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An Empirical Study on the Moderating Effect of Public Governance on the Relationship Between Fiscal Decentralization and Performance of County Governments in Kenya

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Abstract

Various attempts undertaken by Kenya to restructure governance and public expenditure mandates from national to local levels have persisted since the 1960s. The promulgation of a modern constitution in the year 2010 dramatically and emphatically deconstructed the post-independence structure of government to a multi-layered system of governance. This paper uses panel data to investigate the effect of public governance on the relationship between fiscal decentralization and performance of County Governments in Kenya between the years 2013- 2018. The key indicators of public governance include human capital, accountability and compliance with the laws. Three indicators of fiscal decentralization were identified as equitable revenue from National Government, local revenues and transfer grants from other development partners. Performance was assessed in terms of how governments promote the wellbeing of citizens, through reduction of poverty and inequality levels, and a general increase in the living standards at the family, corporate and societal level. In order to measure and explain performance, consumption of food and non-food items were computed and summed up per county. Multiple regression and correlation analysis were used to estimate both the direct and interaction effects of the parameters of the model. The study was descriptive and the panel datasets offered a comprehensive profile of the variables identified in the conceptual framework. Results indicate that Public Governance had a moderating influence on the relationship between fiscal decentralization and the performance of county governments in Kenya.

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1. Introduction

While a growing literature of data in recent years has hypothesized a positive association between fiscal decentralization (FD) and public governance (PG) [1], it is not always the case that subnational governments (SNGs) are able to exercise their mandates and respond effectively to the devolved functions[2]. Lower level governments experience many challenges and difficulties in policy co-ordination between various levels of governments which often undermine development outcomes[3].

The promulgation of a modern constitution in Kenya in 2010 brought to an end a clamor of more than two decades of agitation for better governance and greater economic space that Kenyans had always yearned for[4]. It did away with the colonial constitution, which had been found wanting, and drastically transformed governance and public finance architecture. The overarching objective of the reforms package was devolution that sought to give people at the grassroots level greater control over decisions and governance actions that affected them[5]. In an era of increasing decentralization, the need for a framework of good governance becomes important as it affects the development and performance of subnational governments (SNGs) and exerts a strong influence on resource allocation and expenditure decisions. During the transitionary period spanning from 2013- 2018, the implementation and decision-making authority was clearly thrust to the domain of County Governments for the first time in the history of the country calling for greater focus on the role of public governance in the management and sustainability of available resources.

While fiscal decentralization refers to the transfer of public finance decisions from the central government to lower levels[1] and entails both direct transfers as well as assignment of taxation powers (IEA/NCCK), public governance is the manner in which power and authority are exercised in the use of public resources to ensure achievement of social-economic development in a given country[6]. It is considered a vital ingredient in the efficient production of goods and services and has been a key objective in most reform programs advocated in recent years by IMF and the World Bank as a condition for the maintenance of order and equity, control in the exercise of power and retention of an orderly society[4].

Fiscal decentralization has been identified as an explicit policy instrument to improve public governance at the local level by transitioning countries[1]. Other authors[7] hold good public governance to be a vital ingredient in the efficient production of goods and services, accountability in the use of power, protection of human rights and freedoms, as well as the maintenance of an organized framework for every citizen to contribute towards resolving common issues and problems. These scholars hold that fiscal decentralization is associated with various indicators of governance such as rule of law, government effectiveness, accountability and that the relationship between it and governance depends on how subnational expenditures are financed.

The choice of a governance structure is basically a political decision and once the decision has been made, it affects political system, public finance orientation, and economic wellbeing alongside the achievement of social stability[8]. Kenya was beleaguered for decades by a colonial constitution that ignored good governance fundamentals such as the principle of separation of powers, the principle of subsidiarity, checks and balances, independence of the judiciary and a just and equitable system of resource allocation[4]. These are some of the ills that the 2010 constitution sought to address and it is expected that with good governance and effective implementation of the constitution, political and economic stability will have a firm foundation.

From the year 2013, the National Government began transferring a minimum of 15% of national revenues to the 47 County governments for use in their various development programmes and projects. The amount is shared among all the counties on a set criterion that regards population size, land mass, poverty levels and a county's capacity to utilize allocated resources. Similarly, the county governments mobilize their own revenues from local sources to supplement the transfers from the centre. This is done through local tax collection in the form of property rates, charges and various fees. The national government also continued with intergovernmental transfers of grants and other conditional funds to undertake nationally- identified programs and projects in the counties that do not fall within the mandate of county governments[9].

To ensure both the devolved and locally collected funds are utilized efficiently, the Kenyan Constitution[5] compels observance of the principle of openness and transparency in resource allocation. Hence the quality of public governance does affect performance of County governments and is thus an important framework condition for the effective utilization of devolved resources.

The greater democratic space that Kenyans were yearning for more than 20 years heralding promulgation of the constitution[5], was one that would enable them participate effectively in the local institutional and national level governance and management; in other words, give them a greater say in the decision-making process. At its core was a decentralized form of structure of government; a radical departure from the centralized structure that had guided the country for more than fifty years[10]. The key objective of devolution was to give people at the grassroots control over governance and decisions that affect them directly[5]. It was hoped that this would greatly contribute to the improvement of their standards of living as well as eradication of three vices that bedevil the nation: corruption, tribalism, and impunity[4]. Proponents argued that an empowered populace, through information access will lead to good governance of the national, county, constituency and local level units.

