

# Determinants of Own Source Revenue Mobilisation by Counties in Kenya

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**Abstract:** *The capacity of county governments to raise their own revenue is important for their sustainability and wellbeing. In the financial year 2014/15, county governments' own revenues were 33 percent off-target. I studied the effects of urbanisation, intergovernmental grants, poverty and land area on county own revenue collection. I found that except for land area, all the independent variables were found to be statistically significant which led to the rejection of the null hypotheses. The study recommends that; county governments concentrate on developing urban areas, intergovernmental grants be increased and lowering of poverty be made a priority.*

**Keywords:** Fiscal Decentralization, Fiscal capacity, Own revenue, Urbanisation, Intergovernmental grants

## 1. Introduction

In a highly decentralized system, local governments have considerable power to mobilize resources, through taxing authorities accompanied by strong tax bases. Fiscal decentralization generally refers to the devolution of taxing and spending powers from the control of central government authorities to government authorities at sub-national levels (regional, provincial, municipal, county etc) [1], [2].

Since 1980s, fiscal decentralization has been at the centre stage of policy experiments among governments of developing and transition economies in Latin America, Africa and Asia. For example, world's two largest countries, India and China, have carried out the decentralization program which helped these countries to achieve phenomenal industrial growth in the last two decades. These potential benefits of decentralization have attracted a large number of countries to see the process as a way to make government more responsive and efficient [3], [4].

These changes have taken special significance in many developing and transitional countries where centralized systems were perceived to have failed to deliver improved general welfare. The promise of political, administrative and fiscal decentralization is that it can strengthen democratic representative institutions, increase the overall efficiency of the public sector and lead to improved social and economic welfare for countries that decide to adopt it [4]. It is further argued that the one critical assumption in expecting these benefits is that decentralized governments will generally be more accountable and responsive to citizens' needs and preferences than centralized governments were in the past [4]. At the same time, there is general agreement among experts in decentralized that the increased accountability associated with decentralization can only be assured when sub-national governments have an adequate level of autonomy and discretion in raising their own revenues.

The decentralization of powers must be accompanied by sufficient revenue to ensure that the new responsibilities of local government are adequately financed. Decisions are required as to which revenue sources should be available for the exclusive use of local governments and which should be

subject to inter-governmental sharing. Revenues through grants and other intergovernmental transfers play a large role in the finances of local governments in most countries. However, to ensure that fiscal autonomy of a local government is real, it is essential that a significant percentage of the total revenue of the local government is regarded as its 'own revenue,' i.e. under its control. Local taxes are an important source of locally derived revenues [5].

The promulgation of the constitution of Kenya in August 2010 collapsed the 175 local authorities (LAs) in Kenya into 47 county governments. The sources of revenue for the county is the same as for the defunct LAs as provided for in Article 209 (3) of the constitution of Kenya 2010. In this regard, the constitution explicitly assigns property rates and entertainment taxes to the county level, in addition to a number of non-tax revenues (fees and charges). While further tax sources may be assigned to the county level by national legislation, all major revenue sources (the value added tax, income tax, and excise taxes) are exclusively assigned to national level.

## 2. Literature Survey

### 2.1 Effects of urbanisation on own source revenue mobilisation

Urbanization and growth go together: no country has ever reached middle income status without a significant population shift into cities [6]. It is further argued that urbanization is necessary to sustain (though not necessarily drive) growth in developing countries and it yields other benefits as well [6]. But it is not painless or always welcomed by policymakers or the general public. Managing urbanization is an important part of nurturing growth; neglecting cities— even in countries in which the level of urbanization is low—can impose heavy costs. In terms of development and growth theory, urbanization occupies a puzzling position. On the one hand, it is recognized as fundamental to the multidimensional structural transformation that low-income rural societies undergo to modernize and to join the ranks of middle- and high-income countries. Some models, explicitly consider how urbanization affects the growth process (primarily through

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the enhanced flow of ideas and knowledge attributable to agglomeration in cities [6].

Widespread urbanization is a recent phenomenon. In 1900 just 15 per cent of the world's population lived in cities. The 20th century transformed this picture, as the pace of urban population growth accelerated very rapidly in about 1950. Sixty years later, it is estimated that half of the world's people lives in cities. UN projections predict that urban populations in developing countries will be growing by more than 65 million people a year between 2000 and 2030. Urbanization has long been viewed with ambivalence. A 2007 UN publication on population reveals deep scepticism about urbanization among policymakers in developing countries. The most intense concerns and most activist policies are in the least developed countries. Arthur Lewis [6] expressed concerns about the costs of urbanization but saw it as unavoidable. "Urbanization would not be inevitable if we could spread industry around the countryside instead of concentrating it in towns, but this is easier said than done. . . . One can work hard at establishing rural industries, but except in police states, this is bound to be limited." Lewis's sense of inevitability is borne out by experience: very few countries have reached income levels of \$10,000 per capita before reaching about 60 per cent urbanization. A simple bivariate regression explains at least 55 per cent of variability across countries, suggesting that urbanization is a very strong indicator of all aspects of productivity growth over the long run, although clearly this simple statistical relation does not establish causality.

