



# Impact of Fiscal Decentralization on Public Sector Employment in Local Government Areas of Kaduna State

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#### Abstract

Bloated bureaucracies and overstaffed public ministries, departments and agencies are prevalent issues in developing countries today. Several empirical studies have suggested fiscal decentralization (FD) as a therapy for this problem, and this implies that the excessive size of governments can be restricted if government responsibilities for taxes and expenditures are decentralized. This study uses panel data from 2006 to 2023 to examine the effect of FD on public sector employment in the 23 local government areas in Kaduna state. The degree of FD in each local government (LG) was measured using four indicators, namely, revenue indicator (RI), expenditure indicator (EI), autonomy indicator (AI), and capital indicator (CI) across three econometric models. The study's findings indicate that making LGs more directly responsible for their financing encourages more conservative employment. Based on the findings of this research, it is recommended that Kaduna state government promote true FD by assigning more revenue-generating functions to LGs to enable them take responsibility for all expenditure decisions and be more efficient managers.

**Keywords:** Fiscal decentralisation (FD); Public Sector Employment; Local government **JEL Classification:** 

#### 1.0 Introduction

Government plays a crucial role in the modern economy using tools such as fiscal and monetary policies. In many countries, the public sector employs a significant portion of the workforce, and empirical research in this field has garnered a lot of attention (Maryanti et al., 2022). In developing and transition economies, issues like bloated bureaucracies, overstaffed public companies, and wasteful spending—such as excessive ministries, duplicate roles, and ghost employees—are common (Oguzierem & Sofiri, 2017). Consequently, reducing public-sector employment has become a key focus of economic reform in these nations (Enakirerhi & Temile, 2017).

Decentralization involves transferring fiscal, political, and administrative powers from central governments to regional or local governments (Raji, 2024). Fiscal decentralization (FD) specifically focuses on devolving control over public revenue and expenditure to lower levels of government (Shiyanbade & Esan-Atanda, 2024). The economic argument for FD is that it enhances both allocative and productive efficiency. Productive efficiency refers to providing public goods at the lowest cost, while allocative efficiency ensures services match local preferences (Makka et al., 2024). These efficiencies are the key economic benefits expected from FD.



The main argument for FD is that it leads to macroeconomic gains by efficiently providing social goods, tailored to the preferences of different local governments (Shiyanbade & Esan-Atanda, 2024). Since constituents' preferences and the costs of providing local public goods vary, the optimal level of service delivery will differ across regions. To maximize social welfare, public good delivery must adapt to these variations. FD also enhances allocative efficiency by allowing local governments, who are closer to citizens make more responsive spending decisions (Adedeji, 2023). This could potentially reduce the resources, including staff, needed to meet demand.

Fiscal decentralization has been successfully implemented in countries such as the United States, Denmark, Indonesia, and Switzerland, leading to steady economic growth, improved governance efficiency, and better transparency in public fund use (Koledoye, 2017). According to Luka (2024), countries such as the U.S., U.K., Spain, and India have experienced positive growth rates, with the U.S. showing a 2.2% average, the U.K. 0.7%, Spain 1.1%, and India 5%. In the U.K., decentralization occurs in Scotland, Wales, and Northern Ireland, while the U.S. utilizes semi-autonomous states and local governments. Spain's "Autonomous Communities" system grants counties varying self-governance powers, and India's Panchayati Raj system decentralizes power to local authorities (Bellido, 2024; Ananth, 2014)

The success of the countries mentioned above has motivated many African countries including Nigeria to adopt FD policies in governance. Although these countries can be argued to have achieved a high level of efficiency and effectiveness of governance, Nigeria has yet to replicate the type of success seen in Western/European countries as more than half of the population in Nigeria live on less than US \$1 per day (Okonta & Nwankwo, 2023).

Pioneer studies by Brennan and Buchanan (1980) and Niskanen (1975) depict government as a revenue-maximizing entity, arguing that fiscal decentralization limits government size through tax competition, aided by the mobility of people and businesses. However, scholars such as Erubami (2024), Adedeji (2023), and Ewetan et al. (2020) warn against FD, citing potential drawbacks such as regional inequalities, macroeconomic destabilization, lower quality of governance, lack of basic infrastructure, high corruption rates, and increased administrative costs, which could undermine the economic benefits of decentralization.

