MODERATING EFFECT OF BUSINESS SIZE ON THE RELATIONSHIP BETWEEN TECHNOLOGICAL CRITICAL SUCCESS FACTORS AND ITAX STRATEGY PERFORMANCE AMONG MANUFACTURING FIRMS IN KENYA

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ABSTRACT
Kenya Revenue Authority (KRA) iTax strategy is an essential element of the eGovernment initiative, designed to augment transparency, minimize expenses, and elevate service quality for citizens. Identification of its Technological Critical Success Factors (CSFs) and their overall influences on iTax strategy performance and the moderating effect of business size on the relationship remain inadequately examined. The study sought to determine the moderating effect of Business Size on the relationship between Technological CSFs and iTax Strategy Performance among manufacturing Firms in Kenya. The research focused on 586 manufacturing companies, with a representative sample of 138 firms identified through the Cochran (1963) sampling model. Data was gathered using a semi-structured questionnaire distributed to tax personnel in chosen companies. Diagnostic assessments were performed to identify possible infringements of Classical Linear Regression Model assumptions. Structural Equation Modelling was employed for confirmatory factor analysis. Hypotheses were evaluated using an F-test at 5% significance level and linear regression technique was employed to forecast associations. The study found technological (CSFs) have significant influence on iTax strategy performance and business size has significant moderating effect on the relationship between the technological CSFs and the iTax strategy performance and its influence on quality of service.

Keywords: Business size, Technological Critical Success Factors, iTax Strategy Performance Manufacturing Firms.

1. INTRODUCTION
1.1 Background of the Study
The modern global economy prioritizes human intellectual capital and technology to integrate processes, enhance company strategies, optimize resources, and establish competitive advantage. The New Public Management (NPM) concept emerged in the 1990s within the public sector, with the objective of enhancing practices and management in public administration. Technological innovation in organizations has consistently been seen as a strategic mechanism that enhances effective business operations to cultivate competitive advantage (Rukundo, 2020; Ismail, 2020; Luca-Mas, 2021; Chandan, et al., 2021). In the last twenty years, there has been a worldwide trend of increasingly integrating information communication technology (ICT) strategies into public service platforms to attain the objectives of New Public Management (NPM). Digital innovations like cloud computing have become a feasible strategic platform for adoption by various organizations (Loukas et al. 2019; Senyo et al. 2018; Karunagaran et al. 2017; Sabi et al. 2017; Wang et al. 2016). From an organizational perspective, investment in innovative technology can

introduce unique complications and hazards.

Strategy provides operational guidance by delineating the existing environment, the objectives to be attained, and the various alternatives available to accomplish the strategic aims. The ICT strategy is an organization's overarching policy that encompasses objectives, principles, and protocols concerning the utilization of technology inside a certain organization or public institutions (Fang, 2002). It offers a comprehensive framework that guarantees efficient management of ICT infrastructure and operations in accordance with corporate goals and the evolving business landscape.

In governance, the use of ICT strategy is commonly referred to as eGovernment, which is best characterized as the ongoing enhancement of services, civic engagement, and administration by establishing internal and external relationships through technology, the internet, and other modern media. Tax administration has frequently led change, since technology has facilitated enhancements in efficiency, productivity, effectiveness, simplicity, and equity within a highly budget-constrained context.

The swift acceleration of digital adoption and transformation in 2020 has posed considerable concerns for governments in the decade up to 2030. The ICT strategy encounters challenges in aligning with the company strategy and achieving successful execution, with strategic alignment being essential for success. The interplay between ICT strategy and ideas such as business strategy, continuous innovation, continuous improvement, and organizational performance is currently prevalent in the research of strategic ICT innovations management.

Developed nations such as the USA, Turkey, Taiwan, Australia, South Korea, Japan, Malaysia, and Jordan have pioneered global tax administration systems. Automated solutions have demonstrated significant efficiency in commercial processes at a low cost (Kamarulzaman and Azmi, 2010). The OECD has established robust research and coordinating capacity to advance digital tax administration systems across many nations. The OECD suggestion advocates for a digital strategy for government that entails the establishment of a comprehensive digital government ecosystem, incorporating all stakeholders to illustrate how digital governance generates public benefits (Bentley, 2007; Berten & Leisering, 2016).

Public value encompasses a range of societal benefits, including goods or services that fulfil citizens' desires, production decisions that align with expectations of justice, fairness, efficiency, and effectiveness, well- structured and efficient public institutions that mirror citizens' preferences, equitable and efficient distribution, legitimate resource utilization for public objectives, and the capacity for innovation and adaptability to evolving preferences and demands. Establishing trust between citizens and government is crucial for efficient digital tax administration in the 21st century.

The OECD initiated the Going Digital Project to assist governments in directing digital transformation across society, utilizing extensive literature and expert interdisciplinary panels to create a framework for both members and non-members to enhance the effective utilization of digital capabilities in the transformation of tax administration (OECD, 2014). The Kenya Revenue Authority's iTax policy is significantly influenced by the aforementioned.

