DIGITAL LITERACY AND SUCCESSFUL IMPLEMENTATION OF ELECTRONIC TAX ADMINISTRATION SYSTEM IN NAIROBI COUNTY

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ABSTRACT

The advancement of ICT has revolutionized the way citizens received services from their government. The aim of adopting e-government is to improve service delivery and make it easy to access government information. The research aimed to assess the way digital literacy influences the implementation of electronic tax administration systems amongst Small and Medium Enterprises in Nairobi City County. The objectives were to determine the effect of technical proficiency on the implementation of E-tax administration systems; examine the influence of Information Security on the successful implementation of E-tax administration systems in Nairobi City County. A correlational descriptive research method was used in this study. The researcher targeted a population of 21,100 licensed SMEs within Nairobi CBD. The sample size of the study was 100 licensed SMEs. A questionnaire was used to collect primary data which was analysed using SPSS 21. The researcher employed inferential and descriptive statistics in analysing the data. The results established a positive and statistically significant correlation between technical proficiency and implementation of KRA e-tax administration systems ($r = 0.746$; p-value = 0.000) and positive and statistically significant correlation and implementation of KRA e-tax administration systems ($r = 0.328$; p-value = 0.005). However, while technical proficiency was found to be key success factor in successfully implementing e-tax administration systems, information security is critical, but not a key predictor of the implementation of e-tax administration systems. Besides, the study recommended that KRA should focus more on the technical proficiency of the taxpayers and assures users of the security of their information.

Key words: **Technical Proficiency; Information Security; Implementation; KRA e- tax administration systems**.

INTRODUCTION

The advancement of ICTs has changed the way the government delivers services to citizens and how the citizens make payments for the services. Globally, governments are adopting ICTs to enhance service delivery, increase accessibility to government information, and enhance convenience among citizens (Azmi & Kamarulzaman, 2010). This has made many governments adopt electronic services. E-government refers to the application of ICT by the government to deliver its services and information. One of the major e-government services is filing taxes electronically (Lai and Choong, 2010).

To improve compliance and tax administrative efficiency, various governments have introduced e-filling (Mandola, 2013). Young (2012) noted that there are various benefits of e-tax filling. Some of the benefits include taxpayer convenience since they can file the tax returns remotely from the comforts of their home or office; decreased or eliminated errors

that are common in the manual filling because the system auto-checks the application (Osebe, 2013). An E-tax filing is advantageous to the citizens in that it leads to reduced workload both for the taxpayers and the tax collector.

The success of government e-services largely depends on the ability of the citizens to use the services which require specific skills in using a computer and the internet. Digital literacy refers to the basic and essential communication skills which include the skills to use and manage the tools and services of ICT (Agnieszka, 2015). According to Agnieszka (2015), the basic skills that may be used to measure digital literacy include sending e-mails with attachments, the capacity to search for information using search, engines in online chats, groups, discussion forums, as well as making calls over the internet among others.

However, Eshet (2012) added that digital literacy entailed a large variety of complex sociological, cognitive, emotional, and motor skills. Osterman (2013) noted that digital literacy consists of three main aspects namely, technical procedural skills, Cognitive skills, creativity, and social skills. Technical procedures skills refer to the basic computing skills required to operate technology using modern graphics interfaces and surfing the web. Cognitive skills deal with pedagogical issues while creativity and emotional-social skills are concerned with the social media aspect of computing in contemporary society. These skills are crucial in ensuring success in service delivery through e-government. Therefore, besides tax education for SMEs, digital literacy is important in raising tax revenue through the adoption of e-services (Bornman and Wassermann, 2018). While it is not easy to improve revenue generation and achieve tax compliance, digital literacy and tax education can be used to minimize the challenge (Aksnes, 2014).

