Effect of System Automation on Excise Duty Compliance among Cigarettes Importers in Kenya

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Abstract

Excise duty compliance remains low in many economies around the world, with revenue authorities failing to achieve their annual targets. The main objective of this study was to determine the effect of system automation on excise duty compliance among cigarette importers in Kenya. The study was guided by diffusion of innovations theory. The study employed an explanatory research design that involved the use of structured questionnaires in collecting primary data. The target population was 21 cigarette importers in Kenya. Data was collected on a 5-point Likert scale questionnaire. Descriptive statistics were presented in tables and charts. Regression analysis was used to determine the relationship between the study variables. The study found that system automation ($\beta=0.215$, P=009) has a positive and significant effect on excise duty tax compliance. The study concluded that system automation contributes significantly to improved excise duty compliance among cigarette importers in Kenya. The study recommends that the management of KRA should come up with measures that will lead to an increment in system automation for registration, filing, and payment of excise duty tax. The findings that system automation has a positive and significant effect on excise duty tax compliance also serve to further the diffusions of innovations theory which explains the passage of a new idea through stages of adoption by different people who participate in or begin using the new idea.

Keywords: *System Automation, Excise Duty Compliance, Cigarettes Importers*

1.0 Introduction

Various governments all over the world depend on tax revenue to provide public goods and services. To meet the growing need for economic development and growth, these governments have come up with various tax regimes, systems, and bases (OECD, 2020). Collecting taxes and fees is a fundamental task for countries to generate public revenue that makes it possible to finance investments in human capital, infrastructure, and the provision of services for citizens and businesses (IMF, 2020).

Taxation is also a vital aspect of sustainable economic development because it seeks to offer financial independence to all nations (OECD, 2016). All governments are thus compelled by such requirements to raise adequate finances that will fund their projects of development and ensure all the responsibilities are discharged in the expected way. Since the governments are

not entrepreneurial entities, they have to obtain financial resources for all their projects from different tax revenues (Simiyu, 2013).

The practice of tax collection globally has to be in line with all best practices and the basic ability to pay, the principles of equity, certainty, convenience, and economy. With economic growth, governments undergo numerous challenges of evasion of taxes and dumping of some goods that are not customed hence, they end up being deprived of resources that generate income.

Excise taxation constitutes an important part of fiscal policy that can be engaged effectively by different countries, governments, and developing economies. According to Mashiri and Sebele-Mpofu (2017), most of the developing countries rely on excise taxes for their economic growth and generating wealth. In Kenya, excise taxes have continued to play an important role in raising additional government revenue. Excise taxes have always been useful whenever the government wants to raise additional revenue to contain the level of its budget deficit. Furthermore, most of the recent upward adjustments to tax rates outside the usual annual government budget have been on excisable products such as bottled water, soft drinks, cigarettes, alcohol, fuels, and motor vehicles (Ibraimi, 2019).

With a general reduction in import tariffs, governments are placing increasing importance on excise taxation as a means of generating a reliable stream of sustainable income (Scholes et al., 2019). Further, excise duty plays a greater role in broader government policies as a form of taxation that can be used to influence the consumption of certain products, generally on health or environmental protection grounds.

Ndung'u (2017) argued on factors affecting revenue collection. Ineffective tax structure and Corruption were identified to be the main challenge that inhibits revenue collection. The employees were also alleged to lack the requisite competencies for collecting revenue (Kariuki, 2019). Thus, the effective collection of excise duties is becoming a high national priority in many countries including Kenya. This study, therefore, seeks to assess factors affecting the collection of excise duty on cigarette importers in Kenya.

According to Preece (2017), the effectiveness of excise duty on various food and beverage products deemed luxuries or harmful to health and how they affect the financial performance of importers involved has been debated regularly in recent years. Andrejs et al. (2017) established the impact of changes in excise tax on the financial performance of alcoholic beverage manufacturing firms in Latvia. They revealed that changes in excise taxes do impact negatively on the financial performance of alcoholic beverage manufacturing firms in Latvia. According to Caitlan and Walbeek (2016), imposition and over-shifting of excise duty on the manufacturing sector have both positive and negative implications for manufacturing firms.

