UNIVERSITY OF GHANA

THE EFFECTS OF INTERGOVERNMENTAL TRANSFERS ON THE INCENTIVE FOR LOCAL GOVERNMENTS TO GENERATE OWN REVENUE IN GHANA

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THIS LONG ESSAY IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE (MSc) DEGREE IN DEVELOPMENT FINANCE

JULY, 2019

DECLARATION

I, COFFIE RICHMOND DELALI hereby declare that this long essay is the original research undertaken by me under the guidance of my supervisor. Neither the whole nor a part of this long essay has been presented for another degree elsewhere. All references used in this work have been accordingly acknowledged.

……. **…….**

COFFIE RICHMOND DELALI **DATE**

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CERTIFICATION

I hereby certify that this long essay was supervised in accordance with procedures laid down by the University.

I declare that I have supervised the above student in undertaking the study reported herein and confirm that he has my permission to submit it for assessment.

…….. ……

DR. EMMANUEL SARPONG-KUMANKOMA **DATE**

(SUPERVISOR)

DEDICATION

I dedicate this long essay to the Almighty God my heavenly father and father of my Lord Jesus Christ.

ACKNOWLEDGEMENTS

My greatest gratitude goes to God Almighty for giving me life, good health, and strength to go through this program.

I wish to express my deepest gratitude to my spiritual father, Rev. Emmanuel Atubra for sponsoring my studies; my parents, Pastor and Mrs. De-Lawrence; my brothers, Raymond and Emmanuel Coffie and my entire family for their unwavering support throughout my studies.

My profound gratitude goes to Dr. Emmanuel Sarpong-Kumankoma for his good supervision, constructive criticisms, suggestions, tolerance, and advice in writing this long essay. Also, I sincerely thank all the lecturers and my colleagues at the Department of Finance, University of Ghana Business School for their suggestions and constructive criticisms.

My next thanks go to Mr. Iddrisu Abdul Ganiyu, a research assistant at the University of Ghana Business School for his mentorship and support. Also, to Dr. Christopher Dick-Sagoe, a lecturer at the University of Lesotho. I particularly thank them for their critical readership and comments. Further thanks go to Miss Dorothy Onny, Mr. Frank Raji, Miss Agnes Lamptey and Mr. Raphael Edu-Gyan of the MLGRD as well as Mrs. Cynthia Dagadu of the DACF Secretariat for providing more insights and granting me access to data.

To all my family and friends especially members of the Tabernacle of Hope International Church and all my program colleagues and those who played various roles during my studies, I say a very big thank you for your immeasurable support.

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LIST OF ACRONYMS/ABBREVIATIONS

MMDAs	Metropolitan, Municipal and District Assemblies
DACF	District Assemblies Common Fund
IGF	Internally Generated Funds
SDGs	Sustainable Development Goals
UNDP	United Nations Development Programme
PNDC	Provisional National Defence Council
MLGRD	Ministry of Local Government and Rural Development
MOFEP	Ministry of Finance and Economic Planning
GSS	Ghana Statistical Service
RCC	Regional Coordinating Council
NRCD	National Redemption Council Decree
USAID	United States Agency for International Development
FEM	Fixed Effect Model
REM	Random Effect Model
VIF	Variance Inflation Factor
CG	Central Government
LG	Local Government
UDG	Urban Development Grant

ABSTRACT

This study empirically examines the effect of Central Government transfers to Local Assemblies on their ability to internally generate revenue in Ghana. The study used data from the Ministry of Local Government and Rural Development for 216 districts in Ghana from 2013 to 2017. Employing panel data and using random effects and fixed effects estimation techniques in estimating the models and correcting for serial correlation and heteroskedasticity, the study found no significant relationship between IGF and current government transfers, however, there was a positive and significant relationship between the *lag of* government transfers and *IGF* indicating that the higher the previous year's transfers, the higher the amount of IGF that will be generated by districts. The study also found a positive and significant relationship between *UDG dummy* and *IGF*, which indicates that assemblies that receive UDG as an additional transfer generate more internal funds as compared to their counterparts who do not. We thus conclude that for the generation of local assemblies' internal funds to be more effective in Ghana, an increase in central government transfers is complementarily required.

The study recommends that the government of Ghana should increase the amount of transfers given the assemblies. Also, we recommend that the government of Ghana should include more assemblies to benefit the urban development grant (UDG). This, when done, will boost up their level of capital to enable them to generate more internal funds.

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Development is always an issue of concern to every government in every country throughout the world be it considered as developed or developing. Though there has been many arguments and theories regarding the term development, many schools of thought agree with its necessity for progress and transformation.

In the world today, development decision making and implementation have devolved from being handled solely by the Central Government (CG) to being a shared responsibility between the CG and Local Government (LG) through decentralization. Many believe that due to the likelihood of LGs obtaining better information about the needs of their localities, they are able to allocate resources more efficiently (Hayek, 1945). However, most of the LG development plans aim at meeting the overall objectives of the CG.

Financing local developmental projects have been a challenge for most LGs. The two major sources of finance for the LGs are the transfers from the CG and the internally generated revenues by the LG. The transfers from the CG which in most cases are not enough to meet their expenditure carries the larger share of their revenue. This has been found to have an impact on the fiscal autonomy of the LG. Research suggests that LGs ought to raise much more

revenues themselves not only to be able to meet their expenditure but also to increase their fiscal autonomy.

Studies have shown, however, that there is a link between the transfers from the CG and the ability of the LGs to raise their own revenue (Buettner & Wildasin, 2006; Zhuravskaya, 2000). Most of these studies are nonetheless based on developed countries with very little attention given to developing countries. These pieces of literature discovered a negative relationship between CG transfers and LG revenue generation. Similar research on Tanzania, a developing country in Africa found a positive relationship between the transfers and own revenue generation, especially in rural areas. The only literature conducted in Ghana which is also a developing country in Africa on all its district assemblies at the time revealed a negative relationship (Mogues and Benin, 2012).

This paper seeks to investigate the current trends in the relationship between intergovernmental transfers and own revenue generation in Ghana by testing the hypothesis that, transfers from the CG crowd-out local revenue generation. Carrying out current research is ideal especially when the number of district assemblies in the country has more than doubled since the last research.

1.2 Problem Statement

Decentralization in Ghana intends to transform the society by giving citizens the power to take responsibility of their development agenda which requires the Metropolitan, Municipal and District Assemblies (MMDAs) to be able to generate sufficient funds while the citizens also

fulfill their tax obligations. MMDAs in Ghana rely so much on the CG transfers; especially the District Assembly Common Fund (DACF) for local development. However, this revenue is not enough to finance the developmental agendas of these institutions. This has necessitated the need for MMDAs to proactively identify and use other means of generating revenue to augment the transfers from the CG. (George, 2018). It is, however, expedient to identify how these transfers from the CG affect the ability of the LGs to raise their own revenue. Empirical studies on the effect of intergovernmental transfers on the incentive of LGs to raise their own revenue; most of which are on developed countries has produced mixed results. While some largely comprising of developed countries showed a negative relationship (Buettner & Wildasin, 2006; Bradford & Oates, 1971a, 1971b)., others showed a positive relationship (Skidmore, 1999; Brun & Khdari, 2016). Similar research on Ghana shows that intergovernmental transfers have negative effects on the incentive of LGs to raise their own revenues (Mogues and Benin, 2012). Mogues and Benin using data from 1994 to 2004 found out that transfers from the CG lower the incentive for LGs to raise their own revenue. According to Masaki (2018), recent literature has shown a positive relationship between CG transfers and LG revenue generation which tallied with his work on Tanzania which has similar characteristics as Ghana. Also, the number of Districts in Ghana has significantly increased since 2004 where the previous study was limited to. This study aims at finding the current effects of CG transfers on the incentive of LGs to raise their own revenue.