Tax authorities in Sub-Saharan Africa have adopted diverse digital tax administration tactics to enhance tax income. The OECD advises that tax authorities should levy taxes in the jurisdiction of consumption, although only a limited number of African nations have revised their VAT legislation to include digital services (Casey & Castro, 2015).

In Kenya, digital tax administration has emerged as a vital revenue collecting tool. Nevertheless, many taxes are levied on enterprises and individuals using the iTax approach system (Tyce, 2020). The majority of these taxes are imposed on the provision of taxable goods and services supplied by a taxable entity during its taxable operations. Tax reforms are regarded as the paramount component of fiscal policy, designed to diminish the prevalence of tax evasion among individuals and corporate entities. The effective execution of tax changes enhances compliance and diminishes tax evasion resulting in increased tax revenue.

The iTax strategy, introduced in Kenya in 2014, is a digital automated tax administration system designed to improve efficiency and mitigate corruption. Developed by the Indian company Tata, it supersedes the former online system (ITMS) and enables businesses and individuals to file returns online, examine tax liabilities, monitor tax status continuously, upload tax documents, request compliance certificates, and make tax payments (Holban, 2007). The ongoing installation and operationalization of the iTax system in Kenya is anticipated to enhance tax generation, decrease compliance expenses, and optimize revenue administration. Global difficulties of digital inclusion persist, particularly affecting socio-economically disadvantaged individuals and groups who are most vulnerable to digital exclusion. In Kenya, the primary hurdles to digital inclusion encompass inadequate ICT literacy, deficient ICT infrastructure, affordability issues, and other demographic factors such as gender and age. The manufacturing industry in Kenya is essential for promoting sustainable economic growth via value addition and long-term employment opportunities. Nonetheless, the sector's impact on employment, economic transformation, productivity, and overall performance has persistently been inadequate and below anticipated standards.

The evidence regarding the relationship among business size, business growth, and e-tax approach is limited and largely inconsistent. Certain research regarding organizational size and growth rate linked to strategy have yielded unfavorable outcomes. It is widely acknowledged that corporate growth correlates with size and ICT strategy, but challenging to quantity, attain, and maintain. Research indicates that business size is a crucial factor influencing tax compliance, with medium enterprises exhibiting higher tax payments than small enterprises. Moreover, several research suggest that small enterprises incur greater tax compliance expenses than larger corporations, resulting in an elevated risk of non-payment defaults. Consequently, additional research is required to moderate the study correlations, and the variable of company size should be defined as a moderating factor in these associations.

1.2 Statement of the problem

The iTax system strategy was developed and implemented in Kenya in 2003 with the objectives of enhancing efficiency, augmenting tax revenue collection, and minimizing direct interactions between taxpayers and revenue authority personnel to mitigate corruption vulnerabilities (KRA, 2021). Despite the implementation of the iTax systems with the aim of promoting tax compliance and efficiency in operations with a general view of improving revenue collection, the achievement of these goals has continued to fluctuate strongly depending on the size of the business. Although technological critical success factors inclusive of system usability, reliability, infrastructure availability, and user support have been identified as crucial to effective implementation of IT systems, systematic evaluation of their imprint on iTax strategy performance in difference enterprise sizes remains limited. For instance, Small and Medium Enterprises (SMEs,) which

constitute 98% of all registered enterprises in Kenya, remain non- compliant, contributing only 34.3% to GDP in 2012, despite a tax potential of 79 billion Kenyan shillings, with actual collections falling below one billion (Mage, 2012).

Manufacturing firms in particular, as major players in Kenya's economy experience myriad of challenges in their quest to fully embrace and utilize the iTax system. Challenges experienced by, Small and medium-sized enterprises (SMEs) in the manufacturing sector include limited resources, reduced technological development, and inadequate knowledge about the available technology that may need efficient system performance. On the other hand, larger manufacturing firms may have challenges in implementing the iTax system within the frameworks of complex operating structures. However, considering these size-specific dynamics, there is a lack of theoretical and empirical investigations of how business size may act as a moderator between technological critical success factors and performance of iTax strategy. Consequently, this study aimed at filling this existing gap by examining the effect of technological critical success factors on the performance of the iTax strategy besides assessing the moderating influence of business size among the manufacturing firms that operate in Nairobi County,

1.3 Research Objective
The primary aim of the study was to investigate the Moderating Effect of Business Size on the Relationship between Technological Critical Success Factors and iTax Strategy Performance among Manufacturing Firms in Nairobi, Kenya

2. THEORETICAL REVIEW
2.1 Technology Determinism Theory
Technological determinism theory maintains that technologies drive the development of social structure and cultural values according to its own logic, and this in turn has effects on society (McLuhan, 2003). It is the belief that characteristics inherent in technology manage the direction of its development and set conditions for social change, and it is suggested by some to be a widely held view of the relationship between technology and society (Schatzki, Knorr-Cetina, & Von Savigny, 2001). Technology, and technological change, are viewed as autonomous factors impacting on society from outside, and determinism focuses concern on how to adapt to technology and not on how to shape its development (Davison, 2004). Using this theory, Kevin (2010) suggested technology created itself using humans to do its bidding, and that it was a global force beyond human control that appeared to have no boundaries. This theory is applicable in this study in understanding the global technological trends towards digital tax administration and the critical success factors (CSFs) such endeavors. Also, McLuhan (2003) proposal of the global village can be described as determinist in character when he discussed the elimination of time and space barriers in communication processes. This is the main characteristic of eGovernment, e-service online transacting practices of which iTax is one of them.

