

Effects of Automation of Revenue Collection on the Performance of County Government: A Case Study of Trans Nzoia, County Government. Kenya

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Abstract

There is an increasing need by the government to collect much revenue by way of taxes to face the increasing financial expenditures budgeted by the country. The study aimed at assessing the impact of automation of revenue collection process on organizational performance, a case study of Trans Nzoia County. The objective of the study were to determine the effect of communication and the performance of Trans Nzoia county government. The design of this research was a descriptive survey research. The population for this study composed of 7 top level managers, 15 Accountant and 40 Revenue collectors. Stratified proportionate random sampling technique was used to select the sample of 62 respondents. The study used a semi structured self-administered questionnaire to collect data from the respondents. Quantitative data was analyzed by descriptive analysis using SPSS and presented in form of frequency tables. Content analysis was used for the qualitative data and then presented in prose. The study also conducted a regression analysis to establish the relationship between variables. The study concluded that online process of automation of revenue collection processes influence performance in Trans Nzoia county government office to a great extent. The study further concludes that automation of revenue collection processes offers great deal of effective management; The study concludes that online payment process of automation of revenue collection processes influence performance in Trans Nzoia county government office to a great extent. Further, the study concludes that time saving, compliance with government rules, controlled cross-border flow of goods, revenue payment channels and that collection costs influence performance in Trans Nzoia county government office to a great extent. The study also concludes that online response process of automation of revenue collection processes influence performance in Trans Nzoia county government office to a great extent. As well, the study established that risk management, tax data entry and that feedback influence performance in their office. From the findings, the study recommends that automation of the revenue management process should be improved to enhance efficiency in the revenue collection process. The county should maximize employee's multi-dimensional abilities for better performance and hence improve revenue collection. The study further established that reliable online communication influences performance in the Trans Nzoia county government office. As a result, this study recommends that the administration at the County offices invest heavily in communication especially online communication amongst members. This will help to attain maximum possible benefits of online receipting process. The study therefore recommends that the County should make a full migration to online payment process of all large transactions.

Keywords: Communication, Automation of Revenue Collection, Performance

1.0 Introduction

Technology adoption is key in improving the efficiency and effectiveness in revenue mobilization. No doubt, the traditional kinds of paper forms always will be an essential part of the tax administration system (UNCTAD, 2008). Through technology adoption, a tax collection agency will be able to meet their revenue collection targets, as there will be less tax avoidance and evasions. Technology in the tax framework falls under the Public Administration part and its target is to enhance the productivity and viability both at national and local level. Electronic revenue collection in developing countries has gained increasing prominence in the policy debate recently. For instance Nisar (2013) argued that recent trends in public taxation stress the need of developing a system of tax assessment and collection that involves internet services. Several factors explain this, including the potential benefits of taxation for state building; independence from foreign aid; the fiscal effects of trade liberalization; the financial and debt crisis in the "West"; and the acute financial needs of developing countries. Governments in developing countries face great challenges in collecting tax revenues, which result in a gap between what they could collect and what they actually collect. Automation of revenue collection system involves investing in modern technologies for example: ICT in order to upgrade the revenue system to achieve integration and information sharing so as to enhance efficiency and effectiveness of the system. All Sectors of the County should put in place an effective and efficient revenue collection system in monitoring framework that ensures adequate supervision of the budgeted programs and project activities to enhance accountability and absorption of resources (Amin, 2013). Automation of revenue collection systems and structures is instrumental in improving and simplifying administration of taxation through utilizing modern technologies for example ICT. In view of the above, Panday

(2006) carried out an empirical study whose main goal was to establish the influence of adoption of technology on revenue mobilization in India. He used regression analysis among a random sample of 20 local governments in the country. The results of the study revealed that for government to compare in execution with the development and desires of its constituents, it should significantly build its financial profundity without causing expensive repeating overheads. Panday (2006), in his study on use of technology on revenue in Malaysia collections using 120 questionnaires distributed to employees of the country revenue. He further noted that technology adoption through systems automation, have been seen to be fit for acquainting bigger efficiencies with accumulation of street parking fees that can enhance the income. Implementing technical arrangements towards the vital objectives for the government is a key stride towards guaranteeing effectiveness in the collection of street parking fees.