## **2.2 Effects of Intergovernmental grants on own source revenue mobilisation**

A positive and significant relationship was found between the intergovernmental grants and revenue effort in collecting property rates in South Africa [7]. One explanation could be that LAs are using this funding to improve their billing and collection efforts. The intergovernmental grants are important fiscal instruments that aim at fiscal equalization throughout jurisdictions as long as a certain minimum level of local public goods is assured. Redistributive intergovernmental grants channel funds from relatively wealthy jurisdiction to poorer ones. The intergovernmental grants can vary according to the recipient's degree of autonomy to decide how to spend them.

The analysis of the system in Chile argues that the design of the intergovernmental grants requires defining a mechanism which distributes the resources and in the horizontal case, a contribution mechanism which indicates the jurisdictions that will provide the resources to others and the amount of other contributions [8]. The distribution of redistributive grants is often based on a formula that considers the fiscal need and fiscal capacity of each jurisdiction. Fiscal capacity is often measured by the collected own local revenue.

Intergovernmental grants may produce additional effects different to the desired ones. When sub-national governments are responsible for collecting own local revenue [8], the total amount of collected revenue depends mainly on the actions that they carry out for being more efficient in collecting taxes and for looking for alternatives

sources of revenue (i.e. fiscal effort); however, collecting own local revenue is costly for sub-national governments. Grants increase jurisdictions total revenue. Thus, an increase in grants received by an LA would decrease its collected local revenue, implying that local governments do not exploit all their fiscal capacity [8],[9].

The intergovernmental grants can vary according to the recipient's degree of autonomy to decide how to spend them. When sub national governments are responsible for collecting taxes, the total amount of collected revenue depends mainly on the actions that they carry out for being more efficient in collecting taxes and for looking for alternatives sources of revenue (i.e. fiscal effort); however, collecting revenue is costly for subnational governments. Grants increase jurisdictions total revenue, and, due to an income effect, they would exert less fiscal effort and they would collect less local revenue. Thus, an increase in grants received by a local government would decrease its collected local revenue, implying that local governments do not exploit all their fiscal capacity [8]. As in most countries intergovernmental grants represent a significant source of local revenue, it is important to know if not only do they achieve fiscal equalization across jurisdictions, but also if they cause a loss in efficiency.

However, there is empirical evidence that does not support this hypothesis; several papers have even found that local public spending increase by an amount equal or greater than the grant, or grants crowd in local government spending. The literature has called this empirical puzzle "Flypaper effect" because money "sticks where it hits" [8]. To understand this puzzle, several papers have argued different explanations [8]. On the one hand, it is considered a case of fiscal illusion, in which individuals confuse the average and marginal price effects of unconditional grants. Grants reduce the average price of public goods, and individuals base their decisions on this price rather than on the actual marginal tax price. On the other hand, several authors have argued that the flypaper effect is just a specification problem in the Bradford and Oates' model.

## **2.3 Effects of poverty on own source revenue mobilisation**

In Kenya, poverty is measured using estimated consumption expenditures. The Kenya Bureau of Statistics [10] defines poverty line is a threshold below which people are deemed poor. In 2005/06, the poverty line was estimated at Ksh1,562 and Ksh2,913 per adult equivalent per month for rural and urban households respectively. Nationally, 45.2 per cent of the population lives below the poverty line (2009 estimates), down from 46 per cent in 2005/06 [10].

Poverty compromises the market's access to skilled labour which is essential for production of needed goods and services. Poor people lack access to good health care, which presents challenges in workforce productivity. The economy also spends more on health care for people who can't afford it [11]. Further, poverty poses greater demands for the criminal justice system, which reduces productivity of those incarcerated and results in property damage for those affected. Most people living in poverty lack access to a good education. Many uneducated people are unable to secure

employment and contribute to economic growth by aiding production. This also inhibits certain sectors of the market that require higher education. Surging poverty levels cause substantial economic consequences on all taxpayers, including the wealthy [11].

It seems obvious that economic growth should reduce poverty, yet the issue remains controversial. Some scholars assert that economic growth does not eliminate poverty and may exacerbate the problems of the poor [12]. For example, [11] claim that economic growth does not generate benefits in terms of numerous non-pecuniary measures of well-being. Calls for increased government spending or other redistributions of wealth [13] are the logical extension of the argument that growth does not ensure the elimination of poverty. Todaro [13] labels the contention that growth actually reduces poverty as the “trickle-down theory.” In the less than idealized state of affairs, there is not even a “trickle” downward. Simply put, general economic progress does not “improve the levels of the very poor” [13]. In fact, some development economists contend that the “growth processes” typically “trickle-up” to the middle classes and “especially the very rich” [13]. A largely unexamined issue is the impact of the relative wealth of the rich and poor on the level of well-being. There is a substantial literature that asserts that improving the incomes of the poor has a greater effect on the average level of well-being in a country than on improving the incomes of the rich [13]. That proposition, however, has not been exhaustively examined, and more careful analysis constitutes an important research agenda.