This theory has been used to examine access to the Internet in many rural areas thereby identifying various digital inclusion challenges ranging from its being nonexistent or severely limited, which has been problematic for years (Salemink, Strijker, & Bosworth, 2017). Recently the theory has been used by Perrin (2019) to conceptualize both voluntary and forced technological innovation adoption and use arguing that never as acutely painful as during the COVID-19 pandemic, when getting online became (for many people) compulsory. Using same theory, it has been found that

rural areas without sufficient Internet connectivity and services face many digital divide and inclusion challenges including infrastructure access, ICT skills, age, gender and (Hennessy, Läpple, and Moran, 2016; Nyika, 2020; Smith 2020). In this study, the theory will enable better conceptualization of the complexities of iTax system, various stakeholders' roles, activities, digital inclusion and the strategy overall performance in Kenya.

2.2 Conceptual Framework
Sekaran & Bougie (2016) define a conceptual framework as a diagrammatic representation illustrating the link between dependent and independent variables, as depicted in Figure 1.
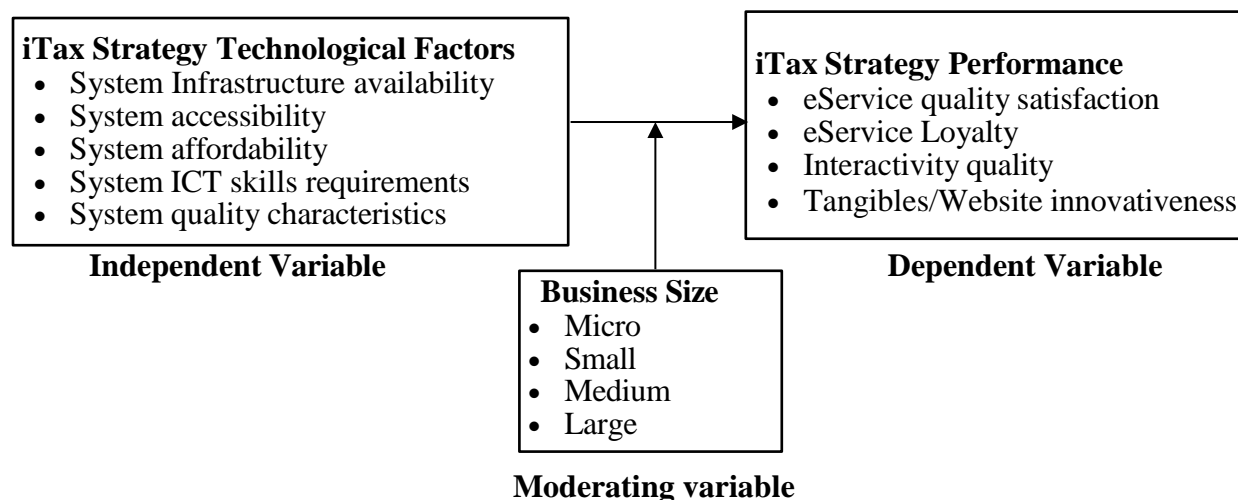
iTax Strategy Technological Factors	iTax Strategy Performance
• System Infrastructure availability • System accessibility • System affordability • System ICT skills requirements • System quality characteristics	• eService quality satisfaction • eService Loyalty • Interactivity quality • Tangibles/Website innovativeness
Independent Variable	**Dependent Variable**

Business Size
- Micro
- Small
- Medium
- Large

Moderating variable

Figure 2.1: Conceptual Framework

2.3 Technological CSFs of iTax Strategy
Technology is the primary causal component of societal changes, whereas human and social variables are seen as subsidiary (Smith & Marx, 1996). Researchers worldwide have established a positive correlation between the number and calibre of ICT infrastructure and its acceptance, utilisation, and consequently, the success of eGovernment projects (Klischewski and Scholl, 2008; Makau et al., 2015). The ICT infrastructure, encompassing sufficient ICTs (both software and hardware) within a conducive atmosphere, is recognized as essential for enabling stakeholders to use electronic services (Salemink, Strijker, & Bosworth, 2017). Numerous components and parts are involved, ranging from hardware to software, as well as technology standards, government portal accessibility, security and privacy, design, interoperability, and collaboration (Al-Sobhi et al, 2010). Researchers have determined that system user-friendliness, adaptability to user wants, capacity to meet anticipated needs, and connectivity can either facilitate or hinder the deployment, adoption, and utilisation of new technologies in numerous manners (Ahmad, 2015; Makau et al., 2015). Flannery et al. (2020) assert that telecommunication networks, fundamental to digital infrastructure, consist of three elements: a) worldwide networks, which facilitate a nation's global connectivity, b) domestic dissemination backbones, which enable signal transport within urban centers, and c) accessibility networks, designed to connect to the "last mile" of telecommunication users. Despite the increasing adoption of ICT- based mobile devices, difficulties related to

