

# **Fiscal Decentralization and Autonomy of Subnational Entities in Ghana**

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# Certificate of originality

I hereby certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify and declare that this thesis and the work reported herein was composed by and originated entirely from me. Information delivered from the published and unpublished work of others has been acknowledged in the text and references are given in the list of references.

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Psalm 127:1-2 – “Unless the Lord builds the house, they labor in vain who build it; unless the Lord guards the city, the watchman stays awake in vain. It is vain for you to rise up early, to sit up late, to eat the bread of sorrows; for so He gives His beloved sleep” (New King James Version).

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# Abstract

This thesis examines the implementation of fiscal decentralization in Ghana, originally known as the Gold Coast in West Africa. It focuses on the Government of Ghana's policies regarding subnational entities especially those related to own-source revenues, property taxes and government fragmentation. Ghana began the implementation of fiscal decentralization during the colonial era, but commenced more rigorous reforms only after 1988, with the enactment of laws to implement a Constitutional provision to allocate 5 percent of tax revenues to subnational governments and to fragment growing subnational units to smaller ones, in order to aid service delivery. The effectiveness of these policies has not yet been assessed by the Government of Ghana. This thesis examines these policies by posing three questions: First, "how effective is fiscal decentralization in supporting subnational autonomy in Ghana?" Second, "To what extent do revenue and expenditure assignments as well as intergovernmental transfers impact on regional gross domestic product in Ghana?" Third, "to what extent do subnational fragmentation and intergovernmental transfers impact on own-source revenue and more specifically property tax revenue in assemblies in Ghana?" The thesis concludes that Ghana has been more successful with political and administrative decentralization relative to fiscal decentralization. Of the pillars of fiscal decentralization, the intergovernmental transfers pillar is the most effective, although its implementation is bedeviled with delays in the transfer of funds. Revenue and expenditure autonomy are limited in Ghana, partly because of financial capacity constraints at the local level and over the financing of their capital budgets. It also concludes that subnational debt is not a challenge in Ghana. However, fragmentation at the regional and assembly levels has an overall negative impact on regional GDP, own-source revenue generally and property taxes more specifically, with some nuance at the level of metropolitan assemblies. Finally, this study confirms that intergovernmental transfers have an aggregate negative impact on own-sourced revenue, but no impact on the property taxes. I therefore recommend a detailed analysis of the institutional capacity of assemblies to generate own source revenue to be carried out before assemblies are fragmented. In addition, the central government needs to progressively increase the performance-based proportion of its intergovernmental transfers and provide technical assistance to assemblies that require support to enhance their revenue collection.

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# Abbreviations and Acronyms

|       |   |
|-------|---|
| DACF  | District Assembly Common Fund                         |
| DDF   | District Development Facility                         |
| FDU   | Fiscal Decentralization Unit                          |
| FOAT  | Functional and Organizational Assessment Tool         |
| GDP   | Gross Domestic Product                                |
| Ghs   | Ghana Cedi  |
| MLGRD | Ministry of Local Government and Rural Development    |
| MMDAs | Metropolitan, Municipal and District Assemblies       |
| NDC   | National Democratic Congress                          |
| NPP   | New Patriotic Party                                   |
| OECD  | Organization for Economic Cooperation and Development |
| PNDC  | Provisional National Defense Council                  |
| UDG   | Urban Development Grant                               |
| UNDP  | United Nations Development Programme                  |

# CHAPTER 1

## BACKGROUND OF STUDY

### 1.1 Introduction

Subnational revenue performance in Ghana has been abysmal for many years. Many factors could be contributing to the prolonged underperformance of these subnational entities, such as the evolution of government policies and reforms, political systems, changes in Constitutional provisions and local governance laws, government policy choices, low revenue generation capacity of subnational governments and complexity of the structure of the local government system in Ghana. Other factors which could have contributed to this situation are development concepts and practices such as decentralization, splitting of subnational entities and inadequate empowerment of subnational governments to make fiscal decisions. These factors could either be supportive of each other when implemented concurrently or otherwise. This thesis determines the factors that influence the revenue performance of subnational entities in Ghana, with emphasis on fiscal decentralization and the granting of subnational autonomy to make fiscal decisions.

Decentralization has been a part of Ghana's history. It has evolved over the years with the adoption of national policies, enactment of laws to guide the control of power and protection of the interests of governments, chiefs and citizens. With population growth, civilization, colonialism and development unleashing their influence over governance practices, groups, communities, towns, tribes and territories, Ghana experienced many changes in leadership, decision making and resource allocation. Decisions concerning the control of national and subnational finances in Ghana could be best understood through a review of the critical issues and stakeholders that interacted before the country was formed, the laws that were passed during the colonial era and the evolution of policies which affected decentralization after independence.

Decentralization was not a deliberate policy of the colonial government, but it underpinned the formation of settlements in the Gold Coast. The British government developed communities in the Gold Coast to commence the process of decentralization. Gold Coast (1925b:50) notes that the government constructed new water power houses or maintained existing ones, in order to decongest towns such as Accra, Sekondi, Winneba, Cape Coast and Kumasi. Bennion (1962:7) states that the British Settlements Act, 1843 and its replacement (in 1887) guided the formation of settlements in the Gold Coast and empowered the natives. Two indicators that illustrate decentralization during the Gold Coast period were that (i) the settlements in the British colonies were treated as though they were states/towns in the United Kingdom and (ii) the governor derived his authority from the British Monarchy, who had jurisdictional power over the United Kingdom and all its colonies. This is a decentralized power often observed in political decentralization. Broadly speaking, the colonial rulers commenced the process of decentralization in the Gold Coast by delegating political powers to her subjects and empowering communities that were formed to collect taxes and fines and to create native police stations. The British style of governance set the stage for the development of the decentralization in the Gold Coast.

The beginning of the Twentieth Century saw many reforms and amendments to ordinances that supported decentralization. Some of these reforms are the demarcation of borders of the Gold Coast instituted by the Gold Coast Order in Council, 1901 under the British leadership, the change of leadership from the British to the natives in 1957, and thereafter leading to the preparation of a constitution. The Gold Coast became a unitary state with subnational governments and a president as the central authority. The evolution of decentralization in the century become characterized by political factors anchored on economic development and urbanization. The British Government defined the boundaries of the Gold Coast within the framework of the partition of Africa but respected the existing internal boundaries among tribes

and ethnic groupings. The British spearheaded economic development and urbanization in the Gold Coast through the passing of laws to regulate the behavior of the people, building of roads and railways, provision of water and educating the people. Most of the social movements centered around the chieftaincy institutions where the paramount chiefs played leading roles. On the political front, the British Government gradually empowered the locals to contribute to their emancipation. Royal British engineers supervised the construction of various roads, thereby transferring knowledge to the locals (Gold Coast, 1908:44).

The Gold Coast was renamed Ghana at independence on March 6, 1957. It became a republic on July 1, 1960, within the Commonwealth of Nations. At independence, Ghana spanned the territories of the Gold Coast and the Northern Territories, the Ashanti Empire, and Togoland. Two political systems governed the people alongside each other at independence – the formal state government established by law and the traditional chieftaincy system that had been sustained during the colonial period (Bennion, 1962:8 and Claridge, 1915:614-617). Gyebi, Novieto and Narh (2013:98) provide evidence that head chiefs were involved in the decision-making process that affected the development of their communities.

## 1.2 Pre-independence efforts at fiscal decentralization

Like decentralization, subnational taxation commenced in the colonial era when the Poll Tax Ordinance of 1852 was passed in order to raise funds for development and to assure the various tribes of greater protection if they complied voluntarily. The law required every adult citizen of the colony to pay one shilling a year. The tax was earmarked for provision of basic amenities, including schools, hospitals, water and roads (Claridge, 1915:534; and Bennion, 1962:11). However, the implementation of the tax was saddled with many challenges. With hindsight, Morton (2017) provided six reasons that made the tax unsuccessful. These include the misapplication of proceeds of the tax to pay civil servants, instead of providing social amenities, the perception that tax collectors were embezzling taxes for personal use and enrichment,

inadequate monitoring systems and accountability of the funds collected, poor patronage due to widespread poverty, inadequate consultation with the ordinary people, and the failure of the British Empire to protect the coastal inhabitants, who paid the tax, from harassment from the Ashanti warriors. These reasons seem plausible, given the fact that most of the local people were not literate, lived in a barter economy and were loyal to their chiefs.

Three provinces and twenty districts were established and empowered to collect rates<sup>1</sup> and licensing fees from property owners in the Gold Coast by 1927. The districts had sanitary committees with no taxing powers, but they were empowered to impose fines on offenders of sanitary rules. Gold Coast (1902:11) cites the collection of toll levies in Attebubu, Mampong and Sika Assiko in the Ashanti Region.<sup>2</sup> The government established town councils in Accra, Cape Coast and Sekondi. In the Northern Region levies were collected at Wa, Bole, Kintampo, Gambaga, Walewale and Tumu. The distribution of provinces and districts is shown in Table 1.1.

**Table 1.1: Distribution of provinces and districts in Gold Coast, 1927**

| Provinces        | Districts  | Number Districts |
|------------------|--|------------------|
| Western Province | Axim, Ankobra, Tarkwa, Sekondi-Dixcove, Sefwi and Aowin  | 6                |
| Central Province | Cape Coast, Saltpond, Winneba and Western Akim   | 4                |
| Eastern Province | Accra, New Juaben, Akwapim, Volta River, Keta-Ada, Birim, (Akim- Abuakwa), Birim, (Kwahu) and Ho (Togoland). | 10               |
| Total            |  | 20               |

Source: Gold Coast 1929. Colonial Reports 1929 – Annual No. 1418, Printed in the Gold Coast.

<sup>1</sup> Rates are taxes levied on individuals (known as specific rates) or on immovable properties (known as general rates).

<sup>2</sup> Regions were territorial areas during the colonial era. Today, regions are made up of assemblies (metropolitans, municipals and districts).



A review of the fiscal performance of the three provinces in 1921 led to a change in the policy to empower subnational governments to collect revenues. The results indicated a weakened revenue collection performance. The central government introduced intergovernmental fiscal transfers as an interim solution to the problem in 1921. The grants enabled the municipalities to shore up the shortfalls in revenues. This is the first mention of the use of intergovernmental transfers as a major pillar of fiscal decentralization in the history of the Gold Coast (Gold Coast 1924). Table A.1 shows the fiscal imbalances in 1921.

In 1953, Municipal Councils were established with enormous powers. They had the duty to prevent the perpetuation of any offence, administer taxes on properties, authorize the remission of fees, insure properties against risks and execute some works (with limits) within their jurisdictions. They could also build or acquire buildings within their territories. In total, the councils had more than 80 functions covering every sector of the economy. Some Municipal Councils struggled to raise sufficient revenues to perform their duties, to control their revenues and expenditures, and to attract skilled labor (Government of Ghana, 1996). These challenges caused the central government to perceive some Municipal Councils to be less competent to perform their functions. In 1956, the central government set up the F. A. Greenwood Commission to investigate the challenges, and to recommend measures for controlling revenues and expenditures in local governments and to assist them to raise funds to finance their budgets (Friedrich-Ebert-Stiftung, 2016:3). The recommendations of the Commission were not implemented when Ghana gained independence in 1957.

### 1.3 Post-independence efforts at fiscal decentralization

The Ghana Independence Act, 1957 curtailed the authorizing power of the United Kingdom Parliament over the Gold Coast. Ghana was no longer a decentralized colony of the United Kingdom. It created a new opportunity for the country to commence its own decentralization. The Ghana Independence Act, 1957 exempted Ghana from all laws that had kept the country

subject to the laws of the United Kingdom, such as the Interpretation Act, 1889 of the United Kingdom and the Colonial Laws Validity Act, 1865. The Constitution of Ghana was adopted in 1960.<sup>3</sup> It created eight regions and the Local Government Service. These included the Ashanti, Brong Ahafo, Central, Eastern, Northern, Upper, Volta and Western Regions. Each region had a house of chiefs to preserve the chieftaincy institution. The regions are made up of assemblies, and councils (urban and local). The creation of the Local Government Service attests to the fact that the process of decentralization had gained root in the Gold Coast and it was accepted by the new Government of Ghana.

The Local Government Act 54 of 1961 also attested to the government's commitment to decentralized reforms. It recognized both central and local governments. The central government handled national matters, while the local governments provided services at subnational level such as maintaining order, executing public works, managing primary schools, and providing agriculture services. It divided Ghana into administrative areas made up of cities and municipal, urban and local councils. Councils were made corporate bodies with perpetual successions and seals. Fiscal decentralization was enhanced by the introduction of the vehicle licensing levy to be imposed, collected and managed by local governments in support of their local budgets. The Local Government Act of 1961 empowered districts to collect property rates, and explicitly identified owners of immovables properties to pay the tax. Property rates are taxes on residential properties and other buildings. These provisions did not by any means guarantee that the local governments had professional personnel to collect the taxes and execute the responsibilities assigned to them.

The Government of Ghana (1996:2-3) mentions that many problems befell the local government system just after independence. Some of the problems included the deliberate infringement of the rights of weak districts in the collection and use of their resources. The central and local

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<sup>3</sup> The current Constitution of Ghana is discussed later in Chapter 3.

government policies were not harmonized, which led to rivalry in policies aimed at attracting human capital. There was a perception that local governments had become corrupt and inefficient in the performance of their legal duties, partly because they could not raise sufficient funds to finance their budgets and they lacked strong systems of accountability. This strained the relationship between the people and the local government on one side, and on the other side, with the central government. This relationship contributed to a lack of willingness to pay local taxes, resulting in lower revenue collection.

