

STRATEGIC REDISTRIBUTIVE TARGETING OF FISCAL TRANSFERS: IMPLICATIONS FOR LOCAL REVENUE GENERATION

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INTRODUCTION

Proponents of the Tactical Redistribution Theory (Fumey 2018; Banful 2011; Dixit and Londregan 1996) raise concerns about how electoral concerns influence policies surrounding decentralisation. Prior empirical insights (Brunnschweiler and Obeng 2022; Fumey 2018; Caldeira and Rota-Graziosi 2014; Banful 2011; Dixit and Londregan 1996) have emphasised that some political influence may be present when transferring fiscal resources to the local government units. This is an imperative issue to be discussed since it is practically observed in Ghana, where governments tend to direct much of fiscal transfers to regions and districts where they possess much influence when it comes to electoral outcomes as a way of securing a majority of their votes (Fumey and Egwaikhide 2018). This is experienced when government officials and ministries tend to inflate the budget submitted to the parliament, engage in excess spending and intrude into local issues that could otherwise be handled by the statutes of the district assemblies. Furthermore, some specialised groups also form coalitions with the sole objective of lobbying the incumbent to make certain decisions to direct fiscal transfers in their favour. Consequently, fiscal transfers are targeted at self-seeking interests rather than national projects (Li and Li 2024; Liu and Zhao 2011).

To avoid distortions of intergovernmental fiscal transfers by politicians and other interest groups, several economies have adopted the use of

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formula-based or performance-based grant allocation systems; examples include Ghana (Fumey and Egwaikhide 2018), Tanzania (Masaaki 2018), Cote D'Ivoire (Brun and Sanogo 2017) and Senegal (Caldeira and Rota-Graziosi 2014). Prior to the implementation of the 1992 Constitution of Ghana, a system of sharing through the District Assemblies Common Fund (DACF) required that not less than 5 percent (now 7.5 percent) of the economy's total tax revenue be paid into the fund in quarterly instalments based upon a formula (needs, equity, service pressure and responsiveness) submitted by the Common Fund Administrator (CFA) and approved by parliament (Fynn 2011). In order to support the performance of district assemblies in Ghana, the District Development Facility (DDF), which is a performance-based grant system (efficiency, accountability and delivery of basic services), was enacted using the Functional Organizational Assessment Tool (FOAT) (Ministry of Local Government and Rural Development (MLGRD) 2013). It is worth noting that neither formula nor performance-based grant systems guarantee a fair and efficient fiscal transfer-sharing system. This is because, in Ghana, for instance, the political party in power may decide to modify the indicators which make up the formula and change their relative weights in order to alter the grant allocations, which favours some politically aligned or swing districts (Fumey 2018). Not considering the implications on local revenue, the core motivation behind such political acts is usually centred on some electoral forecast/predictions.

In an attempt to establish the link that exists between fiscal transfers and Internally Generated Fund (IGF) generation, some authors argue that while allocations from the central government help finance the provision of public service delivery, they also possess an inherent quality of preventing the need for an optimal local revenue generation (Otoo and Danquah 2021; Zhuravskaya 2000; Bradford and Oates 1971). For instance, in several African economies (including Ghana), the administrative and institutional capacity of local assemblies to mobilise tax revenue and deliver public goods and services is extremely limited (Otoo and Danquah 2021; Yeboah and Marfo 2020). Meanwhile, the generation of local revenues requires more robust monitoring and enforcement systems and qualified staff, which are costly to employ and maintain (Masaaki 2018). Moreover, policies surrounding fiscal decisions are highly centralised and politicised such that political interference with district revenue mobilisation is mostly evident within the

borders of the sub-Saharan African region (Masaaki 2018; Brun and Sanogo 2017).

From the literature inspection, however, the political effects of the transfers on locally raised revenues seem to be under-researched with a wider focus on the effects of fiscal transfers on own revenue (Masaaki 2018; Brun and Sanogo 2017; Liu and Zhao 2011; Mogues et al. 2009; Allers et al. 2001). Allers et al. (2001) identified that in the Netherlands, taxation is greater if the government is more left-leaning than when the government is not. Masaaki (2018) and Mogues et al. (2009) found that central government grant allocations crowd out local revenue mobilisation for Ghana and Tanzania, respectively. Liu and Zhao (2011), on the other hand, found a positive relationship between fiscal transfers and own revenue generation. Brun and Sanogo (2017) studied the impact of fiscal allowances to districts on revenue generation in Cote d'Ivoire over a period of 4 years (2011-2014). They documented a statistically significant relationship between central government grants and local revenue generation. Dick-Sagoe and Tingum (2021) investigated the flypaper effect of intergovernmental transfers and incentives. They found that greater external transfers to district assemblies in the Central region were found to increase local government expenditure.