infrastructure access, availability, and cost for digital inclusion persist (Messenger and Gschwind, 2016; Makau et al., 2015). Researchers such Sinibaldi (2020), Katz, Jung, and Callorda (2020), and Susilo (2020) identified that security, assurance, ICT skills, and privacy are critical conditions for online transactions and usage. Additionally, complexity or challenging processes and technical compatibility have been identified as factors influencing the performance of electronic service initiatives (Ahmad et al., 2012; Makau et al., 2015).

2.4 Moderating Effect of Business Size on the relationships between Technological CSFs and iTax Strategy performance

Regarding nature of organization, research has found that e-service and teleworking, which are a continuous online transaction engagement, were mainly done by large businesses (Pigini & Staffolani, 2019). In addition, business characteristics have been found to play a fundamental role in determining selection and adoption of strategic choices (Kogan and Tian, 2012). The specific business characteristics considered by Khandwalla (2013) include ownership structure, board characteristics, age of the business, dividend pay-out, profitability, access to capital markets and growth opportunities. Kinoti (2012) found that business age and size can play a crucial role in moderating some organizational performance research predictor variables. There is therefore, overwhelming empirical evidence (Chen, Sun & Xu, 2016) demonstrating that business characteristic plays a very important role in shaping the performance of any organization. While the World Bank (2001), definition assigns firms into the categories of 5–49 employees (small), 50–500 employees (medium), and more than 500 employees (large), according to Kenya Institute for Public Policy Research and Analysis (KIPPRA, 2024) which is also the same definitions adopted by Pigini & Staffolani (2019), Micro-enterprises have fewer than 10 full time employees, Small enterprises have 10 to 49 employees, Medium-sized enterprises have 50 to 249 employees and large firms have more than 250 employees. This categorization is the one adopted in this study.

2.5 Empirical Review

This section examines the empirical studies undertaken on the critical success factors of digital tax administration strategy performance, its relationships with digital inclusion, quality of service, system perception and overall satisfaction. First, the literature has highlighting little about how technological innovation dynamics influence the adoption of innovative tax administration technologies (Jahanmira and Cavadas 2018; Senyo et al. 2018; Wang et al. 2016). Clearly, the literature has also shown that technological innovation strategy performance is a complex matter to define and even measure, hence many studies try to measure it indirectly through firm performance instead (Adam & Marta, 2020), but even with that, evidence on the association between business size, ICT strategy innovation and performance are rare and mostly contradictory (Bigsten & Gebreeyesus, 2007).

The literature also confirms that business size is a significant determinant of tax compliance (Yusof, Ling & Wah, 2014) with medium enterprises emerging to pay taxes more than small enterprises (Okpeyo, Musah & Gakpetor, 2019). This is why business size is taken to be a moderating variable in this study. Furthermore, other studies also found that small businesses bear higher tax compliance costs than larger companies (Lokhande, 2020), hence having higher default risk of non-payment. From the literature, ICT strategy emerges as just an enabler of service transformation and could be a useful mechanism for enhancing government service delivery as

contended by many researchers such as Hamudi (2020); Lucas-Mas, et al. (2021); Köthenbürger (2020); ATAF (2019a); ATAF (2019b); ATAF (2019c); ATAF (2019d); ATAF (2019e); Rukundo (2020); World Bank (2016); OECD (2015a); OECD (2018); Kakungulu-Mayambala, and Rukundo (2018); Hearson,(2019); OECD (2019a); OECD (2019b); Hadzhieva, (2019); Clavey, et al (2019); UN (2019); Yohou and Goujon, (2017); and Tyce, (2020) among many others.

Under such perspective, through eGovernment strategy, public administrators can rapidly introduce new services, improve operational processes, and realize other positive outcomes as found by several researchers such as by Alshibly & Chiong (2015), Ismail (2020), Chandan (2021) and Chandan, et al., (2021). Although, these findings are contradictory and need further investigation, the above findings justified inclusion of the business size variable as a moderating factor in this study.

The literature has revealed that in Kenya, the manufacturing sector comprise of various firms of varying sizes categorized in to large, Medium, small md micro enterprise (KAM, 2021). Generally, their growth rate has decelerated since 2019. Such decline in growth can have adverse consequences when it comes to investments in ICTs required for digital inclusion and eventual iTax access and utilization among the firms. In this study, lack of financial resources for the required tax payer's iTax ICT systems affordability is considered a critical digital inclusion challenge. In kenya, the literature also indicates that several researchers (e.g., Tyce, 2020; Ouma 2019; Tyce 2020b; Wawire, 2020; Ogembo, 2020; Maina, 2019; Moore and Prichard, 2017; Ndung'u, 2017; Wanjiru et al., 2019; Hassan, 2020) contend on the potential benefits of iTax strategy, hence its immense justification in pursuing as part of a eGovernment digital tax administration service transformation.