This paper sought to investigate and test the hypothesis that the association between fiscal decentralization and public governance is positive and strong in promoting

County Governments performance. The paper addressed some of the components associated with various public governance systems, their impact on devolved resources and overall influence on the performance of County governments. Since the devolved system that created County Governments was new in Kenya, there was hardly enough literature discussing the role or impact of Public Governance on the nexus between fiscal decentralization and the performance of county governments. The data required to construct fiscal decentralization indicators are widely available in Kenya from National and County Government departments, Independent Commissions and Agencies as well as research institutions, Civil Society Organizations (CSOs) and Non-Governmental Organisations (NGOs). However, since governance is a multi-dimensional concept[11], quantitative indicators are much harder to construct and data required is not readily available in transitioning countries. There's particularly an absence of formal theoretical models in the literature dealing with different aspects of the relationship between decentralization and governance which makes it hard for researchers to model the various components in a single theoretical framework.

In this paper, fiscal decentralization has been modelled to include three key components, namely equitable share revenue (UB), locally collected revenue (LR) and transfer grants (TG) while the indicators for public governance analyzed are human capital and government effectiveness (HC); accountability and electoral responsibility (Ai); legal and institutional framework (AL).

The paper is divided into several sections and the second section provides a history of theoretical and empirical reviews of trends in fiscal decentralisation and also formalizes the conceptual framework that analyses the effect of independent variables on the dependent variable. The third section discusses the relevant data and methodology employed in data collection as well as measurement approaches. The key variables are also identified and described. The fourth section discusses and presents the findings of the study by use of both descriptive statistics and multiple regression analysis that makes use of panel datasets to test the hypothesis. The final section of this paper presents the limitations and conclusions of the study as well as suggestions for further research directions. In addition, the paper includes a list of references that serves as a backup for the ideas, theories, principles and practices.

2. Theoretical Foundations and Empirical Reviews

Proponents argue that fiscal decentralization improves governance and local public service provision through proximity to citizens and preference matching, information access and distribution of authority over public resources to different actors who provide checks and balances to one another (Robinson, 2007; Mwenda, 2010). It is further argued that governance is affected not only by fiscal decentralization but also by how subnational expenditures are financed, noting that collection of revenues and utilization of the same at local level would most likely improve accountability[1]. Communities are known to be willing to pay more local taxes in situations where the amounts they contribute can be related more directly with goods and services received[14]. Based on the public finance principle of subsidiarity[1], a better match can be achieved between the supply of public goods by local governments and demands of residents as long as the costs associated with revenue mobilization are borne by the same regions that can internalize the benefits. The closer link between expenditures and tax revenues at the local level is deemed to lead to better accountability of government actions[15,16].

Indeed efficient and accountable management of the public sector and a predictable and transparent policy framework are critical to the functioning of efficient markets and governments[17] and hence to economic development. There's a growing awareness and need for the formulation of a governance framework that provides a comprehensive view of the enabling environment of institutions, interests and policies needed in determining the net impact of the states' activities on the well-being of its citizens[18,19].

Defining governance is problematic as there's no singularly agreed upon definition available and it can carry different meanings depending on the context of usage. The main parameters that are normally used to serve as governance measures in data collection include corruption, rule of law, voice and accountability, political instability as well as quality of bureaucracy[20]. Good governance not only depends on the quality of institutions but also the integrity and capacity of politicians and bureaucrats whose use of power and authority, through such available institutions determine the outcomes[21]. Theoretical literature posits that governance quality is enhanced by more closely matching services with citizens' preferences, and by moving governments closer to the people they are intended to serve, which ensures greater accountability of the public sector[22]. Good governance plays a critical role in the transformation of transition economies and hence a concern for policy makers and governments around the world[11]. The sole aim of good governance is to ensure effective, efficient and accountable leadership that promotes the wellbeing of citizens, be it at the family, corporate or societal level[4].

Empirical studies have hypothesized a positive association between decentralization and public governance as demonstrated by the authors[1] who conducted a cross-country research to evaluate the nexus between public governance and fiscal devolution in Africa. The study aimed to test the hypothesis that fiscal devolution improves governance. The research relied on data from 78 countries. The measures of governance used included corruption, rule of law and effectiveness of government. The study findings indicated that decentralization of funds led to the strengthening of social capital and promotes political inclusivity. In addition, governance is more enhanced if devolution enhances mobilization of resources at the local level. Furthermore, they noted that electoral rules and other mechanisms are needed to encourage voter participation, improve accountability and participation of civil society in the political process. This study however relied on summary statistics computed by World Bank officials which do not reflect the actual aggregates for the variables considered.

Mwenda (2010) advanced the view that where design and implementation is poor, service delivery can be poor and entangled in inefficiencies transferred from the centre. Decentralization as a conducive means of achieving good governance by providing an institutional framework at the local level through which groups and citizens can organize themselves to participate in political and economic decisions that affect their lives[23]. He further holds that where citizen awareness and collective action is low, local government officials can be held captive by elites and lobbies, to the detriment of the greater majority. The European Union, the United States, China, India and a large number of developing and transitional economies[24] in Latin America and Asian nations have embraced decentralization as one of the major policy reforms of governance since the early 1980's.

