF KENYA REVENUE AUTHORITY

Kevin Maina<sup>1</sup>, Dr. Morrisson Mutuku<sup>2</sup>

<sup>1,2</sup>Department of Management Science, School of Business, Economics and Tourism, Kenyatta University, Kenya

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**Abstract:** The Kenya Revenue Authority introduced the management system for contact centers and customer relationship management in 2017 to enhance service provision by offering a detailed perspective of the customer. However, the anticipated increase has not materialized, as the collection of tax revenue has repeatedly fallen below projections. There is a growing anxiety based on the gap between those entitled to pay taxes and the total of persons truly paying within the country. Therefore, this study sought to examine the influence of information technology infrastructure on the growth of Kenya Revenue Authority. A descriptive design was applied. The population was 381 staff of Kenya Revenue Authority at the headquarters who were identified through stratified sampling technique. The method applied in choosing the participants was simple random methodology. A sample size of 195 was arrived through Taro Yamane statistical formula. The process of gathering data was supported through a questionnaire. The process of piloting the tool involved 8 respondents from the same company but were not involved during implementation of actual study. The content validity assessment was adopted for validating the tool. To check the internal consistency and reliability of the survey questions, a Cronbach's alpha coefficient test was performed, yielding a correlation coefficient of 0.779, indicating the reliability of the questionnaire items. The quantitative data analysis included descriptive statistics. Moreover, the implementation of inferential statistical analyses was adhered to express how each variable had related with the other with findings displayed in tables. The observation from the study was that the information technology infrastructure ( $\beta=0.0415$ ,  $t=5.949$ ,  $p=0.002$ ), resulted to significant influence on the growth of the company. The conclusion was that having a stronger IT infrastructure had resulted to enhanced growth of the company through optimized processes and improved management of data. The recommendation was that the company ought to choose for system upgrading for effective management of data traffic and the varied needs of the user as it seeks for expansion of its operations.

**Keywords:** Information Technology Infrastructure, Organizational Growth.

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## 1. INTRODUCTION

Organizational growth is an objective that numerous enterprises follow, regardless of their scale, to improve their capability to survive market changeability, intensify their effect, and accomplish amplified efficacies through economies of scale as indicated by Weinzimmer, Nystrom and Freeman (2018). Boeker (2021) asserts that the fundamental aim of growth is to improve an organization's capability to respond adeptly and adjust to shifts within the industry/market and technological advancements. Besides, organizations that adeptly apply growth strategies regularly establish intensified heights of agility, competently traversing new challenges speedily and with negligible disruption. Therefore, growth is indispensable for the continuing business achievement, as it eases asset gaining, entices new talents, arouses investments, and boosts general performance.

Aiyer, Panigrahi and Das (2018) underscores that organizations internationally are intensifying their creativities in Customer Relationship Management (CRM) systems, through identifying the most appreciated clients, strengthen their relations, and thus enrich customer worth. Demirbaş (2023) notes that organizations in Turkey are embracing CRM with a larger scope, winning full paybacks over a prolonged period, and accomplishing increased profitability. Thus, by exploiting on the compensations of CRM incorporation systems, organizations can not only boost growth and accomplishment but also foster a more positive and appealing customer experience.

AlShawi, Missi, and Irani (2022) emphasize that the solicitation of ICT solutions by Palestinians has remained gradually increasing and garnering acknowledgement. Information and Communication Technology (ICT) gifts strategic benefits to organizations in Palestine, including Customer Relationship Management (CRM) systems, which can significantly assist in meeting objectives aimed at enhancing their competitive edge. Iriqat and Daqar (2022) stated that application of CRM systems presents noticeably positive performance effect within business-to-customer (B2C) context, predominantly in the banking sector of Palestine. Also, the research shows that higher client satisfaction, arising from the distribution of CRM systems, is allied with enhanced performance in B2C enterprises.