Nigeria operates a federal system where authority is shared amongst the federal, state, and local governments, with the federal government holding the final authority on certain policies as outlined in the 1999 constitution. Although federalism is inherently decentralized, it has not led to the same economic success in Nigeria as seen in other decentralized countries. Key reasons for the failure of FD in Nigeria include the challenges of devolving power from the federal government to state and local governments across political, administrative, and economic dimensions (Eniekezimene, 2021; Onwioduokit & Esu, 2018).

Although the 1999 Constitution of Nigeria outlines the fiscal roles of each government tier, local governance has been undermined by constant interference from State governments. In Kaduna State, public sector employment in local governments has increased by over 90% in



the past 18 years, as reflected in their 2021 audited annual reports (Kaduna State Bureau of Statistics, 2021). Despite falling GDP and unfavorable exchange rates, there is growing pressure to reduce governance costs and increase internally generated revenue (Okonta & Nwankwo, 2023). Local governments in Kaduna State receive significant monthly statutory allocations, but the effectiveness and efficiency of governance are far from commensurate with the funds they receive (Amaegbiri & Nsikhe, 2020).

FD can lead to either an increase or decrease in the demand for public services. If services are delivered more effectively, citizens may demand more of certain services while reducing demand for others. However, if overall demand for public services rises, it is unclear whether the efficiency gains from FD will offset the increased cost of governance (Baskaran, 2011). The impact of FD on total public sector employment depends on two factors: the relative size of the substitution effects between different public services and any changes in demand and spending on services that FD may trigger (Martinez et al., 2017).

Within this context, this paper tries to determine if an increase in FD leads to an increase in public-sector employment at the local government level in Kaduna state. This paper is organized into five sections. Section two reviews the literature on FD, section three discusses the research methodology, section four analyses the results and section five concludes the research.

# 2.0 Literature Review

### 2.1 Conceptual Review

Fiscal decentralization refers to the transfer of financial authority from national to subnational governments, involving both the devolution of power to raise revenue (e.g., through tax collection) and the expansion of expenditure responsibilities for lower levels of government (Eniekezimene, 2021). This process allows subnational governments to take on more developmental activities, as permitted by the 1999 constitution. To measure FD, one typically calculates the degree of power transfer by comparing the revenue and expenditure of local governments to those of the state government, using accounting measures such as ratios (Li & Li, 2024).

The four pillars of fiscal decentralization, as outlined by Maryanti et al. (2022), include: (1) expenditure decentralization, which involves distributing government spending across levels of government; (2) revenue decentralization, focusing on the distribution of intergovernmental transfers; (3) autonomy decentralization, which grants local governments the ability to generate their own revenue; and (4) sub-national borrowing, allowing local governments to borrow when they cannot meet their expenditure needs.

# 2.2 Theoretical Review

# 2.2.1 Wagner's law

The study's theoretical framework is anchored on Wagner's Law of increasing state activities (1893), which suggests a positive correlation between economic development and government expenditure. As economies grow, the demand for government services rises faster than economic growth. Wagner identified factors influencing public expenditure, such as per capita income, literacy rates, population growth, urbanization, and fiscal autonomy.



The law has been tested across nations, where public sector size is measured by government spending as a proportion of GDP or the ratio of public employees to the population.

However, some studies contend that although public sector employment rises in tandem with economic growth, this relationship is not linear (Martinez et al., 2017). The association between development level and employment in the public sector becomes insignificant after a certain point in development and Wagner's law no longer holds. The turning point in this regard is estimated to be 14,000 dollars per capita at 1985 purchasing power parity (PPP) prices, according to a study by Rama (1997) which used an unbalanced panel data set covering 90 countries spanning the years 1970, 1980, and 1990. More so, Alesina et al. (2001) argue that although Wagner's law provides a comprehensive explanation of the size of public sector employment across countries, it offers less insight into how public sector employment is distributed inside a country.

# 2.3 Empirical Review

Using inter-provincial panel data in China from 2005 to 2020, Li and Li (2024) examined the effects of FD on local governments' degree of self-interest and how much influence this self-interest has on the bias of the fiscal spending structure. Using a fixed-effects model, they discovered that local governments' self-interest increases due to FD, which causes a bias in the spending structure against livelihood expenditures such as education, medical care, and housing.