1.3 Purpose of the Study

The main purpose of this study is to investigate the effects of CG transfers on assemblies' in Ghana ability to raise their own revenue.

1.4 Research Objectives

The objectives of the research are:

(i) To investigate the effects of CG transfers on local revenue generation by the MMDAs in Ghana; and

(ii) To see the role urban development grant play on assemblies' generation of internal funds.

1.5 Research Questions

(i) What are the effects of CG transfers on local revenue generation by the MMDAs in Ghana?

(ii) Do Assemblies that benefit from urban development grant generate more revenue as compare to their counterparts?

1.6 Significance of the Study

The study can be useful in three ways: research, practice, and policy. Regarding research, it adds to literature since it goes beyond past research to examine the current effects of intergovernmental transfers on local revenue generation by district assemblies in Ghana. Regarding practice, the study will serve as a reference document that provides guidelines on strategies that could be adopted to increase local revenue generation.

Regarding policy usefulness, the study will make useful comments on policies driving the transfer of funds from the CG to the district assemblies. It will inform them on how to go about future policy in building consensus and to empower LG to promote economic growth.

1.7 Limitations of the Study

The major limitation of the study is that it does not cover the total number of districts in Ghana primarily because they were recently created hence much data could not be gotten about them. Also, the lack of adequate data and time made it impossible to include more control variables. Since the Assemblies have similar characteristics, recommendations made could be applied to other Districts in the country.

1.8 Organization of Study

The first chapter consists of; research background, problem statement, the purpose of the study, objectives, research questions, significance, limitation and the organization of the study. Chapter two contains a relevant literature review on decentralization as well as intergovernmental transfers and local revenue generation. The third chapter entails the research methodology. It covers the type of data used, the source of the data, the population and the span of the study. It also deals with the method of data analysis and variables. Chapter four contains the analysis and discussion of findings. Chapter five concludes the research by presenting the summary, conclusions, and recommendations. The references then follow.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

According to Steiner (2017), public finance at the domestic level in conjunction with foreign assistance remains vital in achieving the Sustainable Development Goals (SDGs). However, he believes the former plays a much more superior role in national development. The study reviews both theoretical and empirical literature on decentralization, intergovernmental transfers, and own revenue generation. The study begins with a general review and then takes a glance at the case of Ghana.

2.2 Decentralization

Oates, (1972) postulated that; "Each public service should be provided by the jurisdiction having control over the minimum geographic area that would internalize benefits and costs of such provision". This was premised on a benefit of decentralization which is the superior information LGs command at the local level due to their closeness to local constituents and thus will be able to know their basic needs (Klugman, 1994). This is why Oates (1993) posited the economic efficiency increment ability of fiscal decentralization. LG's being nearer to the people in their governance areas are at a much advantage to identify the needs and preferences of the people; hence would be much more efficient in and responsive to the supply of public services per the needs identified. According to Tiebout (1956), the ability of residents to move to other areas where their needs and preferences are better met would enhance this efficiency. He added that this could incentivize competition in the provision of public services between the LGs. Once LGs realize how their provision of public services can either attract or dismiss

residents due to their mobility, they would be eager to ensure they provide tailor-made public services for their residents thereby using resources more efficiently.

2.2.1 Defining Decentralization

There are so many meanings to the term decentralization. Rondinelli (1981) defined decentralization as "the transfer of responsibility for planning, management, and resource-raising and allocation from" the CG to the LGs. The United Nations Development Programme (UNDP) also defined decentralization as the creation of LG systems that are responsive, open and effective for decision-making (UNDP, 1998). Decentralization is the devolving of some responsibilities of the CG to the LGs. According to Falleti's sequential theory, decentralization could be characterized by how it "i) defines a process; ii) takes into account the territorial interests of bargaining actors; and iii) incorporates policy feedback effects" (Falleti, 2004).

2.2.2 The Importance of Decentralization

Though many studies posit positive outcomes of decentralization, finding systematic evidence for decentralization outcomes is difficult (Crook, 2003). Most empirical literature, therefore, discuss expectations other than outcomes. Many governments have decentralized based on varying reasons. This ranges from political, economic and social factors. The main aim theoretically for embarking on decentralization is to transfer part of the CG roles and resources to the LGs so as to be more effective in meeting local needs (Balagun, 2000; Oyugi, 2000; Bardhan and Mookherjee, 2006).

According to the World Bank (2008), some of the expectations of decentralization are:

(i) Improved service delivery because LGs are closer to the people and can easily assess and get to know their needs and meet them accordingly. This can encourage people to meet their tax obligations.

(ii) Sustainability of public service delivery through accountability and efficient practices.

(iii) Improved representation in rural areas and marginalized jurisdictions.

(iv) Participatory democracy.

(v) Addressing ethnicity and conflict by smoothing out regional, ethnic and political problems by transferring authority to regions or ethnic groups.

According to Smoke (2015), some success has been chopped in the provision of local service, socio-economic development, and accountability. ‘‘Decentralization is neither good nor bad for efficiency, equity, or macroeconomy’’ (Litvak, Ahmad, and Bird, 1998). The World Bank (2008) adds that decentralization also poses some risks; some of which include:

(i) Increasing regional disparities;

(ii) Targeting the rich rather than the poor; and

(iii) Macroeconomic risks such as increased fiscal pressures.

Litvak, Ahmad, and Bird (1998) therefore caution for institution-specific design to necessitate its effective performance.

2.2.3 Forms of Decentralisation

Decentralization comes in the form of administrative, democratic and fiscal decentralization. The process by which CGs devolve responsibilities affects LG's power (Falleti, 2004). Falleti (2004) posits that, if administrative decentralization policies are practiced first, it tends to harm the power of LGs unlike political and fiscal decentralization policies which increase their power when practiced earlier in the sequence. The process used depends on the political intents of the government. National executives and politicians prefer administrative decentralization policies to fiscal decentralization policies. They also prefer fiscal decentralization policies to political decentralization policies. (Awortwi, 2011). This could be attributed to their desire for power.

1. Administrative decentralization

Administrative decentralization "is the re-location of branches of the CG to local areas, entailing a transfer of powers to locally-based officials who remain part of, and upwardly accountable to, CG ministries and agencies" (Crawford, 2004). It could be a deconcentration or delegation where LG officials have either little or no power to make decisions (Crook and Manor, 1998). The lead of the LG administration is usually appointed by and accountable to the CG. Administrative decentralization mainly aims at improving efficiency and effectiveness in providing the needs of the local people.