In 1971, the government decided to reform the local government system in order to resolve the confusion and lack of effectiveness that had emerged after Ghana gained independence. The Local Administration Act of 1971 was passed in order to decentralize the central government powers. However, the Government of Ghana (1996:4) notes that the law was not implemented due to a change in government in 1972. In 1974, an attempt was made to replace the two systems with a single local government system where power was fully decentralized. Assemblies were envisaged to be politically autonomous and to provide services in every sector. This led to the merging of smaller assemblies and the formation of 65 district councils that would work closely with the regions. The reform empowered the regions to be directly involved in the work of districts. Districts became larger and had more responsibilities. However, the departments of the central government were not decentralized. The provision of central government sectoral services remained with ministries.

The Local Administration (Amendment) Decree, 1974, which is also known as the National Redemption Council (N.R.C.D) 258, amended the term “Local Administration” and introduced “Local Government” instead. The Friedrich Ebert Stiftung (2016:6) reports that an amendment to the Local Administration (Decree) of 1974 in 1980 allowed chiefs to participate in local governance. Decentralization reforms stalled after 1974 until 1988, when the amendments to the Local Administration Decree, 1974 were being implemented. The central government devolved administrative authority to lower levels of government and made regions and districts focal

points for development. Regional coordinating councils were charged with the responsibility to coordinate and ensure development within districts. A regional coordinating council is an administrative body with the responsibility to assess the performance of assemblies, monitor their use of funds and review services they provide to the public.

Many reforms were proposed to Ghana's governance structure following military takeovers in the 1970s and the return to constitutional rule in 1992. Article 4(1) of the 1992 Constitution described Ghana as a unitary state with regions and boundaries covering its land, sea and air space. The public sector has three main categorizations, namely the central government, regional governments and districts governments also known as Assemblies (categorized in Metropolitan, Municipal and District Assemblies). The central government is led by the President of the Republic, who appoints heads of regions (Regional Ministers) and assemblies (metropolitan, municipal and district chief executives). The regions are governed by regional councils, headed by a regional minister, who reports directly to the President of Ghana. Each regional minister and chief executive (metropolitan, municipal and district) performs public functions within their territorial jurisdictions which are defined by law such as representing the President in the region or district and coordinating the administrative machinery of government.

Ghana reinvigorated rigorous decentralization reforms after 1988, with the adoption of the Constitution (1992) and the passing of new local government Acts. The country has made progress in adopting different layers of government (national, regional, district and local/town councils), amending the local government Acts and devolving administrative powers to various levels of government. Among the laws enacted are the Local Government Act in 1988 (Provisional National Defense Council Law 207), the Local Governance Act of 2016, the Civil Service Law of 1993, the National Development Planning System Act of 1994 and the District Assemblies Common Fund Act of 1993. The Local Governance Act of 2016 had different layers of subnational entities below regions. Metropolitans have four layers, but municipals and

districts have three layers each. The subnational entities in Ghana are regions, metropolitans, municipals, districts, sub-metropolitan assemblies, town councils, zonal councils, urban councils and unit committees. The thesis will limit the analysis to regions and assemblies (metropolitans, municipals and districts).

**Table1.2: The size, relative population size and borders of regions in Ghana, 2018**

| Regions       | Geographical Size  | Population Size 2018                          |
|---------------|--|---|
| Upper West    | It covers a total land area of about 18,478 square kilometers and constitutes about 12.7 percent of the total land area of Ghana.                                      | 829,984 representing 2.8 percent of total.    |
| Upper East    | It covers a total land area of about 8,842 square kilometers, which constitutes 2.7 percent of the total land area of Ghana.   | 1,244,983 representing 4.2 percent of total.  |
| Northern      | It covers a total land area of about 70,383 square kilometers. It is the largest region in Ghana in terms of land area.  | 2,993,889 representing 10.1 percent of total. |
| Brong Ahafo   | It covers a total land area of about 39,557 square kilometers.   | 2,786,400 representing 9.4 percent of total.  |
| Ashanti       | It covers a total land area of 24,389 square kilometers representing 10.2 percent of the total land area and geographically the third largest in Ghana.                | 5,661,728 representing 19.1 percent of total. |
| Western       | It occupies a land area of 23,921 square kilometers.   | 3,023,529 representing 10.2 percent of total. |
| Central       | It occupies an area of 9,826 square kilometers and 4.1 percent of Ghana's land area. It was the capital of Gold Coast until 1877, when the capital was moved to Accra. | 2,521,118 representing 8.6 percent of total.  |
| Eastern       | It occupies a land area of 19,323 square kilometers and constitutes 8.1 percent of the total land area of Ghana.   | 3,171,740 representing 10.7 percent of total. |
| Volta         | It occupies a land area of 20,572 square kilometers.   | 2,549,256 representing 8.6 percent of total.  |
| Greater Accra | It occupies a land area of 3,245 square kilometers.  | 4,831,710 representing 16.3 percent of total. |

Source: Ministry of Local Government and Rural Development (geographical size) and Ghana Statistical Service (population size). Note: Total population as of 2018 published by the Ghana Statistical Service is 29,614,337.

Regions were the territories of tribes in the Gold Coast during the colonial era, but this changed after independence. Regions could be defined as a group of districts that are headed by regional coordinating councils. Ten regions which existed in Ghana as of June 2018 are shown in Table 1.2. The number has been increased to sixteen as of February 2019 (Table 1.3). The government created six new regions namely, Oti (from Volta Region), Ahafo (from Brong Ahafo), Bono East (from Brong Ahafo) and Western North (from Western Region). The others are North East (from Northern Region) and Savanna (from Northern Region). The population size of all regions in Ghana increased significantly after 1960. Using 1960 population census data as a baseline, the population of many regions quadrupled by the year 2019, increasing the demand for more public services. The evolution of population is shown in Table A.2 (in Appendix A), indicating a period before new regions were created while Table 1.3 shows the population size of regions in Ghana after the creation of new regions.

**Table 1.3: New regions and the population size in Ghana, December 2019**

| Regions       | Population Size 2019 | Percentage of total population |
|---------------|----------------------|--------------------------------|
| Ashanti       | 5,792,187            | 19.1                           |
| Bono          | 1,082,520            | 3.6                            |
| Greater Accra | 4,943,075            | 16.3                           |
| Central       | 2,563,228            | 8.5                            |
| Eastern       | 3,244,834            | 10.7                           |
| Northern      | 1,905,628            | 6.3                            |
| Western       | 2,165,241            | 7.2                            |
| Upper East    | 1,273,677            | 4.2                            |
| Upper West    | 849,123              | 2.8                            |
| Volta         | 1,865,332            | 6.2                            |
| North East    | 575,558              | 1.9                            |

|               |           |     |
|---------------|-----------|-----|
| Oti           | 742,664   | 2.5 |
| Bono East     | 581,368   | 1.9 |
| Savannah      | 599,852   | 2.0 |
| Ahafo         | 927,960   | 3.1 |
| Western North | 1,168,235 | 3.9 |

Source: Ghana Statistical Service, 2019

Population size, geographic contiguity and economic viability are used as part of the criteria for splitting metropolitans, municipals, districts. Metropolitans are required by the Local Governance Act of 2016 to have a population of over 250,000 people. Metropolitans have town councils which usually contain about 5,000 to 15,000 people. Municipals have at least 95,000 people and are supported by the work of zonal councils which should have a population of 3,000 people. Districts are expected to have 75,000 people and have urban/town/area councils beneath them. All district assemblies have unit committees with a population that ranges from 500 to 1,500 people.

The distribution of assemblies has varied significantly since 1988. The total number of assemblies increased from 65 assemblies before 1988 to 260 in 2019 (Clarke, 2010:15; Ghana Districts, 2019). As at December 2019, there were 6 metropolitans, 109 municipalities and 145 districts in Ghana (Table 1.4).

**Table 1.4: Distribution of assemblies in Ghana across 16 regions, December 2019**

| Regions              | Metros | Municipals | Districts | Total |
|----------------------|--------|------------|-----------|-------|
| Ashanti Region       | 1      | 19         | 23        | 43    |
| Bono Region          |        | 5          | 7         | 12    |
| Bono East Region     |        | 4          | 7         | 11    |
| Ahafo Region         |        | 3          | 3         | 6     |
| Central Region       | 1      | 7          | 14        | 22    |
| Eastern Region       |        | 13         | 20        | 33    |
| Greater Accra Region | 2      | 23         | 4         | 29    |

|                   |   |     |     |     |
|-------------------|---|-----|-----|-----|
| Northern Region   | 1 | 5   | 10  | 16  |
| North East Region |   | 2   | 4   | 6   |
| Savannah Region   |   | 1   | 6   | 7   |
| Upper East Region |   | 4   | 11  | 15  |
| Upper West Region |   | 4   | 7   | 11  |
| Volta Region      |   | 6   | 12  | 18  |
| Oti Region        |   | 2   | 6   | 8   |
| Western Region    | 1 | 8   | 5   | 14  |
| Western North     |   | 3   | 6   | 9   |
| Total             | 6 | 109 | 145 | 260 |

Source: Ghana Districts, 2019.

#### 1.4 Problem statement and justification

The Government of Ghana (1996:61) identified financial problems as one of the major problems encountered in the implementation of decentralization in Ghana. The government's rationale for pursuing fiscal decentralization, as stated in the Internally Generated Funds Strategy of the Ministry of Finance, is to establish local government units with a sound financial base, where each metropolitan, municipal and district assembly (MMDA) has adequate and reliable sources of revenue. In other words, the government desires that all MMDAs have sustainable revenues. Currently, the largest source of MMDA revenue is transfers from the government and donors. Transfers to MMDAs constitute about 80 percent of total MMDA revenues on average. The thesis ascertains whether the provision of intergovernmental transfers contributes to own source revenue performance of subnational governments in Ghana. It also ascertains whether the splitting of MMDAs impacts on their revenue performance. The government has been continuously creating more MMDAs by splitting them up as a development strategy. The thesis examines how the continuous creating of more MMDAs affects their revenue performance.

Assemblies in Ghana are mandated by the Local Governance Act, 2016 (as well as its predecessor, the Local Government Act of 1993) to collect revenues to support the revenue and expenditure assignments. Assemblies could generate revenues through property rates (property taxes), licenses, fees and permits, yet they tend to depend on intergovernmental transfers from



the central governments because many of them lack the capacity to tax their residents. Historically, own source revenues have been very low, representing less than 1 percent of central government revenue annually. In 2018, out of a total own source revenue of Ghs 343.3 million (US\$74.6 million) collected, assemblies in three regions (Greater Accra, Ashanti and Western) collected 70 percent of the total, while the others collected 30 percent. In 2018, total own source revenue represented 0.8 percent of total government revenue in Ghana, similar to the shares in previous years after 2010. It is within this country context that the government continues to create new assemblies, a process that further stretches the existing capacities and available resources of assemblies to perform their functions. It has also reformed the laws that directly influence the functions of assemblies. Irrespective of the reforms, the ability of assemblies to collect own-source revenues is not significantly different from the past. By using data available from 2008 to 2016, the thesis examines the factors that influences revenue and expenditure assignments in Ghana.

The thesis will also examine one type of own source revenue, namely property taxes, due to its revenue generating potential emphasized in empirical literature. Property tax revenues are also low in Ghana though assigned to subnational governments for decades as noted above. Article 245 of the 1992 Constitution assigns property taxes as source of revenue for assemblies in Ghana. One of the strongest motivations of this thesis is to examine the impact of jurisdictional fragmentation on property taxes in Ghana. The government of Ghana creates new assemblies with the hope that they will be more efficient in the collection of property taxes and to improve the delivery of services to communities. Assemblies are assisted to value properties through services provided by the Land Valuation Division of the Lands Commission in Ghana. In addition, the Minister of Local Government and Rural Development is mandated to provide guidance to assemblies on the property rates. Assemblies are required to collect the revenue and retain them for the provision of local services. It is therefore paradoxical that after all the legal

provisions made to support assemblies, their property tax collections are low. The thesis examines this paradox through the lens of the fragmentation of assemblies.

Most fiscal decentralization reforms take place at the level of assemblies in Ghana and yet very little data is available for quantitative analysis. The Ghana Statistical Service, the institution mandated to collect, analyze and publish data usually focuses on national and regional data. For instance, there are no estimates of economic growth in regions and assemblies. Many reasons account for situation, including the lack of funding and weak technological capacity to collect assembly level data, and low demand for assembly level data. The creation of new assemblies leads to changes in the jurisdictional areas and could make historical data difficult to compare across assemblies. In Chapter 5 of this thesis, the quantitative techniques will be applied to regional data even though fiscal decentralization takes place at the level of districts because of data limitations. One of these limitations is the lack of reliable benchmark data for splicing the regional GDP data for all districts (also because of the lack of data for newly created assemblies). Generating reliable GDP proxies requires good reference or benchmark data for splicing. This thesis uses the 2010 census data and labor force survey as referencing points for data preparation before analyses. Ghana produces real GDP numbers only at the national level. However, Ghana Statistical Service has regional indicators for splicing the national real GDP data across regions. In order to improve the efficacy and reliability of the results in this thesis, regional analyses are purposively selected to enable the use of real regional GDP as a dependent variable. Assembly level data will be employed to understand how the creating of assemblies by splitting them, impacts on own-source revenues, especially property taxes.

