EFFICIENCY IN PROVISION OF PUBLIC GOODS AND SERVICES BY DEVOLVED SECTORS OF THARAKA NITHI COUNTY GOVERNMENT IN KENYA

Purity Kanja Kamiru

Master of Economics, Kenyatta University, Kenya

Dr. Shadrack Mwilaria

Department of Economic Theory, Kenyatta University, Kenya

ABSTRACT

A government of any country has a major role of making available public goods for its burgesses. There are however emerging Concerns about whether governments are really efficient as they carry out the task of providing public services to citizens. Investigating efficiency levels for a government is vital as it enables one to obtain useful information that can enable policy makers reduce possible inefficiencies. Different ways of reducing public expenditure include reducing the quantity of the goods supplied and by looking for other revenue sources. Countries also can try to lower public spending by minimizing inefficiencies. This study aimed at estimating the technical efficiency levels in provision of public goods and services by Tharaka Nithi County Government using stochastic frontier analysis. The study concentrated on four devolved sectors of Tharaka Nithi County; Agriculture, Health, Transport and Pre-primary education. These sectors are the most devolved and the major drivers of the county's economy. Data was collected from a sample of 86 sub locations. This sample was picked from 134 sub locations within the county by means of multi- stage sampling technique. In addition, the study compared efficiency levels across different devolved sectors of Tharaka Nithi County. Different studies related to efficiency of governments, both central and local, were reviewed. The study findings were that efficiency scores of the four sectors were very low, with none of them reaching 50%. Education sector was the most efficient with an efficiency score of 37.68%, followed by the transport sector with an efficiency score of 30.60%. Agricultural sector had an efficiency score of 27.83% while the health sector was the least efficient with a score of 18.52%. Different approaches of measuring efficiency are also looked at. The research methodology used was descriptive survey design where schedules were administered to the target population. This study faced the limitation of inadequate local empirical literature since not much has been done regarding efficiency of county governments in Kenya since devolution. This present study is cross-sectional in nature. Longitudinal studies can be done later so as to examine how efficiency changes with time.

Key Words: *public goods and services, devolved sectors, Tharaka Nithi, Kenya*

INTRODUCTION

Public goods and services are said to be non-excludable and non-rival in consumption. This means that once they are provided, it is not possible to prevent those that do not pay for the goods or services from consuming them, and that one consumer's use of the good does not diminish it for other users. They include roads, water, electricity, public health care, and street lights. It is the responsibility of governments to provide public utilities to citizens, since their characteristics of non-rival in consumption and non-excludability offer no incentive to private investors to produce

them. (Ghatak, 1998) observes that development of a country depends on efficiency of her government at a greater extent.

Government sectors operating at low levels of efficiency provide greater quantity and quality of public goods than those operating at high efficiency levels. A sector operating at high efficiency levels uses its means more efficiently. Governments, however, especially the centralized government systems have greatly failed in regard to operating efficiently. These governments have ended up providing low levels of public goods at very high costs. (Kaul, 2013) argues that the current long strip of worldwide difficulties indicate that public utilities are not sufficiently availed.

(Kaul, 2013) argues that planners ought to make policies that are sensitive of the destitute members of the society. The welfare of the poor is highly influenced by the actions of the government. High income- earning households can always look for alternative ways of surviving in case of a fall in the level of public goods and services provided by the government, unlike the poor. The rich can substitute public goods for private goods as they can afford to purchase the private goods. For example, they can construct their own roads leading to their homes where public roads are missing, or private swimming pools where temperatures are high. The low- income individuals cannot afford to substitute public goods for private goods (Kaul, 2013). Unavailability of public goods worsens the situation for the already poor.

It was as a result of these failures that the 2010 Kenyan constitution provided for decentralization. Promotion of efficiency in producing public goods was among the arguments for devolution in Kenya. By decentralized provision of public goods, it was believed that people's needs could be met more easily since county governments can identify people's needs with ease. (Ghai, 2008) observes that proponents of centralization may argue that a centralized system is more efficient than a devolved system as it promotes equitable distribution and even development by collecting and distributing revenue without middle levels of government, but the idea is not applicable in Kenya where prior to devolution, there was discrimination against ethnic lines.