While fiscal decentralization has a bearing on governance and on the quality of government[22], governance has a role in reconciling the necessity for equity and order in society; and efficient production and delivery of goods and services; responsible use of power, regard for human rights and a well-aligned social and corporate framework in a country[25]. Hence, existence of a coherent framework for consistent decision-making across all levels of government forms the basic foundations for performance in the public sector leading to improved social-economic well-being for all citizens[26]. Countries that have already achieved macro-economic stability through the first generation of reforms that included decentralization and structural adjustment programs (SAPs) promoted by donor nations, have designed and implemented second phase measures aimed at upgrading the social and legal institutions that advocate good governance for faster economic growth[1]. Advocates of fiscal decentralization argue that it improves allocation of resources in a manner that ensures public preferences are met and at the same time, it reduces the waste, corruption and poor governance.

From a review of literature, the following analytical framework was drafted for this study based on existing models, with modifications to suit the study context. The regressional model employed was tested by using the panel data collected for five years (2013- 2018). The model is shown below:

Theorem 2.1 The performance of County Governments

$$Y = \alpha_o + \beta_1 UB + \beta_2 LR + \beta_3 TG + \beta_4 HC + \beta_5 A_i + \beta_6 A_L + \varepsilon_i$$

Where Y is performance of County Governments (where, $0 < Y < 1$), UB is equitable share, LR is local revenue collection and TG is conditional transfer grants, HC is the capacity and competence of human capital, Ai is the accountability index, A_L is legislation of new statutes and compliance with existing ones, and α_o is the intercept while, ε is the random error term β_{1} - β_{6} are the regression coefficients.

2.1 Framework of Variable Operationalization

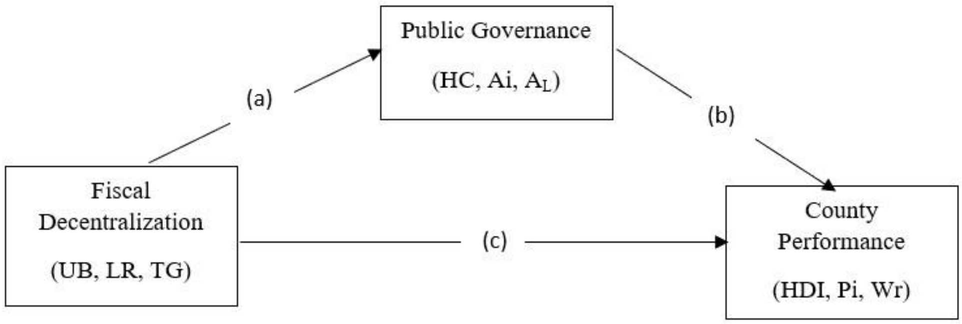

Figure 1: Conceptual Framework

c represents the impact of the predictor variable (FD) on the dependent variable (Y),
b depicts the influence of the moderating variable (PG) on the dependent variable and
a depicts the impact of the predictor variable (FD) on the moderating variable (PG). The separate coefficients for each equation were estimated and tested using P-values.

Fiscal decentralization has a known influence on governance and government quality[22]. The drive towards fiscal decentralization in Kenya has been in the context of increasing focus on good governance whose key indicators are citizen participation, transparency, accountability, subsidiarity and separation of powers[27]. Other key characteristics of good governance include electoral democracy, efficiency and effectiveness, equity and inclusiveness[4]. Citizen participation can strengthen accountability and in so doing, the public should have accurate and accessible information about local governance such as available resources, performance and service delivery levels, budgets and other financial indicators[28]. Such an arrangement is based on the assumption that local units will be more responsive to the needs of citizens and takes their preferences into account when determining the type of public goods to be provided and how they will be optimally distributed[12].
To achieve sustainable human capacity development, societies and communities must continuously work towards the ideal of achieving good governance and making it a reality, though difficult. It is key to increasing the responsiveness of local governments to the poor and to making development more pro-poor[22]. Good local governance also requires mechanisms for accounting to local citizens beyond the five-year electoral period. It calls for publicly accessible information about how resources are being utilized through the institutionalization of systems for checking by those with requisite skills like auditors and engineers so that citizens can have confidence and trust in the government[30].

3. Data and Methodology

Panel data was analyzed from 47 County governments for the objective of this paper; to assess the relationship between variables in the study and hence establish whether public governance is a significant variable in the relationship between fiscal decentralization and performance of County governments in Kenya.

The author used a data collection form to gather data and information from various institutions such as the National Treasury, Office of the Auditor General, Office of the Controller of Budget, Commission on Revenue Allocation, Kenya National Bureau of Statistics, Kenya Institute of Public Policy and Research Analysis among others. The study examines and discusses the key parameters of the predictor variable in order to establish and explain the effects and role of the public governance in the relationship between fiscal decentralization and performance of county governments.

A moderator is a variable that functions to account how and why a relationship between an independent variable and a dependent variable exists. The moderator, in this case public governance was measured by use of both correlation analysis as well as interaction effects in the ordinary least squares and multiple linear regression.