## 1.5 Research objectives and research questions

The objectives of this study are:

- To examine the implementation of fiscal decentralization in Ghana and its effectiveness in supporting subnational revenue and expenditure assignments of regions and assemblies in Ghana;
- To ascertain the impact of revenue and expenditure assignments and intergovernmental transfers on regional real gross domestic product in Ghana; and
- To examine the impact of the fragmentation policy and practice on own source revenue performance of subnational governments and more specifically on property taxes between 2010 and 2016 in Ghana.

Three questions are derived from these objectives and the literature reviewed. These are:

- Question 1: How effective is fiscal decentralization in supporting subnational autonomy in Ghana?
- Question 2: To what extent do revenue and expenditure assignments as well as intergovernmental transfers impact on regional gross domestic product in Ghana?
- Question 3: To what extent do subnational fragmentation and intergovernmental transfers impact on own-source revenue and more specifically property tax revenue in assemblies in Ghana?

By answering the three questions above, the thesis intends to assess and contribute additional knowledge to assist government with the implementation of fiscal decentralization in Ghana. It will also provide policy recommendations with the intention to influence policy formulation, design and implementation on subnational fragmentation. It intends to recommend, where necessary, implementable policy actions regarding subnational assignments, and

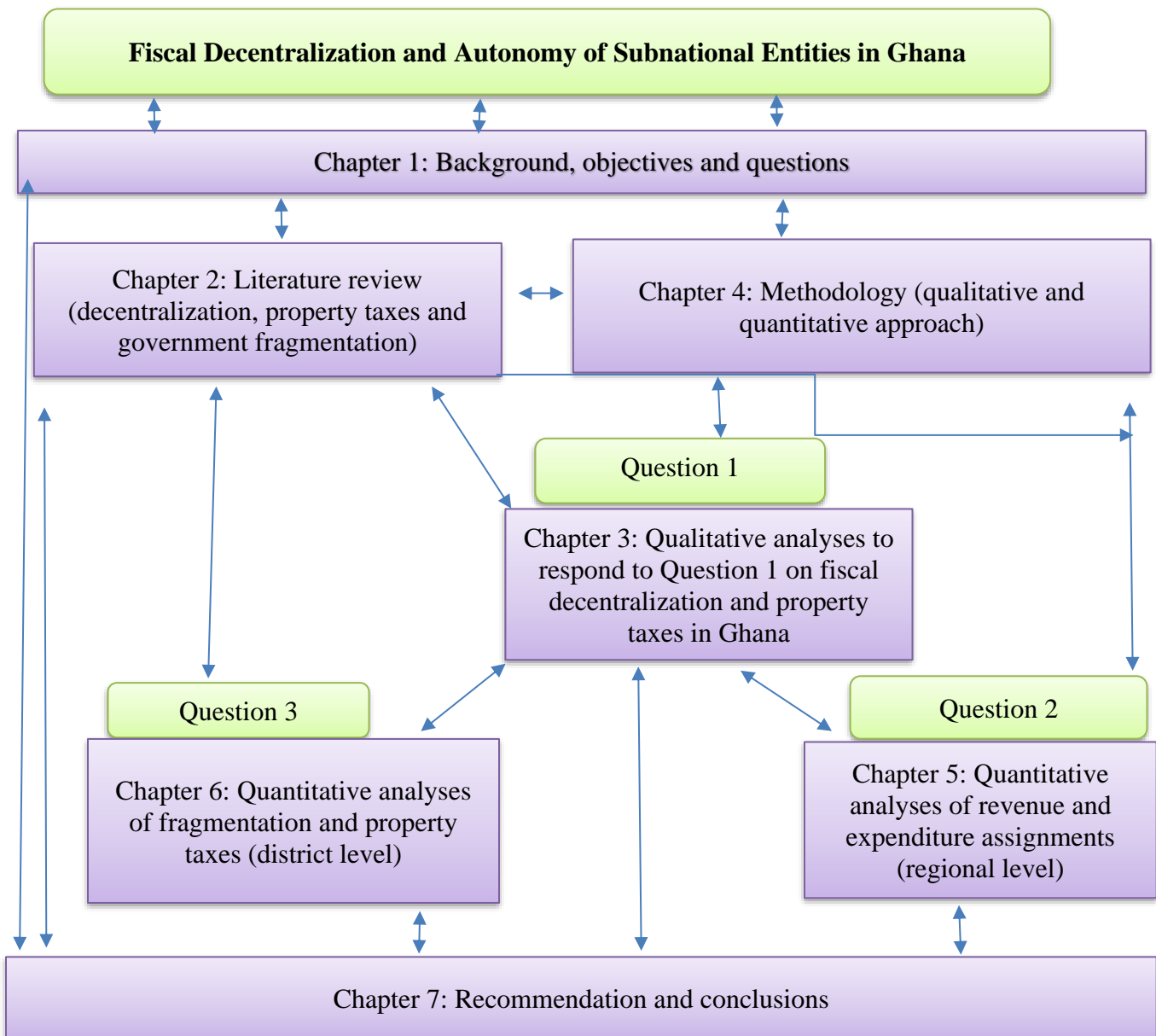
intergovernmental transfers. The thesis reviews international experiences regarding property taxes and undertakes analyses that could guide decision making in Ghana.

Two main research methods will be employed to answer the three broad questions. A qualitative approach will be applied in answering Question 1. The approach requires a review of theoretical and empirical documents, such as peer reviewed literature, laws, budget statements, government strategies, local government action plans and other relevant publications. Local government data in Ghana will be extensively analyzed to provide evidence to the findings derived from the literature. Question 1 will be answered in Chapter 3 to provide the required background for responding to Questions 2 and 3. Quantitative approaches will be employed to respond to Question 2 and 3 using a panel data and innovative model specifications underpinned by theoretical and empirical literature discussed in Chapter 2. A detailed discussion of the methodology is presented in Chapter 4 of this thesis. Figure 1.1 provides a pictorial view of the thesis.

## 1.6 Chapter sequence

The first chapter provides the background for the thesis. The literature review follows in Chapter 2. In Chapter 3, fiscal decentralization and property taxation in Ghana are examined, while the methodologies applied to answer the research questions are explained in the fourth chapter. Chapter 5 examines the extent to which intergovernmental transfers, and revenue and expenditure assignments impact on regional gross domestic product in Ghana. Chapter 6 examines the impact of subnational fragmentation on own revenue and more specifically property tax revenue in Ghana. In Chapter 7, I draw conclusions and make policy recommendations. Figure 1.1 shows the structure of the thesis and the linkages in addressing the questions.

**Figure 1. 1: Structure of the thesis indicating linkages across chapters**



## 1.7 Limitation of the study

This study was limited by the availability of regional and district level data that could be used either as variables or instruments in the regressions. In this case, the thesis employed available subnational data from Ministry of Local Government and Rural Development (MLGRD) for the period 2005 to 2016 for regional regressions and 2010 to 2016 for assembly level regressions. However, the ministry did not have data from 1988 to 2005 during which some MMDAs were fragmented. In addition, the data for 2017 and 2019 were not produced and shared by the MLGRD. This prevented analysis of the impact of the 2019 fragmentation of MMDAs. The new regions are not covered in this thesis, partly because there are no data covering their activities. In addition, the government is yet to recalibrate the existing MMDA data to cover the new regions. Ghana Statistical Service does not produce regional and assembly level gross domestic product data. Subnational data are difficult to obtain in Ghana and this was the main challenge throughout the preparation of this thesis.

Moreover, many assemblies do not publish their data. It is, therefore, difficult to obtain reliable subnational data to use as instruments where endogeneity is suspected in a regression. I obtained tax payer level property tax data from some assemblies, but there were no comparable data in the Ghana Living Standard Surveys to enable micro level analysis in order to determine the behavior of tax payers in a partial equilibrium model.

The district level analysis in the thesis required additional instrumentation given the limited data points. However, data unavailability restricted assembly specific analysis and the use of General Methods of Moments. There are only 6 metropolitan assemblies in Ghana and thus, restricted metro analyses were not possible in this thesis. I introduced interaction variables to further analyze the results. Furthermore, MLGRD does not collate the data on exemptions granted by assemblies. This prevented detailed quantitative analysis of exemptions across MMDAs.

# CHAPTER 2

## LITERATURE REVIEW

### 2.1 Introduction

The conceptual framework for decentralization draws on vast literature about market failure in the provision of public services, income inequality, housing choices, and preferences of different constituencies in maximizing welfare. Oates (1972:55) presents the decentralization theorem that highlights three major focus areas of empowerment of subnational governments to include (i) identification of a jurisdiction, (ii) determination of the control over the jurisdiction, and (iii) decisions about who will bear the costs and benefits of the provision of the public goods. Oates (2005:350) mentions the work of Richard Musgrave, Kenneth Arrow and Paul Samuelson as a part of the pioneering thinking on fiscal decentralization. Their work covering the conceptual framework of fiscal decentralization discusses budget policy issues related to securing macro-economic stabilization (price-level stability and full employment), adjustments in resource allocation and income distribution. It also discusses fiscal decentralization from the perspective of economic efficiency and notes that supply-side benefits may remain the same or decline over time, while on the demand side, the provision of public goods can lead to factor mobility (Musgrave, 1959:4-41; Tiebout, 1961:79-95).

Four forms of decentralization are mentioned in a considerable body of academic literature. These are administrative, political, fiscal and market decentralization. There are considerable overlaps among the different concepts of decentralization, although their policy implications differ. All four forms of decentralization involve either a shift of decision-making power, functions or resources to subnational governments using country systems such as regulatory channels and national budgetary systems (Ahmad and Brosio, 2009:5; Litvack and Seddon, 2002:2; Torrisi, Pike, Tomaney and Tselios, 2011:3). These pillars are discussed in detail in section 2.3.

## 2.2 Decentralization defined

Decentralization is a multifaceted phenomenon with many definitions and perspectives in the literature. Four of such important definitions are presented by Smoke (2003), Joint United Nations Development Programme and Government of Germany (1999), World Bank (2013), and European Union (2019). Smoke (2003:8) describes decentralization as encompassing everything or nothing in which the central government role is limited. This indicates that the scope of decentralization covers every policy and program that limits the power of central governments in favor of subnational governments. The Joint United Nations Development Programme and Government of Germany (1999:2) define decentralization as

“the restructuring or reorganization of authority so that there is a system of co-responsibility between institutions of governance at the central, regional and local levels according to the principle of subsidiarity, thus increasing the overall quality and effectiveness of the system of governance, while increasing the authority and capacities of subnational levels”.

The European Union (2019) defines decentralization on its website as “a process whereby management of European Union funds is delegated to the administrations of the beneficiary countries”. This focuses on fiscal transfers among government institutions. Finally, the World Bank (2013:1) refers to decentralization as a transfer of “authority and responsibility of major government functions from central to subnational governments — including local governments, civil society and the private sector”. Central to the three definitions is the transfer of power and responsibility from a central government to lower local authorities (Yuliani, 2004:1; Smoke, 2003:8; Bahl, 2008:4).

The transfer of power, responsibility and resources requires power-sharing arrangements among different agents of government. The central government may develop norms and standards in order to guide the use of power and resources. The relationship between the central and



subnational governments must be explicitly documented in the country's constitution, local governance laws and other government policy papers. The law must indicate the limits to their authority and the point at which central government could intervene (Yilmaz, 2009: 62-63; Bahl, 2008:4).

The transfer of power to the subnational governments enables them to perform developmental duties that would hitherto have been performed by the central government. It could also facilitate the decision-making process at the subnational level leading to the empowerment of the people (Smoke, 2003:8; Bahl and Bird, 2018:2; Bird and Vaillancourt, 2008:5; Bahl, 2008:4). Miller (2002:3) describes decentralization as “the redefinition of structures, procedures and practices of governance to be closer to the citizenry”. The decision-making process across structures and practices of governance are usually complex. Subnational governments usually represent the views, interests and aspirations of the people or the central government in power. When leaders of subnational governments are elected by the people, it could increase their likelihood to represent the views of the people. This is because of the fear of being voted out when the people are dissatisfied with the services they receive. Central government appointees to positions at the subnational level may not necessarily represent the voice of the people. Without ruling out the possibility that they will represent the people, their allegiance may be to the appointing authority.

More importantly, the transfer of power is linked to service delivery, achievement of local objectives, and promotion of regional growth (Edoun and Jahed, 2009:4; Shah, 2004:7; Dafflon and Madiès, 2013:16). As a link to service delivery, decentralization could be a catalyst for achieving development results in a timely manner, especially when citizens and institutions have clarity about their roles and responsibilities. By implication decentralization should be considered as a continuous process during which actions are taken by the citizens and their governments to achieve results. Some of these actions are central government's willingness to

grant subnational governments political power to make decisions, selection of subnational government roles, allocation of enough resources to fund planned local expenditures, and proper implementation and monitoring of local projects. Where the actions are properly sequenced, Dafflon and Madiès (2013:16) argue that central governments could achieve economic growth, redistribute wealth, make labor mobile and improve the standard of living.

Decentralization could reduce labor mobility and support subnational growth under the right conditions such as higher wages, low taxes and job satisfaction. Decentralization can reduce labor mobility but may be associated with increased cost of administration and coordination. Stronger economic growth can be achieved if decentralization is positively correlated with the variance in the demand for public goods in a decentralized system (Panizza, 1999:98). Oates (1999:1124) emphasizes that “even in the absence of factor mobility, the efficient level of output of a local public good, as determined by the Samuelson condition, that the sum of the marginal rates of substitution equals marginal cost, will typically vary from one jurisdiction to another”. Thus, decentralization could potentially create the means for economic growth in all regions if labor mobility is minimized.