3. RESEARCH METHODOLOGY
3.1 Research Design
This research study adopted the descriptive research design. A descriptive research design is defined as a scientific research inquiry that attempts to obtain answers as to what, who, where, and when of a phenomenon under investigation (Blumberg, Cooper & Schindler, 2014). The adopted research design will be appropriate because it enable the investigator to gather answers as to the research problem in an objective and neutral manner using detailed information concerning the study variables (Blumberg, et al, 2014; Saunders, Lewis & Thornhill, 2012). Descriptive research design is considered appropriate since it has yielded positive results in technological innovation adoption empirical studies such as Tyce (2020); Ouma (2019); Wawire (2020) and Makau et al., (2015).

3.2 Research Philosophy
This research study was anchored on positivism research philosophy. According to Babbie (2016), positivism refers to an epistemological stance that advocates for application of systematic and structured scientific methods of natural sciences to the study of the social sciences and beyond, in order to engender scientific research replication. The two basic assumptions of Positivism are: on one hand that research studies can be undertaken objectively and on the other hand that social reality is regular and orderly instead of being random in order to allow for research results generalizations. Positivists opine that there is one true reality that exists whilst being independent of the observer's interest in it and operates according to immutable, causality - oriented natural

laws (Majeed, 2019).

3.3 Target Population
The target population of this study comprised all manufacturing firms located in Nairobi County which is 586 firms as per the most recently published data on manufacturers in Kenya (KAM, 2020). According to Were (2016) eighty percent of the Kenyan manufacturers are based in Nairobi County and is considered as a significant representation of the total Kenyan manufacturing industry. Thus, the target population formed the unit of analysis. The study respondents were finance officers in charge of tax administration particularly tax remittances so as to only include officers conversant with and experienced in iTax system in the selected manufacturing firms in Kenya. For the purpose of this study, only one respondent per firm was targeted to participate in the scientific inquiry.

3.4 Sampling Frame
Sampling frame refers to the entire list of all entities in study population from which an accurate, valid, reliable, and representative sample is drawn (Zikmund, Babin, Carr & Griffin, 2013). For the purpose of this study, the sampling frame consisted of 586 Nairobi county-based manufacturing firms as registered in KAM membership directory as at end of 2020 as this is the most currently published data concerning manufacturing firms in Kenya.

3.5 Sample Size and Sampling Technique
A sample is a representative subset of the entire population that is systematically investigated in order to make inferences concerning the same population of interest (Ragab & Arisha, 2018). This study adopted a 3-phased approach in employing the multistage sampling design. Firstly, the proportionate stratified random sampling was utilized to divide the targeted population into distinct strata that have homogeneous attributes. Proportionate stratified random sampling technique is defined as a method that involves random selection of elements in each population stratum in proportion to the total population of interest (Sekaran & Bougie, 2010). This proportionate random sampling design is justified by the sense that most current KAM 2020 directory classifies manufacturing industry members into twelve (12) unique sub-sectors. Secondly, simple random sampling was used to select participant businesses in each manufacturing sectors stratum. Simple random sampling refers to a sampling technique in which each member of a population has an equal chance of being selected into the desired sample (Taherdoost, 2016). Thirdly, purposive sampling was adopted in the choice of one participant per firm.

The target respondents for this study were officers in charge of tax remittance purposively selected as one participant per firm. Purposive sampling refers to a sampling method that entails a researcher choosing respondents who possess pertinent knowledge that is relevant to the scientific research inquiry of interest (Etikan, Musa & Alkassim, 2016). The targeting of officers in charge of tax remittance was informed by their position in the firm and responsibility of iTax system adoption, utilization and interaction decisions in their respective organizations

Roscoe (1975) suggested that empirical studies sample size rule of thumb is t comprise of elements greater than thirty (30) and less than five hundred (500). This study adopts Cochran (1963) sample size determination formula. Mburung'a, et al., (2019) adopted the sample size calculation formula in their published empirical study that examined the influence of firm-level factors on the

relationship between strategic planning and performance of Kenyan manufacturing firms.
The Cochran (1963) sample size determination formula is detailed as below:
The Cochran (1963) sample size determination formula is detailed as below:

$$n = \frac{Z^2 pq}{e^2} \qquad\qquad (3.1)$$

Where:

n = sample size

Z = Confidence level at 95% (take critical value of 1.96 at 5% significance level)

p = estimated distribution of attributes in the population of interest (take 10%)

q = 1- p

e = margin of error (take 0.05)

Thus, the sample size for this study is calculated as below:

$$n = \frac{1.96^2 \times 0.1(1 - 0.1)}{0.05^2}$$

$$n = \frac{3.8416 \times 0.09}{0.0025} = \frac{0.345744}{0.0025}$$

$$n = 138.30$$

$$n \cong 138$$

Therefore, this study targeted 138 respondents in Nairobi County-based manufacturing firms. The study targeted one senior manager for each sampled firm in order to ensure consistency of results and avoid duplication of response.