Linegar and Walbeek (2018) conducted a study to establish the effects of excise tax rates increase on the price of cigarettes in South Africa. Data on the excise tax rate per cigarette were obtained from Budget Reviews prepared by the National Treasury of South Africa. The study concluded that excise tax rates cause an increase in the prices of cigarettes and thus also have an impact on the producing firms. A study conducted by Munyoro, Chiinze, and Dzapasi (2016) aimed at establishing the effects of excise duty rate on the profitability and growth of small manufacturing firms in Zimbabwe. To achieve this, a qualitative 6 research methodology centered on the positivist philosophy was adopted. The research design involved a case study approach where data was obtained through a self-administered questionnaire. The study findings indicate that excise tax rates have a negative impact on the financial performance of small manufacturing firms in Zimbabwe.

Muriithi and Moyi (2017) indicate that excise taxes in Kenya are imposed under the Customs and Excise Act (Chapter 472). The administration of excise taxes, therefore, is the responsibility of the Customs and Excise Department of the Kenya Revenue Authority. Kenya's main excisable commodities include soft drinks, alcoholic beverages, tobacco, fuel, and motor vehicles. Other excisable commodities are plastic bags and the importation of 4 second-hand computers. Excisable services mainly include mobile telephone services and gambling. Other than on motor vehicles, excise taxes on beer, cigarettes, and petroleum are currently charged on a specific basis, per volume or quantity. Characteristic of these commodities is that they have a low own-price elasticity of demand implying that their responsiveness to price change is low and hence minimum shifting of consumer purchases. It is these characteristics that make high excise tax rates applicable.

1.1 Problem Statement

Excise duty compliance remains low in many economies the world over, with revenue authorities failing to achieve their yearly targets (Dutkowsky, 2014). It is therefore important to educate taxpayers on their Excise duty obligations to have a fully functional tax system (Lloyd, 2015). Voluntary compliance can only be brought about by proper taxpayer education (Alm, 2018). Given how valuable excisable goods are, there exists an opportunity to smuggle the goods or use fake excise stamps and avoid paying any duty.

Tax plays an important role in the growth of any economy so tax evasion is harmful to the economy. Tax evasion hampers government revenue collection thus inefficiency in Government spending because it diminishes the capacity of the state to mobilize domestic revenues, resources that are needed for investments OECD (2016). Excise Duty is a charge on excisable goods and services. Some of the excisable goods include bottled water, juice, cigarettes, second-hand motor vehicles not to forget alcoholic beverages. Excise Duty compliance had remained low, contributing to only 15% of the total revenue collected in Kenya.

The collection of Domestic Excise Duty in the financial year 2021/2022 was Ksh.66,259 million a performance rate of 91.4% compared to a target of Ksh.74,533 million falling short of the target by Ksh 8,274 million (KRA, 2022). In the financial year 2022/2023, the set target was Kshs.79,522 million, yet KRA only collected Kshs.68,124 million again falling short of the target by Ksh 11,398 million (KRA, 2023) This raised a concern, especially on cigarettes excise duty which has been declining over the years. For instance, in the year 2020, the revenue was 12,221.16 million, further, in the year 2021, the revenue was 11,759.14 million, and lastly, in the year 2022, the revenue was 11,757.73 million (Economic Survey, 2023).

The effect of non-compliance is giving the government a hard time in performing its obligations such as offering services and infrastructure development. This trend clearly shows that there is a need for the government and the tax authority to review its efforts to foster compliance among the taxpayers to be able to meet its revenue targets. This study therefore sought to investigate the effect of system automation on excise duty compliance among cigarette importers in Kenya.

1.2 Research Hypothesis

H_{01}: System automation has no significant effect on excise duty compliance among cigarette importers in Kenya.