Park (2022) investigates the relationship between FD and expenditure composition in order to examine the indirect effect of FD on allocative efficiency. The study, which uses the Mundlak econometric model and data from 224 local governments in South Korea from 2008 to 2018, concludes that FD puts downward pressure on welfare expenditure (health and education). That is, FD has a tendency to move expenditure from the current expenditure account, which includes higher salaries, to the capital account (road construction and transport services).

Makreshanska-Mladenovska and Petrevski (2019) examined the relationship between FD and government size using a panel of 28 European countries from 1990-2016. By employing General Method of Moments (GMM) estimator, the study discovered that both revenue and expenditure decentralization has a negative effect on government size, and expenditure decentralization has a more significant effect on reducing the size of government.

Golem and Perovic (2014) investigate the relationship between FD and the size of government using a pooled mean group estimator on a set of 23 OECD countries over the period 1970 to 2008. FD was measured through the degree of subnational autonomy and their results suggest that FD decreases the size of government in the long run.

Liberati and Sacchi (2013) analyzed the impact of FD on government size using unbalanced panel data from 1980 to 2004. The data provided information on the local governments of 19 OECD countries and FD, measured by fiscal autonomy and federal transfers. Using three econometric models, the data demonstrated a negative significant relationship between fiscal autonomy and government size, while federal transfers showed a positive relationship.

Despite the availability of empirical research on the impact of FD on public sector employment, there are no empirical studies concentrating on FD between states and local governments in Nigeria. Motivated by the scarcity of empirical research in this area and the



heterogeneities in both theoretical and empirical literature, this paper aims to bridge this gap by shedding more light on FD between Kaduna state and the twenty-three Local Government Areas of the State.

### 3.0 Methodology

### 3.1 Introduction

To measure FD, one has to calculate the degree of devolution of power from State to local governments. The use of one indicator cannot accurately capture and quantify the true amount of FD because, expenditure, internally generated revenue, and intergovernmental grants (statutory transfers from Federal and State governments to local governments) are all different aspects of FD (Eniekezimene, 2021). As such, four FD indicators will be constructed to assess the impact of FD on economic growth. These indicators include Revenue Indicator (RI), Expenditure Indicator (EI), Autonomy Indicator (AI), and Capital Indicator (CI).

### 3.2 Sample of Study

Data from the published audited annual accounts of Kaduna state and its twenty-three local government areas covering the years 2006 to 2023 was used to generate the data used to analyze the effect of FD on public sector employment. The Local government areas include; Birnin Gwari, Chikun, Giwa, Igabi, Ikara, Jaba, Jema'a, kachia, Kaduna North, Kaduna South, Kagarko, Kajuru, Kaura, Kauru, Kubau, Kudan, Lere, Makarfi, Sabon Gari, Sanga, Soba, Zangon Kataf & Zaria Local government.

### 3.3 Model Specification

The econometric model of this study is established on a modified version of the endogenous growth model by Barro (1990) which identifies linear relationships between government expenditure and economic growth. As such, a growth model that captures revenue and expenditure by different tiers of government is the most appropriate for this thesis. Overall, this model indicates that if actual expenditure shares do not match growth-maximizing ones, reallocating resources across the tiers of government will boost economic growth. This endogenous growth model has been used by Philip and Isah (2012) and Atan and Esu (2021).

$$Y = P + G \tag{1}$$

The model assumes that two sectors of the economy produce output (Y): the private sector (P) and the government sector (G).

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$$P = p(L_p K_p Rg) \tag{2}$$

$$G = g(L_g K_g) \tag{3}$$

In this model, output (Y) is dependent on labour (L) and capital (K) inputs from both the government sector (G) and private sector (P). It is further assumed that output in the government sector (government expenditure) has an externality effect on output in the private sector. This is represented in the model as resource allocation policy of the government (Rg).



$$L = L_p + L_g \tag{4}$$

$$K = K_p + K_G \tag{5}$$

Equation 4 illustrates that total labour input in the economy comes from both the private and government sectors while equation (5) illustrates that total capital input in the economy comes from both the private and government sectors.