A different string of evidence exists on the presence of political influence when distributing resources to local districts (Li and Li 2024; Brunnschweiler and Obeng 2022; Fumey and Egwaikhide 2018; Fourniaies and Mutlu-Eren 2015; Caldeira and Rota-Graziosi 2014; Banful 2011). Banful (2011) examined, with evidence from Ghana, that formula-based intergovernmental transfer mechanisms eliminated politically motivated targeting between 1994 and 2005. Fumey (2018) concurs that tactical considerations exist for political fortunes and illustrates that economic transfers to each district increased by 8.4 percent during election years, whereby such increases favoured swing districts over non-swing ones. Fourniaies and Mutlu-Eren (2015) offer distinctive insights into the presence of co-partisan bias in intergovernmental grant allocation in England. Caldeira and Rota-Graziosi (2014) evidenced that the redistribution of central resources in Senegal follows the pattern of tactical redistribution where swing districts

are targeted to bolster electoral fortunes. On fiscal decentralisation dynamics, Otoo and Danquah (2021) studied fiscal decentralisation and the efficiency of public service delivery by local governments in Ghana. Using a panel dataset of all 216 MMDAs in Ghana for the year 2013 and parametric and non-parametric methods, their work established that IGF as a proportion of intergovernmental fiscal transfers has a positive impact on the efficiency of MMDAs in Ghana.

This paper examines an extensive discussion by Brunnschweiler and Obeng (2022) in a similar study on political alignment and fiscal outcomes in the local government of Ghana. Nonetheless, their study fails to account for possible endogeneity issues that may be present in the build-up of the fiscal outcome model (Fumey, 2018). We affirm succinctly in this paper that failing to account for all possible forms of endogeneity may lead to spurious results (Fumey 2018; Schultz 2010). An empirical analysis of the political implications of these grants on locally raised revenues, which considers a robust estimation procedure including the system GMM, therefore becomes timely and relevant for reliable policy implications. We contribute originally to the already existing strand of literature by advancing knowledge on the dynamic effects of fiscal transfers on IGF from a district's political affiliation perspective. To achieve this, we first test the presence of strategic targeting by ascertaining the allocation of fiscal transfers influenced by political affiliation and then innovatively establish the implications of fiscal transfers on swing and aligned districts' IGF. These submissions are, therefore, considered novel to the already identified strand of literature.

This article follows various iterations divided into sections. In section 2, we provide a distinctive review of the political nature of fiscal transfers and IGF in Ghana, as well as theory and empirics. Section 3 presents data and methods; section 4 discusses the estimation results; and the final section provides a conclusion with policy implications, highlighting various areas needed for further discussions.

LITERATURE REVIEW

The political nature of fiscal transfers and IGF in Ghana

Revenue generated internally performs a crucial function for all levels of government as a sound revenue system is needed to function effectively (Masaaki 2018; Brun and Sanogo 2017; Liu and Zhao 2011; Mogues et al. 2009; Allers et al. 2001). In Africa and most parts of other least developed economies, many local government units are faced with resource challenges. For instance, in Ghana, Yeboah and Marfo (2020) established that the resource challenges involve inadequate logistics, lack of accurate and current data on taxpayers, inadequate education and poor tracking of economic activities within the districts, all of which make it extremely difficult for local assemblies to raise optimal tax revenue (Otoo and Danquah 2021). Since the local units are unable to generate enough revenue, although they are known to possess greater IGF potentials, they are unable to function effectively and, therefore, tend to rely on the fiscal transfers from the central government before they can be able to operate (Akudugu and Oppong-Peprah 2013) fully. By deeply relying on grants from the central government for their survival, several other sources of local revenue that could have been generated internally by the districts are left untapped (Appiah-Agyekum et al. 2013).

According to the MLGRD (2019), the Government of Ghana increased grant allocations to the district assemblies from 2012 to 2018. Total fiscal transfers to the assemblies in 2012 totalled GHS 194 000 000 and GHS 368 000 000 in 2015, which is approximately a 47.28 percent addition. Again, fiscal transfers increased from GHS 368 000 000 to GHS 475 000 000 in 2018, which is approximately 22.53 percent increment (MLGRD 2019). This means that central grant allocation to district assemblies has been increasing throughout the periods. This may serve as a disincentive for Metropolitan, Municipal, and District Assemblies (MMDAs) to raise the required revenue to support their budget (Liu and Zhao 2011; Mogues et al. 2009). The main concern of our study is that these actions may have serious implications on locally raised revenues at the district level and the economy at large.

This may pose a greater risk to the welfare of the citizens when the situation persists without any form of intervention. This risk could result from elections in the country because, throughout the 4th Republic to date, Ghana's four-year political business cycle has been evidenced by excess spending in each election year (Posner 2015). It is worth noting that this may lead to an increase in government borrowing. This is because the government may want to deliver the campaign promises within the four-year spectrum and retain the seat of governance by securing more votes (Fumey and Egwaikhide 2018). This could hurt us as a country since the government will have to raise enough funds from the citizens by increasing income taxes, fines, fees, licenses, utilities and levies to settle the borrowed funds after the elections.