The choice is left to the locals whether they provide the required standard of living, but most important is that it improves the poorer regions even though the transfers are not specifically targeted to the poor but they will benefit from the general increase in the region. All in all, general purpose transfers should enable the fiscally disadvantaged sub-national units to provide comparable levels of public services at comparable tax rates. Specific transfers should ensure that specified services, impacting directly on poverty, are provided at the required quantities [14].

#### **2.4 Effects of Land Area on own source revenue mobilisation**

Bird and Slack [15] argue that taxes on land and property are at best minor revenue sources in all countries. For the developing countries such taxes accounted for only about 0.4% of GDP and about 2% of total tax revenues in the 1990s, down slightly from earlier decades, although the equivalent share for the OECD countries remained at a bit more than 1% of GDP and about 4% of all tax revenues throughout the period. Nonetheless, property taxes are important sources of subnational revenue in many countries, and more so in developing than in developed or transition countries. In terms of subnational taxes (instead of subnational revenues), in the 1990s, property taxes accounted for 40% of all subnational taxes in developing countries, 35% (up from 30% in earlier decades) in developed countries, although only 12% in transition countries. In the same period, property taxes financed a bit more than 10% of subnational expenditure in developed and developing countries, although little more than half that

much in transition countries. Property taxes are much more important in rich (OECD) countries than in developing or transition countries. For instance, in 1995 the highest property tax to GDP ratio (4.1%) was in Canada, followed by the United States (2.9%), and Australia (2.5%): it is likely not a coincidence that all three are rich federations. On the other hand, the lowest ratio recorded (0.01%) was also in a rich federal country (Austria), and some developing and transition countries (South Africa, Latvia) had relatively high (over 1%) ratios, so there is clearly more to it than simply wealth.

Dependence on property taxes as a source of local government revenue varies across jurisdictions depending upon many factors, such as the expenditure responsibilities assigned to local governments, the other revenues available to them (such as intergovernmental transfers, user fees, and other taxes), the degree of freedom local governments have with respect to property taxation, the size and growth of the tax base available to them, and their willingness and ability to enforce such taxes.

The property tax has, historically, been associated with local government in most countries. One reason that taxes on land and property have been considered to be especially appropriate as a local revenue source is that real property is immovable -- it is unable to shift location in response to the tax. Although a change in property tax may be capitalized into property values in a particular community, and in the long run tax differentials may affect where people locate, these effects are of a smaller magnitude than those that would occur with income and sales taxes at the local level. Another reason why property taxes are considered to be appropriate as a source of revenue for local governments is the connection between many of the services typically funded at the local level and the benefit to property values. It has been argued that the property tax in the United States is like a benefit tax because taxes approximate the benefits received from local services. To the extent that this is the case, local property tax finance of local services will promote efficient public decisions since taxpayers will support those measures for which the benefits exceed the taxes. Both the benefits derived from such local services as good schools and better access to roads and transit, etc. and the taxes used to finance such services are capitalized into property values. Since taxpayers are willing to pay more for better services and lower tax rates, either will translate into higher property values.

#### **Problem Definition**

Without doubt, financial resources are of essential importance for the estimation of actual LAs situation. Without resources, decentralization is nothing more than an external appearance. The 1996 Omani Commission of Inquiry on LAs pointed to a large number of small and non-viable LAs in Kenya due to dismal revenue performance [16]. This problem was however not addressed. The challenge persisted and had been inherited by the newly formed county governments. This though cannot be said of all county governments. The revenue raising capacity of county governments depends partly on their fiscal capacity, which differs from county to county.

The capacity of county governments to raise their own revenue is important for their financial sustainability and ability to promote the wellbeing of the local communities. The second part of the fourth schedule of the constitution [17] identifies functions of the county government distinct from those of the national government. These functions are more than what the defunct LAs were assigned which implies that the county governments need to deepen and broaden the revenue sources to provide the assigned functions.

The Annual County Governments Budget Implementation Review Report, FY 2014/15 from the Controller of Budget [18] indicates that though the 47 counties had targeted to raise Ksh. 50.4 billion from local sources, in the financial year 2014/15 to supplement the equitable share of revenue from the National Government. During the period under review, the cumulative revenue raised by counties amounted to Ksh. 33.85 billion which was 67.2 per cent of the annual local revenue target [18]. Though the report indicates that the local revenue collection had improved from the previous year, it is far off the target and thus just a tip-of-the-ice-berg of what ails county own revenue collections strategies. The report attributes the low performance in own revenue collection to understaffing in the Public Finance Management (PFM) office.

Persistent under collection of revenue for county governments could have serious ramifications for service delivery in the county governments. This will compromise the objectives of devolution as identified in Chapter eleven Part One of the [17] and as such, a blow to the gain so far made on devolution and self-governance in Kenya.

It is argued that the final element which will help determine whether fiscal decentralization in Kenya will be transformative in nature will be how county governments will fare in terms of own revenues [19]. To the extent that county own source revenues are meagre, county governments will virtually be fully dependent on national revenues and any potential (implicit or explicit) strings attached. This will compromise on the autonomous fiscal decisions by counties further limiting local revenue space. While the weak assignment of revenues to the county level is offset to some extent by the block nature of discretionary grants received through the equitable share, transfers are not perfect substitutes for own revenue sources in the design of an intergovernmental fiscal system [19].