The standpoint on CRM in Malaysian public institutions centers on how these organizations can provide optimal services to the public while cultivating robust relationships with them (Hassan, Mohamed Haniba & Ahmad, 2019). Al-Arafati, Kadir, and Al-Haderi (2023) observe that CRM is a inclusive strategy for resource enhancement in the development of Malaysia's food sector and trading industry. Consequently, the country's food sector and trading industry are increasingly striving to embrace CRM to attain a competitive advantage that will bolster their long-term business prospects. Therefore, these organizations must identify, prioritize, and tackle their business challenges to enhance their competitiveness and relevance in the market.

Nwogwugwu (2017) declares that CRM functions as an all-inclusive methodology for engaging with particular customers, in so doing enlarging value to both parties. Nevertheless, regardless of the paybacks derived through applying CRM systems within the banking zone, their reception in Nigerian banks has stood steady. Giga (2022) specifies that almost every service enterprise in Nigeria endeavoring to accept a CRM strategy meet extensive challenges. Besides, these organizations fail to know the complexities of CRM systems, fight to articulate exact objectives in their processes, and incompetently assign financial resources towards obtaining CRM software.

CRM has mainly been highlighted as a essential methodology for gathering, examining, and comprehending vital customer data, and leveraging this information for better marketing choices amongst telecommunications firms within Tunisia (Bahri-Ammari & Soliman, 2016). Alduwailah (2021) advises that the competences embedded within the CRM outline are believed to positively and unwaveringly affect the capabilities of telecommunications sector in Tunisia. Nevertheless, customer-centric and learning-oriented cultures have a more significant impact on CRM capabilities than infrastructural resources in enhancing organizational performance within Tunisia's mobile telecommunications domain. Consequently, Customer Relationship Management (CRM) empowers these firms to efficiently establish and sustain customer relationships by thoroughly and accurately interpreting consumer data through various information technologies.

A study conducted by Fozia, Shiamwama, and Otiso (2021) reveals that customer confidence in Kenyan universities has significantly increased following the application of CRM strategies, thereby improving consumer-business relations. Additionally, Nguyen and Mutum (2022) observed that the Information Technology (IT) sector has been instrumental in facilitating the Kenya's SMEs' growth, allowing them to provide tailored customer service, boost profits, and cultivate enduring customer relationships through CRM systems. Therefore, the generation of customer value should be woven into the organization's existing processes and frameworks, and nurturing a customer-centric culture is fostered by a system that highly prioritizes customer satisfaction.

Cheng and Yang (2019) indicate that due to innovative approaches to conducting and perceiving business, coupled with relentless technological advancements, organizations are engaging in increasingly fierce competition to attract customers. Rababah, Mohd, and Ibrahim (2021) show that the modern-day business climate requires that businesses adopt a customer-focused approaches, assigning resources, competences, and tools in means that permit the provision of fitting products and services that accomplish customer anticipations. Thus, when an organization strives for CRM system implementation, it is decisive to articulate strategies for promoting cultivating, and growing customer associations.

Markus (2017) proclaims that system incorporation through digital transformation apparatuses can liberate staffs to deliberate on more complicated tasks that will profit the organization and are vibrant for business development and wealth. Raman, Wittmann, and Rauseo (2022) projected that an all-inclusive CRM system has turn into a foundation of each enterprise, purposing to enhance employee throughput, which in turn certainly influences customer contentment and lifts revenue through skillful administration of customer relationships.

Aiyer, Panigrahi and Das (2018) noted that a combined CRM system offers a significant competitive superiority to businesses, permitting them to survive within modern-day market situations and the management to track customer connections with the organization and give staff accessibility to comprehensive past consumer data. Chang, Park, and Chaiky (2020) indicated that an amalgamated CRM system intensely impacts an organization by raising greater customer loyalty, superior service distribution, upgraded data gathering, knowledge distribution, and organizational knowledge.