The long-term benefits of decentralization may last longer than the political tenure of many political leaders. Political leaders have a short horizon to show results to voters. However, the processes required for planning and implementing of decentralized reforms need a long time. The central government needs to put in place many administrative systems, including passing laws to authenticate the authority of local governments and to achieve results. However, Crook (1994:340) indicates that subnational governments need not wait for the long-term results of decentralization because there are short-term results such as good governance that can be politically rewarding.

Decentralization encompass deconcentration, delegation and devolution but these terms could be applied differently by economists and governments. Economists may use the term “decentralization” to mean devolution, referring to the transfer of responsibilities from central government to subnational governments. However, when governments mention decentralization, they refer to deconcentration or delegation. Whereas deconcentration refers to the transfer of decision-making power from central government offices to regional and local offices, delegation refers to the act of giving subnational governments responsibilities for service delivery that are usually undertaken by the central government (Bird and Vaillancourt, 2008:5).

Some authors also warn researchers to avoid defining decentralization or at best be aware of the conceptual challenges associated with using a narrow definition (Sharma, 2006:51; Schneider, 2003:34). Sharma (2006:51) suggests that no formal definition exists for decentralization among countries, and its measurement may be illusive given the different dimensions of the subject. However, any attempt to measure decentralization must consider the distribution of power, use of resources, tax bases, laws and the rights of local governments. Schneider (2003:34) warns researchers against the possibility of the different meanings of decentralization leading to conceptual challenges, resulting from either over-specification or under-specification of the meaning of decentralization. This caution suggests that decentralization must be defined broad enough to encompass all its four pillars.

From the different definitions discussed in this section, I propose the following definition of decentralization. It is the transfer of political and decision-making power, fiscal resources, administration and development responsibilities from the central government to subnational governments including civil society and the private sector groups to make them become more efficient and effective in the delivery of services to the citizenry.

### 2.3 Objectives of decentralization vary across countries

Every country determines its own political, fiscal and regulatory objectives for implementing decentralized reforms, because they face different challenges. Differences in ethnicity, race and culture of a people are justifiable arguments for difference in the pursuit of decentralization beyond economic and efficiency justifications (Brosio, 2009:4-5; Tanzi, 1995:297). While decentralization reforms are aimed at poverty reduction in many African countries, policy makers focus on autonomy of ethnic and cultural differences in Europe. In Latin America, the focus was on democratization (World Bank, 2013).

However, there are a few commonalities across objectives irrespective of the location where they are implemented. First is the main traditional objective of decentralization to restrain central government power (Bardhan, 2002:188; Smoke, 2003:8). Second is the desire to improve public participation in reforms, ensure equitable distribution of public goods, focus on efficiency in the provision of services and to create an accountable public sector (Shah, 2004:3). Third is to promote socio-economic development involving ordinary people in development, providing flexibility during planning and project implementation, and promoting good governance and national unity (Maro, 1990:673).

From the above objectives, I support the view that geographical location could influence the choice of objectives selected by individual countries. However as noted by Shah (2004:4-5), the rearrangements of the global economy are gradually changing the role and structure of governance towards more open governance structures and risk-taking in order to improve the effectiveness of subnational government policies and programs (refer to Table 2.1). The role of subnational governments is also changing to accommodate more open objectives which are participatory and results oriented. Decentralization could be a means through which subnational governments support technological advancement for the benefit of residents in their jurisdictions.

**Table 2.1: Changes in governance structure of local governments**

| Governance Structure in the 20 <sup>th</sup> Century | Governance Structure in the 21 <sup>st</sup> Century     |
|--|--|
| Move towards unitary states                          | Move towards federal and confederal states               |
| Centralization of states                             | Globalization and localization                           |
| Central government manages resources                 | Central governments lead reforms                         |
| Governance is bureaucratic                           | Governance is participatory                              |
| Focus on command and control is emphasized           | Demand for responsiveness and accountability to citizens |
| There are input controls                             | Results of decentralized reforms matters                 |
| Top-down accountability enforced                     | Demand for bottom-up accountability                      |
| Internally dependent                                 | Move towards competition                                 |
| Closed and slow governance                           | Open and quick governance                                |
| Intolerance of risk                                  | Move towards freedom to fail or succeed                  |

Source: Shah (2004:4).

Missing in Table 2.1 is the overarching focus on improving the standard of living of the citizenry and the impact of recent technological advancement. Many government policies are now available through “Google Search” and social media such as Facebook group pages. Shah (2004:2) notes that the information world has made nations too small for their challenges and yet there are available solutions that make subnational problems too small. Subnational governments could take advantage of new technology to access ideas, gain innovative solutions, and increase community receptiveness to decentralization reforms.

## 2.4 Forms of decentralization

The four types of decentralization are administrative, political, fiscal, and market decentralization. Each type of decentralization has its own distinctive features and may vary based on country specific contextual issues. The different forms of decentralization are discussed below.

### 2.4.1 Administrative decentralization

Administrative decentralization considers the institutional framework or structure of local government units and their capacity to undertake planning, implementation, financing and management responsibilities. It includes allocating to subnational governments responsibilities based on clear guidelines and control. The institutional bodies are the critical architecture upon which the entire decentralization process is built. Some of the institutional bodies are the tiers of government (central, regional, state and districts), legislation (constitution and local government Acts), jurisdictional autonomy and control, and governance structure. Administrative decentralization could be better explained in three forms, namely deconcentration, delegation and devolution (Tanzi, 1995:297; Smoke, 2003:10; Litvack and Seddon, 2002:9; Schneider, 2003:38).

Deconcentration is the first stage of administrative decentralization. It occurs when the central governments hold taxing authority but perform spending activities at the local level through departments of line ministries in the regions, provinces and district assemblies, town councils and zonal councils. The transfer of power is somewhat limited, monitored and controlled during this process. It enables integrated horizontal administrative systems and regional offices to be more effective in increasing their administrative autonomy (Work, 2002:6; World Bank, 1999:3; Joint United Nations Development Program and Government of Germany, 1999:7). Dafflon and Madiès (2013:17) note that the decision-making process in deconcentration may be vertical reinforcing existing hierarchy within government system.

Delegation is the second stage of administrative decentralization. Delegation takes place when subnational governments perform functions for which central governments are to be held accountable for their implementation. Decisions made by these subnational organizations are binding on the central government and thus it requires a set of rules or norms to govern the relationship between central and subnational governments. These rules define the expectations

of both parties. Delegation promotes good governance when it results in the transfer of powers and resources to subnational governments. When central governments engage in a private-public partnership which requires the private sector to build, manage and transfer ownership of a public infrastructure, it has delegated power, (Bird and Vaillancourt, 2008:5; Dafflon and Madiès, 2013:17). However, Bahl, Boex and Martinez-Vazquez (2001:3) note that delegation is limited in developing and transition countries when it comes to transferring taxing autonomy to local governments, partly because there are fewer taxing options.

Devolution is the third stage of administrative decentralization. In this stage, the central governments permit autonomous or quasi-autonomous units to exercise full authority over their work. They have the power to formulate, implement and finance their own policies without interference from the central government. Subnational governments are autonomously elected by the citizenry and thus, have their own decision-making powers. They could impose and adjust tax rates and bases within their jurisdictions, especially in federal states. A fully operational devolution occurs when subnational government programs are aligned with central government policies (Work, 2002:6; Schneider, 2003:38; Dafflon and Madiès, 2013:17).

Weaker subnational governments may need help in order to adapt their programs to national policies in a full devolution. In such cases, central government interference may have positive effects and be beneficial to the subnational governments. Subnational governments must allow central government departments to work with them in areas where their capacity is weak. For instance, central governments may use their machinery and systems to collect property taxes for subnational governments. In such a case, they could decide to enter into an agreement to share the proceeds. The Joint United Nations Development Programme and Government of Germany (1999:6) emphasizes the need for central governments to help build local institutions in a devolution because such support may be mutually beneficial to both parties.

### 2.4.1.1 Administrative decentralization and tiers of government

Administrative decentralization involves planning and implementation of responsibilities at different tiers of government. The planning responsibilities involves developing subnational plans out of national development strategies, while the implementation responsibility occurs when subnational governments execute their decentralized plans after completing the procurement processes. To ensure effective planning and implementation, subnational governments need the right institutional structures, accountability mechanisms and politics at different tiers of government including regions, districts, public authorities and government agencies (Rondinelli, 1999:2; Smoke, 2013:57-62; World Bank, 2013). Table 2.2 provides examples of countries with different levels of government, their administrative structure and subnational government policy. Countries such as Brazil and Indonesia have strong devolution while others such as Belarus, Cambodia and Egypt are highly centralized.

**Table 2.2: Decentralized government administration and policy**

| Country  | Sub-national levels of government | Structure of the level  | Government policy   |
|----------|-----------------------------------|---|---|
| Brazil   | 2                                 | States and Federal Districts, Municipalities  | Strong devolution   |
| Belarus  | 3                                 | Regions, Districts, Local Councils and Towns and Villages                                       | Centralized system  |
| Cambodia | 3                                 | Provinces and Municipal Administration, Commune Councils and Local Self -government Communities | Centralized system  |
| Egypt    | 5                                 | Governorates, Markaz and city administrations, Districts, Villages, the capital                 | Highly centralized  |
| Ghana    | 3                                 | Regions, Districts (Metropolitan, Municipal and District Assemblies) and Town/Area Councils     | Deconcentration but recent moves to recentralize in 2016. |
| India    | 3                                 | States, Union Territories and Local Bodies  | Federal system  |



|              |   |  |  |
|--------------|---|--|--|
| Indonesia    | 3 | Provinces - Special Regions and Capital City, Local government-Kota (cities) and Kabupaten (districts) and Desa-villages | Devolution   |
| Mexico       | 2 | States and Federal Districts and Municipalities  | Federal system   |
| Philippines  | 4 | Provinces, Cities, Municipalities, and Barangays/villages  | Devolution of sub-provinces.                                     |
| South Africa | 2 | Provinces, Municipalities: Metropolitan, District and Local.   | Distinct but interdependent spheres of government.               |
| Uganda       | 5 | Districts and the city of Kampala, Counties, Municipal Councils and City Divisions, Sub-counties, Parishes and Villages  | Devolved district councils but recentralization in recent years. |

Source: Derived from Smoke (2013: 61-62) and Dabla-Norris and Wade (2002:12).

Some countries with larger population sizes may need more tiers of decentralized units compared to smaller unitary countries to ease their service delivery. As shown in Table 2.2, Brazil and South Africa are big, but they have fewer levels of government than smaller countries like Ghana and Uganda. Dabla-Norris and Wade (2002:13) cite political considerations to be important for establishing administrative units. Smoke (2013:63) also indicates that size of the land area and population did not matter in determining the levels of government in Uganda, the Philippines, Indonesia and South Africa. This implies that the population size and coverage area of a country are not the only factors that determine the tiers of government in a country and the extent to which administrative decentralization are implemented.

#### *2.4.1.2 Administrative decentralization encompasses subnational fiscal autonomy*

Fiscal autonomy could be divided into expenditure autonomy and revenue autonomy. Expenditure autonomy is when local governments have the right to determine the type of expenditures they make in their budgets. Expenditure autonomy could be legislated in the Constitution or Local Government Law) to define how services are provided at the subnational level. However, expenditure autonomy of subnational governments gets constrained when central governments direct how local wages and salaries are determined, or which capital

expenditure should be accommodated in local budgets. Another factor that limits subnational expenditure autonomy is high dependence on central governments for budgetary resources (Bird and Wallich, 1993:7; Dillinger, 1991:12; Panizza, 1999:108; Rodden 2002:674; Litvack and Seddon, 2002:19). Subnational expenditure autonomy is one of the factors that need to be considered in increasing the efficiency in service delivery to a diverse population because subnational governments have the opportunity to match the needs of the population with their expenditures (Dillinger 1991:12).

When subnational governments are assigned functions responsibilities, they require autonomy to decide the sequencing, nature and types of projects desired based on their own preferences, but this may not always be the case. Even when there are Constitutional provisions for expenditure autonomy, there are always political influence to limit the funding of projects or the extent to which this autonomy is used by subnational governments (Rodden 2002:674). Thus, fiscal decentralization becomes more functional when governments transparently decide on how much expenditure autonomy, they can give to subnational governments through expenditure mandates, size of grants and sometimes subnational taxing powers (Bahl, 2008:8).

Expenditure autonomy cannot be discussed when subnational governments do not have resources to fund their functions mandated by law (Dickovick, 2005:193). Some of the characteristics of limited expenditure autonomy are strong control over subnational budgets, unfunded local functions, slow budget execution, central government control of local government staff, and strong dependence of regions and provinces on central government revenues (Dickovick, 2005:202). Fiscal decentralization may not necessarily improve expenditure autonomy when funding support from central government administration are tied because subnational governments are unable to raise funds. To a large extent, expenditure autonomy depends on the ability of subnational governments to raise sufficient local revenues to fund their own activities (Mogues and Benin, 2012:1054).

Expenditure autonomy requires subnational governments to be accountable for all the decisions they make in their budgets. Subnational governments could be held accountable when they are match their own source revenues with their expenditure needs (Shah, 2004:17-18). This rule is likely to constrain subnational governments from getting to excessive debt because of the persistence of fiscal deficits among some of them. Where there are sanctions associated with the accountability framework, subnational governments are likely to stay within provisions of the law.