Studies conducted in other jurisdictions [4], [5] point to a myriad of factors that impinge on own revenue collection efforts by sub-national government units. Taking cognisance of the identified factors and data availability, this study will consider, level of urbanisation, intergovernmental grants, number of poor people in a county and effects of land area on county own revenue collection strategies in Kenyan counties and suggest the optimal strategy mix for the local situation.

### 3. Methodology

#### 3.1 Research Design

A research design is the framework or plan for a study used as a guide in collecting and analysing data. This study utilised quantitative data on counties own revenue collection in the financial year 2014/15. As such, the study adopted a cross-sectional research design. Cross-sectional research designs have three distinctive features: no time dimension; a reliance on existing differences rather than change following intervention; and, groups are selected based on existing differences rather than random allocation. The cross-sectional design measures differences between or from among a variety of people, subjects, or phenomena rather than a process of change [20], [21].

#### 3.2 Population

Hair, 2003 defines a population as an identifiable total group or aggregation of elements (counties) that are of interest to the researcher and pertinent to the specified information problem. A population can be defined as including all people or items with the characteristic one wishes to understand.

The population for this study consisted of the 47 counties of the republic of Kenya as identified under first schedule of the Constitution of Kenya [17].

#### 3.3 Sampling frame

A sampling frame is a list or other device used to define a researcher's population of interest. The sampling frame defines a set of elements from which a researcher can select a sample of the target population [22].

This study attempted to collect data from every member of the population being studied rather than choosing a sample. As such, the study used data sets from all the 47 counties (census study) as provided under first schedule of the Constitution of Kenya 2010, therefore the study used the First Schedule of the constitution [17] as the sampling frame.

#### 3.4 Sample and sampling technique

Sampling involves selecting a relatively small number of elements and expecting that the information gathered from the small group of elements will provide accurate judgement about a larger group [23]. The study used a census study to select all the counties.

#### 3.5 Model specification

This study analysed the relationship between the dependent or criterion variable of interest (Y) and a set of k independent variables or potential predictor variables ( $X_1, X_2, X_3, X_4$ ), where the scores on all variables were measured for N (N=47) cases. The study was interested in predicting performance of county own source revenue (Y) using information on urbanisation levels ( $X_1$ ), intergovernmental grants ( $X_2$ ), poverty levels ( $X_3$ ) and Land Area ( $X_4$ ). The purpose of generating a regression line was to see the individual effect of the above identified independent variables on the total county own source revenue

mobilisation [24]. A multiple regression equation for predicting Y was expressed as follows:

$$Y=f(x)$$

$$CoR = \alpha + \beta_1 LnUrb + \beta_2 IG + \beta_3 Pov + \beta_4 LA + \varepsilon_i$$

Where,

CoR = county own source revenue

$\alpha$  = constant/slope

$\beta_1, \beta_2, \beta_3, \beta_4$  = Coefficients of regression

LnUrb = urbanisation levels

IG = intergovernmental grants

Pov= poverty levels

LA= Land Area

$\varepsilon_i$  = error term

### 3.6 Data collection procedure

Secondary data on actual county own source revenues, were collected from the Office of Controller of Budget [18] in the financial year 2014-2015. Data on urbanisation level of counties, county level poverty and county land area was collected from the Kenya National Bureau of Statistics (KNBS) while data on intergovernmental grants was collected from the County Allocation of Revenue Act [25].

### 3.7 Pilot test

A pilot test of 2 counties (Nairobi and Tana River counties) was conducted to identify and eliminate potential problems [23]. This provided testing of all aspects of the county revenue model including predictive capacity, feasibility, ease of use, efficiency and adaptability [27]. The sample counties were similar to those that were included in the actual study.

### 3.8 Data processing and analysis

Data was collected on the variables through secondary sources. It was then organized and entered in SPSS. Data on county urbanisation level was collected in percentages and converted into natural logarithms (Ln); intergovernmental grants were presented in their absolute terms in million Kenya shillings. On poverty levels, the percentage of people living below poverty line was collected per county and converted into number of people living below poverty line per county using the 2009 population census results. While data on county land area was collected and analysed in square kilometres. The model was tested for OLS assumptions for its reliability, predictability and specification to enable correct interpretation. Once the model was found to be fitting, analysis and interpretation were done. This generated outputs which helped to get the effects of the independent variables of the dependent variable.