According to Pariwat & Hataiseere (2004) for the achievement of effective and efficient retail payment systems in Thailand, the following considerations that shape the choice payment method for consumers and businesses should be taken into account; the convenience, reliability and security of the payment method, the quality services, involving such features as the speed with which payment are processed; the level and structure of fees charged by financial institutions; taste and demographic; and technological advances which have improved the speed, convenience and flexibility of different payment systems. Automation of tax payment was first coined in US. Australia is among the countries that had implemented the system in the management of their municipalities (Turner et al, 2004). However, the purpose of the tax strategy in Turkey is to simplify tax laws and regulations and to harmonize tax law with European Union law. The development and utilization of modern technology in revenue mobilization has become a critical feature of every country particularly developing countries. This is as a result of the numerous usefulness modern technology offers in the development of municipalities.

Wasilewski (2000) studied the economic development and taxation system by comparing the case of Brazil and Japan. Japans experience demonstrated that a country does not need to postpone a real change in the tax structure until it achieves a high stage of development. Rather, a modern system can stimulate economic growth and enhance the domestic market. According to a study conducted in Ghana by Gidisu (2012) on the automation system procedure of the Ghana revenue authority on the effectiveness of revenue collection, Ghana Revenue Authority (GRA) adopted the UNCTAD developed Automated System for Customs Data and Management, which is fully integrated and covers the complete tax clearance process. The system handles customs declarations, accounting procedures, transit and other suspense procedures, generation of trade data that can be used for statistical and economic analysis.

According to Zhou & Madhikeni, (2013), the adoption of technology on online receipting process in Zimbabwe has showed a positive impact on organization performance in developed countries. Compared to the traditional receipting process, an online receipting is a value-added service that allows a reliable online communication between the sender and the recipients. A certified receipting process has to guarantee the following aspects. First, the validity of the origin and the receipt exchange must not be denied and both the sender and Impeding Mechanisms for Adopting a New Technology the recipient receive a confirmation in case the receipt is delivered successfully or if the delivery fails (Zhou & Madhikeni, 2013).

In Uganda Nkote and Luwugge (2010) did a study on Automation and customs tax administration. The results suggest a positive correlation of automation and the cost of tax administration, automation and effectiveness of revenue collection while automation was negatively and significantly related with tax clearance time. The paper makes significant empirical contribution to analyzing tax automation and administration cost, time efficiency and effectiveness of revenue collection

In Kenya, Otieno, Oginda, Obura, Aila, Ojera, & Siringi, (2013) study found that there is a relationship between Information Systems (IS) and both efficiency and effectiveness in revenue collection, there is a strong positive relationship between Internal Control Systems and revenue collection. However, resistance to change by the council staff was derailing the full implementation of IS. The study is useful to the present study for full integration of IS, and more specifically e-payment system, in revenue collection. Another study by Kinyanjui and Kahonge (2013) in Kenya revealed that the use of e-payment by mobile phone based technology in mobile parking increased parking fees collection. It recommended for development of an application to control traffic flow, allocation and availability of parking space within the streets of Nairobi but failed to handle the penalty payment mechanism, an issues the present study has to handle carefully. Muema, Kyambo. Kirichu, & Senagi,(2014) study was vocal in agitating for e-payment in Nairobi County and the parking industry using mobile parking management system but the study was cognizant of the barriers which could be overcome. The study did not give the specific mechanisms of overcoming these barriers, which the current study will do. The study by Nyongesa (2014) found that the use of automation of revenue collection system would widely increase the revenue collection but it was not clear how the revenue collection would be influence by e-payment. In fact the study recommends that the County Government of Mombasa needs to automate its revenue collection without specifying the system to use.

The enactment and adoption of Constitution of Kenya 2010 saw the devolvement of several public services to the County Governments (Rok, 2010), including revenue collection by these governments to finance their operations and/or functions (Ndunda et al., 2015). The County Governments get their revenue from taxation such

as, permit fees, cess, license fees, parking fees and other sources (Odd-Helge, 2006). When the County Governments fail to optimally collect requisite revenues, the public will negatively be affected by being denied vital services, a challenge that would drastically affect the devolution process (Fjeldstad & Heggstad, 2012). On the contrary, a sound revenue system for devolved governments sets the pace for the success of fiscal decentralization (Bird, 2010), since it is the avenue for administrative accountability by empowering communities. According to Muema et al. (2014), modern e-payment services, such as smart parking service, provide convenience in revenue collection through use of devices such as mobile devices in the parking industry, highly improve revenue collection performance and gain a competitive edge. (Wang & Wenbo, 2013). However, there is a rising challenge as far as adoption of e-payment adoption by County Governments in Kenya is concerned. Since this is a new technology in Kenya and there are limited studies and information about online banking in our country. Studies such as by; Muema et al. (2014); Kinyanjui and Kahonge (2013); Wahab (2012); Rocheleau and Wu (2005) have not significantly addressed the effect of e-payment system on revenue collection by the Nairobi County Government. This is to say that past studies have not sufficiently addressed the factors of e-payment system affecting revenue collection by the Nairobi County Government. It is in this light that this study sought to address the automation of revenue collection in Trans Nzoia County and how it has improved the performance of the county as it filled the existing knowledge gap, in an effort to recommend on ways to fully adopt technology in revenue collection. The study was guided by the following objective; to determine the effects of communication on the performance of County Government of Trans Nzoia.