Many authors emphasize the importance of granting revenue and expenditure autonomy to subnational governments to enable them to introduce and abolish taxes, set tax rates, define the tax bases, grant tax relief to economic agents, and budget composition (McClure and Martinez-Vazquez, 2000:14; Bahl, 2008:8-15; Yilmaz, Aslam and Gurkan, 2010:1). Subnational governments without administrative autonomy over their fiscal instruments and funding are sometimes ineffective in providing public services. Revenue autonomy grants subnational governments secured rights, privileges and discretionary power over the design of tax structures and rates which is a prerequisite for subnational fiscal sovereignty or autonomy (Ribot, 2002:6; Blöchliger and Nettley, 2011:4; Dafflon and Madiès, 2013:35). Fiscal autonomy enables subnational governments to match their revenues with budgeted expenditure.

There could be about six levels of subnational revenue autonomy ranging from high autonomy (Range 6, where subnational governments have full control to determine tax bases and to set tax rates) to low autonomy (Range 1, where the subnational governments do not control the scope of tax bases or the setting of tax rates). Within the range, some subnational governments may have control over either the tax rate or the tax base, but not both at the same time (Ebel, 2003:7-8). Subnational governments with higher revenue autonomy tend to have control over many independent sources of revenue such as property taxes, fees and licenses (McLure and Martinez-

Vazquez, 2000:2; Bird and Slack, 2006:205-206). It also determines their ability to make autonomous expenditure decisions that influence the quality of service delivery.

Subnational fiscal autonomy could promote the enforcement of revenue compliance rules at the local level if there are no political interferences. Subnational governments have the liberty to use the revenues they retain to build the required capacity needed to enforce local and national revenue compliance rules within their jurisdictions. Their fiscal autonomy gets eroded when subnational governments depend on conditional transfers, earmarked funds and performance-related funds for their budgets (Ebel, 2003:19; Mogue and Benin, 2012:1065; Gilbert, Hugounenq and Vaillancourt, 2013:132; Smoke, 2015:104).

There are, however, inconclusive views about whether it is desirable for subnational governments to have full fiscal autonomy. Ankamah (2012:33-38) notes that granting more power to subnational governments leads to better use of funds and more efficient services. On the other hand, in the 1990s, many subnational governments received control over their tax bases, but they were unable to control their expenditures for political, equity and efficiency reasons (Stein, 1998:4; Dillinger and Webb, 1999:8-12). There are stronger arguments for subnational expenditure autonomy rather than revenue autonomy even though it could lead to complex political relationships with central governments if not backed by law. Intergovernmental politics and political interferences in local decision making are examples of complex political relationships that could significantly influence the granting of fiscal autonomy (Oppong, 2014:20; Smoke, 2015:102).

From the review, I propose a definition of subnational expenditure autonomy. Subnational expenditure autonomy occurs when there are no laws, norms or guidelines from central governments that tie, limit and control how subnational governments determine their expenditure priorities in their budgets, but rather, they are allowed to freely align their priorities

with a defined national strategy to ensure efficient service delivery and are held accountable for their decisions.

#### *2.4.1.3 Measurement of fiscal autonomy*

Different qualitative and quantitative indicators are used to measure the level of revenue and expenditure autonomy. Expenditure autonomy is measured by the “percentage of own expenditure under the effective control of subnational governments” in any particular year (Shah, 2004:17). Four other variables used to measure fiscal autonomy of subnational entities in Latin America are the degree of expenditure decentralization, the vertical fiscal balance, discretion in the transfer system, and borrowing autonomy. In West Africa, the legal authority to prepare annual subnational budgets is used as a measure of expenditure autonomy in Ghana. Others also use the provision of independent subnational legislation as measure of fiscal autonomy (Gilbert, Hugounenq and Vaillancourt, 2013:128-131; McLure and Martinez-Vazquez, 2000:16). Quantitative indicators of revenue autonomy are the percentage of local revenue from taxes, proportion of own revenues in total resources of the local government, and percentage of total grants and revenues not accounted for by transfers (Stein, 1998:10-20; Schneider, 2003:38-39; Dafflon and Madiès, 2013:29-35).

#### *2.4.2 Political decentralization*

The World Bank (2013) defines political decentralization to be the transfers of “policy and legislative powers from central governments to autonomous, lower level assemblies, and local councils that have been democratically elected by their constituencies”. The autonomous lower level assemblies include metropolitans, municipals, districts, zonal bodies and local councils. The main distinguishing feature of political decentralization emphasized in the literature is subnational elections through which subnational governments gain power from the people (Schneider, 2003:40; Martinez-Vazquez, Lago-Peñas and Sacchi, 2015:16).

### 2.4.3 Economic decentralization and privatization

Economic decentralization is a process whereby the central government deregulates certain functions in order to enable the private sector to participate in local service delivery. The process allows central governments to share their core responsibilities with the private sector and other non-governmental organizations. In other words, the government cedes power and control through the transfer of ownership of resources to the private sector. Municipalities in Bolivia, Guatemala and Zimbabwe work with the private sector to manage, regulate and protect the forest (Yuliani, 2004:2; Litvack and Seddon, 2002:4; Ribot, 2002:4).

Privatization does not suggest the loss of authority to subnational governments. The transfer of control may be partial, in which case, a private-public partnership contract may be needed to guide the use of private sector expertise to provide public goods. Shirley (1992:24) notes that such a partnership will improve both static and dynamic efficiency of service delivery. Static efficiency refers to operating on the production frontier with least cost, whereas dynamic efficiency involves undertaking innovation, new technology and capital to push the production frontier. It is these efficiency gains that influence governments to source private sector skills in order to influence their economic growth, revenue mobilization and enforcement of social laws.

### 2.4.4 Fiscal decentralization

Fiscal decentralization has been extensively discussed in the academic literature as an area that has contributed to increased effectiveness of public sector management and local governance (Oates, 1999:1120; Bird and Vaillancourt, 2008:1). It is the transfer of budgetary authority and enforcement of fiduciary controls from central to subnational governments to enforce their jurisdictional control, enhance the provision of public goods and services, and promote local resource mobilization. The budgetary authority is administrative and covers both the revenue mobilization role using taxing power and decisions on budgetary allocations (Bahl, 2008:4; Kee, 2003:3; Yuliani, 2004:2; World Bank, 2013).

Fiscal decentralization—the ceding of fiscal authority from central governments to subnational governments—differs from administrative decentralization—the level of autonomy that the central governments give to the subnational governments relative to their own control. However, when subnational governments improve the collection of their own source revenue and retain them, fiscal decentralization could result in promoting administrative autonomy at that subnational level. Central governments provide the rules for the roles of subnational governments in revenue generation and determine additional support needed in the form of intergovernmental transfers or borrowing. These rules could guide budget preparation and execution, revenue mobilization and borrowing, budget monitoring and evaluation (Schneider, 2003:33; Yilmaz, Aslam and Gurkan, 2010:1; Bahl, 1999a:1-22).

There are four pillars of fiscal decentralization in the literature. These are expenditure assignment, revenue assignment, intergovernmental transfers, and subnational borrowing. Central to the four pillars is the rationale of fiscal decentralization, in other words to provide subnational governments with sufficient funds to exercise their responsibilities and perform their functions (Litvack and Seddon, 2002:10; UNDP, 2005:3; Wildasin, 1995:7; Bahl, 2008:3).

#### *2.3.4.1 Expenditure Assignment*

The starting point of fiscal decentralization is a clearly determined expenditure assignment of subnational governments within their jurisdictions to enable central governments to decide on the adequacy of revenue assignments and intergovernmental transfers. In cases, where central governments have reversed the process, it resulted in weak decentralized systems, institutional instability and increased the fiscal burdens of the central governments. The expenditure assignment is usually documented local governance laws, state laws, and national strategies (McLure and Martinez-Vazquez, 2000:1-8; Martinez-Vazquez, McLure and Vaillancourt, 2006:18). The immediate effect of the expenditure assignments is that subnational governments

can prepare well-focused budgets based on local priorities. It provides clarity on the government institution required to deliver local services.

Many factors influence the determination of expenditure assignments of subnational governments. Some of the factors are political, geographic, historical, cost of services and availability of skills for local governments to respond to the demand of citizens. The efficiency rule for selecting the allocation of functions is the European Union subsidiary principle that requires public responsibilities to be assigned to the lowest level of government that is able to perform most efficiently. Where subnational governments have comparative advantage, they are likely to efficiently distribute scarce resources to strategic local priorities with the view of achieving longer-term outcomes. The subnational budget composition usually reflects the priorities of the government. However, considerable judgement is required in applying this principle given that many other factors such as capacity to implement reforms, culture of the people and historical occurrences may influence the choice of the right level of government to perform certain functions (UNDP, 2005: 3; Bird and Vaillancourt, 2006:2; Bahl, 2008: 10).

The extent of expenditure assignment is measured using shares of subnational expenditure to total government expenditure. Other measures are the share of total subnational expenditure in total provincial government expenditure; and share of current subnational expenditure in current expenditure of the central government (Neyapti, 2003:10; Bahl and Martinez-Vazquez, 2007:20). The expenditure share was highest in Organization for Economic Cooperation and Development countries [OECD (2017)] at 32.68 percent and lowest in developing countries (12.97 percent) during the same period.

Expenditure assignment has been limited in many transition countries, mainly because expenditure assignment requires close correspondence between the responsibility and the decision-making authority, norms and regulations on the quality and scope of service provision



and spending mandates. Examples of transition countries with limited expenditure autonomy are Belarus (subnational governments have no autonomy), Georgia (no formal assignment of expenditure responsibilities between the different levels of government) and Lithuania (55 percent of municipal revenues are earmarked through transfers to finance functions delegated by the state), (Dabla-Norris and Wade, 2002:23).

#### *2.3.4.2 Revenue assignment*

Revenue assignment refers to the allocation of revenue-raising responsibilities to subnational governments to enable them to finance expenditure responsibilities assigned to them by central governments. This assignment directly deprived central governments of tax instruments they could use to raise revenue for macroeconomic management, defense and provision of public goods. If the citizenry must fully pay for the public services they receive from governments, then the principle of subsidiarity will apply to this pillar of fiscal decentralization. The level of government that is most efficient in collecting taxes must have a clear responsibility and receive the taxing power. How much of the collected revenue is retained by the collecting institution depends on the revenue sharing arrangements in place (Ter-Minassian, 1997:8; Fjeldstad and Heggstad, 2012:6-7; Bahl, 2008:17-18).

In some instances, central governments may simply be more efficient at collecting certain taxes than all levels of subnational governments (Bird and Vaillancourt, 2008:11). Local governments may be constrained by their inability to implement the taxing powers. In such instances, central governments may have to exercise judgement on the effectiveness of the local governments in collecting the taxes because the revenue assignment may reduce their dependence on central governments. For some cases, subnational tax capacity building may be needed to strengthen the skills of tax administrators in the use of local tax instruments to increase tax compliance and revenue mobilization (Bird and Wallich, 1993:3). In other cases, central governments may

identify destructive competition between subnational governments lowering tax rates and revenues that need to be collected using legislation (Prud'homme, 1999:204).

Subnational governments may also be efficient at collecting certain types of taxes and need to have control over their collections (Fjeldstad and Heggstad, 2012:7). Examples are benefit taxes on mobile economic units and non-benefit taxes levied on tax bases that are somehow immobile across economic units (subnational governments). Benefit taxes rely on the principle that beneficiaries of public goods should carry the burden of the related taxes (Bird, 2010a:3-4). In this sense, subnational governments would be in a better position to implement benefit taxes such as road and bridge tolls that are immobile. Where non-users are expected to pay the taxes, the central government is deemed to be in a better position to impose such taxes for redistributive purposes.

In situations where both central governments and subnational governments are equally efficient at collecting certain taxes, vertical revenue sharing arrangements may be deployed to avoid conflicts about which level of government should have the taxing power. If the conflict is between two or more subnational governments, then horizontal revenue sharing arrangements may be necessary to ensure the revenues are fairly distributed. Many forms of revenue or tax sharing arrangements may be agreed on, such as using tax by tax basis, pre-determined constitutional arrangements, fixed revenue sharing arrangements and formula-based arrangements. In all conflict situations, some judgement is required to ensure amicable distribution of revenues to enable subnational governments to perform their functions and achieve desired fiscal outcomes (Ter-Minassian, 1997:11-12; Blöchliger and King, 2006:15).

The taxing power of central and subnational governments must be distinguished and legislated to make it enforceable. Inherently, central governments are likely to be more efficient in collecting some taxes than subnational governments (Litvack and Seddon, 2002:23; Bird,

2008:14). Central governments play exclusive roles as noted earlier such as economic management, provision of national security, determination and implementation of foreign policy and the provision of public goods such as infrastructure. It is prudent for the national laws to ring-fence some tax instruments to them for these responsibilities. Central governments may choose to apply different taxes on overlapping bases (such as the use of income taxes, payroll taxes and value added taxes) to raise the required revenues and in many cases borrow additional resources to fill their financing gap. Regions and districts also need tax instruments to be legislated in the national constitution or local government Acts to enable them to perform their roles. More so, the potential tax bases of subnational governments sometimes vary widely across jurisdictions. For instance, in Ghana and Senegal, the revenue assignments are legislated in the local government Acts but in Spain it is part of the constitution (Gil-Serrate, Lopez-Laborda and Mur, 2011:2632; Monkam, 2017:351).