## 4. Research Findings and Discussion

### 4.1 Research findings

#### 4.1.1 Descriptive statistics

**Table 1: Descriptive Statistics**

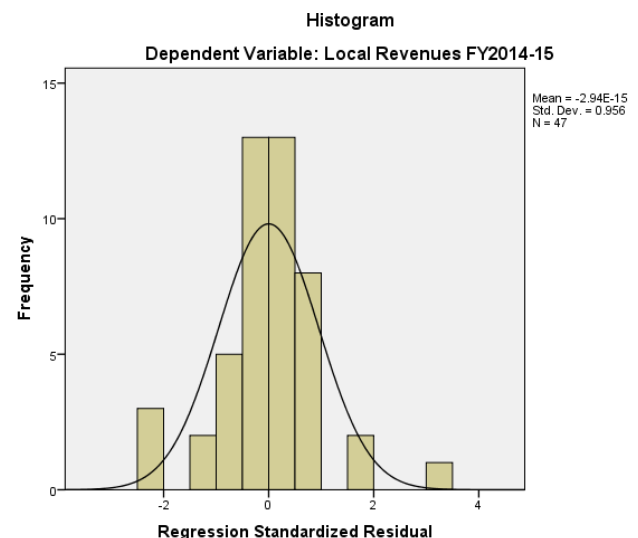
|                                  | Mean      | Std. Deviation | N  |
|----------------------------------|-----------|----------------|----|
| Local Revenues FY2014-15         | 720.1819  | 1705.12188     | 47 |
| Ln Urbanisation level            | 3.1412    | .65174         | 47 |
| Intergovernmental Grants FY14/15 | 5104.2272 | 2028.26629     | 47 |
| No of pple below poverty line    | 291855.43 | 152251.386     | 47 |
| Land Area                        | 12368.32  | 17389.015      | 47 |

The study sought to determine factors affecting own revenue collection by counties in Kenya in the financial year 2014/15. In attempting to understand the relationship between the dependent variable (DV) (Local revenues) and independent variables (IVs), the researcher collected 47 data elements from each of the following; levels of urbanisation, intergovernmental grants, number of people below poverty line and land area. All together the researcher collected 235 data elements from the five variables. The means and standard deviations of each of the variable are presented in table 4.2. above.

### 4.2 Model Diagnostics

After fitting a regression model it was important to determine whether all the necessary model assumptions are valid before performing inference. If there are any violations, subsequent inferential procedures may have been invalid resulting in faulty conclusions. Therefore, it was crucial to perform appropriate model diagnostics. In constructing the regression model we assumed that the response y to the explanatory variables were linear in the  $\beta$  parameters and that the errors were independent and identically distributed (i.i.d) normal random variables with mean 0 and constant variance,  $\sigma^2$ . Model diagnostic procedures involved both graphical methods and formal statistical tests. These procedures allowed the researcher to explore whether the assumptions of the regression model were valid and decide whether the researcher could trust subsequent inference results.

#### 4.2.1 Test for normality

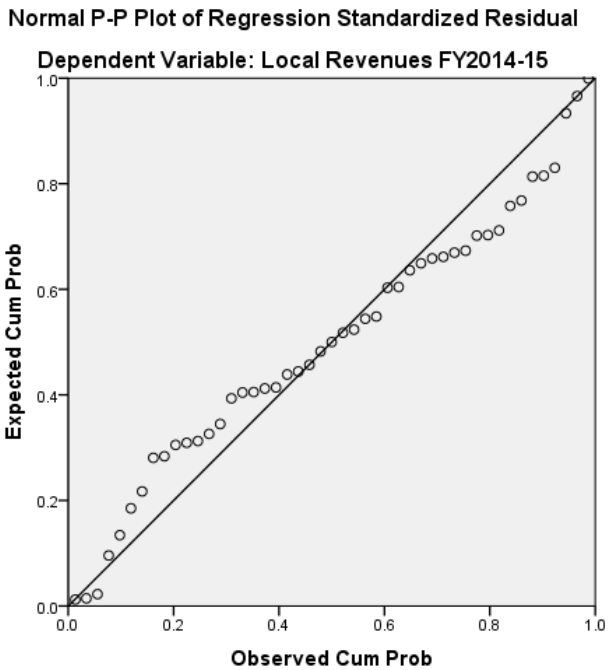


**Figure 4.2:** Histogram of standardised model residuals

A Histogram of the residuals (Figure 4.2) suggests that they

are close to being normally distributed but there are more residuals close to zero than perhaps you would expect. The data was found to be normally distributed.

**4.2.2 Test linearity**



**Figure 4.3:** Normal P-P plot of Regression Standardised Residual

An assessment of the normality of data is a prerequisite for many statistical tests because normal data is an underlying assumption in parametric testing. There are two main methods of assessing normality: graphically and numerically. Graphical interpretation has the advantage of allowing good judgement to assess normality in situations when numerical tests might be over or under sensitive.

The above P-P plot (Figure 4.3) is a little more reassuring. There does seem to be some deviation from normality between the observed cumulative probabilities but it appears to be minor. Overall there does not appear to be a severe problem with non-normality of residuals. The above P-P plot indicates a linear relationship between the dependent and independent variables.

**4.2.3 Test for multicollinearity**

**Table 4.3:** Collinearity statistics

| Model                            | Collinearity Statistics |       |
|----------------------------------|-------------------------|-------|
|                                  | Tolerance               | VIF   |
| (Constant)                       |                         |       |
| 1 Ln_Urbanisation level          | .861                    | 1.161 |
| Intergovernmental Grants FY14/15 | .234                    | 4.268 |
| No of pple below poverty line    | .242                    | 4.124 |
| Land Area                        | .938                    | 1.066 |

The *Collinearity Statistics* tell us the extent to which there is multicollinearity between our variables. If the value for the *VIF* is less than 10 and the value of the *Tolerance* is close to 1 for each explanatory variable then there is no cause for concern. A *VIF* higher than 10 for some of *IVs* would suggest we may have some issues with multicollinearity which would require further investigation. However, with a *VIF* less than 10, the independent variables were found not to exhibit multicollinearity therefore not affecting the validity of the results.