$$Y = f(L, K, R_g) \tag{6}$$

The total inputs (labour and capital) from both the private government sectors are represented by equations (4) and (5). Therefore, the total output function is shown in equation (6). Assuming that resources in the government sector (G), are allocated to two tiers of government: State (S) and local (L); then

$$G = S + L \tag{7}$$

Equation (7) provides a statement of statutory allocations to state and local governments; and if Q denotes local government resources, therefore

$$Q = L \tag{8}$$

Equation (8) represents local government share of total government revenue and expenditure but is subsumed in (7), while (7) is imbedded in (6). Equation (6) becomes our baseline equation, and the Rg component will be unbundled subsequently. Atan and Esu (2021) adopted this approach in their model specification. Given the factor input components of equation (6), equation (6) is re-written as a Cobb-Douglas production function:

$$Y = f(L^{\beta_1} K^{\beta_2} A) \tag{9}$$

Where Y is output growth rate; L is labour and K is capital; which is divided into human and physical capital and A represents total factor productivity (TFP), which is regarded as an efficiency parameter. The model assumes implicitly that endogenous variables are instrumental to the establishment of the behaviour of the TFP component of the model. The TFP is therefore structured as:

$$A = f(R_g, X) \tag{10}$$

$$R_g = f(FD_j) \tag{11}$$

Where  $FD_j$  represents each of the four FD indicators discussed previously and X is the vector of some control variables which, in most economic growth studies, have been found to interact positively and significantly with economic growth. Equations (9) therefore can be expressed as a linearized composite function by taking the log of both sides thus:

$$Y_{it} = L_{it} + K_{it}^{h} + K_{it}^{c} + FD_{jit} + X_{it}$$
(12)

Where *i* represent each local government area, *t* signifies the time period, *j* represents the FD indicator being used,  $L_{it}$  represents labour,  $K_{it}^h$  and  $K_{it}^c$  represent human and physical capital respectively. To adaptable for OLS estimation, the econometric version of equation (12) is restated as thus:



 $PSE_{it} = \beta_0 + \beta_1 IGR_{it} + \beta_2 PED_{it} + \beta_3 CEX_{it} + \beta_4 FD_{jit} + \beta_5 X_{it} + E_{it}$ (13)

Where  $PSE_{it}$  is public sector employment per capita in local government *i* at time *t*,  $\beta_0$  is the constant parameter;  $\beta_i$  are elasticities of the above-defined variables and their expected signs are discussed in the next sub-section;  $IGR_{it}$  is economic growth measured using the Internally Generated Revenue (IGR) of the 23 Local Governments,  $PED_{it}$  is primary school education,  $CEX_{it}$  is capital expenditure,  $FD_j$  represents each of the four FD indicators discussed previously and **X** is the vector of some control variables which, in most economic growth studies, have been found to interact significantly with Public sector employment.  $E_{it}$  represents the stochastic error term which is assumed to be normally distributed, homoscedastic, and independent across observations.

### 3.4 Data and Sources of Data Collection

Although the key variable of interest is FD, there are other factors that need to be accounted for to avoid endogeneity problems. As such, variables that are known to impact public sector employment in each local government are included as control variables.

Variable	Description	Expected	Data Source
		Sign	
PSE	Public Sector Employment rate measured as Personnel Emolument in each Local government area.		Published audited annual reports of each Local Government (2005 to 2023).
RI	Ratio of local government revenue to combined State and local government revenue	-	Published audited annual reports of Kaduna State Government and each Local Government (2005 to 2023).
EI	Ratio of local government expenditure to combined State and local government expenditure	-	Published audited annual reports of Kaduna State Government and each Local Government (2005 to 2023).
AI	Ratio of Local government's own revenue share of its total revenue	-	Published audited annual reports of Kaduna State Government and each Local Government (2005 to 2023).
CI	Ratio of local government capital investments to combined State and local government capital investments.	-	Published audited annual reports of Kaduna State Government and each Local Government (2005 to 2023).
IGR	Local government Internally generated revenue per capita	+	Published audited annual reports of each Local Government (2005 to 2023).
CEX	Physical capital measured by capital investments in each Local government	+	Published audited annual reports of each Local Government (2005 to 2023).
PED	Human capital measured by primary education expenses in each Local government area	+	Published audited annual reports of Kaduna State Government and each Local Government (2005 to 2023).
APC	Political party in power captured by a dummy variable	+/-	Published audited annual reports of Kaduna State Government and each

 Table 1: Variables, Definitions and Data Sources



			Local Government (2005 to 2023).
COP	Corruption Rate is measured by the	+	Published audited annual reports of
	percentage of overhead expenditure		Kaduna State Government and each
	that violates appropriation law.		Local Government (2005 to 2023).