2. Political Decentralization

Political decentralization also known as democratic decentralization occurs when CG authorities transfer some of their powers to elected LG authorities, who are wholly independent and democratically elected (Manor 1995; Smith, 1996). Under political decentralization, LGs have much autonomy to make decisions. To avoid future opposition from the local level, many CGs fail to fully decentralize politically despite the many calls for reforms.

3. Fiscal Decentralization

This is the focal point of the study. It is defined as the transfer of resources and the authority to raise revenue from the CG to the LG (Crawford, 2003). Martinez-Vazquez and McNab (2001) argue that fiscal decentralization is multidimensional in the sense that, the share of local government revenue or expenditure and the autonomy they have over expenditure vary hence two countries could have varying levels of fiscal decentralization. Fiscal autonomy is of great importance in that, the more power the LG has in raising own revenue in the area of setting its own taxes and fees to meet the service demand of its jurisdiction, the more efficient they would be. This, however, hasn't been the case due to the political pressures from the politicians in the upper tier of government on local tax administration (Fjeldstad and Heggstad, 2012). Due to

political desires of elected officials seeking to gain political support especially in election years, these officials limit the powers of the LG to ensure tax burden on their jurisdictions are minimized to earn support politically (Fjeldstad, 2001). It then creates a problem of fiscal capacity which is the ability of a government to generate revenues from taxes. This reluctance of the officials to delegate much tax responsibilities to the LGs creates an imbalance between the services to be provided and the amount of revenue the LGs can raise (Bird, 2010, Dahlberg et al., 2008). This has led to increasing fiscal pressures on CG transfers to provide public services.

2.2.4 Empirical Conclusion on Decentralization

Political decentralization is Africa's current policy focus when it comes to decentralization (Olowu, 2003). He adds that the planning and execution of development programs for local residents are transferred from the CG to the LG through their elected officials, thereby enhancing self-governance at the local level. Conclusions from several studies on Africa's decentralization states that most CGs do not want to transfer sufficient powers as well as resources to LGs. Hence the benefits that could be derived from the building and deepening of institutions for self-governance at the local level have not materialized. (Crook and Manor, 1998; Conyers, 2007; Olowu and Wunsch, 2004). This is primarily due to the political cost of tax administration. Though there have been many CG tax reforms over the past years, until recently, most LG revenue systems still remain unchanged in Sub-Saharan Africa (Falleti, 2004). Many studies argue that, decentralization more particularly fiscal decentralization assumes the power of LGs to allocate public resources more effectively. LGs tend to have more control over the revenues they generate than that from the CG. Therefore, it is expedient for LGs to raise more revenues to increase fiscal autonomy which will translate into being able to provide adequate public services to residents in their jurisdictions.

2.3 Intergovernmental Transfers and Local Revenue Generation

The increasing responsibility of LGs for expenditure mostly mismatches the revenue they raise which creates their increasing dependence on CG transfers. CG transfers are the various types of grants that the CG transfers to the LG. These grants are either conditional or unconditional (Kwada, 2007). The transfers to LGs are intended to aid them in fighting poverty while strengthening their own ability to provide services. According to UNDP (2005), the rationale for CG transfers are:

(i) To address vertical fiscal imbalances thus the CG transfers fiscal resources to balance the limited budget of the LGs;

(ii) To address horizontal fiscal imbalances thus the CG transfers fiscal resources to make up for the differences in fiscal capacity and fiscal need especially because certain jurisdictions could have better tax bases or extraordinary expenditure needs that are not available in others; and

(iii) To deal with inter-jurisdictional spillover effects where some public services have externalities on other jurisdictions. Because LGs may not reap the full benefits of certain projects such as highway construction alone, they feel reluctant to invest in such projects (Ma, 1997).

Practically, intergovernmental transfers are made through various mechanisms and instruments. Some are made directly in cash either on a conditional or unconditional basis, while others are made indirectly in the form of assets. According to Shah (2000), the design of the transfer system in many developing countries contributes to their LG's imbalances and their inability to meet the needs of their people. While CGs from the western matured democracies ensure a proper application of intergovernmental transfer formula, check and balances systems are built into their LG structures which helped empower citizens (Mazaanaah, 2012), Shah

(2000) found out that most governments in developing countries especially Sub-Saharan Africa make ad hoc transfer decisions without applying "basic principles of equity, benefit-cost spillovers, allocative efficiency within government, autonomy, certainty in planning, ease of administration, transparency, neutrality toward grantsmanship, consistency with federal and state objectives, and equalization among others". Meanwhile, Musgrave's theory assumes that for CGs to effectively transfer resources to LGs, there must be adequate measures of checks and balances in the intergovernmental transfer system. Designing a good transfer system is therefore crucial to effectiveness in macroeconomic stabilization, equitable redistribution of income and allocative efficiency by LGs. According to the World Bank, attributes of a good transfer system as cited by many experts include:

(i) The transfer system should have a clear objective to be pursued so that the design of the grants can be made accordingly;

(ii) It should be transparent so that sub-national governments have an idea of how the system works, that is, what resources to be distributed (vertical pool) are allocated and how the distribution is made among sub-national governments (horizontal distribution). For the first two attributes, simplicity is an important characteristic to be considered;

(iii) It should enable accurate forecasting when making plans at the local level by being timely and stable;

(iv) It should be equitable, addressing the vertical imbalances of the different tiers of government and implementing some equalization mechanism to address horizontal regional disparities; and

(v) Lastly, enough incentives should be made available for LGs to make rightful decisions.

However, the frequent growth in transfers, as well as the changes to transfer mechanisms, have brought to bear another set of challenges. LG dependence on CG transfers has dramatically risen.

Intergovernmental transfers are intended to supplement own revenue generated which in most cases hasn't been enough. LGs are therefore faced with the alternative of either increasing IGF, lobbying for more transfers, or reducing costs. The amount of CG transfers LG receive is decided by the upper-tier government while the fiscal power to raise own revenue has been transferred to the LG. However, the politicization of the local tax administration has led to the lower fiscal capacity of the LGs thereby leaving them with the only choice of reducing expenditures and costs. This has also translated in the inability of the LGs to adequately meet the public service needs of their respective jurisdictions. Raising local revenues which usually consists of taxes and fees but vary from one jurisdiction to another could cost much if good systems are not put in place. The poor quality of fiscal institutions as can be seen in most developing countries causes the revenue mobilization costs to go beyond the amounts mobilized in certain jurisdictions (McCluskey & Franzsen, 2005). In most parts of Africa, LGs do not have much-skilled labour with the technical know-how to manage their finances (Scott, 2009). Raising of own revenue is mostly poor because those supposed to pay tax either resist payment due to poor provision of public goods or are not identified at all (Fjeldstad et al., 2014). If CG politicians could allow full fiscal decentralization to take place devoid of any political influence, it would be a major step in promoting local revenue mobilization.

Despite the good rationale of intergovernmental transfers, critics argue that they can also do away with the need for own revenue mobilization thereby affecting LG fiscal autonomy adversely (Masaaki, 2018). Empirics have seen a negative relationship between CG transfers and local revenue collection in Indonesia (Smoke and Sugana, 2012; Lewis, 2002). The trend is same in other developing countries (Lewis & Smoke, 2012; Bahl & Bird, 2008; Bahl, 2000; Bird, 2011) and even the developed countries (Courchere, 1981; McKinnon, 1997). This presents the picture of the extent of the problem. Therefore, if this claim remains true, then

own-source revenue mobilization levels will be reduced with increasing intergovernmental transfers to district assemblies.