According to Kimenyi and Mwangi (2005), unlike with centralization where money for development purposes would diffuse from the national government through more hierarchies of administration, money under decentralization go straight to grass roots. According to (Ghai, 2008) Decentralization would build on pressure on the government to look at the welfare of people at the grass roots. (World Bank, 2011) found out that unfairness in distribution of opportunities is high in Kenya, signaling complete inability of the Kenyan government to carry out re-distribution of resources appropriately. (Njuguna, 2016) found out that devolution influences community development as it improved living standards by improving accessibility to services such as schools, clean water and health care. According to the 2010 Kenyan Constitution Fourth Schedule, the most devolved sectors are Agriculture, Health, County Transport and Pre-primary education. This study will focus on these most devolved sectors that are also the main drivers of any economy.

STATEMENT OF THE PROBLEM

A government that operates at an efficient level while creating public goods and services is a good government, since this efficiency is essential in minimizing costs to citizens as well as ensuring maximum welfare gains to the residents of a country. In Kenya however, a key challenge to the government remains that of ensuring efficiency. This is evident by huge stocks of external debts as well as uneven development within the country. Devolution was believed to improve efficiency in service delivery due to local knowledge. Before the new constitution that was passed in 2010, Kenya was characterized by uneven development and marginalization of some regions within the country. The efforts to reform Kenyan constitution were triggered by the necessity to correct the deficiencies with the central governance in the country. The defective governance framework in Kenya was altered by the Constitution of Kenya, 2010, through reforms that led to devolution of power through creation of two levels of government as outlined in Chapter eleven. This constitution led to creation of 47 county governments. The most decentralized sectors are Agriculture, Health, Transport and Education. Functions were also distributed between these two levels of governments as outlined by the Fourth Schedule of Kenya Constitution, 2010 (Muriu, et al. 2013). In Kenya, however, county governments are still grappling with challenges of provision of public goods and services even after decentralization, which was aimed at making delivery of services to citizens efficient. Recently, there are developing interest under devolution, about whether counties are efficiently utilizing financial resources (Kimenyi and Mwangi, 2005). Reports by Kenya Institute for Public Policy Research and Analysis illuminate various areas of the economy that have not yet streamlined themselves and are still experiencing difficulties in their performance. The report in 2013 for example, indicates that in the health sector, there was an increase in maternal mortality from 414 in 2003 to 488 deaths per 100,000 live births in 2009. The report of 2017 indicates that in the agricultural sector, the deficit for cereals in 2016 was 61,200 tons higher than that of 2012. A research by Transparency International (2013) observed that 41% of Kenyan citizens were dissatisfied with the way county governments were delivering services. A report by Omondi and Chege (2019) observed that in Tharaka Nithi County, with the agricultural sector, households' food stocks diminished in June 2018 forcing families to rely on markets for food, which resulted to increased food prices. The proportion of children under five years at risk of malnutrition increased to 2.6 percent in January, 2019 from 1.5 percent in December, 2018. This study therefore aims at determining the of technical efficiency score in provision of various public goods and services by Tharaka Nithi County Government.

GENERAL OBJECTIVE

The general objective of this study is to determine the levels of economic efficiency in provision of public goods and services, and to compare efficiency levels across different devolved sectors of Tharaka Nithi County.

EMPIRICAL LITERATURE

Deller et al. (1988) investigated efficiency in construction of roads in America. They estimated cost functions by assuming their input to be financial expenditure and output was measured by size of the road constructed. The study find out that there were high levels of inefficiencies in the construction of roads in the rural areas. While this study concentrated on production of rural roads alone, the current study will look at different outputs produced by transport sector which will include roads produced and maintained as well as production of streetlights.

Deller et al. (1992) were concerned with finding out whether there existed technical efficiency during maintenance of roads in the United States. The study applied Stochastic Frontier Analysis to come up with the findings that road maintenance costs are very high, and the increase in the costs is accelerated by inefficiencies. The current study will also apply Stochastic Frontier Analysis, but will instead examine efficiency of the whole transport sector of a devolved unit. Chu et al. (1992) investigated efficiency of bus companies in the United States and found out that the agencies operated at very high inefficiency levels. The study had employed the means of Data Envelopment Analysis. The current study will however apply stochastic frontier analysis and examine whether such inefficiencies still exist.