Theoretical Frameworks

The theoretical framework for this paper draws comprehensively on the tactical redistribution theory and the fiscal federalism theory by Dixit and Londregan (1996) and Oates (1972), respectively. The central tenets of the tactical redistribution theory emphasise that when allocating resources across a district, an obligatory government considers the degree of its political strength in diverse areas (Brunnschweiler and Obeng 2022; Fumey and Egwaikhide 2018; Dixit and Londregan 1996). The authors argued that politicians are investors seeking to maximise profits on their investments (in the form of public expenditure) and thus invest in votes by promising to allocate resources to the two forms of voters, including swing and aligned groups. This is not different from the context of Ghana (Masaaki 2018; Fumey 2018; Fumey and Egwaikhide 2018; Fourniaies and Mutlu-Eren 2015). Dixit and Londregan (1996) grounded their debate on unhealthy competition between two symmetric parties that make campaign promises in a bid to maximise their vote share (or chance of winning a majority of seats in parliament) and gain control at one level of government (Fumey 2018). The government may transfer more significant resources to a particular district to bolster political fortunes. Based on the foregoing assertion, we are motivated to employ the tactical redistribution theory as a lens to test the presence of strategic grant allocations initially.

To align tactical redistributive politics with the fiscal transfers-own revenue dynamics, this paper provides a more robust analytical lens by engaging the foundational texts of Fiscal Federalism Theory to perform that function. Fiscal Federalism Theory provides a comprehensive normative framework for conveying functions to different government levels and the applicable economic tools for taking out these functions (Oates 1972). Essentially, the theory urges the central government to focus on stabilisation functions, redistribution of income in correcting income disparities among citizens, and allocation functions such as the provision of certain national public goods that serve the entire country. The stabilisation function includes governments' fiscal policies, i.e., the taxing and spending role and monetary policy in managing the entire actions of the economy. Consequently, the primary aim of the theory of fiscal federalism is to emphasise the relationship between transfers from the central government and local revenue (Caldeira and Rota-Graziosi 2014). We consider a country consisting of a certain number of districts seeking to optimise their fiscal policy function by maximising revenue mobilisation. The districts receive some amounts of cedis as transfers from the central government. In line with the tenets of this theory, we argue that since local authorities receive these forms of transfers, they might be reluctant to improve upon their own revenue generation. Empirical papers of Masaaki (2018), Caldeira and Rota-Graziosi (2014), Liu and Zhao (2011) and Mogues et al. (2009) argue distinctively that the extent of IGF mobilised by local assemblies is dependent on the amounts of cedis received as transfers from the central government.

The implications of these theories suggest that by tactically distributing fiscal transfers to local assemblies with a specific political status (either swing or aligned), their attitude towards own revenue mobilisation will likely differ. We situate this precept within a decentralised and stable multi-party African economy to affirm the implications of tactically targeted fiscal transfers on the IGF of swing and aligned states. This is considered very important, and as such, distinctive investigations would assist in understanding what policy interventions are needed to ensure a consistent improvement in IGF irrespective of a district's electoral affiliation, given the political diplomacies on fiscal resources in securing governance.

Empirical Studies

Empirical studies applied to both developed (Allers et al. 2001; Borge and Rattsø 1997; Dixit and Londregan 1996) and developing economies showed that the political economy (such as the regional political structure and partisan politics) also has a potential effect on fiscal transfer outcomes (Fumey 2018; Caldeira and Rota-Graziosi 2014; Banful 2011). Works by Borge and Rattsø (1997) in the contest of Norwegians and Allers et al. (2001) on the Netherlands identified that the size of local taxes was greatly affected by the political ideology of the government: i.e., taxation is greater if the government is more left-leaning than when the government is not. Similarly, Caldeira and Rota-Graziosi (2014) estimated whether the allocation of fiscal resources in Senegal dealt with politically motivated targeting. The study rigorously evaluated panel data for 67 local governments from 1997 to 2009 and found that equity concerns do not affect the distribution of intergovernmental allowances in Senegal. The authors established that the resource distribution system does not conform to the dictates of the normative theory. The outcome additionally specified that the redistribution of central resources followed the pattern of tactical redistribution, where swing districts are targeted to bolster electoral fortunes.

After the use of the redistributive politics model by Dixit and Londregan (1996), the results provided evidence that there was political enthusiasm for the distribution of the DACF grants and that various governments targeted more resources to districts where economic benefits may influence the vote of a higher percentage of the population. Results from the use of the core-supporter model also provided proof against the DACF being battered by the ruling party's core followers. Fumey (2018) studied intergovernmental fiscal transfers and tactical political manoeuvrings with evidence from Ghana's District Assemblies Common Fund. Using a two-step system Generalized Method of Moments approach and elections data for 167 districts from 1994 to 2014; the results demonstrated that economic transfers to each district increased by 8.4 percent during election years. It is worth emphasising that these increases favoured swing districts over the non-swing ones. Though the review unearths enough evidence of political motivations behind fiscal transfers, this study argues that such strategic allocations in transfers for

political fortunes could be detrimental regarding districts' own revenue generation but have not well been expounded.