**4.3 Model summary**

Model summary table, provides information about the regression line's ability to account for the total variation in the dependent variable.

**Table 4.4:** Model Summary

| Model Summary <sup>b</sup> |                   |          |                   |                            |
|----------------------------|-------------------|----------|-------------------|----------------------------|
| Model                      | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1                          | .875 <sup>a</sup> | .765     | .742              | 865.48832                  |

- a. Predictors: (Constant), Land Area, Intergovernmental Grants FY14/15, Ln\_Urbanisation level, No of pple below poverty line
- b. Dependent Variable: Local Revenues FY2014-15

Table 4.4 above, tells us the percentage amount of variability in the dependent variable (DV) that is accounted for by all of the predictors together. With an R-square of 0.765, this indicates that all things being equal, the model accounts for almost 77 per cent of variations in the DV. Further, with an Adjusted R-square of 74% (0.742), this indicates that less than 26% of variability is not explained by the model. Therefore the model is a good predictor.

**4.4 ANOVA table**

ANOVA compares the variance (variability in scores) between different groups with the variability within each of the groups. An *F* ratio is calculated - variance between the groups divided by the variance within the groups.

**Table 4.5:** ANOVA

| ANOVA <sup>a</sup> |            |                |    |              |        |                   |
|--------------------|------------|----------------|----|--------------|--------|-------------------|
| Model              |            | Sum of Squares | df | Mean Square  | F      | Sig.              |
| 1                  | Regression | 102281327.47   | 4  | 25570331.868 | 34.136 | .000 <sup>b</sup> |
|                    | Residual   | 31460941.499   | 42 | 749070.036   |        |                   |
|                    | Total      | 133742268.970  | 46 |              |        |                   |

Table 4.5 above gives an *F*-test to determine whether the model is a good fit for the data. With a *p*-value, that is less than 0.05, the model is found to be a good fit.

**Table 4.6: Unstandardized Beta coefficients**

| Coefficients <sup>a</sup> |                                  |            |                           |       |        |      |
|---------------------------|----------------------------------|------------|---------------------------|-------|--------|------|
| Model                     | Unstandardized Coefficients      |            | Standardized Coefficients | t     | Sig.   |      |
|                           | B                                | Std. Error | Beta                      |       |        |      |
| 1                         | (Constant)                       | -3808.701  | 695.159                   |       | -5.479 | .000 |
|                           | Ln Urbanisation level            | 510.296    | 210.998                   | .195  | 2.418  | .020 |
|                           | Intergovernmental Grants FY14/15 | 1.176      | .130                      | 1.399 | 9.045  | .000 |
|                           | No of pple below poverty line    | -.010      | .002                      | -.888 | -5.841 | .000 |
|                           | Land Area                        | -.014      | .008                      | -.143 | -1.852 | .071 |

The above table 4.6 shows the beta coefficients for the actual regression equation. The “unstandardized coefficients,” are preferred because they include a y-intercept term as well as a slope term. The “standardized coefficients” are based on a re-scaling of the variables so that the y-intercept is equal to zero. Based on this table 4.6 above, the equation for the regression line is:

$$CoR = -3808.701 + 510.296LnUrb + 1.176IG - 0.10Pov - 0.14LA$$

Using this equation, given values for “*LnUrb*,” “*IG*,” “*Pov*” and “*LA*,” one can come up with a prediction for the “*CoR*” variable.

Table 4.2.5 also gives the significance levels of the variables, with the exception of Land Area which had a significance level of 0.071, which is greater than 0.05, the rest of the variables were found to be statistically significant (less than 0.05).

## 5. Discussions

### 5.1 Effects of Urbanisation

From Table 4.6 above, Urbanisation was found to be statistically significant with a p-value = 0.02 (significance value of 0.02), which is less than the threshold of 0.05. As such, the researcher rejected the null hypothesis in favour of the alternate hypothesis which stated that; Urbanisation levels had an effect on own source revenue mobilisation by counties in Kenya, 2014/2015 financial year. Holding other factors constant, the researcher found that a one percentage increase in urbanisation in counties leads to 510 million Kenya shillings increase in county own revenues.

Clearly, urbanisation has the highest contribution to higher own revenue collections by counties. Literature is also replete with the argument that urbanization and growth go together: no country has ever reached middle income status without a significant population shift into cities [6]. This is also very clear from the output of the study; counties will not expect to generate more revenues without urbanisation. Urbanization is necessary to sustain (though not necessarily drive) growth in Kenyan counties and it yields other benefits as well; this stance is supported by the study done by [6]. Managing urbanization is an important part of nurturing growth; neglecting cities— even in counties in which the level of urbanization is low—can impose heavy costs. In terms of development and growth theory, urbanization occupies a puzzling position. On the one hand, it is recognized as fundamental to the multidimensional structural transformation that low-income rural societies undergo to modernize and to join the ranks of middle-and high-income countries. Some models, such as Lucas’s [6], explicitly

consider how urbanization affects the growth process (primarily through the enhanced flow of ideas and knowledge attributable to agglomeration in cities.