Table 1: Measurement and operationalization of variables

Variable	Indicators	Operational Definitions	Country level variables	Data Sources
Dependent Variable Fiscal Decentralization (FD)	Equitable Share	Amount transferred from National to County level	Total National Budget	[30, 31]
	Local revenue Collection	Amount of Local Revenue Collection	National Tax Revenue	[1, 32]
	Conditional/ Unconditional Grants	Other funds from National Government development partners	External funds from donor/development partners	[5, 33]
Moderating variable Public Governance (PG)	Capacity of human capital	Effectiveness of county personnel to execute government agenda	Effectiveness of National government personnel in the execution of the government agenda.	[5, 1]
	Accountability index of government	Existence of policy and bureaucratic framework, structures for local revenue collection	Kenya Revenue Authority to meet annual Revenue collection targets	[5,20, 34]
	Applicable Laws enacted locally and others	Total number of new Laws enacted and compliance	National laws and regulations enacted by parliament	[5, 4]
Independent Variable Performance of County Governments (Wr)	• Per capita income (PCI) • Well-being index • Human development index (HDI) • Poverty Levels (PI)	Standards of living, health, literacy, employment, consumption per capita and general state of wellbeing	GDP per capita Rate of GDP growth National Poverty Index	[34,35,36,37,38]

Source[39]

If fiscal decentralization is denoted as X and moderator (PG) as Z, and County performance as Wi, then Wi was regressed on X, Z and then on XZ. The moderator effects were indicated by the significant effects of XZ while holding X and Z constant.

Theorem 3.1 County Performance as Wi

$$Wi = \beta_o + \beta_1 X + \beta_2 Z + \beta_3 XZ + \varepsilon$$

The purpose was to determine the moderating effect in the relationship between fiscal decentralization and County performance. A common path analysis framework together with the model below was deployed reflecting both a descriptive and an analytic procedure.

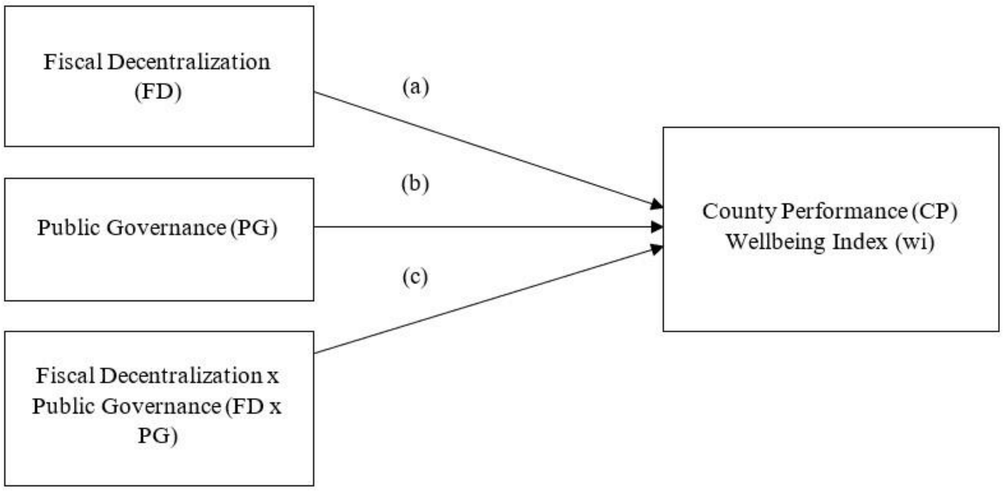

Figure 2: Model used to measure the second Hypothesis

Theorem 3.2 Using, County Performance as Wi, to test Ho

$$Wi = \beta_o + \beta_1 (FD) + \beta_2 (PG) + \beta_3 (FD \text{ x } PG) + \varepsilon$$

The model was used to measure the second hypotheses (H_0)
Where, $\beta_1 \ldots\ldots \beta_3$ are the regression coefficients,
CP is the performance score,
FD is the Fiscal Decentralization composite score,
PG is the composite result of capacity of human capital and accountability (measured in terms of compliance, absorption rates, proportion of local revenue collections and enforcement of legal requirements) as defined in table 1 above.

βo is the intercept term while, ε is the random error term that accounts for the unexplained variations.
The composite scores of both fiscal decentralization and public governance were arrived at by computing the arithmetic mean of the respective indicators of each variable. The value for public governance was found by computing the mean of the ratios of absorption rates, accountability indexes and the ratio of number of laws enacted in each County against the highest possible number achieved by a County.

4. Analysis and presentation of results

This section presents and discusses the findings for the study's main objective- which was to assess the influence of public governance in the relationship between fiscal decentralization and performance of County governments in Kenya during the transitionary period of 2013 to 2018. The paper sought to test the hypothesis that: the association between fiscal decentralization and public governance is positive and strong in promoting the performance of County governments in Kenya. The variables of the regression model were subjected to rigorous descriptive tests as shown in table 2 as well as diagnostic tests, which included multicollinearity, autocorrelation, unit root and homoscedasticity, in order to verify their validity and suitability[39].

4.1 Descriptive statistics

A preliminary analysis of descriptive statistics was done to enable presentation of data in a simpler manner for ease of interpretation. The analysis was to establish the measures of central tendency, the standard deviation as well as normality. The test for normality was done by use of Shapiro-Wilks which indicated normality of distribution of the variables. The results are shown in table 2 below.