The integration of CRM includes a continuous linking of CRM software with external applications of enterprises, streamlining processes the enhance the competences of the organizational software and eliminate the necessity for moving to various systems (Shang & Fen, 2018). Chatterjee, Nguyen, Ghosh, Bhattacharjee and Chaudhuri (2020) specified that a consistent CRM system serves a central hub for every business activity and consumer data, guaranteeing fluid processes that produce more tailored and timely connections for clientele.

Strader, Lin and Shaw (2018) designate that the oversight of IT infrastructure includes managing hardware and software assets, lining up digital procedures, systems, and rules to successfully provide business services. Chanopas, Krairit, and Khang (2021) underscore the principle of IT infrastructure on relying on engaging technology to improve business performance, guard data, and uphold competitiveness within worldwide technological field using strategic planning, maintenance and preparation of IT mechanisms for continuous operation.

The Kenya Revenue Authority (KRA) was founded on July 1, 1995, over a law passed under the KRA Act, Chapter 469 of Kenyan legislature. Its chief purpose is to collect revenue on behalf of the Kenyan government. The Authority is in charge for the valuation, gathering, and distribution of all tax revenues in agreement with the procedures defined in Parts I and II of the First Schedule of the Act. Additionally, the Authority offers advice linked to revenue collection and administration and does additional chores allocated by the Cabinet Secretary of the National Treasury.

KRA's significant contribution to the country's development policies is evidently visible in the Seventh Plan period, as it serves a substantial role in satisfying several national policy aims. The vital duties given to KRA involve the implementation of the Budget Policy Statement 2018, together with Vision 2030, the Third Medium Term Plan, and the 'Big Four' Agenda. Also, the strategic plan stresses the necessity to be in sync within Sustainable Development Goals (SDGs).

## **2. STATEMENT OF THE PROBLEM**

The change in business viewpoint from a profit-based approach to a customer-focused model has resulted to the progress and implementation of several strategies meant for improving CRM and enhancing service distribution to nurture business enlargement (Finnegan & Currie, 2020). Ledro, Nosella, and Dalla (2023) noted that proficient CRM is vital for attaining promising organizational performance, leading in intensified profits, greater goodwill, and better-quality product and service endowment. Nonetheless, organizations encounters difficulties regarding CRM integrations including the gathering of data in wide-ranging formats and positions, insufficient integrations, data permeation and preminent integration expenditures.

The adoption of Contact Centre Management System (CCMS) and CRM solutions by KRA in 2017 provided a consolidated viewpoint of the client, with the purpose of enhancing service provision, leading to magnificent improvement of service efficiency using management and monitoring of incidents. In spite of these initiatives, KRA has not attained its predictable growth targets, as confirmed by the yearly deficit in tax revenue collection, reflecting an increased fear regarding the gap linking number of qualified taxpayers with actual taxpaying populace within the country. Data from KRA designates that merely 3.6 million taxpayers gave back their yearly income tax earnings by end of June 2023, reaching 7.6 percent of the total populace. Likewise, KRA has been incapable of fulfilling its growth purposes between 2019 and 2023. This is reflected in the 2019/2020 financial year, KRA expected to accumulate 1.846 trillion Kshs but merely gathered 1.51 trillion Kshs. Likewise, within 2020/2021 fiscal year, the objective was 1.624 trillion Kshs, however just 1.544 trillion Kshs was attained. Lastly, in 2022/2023 financial year, the goal line was established at 2.135 trillion Kshs, however just 2.030 trillion Kshs was realized.

### 3. LITERATURE REVIEW

#### Theoretical Literature Review

##### Technology Acceptance Model

Davis (1986) offered the Technology Acceptance Model, which purposes to estimate how appropriate an information system is, predicting the effectiveness of an instrument and pinpointing the alterations required to warrant it is embraced by the users. The model proposes that the readiness to adopt a digital information system pivots on two primary elements: perceived usefulness and ease of use. Perceived usefulness, as delineated by Davis (1986), appraises personality's conviction that exhausting a system will progress their performance. The perceived ease of use stares at how a person honors the system as user friendly. This viewpoint impacts a person's attitude in two significant ways: self-confidence and practicality.

