Electronic Revenue Collection System for Improving Local Government Authorities Revenue in Tanzania: A Case of Moshi Municipal Council, Kilimanjaro Region

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ABSTRACT

The aim of the study was to evaluate whether electronic revenue collection systems improves Municipal revenues. The study specifically aimed to determine the effective sources of revenues; to compare the revenue collection before and after the introduction of electronic revenues collection system; and to analyze the challenges encountered with the use of electronic revenue collection system. A descriptive research design was adopted in conducting the study. The study sample was 79 respondents whereby simple random sampling was employed. Data were collected using questionnaires to provide quantitative data. Data was analyzed using descriptive statistics and Pearson correlation coefficient. The findings revealed that the major sources of revenues to Municipal Council are Guest house/hotel levy, Land rent fees, Markets fees, Intoxicating liquor licenses, Abattoirs charges, Revenue from agricultural and forestry products and Meat inspection charges. The study finding revealed that electronic revenue collection system improves Municipal revenue collection in the financial year 2015/2016 compare to that of 2014/2015 revenues. The major challenges encountered the e-payment is access to internet and lack of civic education to revenues payers on the use of online payments. The study concludes that online revenue collection system gives accurate revenue computations to a very great extent and the revenue payers is satisfied with the electronic revenues collection service which assured no queuew is experienced on revenue due dates. The study recommends to the Municipal officials that it's high time for Moshi Municipal Council to put much efforts to encourage revenue payers to adopt electronic revenue collection system as the findings shows it has reduced queuing and increased revenue. Also civic education should be provided to other revenue payers who did not registered in order to be aware and help the Municipal to improve their revenues collection status.

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Introduction

Background to the Study
Globally, all developed and developing countries need to collect revenues for several reasons, such as to finance developmental activities, to meet their day-to-day expenses related to maintenance of a free and fair society, to control the economy through fiscal measures, and to a certain extent, to change the economic behavior of people [1].

Electronic payment system history began in 1986 as a small test program in which only five taxpayers in United States of America agreed to participate. Since then, electronic tax system has grown to become commonplace, serving millions of taxpayers every year in United States of America. In Europe, Italy was the first to introduce the electronic taxes collection system, following Poland, Bulgaria and Albania Cobham 2010.

Revenue collection is very important for every government in the world as it enables the government to acquire assets which are not liable to debt and which the government uses to develop its economy [2]. More importantly, high revenue collection performance is vital to promote efficiency in the service delivery and economic development at the counties. However, studies and other journal publication have shown that most governments face serious challenges in their revenue collection performance where governments are not able to collect sufficient funds to cover their budget expectations. For years, revenue collectors have not been channeling all the amount of money they collect to the County Treasury [2]. For instance, revenue collection staff may collude with the revenue payers to avoid paying the prescribed charges and instead bribe the collector to shield against paying the correct amount to the local government authority. The net effect could be a bigger loss, which would deter county economic development , growth , and improved service delivery [3-6]. To eliminate or significantly reduce corruption, achieve the county financial objective and simplify payments Abor 2004, the Electronic Payment (E-Payment) has been introduced [7].

Electronic revenue collection in developing countries has gained increasing prominence in the policy debate recently. For instance 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 nation 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. In Sub Saharan African countries, specifically Kenya, Zimbabwe, Ethiopia and Uganda after faced analogy challenges of taxes collection system they agreed to adopted the digital system of taxes collection in 2000s. The country of Kenya was the first to introduce electronic taxes collection system under Kenya Revenue Authority in 2013 and witnesses improvement in revenues collection [8].

In Tanzania, the Government faces great challenges in collecting tax revenues, which result in a gap between what they could collect and what they actually collect. Following that challenges the electronic tax collection system was established effectively which is assumed as a tax payment methods that are more efficient so as they can reduce wastage URT 2017.

The process of cashless transactions plays a big role in ensuring that the Local Governments Authority collects enough revenue to fund its projects. The analogy system was used to collect revenues before 1986. Online revenues collection systems are rapidly replacing paper-based revenue reporting systems. Promising many advantages over the traditional method of hard copy tax filing, these systems promise faster process, lower costs and increased efficiency [9]. With this background information, the researchers therefore motivated to conduct a study on the effects of the electronic revenue collection system in Local Government Authorities more specifically on the area of efficient revenue collection.