Table 2: Summary of descriptive statistics

variable	mean	maximum	minimum	Standard deviation	skewness	kurtosis	observations
UB	5.527	14.045	2.052	2.073	1.749	3.399	235
LR	0.682	11.71	0.027	0.161	5.553	32.799	235
TG	8.879	51.63	1.598	7.857	2.262	5.733	235
HC	0.647	0.931	0.45	0.107	0.188	-0.139	235
$\mathbf{A_i}$	0.644	1.134	0.244	0.172	0.288	0.506	235
$\mathbf{A_L}$	17.57	38	12	6.023	1.069	0.73	235
$\mathbf{W_r}$	0.509	0.782	0.125	0.164	-0.636	-0.279	235

Source[39]

4.2 Diagnostic Tests

The data collected was subjected to the following tests.

4.2.1 Multicollinearity

Multicollinearity tests are crucial especially in order to check whether the predictors in a regression model are themselves correlated. Accordingly, the test was conducted on the three variables under fiscal decentralization namely equitable allocation from the national government, local revenue collections by the County government as well as conditional and unconditional grants given to the counties.

This was done by use of variance inflation factors (VIF) is a measure of the extent to which the residues in a multivariate linear regression is inflated by its correlation with other concepts in the model[40]. It's a phenomenon where a predictor variable in a multiple regression model can also be linearly predicted and inferred from the others.

Table 3: Results of multicollinearity tests

Variable	VIF	1/VIF
Equitable Share (UB)	6.56	0.152360
Local Revenue (LR)	1.68	0.593864
Transfer Grants (TG)	1.20	0.834365

Source[39]

As indicated in table 3 above, since all the values of variance inflation factors were below 10, it can be confirmed that indeed they are not significant in the correlations among the independent variables which were used in the model namely equitable share from the national government, conditional and unconditional grants as well as local revenue collected by the County governments[40].

4.2.2 Unit Root Tests

A unit root is a feature of random probability distribution process involving time series models that can occasion challenges in statistical inference. It is a trend in a time series that displays a systematic pattern that is unpredictable. Existence of a unit root can cause serious issues in statistical analysis like spurious regression or errant behavior of results. A unit root is one of the causes of non-stationarity. In this study, a test for existence of unit root was conducted by use of Augmented Dickey Fuller (ADF) technique which tests the null hypothesis that a unit root exists in a time series data set.

Table 4: Unit Root Test

Variable	ADF Test	P-Value (95 % confidence interval)	Remarks
WI	-0.208	0.05	Stationary
UB	-0.531	0.02	Stationary
LR	-0.532	0.00	Stationary
TG	-5.941	0.04	Stationary

Source[39]

The findings summarized in the table 4 above reveal that all the three variables for the 235 observations yielded p-values that were less than the 0.05 level of significance implying that they all met the required condition of stationarity.

4.2.3 Heteroscedasticity Tests

This is yet another critical test in most of econometric and statistical analysis. The test is used to check for the presence of various patterns of non-constant variances in the linear model. The presence of heteroscedasticity in the application of regression analysis is of great of concern as it can invalidate or bias the significance of statistical tests. The research used Breusch-Pagan / Cook-Weisberg test. For the model to hold the variance of residues should be constant otherwise they would be referred to as being heteroscedastic.

Table 5: Results of tests for heteroscedasticity

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: The residuals of the regression are homoscedastic.
Variables: fitted values for wellbeing 2016
chi2(1) = 0.67
Prob > chi2 = 0.4119

Source[39]

Table 5 above provides results for test of heteroscedasticity which was carried out on the basis of the null hypothesis that indeed the residuals of the regression are constant in the given set of data. As clearly summarized in the table above, the value of the test statistic which is the chi-square equals to 0.67, which furthermore has a p-value of 0.4119 which is above 0.05. This leads to failure to reject the null hypotheses (H_O), in other words there is constant variance in the datasets or the data is homoscedastic.

4.2.4 Autocorrelation Tests

In order to check for autocorrelation, the study employed the Durbin Watson test statistic which is used to test for first order serial correlation. This is a measure of correlation between the errors of a series and others from the same series and can be positive or negative[40]. The study hypothesized a null hypothesis that there does not exist a first order autocorrelation from the regression analysis. The test proceeded to examine if serial residuals are autocorrelated at a *P*-value of 0.05.
Table 6 below provides the results for autocorrelation tests on the residuals.

Table 6: Autocorrelation tests on residuals

Durbin-Watson d-statistic (4, 235) = 1.9032

Source[39]

Since the calculated value of the test statistic for this study was 1.9, it can be said that indeed there was no statistically significant serial correlation between the residuals of the regression model based on the equitable share from the national government, conditional and unconditional grants as well as local revenue collected by the national government as the independent variables. Hence independence of the residuals is maintained.

4.2.5 Cointegration Tests

In empirical statistics, it is common and important to fit vector autoregressive (VAR) models as a preliminary step in order to estimate Impulse responses. The purpose is to make sure that the right number of lags are selected for the fitted model in order to come up with an optimal lag length among multiple time series data. Each variable is considered a linear function of past lags of the other variables. The analysis was undertaken by making a null hypothesis that there is no cointegration amongst the variables. The study used the Johansen methodology which makes use of the Maximum Likelihood (ML) estimator of the parameters. The study results are in table **7** below.