STATEMENT OF THE PROBLEM

The use of electronic tax administration systems is increasing and is supposed to make tax filling efficient and effective for both large and small taxpayers (Agnieszka, 2015). This is achieved by reducing the cost of tax compliance and reducing the time a taxpayer spends filling his or her tax return (Kiring'a and Jagongo, 2017). Therefore, taxpayers should embrace the introduction of an electronic system since it is meant to make things easier for them as well as the tax collector. It is thus, important for taxpayers to be computer literate.
Taxpayers' resistance, reluctance, and underutilization of e-services in filing taxes remain a concern worldwide (Azmi and Bee, 2011). In Kenya, the underutilization is even more among the small and medium Taxpayers. The KRA e-service for tax filling was introduced back in 2007 and was voluntary. Later on, in 2013 the current KRA e-service called iTax was implemented with improved features to make online filing simpler for the taxpayers. However, only years later, the use of the e-service was quite low among the small and medium taxpayers.

The number of small and medium taxpayers who registered with ITMS for tax purposes was 479,592, but only 24,626 used it in the online filing. Four years later, there were 790,048 taxpayers registered on ITMS, but only 7,832 used it for online filing (KRA, 2012). These

challenges are attributed to digital illiteracy which has made most SMEs not adopt the new electronic filing systems. The non-compliance played a role in the Kshs 11.47 billion shortfalls in tax collection 2011/2012 financial year and a shortfall of Kshs sixty billion in half-year tax collection during the 2012/2013 financial year (KRA, 2012). The Government of Kenya has continued to modernize and improve service delivery to its citizens through ICT and Automation. This has made available services that were previously inaccessible to ordinary citizens.

The success of e-Government services depends on government support as well as citizens' adoption. Therefore, the importance of taxpayers' adoption of E-tax administration systems is critical given the government's investment in technology and the potential to cost savings (Muturi & Kiarie, 2015). Despite the increased need to improve revenue collection and enforcement, developing countries including Kenya still face the challenge of adopting e-services leading to low tax compliance. While digital literacy is important to ensure any e-service programs succeed, researchers have not focused on the influence of digital literacy on the adoption of e-services. However, in research on factors that affect the successful implementation of e-filling in Kenya, Muita (2011) found that it helps in tax administration and is cost-saving. The current study sought to fill the gap in the literature by studying how digital literacy influences the implementation of e-tax administration systems in Nairobi City County.

OBJECTIVE OF THE STUDY

a) To determine the influence of technical proficiency on the successful implementation of E-tax administration systems in Nairobi City County.
b) To examine the influence of Information Security on the successful implementation of E-tax administration systems in Nairobi City County

THEORETICAL REVIEW

This study was guided by three theories; namely, diffusion of Innovation, technology acceptance model, and Unified Theory of Acceptance.

Technology Acceptance Model (TAM)

The proponents of this theory are Davis in 1989 and Venkatesh in 2003. The TAM is a great framework that has been used widely to explain how users adopt information technology. The model holds that the intention of users to use a new information system, which is determined by users' beliefs about the system, determines system adoption. The theory further holds that perceived ease of use and perceived usefulness are essential in explaining the disparity in the intention of the users to adopt the information system (Davis, 1989). The perceived usefulness of a system refers to the extent a user believes the use of the system would enhance his or her performance.

The degree to which one believes that using a particular technology will be simple, on the other hand, is known as perceived ease of use (Venkatesh, 2003; Davis, 1989). The perceived ease of use or usefulness of technology, such as E-tax administration systems, is important in its adoption. Furthermore, the perceived usefulness and ease of use to some extent influence the users' willingness to be engaged by the government during the implementation. Therefore, this theory is relevant to this study as it explains what influences users of a technology to adopt technology and get engaged in its implementation.

Unified Theory of Acceptance and Use of Technology (UTAUT)

Venkatesh, Thong, and Xu first proposed this theory in 2003. The goal of UTAUT is to explain the user's usage habits and intent when using an information system. According to Venkatesh, Thong, and Xu (2003), UTAUT seeks to guide in understanding both the intention to use and the actual use of an information system. According to the theory, performance expectancy, facilitating conditions, social influence, and effort expectancy all have a direct impact on usage intention and behaviour. However, the effect of the four constructs on behaviours and intention to use is influenced by voluntariness of age, use, and gender (Venkatesh, 2003). Performance expectancy refers to the extent to which one believes that the use of a system aid in enhancing job performance. Effort expectancy is the degree of ease that is associated with using a system. Social influence refers to the extent a person believes that their partners or friends believe they ought to adopt a new system. On the other hand, facilitating condition is the extent an individual believes that an organizational and technical infrastructure has been put in place to support the application of the system (Venkatesh, et al., 2003). SMEs would adopt the e-tax systems when they are sure it helps facilitate their performance and if they can use it with ease. According to the theory, the successful implementation of technology is dependent on users' expectations that it will enhance performance, which is clear to users who have technical proficiency.

