EMPLOYEE PERCEPTIONS ON THE EFFECT OF INTEGRATED TAX SYSTEM SECURITY ON REVENUE COLLECTION IN KENYA: THE CASE OF KENYA REVENUE AUTHORITY

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ABSTRACT

Governments aim at improving the effectiveness and efficiency of tax collection and management systems in numerous ways. In Kenya, one of the approaches towards this has been the implementation of the integrated tax management (iTax) system. This study sought to determine the employee perceptions on the effect of integrated tax system security on revenue collection in Kenya. The study adopted a comparative event study research design. Questionnaires were used to collect primary data. Quantitative data was analyzed using descriptive statistical techniques. Pearson Product Moment correlations was used to establish the relationships between the variables. Multiple regressions were used to establish the cause-effect relationships. The findings indicated that iTax system security positively and significantly influences revenue collection. Besides, increased revenue collection could only be realized with the iTax system if the taxpayers were empowered to take control of the security of their data. It was therefore recommended for KRA to ensure the security levels of iTax system is upgraded and maintained to the users’ satisfaction.

Key Words: itax, Kenya Revenue Authority, System Security

INTRODUCTION
The Global perspective of many governments are mostly adopting high end and informative information and Communications of Technologies (ICT) and so as to mainly improve on the one service delivery, besides enhance the convenience of among citizens and greatly and increase accessibility to large government information that is mostly on the rise (Azmi & Kamarulzaman, 2010). The introduction of the most celebrated electronic tax and return filing system is a big and major form of the best electronic government services (Lai & Choong, 2010). Various governments in the world have started introducing electronic tax and return filing in order to greatly achieve more and greater tax and revenue administration, revenue and compliance are efficiencies (Mandola, 2013). Proactive Governments of around the wide big world are now introducing electronic filing and processing of tax returns because now of the various and many advantages associated and with it (Young, 2012). Among these advantages include that convenience of both the large and the small taxpayers as they are often able to file tax returns mainly at their home or at the town cybercafés, and also these eliminates and reduces the errors associated with the hectic manual filing as the now and new system auto checks the possible applications (Osebe, 2013). Other main major advantages that include the reduced of workload and the reduced costs for the revenue tax collector (Simiyu, 2013). However, there are also many challenges associated with and these online filing of which include the taxpayer’s mood and perception, the challenges mainly associated with the learning the new tax electronic filing systems from these service providers, has tax limited accessibility of the internet infrastructure and the possible electronic filing of system down times (Azmi & Bee, 2011). Other several major countries have had other different and different experiences in regards to and these tax electronic filing of tax returns.

In Kenya, the one and earliest source revenue collection or/and administration form of the major online filing of the tax returns was also through the implementation of one and evidently the Integrated Tax Management System (ITMS) in 2013. This however was meant to mainly facilitate the major online payments of Value Added Tax (VAT), Cooperate Tax among also other taxes (Lukorito, 2012). The ITMS also connected also the Electronic Tax Registers (ETR) devices (registers) to enable and simplification of the main VAT declarations. The ambiguous ITMS system also enabled the taxpayers to mainly undertook the electronic filing. In these new context of the new major new system requirements, the main ITMS required and internet explorer and 7 or a higher of the version of Mozilla Firefox 3.0.3 (Mandola, 2013). The only Kenya Revenue Authority (KRA) was also to later phase out the ITMS and replaced it with the iTax system. These iTax system enabled the taxpayer to mainly undertake the internet based moments of registration, maybe filing, or paying and status inquiries and with the real time and monitoring of the firms accounts (Mandola, 2013).

Statement of the Problem
Since 2011, there have been surveys and reports carried out in Kenya for the purpose of exposing weaknesses in service delivery as well as enhancement of revenue collection due to the need to increase revenue raised (Cheeseman & Griffiths, 2015). The National Business Agenda released by members of the private sector pointed out that despite improved services, taxpayers still face difficulties from the complexities of ever changing processes and statutory procedures as well as the forms and paperwork that are required to be filled for service requests (Tanzania Revenue Authority, 2000). As a result, the Taxpayer Program iTax was developed so as to improve service delivery and enhance iTax compliance (Kenya Revenue Authority, 2015). The challenges experienced in the implementation of the iTax system in Kenya can be attributed to insufficient user education and resistance to technology. Increased awareness of
the operation and benefits of the system by key stakeholders including KRA and individuals’ initiative to embrace the technology are amicable counter solutions (Chao, 2005).