Table 7: Cointegration results

Johansen Tests for Cointegration					
Trend: constant			Number of obs = 235		
Sample: 2013-2017			Lags =2		
Maximum				Trace	5% critical
Rank	Parms	LL	Eigen Value	Statistic	value
0	6	-399.923		19.2203	14.34
1	9	-391.382	0.36976	1.1495*	3.76
2	10	-390.807	0.03059		

Source[39]

After determining that there was indeed a long run relationship between fiscal decentralisation and performance of county governments, a vector error correction (VEC) was conducted and the results are summarised in table 8 below.

Table 8: Vector Error Correction Model

D_Wellbeing Index	**Coef.**	**Std. Err.**	**z**	**P>z**	**[95% Conf.**	**Interval]**
L1.	1	0.056163	0.58	0.561	-0.0774558	0.142699
_cons	0.598432	38.98808	0.02	0.988	-75.8168	77.01367
D_UB						
L1.	0.009822	0.003804	2.58	0.01	0.0023678	0.017277
_cons	-1.14739	2.640344	-0.43	0.664	-6.322367	4.02759
D_LR						
L1.	0.00662	0.001461	4.53	0	0.0037564	0.009484
_cons	-1.39429	1.014375	-1.37	0.169	-3.382425	0.593852
D_TG						
L1.	0.000411	0.001347	0.31	0.76	-0.002228	0.003051
_cons	2.379055	0.934838	2.54	0.011	0.5468055	4.211304

Source[39]

The study findings indicate that the three components of fiscal decentralisation had a positive relationship with their first lags and that the relationship of lags between equitable share and local revenue collections had a statistically significant relationship with their first lags.
The variables of the regression model were then tested and coefficients of the equation computed as shown in table 9. The regression coefficients of the equation computed are shown below.

Table 9: Model Summary for County Performance, Fiscal Decentralization and Public Governance

Source	**SS**	**Df**	**MS**	**Number of obs = 235**
				F(1,233) = 0.33
Model	0.17827311	2	0.008913655	Prob > F = 0.7209
Residual	6.30988678	232	0.271977788	R^2 = 0.0028
				Adj R^2 = -0.0058
Total	6.32771409	234	0.027041513	Root MSE = 0. 16492

Source[39]

Table 10: Regression Coefficients for County Performance, Fiscal Decentralization and Public Governance

Wellbeing Index	Coef.	Std. Err.	T	P>|t|	[95%Conf. Interval]	
FD	0.0009811	0.0012899	0.76	0.081	0.448	-0.0015603 +0.0035226
PG	0.011093	0.0053776	0.21	0.158	0.837	-0.0094858 +0.0117044
_cons	0.4933641	0.0365078	10.51	13.51	0.000	0.4214349 0.5652934

Source[39]

The tables above give a summary of analysis of variance due to the regression model and also variance attributed to residuals (errors). From table 10 above the value of adjusted r-squared was -0.0058 indicating that 0.58% of variations in the dependent variable were caused by variations in the independent variables, while 99.42% was caused by other factors. Furthermore, the table also shows that the F-Statistic = 0.33, and P-value > 0.05 was more than the level of significance, hence indicating that the relationship between county performance (dependent variable), and public governance (moderating variable) and fiscal decentralization was not significant at 5%.

The second step (model 2) is defined by the model below and represented in table 11. Make reference to theorem 3.2 as shown below.

$$Wi = \beta_{0} + \beta_{1} (FD) + \beta_{2} (PG) + \beta_{2} (FD \text{ x } PG) + \varepsilon$$

Table 11: Model Summary for County Performance, Fiscal Decentralization, Public Governance and Interaction Term

Source	SS	df	MS	Number of obs=235
				F(3,231) = 1.59
Model	0.128201381	3	0.042733794	Prob > F = 0.1920
Residual	6.19951271	231	0.026837717	R^2 = 0.0203
				Adj R^2 = 0.0075
Total	6.32771409	234	0.027041513	Root MSE = 0.16382

Source[39]

Table 11 above gives a summary of analysis of variance due to the regression model and also variance attributed to residuals (errors). From table above, the value of adjusted r-squared was 0.0075 indicating that 0.75% of variations in the dependent variable were caused by variations in the independent variables, while 99.25% was caused by other factors.

Table 12: Regression coefficients for County Performance, Fiscal Decentralization, Public Governance and Interaction Term

Wellbeing Index	Coef.	Std. Err.	T	P>|t|	[95% Conf. Interval]	
FD	0.0085475	0.00487	1.76	0.081	0.0010482	0.0181433
PG	0.0117473	0.00829	1.42	0.158	0.0045866	0.0280812
Interaction_PG	0.0014334	0.000707	2.03	0.044	0.0000408	0.0028259
_cons	0.5768768	0.054873	10.51	0.000	0.4687619	0.6849916

Source[39]

Table 13: Summary of Regression Results of County Performance, Fiscal Decentralization, Public Governance and Interaction Term (FD x PG)

	Model 1	Model 2
Constant	0.4933641 (0.000)	0.5768768 (0.000)
FD	0.0009811 (0.448)	0.0085475 (0.081)
PG	0.0011093 (0.837)	0.0117473 (0.158)
FD x PG	-	0.0014334 (0.044)
Adjusted R^2	-0.0058	0.0075
F-statistics	0.33 (0.7209)	1.59 (0.1920)

Source[39]
P-values are in parentheses

Table 13 above shows that the interaction term between fiscal decentralization and public governance (FD x PG) had a statistically significant effect at 0.05 level of significance with a p-value of 0.044. It can therefore be concluded that the introduction of the interaction term which was public governance on the relationship between fiscal decentralization and performance of County government was statistically significant. It increased the explanatory power by 1.33% (0.0075 – (-0.0058) = 0.0133). This therefore meant that public governance, comprising of human capital (HC), accountability index (Ai) and government applicable laws (A_l) had a statistically significant and positive moderating influence on the relationship between fiscal decentralization and performance of County governments in Kenya. This therefore led to the rejection of the null hypothesis (H_0) and acceptance of the alternate hypothesis that predicts a significant moderating influence.