2.0 Literature Review

2.1 Theoretical Review

The diffusion of innovations theory was developed by Rogers (1962). The theory explains the passage of a new idea through stages of adoption by different people who participate in or begin using the new idea. The main people in the diffusion of innovations theory are Innovators who are those who are open to risks and the first to try new ideas; Early adopters who are people who are interested in trying new technologies and establishing their utility in society; Early majority who are those who pave the way for the use of innovation within mainstream society and are part of the general population; Late majority who are people who follow the early majority into adopting the innovation as part of their daily life and are also part of the general population and; laggards who are people who lag behind the general population in adopting innovative products and new ideas.

Three stages of diffusion theory can be identified in the literature: dominant, technology organization-environment, and emergent. According to the dominant paradigm, the rate and pattern of the adoption and diffusion of ideas, practices, or objects through populations of potential adopters are affected by the characteristics of both the innovation and the adopter (Rogers, 1983). The multistage adoption process is affected by the actions of 'key adopters', the resulting profile is characterized by an S-shaped curve. Information systems (IS) researchers have applied the dominant paradigm to examine a variety of IT-based innovations, including electronic scanners in supermarket chains (Vagnani, Gatti & Proietti, 2019), spreadsheet software (Manalastas, 2018), IT outsourcing (Watson & Seidel, 2018).), and internet computing (Budu, 2020). Examining this literature, Xiaoyan (2022) concludes that firm-level effects are salient in explaining the adoption and diffusion of IS innovations.

Contributing to the diffusion of innovation literature, Rogers Singhal and Quinlan (2014) suggested that there are six phases for the diffusion of an innovation: recognition of a problem or need basic and applied research, development, commercialization, diffusion and adoption, and consequences. Given this explanation, Rogers emphasized that these six phases are somehow arbitrary, as they might not always occur in order, and some of them might be skipped in the case of particular innovations. An innovation development consists of all decisions and activities and their impacts that occur during these phases. This theory was used in this study to explain the variable system automation.

2.2 Empirical Review

A study was carried out in South Korea and Turkey on User evaluation of tax filing websites by Lee et al. (2018), to compare the design and the complexity of the websites and the ease with which taxpayers can file tax returns and queries on their tax status. Even though Turkey had a complex online system, Turkish users did not find the tax filing system difficult to use and that was attributable to the fact that they relied on accounting experts to do their tax returns online. On the other hand, the South Korean system was considered as being simple to use but few taxpayers were using it as expected. Putting in place an electronic tax filing system is one thing, but being able to be utilized by taxpayers is another thing. This affected the current study in a way that the tax website's ease of usage must be considered before such a system is rolled out to taxpayers. Lee et al. (2005), mentioned that other factors to be considered should also be the capacity of the system and the efficiency.

In Malaysia, Liu (2021) surveyed Integrating ICT Skills and tax software in tax education. The survey used tax practitioners as respondents and the study aimed at establishing the relevant skills required by taxpayers to fully use a tax online tax system. The study discovered three

skills that are needed by a taxpayer to interact well with technology-based tax systems namely, spreadsheet software, word-processing software, and email. The findings of this study have implications for the current study in that in analyzing the effectiveness of an electronic filing system, one must not ignore the mandatory skills that users of the system may need. If such skills are not considered, the intention of the system may not be realized as confirmed by Maede (2002). He pointed out that despite the heavy investment that the Malaysian tax authority put in a new online system, only 20% of the targeted taxpayers were able to use it after three years of implementation. This was majorly due to the absence of necessary user skills like computer literacy; however, taxpayer behavior also played a role.

Amitabh *et al.* (2009), carried out a study on the antecedents of paperless income tax filing by young professionals in India. The study was undertaken to find out how young Indian professionals would adopt or behave toward paperless or online filing of tax returns with the aim of enhancing compliance. The regression analysis that was carried out revealed that the antecedents of young Indian experts depended on the perceived ease of the tax system, personal creativeness in information technology, relative advantage, performance of filing service, and compatibility.

Mukuwa and Phiri (2019) investigated the effects of electronic services on revenue collection and tax compliance among Small and Medium Enterprises in urban Zambia. The study employed a descriptive research design where 400 questionnaires were administered to purposively sampled SMEs in the Copper Belt and Lusaka provinces. The data collected was analyzed using the social package for statistical sciences software (SPSS) descriptive and correlation analysis. The correlation analysis gave a positive correlation coefficient and a p-value which was deemed to be statistically significant.