As earlier stated, LG revenue generation is affected by transfers from the CG. Many empirical studies show that transfers from the CG displace local revenues. These studies, however, are mostly based on the developed world. While few empirical works have been done on developing countries, the results vary. Buettner and Wildasin (2006) for instance did a study on India and found out that the adjustment of local governments to an increase in external grants results in reduced subsequent own revenue generation. Meanwhile, a study on Tanzania shows that central government transfers increases own revenue generation (Masaki, 2018). There has therefore been no conclusion on how CG transfers impact LG revenue generation. This argument forms the foundation for this study.

2.4 The Case of Ghana

2.4.1 Overview of Decentralization in Ghana

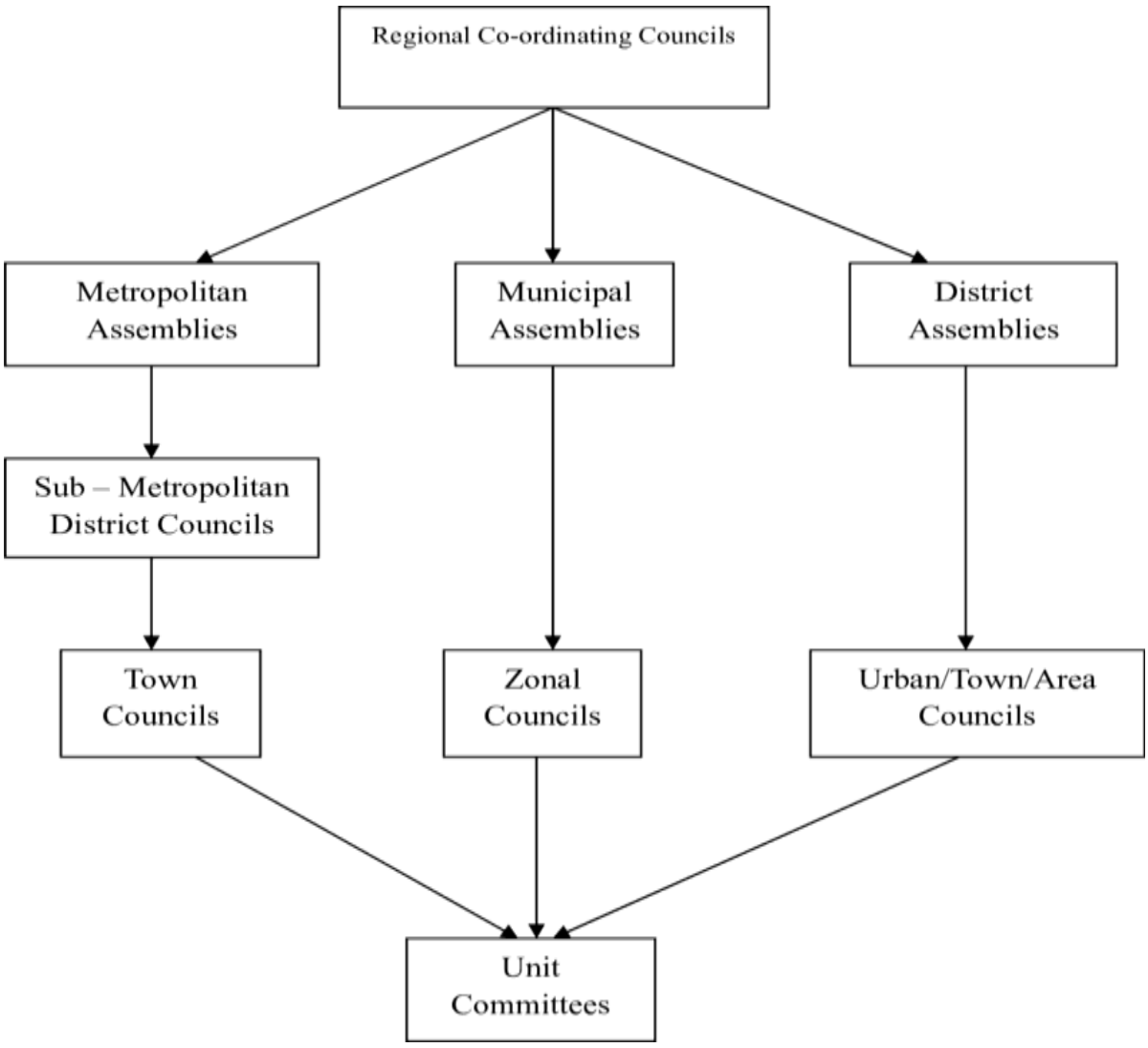
The intent of decentralization in Ghana is to transform the society by empowering citizens to take charge of their development agenda which requires the MMDAs to be able to mobilize sufficient funds while the citizens also fulfill their tax obligations (George, 2018). The present system is the most sustained throughout the county's history.

The first decentralization reform which took place after Ghana's Independence was the administrative form of decentralization which came in the form of deconcentration (Aryee, 1994; 2008). Six years after, political decentralization started in 1988. Though multiparty democracy was imposed due to pressure from political groups that had been banned as well as international donors, LGs were excluded from the multi-party process. The year 1994 saw the introduction of fiscal decentralization. According to the Local Government Act, "each local

government unit shall have a sound financial base with adequate and reliable sources of revenue" (DACF website). By doing so, LG authorities were to raise funds while funds are being transferred from the CG to them. Many LGs still have limited revenue sources to meet their development needs. "To support these reforms, the Government in 2010 issued a Decentralization Policy Framework which identified fiscal decentralization as critical to enable District Assemblies to have the appropriate funding and financial management arrangements to enable responsive local governance and efficient and accountable public service delivery" (MOFEP website).

The Ministry of Local Government and Rural Development (MLGRD) is the institution in charge of promoting the development and establishment of a strong decentralized system In Ghana. The current LG structure consists of the Regional Coordinating Council (RCC) which consists of MMDAs and sub-districts in each region. They basically coordinate, monitor and evaluate the use of allocated funds and the performance of the MMDAs (MLGRD, 1996). The MMDAs are the "pivot of administrative and developmental decision-making at the local level" (DACF website).

Figure 2.1: Structure of the local government



Source: Introduction to Ghana's Local Government System, ILGS, 2008

The Metropolitan assemblies have a population of over 250,000, Sub-metropolitan district councils, a city/town, and planning, administrative, executive and legislative authorities. The Municipal assemblies have a population of over 95,000, a town and planning, administrative, executive and legislative authorities. The District assemblies have a population of over 75,000, a town, urban or area council, and planning, administrative, executive and legislative authorities. To achieve this decentralization goal however, the RCC together with the MMDAs must possess in addition to adequate resources, the ability to manage them.

Despite the positive effects of Ghana's decentralization over the years, quite a large number still think MMDAs do not meet their needs (Crook and Manor, 1998). An increase in MMDAs finances through the increase in the DACF reported similar results in some districts (Ayee, 1995). Many MMDAs try to implement centrally determined policies with locally raised revenue due to pressures from the upper tier. This raises an autonomy problem at the local level. MMDAs who usually should have discretion over the revenue they raise to meet the tailored needs of their people rather tend to meet the needs of the CG. However, Ghana's MMDAs look relatively good than other African countries in terms of participatory achievements.