A study by Hjalmarsson and Odeck (1996) investigated efficiency of tractors that construct roads in Norway by application of Data Envelopment Analysis. The study used driver's wage and fuel as input indicators and total transport distance and time as output indicators. The findings were that efficiency levels were between 0.80 and 0.90. The study also found out that efficiency is neither influenced brand nor age of trucks. The current study deviates from this one, as it will only consider financial expenditure as input by the transport sector.

The study of Perelman and Pestieau (1988) concentrated on determinants of efficiency on the railway transport. It found out that when external factors are included in the model, the rank of levels of efficiency changed. With the current study, railway transport is not available in the study area, but instead efficiency in road transport will be investigated. A study by Afonso and St. Aubyn (2005, 2006) was interested in comparing efficiency of education sectors of different countries. By use of non-parametric approaches, they came up with the findings that different countries had different levels of efficiency. The current study will however use stochastic frontier analysis and will be concerned with efficiency of county government in provision of pre-primary education.

Deller and Rudnicki (1992) and Cooper and Cohn (1997) did a study on technical efficiency of schools and determinants of efficiency in Maine and South Carolina. They used stochastic frontier analysis to determine technical efficiency levels. They found out that the levels of efficiency varied with the characteristics of schools. These studies were done in a developed country which embraced devolution earlier, unlike the current study that looks at efficiency of a county government in Kenya, which has just embraced devolution recently.

Ray (1991), Ray and Mukeherjee (1988), Dumcombe et al. (1977) and Ruggiero (1996) were concerned with investigation of the factors determining technical efficiency for schools in Connecticut. The findings of these studies were that efficiency changed with changes in the economic and environmental traits of states. The current study will not look at determinants of efficiency, but will measure efficiency levels of the Tharaka Nithi County government in provision of pre-primary education.

Besent et al. (1982) found out that educational institutions in Houston had substantial inefficiencies while Fare et al (1989) found that above 50 per cent of the institutions were operating efficiently in Missouri. Both studies used non-parametric approaches of analysis. Banker et al. (2004) investigated efficiency of schools in Texas. They used expenditure as an input and the number of learners as output indicator. They found out that technical inefficiency raised across years while allocative inefficiency remained relatively stable. While the current study will also use expenditure as input or cost, it will apply stochastic frontier method of analysis.

Grosskopt et al. (2006) investigated efficiency of health sectors, and found out that first world countries had high inefficiency levels compared to the second and third world countries. The current study will deviate from this one because it will apply stochastic frontier analysis, and unlike this study that compared efficiency across countries, the current study will compare efficiency across counties of the same country. Kooreman (1994) uses Data Envelopment Analysis to show that quality is negatively related to efficiency. This is explained by the fact that high quality requires more resource use. More resource use means high cost and therefore translates to inefficiency. The current study will apply stochastic frontier method of analysis.

Toren (1994) argued that efficiency is not dependent on level of profit that firms make. The current study will as well apply stochastic method of analysis, but will not examine effects of profits on efficiency. Woodbury and Dollery (2004) and Haug (2008) analyzed the efficiency of water supply utilities together with determinants of efficiency in Australia and Germany respectively. Woodbury and Dollery (2004) used total cost for water supply as input and annual water consumption, quality index and number of assessments as output. The current study will examine overall efficiency of a county health sector and not of a single activity, like water supply. These two studies employed a second-stage regression and found that external factors have do not affect efficiency.

RESEARCH METHODOLOGY

Research Design

Research design shows the structure of research and shows how different areas will work together in addressing the research problem as well as communicating the key features. This study assumes a descriptive research design. Stochastic Frontier Analysis was used to measure efficiency scores of the four selected devolved sectors in provision of public goods and services.

Theoretical Model

The one stage approach proposed by Coelli (1995) and Belotti et al (2012) was used to estimate the inefficiency parameter and the stochastic parameter of the models in stata package. This estimation method has previously been used by Ezeh et al (2012), Rahman et al (2012) and Tijjani (2006). To achieve both the objectives of determining efficiency levels of different devolved sectors and comparing efficiency levels across sectors, the Cobb-Douglas function was applied as it is simple and easy to estimate and interpret. The four devolved sectors that were investigated are agriculture, pre-primary education, health and transport. For each sector, input comprised of the amount of money utilized, while outputs varied across sectors. The general stochastic cost frontier was presented as:

$$y = \beta'x + v + u \dots\dots\dots\dots\dots 1$$

Where: y = noticed outcome; β'x + v = ideal outcome, in this case it represents minimum cost; β'x is the deterministic part of the frontier and v- N(0, d^2v) is the stochastic part.