Irefe-Esema and Akinmade (2020) examined the impact of tax automation on tax compliance in Nigeria. Adopting a structured in-depth interview, administered to tax professionals, comprising tax consultants and staff of the Nigerian Federal Inland Revenue Service (FIRS), the study found that automation significantly increased tax registration and payment compliance. However, filing and reporting compliance showed no positive response. The study highlighted the procedural effectiveness of tax automation in reducing evasion and corrupt practices among tax administrators, given the outright elimination of physical contact between tax officials and taxpayers. The study found that tax automation improved registration and payment compliance in Nigeria, but not the filing and reporting compliance due to the usage complexity of the electronic platform.

Nshimirimana and Twesigye (2022) assessed the impact of e-tax systems on tax compliance for Small and Medium Taxpayers in Rwanda. The study employed a descriptive-analytical design that combines qualitative and quantitative methods. The study population consisted of SMT reports from both Kigali and upcountry location/business location/tax centers in Rwanda totaling 231,088 taxpayers. A census approach was employed by the study. The study only used secondary data from the RRA database. The study concluded that the electronic filing system influences tax compliance.

In Kenya, especially in the Kenya Revenue Authority, different studies have been done on the the subject of technology and tax compliance with specific reference to tax filing Mahangila, (2017). Mahangila, (2017) did a study on the adoption of technology as a strategic tool for enhancing tax compliance in Kenya. The case study was based on Large Taxpayers which included importers with a turnover of Kshs. 750 million and above, or government ministries and corporations. The objective of the study was to evaluate the role Technology would play

in Kenya to enhance tax compliance among large taxpayers. The study found that in the fast-changing business world, technology has become part and parcel of any business growth.

3.0 Methodology

The study employed an explanatory research design that involved the use of structured questionnaires in collecting primary data. The target population was 21 cigarette importers in Kenya. The study issued 4 questionnaires each from the 21 different cigarette importers. Thus, making a total of 84 respondents who included accounts managers, accounts officers, operations managers, and operations officers. According to Mugenda and Mugenda (2008), a census is suitable for a small population usually less than 200 subjects. Since the study population was small, a census was used, and therefore, no sampling was required. Data was collected on a 5-point Likert scale questionnaire. Descriptive statistics were presented in tables and charts. Regression analysis was used to determine the effect of system automation on excise duty compliance among cigarette importers in Kenya.

4.0 Results and Discussion

4.1 Descriptive Analysis

4.1.1 System Automation

The descriptive statistics results for the variable system automation are presented in Table 1.

Table 1: Descriptive Statistics for System Automation

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Dev.
Payment of taxes through mobile money has improved my excise duty compliance	7.10%	17.10%	12.90%	21.40%	41.40%	3.73	1.4
Retrieval of tax records from itax is vital since it enables me to track tax returns and payments at low costs	12.90%	8.60%	12.90%	28.60%	37.10%	3.69	1.4
Online remittances of taxes are easy to track thus I can tell when taxes are due.	5.70%	14.30%	20.00%	28.60%	31.40%	3.66	1.2
The use of an internet-enabled tax system has reduced system automation hence motivating me to remain compliant	4.30%	8.60%	12.90%	28.60%	45.70%	4.03	1.2
I file my returns and make my payment of taxes due using the iTax system	1.40%	4.30%	20.00%	47.10%	27.10%	3.94	0.9

The descriptive analysis results provided in Table 1 revealed that the majority of the respondents agreed that payment of taxes through mobile money has improved their excise duty compliance (mean =3.73, standard deviation=1.4). The descriptive statistics also showed that the majority of the respondents agreed that retrieval of tax records from itax is vital since it enables them to track tax returns and payments at low costs (Mean =3.69, standard deviation =1.4). Further, according to the results of descriptive analysis, the majority of the respondents affirmed that online remittances of taxes are easy to track thus they can tell when taxes are due (mean =3.66, standard deviation=1.2). Furthermore, the results showed that the majority of the respondents agreed that the use of an internet-enabled tax system has reduced system automation hence motivating them to remain compliant (mean=4.03, standard deviation=1.2). Finally, the majority of the respondents agreed that they file returns and make payments of taxes using the iTax system (mean =3,94, standard deviation, 0.9). The findings imply that system automation is critical in enhancing excise duty compliance.