### *2.3.6 Intergovernmental transfers*

Intergovernmental transfers are instruments used by central governments in order to fund subnational governments and to support their budgets. The essence of intergovernmental transfers varies as they include filling the gap between expenditure assignment and revenue raising powers, compensating for external benefits and costs, equalizing revenue across jurisdictions, funding critical infrastructure, and serving as a catalyst for subnational to improve the revenue collection or service delivery (Bahl, Linn and Wetzel, 2013:17; Bahl, Boex and Martinez-Vazquez, 2001:6-7). Subnational governments are usually not expected to repay the transfers which they receive from central governments, partly because their assignments are decided by central governments. Good intergovernmental transfer systems must satisfy sound economic principles. Some of these principles are providing adequate revenue; preserving budget autonomy; enhancing equity and fairness; being stable, simple and transparent; creating incentives and not being liable to large changes (Mikesell, 2007:45; Bahl, Linn and Wetzel, 2013:17). At the minimum, all

intergovernmental transfers must be reliable, transparent and stable (Mikesell, 2007:45). Reliability promotes efficiency in the execution of subnational budgets and service delivery. Transparency of intergovernmental transfers promotes accountability and good governance. Stability of the intergovernmental transfers relates to the timelines with which central governments release the funds. Thus, stability of intergovernmental transfers promotes predictable during budget execution.

Intergovernmental transfers are one of the most dominant revenue sources of subnational governments in developing countries and are influenced by many factors (Shah, 2013:214; Schroeder, 2007:63). In transition countries, transfers are made within the context of shrinking roles of central governments, to promote political decentralization, to reform national tax systems, to resolve the impact of macroeconomic instability at the level of central government, and to increase expenditure assignment to subnational governments (Bird and Wallich, 1993:6-7; Fölscher, 2007:82). Usually, central governments are the main source of intergovernmental transfers, but in some cases development partners and other development agencies tend to support the government by structuring intergovernmental transfer systems aimed at supplementing central government funds and addressing their interest in specific sectors. Irrespective of the source, central governments have the responsibility to minimize the potential distortionary effects of intergovernmental transfers, especially the cost of providing public goods and services. This is because, intergovernmental transfers reduce the true tax price of subnational public goods and services, reduce the willingness of subnational governments to increase subnational tax rates (because they get to spend funds they did not generate), and constrain funds needed to meet other central government obligations (McLure Jr., 1994:162-4).

Subnational governments receive two types of intergovernmental transfers known as general purpose grants (unconditional transfers) and specific grants (conditional transfers). General purpose grants do not have any restrictions associated with the use of the funds transferred to local

governments (Ter-Minassian, 1997:13; Shah, 2013:216). Subnational governments could use the funds for projects that will help them catch up with other states, regions or districts. They may also use the funds to finance projects that central governments are promoting across all subnational entities. General purpose grants are like general budget support received by central governments from development partners. Specific purpose grants have conditions associated with the funds that subnational governments receive (Shah, 2013:216). The conditions may be performance-based, a co-financing arrangement, sector specific, theme specific or linked to a defined program (Mikesell, 2007:42). Where subnational governments are expected to raise matching or counterpart funds, the timely collection of the expected own source revenues facilitates their access to conditional grants.

Conditional matching transfers are usually used to compensate for benefit spillovers. It may be warranted when subnational governments serve as policy delivery agents for central governments or during a typical cost sharing arrangement to finance expenditures that are prioritized by both levels of government (Bird, 2010a:13). In Bangladesh, conditional transfers finance essential services while in Sri-Lanka they are used for the payment of local salaries (Smoke, 2016:8). In India, Belgium and Spain the redistributive impact of transfers kept contending political parties together and allowed states to borrow locally in order to provide some essential services. In some cases, conditional matching funds may not be good practice for two reasons. First, it might require subnational governments to inefficiently allocate their revenues to priorities of central governments or the source agency rather than their own needs (unless such needs match). Second, resource constrained subnational governments who may be struggling to raise enough revenue to finance basic recurrent spending may be disadvantaged (Bardhan, 2002:189; Ter-Minassian, 1997:14).

Conditional non-matching transfers are better used when central governments want to promote the provision of certain public goods and services. They are usually accompanied by some

restrictions on the use of the funds. Subnational governments may be required to meet some basic criteria to benefit from these types of transfers. Intergovernmental transfers may also be discretionary, negotiated and unconditional (Dabla-Norris and Wade, 2002:22). In the case of unconditional transfers, subnational governments are given some autonomy to use the funds to finance projects of their choice within legal limits (Smoke, 2012: 47).

Two factors that influence the flow of transfers to subnational governments are the total allocation of transfers at the center and the mechanism used to distribute the funds (Schroeder, 2007:63; Bahl, Boex and Martinez-Vazquez, 2001:1). The four commonly used methods for allocating both conditional and unconditional transfers are through tax sharing, formula-based transfers, cost sharing transfers, and ad hoc transfers (grants or subsidies). Central governments use tax sharing methods when obliged by law to distribute a portion of the tax revenues to subnational governments. In using formula-based methods of transfer, there are usually defined criteria for distributing the revenue. Cost sharing transfers are used when central governments want to reimburse subnational governments for expenditure incurred. Finally, ad hoc transfers are based on the discretion of central governments. Countries that implement discretionary unconditional transfers are the Slovak Republic, Poland, Hungary and the three Baltic Republics. Bulgaria, Croatia, Romania, Georgia, Russia, Kazakhstan and the Ukraine use a transparent formula-based system (Dabla-Norris and Wade, 2002:22).

Subnational fiscal imbalances and disparities tend to hamper local service delivery, in a manner that makes it imperative for central governments to intervene with intergovernmental transfers. These disparities are described as either vertical fiscal disparities where subnational governments are unable to collect the taxes assigned them, or horizontal fiscal disparities where tax capacities vary across subnational jurisdictions, making it difficult for revenue targets to be met relative to the expenditure assignments. The disparities occur when subnational expenditures are higher than their revenues, in which case intergovernmental transfers will be

needed in order to restore the imbalance. Horizontal fiscal balance enables subnational governments to equalize in terms of their fiscal disparities (McLure and Martinez-Vazquez, 2000:32-33; Fölscher, 2007:85; Mikesell, 2007:42). Bahl, Linn and Wetzel (2013:17) state that some central cities and metropolitan areas have been able to wean themselves off intergovernmental transfers, such as Buenos Aires in Argentina and some metropolitan municipalities in South Africa.

### *2.3.7 Subnational Borrowing*

One of the residual elements of subnational budgeting is debt that accrues when subnational governments finance their fiscal deficits with external funds. Some of the sources of external funds are banks, private institutional funds and subnational debt markets. Subnational fiscal deficits become challenging when central governments limit the borrowing rights of local governments. Where possible, subnational governments could use debt to finance their infrastructure projects within some fiscal rules in order to control the volume of debt. The fiscal rules must determine the criteria under which subnational governments could borrow institutional funds to finance their budgets and how much (Mikesell, 2007:45; Dillinger and Webb, 1999:16). In countries where central governments permit subnational borrowing without limits, there are reported cases of irresponsible behaviors that adversely impact on macroeconomic stability and thus necessitates close regulation of all forms of subnational borrowing regimes (McLure and Martinez-Vazquez, 2000:4; Rodden, 2002:670; Kharas and Linn, 2013:406). In Poland, the Public Finance Act of 1998 was amended in 2014 to allow local governments to borrow up to 60 percent of their total revenue and to trim their capital investments to debt limits to correct such irresponsible behaviors.

Borrowing from the debt market requires subnational governments to demonstrate the capacity to repay the debt. Institutional fund managers tend to profile the risk of lending to subnational governments and use same to determine the interest rates which they pay. High risk subnational

governments are likely to pay higher interest rates than those with low risk profiles (unless their debts are guaranteed by the central government). Often newly established subnational governments are likely to have higher risk profiles, unless they have guaranteed revenue sources which are considered viable by the debt market (Bird and Vaillancourt, 2008:6). There are many issues with broader national implications regarding the use of public guarantees at the local level. Public guarantees tend to reduce risks associated with the debt and may persuade private investors to finance subnational projects without rigorously following standard loan procedures. In addition, public guarantees could increase contingent liabilities of the central governments which may adversely affect the debt sustainability of the country. Shortfalls in local revenues could also result in debt defaults and thus shift local obligations to central governments given that the repayment risks may not be predictable. Finally, subnational governments' fiscal mistakes could result in increased local and national debt in jurisdictions with no debt limits and ceilings on guarantees.

It is prudent to finance long-term investment with long-term credit facilities which are concessional, and with low interest costs. The benefits of accessing long term credit from financial markets include easier access to infrastructure finance, provision of more equitable and efficient long-term assets, exposure of subnational governments to market discipline and facilitation of financial market deepening. Subnational bonds are means of obtaining long term financing. These bonds offer many advantages over traditional borrowing from deposit-taking banks. Subnational bonds do not require collateral, rather the governments need to demonstrate their willingness and capacity to pay the debt. Also, subnational bonds allow flexible disbursement and repayment dates, are more cost effective, provide financing diversification, and overall large loans for capital investments (UNDP, 2005:6; Liu 2008:173). Where subnational governments access long term funds, they must match their repayments with the



pattern of the benefits by capturing the returns on their long-term expenditure (Bahl, Linn and Wetzal, 2013:21).

Smoke (2013:70) classifies countries according to their borrowings. The first group are those with little or almost no borrowing (such as Ghana, Egypt and Uganda). The second group are moderate borrowers such as Indonesia. The third group are extensive borrowers (such as Brazil, India and Mexico). These different country groupings and their borrowing frameworks are presented in Table 2.3. High borrowing autonomy is associated with high sovereignty of subnational governments and low expectation of bailout from central governments. Strong subnational governments are more likely to have the capacity to borrow from local debt markets than weaker states (Smoke, 2013:73).

**Table 2.3: Debt framework among selected subnational governments**

| Country      | Type of frameworks supporting borrowing  |
|--------------|--|
| Brazil       | Constitution, regulatory framework for problematic state borrowing.  |
| Cambodia     | Law prohibits subnational borrowing.   |
| Egypt        | Fiscal rule: Borrowing from only government sources and up to 20% of tax and non-tax revenues.                     |
| Ghana        | Local governance law. Non-existent debt market.  |
| India        | Borrowing allowed with state guarantee. Urban governments dominate local borrowing.                                |
| Indonesia    | Subnational laws allow borrowing from different sources including private, public and international organizations. |
| Mexico       | Subnational borrowing allowed by law but regulated. State and municipal borrowing encouraged.                      |
| Philippines  | Subnational borrowing allowed by law but limited in practice.  |
| South Africa | Constitution and other legislation permit subnational borrowing.   |
| Uganda       | Constitution with central government approval, though borrowing is non-existent.                                   |

Source: Smoke (2013) - Metropolitan cities in the national fiscal and institutional structure.

The literature on subnational borrowing should always be viewed in reference to revenue and expenditure assignments, and intergovernmental transfers because subnational borrowing is a residual effect of subnational fiscal relations. One of the main issues suggested in the literature is that subnational borrowing must be regulated and monitored. However, the use of blanket ceilings on subnational borrowing is not enough to prevent the adverse effect on the macroeconomic stability. For instance, Brazil's debt crisis happened even though the country had limits on subnational debt. Regional politics overrode adherence to rules in Brazil (Burki, Perry and Dillinger, 1999:31). Based on the complexity in the design and implementation of subnational borrowing policies and the challenges discussed above, I propose three measures which could be implemented concurrently. These are: central governments to strengthen the revenue assignment of subnational governments, impose borrowing limits on subnational government and impose strict implementable sanctions to political heads that do not follow the rules. Thereafter, subnational governments could be allowed to borrow by floating municipal bonds using their cashflows rather than use central government guarantees. Finally, subnational government should be made to publish their borrowings and debt stock semi-annually. This package will support macroeconomic stability and transparency measures at the subnational level. Where necessary, central governments may have to build the tax capacity of subnational governments as part of the package.

## 2.5 Decentralization and government fragmentation

Government services may be delivered at the national, federal, state, regional, provincial and community level based on the decentralized framework adopted in a country. The national government decides the actors to empower with the responsibility to formulate policies, implement programs and monitor results. Different approaches are deployed by governments to reorganize the public sector operations to improve the efficiency of service delivery, and to address differences in income distribution across geographical areas. Three approaches

governments utilize are jurisdictional fragmentation, functional fragmentation, and metropolitan government (Bahl, 2013:88). The approaches respectively emphasize the independence of decisions of jurisdictions, technical efficiency of responsibilities, and need to regulate service delivery as well as internalize externalities. Fragmentation approaches are applied to implement decentralization reforms in some jurisdictions.

The concept of fragmentation relates to splitting jurisdictions and functions or isolating decision-making processes at different levels of government in a manner which aims to facilitate effective and efficient service delivery and make governments more responsive to the needs of their citizens, especially the rural poor (Bardhan, 2002:185; Wildasin, 1995:5; Gómez-Reino and Martinez-Vazquez, 2012:20). In other words, fragmentation may be either classified as being jurisdictional when jurisdictions are split or functional when lower tiers of government or institutions are given responsibilities, though there may be risks of their failure (Wildasin, 1995:5; Bahl, 2013:88-90). In broad terms, governments could decide to empower different groups across different levels of government to assist with the formulation and implementation of policy decisions.