In this case, u is the inefficiency.

Presented in the Cobb-Douglas trans log form, the stochastic frontier becomes:

$$Ln\ qi\ =\ xi'\beta\ +\ \epsilon i \dots\dots\dots\dots\dots 2$$

Where: qi is output or cost of a decision-making unit, i, $x_{i's}$ are logs of output for a cost model; The error term ϵ_i comprises two components which are the positive inefficiency component $\mu_i \geq 0$ and the random error term u that is normally distributed N (0, d_v^2).

The Cobb-Douglas stochastic frontier takes the form:

$$Ln\ q_i\ =\ \beta_0\ +\ \beta_i\ ln\ x_i\ +\ v_i\ +\ u_i \dots\dots\dots\dots\dots 3$$

The equation is then estimated using Maximum Likelihood Estimation, to get efficiency scores. The model for agricultural sector was specified as follows, and addressed the first objective:

$$lnY_a = \alpha_0 + \alpha_1 lnx_{1a} + \alpha_2 lnx_{2a} + \alpha_3 lnx_{3a} + v_a + u_a \dots\dots\dots\dots\dots 4$$

Where: Ya is expenditure by the agricultural sector; α_0 is the slope coefficient; X_{1a} is the number of irrigation projects; $X_{2a\ is}$ the number of livestock sale yards; X_{3a} is the number of agricultural extension officers; V_a is the technical inefficiency component; U_a is the random error term

In the pre-primary education sector, the model that handled the second objective was as follows:

$$lnY_e = \beta_0 + \beta_1 lnx_{1e} + \beta_2 lnx_{2e} + \beta_3 lnx_{3e} + Ve + \boldsymbol{Ue} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.5$$

Where: Y_e is the amount of money spent in the pre-primary education sector; β_0 is the slope coefficient; X_{1e} is the number of ECDE teachers; X_{2e} is the number of pre-primary classrooms; X_{3e} is the number of village polytechnics

The third objective was achieved by the following model for health sector:

$$lnY_h = \lambda_0 + \lambda_1 \, lnx_{1h} + \lambda_2 \, lnx_{2h} + \lambda_3 \, lnx_{3h} + Vh + \boldsymbol{Uh} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots...6$$

Where: Y_h is expenditure by the health sector; X_{1h} is the number of health facilities; X_{2h} is the number of health workers; X_{3h} is the number of health institutions

The fourth objective involved solving the below model for transport sector:

$$lnY_t = ln\gamma_0 + \gamma_1 \, lnx_{1t} + 2lnx_{2t} + 3lnx_{3t} + Vt + Ut \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.7$$

Where: Y_t is expenditure by transport sector; X_{1t} is the number of new roads constructed; X_{2t} is roads maintained; X_{3t} is the number of streetlights

Study Area and Target Population

The study area was Tharaka Nithi County, which comprises of three constituencies, Tharaka, Maara and Chuka/Igambang'ombe. Each constituency comprises five wards, making a total of 15 wards in the county. There are 53 locations and 134 sub-locations in the county. As indicated in the background, people's expectation for economic prosperity with introduction of county governments will be achieved if only counties perform efficiently.

Sample Size and Sampling Techniques

The sampling frame comprised all the 134 sub-locations in Tharaka Nithi County. The sample was calculated by the following formula by Edriss:

$$n = \frac{z^2 \, p.q.N}{e^2(N-1)+z^2 \, .p.q} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.8$$

Where: n= size of the sample; Z=desired z-value yielding the desired degree of confidence; P= population proportion estimate; e= the absolute size of the error; q=1-p; N = size of the population.

In this study, N is 134 sub-locations; a p of 0.9 was used at 99% confidence interval, which yields a z-value of 2.58 and an allowable error of 0.05. This gives a sample size of 86 sub-locations.

Multi-stage sampling technique was used in selecting a sample of 86 sub-locations for this study. All the 3 constituencies were considered and wards within these constituencies were enlisted. A random sample of 10 wards was selected. All the locations within the selected ten wards were enlisted and a random sample of 40 locations was selected. All the sub-locations within the 40 selected locations were enlisted and a random sample of 86 sub-locations was selected. This constituted the sample. The four County Executive Officers in charge of health, agriculture, education and transport comprised the key informants, who were contacted to give information that sub-location heads may have difficulty finding such as concerning expenditures.