Statement of the Problem
The local government authorities in Tanzania revenues collection system over the years has been conducted manually with appreciable wastage of fiscal resources which affects the national development sectors in health services, education and other public infrastructures and increases dependency from central government. This form of revenue collection system has its many problems like revenue evasion and avoidance, errors in revenue payer payment and tax return details occasioned by manual processing of returns and long queues experienced when filing revenue returns at Moshi Municipal Council offices, leading to high financial losses to the government hence low revenue collections. This was witnessed to most of local government authorities faced with low revenue collection due to ineffective revenue collection system. Gideon and wrote that an efficient national revenue collection system is the hub of every public administration system and the cornerstone of sound fiscal management. It enables governments to finance budget deficits from domestic sources, thus dissuading recourse to off- shore sourcing [10].

The local government authorities recently have invested heavily in electronic revenue collection system. The system is meant to enhance revenue, reduce paper work and long queues during the time of filing revenue returns. Despite the government efforts on electronic revenues collection to improve local government authority's revenues, the researchers has not sure, whether the revenues collected differs before and after the introduction of electronic system looking on revenue collection indicators. It is in this light that this study seeks to carry out a research on the effect of electronic revenue collection system on Moshi Municipal Council revenue collection improvement.

Objectives of the Study
The research was guided with the following specific objectives namely to determine the effective sources of Moshi Municipal council revenue using electronic revenue collection system; to compare whether electronic revenue collection system will significantly increase the Municipal Council revenues collection before and after the introduction of electronic revenue collection system, and to analyses challenges of using electronic revenue collection system in the study area.

Theoretical Foundation of the Study
Revenue Diversification Theory (RDT)
The study was guided with revenue diversification theory developed by [11]. The theory focuses on whether a more diversified, well-balanced revenue portfolio increases financial stability for county by reducing revenue volatility. There is a positive effect of the strategies adopted in raising revenues on finances. Commercial and market-oriented revenue strategies have been found to have a positive effect on revenue collection performance. Further the theory suggest that revenue diversification, i.e. an equal balance between multiple incomes sources in the revenue portfolio of nonprofit organizations usually lead to increased financial stability.

The theory implies that an organization adopting e-payments would adequately improve the revenue collection performance for the country. However, if the motivation for adoption of the e-payments system is solely external, the organization implementing the system would meet the pressures and might not improve revenue collection [12]. The present study find this theory very beneficial in that the theory revenue collection performance measures are used as the indicators to assess the success of the local government in achieving stated strategies, objectives and critical success factors.

Research Methods
Description of the Study Area
The study was conducted in Moshi Municipal Council, which is located in Kilimanjaro region. The reason for its choice is Moshi Municipal Council is among other Municipal Councils which used paper/receipt books to collect tax since 1986. As until 2016 when all Municipal Councils including Moshi started to use electronic revenue collection system. Following the introduction of electronic revenue system there is no information on whether the revenue collection was increased or otherwise. With this reasons, the researcher motivated to examine whether or not the system brought about tangible revenue collection.

Research Design
The study adopted descriptive research design since it describes the state of affairs as it is. The study aimed at describing the state of affairs of e-payments on revenue collection performance before and after the introduction of electronic payment and therefore descriptive research, design was considered as the most appropriate for this study.

Population, Sample and Sampling Technique
The target population of this study comprised of 380 staff of Moshi Municipal Council includes heads of departments, Revenues accountants, Ward Revenue collectors and Agents of revenue collection. The sample size of this study was 79 respondents determined by Slovene's 2012. Simple random sampling was adopted in this study. The respondents chosen from the random numbers obtained from the list of tax collectors and tax collection

agents from Moshi Municipal Council. Simple random sampling is a procedure in which all the individuals in the defined population have an equal chance of being selected as a sample within a population. In this case, the study had chosen this technique because it eliminates the deliberate bias.

Data and Data Collection Tool/Method
Data in this study includes both primary and secondary data collected based on study objectives. Primary data obtained from the respondents who are Moshi Municipal Council departmental heads, Revenue accountants (district treasury and staff from revenue sections), Ward Revenue collectors and Agents of revenue collection.