2.4.2 Intergovernmental Transfers and Local Revenue Generation in Ghana

The 1992 Constitution and the Local Government Act, 1993 give the financial provisions of the MMDAs which could be divided into CG transfers and LG internally generated revenues (Ghana Government, 1992; 1993).

Fjeldstad, O-H. & Semboja, J. (2000) posit a well-known characteristic of LG Internally Generated Fund (IGF) systems. They found that LGs in Africa have a large number of tools used to raise funds. In Ghana, for instance, LGs raise taxes, fees and other charges, some of which may have a possible adverse economic effect on the masses. To make domestic revenue mobilization more effective, it is expedient to widen the tax base, enhance the tax administration's capacity, and make it more progressive (Steiner, 2017).

The main idea behind fiscal decentralization was for the LG to be able to raise most of the funds they need to finance their own developmental projects; however, it is always the lowest revenue (Akorsu, 2015; Bandie, 2003; Dick-Sagoe, 2012; Puopiel and Chimsi, 2015). It is believed that a positive relationship exists between LG revenue and local level development (Adesoji and Chike, 2013). Benin and Mogues (2011) found a negative relationship between

CG transfers and own revenue generation in Ghana. This conflicts with the study made in Tanzania which showed a positive relationship in developing countries especially in rural areas. The previous study was however limited to the year 2003 and studied all 110 districts at the time. Nonetheless, new indicators have been introduced into the disbursement of some transfers. Key among them is the responsive factor that has been introduced thereby causing an inverse impact of transfers on IGF. This could probably be in response to suggestions in the earlier work on the subject. This has necessitated however, the need to introduce that impact in making the analysis. Also, the number of MMDAs in the country has increased to 260 districts. This study, however, limits itself to 216 MMDAs existent as of 2017 due to the limited data available on the new districts. This study, therefore, examines the current trends of government transfers and its effects on local government own revenue generation.

2.4.3 Internally Generated Funds in Ghana

Section 86 of the Local Government Act 462, 1993, puts the IGF into ten (10) broad categories. These are Casino revenue; Entertainment duty; Income tax; Betting tax; Rates and levies, Gambling tax; Fees; Licences; other taxable incomes and miscellaneous receipts such as toilet receipts.

The revenue options available vary from one district to the other. Boachie-Danquah observed that there are poor incentives for LGs to improve revenue collection and management practices. Recent transfers sharing criteria's have begun to consider the performance LG in generating internal revenue so as to boost revenue.

2.4.4 Transfers to District Assemblies

The transfer of some authority to LG required that enough financial resources be made available commensurably. This necessitated the need to make transfers from the CG to the LG

authorities. To ensure that the district assemblies carry out their responsibilities, the Constitution makes provision for the establishment of the common fund to provide a financial base and reliable source of revenue as well as serve as a resource transfer mechanism from the CG to the LGs. Aside the DACF and other donor funds, the Urban Development Grant (UDG) and the District Development Facility (DDF) add up to the transfers from the CG. The UDG is however restricted to 46 metropolitan and municipal assemblies. Despite an increase in CG transfers over the years; mainly due to revenue increases, the finances are not enough in commensuration to the responsibilities that have been given to the LGs.

2.4.5 The District Assemblies Common Fund (DACF)

The Article 252 of the 1992 constitution makes provision for and operationalized by DACF Act (Act 455) in July 1993 for at least 5% of Ghana's total national tax revenue to be paid into the DACF for onward transfer to LGs. This is usually referred to as direct transfers and is shared through a yearly approved formula. "In 2013 and 2014, about 50 percent of the total amount for the Common Fund was allocated for direct transfers to the Assemblies" (DACF website). Many argue about the insufficiency of the 5% allocation (Crawford, 2004).

Some of the money from the Fund referred to as indirect transfers are used for social intervention projects such as school feeding programs while some go to members of parliament for other projects.

The DACF Formula as developed every year to allocate the transfers in such a way that addresses the development imbalances found between districts in the country. According to the DACF formula manual, the factors used in developing the indicators are put into four thematic areas. These are:

- The Basic Needs Factor: an approach to development is adopted with Education Services; Health Services; Tarred Road Coverage and Water Coverage as indicators.
- Responsiveness Factor: where an improvement in revenue collection is used as an indicator. Also, the Budget Implementation Status has been introduced as an indicator to act as a check on MMDAs to implement approved budgets. It is also to act as a Budgetary Control mechanism as an incentive for adhering to policies.
- Service Pressure Factor: an indicator which is used to compensate MMDAs in the urban areas for the excessive use of their facilities by visitors.
- Equality Factor: which involves dividing a portion of this fund by 216 being the number of MMDAs. Hence, indicators are required.

2.4.6 The District Development Facility

This grant is available to all MMDAs in the country and is based on performance. It has performance measures used to determine each MMDA's allocation. The table below summarises the various thematic areas as well as the maximum obtainable scores.

Table 2.1: Summary of Scores for each DDF Thematic Area

Performance Measures	Maximum Score
Transparency, Openness, and Accountability	11
Management and Organisation	10
Relationship with sub-district structures	3
Human Resource Management	5
Planning System	18
Financial Management and Auditing	20
Environmental Sanitation Management	6
Procurement	7
Fiscal Capacity	20
Total	100

Source: MLGRD

2.4.7 Urban Development Grant (UDG)

This is also a performance-based grant but available to only 46 metropolitan and municipal assemblies. The indicators to measure the performances are tabulated below.

Table 2.2: Summary of Scores for each UDG Thematic Area

Performance Measures	Maximum Score
Revenue Management	35
Social Accountability	15
Asset Management	20
Budgeting	15
Auditing and Report	15
Total	100

Source: MLGRD

The responsive factor within the DACF, the DDF, and UDG signify a reverse effect of IGF on CG transfers. Thus, not only is there a potential impact of intergovernmental transfers on own revenue but own revenue can also have an impact on transfers received. This measure was put in place to encourage efficient own revenue generation by the LGs. Despite the support from donors and Non-Governmental Organisations (NGOs), the DACF continues to remain the most vital source of local revenue in the country.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter discusses the techniques which are used for this study. The next section will give the research design. The population and sampling techniques as well as the data collection methods and procedure follow. The chapter ends with a section on the data analysis method applied.

3.2 Research Design

This study makes use of the experimental design which allows for the control of any possible factor likely to affect the result of the study.

3.3 Population and Sampling Techniques

The population of the study is all MMDAs in the country. There are currently 260 MMDAs in Ghana. As of 2017, there were only 216 MMDAs in the country. Since the study covers the five-year period from 2013 to 2017, purposive sampling is used to limit the number of MMDAs to the number as of 2017. The sample size for the study is therefore 216. Though there are currently 16 regions in the country, the study takes into consideration the 10 regions in existence over the study period.

3.4 Data, Collection Methods, and Procedure

This study mainly makes use of long panel data to make the analysis. Both primary and secondary data are however used in the study.