Table 3.1: Sample Size

Sector (Strata)	Target population	membership contribution	Sample
Building, mining and construction	25	4%	5
Chemical and allied	61	9%	14
Energy, electricals and electronics	36	6%	8
Food and beverages	156	23%	35
Leather and footwear	8	1%	2
Metal and allied	63	9%	14
Motor vehicle assemblers and accessories	38	6%	8
Paper and board	53	8%	12
Pharmaceutical and equipment	20	3%	4
Plastic and rubber	62	9%	14
Textile and apparels	44	7%	10
Timber, wood and furniture	20	3%	4
Total	**586**	**100%**	**138**

Source: KAM Directory, 2020

3.6 Data Collection Instruments
A questionnaire is defined as list of ordered questions that are printed in a form and administered

to respondents in a research inquiry (Creswell, 2012) and was the main instrument used for this study. Primary data was therefore collected using a semi structured questionnaires consisting of both open ended and close ended questions in order to gather facts for revealing answers to the research problem from targeted respondents. The open-ended questions were used to capture the respondent's opinions and recommendations while closed ended questions were used to gather useful quantitative data for answering the research problem of interest. Secondary data was also reviewed from KRA and Kenyan manufacturing firms published annual reports.

3.7 Pilot Study
A pilot study is a small-scale research study undertaken to pre-test the questionnaire in order to establish potential flaws on the design, ordering and instrumentation of the data collection instruments, using target sample respondents before undertaking a full-fledged large-scale study (Fraser, Fahlman, Arscott, 2018). A pilot study of 14 study respondents was undertaken in order to pre-test the questionnaire. The goal of pilot testing is to enhance data collection instrument reliability and validity quality assurance, as well as provide insight on the planned data analysis techniques effectiveness as well as spotlight the financial and human resource requirements (Doody & Doody, 2015).

3.8 Data Analysis and Presentation
Data analysis was undertaken using SPSS version 21 for multiplicity of different methods. The first method was to undertake diagnostics tests. Secondly, descriptive statistical analysis was conducted in order guide in making statistical decisions using mean and standard deviation. Thirdly, factor analysis technique was used in order to transform any possible set of correlated variables into observations comprising of linearly non-correlated explanatory variables (Kothari & Garg, 2014). Specifically, analysis of qualitative data was done through content analysis. Hsieh and Shannon (2005) defined qualitative content analysis as a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns.

The study hypothesis was tested using the analysis of variance (ANOVA) F-test statistic in order to determine the goodness of fit of the model. Inferential statistics derived from multiple linear regression (MLR) analysis was utilized to predict the regression through execution of rigorous and robust tests of statistical significance as well as ANOVA from the data collected using SPSS version 21.

4. RESEARCH FINDINGS
During the fieldwork, a total of 138 questionnaires were distributed, but only 115 questionnaires were returned having been dully filled. This translated to 83.3%. A response rate of 70% and above is considered excellent according to Mugenda and Mugenda (2013).

Table 4.1: Response Rate

Questionnaires	Frequency	Percent
Responded	115	83.3%
Un-responded	23	16.7%
Total	**138**	**100.0%**

4.1 Technological CSFs in I tax Systems

Respondents were asked to give their level of satisfaction with various statements to examine the effect of technology on iTax system strategy usage in their respective companies. The results in Table 3 shows that 53.9% of the respondents agreed that the ICT system infrastructure for connecting to submit returns is always available in their respective companies at all time. Roughly, a half (52.2%) of the respondents affirmed that the iTax online system portal for connecting to submit returns is always up and running hence accessible at all the times. Two in five (40.0%) of the respondents were in agreement that the iTax online returns methods has been affordable for their respective companies at all the time. In addition, 54.8% of the respondents agreed that the iTax online system does not require much computing skills for its use. Approximately, 56.5% of the respondents agreed that the iTax online system is of high quality for connecting at all the time and about 40.9% of the respondents were in agreement that there has been high iTax online system support from the technical team during submission of returns. From this analysis, it can be noted that there is a positive agreement by the respondents on the technological factors.

Table 4.2: Technological CSFs iTax Systems

Statements	Disagree	Neutral	Agree	Mean	SD
The ICT system infrastructure (Smart Phone, computer, laptop, Network, Internet, Wi-Fi, data bundles, LAN, WAN, Routers, Access Points) for connecting to submit returns is always available.	31.3	14.8	53.9	3.72	1.29
The iTax online system portal for connecting to submit returns is always up and running hence accessible at all the times.	20	27.8	52.2	3.78	0.98
The iTax online returns methods has been affordable for my company all the time.	34.8	25.2	40	3.6	1.09
The iTax online system does not require much computing skills for my use	21.7	23.5	54.8	4.01	1.16
The iTax online system is of high quality (ensures security, privacy, easy to use, fast and accurate) for my connecting all the time.	14.8	28.7	56.5	3.59	0.87