2.0 Effect of Communication on County Government Performance

Automation of tax collection allows tax data entry, automated processing, computation and analysis as well as automatic production of tax reports and feedback required for control and risk management purposes (Holniker, 2005). According to Holniker (2005), automation of tax collection includes developing powered computer program to carry out tax assessments and computations; and to determine tax dues at high levels of speed and accuracy hence ensuring quick response to the recipient (Guido, 2007). Automation argues Katsuya-Takii (2003) is a catalyst and stimulus for customs modernization. Baurer (2005) argues that in carrying out their responsibilities, tax administrations can also create problems for the business community when they impose burdensome reporting and record keeping requirements; conduct excessive inspections and audits; fail to deal with corrupt tax administration employees; and fail to provide transparency in tax administration operations. This type of environment harms individual businesses and the overall economy. As a result, many in the business community react by taking steps which adversely affect the tax base. This typically includes underreporting profits and turnover; underreporting employee wages and by creating phantom employees. A significant number of businesses also fail to register or file tax declarations. This only increases the burden on those tax payers who try to comply with the tax law and discourages their future compliance. The result is a vicious cycle which tends to preserve the status quo

Customs automation is usually part of an overall tax administration reform (Rao, 2000) and modernization program. Online response of automation tax collection is the processing of customs documents by the computer-assisted treatment of electronically transmitted information. Swindle (2007) adds payment and accounting, to register and account for payments by importers and exporters; and risk management, to select those consignments bearing higher risks, concealing duty and tax noncompliance, illegal importation of drugs or materials aimed for terrorist activities. Notwithstanding the foregoing benefits, Ward and Dietmar (2007) noted that automating customs administration has cost implications, which vary from country to country and according to the initial situation of the customs administration in terms of available ICT, human expertise and the structure of tax administration (Peled, 2008).

Abiola and Asiweh (2012) did a study on the impact of tax administration on government revenue in a developing economy using a case study of Nigeria.

The success Booze et al. (2007) argues, depends on strong political will and support for the automation/modernization processes; appropriate legal instruments, a transparent and collaborative approach by stakeholders, cooperation between the public and private sectors; and a phased implementation of the customs automation systems (Gutierrez, 2008). The study by Ndunda et al. (2015) revealed that level of tax payment (compliance) affected optimal revenue collection but failed to show how use of modern collection system such as e-payment would influence revenue collection performance. Kinuthia and Akinnusi (2014) study found that telecommunications infrastructure barrier was one of barriers to effectiveness of e-commerce but fell short of showing the impact of e-commerce on revenue collection. The study by Nyongesa (2014) found that the use of automation of revenue collection system would widely increase the revenue collection but it was not clear how the revenue collection would be influence by e-payment. In fact the study recommends that the County Government of Mombasa needs to automate its revenue collection without specifying the system to use.

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The study by Rocheleau and Wu (2005) found governments can affect usage rates of e-payment by providing incentives to employ online transactions and/or penalties for making payment by manual methods but did not show the effectiveness of the e-payments in risk management. A study by Moulder (2005) showed that most county governments had plans to offer online payment of utility bills, fees and fines. Norris & Moon (2005) point there is interest by governments to use e-payment systems. The study by Kaburia (2004) found out that lack of suitable e-Payment alternatives was a critical challenge to the growth of e-commerce in Kenya. Perlman (2001) established that the use of third party vendors has allowed counties without large ICT resources to implement an online ticket-paying system. Although the studies reviewed provided very useful information to the present study on e-payment and revenue collection, very few have addressed the efficiency of revenue collection online receipting process, online payment process and online response in Trans Nzoia County. This is knowledge that necessitated the need for this study.

3.0 Method

The design of this research was descriptive survey research. The population for this study was composed of the Trans Nzoia county government staff. The study was conducted from; Senior managers 25, 25 Department heads of which at least 5 section head and 800 Revenue clerk wITH A sAmPLE sIzE Of 100 RespoNdENTS. The study used a semi structured self-administered questionnaire to collect data from the top level managers and accountants. The study conducted a pre-testing of the research instrument before administering it, in an attempt to test the reliability and validity of the research tool. Data from questionnaire was coded and logged in the computer using Statistical Package for Social Science (SPSS V 20.0). The collected data was analyzed using both quantitative and qualitative data analysis methods.