The primary data is collected through face-to-face individual unstructured interviews with key staff of the MLGRD and the DACF secretariat. Acceptance and understanding are important basic principles of unstructured interviews (Bogdan & Taylor, 1975). This was necessary to build rapport with the interviewees. Caution was taken to prevent any emotional bias which affects the reliability and validity of the data. Participants were made to choose a conducive time and venue for the interviews so as to create a comfortable atmosphere (Bogdan & Taylor,1975). The staff of the MLGRD was interviewed on all transfers to and expenditures of the MMDAs except for the DACF. This was to gather data on the various components of the intergovernmental transfers and their sources. The staff of the DACF secretariat was interviewed on the DACF to gain further clarification on the method used in generating the DACF formula and why.

The secondary data used for the analysis was drawn from three main sources namely the CG transfers, IGF and the 2010 Population and Housing Census. Data on all intergovernmental transfers except for the DACF as well as all IGF was gotten from the MLGRD whereas data on DACF transfers were gotten from the DACF secretariat. The 2010 Population and Housing Census data was gotten from the Ghana Statistical Service (GSS).

All the secondary data is disaggregated into the various districts so as to assess the district fixed effects. Though the total of all transfers will be used, the study will draw mainly on the two major transfers available to all the MMDAs thus the DACF and the DDF. The study will go further to assess the change in impact on the metropolitan and municipal assemblies that receive the UDG. Thus, assessing how the various transfer sources influence local revenue. The Population and Housing Census data provides socioeconomic and demographic information and will aid in calculating the per capita CG transfers and IGF.

3.5 Model Specification

To address the issue of IGF and central government transfers to districts, the study seeks to find the effect of total government transfer on assemblies' internal generation of funds. The study then adopted the model specified below. This model was used by Masaki (2018), to assess the IGF and government transfers relations:

$$\text{IGF}_{it} = \beta_0 + \beta_1 IGF_{it-1} + \beta_2 TRANSFER_{it} + \beta_3 TRANSFER_{it-1} + \alpha_i + \rho_i + \varepsilon_{it} \quad (1)$$

Where,

$\boldsymbol{IGF_{it}}$ represents the internally generated funds of assembly $\boldsymbol{i}$ at year $\boldsymbol{t}$; $\boldsymbol{IGF_{it-1}}$ represents the previous year's internally generated funds of the same MMDA; $\boldsymbol{TRANSFER_{it}}$ represents CG transfers to MMDAs; $\boldsymbol{TRANSFER_{it-1}}$ represents the previous year's transfers to the same assembly; α_i represents district fixed effects which control for time-invariant unobserved district characteristics. ρ_i represents year fixed effects which control for time-invariant unobserved year characteristics. $\boldsymbol{\varepsilon_{it}}$ is the random error term, $\boldsymbol{i}$ denotes district, and $\boldsymbol{t}$ denotes time.

To address the issue of the role of the urban development grant (UDG), the study seeks to find the effect of the UDG dummy on IGF. Again, we refer to the works of Masaki (2018) and consequently estimate the following empirical model:

$$\text{IGF}_{it} = \beta_0 + \beta_1 UDG\_dummy_{it} + \beta_2 TRANSFER_{it} + \alpha_i + \rho_i + \varepsilon_{it} \quad (2)$$

Where,

UDG_dummy is a dummy variable that takes the value 1 if the assembly is enjoying UDG as an additional transfer and 0 otherwise. All other variables are defined as above.

To take care of differences across districts which may influence the dependent variable (**IGF**), either the FEM or REM, depending on the Hausman test is applied.

3.6 Variables Definition

3.6.1 Main Variables

The main variables used to assess the impact of CG transfers on MMDAs' internal generation of funds are the actual values of assemblies' internal generated funds (IGF), central government transfer to assemblies (transfers), and the urban development grant dummy (UDG_dummy). Lag values were used as control variables.

(a) Internally Generated Funds (IGF)

This is a continuous variable; it is the revenue generated internally by assemblies. The actual values really generated are used. The IGF variable is the dependent variable in both models of this study.

(b) Central Government Transfer (transfer)

The central government transfer (transfer) is a continuous variable that represents the total government transfers to district assemblies. It is the sum of various transfers from the CG to the Assemblies. The **transfer** is used as the main independent variable in the first model and as a control in the second model.

(c) Urban Development Grant Dummy (UDG dummy)

Urban Development Grant Dummy is a dummy variable that takes value 1 if the assembly receives UDG as an additional government transfer and 0 otherwise. This variable is the main independent variable in the second model.

3.6.2 Control variables

To improve the empirical analysis, we use the lag values as controls due to unavailability of other appropriate covariates. We also use government transfer as a control in the second model.

The study will make use of fixed and random effects models. Hausman test will be applied to decide on which of the two models will be best and produce a reliable result. The Hausman test has a null hypothesis of no significant difference in the estimator of the fixed effect model (FEM) and the random effect model (REM). If the null hypothesis is rejected, the FEM will be the appropriate model. Rejecting the null hypothesis means that, the error term (ε_{it}) and dependent variables might be correlated.

3.7 Diagnostic tests

This study tests the model for heteroskedasticity and serial correlation. Multicollinearity is also tested for, despite the advantage of less collinearity in the use of panel data.

3.7.1 Serial Correlation and Heteroskedasticity

Baltagi et al. (2010), mentioned that the component of the panel data model with the standard error assumes homoskedastic variance of the disturbance and constant serial correlation through the random individual effects. Empirically, without these assumptions, applying panel data models are weakened. Serial correlation is an estimation problem mostly found in time series data while heteroskedasticity estimation problems are mostly associated with cross-sectional data. Panel data comprises time series and cross-section, hence contains serial correlation and heteroskedasticity. Serial correlation (autocorrelation) in a model can render inefficient the regression coefficients estimates, among others (Granger and Newbold, 1974).

With Heteroskedasticity (i.e. the correlation between error terms of different periods), the assumption of the constant variance of the error term [i.e. var $(\varepsilon_{it}) \neq \sigma^2$, thus heteroskedasticity] is violated. Again, Wooldridge (2008) points out that heteroskedasticity if present can make parameters inefficient, thereby causing the unreliability of inferences made from the t and F tests.

As a result of these problems, the study tests for their presence by adopting the Wooldridge (2008) test for serial correlation in linear panel models and the Breuch-Pagan (BP) test for heteroskedasticity. In case the Hausman test favors the FEM, the modified Wald test which tests for heteroskedasticity in the fixed effects regression model will be conducted.

To "correct for the presence of heteroskedasticity and serial correlation, we run a robust command as part of our panel estimation techniques. This method gives standard errors of regression coefficients that are robust to heteroskedasticity and serial correlation" (Iddrisu and Bokpin, 2018).

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF RESULTS

4.1 Introduction

This chapter presents and discusses issues concerning the panel model econometric estimation specified in chapter three above. STATA is used ahead of SPSS for the regression analysis. This is due to the argument of many scholars that, there is a limitation when dealing with serial correlation, multicollinearity and heteroskedasticity problems in the use of SPSS to compute time-series related regression analysis (Moon, Sekwat, and Stanley, 2004). The analysis starts with a descriptive analysis of the variables used in the study followed by the diagnostic tests discussed in the preceding chapter. Finally, the results of the actual estimations are presented and discussed.