Data Type, Sources and Collection

Primary data was used for this study. The information was provided by assistant chiefs, who are the sub-locations heads. Schedules were administered to the respondents. The justification for choice of schedules is that it ensures a good response rate and that clarification can be sought from the researcher in case a respondent doesn't understand a question.

Data Analysis

The collected data was first entered and cleaned in Microsoft Access. Data was imported to Stata and analyzed by Maximum Likelihood Estimation. The unknown parameters of the stochastic frontier provision and the efficiency scores were estimated simultaneously.

RESEARCH RESULTS

Public sector across the world, faces numerous challenges in its attempts to operate with efficiency. Kenya has as well faced these challenges regardless of the several steps it has taken to address efficiency. The public sector has a great task of addressing these challenges sufficiently, so as to ensure that public funds are being utilized efficiently to provide public goods and services to citizens. In the efforts to improve efficiency in provision of public goods and services to all citizens even at the grassroots, Kenya embraced devolution in the year 2010.Spending at the counties was believed would address the real needs of the local citizens efficiently. These steps, however, have operated with their own challenges. These challenges have hence made efficient operation at the counties difficult. These challenges include procurement practices that are unfair, lack of transparency and accountability, lack of capacity and skills, resource optimization issues and lack of internal financial controls.

This study analyzed the performance of 4 devolved sectors of Tharaka Nithi County, which are agriculture, health, pre-primary education and transport. The sectors considered are the most devolved and the main drivers of any economy. Efficiency scores of the sectors were estimated and comparisons made. The study estimated stochastic cost frontier functions of Cobb-Douglas type, one for each sector. Financial expenditure was taken to be the cost, while outputs varied across the sectors since the sectors perform different development activities within the county. A sample of 86 out of 134 sub locations was selected.

The study found out that the mean technical efficiency of the four sectors was 28.66%, where education sector was the most efficient with an efficiency score of 37.68%, followed by the transport sector with an efficiency score of 30.60%. Agricultural sector had an efficiency score of 27.83% while the health sector was the least efficient with a score of 18.52%.

INFERENTIAL STATISTICS

Table 1: Estimation results for agricultural sector

Agriculture Expenditure	Coefficient	Std. Err	Z	P>Z
Market place	-0.1758476	0.904092*	-1.92	0.052
Irrigation project	1.21604	0.1550757***	7.82	0.000
Extension officer	-1.020244	0.1302521***	-7.83	0.000
Constant	30.0310267	14.20345***	0.00	0.000
lnsig2v	-10.46393	902.282	-0.01	0.991
lnsig2u	26.551	0.4447153	59.70	0.998

Number of observations=86; Log likelihood = -1209.446
***significant at 1%; **significant at 5% and *significant at 10%.

Table 1 shows the estimation results for a cost frontier of the Agricultural sector. Cross sectional data was used and Maximum Likelihood Estimation assumed half normal distribution of the inefficiency term. The log likelihood function for the model is 1209.446.The frontier is not devoid of technical inefficiency as the calculated likelihood ratio test statistic was found to be 314.8369.This value exceeds the critical value of 3.8415 at 5% significance level. This enables this study to reject the null hypothesis that inefficiency effects are absent in the frontier.

While all the output variables of the stochastic cost frontier model are statistically significant, it is only irrigation project that has a positive relationship with the sector's expenditure level. The coefficients of the market place and extension officer are negative. The result implies that there is a positive relationship between the total expenditure for the agricultural sector and outputs of the sector in terms of construction of boreholes for irrigation purposes. This result shows that by increasing expenditure for the agricultural sector, the county will not be interested in employing more extension officers but would instead dig more bores. This can be attributed to the fact that the county has not yet appreciated the contribution of extension services in promoting agriculture.