DATA AND METHODS

We investigate the political implications of fiscal transfers on local revenue generation. We extracted district-level data from 126 local assemblies in Ghana using panel data from 7 years, which ranged from 2012 to 2018, including the districts' revenue. We first divide the economy into the three major belts: Savannah, Forest and Coastal⁷. We then randomly select two regions each from the Savannah belt (Upper West and Northern Region), Forest belt (Brong Ahafo and Ashanti Region) and Coastal belt (Central and Greater Accra Region) of Ghana, making a total of 6 regions (Saunders et al. 2009). A simple random sampling technique was used to ensure that each region has a greater chance of being selected (Saunders et al. 2009). We include all districts in the areas sampled (Ashanti, 29; Brong Ahafo, 27; Cape Coast, 20; Greater Accra, 16; Northern, 24; and Upper West, 10) based on the previous 216 districts in Ghana⁸.

However, due to the unavailability of data for the newly created districts, we maintain the parent districts with data readily available. Before conducting empirical investigations, we extract descriptive statistics of the variables under study to ascertain the potential stability of the figures over time. First, the Pooled Ordinary Least Square (OLS) to test the own revenue generation model is used. Nonetheless, the adoption of the Pooled OLS technique, which is surcharged with a strong assumption of a constant slope and intercept over the cross-sections, is not practical in our case. Hence, when estimated with this technique, our results are likely to generate some inconsistent estimates (Fumey 2018). We estimate our model using the Fixed Effect (FE) and Random Effect (RE), which corrects for both contemporaneous and cross-sectional correlations as it allows the intercept terms to vary. We account for the

⁷ The Ghanaian economy is split into ten regions as a form of decentralisation, which are also categorised under three major belts (Savannah, Forest and Coastal belts). Selecting regions from each belt gives a fair representation due to the similarity in characteristics of the regions found in each belt (Bukari *et al.* 2014).

⁸ In November 2016, the Government of Ghana created additional 38 MMDAs moving the total MMDAs in Ghana to 254 (MLGRD 2019).

appropriateness of either Fixed Effect Model (FEM) or Random Effect Model (REM) using the Hausman (1978) Specification Test. Further, we employ various tests like the Wooldridge test for autocorrelation in panel data, the Modified Wald test for group-wise heteroskedasticity in the fixed effect regression model, Breusch and Pagan Lagrange Multiplier test for random effects.

Nevertheless, even in the absence of serial correlation between the lagged dependent variable and the error term, the bias would still exist because of the dataset's substantial cross-sectional dominance (N=126) over the time component (T=7). This, therefore, makes the FE/RE unviable in our case. To address such nuances, we subject our model to a more robust estimation tool like the system Generalised Method of Moments (GMM) regression technique using STATA version 14, which addresses the bias from lagged dependent variables and the district-specific effects. We check the validity of the instruments used for the estimation using the Hansen tests as well as the Arellano-Bond (AR) tests to ensure that the estimation is free from the problem of autocorrelation of orders 1 and 2 (Fumey 2018).

The district revenues are disaggregated by source: Internally Generated Fund (IGF) (based on rates, land and royalties, rents, licenses, fees and fines, and miscellaneous). The MLGRD (2008) defines IGF as all revenue collected by and on behalf of MMDAs, and it is the only revenue MMDAs have control over (in terms of collection and usage). The authority to generate revenues by MMDAs has its legal backing from Article 245(b) of the 1992 Constitution. Fiscal transfers for the study included the aggregation of the DACF and the DDF given by the central government to the local assemblies to serve as a support for them to undertake all social and other provisions (Masaaki 2018; Caldeira and Rota-Graziosi 2014; Liu and Zhao 2011). The revenue and external grant data were obtained from the annual composite budgets of the district assemblies submitted to the Ministry of Finance and Economic Planning. Data on the election results used to ascertain the political status of each district (swing or aligned)⁹ were also obtained from the 2012 and 2016 general elections from the Electoral Commission of

Ghana. The political swing variable is measured as a dummy of one if voting decisions change between two elections and zero otherwise. A case is when a district votes for Party A in 2012 and Party B in 2016 (Fumey 2018). We measure political alignment as a dummy of one if the district votes presidential, zero otherwise. For example, in Ghana, a district is said to be aligned with Party A if the district voted for the presidential and the sitting government is Party A10. It should be noted that the total votes in a district are the sum of votes of the constituencies within the district, and the variable is derived from previous election results as reported by¹¹ the Electoral Commission of Ghana.