4.2 Descriptive analysis

Here, a brief discussion of the basic statistical properties of the variables used in the model over the period 2013 to 2017. Among the summary statistics examined are the mean, standard deviation, minimum and maximum values for the pooled sample. Table 4.1 below shows the details

Table 4.1: Summary statistics of variables, 2013-2017

Variable	Mean	Std. Dev.	Min	Max
Total Gov. Trans	4208977	3913461	218530.4	5.31E+07
IGF actuals	1046938	3356041	25331.07	4.27E+07
UDG dummy	0.181482	0.385595	0	1

Source: Author's computation using STATA

The standard deviation column from Table 4.1 above measures the dispersion of the variables from their means. The presence of outliers is indicated by large standard errors which significantly influence the data. The difference between the maximum and minimum values of the variables can also help to determine the spread. The bigger the gap of a variable, the larger the standard deviation of the said variable.

Total government transfers averaged about GHS 4,208,977. The maximum and minimum values of Total government transfers were GHS 53,100,000 and GHS 218,530.4 respectively over the period. The average of Interest generated funds for the period was about GHS 1,046,938, with about GHS 25,331.07 minimum and about GHS 42,700,000.00 maximum. The mean value of UDG dummy was 0.1814, indicating that about 18% of the districts receive UDG as part of their government transfers.

Table 4.2 below presents the correlation between the dependent and independent variables used.

Table 4.2: Correlation matrix

	Total Gov. Trans	IGF actuals	UDG dummy
Total Gov. Trans	1		
IGF actuals	0.796	1	
UDG dummy	0.3806	0.2704	1

Source: Author's computation using STATA

From the table, the correlation between all the variables is generally low (below 0.50) except between total government transfers and internally generated funds which recorded about 0.80. Even though the 0.80 correlation is between the dependent variable and an independent

variable, the study employs the Variant Inflation Factor (VIF) to test further the presence of collinearity among the variables.

4.3 The Hausman test

As mention earlier on, the study compared the FEM with the REM using the Hausman test. Results of which are presented in Tables 4.3 and 4.4 below.

Table 4.3: Hausman specification test for the model (1)

	Coefficients			
	(b)	(B)	(b-B)	sqrt (diag (V_b-V_B))
	FE	RE	Difference	Standard Errors
igfactuals				
L1.	.4849794	1.105837	-.6208571	.0257516
totaltrans~s				
	-.0109247	.0030919	-.0140166	.0020475
L1.	.0800541	.0331546	.0468995	.0025212

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic
chi2 (3) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 611.55
Prob>chi2 = 0.0000
Therefore (V_b-V_B is not positive definite)

Source: Author's computation using STATA

From the results in Table 4.3 above, the Hausman test rejects the null hypothesis of no correlation between the regressors and the district heterogeneity error term. This makes the FEM appropriate over the REM. Therefore, the study concentrates on the results of the FEM. However, in Table 4.4 below, the reverse was true where the Hausman test fails to reject the null hypothesis of no correlation between the regressors and the district heterogeneity error term, thereby making the REM appropriate over the FEM. Therefore, the study concentrates on the results of the REM for the second model.

Table 4.4: Hausman specification test for the model (2)

	Coefficients			
	(b)	(B)	(b-B)	sqrt (diag (V_b-V_B))
	RE	FE	Difference	Standard Errors
udg_dummy	490880.4	358678.9	132201.6	31436.68
totaltrans~s	.3051058	.1767773	.1283285	.0050493

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2 (1) = (b-B)'[(V_b-V_B)^(-1)](b-B)

= 17.68

Prob>chi2 = 0.0000

Therefore (V_b-V_B is not positive definite)

Source: Author's computation using STATA

4.4 Diagnostic Tests

To make an appropriate correction for more robust results, the presence of multicollinearity, serial correlation, and heteroskedasticity are tested.

4.4.1 Multicollinearity

An important concern of multicollinearity is the unstable nature of the estimated coefficients as the degree of multicollinearity increases. Their standard errors may also be widely inflated. Also, severe multicollinearity can cause the coefficients to change signs. To check for its presence, we employed the VIF test for multicollinearity. Results of which are presented in table 4.5 below.

Table 4.5: VIF test for Multicollinearity

Variable	VIF	1/VIF
totaltrans~s	1.17	0.855135
udg_dummy	1.17	0.855135
Mean VIF	1.17	

Source: Author's computation using STATA

From the table, the VIF test revealed a general minimal correlation among the independent variables. The rule of thumb is that VIF should not exceed 10 (Gujarati and Porter, 2009). The VIF of all the variables is less than 10. This means that each of the variables can be considered as a linear combination of the dependent variables.

4.4.2 Serial Correlation

Among the salient assumptions that yields consistent parameter estimates is the assumption of no correlation between the error term and the regressors. This study, therefore, employed the Wooldridge test to verify this assumption. The results are presented in Table 4.6 below.

Table 4.6: Wooldridge test for serial correlation in panel data.

H0: No first-order autocorrelation
F (1, 215) = 5.782
Prob > F = 0.0170

Source: Author's computation using STATA

From the table, a probability value of 0.0170 rejects the null hypothesis and confirms the presence of autocorrelation in the panel model.

4.4.3 Heteroskedasticity

Equal and constant variance error terms (homoscedasticity) are necessary for efficient regression estimates. With Heteroskedasticity, the constant variance of the error term assumption is violated. The study, therefore, tests for heteroskedasticity in the model using the Wald test. See the results in table 4.7 below.

Table 4.7: Wald test for heteroskedasticity

H0: Constant variance

Variables: fitted values of igfactuals

chi2 (1) = 4723.84

Prob>chi2 = 0.0000

Source: Author's computation using STATA

From the table above, the Wald test with a probability value of 0.0000 confirmed that heteroskedasticity is present in the model.

Having realized the presence of heteroskedasticity and serial correlation, the study presented a robust estimation of the fixed effects and random effects models.

4.5 Empirical Results and Discussion

The results shown in table 4.8 and 4.9 are obtained from estimating equation (1) and (2) using the fixed effect (FE) and random effect (RE) techniques. The result of the Hausman test in table 4.3 rejects the null hypothesis of no correlation between the independent variables and the country heterogeneity error term, making the use of the fixed effect model (FEM) appropriate, whiles that of Table 4.4 recommends random effect. Therefore, we present the parameter estimates obtained under the fixed effects estimator and random effects accordingly.

Table 4.8: Estimates of equation (1) using Fixed Effect (FE), 2013-2017

Dependent Variable: Internal Generated Funds (IGF actuals)			
Independent Variables	(1)	(2)	(3)
Lag of IGF	0.485**	0.501***	0.501***
	(0.196)	(0.192)	(0.192)
Total Gov. Transfers	-0.0109	-0.0282	-0.0282
	(0.0415)	(0.0454)	(0.0454)
Lag of Total Gov. Transfers	0.0801*	0.0925*	0.0925*
	(0.0436)	(0.0488)	(0.0488)
Constant	391,103***	423,933***	423,933***
	(118,662)	(118,135)	(118,135)
Year Effects	No	Yes	Yes
District Effects	No	No	Yes
Observations	864	864	864
R-squared	0.454	0.463	0.463
Number of districts	216	216	216

Robust Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. the coefficients of the districts and year dummies are not stated for brevity.