### 3.5 Data Analysis Technique

This study tests the impact of fiscal decentralization on public sector employment using panel data from local governments in Kaduna state. To address potential biases from local government heterogeneity, the study employs multiple estimation techniques: Fixed Effect (FE) and Random Effect (RE) models, with a modified Hausman test to determine the appropriate model. The FE model which is the more efficient estimator according to Hausman test uses Driscoll-Kraay standard errors to handle autocorrelation, heteroscedasticity, and cross-sectional dependence. The study also uses Pooled OLS with Panel Corrected Standard Errors (PCSE) to measure the average effects of FD across time and Cross-Section Augmented Auto Regressive Distributed Lag (CS-ARDL) model to estimate short and long-run effects while considering dynamics and cross-sectional dependence. The study uses these three econometric approaches to comprehensively assess the effect of FD on public sector employment across Kaduna state's 23 local government areas

### 4.0 Results, Findings and Discussion

#### 4.1 Results

Variable	Туре	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis	Observations
PSE	Overall	1374.659	706.9172	188.0803	6202.966	0.827	3.1597	N = 368
IGR	Overall	24.89199	93.6266	-94.9645	321.4143	1.3748	4.1878	N = 368
PED	Overall	2145.964	1026.975	123.0156	6458.567	0.5624	2.3342	N = 368
COR	Overall	8.559906	13.12555	-49.1019	51.5348	0.03917	5.1545	N = 368
CEX	Overall	1286.396	908.3759	3.3985	6778.337	0.6323	2.4918	N = 368
APC	Overall	0.4021739	0.491004	0	1	0.399	1.1592	N = 368
RI	Overall	0.0792364	0.226951	0.009	0.9658	0.6534	3.5321	N = 368
EI	Overall	0.0164764	0.004399	0.0064	0.0313	0.2377	2.3766	N = 368
AI	Overall	0.0268155	0.021941	0.0012	0.1495	0.4584	2.1708	N = 368
CI	Overall	0.009962	0.007827	0	0.0434	1.0685	4.0758	N = 368

#### Table 2: Descriptive Statistics

Source: Author's computation using Stata 13

Table 2 shows that the mean value for each data variable is provided, with the highest mean (0.080) for RI, indicating that fiscal decentralization (FD) is most prominent in local government share of total revenue in the State. The standard deviation suggests a wide dispersion of data around the mean. Most variables are right-skewed and leptokurtic (having kurtosis values greater than three). To address these issues, a letter-value test was conducted,



revealing that the maximum and minimum values of all variables fall within the recommended range, ensuring that the results are consistent with a normally distributed variable.

	Outer Fence		
Variable	Minimum	Maximum	
PSE	-1394.017	3998.742	
IGR	-271.6849	283.2153	
PED	-1717.442	6105.155	
COR	-38.8429	55.9133	
CEX	-653.0416	3683.186	
RI	-0.0049	0.0462	
EI	-0.0041	0.0379	
AI	-0.0633	0.1089	
CI	-0.0308	0.0491	

Table 3: Letter Value Test

Source: Author's computation using Stata 13

#### Table 4: Unit Root Test

Cross-sectionally augmented Im-Pesaran-Shin (CIPS) Panel Unit Root Test					
		C	ritical Valu	ies	
Variable	<b>CIPS Test Statistic</b>	10%	5%	1%	N,T
PSE	-3.929	-2.07	-2.15	-2.32	(23,18)
PED	-2.677	-2.07	-2.15	-2.32	(23,18)
IGR	-5.355	-2.07	-2.15	-2.32	(23,18)
COR	-4.053	-2.07	-2.15	-2.32	(23,18)
CEX	-3.553	-2.07	-2.15	-2.32	(23,18)
RI	-4.002	-2.07	-2.15	-2.32	(23,18)
EI	-3.967	-2.07	-2.15	-2.32	(23,18)
AI	-4.318	-2.07	-2.15	-2.32	(23,18)
CI	-3.333	-2.07	-2.15	-2.32	(23,18)

Source: Author's computation using Stata 13

Under the null hypothesis in Table 4, all panels contain a unit root and the alternative hypothesis is that at least one panel is stationary. The null hypotheses are rejected at a P value of 0.01%. This means that all the variables are stationary at levels.