Population size used as a control variable in this study refers to the total number of persons living in a specific geographical area at a particular time, irrespective of their nationality (Appiah-Agyekum et al. 2013). Population density refers to the total number of people living per unit of an area (GSS 2010). It is calculated by dividing the total population size of an area by the size of the land in that area (in sq. km or sq. miles). It tells how crowded an area is. The figures provided in the study on population are based on the 2010 population and housing census of Ghana provided by the Ghana Statistical Services (GSS). The 2010 Population and Housing Census defines Literacy as “the ability of a person to read and write a simple statement with understanding in a Ghanaian language, English or French.” The literate population used in the work denotes the proportion of the population above 11 years who can read and write (GSS 2011). Gender Index refers to the gender makeup of each district under study. The Gender Index, as used in this study, is measured as the proportion of male inhabitants residing in the district (Birchall and Fontana 2015). The election year used in this study is a dummy equal to one in election years, zero otherwise. Election years in Ghana are characterised as years marked with excessive spending by the government in favour of more votes (Fumey 2018; Posner 2015).

Econometric Models

With insights from the theoretical framework forwarded by Dixit and Londregan (1996) and supported by empirics (Brunnschweiler and Obeng 2022; Fumey and Egwaikhide 2018; Caldeira and Rota-Graziosi 2014; Banful 2011), we first test the presence of tactical considerations in the sharing of fiscal transfers by specifying a model that relates intergovernmental fiscal transfers to political factors.

$$FT_{it} = \alpha_0 + FT_{it-1} + \delta_1 PSW_{it} + \delta_2 PAL_{it} + \phi_{it} + \varepsilon_{it}$$

We then estimate the political implications of the fiscal transfers on own revenue generation. We specify an equation which accounts for such a relationship by interacting fiscal transfers with each political status (swing and aligned). With support from the theoretical predictions of the fiscal federalism theory by Oates (1972) and with empirical inspirations from the works of Fumey (2018) and Banful (2011), we slightly modify the IGF model as follows:

$$IGF_{it} = \alpha_0 + IGF_{it-1} + \beta_1 FT_{it} + \delta_1 PSW_{it} + \delta_2 PAL_{it} + \beta_2 FT * PSW_{it} + \beta_3 FT * PAL_{it} + \phi_{it} + \varepsilon_{it}$$

Where “IGF” represents Internally Generated Fund, “IGFit-1” denotes the lagged value of IGF, “FT” is Fiscal Transfers that a district i receives from the central government in year t ; The alignment dummy is denoted “PAL” and the swing dummy is denoted “PSW” ϕ_{it} is a vector of the control variables of the i th district at time t . The control variables include Population Size, Population Density, Gender Index, Literate Population, and Election Year. ε_{it} represents the error term, α_{it} is the intercept and δ_1 and β_i are the coefficients in the model to be estimated.

ESTIMATION RESULTS

This section describes the study's results, which were duly attained after presenting descriptive statistics and employing various econometric estimation techniques.

Descriptive statistics

We present our descriptive statistics for the study in Table 1. The mean IGF mobilisation by the local government units is about GHS 1 020 000 000. The lower IGF mobilisation could be due to some districts located in rural areas where many economic activities are not carried out. In such instances, the local government may be unable to raise adequate revenue. The higher own revenue generation could also be attributed to the fact that districts found within the urban centres have the available capacity to raise adequate own funds for their social service provision. Fiscal Transfers to the local units registered an average of GHS 247 000 000 over the period under study. Greater external transfers in relation to IGF mobilisation is suggestive of the fact that within the context of Ghana, local assemblies lack the sole capacity to raise the required level of revenue to provide needed services and, therefore, tend to rely on the central government for resources.

Regarding the local units' demographic factors, the districts recorded an average population of about 14 400 000. However, an average of approximately 67 people are found to be crowded in an area at any particular point in time. The Gender Index (male proportion) indicated a mean value of 48.99, which implies that males constitute approximately 49 percent in each district. This proportion may be attributed to the metropolitan, municipal, and district capitals, which are known to be developed to some extent.

Table 1: Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
Internally Generated Fund (IGF)	882	1.02	3.42	0.3	52.5
Fiscal Transfers (FT)	882	0.24	0.19	0.012	19.0
Population Size (PopS)	882	14.4	2.40	10	2141

Population (PopD)	Density	882	0.067	0.021	1.44	0.17
Gender Index (GI)		882	48.99	1.81	40.94	53.45
Literate (Lit_Pop)	Population	882	79.23	97.31	5.71	1161.38
Election Year Dummy (ELYDum)	Dummy	882	0.28	0.45	0	1

Note: Internally Generated Funds and Fiscal Transfers are expressed in billions of Ghana Cedis (GHC). Population size and density are expressed in millions and thousands of people, respectively.