4.1.2 Excise Duty Compliance

The descriptive statistics results for the dependent variable excise duty compliance are presented in Table 2.

Table 2: Descriptive Statistics for Excise Duty Compliance

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Dev.
The business files its tax returns on time	4.30%	5.70%	12.90%	32.90%	44.30%	4.07	1.09
I have registered for excise duty tax compliance obligation	2.90%	7.10%	12.90%	41.40%	35.70%	4	1.02
I pay the tax liability that arises from my excise duty tax obligation without failure	0.00%	10.00%	7.10%	44.30%	38.60%	4.11	0.93
The tax system in place motivates me to voluntarily comply with tax obligation	5.70%	8.60%	7.10%	42.90%	35.70%	3.94	1.14

From the descriptive analysis results provided in Table 2, the majority of the respondents agreed that the business files its tax returns on time (mean =4.07, standard deviation=1.09). The descriptive statistics also showed that the majority of the respondents agreed that they have registered for excise duty tax compliance obligation (Mean =4.0, standard deviation =1.02). Further, according to the results of descriptive analysis, the majority of the respondents affirmed that they pay the tax liability that arises from their excise duty tax obligation without failure (mean =4.11, standard deviation=0.93). Finally, descriptive statistics revealed that the majority of the respondents agreed that the tax system in place motivates them to voluntarily comply with tax obligations (mean =3.94, standard deviation=1.14).

4.2 Regression Results

Regression was conducted to establish the effect of system automation on excise duty compliance.

Table 3: Regression of Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	**Std. Error**	**Beta**		
(Constant)	0.623	0.309		2.018	0.048
System Automation	0.165	0.061	0.215	2.697	0.009

The coefficient for the variable system automation was 0.215 and the p-value was 0.009 which was significant at 95% confidence level. This means that there is a positive and significant relationship between system automation and excise duty tax compliance. Hence, a rise in system automation by one unit would lead to a rise in excise duty tax compliance by 0.215. Based on the findings, the null hypothesis that system automation has no significant effect on excise duty compliance among cigarette importers in Kenya was rejected.

4.3 Discussion of Findings

The results of regression analysis revealed that system automation and excise duty tax compliance have a positive and significant relationship. This was also supported by the results of correlation which showed a positive and significant correlation. Therefore, if the automation of systems is scaled up, the excise duty tax compliance will also go up. Thus, the use of e-filing and e-payment by taxpayers helps them improve on the compliance of excise duty tax. This will lead to an increment in excise duty tax compliance.

These findings relate to what Mukuwa and Phiri (2019) found that the effects of electronic services on revenue collection and tax compliance are positive and statistically significant. The findings were also in line with those of Irefe-Esema and Akinmade (2020) who found that tax automation improved registration and payment compliance. Further, the findings were in line with the findings by Nshimirimana and Twesigye (2022) who concluded that the electronic filing system influences tax compliance.

5.0 Conclusion

The study concluded that system automation has a positive and significant effect on excise duty tax compliance. This is due to the ease of filing and payment of the excise duty tax that comes with system automation. System automation enables taxpayers to track tax returns and payments at a low cost. It also enables them to access information easily on when taxes are due. This makes the taxpayers to be more compliant with the excise duty tax.

6.0 Recommendations

The study recommends that the management of KRA should come up with measures that will lead to an increment in system automation for registration, filing, and payment of excise duty tax. The findings that system automation has a positive and significant effect on excise duty tax compliance also serve to further the diffusions of innovations theory which explains the passage of a new idea through stages of adoption by different people who participate in or begin using the new idea.

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