The study employed structured questionnaires as a tool for gathering relevant primary information from respondents on the revenue collection system of which open and closed ended questions was designed. Also structured and semi structured interviews method was conducted to the Municipal Council financial officials at the department of finance. The Revenue collectors were interviewed on the trend of revenue collection, challenges and benefits of electronic revenues collection system in Moshi Municipal Council. Interview enables the researchers to probe the effects of the electronic tax revenues collection. Through personal interview, the researchers get an opportunity to probe beyond the given answers for additional information.

Further, secondary data were collected from documents using desk checking method. The main source of secondary information was financial year reports and information from internal sources. The study collected data on the budget to estimates in FY 2014/2015 as well as budget to estimates in FY 2015/2016 from all departments of Moshi Municipal Council. Also, the study collected data on revenue obtained in FY 2014/2015 as well as revenue collected in FY 2015/2016 for each of departments in Moshi Municipal Council. The data representing the electronic revenue collection system payment was calculated as the difference between level of compliance to budget estimates in FY 2015-2016 and level of compliance to budget estimates in FY 2014-2015 for each department. The data was summar3ized into the main expenditure and data collection vote heads.

Data Analysis
Quantitative data on determining the effective sources of revenue for Municipal Council was analysed using multiple response analysis. On comparing the revenue collection status before and after introduction of electronic revenue collection system Pearson coefficient correlation analysis was performed to compare electronic revenue collection system using financial year revenues collection between 2014/15 and 2015/16 and challenges facing the use of electronic system was analyzed through descriptive statistic by employing frequency and percentage under the aid of Statistical Package for Social Sciences (SPSS) computer software.

Findings and Discussion
Determine Effective Sources of Revenues to Municipal Council using Electronic Revenue Collection System
Sources of revenue in each Municipal Council differs which depend on the prevailing socio-economic activities. The findings from Table-1 indicated effective sources of revenues to Moshi Municipal Council discussed here under.

Table 1: Effective Sources of Revenues In Moshi Municipal Council

Sources of revenues	Respondents responses (n=79)	%
Property taxes	29	6.5%
Guest house/hotel levy	58	13.0%
Abattoirs	48	10.7%
Guest house/hotel levy	9	2.0%
Business licenses	1	0.2%
Intoxicating Liquor licenses	54	12.1%
Meat inspection charges	48	10.7%
Fines and penalties	8	1.8%
Market fees	35	7.8%
Land rent fee Service Levy	56	12.5%
Revenue from agricultural and forestry products	44	9.8%
Tender fees	13	2.9%

The findings presented on Table 1 shows that the effective sources of revenue to Moshi Municipal Council are Guest house/hotel levy, Land rent fees, Markets fees, Intoxicating liquor licenses, Abattoirs, Revenue from agricultural and forestry products and Meat inspection charges. The finding revealed that 58 (13.0%) of respondents declared that fees from Guest house/hotel levy is the major source of revenue in the Municipal, following fees from Land rent fees which responded by 56 (12.5%) respondents, the third effective source of revenue is Markets fees as it was responded by 54(12.1%), and the fourth effective source of revenue in Moshi Municipal Council is Intoxicating Liquor licenses, the fifth source of revenue is Abattoirs, the sixth source of revenue is Revenue from agricultural and forestry products and Meat inspection charges be the seventh in revenue contribution to the Municipal as it was responded by 48(10.7%). The finding implies that Moshi Municipal Council depend much on the described sources of revenues, even though the remaining sources are also contributes to Municipal revenues but at the low extent as it was presented in Table-1.

Revenue Collection Performance before and after the Introduction of Electronic Revenue Collection System

The study compared the revenue collection before the introduction of e-payment and after the introduction of e-payment. The study sought to establish whether there was significant change in the performance of revenue collection due to e-payment system. This was in an effort to establish whether the dependent variable, e-payment affected the performance of revenue collection in Moshi Municipal Council. The study analyzed the performance of revenue collection data for each financial year (FY); 2014/2015 and 2015/2016. The study also obtained the performance of revenue collection, expressed as percentage for each year where the FY performance was expressed as level of compliance to budget estimates = Revenue collection for the FY*100/ the Budget Estimates for the FY. This was later expressed a percentage to simplify for interpretation and the results were recorded in Table-2.