4.5.1 Effect of Central Government Transfers on Districts IGF.

In table 4.8, the coefficient of **total central government transfer** is not significant across all regressions, however, the coefficient of the previous year's government transfer is positive and statistically significant across all regressions, therefore we do not reject the hypothesis that an increase in previous year's government transfer leads to an increase in districts internally

generated funds. In particular, the results in column (3) where district and year fixed effects are controlled for indicating that an extra cedi increase in the previous year's government transfer leads to an increase in district's internally generated funds by 0.0925 pesewas, all other things being equal. This outcome follows logic because district assemblies may be relying on the money available to them to generate more income, such that the more money they have in their coffers, the more they are able to enforce their laws for more IGF. Current transfers will, therefore, be useful to them the following year and may not even encourage more IGF generation.

To conclude, our results support the hypothesis of a positive and significant effect of **the lag of government transfers** on **districts IGF**. That is, a high amount of previous years transfer increases IGFs of district assemblies in Ghana at the aggregate level which tallies with the findings of Masaki (2018) in Tanzania.

For the lag of IGF as a control variable, the coefficient is positive and significant across all columns indicating that higher previous year's IGF tends to increase the current year's IGF.

Table 4.9: Estimates of equation (2) using Random Effect (RE), 2013-2017

Dependent Variable: Log of Internal Generated Funds (IGF actuals)			
Independent Variables	(1)	(2)	(3)
UDG dummy	0.294***	0.169***	0.00754
	(0.0878)	(0.0568)	(0.0545)
Total Gov. Transfers	7.13e-08***	1.80e-08***	8.45e-10
	(1.01e-08)	(4.91e-09)	(5.62e-09)
Constant	12.52***	12.35***	12.77***
	(0.07 72)	(0.0715)	(0.0559)
Year Effects	No	Yes	Yes
District Effects	No	No	Yes
R-squared	0.0834	0.4703	0.4813
Observations	1,080	1,080	1,080
Number of districts	216	216	216

Robust Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. the coefficients of the districts and year dummies are not stated for brevity.

4.5.2 The Role of Urban Development Grant

In table 4.9, the coefficient of **UDG dummy** is again positive and statistically significant across all regressions, except in column (3) where it's insignificant. Therefore, we do not reject the hypothesis that assemblies that receive urban development grant (UDG) as an additional transfer generate more internal funds as compared to their counterparts who do not. The results of column (2) particularly indicate that, assemblies that receive UDG as an additional transfer get about 0.17 percent more IGF than their counterparts who do not, all other things being equal. This outcome follows the logic and can follow the same reasoning as above.

To conclude, our results support the hypothesis of a positive and significant effect of the **UDG dummy** on **IGF**. That is, urban development grant (UDG) plays a vital role in the assemblies' generation of internal funds in Ghana.

Using total government transfers as a control variable, the results indicate that higher government transfers tend to increase the assembly's generation of internal funds.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter, we present the summary and conclusion of the study as well as some policy recommendations based on the findings of the study.

5.2 Summary

Development is always an issue of concern to every government in every country throughout the world be it considered as developed or developing. Though there has been many arguments and theories regarding the term development, many schools of thought agree with its necessity for progress and transformation.

In the world today, development decision making and implementation have devolved from being handled solely by the CG to being a shared responsibility between the central and LG through decentralization. Many believe that due to the likelihood of LGs obtaining better information about the needs of their localities, they are able to allocate resources more efficiently. However, most of the LG development plans aim at meeting the overall objectives of the CG.

Financing local developmental projects have been a challenge for most LGs. The two major sources of finance for the LGs are the transfers from the CG and the internally generated revenues by the LG. The transfers from the CG which in most case is not enough to meet their expenditure carries the larger share of their revenue. This has been found to have an impact on the fiscal autonomy of the LG. Research suggests that LGs ought to raise much more revenues themselves not only to be able to meet their expenditure but also to increase their fiscal autonomy.

Decentralization in Ghana intends to transform the society by transferring power to citizens to take responsibility of their development agenda which requires the Metropolitan, Municipal and District Assemblies (MMDAs) to be able to mobilize sufficient funds while the citizens also fulfill their tax obligations. MMDAs in Ghana rely so much on the CG transfers; that is the District Assembly Common Fund (DCAF) for development activities. However, this source of revenue is inadequate to finance the developmental agendas of these institutions. This has necessitated the need for MMDAs to proactively identify and use other means of generating revenue to augment the transfers from the CG. It is, however, expedient to identify how these transfers from the CG affect the ability of the LGs to raise their own revenue.

Empirical studies on the effect of intergovernmental transfers on the incentive of LGs to raise their own revenue; most of which are on developed countries has produced mixed results. While some largely comprising of developed countries showed a negative relationship, others showed a positive relationship. Similar research on Ghana shows that intergovernmental transfers have negative effects on the incentive of LGs to raise their own revenues. Some recent literature has shown a positive relationship between CG transfers and LG revenue generation such as that on Tanzania which has similar characteristics as Ghana.

Since the last research, districts in Ghana has more than doubled which necessitates the need to find the current role of central government transfers in the generation of assemblies' internal funds in Ghana. The study used the actual values of internally generated funds (IGF) as the dependent variable in both equations (1) and (2), and total central government transfers to assess the effect of government transfers on the assemblies' internal generation of funds in Ghana. To assess the role of urban development grant (UDG), the study uses a dummy variable that takes the value 1 for metropolitans and municipals that get UDG and zero otherwise. The study controlled for the lag values of IGF and government transfers, this is because the study acknowledge the fact that previous years' funds can influence the current generation of funds.

Using equations (1) and (2) as written out in the previous chapters, the study estimated a panel model using data for 216 Ghanaian districts over the period 2013-2017.

The study presented a robust estimation result of the fixed effect and random effect model. The robust estimation was to control for serial correlation and heteroskedasticity. The study found no significant relationship between IGF and current government transfers, however, there was a positive and significant relationship between the ***lag of*** **government transfers** and ***IGF*** indicating that the higher the previous year's transfers, the higher the amount of IGF that will be generated by districts. The study also found a positive and significant relationship between ***UDG dummy*** and ***IGF***, which indicates that assemblies that receive UDG as an additional transfer generate more internal funds as compared to their counterparts who do not.

5.3 Conclusion

The study therefore concludes that while it is necessary for local governments to put in adequate self-effort to raise internal revenues so as to meet the needs of their localities, a complementary increase in central government transfers can really boost their efforts.

5.4 Recommendations

Following the results obtained from the study, some policy recommendations are suggested as follows:

The fact that IGF is sensitive to government transfers should be of interest to policymakers. Domestic policymakers can use government transfers as a tool if they want to increase the level of internal revenue generation of assemblies. This can be done if they increase the amount of transfers given the assemblies.

Further, the government of Ghana should include more assemblies to benefit the urban development grant (UDG), since it boosts up their level of capital to enable them to generate more internal funds.

5.5 Delimitation of the Study

The key limitation of the study is the fact that it does not consider other covariates as controls due to unavailability of data. Another limitation is that the time span is not long. Therefore, the study recommends that future works in this area should consider as much as possible to include other controls as well as widen the time span and such a study can add more impetus to this study.

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