Functional fragmentation varies widely, and its advantage could be that agencies give new responsibilities may bring on board technical and specialized expertise to improve service delivery. Another way to look at functional fragmentation is the aggregation of many functions under one agency across different geographical areas, in order to improve the financing or effectiveness of the functions. The institutional arrangements for functional fragmentation could vary across countries and jurisdictions (Bahl, 2013:90). Its main disadvantage is the inability of voters and local governments to exercise direct control over the agency. Transportation service (such as bus transit services) is a function that could be placed in the control of an agency outside the government. Also, fragmentation of functions could lead to inefficiencies in the provision of certain specialized public services that require large scale production and heavy

infrastructural setup to be more efficient and cost effective such as water supply, and electricity production (Wildasin, 1995:5; McLure and Martinez-Vazquez, 2000:9-10). However, technological advancement could make it possible for some jurisdictions to minimize some of these inefficiencies (Bardhan, 2002:185).

In jurisdictional fragmentation, subnational governments of newly fragmented geographic areas gain control over their budgets, make fiscal decisions, and provide public services. The main advantage of jurisdictional fragmentation is the opportunity for new subnational governments to send services closer to the people and also to provide the opportunity for localities to contribute to development. One disadvantage of excessive jurisdictional fragmentation is the inability of local governments to enjoy economies of scale, reduce fiscal disparities and reduced local markets (Bahl, 2013:88-90). When intergovernmental transfers are not dependent on the population size of subnational governments, the resources create perverse incentives for increased demand for jurisdictional fragmentation (Fjeldstad and Heggstad, 2012:10).

Arguments in favor of fragmentation note that large government size is incompatible with enhancing local democracy and service delivery, and hence the need to fragment some tiers of government to make them more sensitive to local needs (Schoburgh, 2010:105; Slack, 2006:109). At the same time, it is an opportunity for central governments to reduce their support to subnational budgets because they are expected to have more budgetary control (Wildasin, 1995:5). However, the reverse may be true because, fragmented subnational governments may expect more central government transfers needed to provide quality public goods and services that influence consumers' choice of locations to reside. These public goods and services may include clean beaches, parks, electricity, roads, clinics and security services (Bird and Wallich, 1993:11; Tiebout 1956:418-422). Fragmentation of geographical space of subnational governments affects the balance between the number of residents and the bundle of services that can be provided at least cost as described in Tiebout's model (Tiebout, 1956:419-423).

Consumers vote with their feet when revealing their preferences for a given set of taxes and public services available.

The decision to fragment tiers of government is usually taken and managed by central governments. However, as a country's laws may permit, different approval processes may be involved, including obtaining parliamentary approval and providing the necessary justifications. It may involve stakeholders such as local governments, chiefs, legislative bodies, government institutions and citizens. Fragmentation could take place at the regional or state level, district level and other lower levels of government.

Fragmentation may be considered as a tool to address some of the pertinent issues in subnational jurisdictions, depending on the number of tiers. Some of these issues are promoting economic development, dealing with equity concerns, dealing with externalities, addressing environmental problems, responding to local preferences, assessing national frameworks, promoting local accountability, resolving problems related to complicated policy reforms and putting in place appropriate fiscal structure (Slack, 2006:116; and Smoke, 2013:57). When higher-level governments are faced with daunting challenges related to the above listed issues, they may use lower tiers of government in order to debate and formulate solutions that are acceptable on political grounds as well as being socially acceptable.

Fragmentation of subnational entities could aim to redistribute resources more effectively and equitably across subnational governments. Central governments may split regions with the aim of increasing the quality of services provided to underserved populations and improving efficiency gains associated with sending government administration closer to the people. The fact that central governments fragment subnational governments indicates that there are rich jurisdictions with large tax bases but provide services that are not fully utilized, while poor jurisdictions have small tax bases and not able to provide some basic services (Slack, 2006:110).

On equity grounds, fragmentation of subnational entities could benefit newly created jurisdictions through improvements in the quality and quantity of services provided, either through additional government transfers or own source revenues (Grossman, Pierskalla and Dean, 2017:823; Slack, 2006: 116).

Subnational fragmentation has been linked to competition, job creation, labor productivity and regional growth. Where there is competition among subnational governments, better services tend to be provided, new jobs get created and labor productivity increases (Grossman, Pierskalla and Dean, 2017:824; Green, 2010:83-93; Niskanen, 1975:637). Regional fragmentation is expected to foster the provision of public goods, which can boost economic activities and lead to stronger economic growth. Some empirical evidence show that fragmented regions perform better economically than those that have not been fragmented (Grassmueck and Shields, 2010: 641; Martinez-Vazquez and Gómez-Reino, 2012:12-14; Sjoquist, 1982:79). Among, metropolitan regions, fragmentation was found to result in slower expansion in the subnational expenditures and subsequently service delivery (Schneider, 1986:255). Sun, Zhang, Cai and Wang (2014:1) found that the relationship between fragmentation and labor productivity is not linear. That is, the initial increase in the number of jurisdictions increases with labor productivity, but further fragmentation leads to declines.

Excessive fragmentation hampers service delivery, especially when subnational entities become too small and their administrative overheads begins to limit their efficiency (World Bank, 2015: 32). Jurisdictional fragmentation could be expensive and reduce the actual resources available for executing programs assigned to subnational governments. It could reduce the resources available to finance capital expenditures and other services (Campbell, 2004:324). This is because newly created subnational governments require offices and other logistics for their work that increases the overhead cost of these entities. The cost of building or renting offices are sometimes deducted from intergovernmental transfers assigned to these jurisdictions, limiting

the resources available to finance other critical expenditures. Also, the cost incurred to provide new jurisdictions as a result of fragmentation are sometimes much higher than savings made in keeping them larger.

Empirical evidence shows that efficiency of fragmented subnational entities to deliver services fall if the population size of inhabitants is below 5,000 (World Bank, 2015: 32). One way to avoid the cost of fragmentation on the budget is to keep subnational bodies large enough and to avoid excessive fragmentation (Hendrick, Jimenez and Lal, 2011:470; Myerson, 2006:12). For subnational governments to enjoy economies of scale and to minimize the high cost of jurisdictional fragmentation, central governments must ascertain (using both qualitative and quantitative analyses) if the long-term benefits outweigh the short-term cost of fragmentation.

Quantitative models and analyses of jurisdictional fragmentation must always consider the population and land size of jurisdictions if data is available (Vestal, 1971:155; Martinez-Vazquez and Gómez-Reino, 2012:44). As large tiers of government are fragmented, the level of expenditure required to produce services may vary in per capita terms (Sjoquist, 1982:79). The productivity of population proxied by GDP per worker is deployed for analysis of jurisdictional fragmentation (Sun et al., 2014:8). Also, the size of government is used to explain country fixed effects and the trade-offs between large government size and fragmentation (Grossman, Pierskalla and Dean, 2017:827).

Different models have been applied in the literature in order to examine the impact of fragmentation on budget and service delivery in subnational entities. Martinez-Vazquez and Gómez-Reino (2012:36) presents a model that uses the number of subnational levels of governments as the dependent variable and identifies the determinants of fragmentation as population, area (in square kilometers), Gini (income/expenditure inequality), GDP per capita, Ethno-linguistic Fractionalization Herfindahl Index, a dummy variable with value 1 for

Consumption inequality data, and Age Herfindahl Country Value. Grassmueck and Shields (2010: 652) presented three Ordinary Least Squares regressions results using three dependent variables, namely log of employment growth rate, log of population growth rate and log of per capita income. Their models included regional and country dummies and exogenous variables such as population, horizontal and vertical fragmentation, and year-specific employment.

## 2.6 Fiscal decentralization and regional economic growth

As noted in Chapter 1, a regional approach will be deployed to answer the second broad question of this thesis, namely: “To what extent do revenue and expenditure assignments as well as intergovernmental transfers impact on regional gross domestic product in Ghana?” Below is a review of literature to guide the analyses in Chapter 5.

Various economic growth theories have been developed after the work of Adam Smith, Thomas Malthus and David Ricardo. The 1930s saw the renaissance of many theories and models such as the Harrod-Domar model, classical and neoclassical theories<sup>4</sup>, short run static theories of Keynes and the supply side models.<sup>5</sup> These growth theories discussed concepts and assumptions relating to the relationship between accumulation of capital and output, optimal economic growth, investment theories, capital productivity, impact of labor force increases on economic growth, balanced growth<sup>6</sup> theories, and steady growth potentialities. Solow’s model (1956) comes out as one of the referenced works in literature to link economic growth to fiscal decentralization, following his work that introduced substitution between capital and labor, and labor augmenting changes in technology (Bond, Hoeffler and Temple, 2001:15). Solow’s original work of 1956 criticized the Harrod-Domar model for using short-term tools to manage

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<sup>4</sup> Popular among the classicals’ are Karl Marx and Joseph Schumpeter. Neoclassicals such as Robert M. Solow believe capital and labor can be combined at any proportion during production (that is, substitution between capital and labor). At full employment, capital could be accumulated based on the economy’s savings and robustness.

<sup>5</sup> The supply side models introduce taxes as a factor that affects economic behavior during production.

<sup>6</sup> A situation where output of a commodity changes by a constant rate per unit of time (Solow and Samuelson, 1953).



long-run problems (Solow, 1956:66). It focuses on long-run growth and changes to the assumption that affect capital and output ratio, especially when combined with labor in a fixed ratio during production. It notes that depending on the initial levels of capital and labor, output could increase with changes to capital when labor is fully utilized. Solow's model links a community's real income to stochastic changes in rate of capital accumulation and population growth even at full employment (Solow, 1956; Solow and Samuelson, 1953; Cellini, 1997; Prescott, 1988).

Income per capita is identified as an important variable that explains growth in the literature. When the production function is defined by an augmented Solow's model,<sup>7</sup> the accumulation of capital, population growth and stock of physical capital have a larger impact on income per capita in the original Solow's model. Also, the income elasticity of the stock of physical capital is insignificantly different from the share of capital in income, meaning capital could approximate its social return (Mankiw, Romer and Weil, 1990:27). The augmented Solow's model posits that saving, education and population growth are the most important factors that explain changes in income per capita. It recommends that further work should investigate tax policies, education policies and political stability as potential factors that could affect income per capita in any country. It is noted that countries with similar levels of technology, accumulation of capital and population growth are more likely to have similar income per capita. (Mankiw, Romer and Weil, 1990:27-29).

The fiscal decentralization theories do not present direct causality between measures of autonomy and economic growth models (Yushkov, 2015:406; Asatryan and Feld, 2015). However, many empirical literature have found a positive relationship between fiscal federalism and economic growth over the last two decades (Lin and Liu, 2000; Akai and Sakata, 2002;

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<sup>7</sup> This relates output to physical capital, investment in human capital and consumption.

Brueckner, 2006; Ligthart and Oudheusden, 2017). When federalism allows the provision of public goods in different jurisdictions, it increases the incentive for consumers to save and leads to higher investment in human capital and faster growth (Brueckner, 2006:2107). The positive relationship between fiscal decentralization and economic growth are further validated in recent empirical work that introduces novel instruments such as common legal system origin, common federal systems, geographical position and a country's relative size (Ligthart and Oudheusden, 2017:141).

The results of empirical analyses of fiscal decentralization and economic growth at the national level sometimes differ from regional analyses that obtained a negative relationship between real GDP growth and fiscal decentralization (Baskaran, Feld and Schnellenbach, 2016:1448). When fiscal decentralization proxies (such as, the shares of revenues and expenditures) are used to measure the degree of autonomy of subnational governments over expenditures and taxes, the sign of the coefficients reverse in the regressions with economic growth as the dependent variable and for small samples. The coefficients could also be insignificant (Neyapti 2003:2; Espasa, 2008; Ligthart and Oudheusden, 2017:141-144). In the case of Spain, two different results were obtained for national and regional analyses. At the national level, when decentralization is measured by shares of revenue and expenditure, the coefficients were statistically significant and negative indicating that decentralization of responsibilities to autonomous communities did have a negative effect on economic growth in Spain. However, at the regional level, fiscal decentralization had a positive effect on economic growth of autonomous communities with high competencies and a negative effect on autonomous communities with lower competencies (Espasa 2008:194). In China, Zhang and Zou (1998) report a negative relationship between provincial economic growth and expenditure decentralization contrary to the expected positive relationship.

In many empirical work, economic growth is denoted by changes in growth rate of real GDP per capita of a country or province (Akai and Sakata, 2002; Espasa, 2008; Zhang and Zou, 1998). This construct of dependent variable allows researchers to review the impact of fiscal decentralization variables on the growth of output per person in a jurisdiction rather than the jurisdiction itself. Some papers use the fiscal decentralization definition provided by the International Monetary Fund Government Statistics of 2010. That is, the share of subnational government expenditure in general government expenditure or the share of subnational revenue to general government revenue (Martinez-Vazquez and McNab, 2006; Espasa, 2008; Lledó et al, 2018:13). Many models investigate the relationship between growth of real per capita GDP (representing economic growth) and independent variables such as accumulation of physical capital, stock of capital and population growth (Barro, 1991; Mankiw, Romer and Well, 1990; Bond, Hoeffler and Temple, 2001; Thiessen, 2003; Brueckner, 2006).

Different types of growth models are deployed in empirical literature to analyze the relationship between economic growth and fiscal federalism. For instance, the Cobb-Douglas aggregate demand function has been used to determine the maximization of growth based on the degree of fiscal decentralization (Mankiw, Romer and Weil 1992; Davoodi and Zou, 1998), while the endogenous-growth models with overlapping generations are used to explore the relationship between fiscal federalism and economic growth (Brueckner, 2006). Similarly, the augmented Solow's model has been used extensively (Davoodi and Zou, 1998; Yushkov, 2015). Asatryan and Feld (2015:772) also used the Bayesian model averaging approach to test the link between fiscal federalism and economic growth and found neither a positive nor a negative robust link between output and federalism in a sample of 23 OECD countries between 1975 and 2000.