Revenue sources	Revenue FY 2015-2016%	Revenue FY2014-2015%	Changes in revenue %
Property taxes	98.01	94.25	3.76
Building materials extraction license fee	98.23	98.58	-0.35
Building permits fees	73.72	65.13	8.59
Guest house/ hotel levy	98.87	18.56	80.31
Meat inspection charges	95.87	63.82	32.04
Business licenses	98.68	72.13	26.56
Intoxicating liquor licenses	135.36	96.17	39.19
Fines and penalties	97.12	107.95	-10.83
Land rent fees	108.74	54.43	54.31
Revenue from agricultural and forestry products	96.23	62.87	33.36
Markets fees	100.41	49.10	51.31
Service levy	90.16	69.45	20.71
Bus stand and car parking fees	95.48	91.91	3.57
Permit fees for billboards and posters of hoarding	77.04	66.83	10.22
Abattoirs	99.85	64.28	35.58
Clean water service fees	99.28	75.65	23.63
AVERAGE	**97.69**	**71.94**	**25.74**

Table 2: Comparison on Revenue Collection for FY 2014/15 and FY 2015/16.

Table-2 showed that on the average performance of revenue collection was higher in FY 2015-16 than in FY 2014-15. In FY 2015-16, the average performance of revenue, collection was 97.69% and in FY 2014-15 the average performance of revenue collection was 71.94%. From these results, it was also shown the performance of revenue collection increased by 25.74% for the FY 2014/2015 to FY 2015/2016. Most departments showed higher performance of revenue collection in FY 2015/2016 than in FY 2014/2015.

The results in Table-2 indicate that the e-revenue collection system considerably influenced the revenue collection performance in Moshi Municipal Council between the FY 2015/2016 and 2014/2015. However, some revenue source performed poorly after introduction of electronic revenue collection system, a situation attributable to the e-payment system not being implemented in some areas. The most pronounced application of e-payment in the Moshi Municipal Council was in car parking though under performed.

The findings from correlation Analysis revealed that e- payment system affected revenue collection by the Moshi Municipal Council. The assessed whether that there was a statistically significant relationship between e- payment system and the performance of revenue collection used refer the Table-3

		Performance of revenue collection	Budget compliance FY 2015-16	Budget compliance FY 2014-15
Performance of Revenue Collection	Pearson Correlation	1	.765	-.026**
	Sig. (1-tailed)			
	N	18	18	18
Budget Compliance FY 2015-2016	Pearson Correlation	.765	1	.130
	Sig. (1-tailed)	.046		.303
	N	18	18	18
Budget Compliance FY 2014 -2015	Pearson Correlation	-.026**	.130	1
	Sig. (1-tailed)	.000	.303	
	N	18	18	18

Correlation is significant at the 0.01 level (1-tailed).
Table-3: Correlations statistics of independent and dependent variables.

The study analyzed the correlations as computed in Pearson correlation. The results in table 3 show that under the Pearson correlation, all the Independent Variables; level of compliance to budget estimates in FY 2015/2016 and level of compliance to budget estimates in FY 2014/2015 were statically significant to financial performance. From the results; level of compliance to budget estimates in FY 2015/2016 had the highest relationship (r = .756, p =.046) and then level of compliance to budget estimates in FY 2014/2015 (r = .026, p =.000). For each Independent Variables (IV), the p-value was less than .05, in fact for each Independent Variables, p< .01<.05, this made the relationship very significant. The adoption of electronic revenue collection system was found to affect the revenue collection performance in Moshi Municipal Council, which was in agreement to study by Gupta (2000) and [13] revealed that level of tax payment (compliance) affected optimal revenue collection. The study by established a marginal relationship between tax compliance and revenue collection, which was true in the present study [13]. The findings in the current study which also agreed to those in which recommended for decentralized ICT based tax collection systems and offices in the Municipal Councils in adoption of differentiation strategies in revenue collection role[14].