On the Allocation of fiscal transfers influenced by political affiliation

This presents the results of the transfer of central government grants influenced by political affiliation. The regression parameters were estimated in four folds (as represented in 4 columns) (see Table 2). Firstly, Column 1 estimates the relationship using the Pooled Ordinary Least Squares. Columns 2 and 3 estimate the fixed and random effects model, respectively. Finally, Column 4 depicts the results of the two-step system GMM. A decision of whether to use fixed effects or random effects model as the preferred model for discussion is based on a Hausman Test (Hausman 1978). As indicated in Table 2 (Columns 2 and 3), the Hausman Test designated a significant p-value of one percent, suggesting that the fixed effect model is appropriate. Nonetheless, as appropriately discussed, we run the system GMM model, which accounts for all possible sources of endogeneity that may affect the reliability of the work. We first subject our regression estimates to a series of diagnostic checks to ascertain their robustness and fitness for analysis and onward discussions for policy inferences. The AR (2) test statistic indicates a p-value of 0.48, which is an indication that the data does not suffer from serial correlation of order two, respectively. The results of the Hansen J test, as indicated in the diagnostic test section in Table 2 (Column 4), indicate a p-value of 0.13, which suggests that the model passes the correct specification of moment conditions.

Accordingly, the study discusses the results from the estimates on the basis of the GMM system. Consistent with Fumey (2018), we establish a direct and significant relationship between past fiscal transfers and current fiscal transfers, correcting for an endogeneity problem. The results suggest that, with all else being equal, an increase in the level of fiscal transfers in the previous year is likely to increase fiscal transfers received in the current year. We attribute the result to the growing demand for public goods and service provision at the district level (Akudugu and Oppong-Peprah 2013). It is, therefore, not surprising to see current transfers received by the districts from the central government significantly dependent on the previous fiscal transfers.

Although we document that swing districts receive fewer fiscal transfers from the central government, this evidence is not statistically significant. The implication is that swing districts in Ghana are not targeted (relative to non-swing ones) when it comes to central government grant allocation. The reason might partially be ascribed to the fact that in Ghana, the sitting government always target districts where vote margins are higher and thus transfers much of these funds by way of winning the election (Banful 2011). The empirical estimations revealed a significant surge in central government grant allocation to aligned districts. This result indicates that aligned districts tend to receive about GHS16.95 more of the central government's grant allocation as compared to non-aligned districts. In support of our theoretical framework, inspired by Dixit and Londregan (1996), this suggests tactical targeting of central government fiscal grants to aligned districts. The result is similar to earlier pronouncements made by Fumey and Egwaikhide (2018), Caldeira and Rota-Graziosi (2014), and Banful (2011), who indicated in their study that aligned districts tend to receive many transfers from the central government, affirming the theoretical propositions of politically motivated maneuverings.

We find significant evidence of some demographic characteristics influencing the number of transfers received by a district. An increase in the population size influences the government to increase fiscal transfers to districts. The population growth, as aforementioned, leads to an increase in the demand for public goods and service provision due to pressure on social infrastructure (Appiah-Agyekum et al. 2013).

Reference to the inability of the local assemblies to solely generate adequate revenue to match such growing demands necessitates the intervention of the government to bail the local assemblies out by providing them with some funds. Further, we find a significant adverse impact of population density on fiscal transfers. The explanation is that when people are densely populated, they receive mutual benefits from each other and solicit funds for projects that improve their standard of living (Brockerhoff 2000). This has the potential to reduce the burden on the government by way of reducing the amount of grant allocations to the districts. Fiscal transfers from the central government are higher in male-dominated district assemblies due to the basic premise that males are considered to play a pivotal role towards the development of society, and as a result, the central government would want to transfer enough funds to enable them to assist in the governance and development process of the country (Birchall and Fontana 2015). Finally, the relationship between the literate population and fiscal transfers is estimated to be negative and statistically significant. This finding may be due to the fact that the government expects the literate population to contribute towards raising revenue to support local government agenda and, therefore, transfer adequate fiscal resources to areas where the literacy rate is low. The resultant effect is a fall in fiscal transfers to areas where the literacy rate is assumed to be higher. According to Blunch and Portner (2009), as the majority engage in adult education programs, there is a growth in market activities and can thus contribute significantly towards district developmental projects.

Table 2: Allocation of Fiscal Transfers Influenced by Political Factors.

Variables	1	2	3	4
FT (-1)				0.368*** (0.024)
PSW	0.676 (0.036)	1.175 (0.021)	0.748 (0.087)	-2.044 (0.059)
PAL	0.880 (0.084)	0.455 (0.066)	0.704 (0.042)	16.959*** (0.026)

PopS	0.170*** (0.077)	4.473* (0.045)	0.125 (0.013)	0.186** (0.099)
PopD	-0.145*** (0.027)	-4.748* (0.095)	-0.153*** (0.053)	-0.089** (0.033)
Urb	0.023 (0.016)	0.009 (0.002)	0.014 (0.001)	-0.046 (0.013)
GI	0.014 (0.018)	0.060 (0.034)	0.018 (0.024)	0.031** (0.014)
Lit_Pop	0.002 (0.003)	0.002 (0.003)	0.002 (0.007)	-0.008** (0.002)
ELYDum	-0.303*** (0.063)	-0.282*** (0.038)	-0.300*** (0.037)	-0.039 (0.041)

Observations	882	882	882	882
Groups	126	126	126	126
R2	0.453	0.342	0.335	-
F/Wald Chi2	48.53***	27.57***	397.06***	15.91***
BPLM Chibar2	-	-	124.81**	-
Wooldridge	-	58.001***	58.001***	-
Hausman Test	-	21.76***	21.76***	-

AR (1)	-	-	-	-4.91
AR (2)	-	-	-	0.48
Hansen p-value	-	-	-	0.13

Notes: FT, Population size and density are expressed in their natural logs. The figures in parenthesis (...) represent the standard errors respectively. ***, ** and * denote statistical significance at 1%, 5% and 10% respectively. - denote “Not Applicable”.