This is in line with theorist such as David Harvey and Manuel Castells that have stressed that urbanism is not an autonomous process, but part of a larger political and economic processes and changes [26]. They further point out that in modern urbanism, space is continually restructured. The process is determined by large firms, who decide where they should open their businesses, factories etc and by policies, controls and initiatives asserted by governments which can change the landscape of a city. It would therefore be imperative that counties loop in large firm both locally and internationally urbanise. Harvey and Castells’s analysis of urbanisation and urban situation adds an important dimension – the political economy of a system.

### 5.2 Effects of intergovernmental grants

Intergovernmental grants were found to be statistically significant with a p-value = 0.00 which is less than 0.05 threshold. As such, the researcher rejected the null hypothesis in favour of the alternate. Thereby concluding that: Intergovernmental grants had an effect on own source revenue mobilisation by counties in Kenya, 2014/2015 financial year.

Intergovernmental grants have a positive relationship with local revenues, this means that an increase in one leads to an increase in the other. From table 4.6, holding other factors constant, a one million Kenya shillings increase in intergovernmental grants leads to Ksh.1,176,000/= increase in own revenue collection. From the model, intergovernmental grants have the second highest contribution to county own revenue realisation.

Intergovernmental grants in other jurisdictions have been seen to produce additional effects different to the desired ones. When sub-national governments are responsible for collecting own local revenue, the total amount of collected revenue depends mainly on the actions that they carry out for being more efficient in collecting taxes and for looking for alternatives sources of revenue; however, collecting own local revenue is costly for sub-national governments. Grants increase jurisdictions total revenue. Thus, an increase in grants received by a county could decrease its collected local revenue, implying that local governments do not exploit all their fiscal capacity. As in most countries intergovernmental grants represent a significant source of local revenue, it is important to know if not only do they achieve fiscal equalization across jurisdictions, but also if they cause a loss in efficiency.

However, empirical evidence from this study does not support this hypothesis; we have seen that local revenue collection increased with the increase in intergovernmental grants, which seems to disprove the flypaper theory of Arthur Okun. The study seems to support the “crowding-in-effect” of intergovernmental transfers on local own revenues as espoused by [28]; central transfers increase local tax revenues. It is very much consistent with the “virtuous cycle” model, which explains how the central transfers can positively affect local revenue collection. In fact, intergovernmental transfers in Kenya have been seen to alleviate the revenue constraints of local governments allowing them to improve their ability to provide public goods and services and to strengthen their institutional capacity to raise taxes.

### 5.3 Effects of poverty levels

The number of people in a county living below the poverty line was found to be statistically significant with a  $p$ -value of 0.00. This therefore led the researcher to reject the null hypothesis in favour of the alternate thereby concluding that: Poverty levels have an effect on own source revenue mobilisation by counties in Kenya, 2014/2015 financial year.

Holding other factors constant, poverty was found to have an inverse relationship with own county revenues i.e, an increase in one led to a decrease in the other. Specifically, as one person in the county became poorer below the poverty line this led to a reduction in county own revenues by Ksh. 10,000/=. This implies that counties would do better at revenue collection by first tackling poverty. This also lends credence to the theory of vicious circle of poverty which implies that a circular constellation of forces tend to act and react upon one another in such a way as to keep a poor counties in this case, in a state of poverty.

Poverty is known to compromise the market's access to skilled labour which is essential for production of needed goods and services. Poor people lack access to good health care, which presents challenges in workforce productivity. The economy also spends more on health care for people who can't afford it. Further, poverty poses greater demands for the criminal justice system, which reduces productivity of those incarcerated and results in property damage for those affected. Most people living in poverty lack access to a good education. Many uneducated people are unable to secure employment and contribute to economic growth by aiding production. This also inhibits certain sectors of the market that require higher education. Surging poverty levels cause substantial economic consequences on all taxpayers, including the wealthy.

The choice is left to individual counties whether they provide the required standard of living, but most important is that counties improve the poorer regions even though the transfers are not specifically targeted to the poor but they will benefit from the general increase in the region. All in all, general purpose transfers should enable the fiscally disadvantaged counties to provide comparable levels of public services at comparable tax rates. Specific transfers should ensure that specified services, impacting directly on poverty, are provided at the required quantities.

Empirical evidence from the study seems to support Ragnar Nurkse's “vicious circle of poverty” theory. The implication is that implies a circular constellation of forces tending to act and react upon one another in such a way as to keep a poor counties in a state of poverty and therefore ensuring that revenue collections are low.

That poverty is a great curse requires no further explanation. Poverty has been seen to be the biggest hurdle in the way of counties economic development; it is the basic cause of under-development of poor counties. The low of saving leads to low level of investment and to deficiency of capital. The low of investment leads to low level of productivity. When the productivity per worker is low, the real income will obviously be low and so there poverty and vicious circle is complete. This seems to replicate in our counties.