This concept is especially pertinent to this study since integrated CRM systems are relatively novel on a global scale and are developing quickly. The Customer Relationship Management (CRM) system is crafted to be straightforward and easy to navigate for people who are technologically proficient (Minama, 2016). However, the Technology Acceptance Model (TAM) indicates that the acceptance of technological tools, including CRM systems, relies heavily on users' views regarding their usefulness and ease of use (Davis & Venkatesh, 2000). Therefore, the user-friendliness of a CRM interface, along with the organization's outlook towards it, are crucial aspects influencing its adoption and success, rather than just its continued use for organizational growth.

##### Empirical Literature Review

Saputro and Lisan (2021) studied how the competencies of information technology infrastructure affected the growth of organizations over the viewpoint of organizational agility. The researchers built online surveys and circulated them to participants from a number of Indonesian coal mining industries so as to gather data. The observation was that organizational agility and IT infrastructure competence both had a substantial influence on organizational performance.

King and Xia (2020) surveyed the impact of IT infrastructure capability on enterprises. With data from a survey of 236 companies, their study applied framework that observed both direct and indirect effects. The findings demonstrated that IT infrastructure suggestively impacted performance, mostly by influencing the effectiveness of business processes and Information Systems (IS). This denotes that IT infrastructure abilities could not give organizations much worth individually. If IT infrastructure savings are merely assessed grounded on of their closer influence on performance, their prospective may be disregarded. Also, the study points out how crucial IT infrastructure is to companies, as it could either enable or hamper the deployment of IT applications and business measures.

Karungani and Ochiri (2017) explored the organizational growth and how it was associated with ICT infrastructure support. The study applied a survey methodology for assessment of its quantitative methods. 87 Nairobi County Government employees were selected for participation using a purposive sample technique. Standardized questionnaires were used to gather data. A strong ICT infrastructure in procurement greatly improves workflows, communication, efficiency, monitoring, and control procedures, and service delivery. Additionally, it highlighted how important ICT infrastructure is for encouraging collaboration among supply chain network participants.

### 4. RESEARCH METHODOLOGY

A descriptive design was applied. The population was 381 staff of Kenya Revenue Authority at the headquarters who were identified through stratified sampling technique. The method applied in choosing the participants was simple random methodology. A sample size of 195 was arrived through Taro Yamane statistical formula. The process of gathering data was supported through a questionnaire. The process of piloting the tool involved 8 respondents from the same company but were not involved during implementation of actual study. The content validity assessment was adopted for validating the tool. To check the internal consistency and reliability of the survey questions, a Cronbach's alpha coefficient test was performed, yielding a correlation coefficient of 0.779, indicating the reliability of the questionnaire items. The quantitative data analysis included descriptive statistics. Moreover, the implementation of inferential statistical analyses was adhered to express how each variable had related with the other with findings displayed in tables.

## 5. FINDINGS

The descriptive statistics results on information technology infrastructure are presented in Table 1.

**Table 1: Information Technology Infrastructure**

	SD	D	N	A	SA	M	St.D
The IT infrastructure is essential for maintaining business operations, particularly during unexpected disruptions.	2.6	2.1	0.0	52.9	42.4	3.59	1.41
An organized IT infrastructure enhances operational efficiency, automates routine tasks, and equips employees with necessary tools for productivity.	0.0	5.2	3.1	39.3	52.4	4.15	0.85
IT infrastructure serves as the groundwork for fostering innovation, allowing businesses to explore new technologies and services.	13.1	5.2	1.6	33.5	46.6	3.94	1.06
A strong IT infrastructure guarantees real-time data collection, storage, and analysis.	29.3	21.5	17.3	24.1	7.9	3.12	1.88
Effective management of IT infrastructure is crucial for maximizing performance, security, and cost-efficiency.	0.0	0.0	3.1	51.8	45.1	4.57	0.43
Optimal utilization and cost-effectiveness are achieved through efficient management of IT resources.	26.2	19.4	5.2	10.5	38.7	4.03	0.97
<b>Aggregate score</b>	<b>11.9</b>	<b>8.9</b>	<b>5.1</b>	<b>35.4</b>	<b>38.9</b>	<b>3.90</b>	<b>1.10</b>