The theory also suggests that the adoption of a technology depends on the user's belief that there is a technical and organizational structure to facilitate the implementation. Her social influence is used during stakeholders' engagement since the government must believe that stakeholders should adopt the technology. Therefore, the theory suggests that technical proficiency, stakeholder engagement, and organizational culture are important in ensuring the successful implementation of technology. Thus, this theory is relevant to the study because it helps in understanding what influences the user's behavioural intention to adopt and use a new technology, which in turn determines success in the implementation of the technology.

Diffusion of Innovation (DOI) Theory

Everett Rogers proposed the DOI theory in 1962. The theory describes the patterns of technology adoption, elucidates the mechanism of adoption, and predicts how and whether innovation was successful. The DOI holds that over time, members of a social system communicate technological innovation among themselves through specific channels. (Rogers, 1962). In Kenya, the application of e-tax administration systems for tax filing is a relatively

new practice, and therefore can be considered an innovation. Technology's usefulness, as well as information security, is likely to become a discussion topic among members of a social system as it is communicated over time. The acceptance of a social system member determines whether or not the technology spreads throughout society. This theory is relevant to this study as it gives insight into the pattern of adopting technology, and explains the mechanism of adoption. This is essential as it explains the pattern of adopting e-tax administration systems the SMEs.

EMPIRICAL REVIEW

Technical proficiency and successful implementation of e-tax administration systems

According to Osebe (2013), the lack of appropriate proficiency levels makes online tax filing expensive. This is because the users' inability to use the e-filing system efficiently and effectively compels them to engage third parties, such as cybercafé attendance, who charge a premium for the service (Mandola, 2013). The ultimate effect is e-services become expensive; hence, some opt to file manually thus affecting the implementation of e-services since users become reluctant to adopt and use the technology. Some of the technical skills required for successful implementations of E-tax administration systems include computer skills, information technology literacy, and Knowledge of the taxation online system as well as tax laws.

According to Azmi and Kamarulzaman (2010), the taxpayers who are not IT literate are frustrated when they are required to use the online filling system. They end up spending a lot of time learning how the system operates. The Institute of economic affairs (2012) noted that most SMEs lack computer skills to enable them to use online tax services. Nathan Associates Inc. (2013) conducted a study on "the internet's role in the performance of SMEs in India." The findings indicated that most of the SMEs lacked the technical skills to use the internet which has led to the failure of implementation of e-services. Proficiency in information technology is essential for the implementation of E-tax administration systems because the adoption of technology depends more on the ability of the user to use the technology.

A study by Ofcom (2015) found that SMEs lacked the technical proficiency to manage their relationship with their internet service providers for IT and technical support. The study also found that as a result, most SMEs are not able to solve basic connectivity problems without assistance. This lack of technical proficiency to be able to solve connectivity problems has negatively affected the implementation of e-services that require internet-based applications. This makes it hard for a government agency, that is, KRA to implement e-services among SMEs. Alam and Noor, (2010) conducted a study in Malaysia to assess the factors that influence the adoption of the internet by SMEs. The researchers sampled 465 SMEs. The results revealed that SMEs' computer knowledge and experience influence their adoption of web applications. The study recommended the government agencies that were mandated to implement IT innovations should address the issues of computer literacy of the targeted users.

Ogbuiyi, Ogbuiyi & Oriogu (2014) studied the "influence of computer literacy skill and online searching on undergraduates' use of academic materials in Babcock University library." This study employed a survey research design. Data collection was done using structured questionnaires. The results indicated that the lack of an adequate computer system in the library was the main problem that hindered the search for academic materials online. The researchers concluded that the proficient use of computers is necessary for developing effective online searching. Therefore, government agencies mandated to implement e-services should ensure that all target users have proficiency in computer skills, a lesson KRA should learn to successfully implement their e-services to all stakeholders including the SMEs.