Resistance to technology limits the potential of a target group from attaining maximum benefits (Fu, Farn, & Chao, 2005). The technology employed by iTax facilitates the administration of government tax revenue collection by using new technologies such as ICT. Besides, the technology enables taxpayers to make online pin registration and thereby qualify to remit taxes via the platform. The study wished to analyse the government awareness strategies in publicizing the use of iTax against the adoption rate among Kenyans. Wanjohi, Magutu & Mageto (2010) conducted a study on taxpayer attitude, behavior and tax compliance in Kenya. The two scholars found a relationship between the government’s lack of identification of taxpayer behavior towards a system of tax and revenue limitation. In the 2005/2006 fiscal year, the scholars cite, Kenya experienced a deficit of 3.5 billion shillings. It is vital to note that the mentioned period involved pure manual tax collection processes. However, not much literature investigated the effect of iTax on revenue collection in KRA especially by assessing the attributes of iTax, therefore, established their ground on the possibility of tax evasion among taxpayers since the Kenya Revenue Authority (KRA) could not track them easily.

Research Objectives
The purpose of the study was to determine employee perceptions on the effect of iTax system security on revenue collection in Kenya Revenue Authority.

LITERATURE REVIEW
Technology Acceptance Model (TAM) by Davis et al., (1989) proposes that consumers are concerned about the Perceived Efficiency (PU) and the Perceived Ease of Use (PEOU). PU is defined as the degree to which a person thinks that using a particular system would enhance his/her performance. PEOU is the degree to which a person believes that using a particular system was be free of effort (Davis, 1989 & Venkatesh et al., 2003). This model is used to predict the future consumer behavior (Legris et al., 2003). The taxpayer behavior on the introduction of iTax system can as well be predicted using TAM (Cheong & Park 2005). this model outlines that the contracts, PU and PEOU are the fundamental determinants of any system adoption and use. For the iTax system to be adopted and be used widely all over the country, the customers would evaluate these three (3) determinants. If they perceive it better, then it would be a success. (Kleijnen et al., 2004). In iTax online services, Perceived Efficiency is the degree to which the taxpayer believes that the iTax system would enhance his/her transaction (Chen, 2008). the second one is the Perceived Ease of Use. In iTax, it includes registration procedures followed. Ease of use of the payment procedure, ease access to customer services, minimal steps required to make a payment, appropriate screen size and input capabilities. The availability of customer care officers and/or tax agents also increases the PEOU among the taxpayers to the service. The third determinant is the perceived trust. Trust is the measure of a consumer’s level of assurance that the service was be provided without hindrance.

**Independent Variable**
- iTax System Security
  - Safe tax filing
  - Tax filing information confidentiality
  - Tax filing information privacy

**Dependent Variable**
- Revenue collected
  - Increase PAYE
  - Increased individual tax
  - Increased corporate taxes
  - increased value added tax

Figure 1: Conceptual Framework
In the virtual wide World that provides internet as an open network without any control from and by human all over individual transactions; many people are very reluctant to declare and file their tax returns electronically (Nath, 2007). There is also the high possibility that the financial and the personal information is being misused mainly for fraudulent purposes in cases which make the taxpayers to really hesitate to reveal their personal information. Examples of major security dangers include the potential threats to data and or the network resources that are in the form of destruction, disclosures, modification of data, the denial of service, and/or fraud (Nath, 2007). These issues have reduced the level of the customers’ trust and thus discouraging them to freely disclose their personal and confidential information in the online transactions. In this case, the security mechanisms that make consumers to believe that their online transactions and the payments are safe (Geffen, 2013). Therefore, the perceived security of a system is one of the main huge barriers to the acceptance of any online-based systems (Gefen, 2013). The Relation between the security and the trust can be further in detail explained as the possible belief about the likely safety of information in a system toward system hacking, malware or introduction of document and software viruses. For instance, a possible user who trusts on the nature of security of the system will expect it to use the system hassle free and without any system crash from possible unsafe software and malware or introducing harmful viruses in their machines (24).