4.0 Discussions

The study sought to determine the effects of communication on the performance of county government of TransNzoia. The results were presented as follows in table 4.1 below;

Table 4:1 Effects of communication on the performance of County Government of TransNzoia

Statement	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
Automation of revenue collection processes increases transparency in the assessment of export and import duties and taxes	1.4	25.7	1.4	58.6	12.9
Automation of revenue collection processes ads payment and accounting , to register and accounting, to register and account for payments by importers and exporters	0	34.3	1.5	47.1	17.1
Automation of revenue collection processes reduces substantially the customs clearance time, and predictability	50.1	2.9	1.4	0	45.6
direct and indirect reduction in administration cost and increased effectiveness in collection of customs revenue	32	28	20	8	12
Automating customs administration leads to increases collection of duties and taxes	23	29	8	10	30
Automation of revenue collection processes reduces physical examination of goods and enhances separation of payment of duties and taxes from physical clearance of goods and faster electronic lodgments of customs declaration	33	36	10	11	10

The findings showed that majority 58.6percent of respondents disagreed, 12.9percent strongly disagreed, and 1.4 percent were neutral, 25.7percent agreed while 1.4 strongly agreed automation of revenue collection processes increases transparency in the assessment of export and import duties and taxes. This implies that majority 71.5percent disagreed that automation of revenue collection processes increases transparency in the assessment of

export and import duties and taxes. This implies that automation of revenue collection processes does not increase transparency in the assessment of export and import duties and taxes. According to Pariwat & Hataiseere (2004) for the achievement of effective and efficient retail payment systems in Thailand, the following considerations that shape the choice payment method for consumers and businesses should be taken into account; the convenience, reliability and security of the payment method, the quality services, involving such features as the speed with which payment are processed; the level and structure of fees charged by financial institutions; taste and demographic; and technological advances which have improved the speed, convenience and flexibility of different payment systems.

The results of the study sought to establish whether automation of revenue collection processes ads payment and accounting to register and account for payments by importers and exporters. The results showed that majority 47.1percent disagreed while 17.1percent strongly disagreed, 34.3 percent agreed and 1.5 percent was neutral. This implied that majority 64.2 percent of the respondents disagreed on the statement that automation of revenue collection processes ads payment and accounting to register and account for payments by importers and exporters.

The findings established on whether automation of revenue collection processes reduces substantially the customs clearance time, and predictability. Majority 50.1percent agreed while 2.9percent strongly agreed, 45.6 percent disagreed and 1.4percentwas neutral. This gave a total of 53 percent of respondents who agreed meaning that majority agreed that automation of revenue collection processes reduces substantially the customs clearance time, and predictability.

The findings established on whether direct and indirect reduction in administration cost and increased effectiveness in collection of customs revenue. 32 percent of the respondent strongly agreed to the statement, 28percent agreed. 20 percent of the respondents were neutral, 8 percent disagreed while 12 percent of the respondents strongly disagreed to the statement that direct and indirect reduction in administration cost and increased effectiveness in collection of customs revenue. This implied that majority of respondents who agreed meaning that direct and indirect reduction in administration cost and increased effectiveness in collection of customs revenue. Further, the findings established on whether automating customs administration leads to increases collection of duties and taxes. 23 percent of the respondent strongly agreed to the statement, 29percent agreed. 8 percent of the respondents were neutral, 10 percent disagreed while 30 percent of the respondents strongly disagreed to the statement that automating customs administration leads to increases collection of duties and taxes. This implied that majority of respondents who agreed meaning that automating customs administration leads to increases collection of duties and taxes.

Finally when the respondents asked whether automation of revenue collection processes reduces physical examination of goods and enhances separation of payment of duties and taxes from physical clearance of goods and faster electronic lodgments of customs declaration, 33percent of the respondents strongly agreed to the statement. 36 percent of the respondent agreed, 10 percent of the respondents were neutral on the statement, 11 percent of the respondents disagreed while 10 percent of the respondents strongly disagreed to the statement. This findings implied that majority of the respondents agreed that automation of revenue collection processes reduces physical examination of goods and enhances separation of payment of duties and taxes from physical clearance of goods and faster electronic lodgment of customs declaration

4.1 The Relationship between communication on the performance of County Government of TransNzoia

The communication variable and performance of County Government of TransNzoia variable were subjected to a Pearson's Product Moment Correlation Coefficient test at 0.05 level of significance. The results of this correlation test are shown in Table 4.2.