Ojeniyi, & Adetimirin (2016) studied the influence of ICT literacy skills on the use of electronic information by lecturers in Nigeria. The study adopted a descriptive survey design and a total enumeration sampling technique. The sample consisted of 234 academic staff from Lead City University and Ajayi Crowther University. Email and websites were the most available resources to the academic staff in the two universities. The study found a significant positive correlation between ICT literacy skills and the use of e-resources by lecturers, which determine the implementation of ICT technology. This implies that ICT literacy skills among the users are crucial for the successful implementation of e-services.

Information Security and successful implementation of e-tax administration systems

The implementation of electronic services has affected the effectiveness of the e-government system; hence, raising a challenge for the government to ensure that information is safe and confidential. The information transmitted via e-services requires extra attention to secure data and avoid unauthorized access. This is the only way for the public to trust and have confidence in e-government services, without which e-service implementation is impossible (Shareef, 2016). Information security issues are expected to convince users to use e-services to securely access, share, and exchange information (Shareef, 2016). Various information security issues, such as users' secure identification, network security, access control, privacy, trust, and electronic authentication have an impact on the successful implementation of e-services (Singh, 2011).

Al-Shboul *et al* (2014) carried out a study about the factors and challenges that influence e-government implementation in Jordan. Besides examining the challenge and barriers that the Jordan government must overcome to successfully implement e-government, the researchers further assessed the factors that impact the use of e-government. Semi-structured interview guides were used to collect primary data for the study. The findings revealed that data privacy and security are among the major factors that affect the implementation of electronic services in Jordan.

RESEARCH METHODOLOGY

The study employed a correlational research design. Correlational research describes conditions, practices, processes, and structures that exist at the moment. It comprises the collection of data to assess whether, and to what extent, a correlation between two or more quantifiable variables exists (Gray, 2016). The researcher targeted a population of 21,100 licensed SMEs within Nairobi CBD. The sample size of the study was 100 licensed SMEs. A questionnaire was used to collect primary data which was analysed using SPSS 21. The researcher employed inferential and descriptive statistics in analysing the data.

FINDINGS

The findings of the correlation analysis revealed a Pearson's correlation (r) of 0.746 between technical proficiency and implementation of KRA e-tax administration systems and a p-value of 0.000. This is an indication of a significant positive relationship between the two variables. The strength of the correlation was established as strong. The findings of the regression analysis revealed that the correlation between technical proficiency and implementation of KRA e-tax administration systems is positive and technical proficiency is a strong determinant of implementation of KRA e-tax administration systems.

The findings further revealed that Pearson's correlation (r) between information security and implementation of KRA e- tax administration systems is 0.328 and the value p-value is 0.005. This implies that the two variables have a positive and statistically significant correlation. The correlation, however, is weak, as indicated by the value of 0.328. Further regression analysis revealed a positive relationship between the variables, but information security is not a strong predictor of the implementation of KRA e-tax administration systems; since the significant value is 0.229.

CONCLUSIONS AND RECOMMENDATIONS

The study concluded that technical proficiency positively influences the implementation of e-tax administration systems and it is a key success factor in successfully implementing e-tax administration systems. The results established a statistically significant positive relationship between information security and the implementation of e-tax administration systems. However, the degree of correlation was found to be weak. Therefore, despite its positive relationship information security was found to be a weak determinant of the implementation of KRA e-tax administration systems. As a result, it was concluded that, while information security is critical, it is not a key predictor of the implementation of e-tax administration systems. It was recommended that KRA should focus more on the technical proficiency of the taxpayers and assures users of the security of their information. It was also recommended that further research should be done to assess other factors that determine the successful implementation of e-tax administration systems and that further research be done in other counties in Kenya and compares the findings. Moreover, it was suggested that a

similar study should be done but the target groups changed to large enterprises as opposed to SMEs.

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