Variable	VIF	1/VIF
CI	4.22	0.236925
EI	2.16	0.463673
APC	1.97	0.506834
CEX	1.93	0.518270
PED	1.86	0.537641
PSE	1.70	0.589855
RI	1.37	0.731553
AI	1.33	0.754388
COR	1.11	0.899251
Mean VIF	1.96	

#### Table 5: Variance Inflation Factor

Source: Author's computation using Stata 13

Regarding collinearity between all independent variables, the mean VIF of 1.96 is below the recommended number of 5, suggesting that the inclusion of our control variables does not cause a multicollinearity problem. Following the rule of thumb of VIF being less than 5 and correlation between two variables being less than 0.70, our results show no problem of multicollinearity.

#### Table 6: Pre-Estimation Tests

Tests	Туре	Chi-Square/F-	Р-
		Stats	Value
Cross Sectional Dependence	Pesaran Test	12.867	0.000
Fixed Effects or Random Effects	Modified Hausman Test	63.35	0.000
	0.112		

Source: Author's computation using Stata 13

The Pesaran test for cross-sectional dependence strongly rejects the null hypothesis of independent cross-sectional units, with a p-value of 0.000. This indicates the need for second-generation panel data techniques that can handle cross-sectional dependence and potential endogeneity issues. Additionally, a modified Hausman test is conducted to choose between the Fixed Effect (FE) and Random Effect (RE) models. With a p-value of 0.00, the null hypothesis that the RE model is more efficient is rejected, supporting the use of the FE model.

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Model 1	Model 2	Mo	del 3
FE with Driscoll Kray	Pooled OLS with Panel	CS ARDL Model	
Standard Errors	Corrected Standard Errors		
	(PCSE)		
		Short Run	Long Run
227.78***	398.94***	36.50	1047.7
(74.63)	(113.42)	(31846.25)	(16012.97)
16106.71	-18085.31***	44386.15	24976.61
	FE with Driscoll Kray Standard Errors 227.78*** (74.63) 16106.71	Model 1Model 2FE with Driscoll Kray Standard ErrorsPooled OLS with Panel Corrected Standard Errors (PCSE)227.78***398.94*** (113.42) 16106.7116106.71-18085.31***	Model 1Model 2Model 2FE with Driscoll KrayPooled OLS with PanelCS ARDStandard ErrorsCorrected Standard Errors (PCSE)Short Run227.78***398.94***36.50(74.63)(113.42)(31846.25)16106.71-18085.31***44386.15

	(8664.12)	(8158.82)	(34287.56)	(17696.88)
AI	-4139.66***	-1034.50	-3759.173	-2430.43
	(1749.40)	(1292.01)	(2959.79)	(1718.18)
CI	-1468.14	3038.98	-20427.79**	-10706.54***
	(8780.38)	(6640)	(8720.57)	(4080.14)
PED	0.2473**	0.2754***	-	-
	(0.1118)	(0.0382)		
IGR	0.1761	-0.0341	-	-
	(0.1268)	(0.2034)		
COR	-1.1815	-2.60	-	-
	(0.9862)	(1.58)		
CEX	-0.1370	0.0269	-	-
	(0.0959)	(0.0471)		
APC	-116.44	-94.75	-	-
	(73.92)	(71.50)		
ECT	-	-	-2.12	8492***
			(0.0	)844)
Observation	414	414		391
$R^2$	0.36	0.60	)	
Time Period	18	18		17
Panels	23	23		23
Standard Err	ors are in parentheses.			
P – value: **	* P<0.01 ** P<0.0	5		

Dependent Variable: Public Sector Employment Per Capita (PSE)

# 4.2 Findings

Results from model 1 show that RI and AI have a significant relationship with public sector employment because they have p-values less than 5% while the coefficient on EI and CI are statistically insignificant because they have a p-value higher than 5%. The coefficient of RI shows that a one naira increase in revenue decentralization will increase public sector employment by approximately 228 naira while a one naira increase in autonomy decentralization will decrease public sector employment by 4140 naira. These result from the coefficient of AI align with Golem and Perovic (2014), who argue that the public sector is expected to be smaller when decentralization is funded by revenue generated by the local governments and comparatively larger when funded by statutory transfers from the federal government.