As discussed earlier, this study examined the relationship between the perceived security and the e-trust in the tax e-filing system. Scholars (Mukherjee, and Nath, 2007) studied that security and the privacy of a system as key and major antecedents of the trust in the different environments such as in the online trading systems, the online retailing, and for the online banking.

In most online environments where the users have to openly share their personal data and information so as to perform many online transactions, the privacy issues occurring on how the service provider obtains, stores and reuses the information provided becomes very critical. Hence, the service providers need to assure all of them of how the personal information provided is protected by them. As a result of this, privacy has emerged as one of the very important issues by the bold move of the government toward the higher level of the online interactions with its citizens, including transfer of very private information such as tax returns and medical records.

As such, Yousafzai et al. (2013) defines privacy as the customers’ perception about their possible ability in the controlling and in the monitoring of their own information. Privacy is mainly and deeply concerned with the likely issue of protection of identifiable data and information of all individuals (on the internet) and also involves the adaptation and implementation of the privacy policy, the disclosure, the choice or consent of all consumers (Ramayah, 2009). This study, while finding the effect of the system on revenue collected concerning the tax e-filing system, follows McLeod and Pippin’s (2004) definition of the privacy which clearly says that the personal tax information of the users will not and will never be revealed to any unauthorized individuals or companies without consent of the users. Although the perceived privacy and the perceived security may seem like a similar concept, they are two very different concepts. As discussed in the recent two sections, the perceived security mainly emphasizes on the technical prevention of information from hackers’ attacks those which cause the system to break down (and to steal information). On the other hand, the perceived privacy is normally more concerned mainly about the legal requirements and the good practices aimed to protect the users’ personal information by mainly the online service provider (Casaló et al., 2007). Scholars discuss the huge role of the perceived privacy as the critical determinant of the users’ acceptance of most online services (Poon, 2007). The study by Lean, et al. (2009) did find a positive relationship between the perception
of the privacy protection and the trust in the context of the e-government services in the republic of Malaysia, while Roca, et al. (2007) did not find the main significant relationship that is between the perceived security and the perceived trust in the main context of the online trading systems in Spain republic. To further explore the area, the relationship that is between the users’ perceived privacy and the e-trust in online environment.

**METHODOLOGY**

This study used a descriptive research design to help in indicating the trends in the attitudes and the behaviors and to enable the generalization of the findings of the research study to be done. The descriptive survey design is a method that involves the analysis of the data collected from a population sample, or a representative subset, at one specific point in time (Orodho, 2003). The study targeted 145 employees from KRA headquarters in Nairobi and cut across the following departments in revenue, accounting, IT and custom departments. Stratified random sampling was used to obtain a sample population from a target population of 1140 from Procurement, Finance, Human Resource, Operations and Stores departments.

Questionnaire was used as a tool for data collection in this study. To ensure the reliability of the instrument, the researcher analyzed the data collected from the pilot study by use of the SPSS software where the results from pilot study was carefully studied to assess the reliability of the instrument. The study adopted both quantitative and qualitative approaches, implying that both descriptive statistics and inferential statistics was employed. Quantitative data collected from the document analysis was analyzed statistically using the Statistical Package for Social Scientist (SPSS version 24). All qualitative data gathered during the study was analyzed through content analysis and presented descriptively.

**RESULTS**

**Revenue collection performance**

This indicator measured the performance of revenue collected by KRA. Table 1 illustrated the results. The results from the study revealed that, 21(22.1%) strongly agreed that KRA had improved revenue collection since the inception of iTax, 44(46.3%) of them agreed, 7(7.4%) disagreed, 6(6.3%) strongly disagreed while 17(17.9%) of the respondents were neutral on this item. The mean value for this item was 3.71 and standard deviation was 1.09. Clearly, iTax had led to improvement in revenue collection.