### 5.4 Effect of Land Area

Land as a factor of production was found not to be statistically significant. Land area had a  $p$ -value=0.071 which was greater than 0.05 threshold. This therefore led the researcher not to reject the null hypothesis thereby concluding that: Land area had no effect on own source revenue mobilisation by counties in Kenya, 2014/2015 financial year.

Taxes on land and property have been seen to the best revenue sources in all countries [15]. For the developing countries such taxes accounted for about 0.4% of GDP and about 2% of total tax revenues in the 1990s. Additionally, property taxes are important sources of subnational revenue in many countries, and more so in developing than in developed or transition countries. However, this does not seem to be the case in Kenya.

The property tax has, historically, been associated with local government in most countries. One reason that taxes on land and property have been considered to be especially appropriate as a local revenue source is that real property is immovable -- it is unable to shift location in response to the tax. Although a change in property tax may be capitalized into property values in a particular community, and in the long run tax differentials may affect where people locate, these effects are of a smaller magnitude than those that would occur with income and sales taxes at the local level. Another reason why property taxes are considered to be appropriate as a source of revenue for local governments is the connection between many of the services typically funded at the local level and the benefit to property values.

To the extent that this is the case, local property tax finance of local services will promote efficient public decisions since taxpayers will support those measures for which the benefits exceed the taxes. Both the benefits derived from such local services as good schools and better access to roads and transit, etc. and the taxes used to finance such services are capitalized into property values. Since taxpayers are willing to pay more for better services and lower tax rates, either will translate into higher property values.



## 6. Summary, Conclusions and Recommendations

### 6.1 Summary

The study sought to assess the determinants of own source revenue mobilisation by counties in Kenya, 2014/2015 financial year. The study looked at the effects of urbanisation, intergovernmental grants, poverty levels and land area and how they contributed to own revenue generation by the 47 counties in Kenya in 2014/15 financial year.

The study found that the independent variables have different effects on the dependent variable holding other factors constant. Except for land area, all the independent variables were found to be statistically significant which led to the rejection of the null hypotheses.

Firstly, the study found that urbanisation levels and own source revenue mobilisation were positively related in counties in Kenya, 2014/2015 financial year. Holding other factors constant an increase in one leads to an increase in the other, as such a one percentage increase in urbanisation in counties leads to 510 million Kenya shillings increase in county own revenues.

Secondly, the study found that intergovernmental grants and own source revenue mobilisation were positively related. An increase in one leads to an increase in the other. Holding other factors constant, a one million Kenya shillings increase in intergovernmental grants leads to Ksh. 1,176,000/= increase in own revenue collection. Intergovernmental grants had the second highest contribution to county own revenue realisation.

Thirdly, the study found that poverty levels and own source revenue mobilisation are negatively related. Holding other factors constant, an increase in one led to a decrease in the other. Specifically, as one person in county became poorer below the poverty line this led to a reduction in county own revenues by Ksh. 10,000/=.

Finally, the study found that land area had no effect on own source revenue mobilisation by counties in Kenya, 2014/2015 financial year.

### 6.2 Conclusions

Having empirically assessed the determinants of own source revenue mobilisation by counties in Kenya, 2014/2015 financial year, the study arrived at the following conclusions;

Firstly, urbanisation is an important step in the quest to increase county own revenue collection. That, a one percentage increase in urbanisation in counties leads to 510 million Kenya shillings increase in county own revenues.

Secondly, the study concludes that intergovernmental grants are also an important ingredient in increasing county own revenues. A one million Kenya shillings increase in intergovernmental grants leads to Ksh. 1,176,000/= increase in own revenue collection.

Thirdly, the study concludes that counties would be more prosperous if they tackled and reduced poverty levels in their midst. Poverty hampers the ability of counties to raise more revenues. Lowering county level poverty should be of priority to counties if they wish to raise more revenue.

Finally, the study found that land area had no effect on own source revenue mobilisation therefore they would no point in counties expanding their borders as a strategy to raise more revenues.

### 6.3 Recommendations

The study makes the following recommendations;

- 1) Counties should concentrate their efforts on developing more urban areas because it has the highest return on investment.
- 2) The national government institutions (Senate, National Treasury and Commission on Revenue Allocation) should consider providing more intergovernmental grants to stimulate own revenue collection by counties.
- 3) Both National and County governments should prioritise lowering of poverty levels in a bid to create a prosperous society.
- 4) Though, land area was seen to be insignificant, there is potential in unlocking land area as a resource for counties. Therefore counties need to do more to tap open counties for further economic exploitation more so in land.

### 6.4 Recommendations for further studies

This study has investigated the determinants of own source revenue collection by counties in Kenya in 2014/15 financial year. While so doing, the researcher has looked at four independent variables namely, level of urbanisation, intergovernmental grants, number of people living below poverty line and land area. The researcher recommends that other determinants be considered as well as different time periods to clearly unravel the mysteries in county own source revenue mobilisation strategy.

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