5. Limitations

This study takes cognizance of a number of limitations such as inability to clearly discern the formal or operational bureaucratic channels. It is apparent that power and authority at the county government level operates loosely through a web of formal and informal networks based on personal ties between the executives and their supporters and permeates throughout the various levels and institutions.

Another challenge is the observation that political parties as institutions of governance offer little or limited source of change as majority of them are ethnically-based while yet others operate as personalized enterprises, associated and controlled by powerful personalities, devoid of professionalism, ideology, merit or vision[41].

In addition, the undevolved functions like security, higher education and energy transmission continued to be executed through centralised line ministries and national government regional and county-based technocrats that often occasion conflict with County administrators. Yet another limitation regards investments in major interjurisdictional projects with huge externalities which has mainly been left to the national government. These projects include the construction of highways, huge water dams, power generation, harbours and airports as well as natural resource exploitation. These different channels apparently seeming to operate in parallel with County governments systems lead to unnecessary duplication and undue competition resulting in wastage and embezzlement[24].

This multiplicity of funding institutional channels is attributed to lack of a coherent policy on decentralized financing, a growing demand for effective service delivery and greater participation of citizens in decision-making on public affairs that affect their everyday lives[41].

The overriding objective of this paper was to investigate the moderating effect of public governance on how fiscal decentralization related with the performance of County governments in Kenya during the transition period of 2013 - 2018.

Fiscal decentralization improves governance and local public service provision through proximity to citizens, information access and preference matching[12, 13]. Good public governance is a vital ingredient to the efficient production of goods and services[7], accountability in the use of power, protection of human rights and freedoms, as well as maintenance of an organized framework for every citizen to contribute towards resolving common issues and problems.

Fiscal decentralization has a known influence on governance and government quality[22] and the drive towards the reforms has been in the context of increasing focus on good governance[23]. Associated literature show that decentralization programs that encourage revenue mobilization rather than relying solely on grants and transfers from the higher levels of government to finance local expenditures are known to have smaller governments and lower budget deficits[1,42]. When implemented well and in an accountable environment, fiscal decentralization helps improve the performance of local governments in their efforts to reduce poverty and can also support hard budget constraints and macroeconomic stability.

This requires the maintenance of an organized legal and institutional framework within which citizens in society participate fully and in a transparent manner. The pursuit of good governance is an ideal which counties and societies must continue to pursue in order to ensure sustainable human development[4]. Good governance calls for the rule of law that are enforced by independent agencies; a competent and capable human personnel to manage government structures and resources; while at the same time holding itself accountable to citizens, private sector, civil society organisations and other stakeholders[4].

6. Conclusions

Both the analytical framework in the third section involving correlational and regression analysis and the ensuing discussion, leads the authors to conclude that there are a number of ways in which indicators of public governance influence the impact of fiscal decentralization on the performance of county governments. The results lead to the conclusion that there exists a statistically significant and positive moderating influence on the relationship between fiscal decentralization and performance of county governments in Kenya. The study objective which was to assess the moderating effect of public governance on the relationship between fiscal decentralization and performance of county governments in Kenya was accomplished.

7. Future research directions

Future research can be focused on establishing the post transition relationships amongst the key variables. Other studies could focus on assessing the relationship of fiscal decentralisation for sampled number of county governments and not the whole population. Furthermore, scholars can conduct case studies of individual county governments that can examine the relationships between selected variables such as health, education, infrastructure among others. This may be necessary given that counties are highly heterogeneous and straddle very diverse climatic and physical conditions; and their geographical and population sizes also differ markedly [39].

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References

[1] Luiz, D. & Barenstein, M. (2001). Fiscal decentralization and governance: A cross-country analysis. IMF Working Paper No. 01/71.

[2] Steiner, S. (2006). Decentralization in Uganda: Exploring the constraints for poverty reduction, GIGA-WP-31/2006, German institute of Global and Area Studies.

[3] Azfar, O., Kalikomen, S., & Meagher, P. (2001). Conditions for effective Decentralized governance: A synthesis of Research findings. IRIS Centre, University of Maryland. World Bank.

[4] Institute of Economic Affairs, National Council of Churches of Kenya (2011). A Guide for understanding decentralization in Kenya. Pan Printers, Nairobi.

[5] Republic of Kenya, (2010). Constitution of Kenya (2010). Government Printer, Nairobi.

[6] Sanjai, B., & Brian, B. (2008). Corporate governance and firm performance. Journal of Corporate Finance, 14, 257 – 273.

[7] Mankiw, N, Romer. D. & Weil, N. (1992). A Contribution to the Empirics of Economic Growth. The Quarterly Journal of Economics, Vol. 107, No. 2, Massachusetts Institute of Technology, MIT Press.