On the Implications of Fiscal Transfers on Swing and Aligned Districts’ IGF

After ascertaining a tactical targeting technique of fiscal transfers adopted by the government based on political affiliation, we test for the influence of such politically motivated targeting of the transfers on the IGF potentials of the districts. Table 3, therefore, reports the regression results on the implications of fiscal transfers on swing and aligned districts. As usual, we subject our results to diagnostic checks to affirm their robustness. The AR and Hansen J tests justify the validity of our data, free from autocorrelation of the second order and a correct specification of moment conditions. According to Table 3, the AR (2) test statistic indicates a p-value of 0.40, indicating that the data does not suffer from serial correlation of order 2. The results of the Hansen J test indicate a p-value of 0.44, which suggests that the model passes for the correct specification of moment conditions and demonstrates that the GMM-type internal instruments are valid. Appropriately, the system GMM estimates (Column 4 of Table 3) indicate that the lagged value of IGF has a significant impact on the current value of IGF mobilisation. This result may stem from the fact that local government units always strive to improve their revenue collection efforts (Adu-Gyamfi 2014). This is seen by the enforcement of tax laws and the conduct of performance reviews at the local assemblies and the revenue authorities, where current performances are scrutinised and targets are set by stakeholders to be achieved, thus increasing their performances annually. Consistent with Adu-Gyamfi (2014), district assemblies can ensure an upsurge in their revenue mobilisation through by-law enforcement and constant

prosecution of defaulters, as well as training and motivation of revenue collection staff. Past IGF mobilised by the districts influenced current IGF performance but was not captured by the Pooled OLS, fixed and random effects model, thus correcting for an endogeneity (dynamic) problem.

The coefficient of swing districts is positive, indicative of the fact that swing districts are able to generate about GHS9.815 in tax revenue more, relative to non-swing ones. The result may be attributed to the fact that swing districts are districts whose voting decisions changed between two election periods and might, therefore, not attain much developmental support from the government. Consequently, it is not surprising that they tend not to rely heavily on the government for greater fiscal transfers but strive to improve their own revenue. Allers et al. (2001) predicted that taxation is always higher when the government is more left-leaning relative to when the government is not. The interaction of swing districts and fiscal transfers revealed a significant negative coefficient in relation to IGF mobilisation. The extent of this relationship is suggestive that swing districts generate about GHS0.672 cedis less of their IGF each time they are favoured with additional grant allocations. The implication is that an attempt to tactically redistribute greater fiscal resources to swing states as a way of bolstering electoral fortunes (Fumey 2018; Caldeira and Rota-Graziosi 2014) adversely affects the own revenue generation. In line with our theoretical predictions, we affirm that tactical considerations in the sharing of endowments to swing states have adverse implications on their revenue mobilisation capabilities.

Our finding indicates that aligned districts generate about GHS5.619 less of the IGF than non-aligned ones. Consequently, we intuit that generally, since aligned districts have voted the government to be in power, they expect a corresponding reward as they perceive greater support from the government, thereby relying heavily on external financial resources, leaving their vast IGF potentials unexploited, which disincentivises them to generate adequate IGF for their public provision (Brunnschweiler and Obeng 2022). Table 3 (Column 4) portrays that increases in the transfer allocations have a considerable positive impact on the level of IGF mobilised by aligned districts. This implies that the increase in the transfer allocations to aligned districts encourages them

to generate their own revenue. The degree of this impact suggests that aligned districts generate about GHS 0.381 more of IGF whenever they receive each extra grant allocation from the fund administrator. The logic behind this may partly be credited to the fact that aligned districts have voted for the president to be in power and might receive enormous benefits in terms of resources and development from the government as a reward for their allegiance (Brunnschweiler and Obeng 2022; Banful 2011). Given such greater financial and developmental support from the government, they are likely to be able to widen their tax revenue from the developmental projects, especially when the projects contain positive net present values. Hence, the evidential nature of an improved IGF.