Challenges of using the Electronic Revenue Collection System

Regarding the challenges that face the electronic systems at Moshi Municipal Council a total of 24(30.3%) of respondents agree that they feel uncomfortable using the electronic revenue collection system as compared to the old manual system. Another 32 (40.5%) respondents strongly agreed making it almost neck to neck. This can be attributed to presentation that computer illiteracy is the biggest challenge in using the electronic revenues collection system [15].

Argued that the basic prerequisites for implementing successful e-payment systems are: (1) a reliable and accessible internet service; (2) co-operative financial institutions; (3) an IT oriented public; and (4) adequate financing to set up the appropriate infrastructure in the revenues offices. The findings revealed that 36(45.5%) of the respondents argued that they are not obedient in electronic revenue payment due to unreliable and accessible internet services which in turns reduces the Municipal Council revenues collections [16].

The implementation process for electronic revenue collection systems begins with the development of a strategic business plan – documenting the ideas and actions, desired outcomes and the time frame for each component, taking into account the strengths and weaknesses of the revenues administration and environmental opportunities and threats. The findings revealed that 49(62.0%) of the respondents run their business without having strategic business plan which in turns to evade revenue payment. This is due to the fact that, the revenue payers have thought getting loss in their business and the only solution they thought is to evade on revenue payment to the Municipal Council which also reduce the revenues status.

Conclusion and Recommendation
Conclusion

The study concludes that respondents were aware of Moshi Municipal Council online revenues collection system services; that Municipal Council online services are reliable to a very great extent; that online revenue collection system gives accurate revenue computations to a very great extent; that online services are fully operational to a very great extent, that the respondent is satisfied that the electronic revenues collection service is accessible to a very great extent; and currently the electronic revenue collection system service is famous among revenues payers to a very great extent.

The study also concludes that stations experienced long queues during the period of submitting revenues returns; that online service can solve the problem of long queues experienced at Municipal council offices during the period of submitting revenues returns as there is a decline in the number of manual revenue returns; there is an increase in the number of newly online registered taxpayers; that registered taxpayers and no queue is experienced on revenue due dates.

The study further concludes that electronic filling of returns has enhanced revenue collection for them; that Increased Tax payments through computerized cash receipting system has enhanced revenue collection; that the online tax system is famous among taxpayers has enhanced revenue collection; that Electronic slip is generated online has enhanced revenue collection; that there is an increase in the number of tax returns filed online has enhanced revenue collection.

Therefore, the findings indicate that electronic revenue collection system has been affected upwards and Moshi Municipal Council workers are comfortable using the process as compared with the old manual one. The electronic system has also reduced corruption loopholes by making moist payment through mobile phones and submitting returns online. This is good for efficient revenue collection and good for faster accessibility of Municipal services for the tax payer without physically visiting Municipal Council offices. On the contrary, most tax payers complain of a difficult process, lack of electricity, internet and knowledge to access computers and related media in filing and paying their taxes. The Municipal Council has conducted little civic education to the people to train them on how to use the system leaving the job to individual tax payers who complain of lack of time and skills to do so.

Based on the study findings, this study revealed that the electronic revenue collection system performance in Moshi Municipal Council increased considerably after introduction of e- payment system in revenue collection. The adoption of e-payment makes the Moshi Municipal Council higher compliance to budget estimated, meaning that adoption of electronic revenue collection system has pronounced revenue collection performance in Moshi Municipal Council Moshi Municipal Council effect than non e-payment system. The study concludes that the adoption e- payment system positively influences the revenue collection performance in Moshi Municipal Council.

Recommendations

The study recommends that the Moshi Municipal Council should review its revenue collection standards and audit policies to ensure that all its wards, departments and other related units are compelled by regulations to adopt electronic payment and other ensure management of revenue collection system to lead to assurance total compliance to the budgets. There should be structured electronic revenue collection system adoption standards and structure in Moshi Municipal Council.

The free hand operated by the Municipal Council departments in revenue collection should be tightened to ensure that all sections, departments and other units have adopted electronic revenue collection systems. There should be clear regulation and policies governing adoption of e-payments systems. The Moshi Municipal Council should increase their public awareness campaigns to ensure that the consumers get the right information as pertains to e-payment revenue collection [17-20].

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