In Model 2, the coefficients of AI and CI are insignificantly related to public sector employment as these variables have p values higher than 5%. Similar to Model 1 above, the coefficient of RI shows that a one naira increase in revenue decentralization will increase public sector employment by approximately 399 naira. However, EI is negatively and significantly correlated with public-sector employment, as a one-naira increase in EI will lead to an 18,045 naira decrease in public-sector employment. This result from the



coefficient of EI aligns with the Leviathan hypothesis, whereby inter-jurisdictional competition amongst local governments to keep and increase their tax base constrains the size of the public sector (Brennan & Buchanan, 1980).

Model 3 is estimated using the cross-section augmented autoregressive distributed lag model (CS ARDL) to determine fiscal decentralization's short- and long-run effect on public sector employment. The Error Correction Term (ECT) in model 3 shows long-run cointegration amongst the variables in the panel and this relationship is statistically significant at the 1% level. The results in model 3 show that RI, EI and AI are insignificantly related to public sector employment in both long and short run while CI remains statistically significant in both periods. A one naira increase in CI decreases public sector employment by 20,428 naira and 10,707 naira in the short run and long run respectively.

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Tests	Туре	Chi-Square/F-Stats	<b>P-Value</b>
Groupwise	Wald Test	369.23	0.0000
Heteroskedasticity			
Serial Correlation	Wooldridge Panel Data Test	27.76	0.0000
Misspecification	Ramsey RESET TEST	0.0	0.9386
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Source: Author's computation using Stata 13

The study conducts several tests to assess model assumptions. The Wald test indicates groupwise heteroscedasticity with a p-value of 0.00, rejecting the null hypothesis. The Wooldridge Panel Data Test reveals serial correlation in the residuals, with a p-value of 0.006. The RESET test shows no issues with model specification, as its p-value of 0.94 suggests the model is correctly specified. However, the results indicate that the model suffers from groupwise heteroscedasticity, serial correlation, and cross-sectional dependence, necessitating the use of robust standard errors and advanced panel data techniques to address these issues.

# 4.3 Discussion

The effect of AI and CI renders support to the results of Liberati and Sacchi (2013) who argue that expanding the revenue-raising capacity of local governments leads to a long-term reduction in the size of the public sector, while increases in federal transfers to local governments increases the public sector's size. The message is that if one wants to reduce public sector employment at the local level, let them raise money there as well. Making local governments more directly responsible for their own financing appears to lead to more conservative employment policies and hence a smaller government size.

RI reflects the bulk of local government revenue financed by statutory transfers from the federal and State governments. The positive impact of RI on public sector employment is in line with the results of Cantarero and Perez (2012), who argue that unconditional intergovernmental transfers encourage wasteful or unproductive expenditure at the local government level. The effect of EI on public sector employment is consistent with Martinez et al.'s (2017) argument that local governments may not fully accept responsibility for their



budget decisions because total expenditure decisions do not reflect their own economic policies but those of the state government.

### 5.0 Conclusion and Policy Recommendations

The study used panel data spanning from 2006 to 2023 to examine the effect of FD on public-sector employment in the 23 local government areas of Kaduna State. More specifically, four measures of FD were utilized in three separate models used to assess the effect of FD on public sector employment. Each measure of FD was statistically significant in at least one model. The paper provides evidence that FD can have quite different impacts on public-sector employment depending on the institutional environment and the type of FD in place. The results of this paper showed that intergovernmental transfers make local governments inefficient and an increase in public sector employment may be the cost of improved delivery of public services.

In cases where fiscal decentralization is executed quasi, its impact on public-sector employment will be positive, as demonstrated by the coefficient of RI. The negative impact of AI, CI and EI on public-sector employment lends credence to the fact that local governments are more efficient in utilising manpower for tax administration and executing capital and recurrent projects. Based on these findings, the state government and policymakers are encouraged to not only focus on augmenting revenue autonomy within each local government but also accompany this process by training and monitoring, which would build the capacity of local government administrators. As such, the state government should design proper training and retraining programmes for local government administrators for more effective performance. This will ensure they take responsibility for all expenditure decisions and be more efficient managers.

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