Table 2: Efficiency scores for the four sectors

Sector	Efficiency score	Rank
Agriculture	27.83%	3
Health	18.52%	4
Education	37.68%	1
Transport	30.60%	2

Table 2 presents efficiency scores for the four sectors considered, which are agriculture, health, education and transport. According to Jondrow et al. (1982) and Bauer (1987) it is easy to determine the inefficiency term from the composed error term, when the conditional distribution of u_i given ϵ_i is cleared stated. Therefore, this information will help in generating point estimates of the efficiency term for each sector, while the mean of this distribution will serve as a point estimator for u_i. For a half-normal distribution of the inefficiency term, the conditional distributions are given by:

$$E\,(ui/\,\epsilon i)\; =\; \text{d} * [\phi\,(\epsilon i\lambda/\text{d})\,/\,1 - \Phi\,(-\epsilon i\lambda/\text{d})\, +\, (\epsilon i\lambda/\text{d})]$$

Hence, with the point estimates u_i, technical inefficiency estimates for each sector were obtained via the equation $TEi\; =\; exp\,(-ui)$. To get the efficiency estimate therefore, the inefficiency score as a percentage is subtracted from 100%. From table 2 above, Education sector was ranked the most efficient with an efficiency score of 37.67%, followed by the transport sector with an efficiency score of 30.60%. Agricultural sector had an efficiency score of 27.83% while the health sector was the least efficient with a score of 18.52%. All the four sectors had efficiency scores below 50%, which indicates that all the sectors of Tharaka Nithi County have got ample spaces to improve on their performance. It means that spending at the county does not match the output in terms of public goods and services provision.

When the constitution of Kenya, 2010 brought about reforms in the public sector, it was believed that by formation of counties, efficiency in service delivery to citizens would be improved. The results here, however, suggest that the County governments have so far not made much effort in addressing service provision at the grass roots. A concern thus emerges that devolution reforms may not yet have started impacting positively on service delivery. The anticipated positive results on the general public may not be forthcoming if public sector management is obsessed with prioritizing the interests of the government regardless of whether or not the interests of the government are in contrary with those of the citizens (Ghobadian et al., 2009).

Performance of Tharaka Nithi County Government is felt in some parts of the county. Citizens that had never seen any road constructed or any health facility before emergence of county governments can now access these services easily, thanks to devolution. The low levels of efficiency, however, for example with the health sector, suggest that a lot has to be done especially on expenditure management. In order to improve efficiency, it should be possible to complete a project with the least possible amount of spending.

The low efficiency scores can be explained by a variety issues such as procurement processes that are not competitive, deficiencies with the internal control systems on management of expenditure, lack of transparency and accountability, failure to optimize resource utilization and compliance issues. When Personnel are appointed to perform tasks for which they lack the professionalism or have limited experience, wastage of public funds will ensue. About compliance issues, when there are no consequences to be faced by anyone who contravenes the set regulations are, constant non-

compliance will occur leading to wastage of public resources. Corruption and embezzlement of funds may also be a cause of the low efficiency scores.

CONCLUSION

This study concludes that inefficiency in provision of public goods and services is a great challenge with the county governments in Kenya. While provision of these goods and services at the county level enables reaching the citizens at the grassroots, expenditure management needs to be looked at because a lot of financial resources are being used to complete a few or no projects. This suggests that public funds are not being managed in an efficient manner. Most of the funds are used to pay staff salaries and allowances, alongside other recurrent expenditures. This limits the number of long-term projects such as irrigation schemes and health facilities.

Efficiency is one of the components of a vibrant economy that cannot be overlooked. In its conclusion, this study observes that policies should be put in place to minimize inefficiency in operation of county governments so as to ensure that the funds are utilized in a way that is beneficial to the citizens.

RECOMMENDATIONS

County governments have been revealed to have inefficiencies in their operations. This is depicted by the huge amounts of money spent to complete a single project, resulting to very low efficiency scores as shown in table 4.7. Public funds are not being optimally utilized, and thus leads to understatement of the output. This study recommends that all sectors of a county government look for avenues to facilitate utilization of the available funds optimally such as by increasing monitoring and evaluation of projects and subjecting employees to performance contracting. This will compel the staff to improve their performance in providing services to the county residents.

The study also recommends that personnel who are academically and professionally qualified be placed in charge of expenditure management .This will ensure that expenditure plans are being performed from an experienced point of view, unlike when politicians are assigned this role.

This study further recommends that there be clear regulations on county financial management and that those that contravene the regulations be made to face stern consequences. This will discourage selfish employees from failing to comply with the regulations, and thus avoid wastage of the public funds.

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