With regard to the control variables, our results indicate that population density has a positive and statistically significant effect on IGF mobilisation. The growth in population in a particular area within a specified time period leads to an increase in economic activities by the people and, hence, a larger tax base, where the district assemblies could take the opportunity to generate enough tax revenue (Appiah-Agyekum et al. 2013). The literate population has a positive and statistically significant effect on local revenue. The estimated elasticity of the coefficient suggests that an improvement in the literacy rate at the district level results in a considerable increase in IGF mobilisation. We explain that an improvement in the literacy rate could lead to an increase in economic activities as there is skill improvement and even capacity building, which then results in a corresponding increase in local tax revenue generation. The result is similar to Blunch and Portner (2009), who indicated that participants of adult literacy programs are likely to be engaged in market activities, which consequently leads to higher tax revenue. The estimated coefficient of the election year dummy suggests that IGF mobilisation falls for district assemblies during election years. The results could be attributed to the fact that in a bid to win an election, the central government will seek to spend more by undertaking major projects (Posner 2015). District assemblies are likely to depend heavily on the transfers, which could demoralise IGF mobilisation at the district level.

Table 3: Implications of Fiscal Transfers on IGF of Swing and Aligned Districts.

Variables	1	2	3	4
IGF (-1)				0.606*** (0.093)
FT	0.199*** (0.036)	0.236*** (0.024)	0.240*** (0.024)	0.248*** (0.052)
PSW	0.759 (1.224)	2.137** (0.880)	1.997** (0.876)	9.815** (3.878)
PAL	-0.452 (0.942)	1.341** (0.665)	1.191** (0.663)	-5.619** (2.892)
FT*PSW	-0.050 (0.084)	-0.116** (0.060)	-0.113** (0.060)	-0.672** (0.265)
FT*PAL	0.027 (0.065)	-0.096** (0.045)	-0.085** (0.045)	0.381** (0.196)
PopS	0.550*** (0.077)	-1.950 (1.931)	0.336** (0.132)	0.076 (0.095)
PopD	0.180*** (0.027)	2.109 (1.916)	0.250*** (0.053)	0.131*** (0.039)
GI	-0.014 (0.015)	-0.132*** (0.033)	-0.075*** (0.024)	0.002 (0.018)
Lit_Pop	0.001*** (0.003)	0.009*** (0.003)	0.002*** (0.007)	0.007*** (0.002)
ELYDum	-0.168*** (0.063)	-0.133*** (0.037)	-0.144*** (0.037)	-0.133*** (0.039)

Observations	882	882	882	882
Groups	126	126	126	126
R2	0.284	0.328	0.471	-
F/Wald Chi2	63.34***	32.09***	397.06***	164.98***
BPLM Chibar2	-	-	124.81**	-
Wooldridge	-	58.001***	58.001***	-
Hausman Test	-	29.99***	29.99***	-
AR (1)	-	-	-	-3.60
AR (2)	-	-	-	0.40
Hansen p-value	-	-	-	0.44

Notes: FT, IGF, Population size and density are expressed in their natural logs. The figures in parenthesis (...) represent the standard errors respectively. ***, ** and * denote statistical significance at 1%, 5% and 10% respectively. - denote "Not Applicable".

CONCLUSION

This study provides empirical evidence in affirming the political implications of fiscal transfers on own revenue. Drawing from the tactical redistribution theory and adopting a dynamic panel dataset of 126 MMDAs public finances (internally generated funds and fiscal transfers) from 2012 to 2018, we find evidence of politically motivated targeting in sharing the endowments. Swing districts received fewer transfers, although they were not targeted for political fortunes. On the other hand, the transfers especially target aligned districts for political fortunes. Further, swing districts do not rely heavily on the government as they generate greater own IGF generally. Analysis of the political implications of such acts disclosed that any attempt to target swing districts by

distributing grand fiscal transfers disincentivises them to generate their own revenue.

Aligned districts were also found to generate less IGF. However, an attempt to increase transfer allocations to aligned districts encourages them to generate higher tax revenues. The result, therefore, establishes that the impact of the transfers on local revenue differs for politically aligned districts. Consistent with the result, an independent and transparent annual review of the performance and formula-based indicators, such as the DDF and DACF, respectively, for the allocation of central government grants is considered a stronger governing weapon. This seeks to act against the manipulation of the performance and formula-based indicators done by the executive machinery in favour of political wealth. Not only will it ensure fair and equitable distribution of fiscal resources to districts, but it will also widen tax revenue collection efforts. Inarguably, our study has therefore been able to document that when examining the tactical targeting of central government grant allocations, it is important to consider the implications on the IGF.

It is worth emphasising that our study welcomes future considerations of the rural-urban dynamics of our established implication as well as the potential welfare effects of the fiscal transfers to the districts. It is imperative to highlight that such dynamics are relatively important in the context of our economy and how they vary in different aspects. Our study concentrates on revenues generated as fiscal outcomes of the districts without considering other relatively important fiscal outcomes like expenditure. Moreover, we do not consider any additional effects of being characterised as either a swing or aligned district. We welcome comparative studies with other sub-Saharan African countries to ascertain the dynamics at interplay considering the present results. Lastly, we focus our discussion extensively on micro-level data without recourse to conventional macro-level economic indicators such as average income, unemployment, price levels or economic output. Future empirical evidence could target such dimensions while engaging critically with contemporary debates, particularly regarding fiscal policy impacts of recent developments like pandemics.

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