Table 4.2.: Results of Pearson's Product Moment Correlation test of communication on the performance of County Government of Trans Nzoia

		performance of County Government
	Pearson's Correlation	0.428**
Communication	Sig. (2 -tailed)	.000
	N	270

** Correlation significant at the 0.05 level (2-tailed)

4.3. Test of hypothesis three

Hypothesis three of the study sought to establish the relationship between communication on the performance of County Government of Trans Nzoia. The hypothesis stated that:

H₀₃: There is no statistically significant relationship between communication on the performance of County Government of Trans Nzoia

The results of the correlation test run at 95% confidence level indicated that communication have a small positive influence on the performance of County Government ($r = 0.428$, $p = 0.000$). The null hypothesis was therefore not supported and the alternative hypothesis supported that communication has a positive influence on

the performance of County Government of Trans Nzoia.

4.4 The Multiple Linear Regression Analysis of communication on the performance of County Government of Trans Nzoia

The multiple linear regression was used because it enabled the researcher to predict the relationship between the independent variable and the dependent variable. The Beta weightings (β) gives an indication of how many standard deviation units will be changed in the dependent variable for each standard deviation unit change in each of the independent variables. In a multiple linear regression analysis, there are several independent variables and one dependent variable and for this study there were three independent variable and one dependent variable. The multiple linear regression analysis was used since its techniques of analysis are suitable in finding out the influence some factors when reliability of the model is of concern. The summary is as shown in Table 4.3 below.

Table 4. 3: Multiple Linear Regression Analysis Results on performance of County Government

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig.
1	.918 ^a	.842	.834	1.0741	.000

Predictors: (Constant), Communication

As shown from the table, the R value was 0.918. R is a measure of correlation between the observed value and the predicted value of the dependent variable. Thus, 0.918 is the correlation coefficient between performance of County Government as reported by the respondents and the levels as would be predicted by the predictor variables. The adjusted R value is high (0.834) indicating that 83.4% of the variance in the dependent variable is explained by the independent variables in the study. The adjusted R-square value indicates that this model is able to predict up to 83.4% of the variables in performance of County Government of Trans Nzoia. This implies that up to 83.4% of the variation in dependent variable in the area under study is accounted for by the independent variables.

Table 4. 4: The Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	52.996	4.003		12.976	.000
Communication	0.1970	0.041	0.263	3.915	.000

a. Predictors: (Constant), communication

b. Dependent Variable: performance of County Government.

From table 4.4, The communication with a standardized Beta coefficient of 0.263, an absolute t-value of 3.915 and $p < 0.05$ also had the positive effect on performance of County Government of Trans Nzoia.

5.0 Conclusions and Recommendations

The study aimed at Analyzing effects of automation of revenue collection on the performance of Trans Nzoia County government. The study was guided by the following objective: to determine the effects of communication on the performance of County Government of Trans Nzoia. A number of conclusions arose from the study in line with the objectives of the study.

Based on the findings, In seeking to determine the effects of communication on the performance of County Government of Trans Nzoia, the results indicated that a moderately positive and significant relationship exists between service delivery on the performance of the county Government ($r = 0.501$, $p = 0.000$) tested at 95% confidence level. The null hypothesis was therefore not supported and the alternative hypothesis supported that, service delivery positively and significantly affected the performance of the county Government. Service delivery has significant influence on performance of the county Government. The results of the correlation test run at 95% confidence level indicated that communication have a small positive influence on the performance of County Government ($r = 0.428$, $p = 0.000$). The null hypothesis was therefore not supported and the alternative hypothesis supported that communication has a positive influence on the performance of County Government of Trans Nzoia.

The following recommendations are made in relation to the findings of this study: First, the county government should make fully adoption of technology on online receipting process in order to safes cost, enhance efficiency and realize a positive impact on organization performance in the county. The county government of Trans Nzoia should automation of revenue collection processes offers a value-added service that allows a reliable and timely online communication between the sender and the recipients. According to Pariwat & Hataiseere (2004) for the achievement of effective and efficient retail payment systems in Thailand, the following considerations that shape the choice payment method for consumers and businesses should be taken into account; the convenience,

reliability and security of the payment method, the quality services, involving such features as the speed with which payment are processed; the level and structure of fees charged by financial institutions; taste and demographic; and technological advances which have improved the speed, convenience and flexibility of different payment systems. The county government of Trans Nzoia should train their staff for policy formulation and implementation towards security and sustainable e-government in Kenya and for effectiveness of customs clearance procedures. Automation of revenue collection processes should be embraced for controls cross-boarder flow of goods, ensuring compliance with government rules and regulations.

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