[8] Salami, A. (2011) Taxation, revenue allocation and fiscal federalism in Nigeria: issues, challenges and policy options, Economic Annals, LVI, 189, ISSN:

[9] Kirira, N. (2011). Public finance under Kenya's new constitution; Society for International Development, Nairobi. The Regal Press.

[10] Kenya Human Rights Commission, Social and Public Accountability Network (2010). Harmonization of decentralized development in Kenya. A joint collaborative effort, Nairobi, Kenya.

[11] Dabla-norris, E., & Wade, P. (2002). The challenge of fiscal decentralization in transition counties. IMF institute Working Paper 02/103

[12] Robinson (2007). Does decentralization improve equity and efficiency in public service delivery provision? IDS bulletin. Vol 38 (1) PP. 7-17.

[13] Mwenda, A. K. (2010). Economic and administrative implications of devolution framework established by the constitution of Kenya; Institute of Economic Affairs, Nairobi.

[14] Odd-Helge & Semboja, J. (2000). Dilemmas of fiscal decentralization: A study of local government taxation in Tanzania, Forum for development studies; Vol. 27, No 1 PP 7-41.

[15] Bahl, R.W., & Linn, J.F. (1992). Urban Public Finance in Developing Countries. Oxford: Oxford University Press.

[16] Oates (1999). An essay on fiscal federalism. Journal of Economic literature. American Economic Association. Vol. 37, No 3 PP 1120-1149.

[17] Hillman, A. (2003). Public Finance and Public Policy: Responsibility and Limitations of Government. USA; Cambridge University Press.

[18] Shah, A. (1994). The Reform of Intergovernmental Fiscal Relations in Developing and Emerging Market Economies. Washington: DC. World Bank.

[19] World Bank. (1994). Governance: The World Banks experience: Development in practice. Washington DC. World Bank.

[20] Kaufmann, Kray, Zoido-Lobaton (1999). Aggregating Governance Indicators, World Bank Policy Research Paper No.2195.

[21] Ehtishan, A., & Brosio, G. (2009). Decentralization and local service provision: What do we know? London School of Economics, London.

[22] Huther, J. & Shah, N. (1998). A Simple Measure of Good Governance to the Debate on Fiscal Decentralization. ECLAC Seminar, World Bank, Washington, DC.
[23] Cheema & Rondinelli (2007). Decentralizing Governance: Emerging concepts and practices (eds). The journal of Federalism, Vol. 38 (4) PP 741-743. Brookings Institution Press, Washington DC.
[24] Bardhan, P. (2002). Decentralization of Governance and Development. Journal of Economic Perspectives, 16(4) 185-205.
[25] Muoria, E. & Mirigu, A. (2011). An analysis of the effect of corporate governance on performance of commercial state corporations in Kenya. International journal of Business and public management. Vol I (I) PP 36-41.
[26] Precious. et al., (2017). Advancing evidence based practice for improved public sector performance. Journal of public administration, 52(4). University of Witwerters Land, South Africa.
[27] Rugo, M. (2014). How does citizen participation impact Decentralized service delivery? Lessons from Kenya Local Authority Service Delivery Plan.
[28] Devas, N. & Grant, U (2003). Local government decision-making - citizen participation and local accountability. School of Public Policy. Birmingham. Wiley & Sons ltd.
[29] Crook, R. & Sueverrin, A. (2002). Countries Fiscal Studies, No. 24 (3), pp 237 – 274
[30] Smoke, P. (2001). Fiscal Decentralization. A Review of Current Concepts and Practice. UNRISD, Paper No. 2, ISSN 1020 – 8186.
[31] Wallis, J. J., & Oates, W. (1988). Decentralization in the public sector: An empirical study of state and local government, University of Chicago Press
[32] Tiebout, C. (1956). A pure theory of local expenditures. Journal of Political Economy, 64, 416 – 424, University of Chicago Press.
[33] Oates, W. E. (1972). Fiscal Federalism, Harcourt, Brace, Jovanovich, New York.
[34] National Treasury (2018). Enhancement of County governments Own Source Revenue Kenya.
[35] Republic of Kenya, (2012). Public Finance Management Act. Government printer, Nairobi, Kenya.
[36] Kenya National Bureau of Statistics, KNBS. (2016). Spatial Dimensions of Wellbeing in Kenya, Nairobi.
[37] Sen, A., Stiglitz, E., & Fitoussi, J. (2009). Report by the commission on the measurement of economic performance and social progress. Paris, France.
[38] Ravallion, M. (1998). Poverty Comparisons: Fundamentals of Pure and Applied Economics, Chur, Switzerland. Hardwood Academic Press.
[39] Mbau, E. P., Iraya, C., Mwangi, M., & Njihia, J. (2019). An Assessment of the Effect of Fiscal Decentralisation on Performance of County Governments in Kenya, European Scientific Journal.
[40] Deforest, D., Brix. K., Tear, L., & Adams, W. (2018). Multiple linear regression models for predicting chronic aluminium toxicity for fresh water

aquatic orgasims and developing water quality guidelines. Environmental toxicity & chemistry, 37(1), 80-90.

[41] Menon, B., Mutero, J., Macharia, S. (2008). Decentralization and local governments in Kenya. International Studies Program. Working Paper: 08 - 32. Andrew Young School of Policy Studies.

[42] Ter-Minassian, T. (1997). Decentralization and Macro Economic Management. IMF WP