There has been high iTax online system support from the technical team my submitting of returns all the time	21.7	37.4	40.9	4.02	0.92
Average Proportion	**24.1**	**26.2**	**49.7**	**3.79**	**1.05**

4.2 Business Size CSFs in iTax Systems

For the moderating variable, the respondents were required to indicate their levels of agreement with the three statements relating to iTax system strategy issues concerning their firm or company sizes. Table 6 shows that majority of the respondents (50%) of the respondents disagreed with the statement that they started using iTax system since when their companies were still small and now, they have grown still happy with the system. This may be interpreted to imply that business size affects the strategy application among the businesses. In addition, further confirmation of this fact is given by the outcome that higher majority of 58% of the respondents agreed with the statement that they sometimes did not use iTax system strategy due to their small company sizes.

Generally, in the overall, it emerged that majority of the businesses users of the iTax system strategy were Micro (44), followed by Small (35), Medium (21) and a few large (15). These results are shown in the diagrams below.

Table 4.3: Business Size CSFs Indicators

Statements	Disagree	Neutral	Agree	Total	
I started using iTax system since when my company was small till now it has grown and am still happy with the system	58	12	45	115	
I don't sometimes use iTax system due to my small company size	39	9	67	115	
Total	**97**	**21**	**112**		

	Business Size				
Statements	**Large**	**Medium**	**Small**	**Micro**	**Total**
Business Size	15	21	35	44	115
Average	**13%**	**18%**	**30%**	**38%**	**100%**

4.3 iTax Strategy System CSFs

The results in **Table 4.4** shows that 47.0% of the respondents agreed that they always use iTax strategy for their company tax matters. In addition, 44.3% were in agreement that they are satisfied with iTax system website features whenever using it. Approximately 41.7% of the respondents were contented with iTax system accessibility whenever using it. Also, 46.1% of the respondents affirmed that they were satisfied with iTax system level of assurance whenever they used it. Approximately 44.3% of the respondents accepted that they are satisfied with iTax system level

of assurance whenever they used it. About 39.1% were contented with the iTax system responsiveness to their concerns whenever they used it. In addition, 47.8% were satisfied with the iTax system speed whenever they used it. Also, 42.6% of the respondents were satisfied with itax system support and commitment by KRA whenever they were using it. It is observed that 40.9% of the respondents were satisfied with iTax system level of interactivity whenever they used it. The findings show that 43.5% of the respondents were contented with the iTax system user-friendliness whenever they used it. In addition, 54.8% of the respondents trusted the importance and usefulness of the iTax system and that they will continue using iTax system in future. About 42.6% of the respondents agreed that they are well informed about workings of iTax system through regular KRA communications. Roughly 40.0% of the respondents were satisfied with the prompt attention KRA gives users of iTax whenever requiring their assistance online. In addition, 56.5% of the respondents felt that the iTax system strategy should be encouraged more. From this analysis, it is demonstrated that there is a positive agreement by the respondents on the performance factors affecting the usage of iTax.

Table 4.4: iTax Strategy Performance CSFs

	Disagree	Neutral	Agree	Mean	SD
I always use iTax system for my company tax matters	22.6	30.4	47	3.85	1.05
I am satisfied with iTax system website features whenever using it	11.3	44.3	44.3	3.77	0.99
I am satisfied with iTax system level of innovativeness whenever using it	13	45.2	41.7	3.94	1.04
I am satisfied with iTax system accessibility whenever using it	13.9	40	46.1	3.92	0.82
I am satisfied with iTax system level of assurance whenever using it	14.8	40.9	44.3	3.69	1.16
I am satisfied with iTax system responsiveness to me concerns whenever using it	15.7	45.2	39.1	3.58	1.01
I am satisfied with iTax system speed whenever using it	14.8	37.4	47.8	3.84	0.91
I am satisfied with iTax system support and commitment by KRA whenever using it	15.7	41.7	42.6	3.56	0.85
I am satisfied with iTax system level of interactivity whenever using it	14.8	44.3	40.9	3.78	0.90
I am satisfied with iTax system user-friendliness whenever using it	11.3	45.2	43.5	3.88	0.96
I commit to continue using iTax system in future	8.7	36.5	54.8	3.7	1.06
I trust the usefulness and importance of iTax system	13	32.2	54.8	3.9	0.93
I am well informed about workings of iTax system through regular KRA communications	19.1	38.3	42.6	3.84	0.83

I am satisfied with the prompt attention KRA gives us users of iTax whenever requiring their assistance online	23.5	36.5	40	3.8	0.78
The iTax system strategy should be encouraged more, Isupport it to continue.	9.6	33.9	56.5	3.68	0.6
Average percentages	**14.8**	**39.5**	**45.7**	**3.78**	**0.93**

4.4 Regression Analysis

The regression analysis was done to test the relationship between the dependent and the independent variables. The results were used to analyse the usage of iTax system strategy and its performance status and finally used to test the research hypotheses.