**Source: Research Data (2025)**

The respondents generally agreed that KRA's IT infrastructure influences its growth (M=3.90; St.D=1.10) with an average of 74.3% of respondents agreeing, 20.8% disagreeing, and 5.1% indicating neutral. According to the distribution of these responses, the majority of respondents acknowledged the contribution KRA's IT infrastructure made to the organization's expansion. The results support the findings of Saputro and Lisan's (2021) study, which found that organizational agility and IT infrastructure capability were crucial factors affecting organizational performance.

### Inferential Statistics Results

The inferential statistics involved correlation analysis and regression analysis.

### Correlation Analysis Results

**Table 2: Correlation Analysis Results**

		IT infrastructure	Growth
Growth	Pearson Correlation	.709**	1
	Sig (2-tailed)	0.004	
	N	191	191

**Source: Research Data (2026)**

The findings show that, in relation to the growth of KRA, the Pearson r values for IT infrastructure is 0.709, with significance value of 0.004. These results show a positive correlation between the IT infrastructure and growth of KRA. Therefore, increase in IT infrastructure would contribute to significant improvement on KRA growth.

### Regression Analysis Results

**Table 3: Model Summary**

Model	R	R-Square.	Adjusted R-Square	Sd. Err Est.
1	0.897	0.805	0.786	0.003

**Source: Research Data (2025)**

The findings show that the adjusted r square value was 0.786, indicating that IT infrastructure contributed 78.6% of the variation in KRA's growth. This indicates that 21.4% of the difference account for other related aspects.

**Table 4: Analysis of Variance**

Model		Sum of Square	df	Mean Squares	F.	Sg
	Regressions	223.512	1	223.512	286.061	0.003
	Residuals	147.674	189	0.7813		
	Totals	371.186	190			

**Source: Research Data (2025)**

The ANOVA table results indicate that the significance value is 0.003 which is below the typical 0.005. Therefore, the model was statistically significant.

**Table 5: Regression Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.599	0.251		2.386	0.003
	Information Technology Infrastructure	0.708	0.119	0.0415	5.949	0.002

**Source: Research Data (2025)**

The results indicate that the KRA growth would be at 0.599 alone without the influence of IT infrastructure. Therefore, the resultant regression equation is expressed as;

$$\text{Growth} = 0.599 + 0.708(\text{IT infrastructure}) + \epsilon.$$

The study concluded that KRA's IT infrastructure has improved its growth in a substantial way ( $\beta=0.0415$ ,  $t=5.949$ ,  $p=0.002$ ). Keeping human knowledge and business architecture unchanged, an upgrade in IT infrastructure led to a 0.708 improvement in KRA growth. The results support the findings of Karungani and Ochiri's (2017) study, which found that a robust ICT infrastructure in procurement significantly boosts control processes, optimizes workflows, and enhanced service provision.

## 6. CONCLUSIONS

The deployment with stronger IT infrastructure prominently assists in KRA's enlargement by promoting operational efficiency, streamlining procedures, and permitting better-quality data administration. With leading-edge technology in place, KRA enriches customer contentment and loyalty through enhanced service provision. Better collaboration and communication are made conceivable through stronger IT framework, which stimulates creativity and flexibility within the face of ever-changing market circumstances.

## 7. RECOMMENDATIONS

The KRA should boost network capacity to handle growing data traffic and customer requests as grows its business. Use cloud solutions to ensure flexibility and cost-effectiveness by offering scalable resources that can expand to meet KRA's needs. Upgrade software and hardware systems to increase dependability and performance, which will make operations run more smoothly during the expansion stage. As KRA grows its digital footprint, make investments in cybersecurity measures to safeguard confidential information and uphold compliance.

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