With respect to PAYE, the study found that 27(28.4%) of the respondents strongly agreed that KRA had experienced increase in PAYE, 39 (41.1%) of them agreed, 9(9.5%) disagreed while 19(20%) of the respondents were neutral. These results summed up to a mean of 3.86 and standard deviation of 0.97. Other than the increase in revenue collection, KRA has experienced increase in PAYE.

Regarding individual tax, 45(47.4%) of the respondents strongly agreed that KRA had increased the collection of individual tax, 34(35.8%) agreed, 9(9.5%) disagreed and 7(7.4 %) were undecided. The findings were corroborated by a mean of 4.21 confirming that KRA had increase the collection of individual tax.

With reference to corporate taxes, 24(25.3%) of the respondents strongly agreed that KRA had increased the collection of corporate taxes, 37(38.9%) agreed, 6(6.3%) strongly disagreed while 27(28.4%) of them were neutral. These results summed up to a mean of 3.76 and standard deviation of 1.05, implying that KRA had increased the collection of corporate taxes.

Further, the study enquired if KRA had increased the collection on value added tax. The results revealed that 24(25.3%) of the respondents strongly agreed, 37(38.9%) of them agreed, 27(28.4%) were neutral with 6(6.3%) strongly disagreeing. The item had a mean of 3.94 and a standard deviation of 1.17
suggesting that value added collected by KRA has increased. The study further sought to establish if KRA had achieved its revenue collection target. The respondents were thus asked to respond accordingly. 32(33.7%) strongly agreed, 47(49.5%) agreed, 6(6.3%) disagreed and 2(2.1%) of them were neutral. The item realized a mean of 3.8 and standard deviation of 0.77. The results suggested that KRA had achieved its revenue collection target.

**Table 1: Revenue collection performance**

<table>
<thead>
<tr>
<th></th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>KRA has improved its revenue collection since iTax implementation</td>
<td>%</td>
<td>6.3</td>
<td>7.4</td>
<td>17.9</td>
<td>46.3</td>
<td>22.1</td>
<td></td>
</tr>
<tr>
<td>KRA has experienced increase in Pay As You Earn (PAYE)</td>
<td>%</td>
<td>1.1</td>
<td>9.5</td>
<td>20</td>
<td>41.1</td>
<td>28.4</td>
<td></td>
</tr>
<tr>
<td>KRA as increased it collection on individual tax</td>
<td>%</td>
<td>0</td>
<td>9.5</td>
<td>7.4</td>
<td>35.8</td>
<td>47.4</td>
<td></td>
</tr>
<tr>
<td>KRA as increased it collection on corporate taxes</td>
<td>%</td>
<td>6.3</td>
<td>1.1</td>
<td>28.4</td>
<td>38.9</td>
<td>25.3</td>
<td></td>
</tr>
<tr>
<td>KRA as increased it collection on value added tax</td>
<td>%</td>
<td>6.3</td>
<td>1.1</td>
<td>28.4</td>
<td>38.9</td>
<td>25.3</td>
<td></td>
</tr>
<tr>
<td>KRA has achieved its revenue collection target</td>
<td>%</td>
<td>8.4</td>
<td>6.3</td>
<td>2.1</td>
<td>49.5</td>
<td>33.7</td>
<td></td>
</tr>
<tr>
<td>Revenue collection performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.88</td>
<td>0.76</td>
</tr>
</tbody>
</table>

*Source: Research Data (2018)*

**iTax System security**

The objective of the study sought to determine the effect of iTax system security on revenue collection in KRA. The results were as presented in Table 2 below.

**Table 2: iTax System security**

<table>
<thead>
<tr>
<th></th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>iTax has provided privacy and confidentiality in filling tax returns</td>
<td>%</td>
<td>6.3</td>
<td>14.7</td>
<td>13.7</td>
<td>38.9</td>
<td>26.3</td>
<td></td>
</tr>
<tr>
<td>the taxpayer is empowered to take control of the security of his or her information or data</td>
<td>%</td>
<td>6.3</td>
<td>6.3</td>
<td>8.4</td>
<td>61.1</td>
<td>17.9</td>
<td></td>
</tr>
<tr>
<td>More secure system that helps protect clients and firms’ and their bottom line</td>
<td>%</td>
<td>7.4</td>
<td>27.4</td>
<td>20</td>
<td>36.8</td>
<td>8.4</td>
<td></td>
</tr>
<tr>
<td>KRA has implemented security measures to protect its online tax filers</td>
<td>%</td>
<td>14.7</td>
<td>6.3</td>
<td>25.3</td>
<td>30.5</td>
<td>23.2</td>
<td></td>
</tr>
<tr>
<td><strong>iTax system security</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.545</td>
<td>0.897</td>
</tr>
</tbody>
</table>