4.4.1 Model Summary

The summary was used to determine the volume of variation in iTax system strategy performance that can be explained by changes in technological CSFs. An index of the technological CSFs and business size was included in the second model. Considering the Table 8, the values of correlation for both model 1(R=0.52) and model 2 (0.53) were moderately strong and positive, implying that there was a moderate relationship among the variables. The R square from both model 1 (0.27) and model 2 (0.28) were weak. This suggests that 27.1% of iTax system strategy performance can be explained by changes in technological CSFs for model 1 and 28% model 2 respectively.

Table 4.5: Model Summary

	R	R Square	Adjusted R Square	Std. Error of the Estimate
Model 1	.520a	.271	.244	8.91
Model 2	.530b	.280	.247	8.89

a. Predictors: (Constant), technological factors

b. Predictors: (Constant), technological factors, business size X*Z

4.4.1 Anova for Goodness of fit Regression Analysis

The findings in Table 9 demonstrate that both models remained significant ($p < 0.05$), indicating their statistical significance in assessing the impact of technological factors on the performance of the iTax system approach

Table 4.6: Anova for Goodness of fit Regression Analysis

	F	Sig.
Model 1	10.207	.000b
Model 2	8.494	.000c

a. Dependent Variable: iTax system strategy Performance factors.

b. Predictors: (Constant), technological factors

c. Predictors: (Constant), technological factors, business size X*Z

Final Coefficients of Regression Analysis Results

From the results of the Table 10, the regression equation model was fitted as follows: Considering Model 1,

$$Y = 28.79 + 0.49\,X1 + \varepsilon \qquad (4.1)$$

The model equation indicates that, when the variable of technological factors is held constant at zero, the performance of the iTax system strategy will maintain a constant value of 28.79. Considering Model 2,

$$Y = 27.92 + 0.58\,X1 + 0.09X * Z + \varepsilon \qquad (4.2)$$

From the Model 2 above, holding the independent variable at zero then the performance of the iTax system strategy will be at a constant value of 27.92.

Table 4.7: Coefficient of Regression Analaysis

	Model 1	Model 2
Constant	28.79*	27.92*
Technological factors	0.49*	0.52*
Business Size Moderating effect X*Z	-	0.09

*significant at the 0.05 level

4.5 Hypothesis Testing

The first Hypothesis of the study was: H01: The technological CSFs have no significant influences on KRA iTax strategy performance among the manufacturing firms located in Nairobi County, in Kenya. On this dimension, the findings show that technological factors had a significant effect ($p<0.05$) on the on KRA iTax strategy performance hence we reject the null hypothesis and conclude that the technological factors had significant influences on the KRA iTax strategy performance among the manufacturing firms located in Nairobi County, in Kenya. This is because it emerged that technological factors had positive effect on the KRA iTax strategy performance ($\beta=0.49$, $\beta=0.52$) on both models.

The second Hypothesis was H02: The moderating effect of business size has no significant influence on the effect of technological CSFs on KRA iTax strategy performance among the manufacturing firms located in Nairobi County, in Kenya. In the end, the findings confirm that

Firm size have significant moderating effect on the relationship effects of Technological CSFs on KRA iTax strategy performance. This is particularly because in the first model, the technological factors revealed weak effect to the model before the inclusion of the moderating factor. However, after Business size variable inclusion into the second model, the technological factors had a stronger effect on the dependent variable in model2. We therefore we reject the null hypothesis and conclude that the moderating effect of the Business size has a significant effect on the effect of technological CSFs on KRA iTax strategy performance among the manufacturing firms located in Nairobi County, in Kenya.

5. CONCLUSION OF THE STUDY

The study aimed to identify the technological critical success factors and their impact on the iTax strategy performance of manufacturing enterprises in Nairobi County, Kenya. The findings concluded that certain technology variables had a significant influence on the overall performance of the KRA iTax approach among manufacturing enterprises in Nairobi, Kenya. The data indicate that the influence is positive, suggesting that an increase in the enhancement of technological factors, such as speed, accuracy, and user-friendliness, will result in a corresponding increase in the performance of the iTax system. The study's findings also indicated that the moderating effect of firm size exerted a significant influence on the relationship between technological CSFs and the KRA iTax strategy performance.

5.1 Recommendations of the Study

The study indicates that technological factors significantly impact the effectiveness of the KRA iTax strategy within manufacturing firms in Kenya. Therefore, the technological constraints of the iTax system, such as infrastructure availability, accessibility, cost, ICT skill requirements, and quality attributes, require substantial attention. These are the principal technological variables that substantially impact the efficacy of the iTax system strategy. Government and tax administration experts must formulate clear iTax rules and procedures that include user support and capacity training, facilitating ongoing education in response to the swift progress in ICT. Further research is essential in the same region or a comparable topic to clarify the over 70% crucial success variables associated with the iTax technique in Kenya, which are insufficiently addressed in this study. A subsequent examination focusing on individual iTax users for PAYE may reveal unique insights not uncovered in this study, which depends on official organizational staff who may have praised the system for political reasons.

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