The study sought to find out if iTax had provided privacy and confidentiality in filling tax returns. From the results, 25(26.3%) of the respondents strongly agreed that iTax has provided privacy and confidentiality in filling tax returns, 37(38.9%) of them agreed, 14(14.7%) disagreed while 13(13.7%)
of the respondents were neutral. The findings were supported by a mean of 3.64 and a standard deviation of 1.202. The implication was that iTax had provided privacy and confidentiality in filling tax returns.

To establish if the taxpayer is empowered to take control of the security of his or her information or data, the respondents were asked to respond accordingly. In total, 17(17.9%) of the respondents strongly agreed, 58(61.1%) of them agreed, 6(6.3%) disagreed and 8(8.4%) of the respondents were neutral. The item realized a mean of 3.78 and standard deviation of 1.023, revealing that the iTax system empowers the taxpayer to take control of the security of their data.

Besides, the study sought to find out if the iTax system was a more secure system that helps protect clients and firms and their bottom line. Therefore, respondents were requested to give their opinions. From the results, 8(8.4%) of the respondents strongly agreed, 35(36.8%) of them agreed, 26(27.4%) of them disagreed while 19(20%) of the respondents were neutral. The results summed up to a mean of 3.12 and standard deviation of 1.129 meaning that the respondents are not confident enough that iTax system is a more secure system that helps protect clients and firms.

Finally, the results indicated that 22(23.2%) of the respondents strongly agreed that KRA had implemented security measures to protect its online tax filers, 24(25.3%) of them were neutral, 6(6.3%) disagreed and 14(14.7%) of the respondents strongly disagreed. The results culminated in a mean of 3.41 and standard deviation of 0.897, indicating that it is in doubt whether KRA has implemented security measures to protect its online tax filers.

Generally, the results on iTax system security culminated a mean of 3.545 suggesting that the respondents were agreeable on most items on iTax system security. Besides, the standard deviation of 0.897 implied less variation in the responses.

CONCLUSION

Regarding iTax system security, iTax has provided privacy and confidentiality in filling tax returns. As well, it empowers the taxpayer to take control of the security of their data. Despite this, it was not clear if the iTax system was a more secure system that helped protect clients and firms. In addition, it was in doubt whether KRA had implemented security measures to protect its online tax filers.

It was concluded that iTax system security significantly influences revenue collection. The security of the iTax system is very important for the taxpayers. Increased revenue collection can only be realized with the iTax system if the taxpayers are empowered to take control of the security of their data. The challenge with KRA was that taxpayers lacked the confident that it had implemented security measures to protect them. This had a deleterious effect on revenue collection as it discouraged the rapid adoption of the online system. Consequently, more efforts needed to be directed towards protecting online tax filers if revenue collection was to be improved further.

It was recommended that since iTax system security has a positive and significant effect on revenue collection, there was need for KRA to ensure that its computer systems were effectively secured to protect sensitive financial and taxpayer’s data. Specifically, the security levels of iTax system needed to be upgraded and maintained to the users’ satisfaction. This would encourage more individuals to use the iTax system leading to more revenue collected by KRA.

The study recommended that there was need for further research on the contribution of online taxpayer registration and revenue collection. Also, further study is necessary to investigate the factors affecting effective implementation of online tax systems as a strategy for enhancing revenue collection in Kenya. The data used for the current study was derived from each tax head by KRA. A larger data set from the tax heads may result in a different model of the effect of implementation of the integrated tax management system (iTax) in
Kenya. Additionally, a further study needs to be conducted using more variables that may be relevant to this study. This project however, contributed with knowledge that was needed for this kind of research.

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