Different types of datasets are used in empirical literature to assess the relationship between fiscal decentralization and economic growth. For instance, using cross-sectional data and the augmented Solow's model, some researchers report a positive relationship between the growth

rate of real per capita GDP and the initial human capital proxied by school enrolment, but insignificant relationship with the share of public investment (Barro, 1991:407, Ligthart and Oudheusden, 2017:141). In some cases, similar analyses were undertaken using panel data and Ordinary Least Squares methods (Martinez-Vazquez and McNab, 2006; Baskaran, Feld and Schnellenbach, 2016).

Econometric approaches and techniques adopted for fiscal federalism and economic growth analyses vary significantly from ordinary least squares, fixed effects, random effects, generalized least squares, pooled mean groups and IV regression models. These methods do not in themselves vary regression the results, but the inadequate use of control variables, dummies and instruments could affect the results (Baskaran, Feld and Schnellenbach, 2016:1451). Thus, the manner through which models are specified could influence the results of the relationship between proxies of fiscal decentralization and economic growth. Davoodi and Zou (1998:247-248) used the augmented Solow's and the ordinary least squares technique, to measure the impact of fiscal decentralization (subnational share of government spending) on economic growth but included country and time dummies as explanatory variables. Others, such as Jin and Zou (2005) also used time dummies in their model to analyze the impact of local expenditure and revenue on economic growth.

Variables used as proxies to estimate fiscal decentralization have limitations related to their scope and representativeness, but they are generally accepted in the literature. This is partly because, in countries with multi-level government structures, taxes bases may differ across regions/states/provinces and in some cases central government may be inherently more efficient in collecting some taxes assigned to local governments (Bird and Vaillancourt, 2008:11). When the share of subnational revenues to general government revenues is used to measure fiscal decentralization, it could be criticized for including portions of revenues from central governments, non-resident government and private sector grants. Thus, some empirical

literature defines revenue decentralization as the share of own revenues to general government revenue (Lledó et al, 2018). Some papers use a combination of indicators at different levels of government (state/region/ province, and local) to measure fiscal decentralization (Jin and Zou, 2005:1056; Gil-Serrate, Lopez-Laborda and Mur, 2011:2637). Others also measure revenue decentralization as self-generated subnational revenue over total subnational revenue (Yushkov, 2015:410). Many of the other variables in fiscal federalism models suffer similar limitations. For instance, human capital has been proxied by secondary school enrolments or percentage of working population in secondary schools, while physical capital is proxied by real share of investment in GDP (Davoodi and Zou, 1998; Mankiw, Romer and Weil, 1990; Cellini, 1997).

Overall, empirical evidence determining the relationship between fiscal decentralization and economic growth provide inconclusive results. The relationship and impact tend to vary across countries and within a country, across regions, states and localities. For instance, there is empirical evidence that expenditure assignment has a positive impact on real GDP growth in China (Jin and Zou, 2005:1047). However, in Russia, expenditure decentralization within regions without corresponding revenue decentralization negatively impacts regional economic growth (Yushkov, 2015:404). Conventional wisdom expects revenue decentralization to have a regressive impact on income, but this is not always the case (Sepulveda and Martinez-Vazquez, 2011:326). It could have an initial negative effect on economic growth and later a positive effect (Baskaran, Feld and Schnellenbach, 2016:1448). In Spain, revenue assignment has a positive impact on regional growth (Gil-Serrate, Lopez-Laborda and Mur, 2011:2643).

## 2.7 Property taxes

Property taxes are one of the own source revenues that could be assigned to subnational governments in some countries. In almost all jurisdictions, subnational governments are assigned taxes and non- tax revenues that constitute their own source revenue. This thesis focuses on subnational governments that are required by Ghana's Local Governance Act , 2016

to collect, manage and use property taxes. It reviews relevant literature below to support the response to Question 3 noted in Chapter 1. Property taxes are discussed in relation to fiscal decentralization. That is, property tax is viewed as one of the own-source revenues for subnational governments.

Property taxes may be defined either broadly or narrowly for the purpose of research and empirical work. In broad terms, property taxes include stamp duties and property transfer taxes, estate and gift taxes and financial transaction taxes (Franzsen and McCluskey, 2017:4; IMF, 2014:93). In a narrow sense, it refers to taxes on the use, ownership and occupation of real estate – that is, land and/or buildings and other improvements. The IMF (2014:93) categorizes taxes on property in five forms: “(i) recurrent taxes on immovable property; (ii) recurrent taxes on net wealth; (iii) estate, inheritance and gift taxes; (iv) capital levies; and (v) other recurrent taxes on property.” From a narrow perspective, the term property tax or recurrent property tax may be used to describe recurrent taxes on immovable property: a tax levied on the use or ownership of immovable property such as land or building or both (Franzsen and McCluskey, 2017:4-5; IMF, 2014:93).

From a broad perspective, property taxes may be levied on mobile capital, and immobile properties such as real properties, and personal properties. Real properties consist of the land and permanent fixtures affixed to or improvements on it, and the personal properties are both tangible buildings and intangible personal properties (Bell, 1999:8; Franzsen and McCluskey, 2017:5). Property taxes are levies on all categories of properties irrespective of their use, ownership and class (Bird and Slack, 2004:19). Different terminologies are used to refer to property taxes, some of which are property rates (Ghana, Zimbabwe, South Africa and Kenya), property taxes (Chile and Argentina), real estate taxes (Latvia and Poland), building tax (Tanzania), and the tax on land and buildings (Indonesia), (Dillinger 1988:1; McLure and

Martinez-Vazquez 2000:4; Kelly, 2000:40-41; Ebel, 2003:13; Franzsen and McCluskey, 2017:5-6).

Property taxes<sup>8</sup> are described as a good local tax and appropriate for subnational governments when the following five conditions are met concerning the authorizing subnational governments. Whether they can impose taxes or not, determine their tax bases, decide or set rates, administer taxes, and retain revenues collected (Bird, 2010a: 6-28). In addition, Almy (2013:67) suggests that the choice of institutions to collect property taxes should be influenced by their administrative capacity, convenience to tax payers, and the fiscal interest of the institution. When subnational governments are functioning well, they tend to access the tax base of property taxes better than central governments (Ebel, 2003:13). They are sometimes assigned rate setting powers because property taxes may have a broad base, are revenue productive, and can produce very stable revenue for subnational governments (Bahl and Cyan, 2011:270).

Property taxes are a good source of subnational revenues and sometimes are described as a generator of subnational revenue (Rosengard, 2012:1; Bird and Slack, 2006:206; Schroeder, 2007:58). Kelly (2000:37) notes that almost all local governments are enthusiastic about strengthening property tax collections, in order to increase their revenues. In Latin America, property taxes remain the main way to raise revenues for local development (Bird and Slack, 2006:206). These taxes are potentially good revenue generators because they are economically efficient (hard to avoid), and socially equitable (roughly progressive and a good proxy for tax on multi-year income). The tax represents the largest and most reliable source of revenue to municipal governments and could be efficient and equitable revenue generating instruments for subnational governments even though they remain largely untapped in many countries due in

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<sup>8</sup> Property taxes are collected at national level in some jurisdictions. By local taxes, it refers to metropolitans, municipals and districts with decision-making powers, lower than regions/states/provinces. In federal countries, the term local taxes are charged in localities and it may not be uniform across states or provinces.

part to political, institutional and political constraints to its administration. Property taxes are described as appropriate to subnational governments due to the connection between services funded and property values (Slack, 2004:69; Bird and Slack 2006:209; Norregaard, 2013:4; Rosengard, 2012:1; Kelly, 2014:326). However, Bahl, Martinez-Vazquez and Youngman (2010:9) argue that the evidence about the equity of property taxes is mixed due to exemptions given to low-income housing. This is because exemptions erode the tax base, leaving other tax payers to pay more taxes (Slack and Bird, 2015:7). Irrespective of income brackets of homeowners, they benefit equally from free public goods and services funded with taxes collected by subnational governments in developing countries and thus, it is fair to broaden the tax base by reducing exemptions. Also, the tax burden may fall more progressively on high and middle-income earners who own large properties. The burden imposed by property tax raises questions about how it creates horizontal equity among subnational units and tax payers.

However, property taxes are sometimes not accepted as good subnational taxes partly because of the high cost of administration, less efficient administration, and low yields. As a result, some authors suggest that even though subnational governments are best placed to administer the tax, leaving property taxes to them may not be good advice due to the difficulty in administering the tax equitably<sup>9</sup> and because non-residential property taxes increase the cost of providing services (Bird, 1999:11; Slack, 2010:3; Bahl and Martinez-Vazquez, 2007:5). Country experiences of property tax implementation varies very much, even though the burden of property taxes is difficult to pass to others. Canada and the United States have been able to increase property taxes to 4 percent of their GDP, suggesting that the tax is a good revenue generator and efficient administration could improve collections (Bahl and Martinez-Vazquez (2007:2). In Africa, few

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<sup>9</sup> There are different arguments about equity of property taxes. Some considered property taxes to be inherently equitable because public services contribute to increases in the price of land. When viewed as a tax on real residential properties to provide housing services, it is considered to be regressive because of the share of housing in the budgets of poor households. Those that view it as a tax on capital consider property taxes as progressive because of the large share of capital in the wealth portfolio or income of the rich (Bird and Slack, 2006:213).



countries are able to significantly increase revenue from property tax, although one could point to success stories in South Africa, Liberia and Sierra Leone (McCluskey, Franzsen and Bahl, 2017:552).

Property taxes could cause distortions to consumption and production through their effect on the price of capital and may bias the tax price of providing public services when property tax rates are static (Bahl, Martinez-Vazquez and Youngman, 2010:6). In some cases, property tax distorts housing prices and local fiscal decisions (Bird and Slack, 2006:212). It is only when property tax differentials are matched by differentials in the provision and delivery of public services, that they should not distort the allocation and use of land (Bird and Slack, 2006:207). Public service could enhance the value of properties to the benefit of owners and thus, subnational governments should be willing to increase the property tax rates to match the cost of tax administration.

Globally, there is a renewed interest to use property taxes as a conduit to gaining administrative revenue autonomy in jurisdictions where subnational governments are assigned the responsibility to manage the tax. Subnational governments that collect and retain property taxes tend to have more control over the use of the revenues. Some of the countries pursuing these reforms include Namibia, Liberia, Cambodia, China, Singapore, Vietnam, Croatia, Hong Kong SAR, Greece, Ireland, Latvia, Serbia, Slovenia, Egypt, Kyrgyz Republic, El Salvador and several Caribbean countries (Norregaard, 2013:4). Some of the reforms in this area include increased stamp taxes on homes, new area-based taxes on non-agricultural lands, land tax on agricultural lands, residential property taxes, modernization of property tax systems, mass appraisal of market values of properties and new property taxes for companies. This wide range of reforms indicates a renewed interest in property taxation across the globe (Norregaard, 2013:4). Many African countries have started levying recurrent property taxes (Franzsen and McCluskey, 2017:6).

### 2.7.1 Property tax administration

The administration of property taxes entails processes beyond mere collection of revenue from property owners. Many factors affect how much tax is paid and chargeable tax rates. Some of these factors include assessing properties at their market value, putting in place systems for identification of properties and payment of taxes, billing, collection of the taxes and enforcement (Bird, 2006:183). McCluskey and Franzsen (2013:173) note that some metropolitan municipalities such as Accra, Dar es Salaam, Lagos and Lilongwe use manual billing systems due to data problems related to lack of address systems and poor postal services. In response to these challenges, some cities such as Accra, Kumasi, and Tema in Ghana use the services of private collectors to increase revenue collected from existing sources (McCluskey and Franzsen, 2013; Fjeldstad and Heggstad, 2012:13).

Comparative country results of the cost of collection indicate that it is generally less expensive for private collectors to be engaged to collect the property taxes than for subnational governments to take the responsibility (Kitchen, 2006:164). However, there are risks of outsourcing the collection of property taxes entirely to private collectors because they could inflate the costs of collection and extort higher amounts from tax payers if they are not properly monitored and controlled by the government (McCluskey, Franzsen and Bahl, 2017b:92). Technological improvements are one of suggested ways of improving the administration of property taxes to enable central governments collect their own revenue (McCluskey, Franzsen and Bahl, 2017a:552). I propose that property tax payers be segregated into large, medium and small groups. Subnational governments could set up offices or task forces to collect taxes from large, medium and small tax payers. In addition, subnational governments should set up an Information Technology platform or “apps” to allow smaller tax payers pay their property taxes at least cost as is the case in Cameroon, Kenya and Tanzania, where local taxes could be paid via mobile phones (McCluskey, Franzsen and Bahl, 2017b:92).

The administration of property tax reforms is difficult, and the reforms are not always successful. Some of the reforms in developing countries have failed because of the high cost required to improve the administrative systems, compared with low potential yields after the reforms (Slack and Bird, 2015:1; Bahl and Wallace 2008:26). Developing countries that are plagued with challenges regarding property tax administration reforms, need to tailor their tax reform strategies to their country systems such as legal framework, political system and institutional conditions. In addition, these countries could intensify their enforcement efforts (such as fines), compiling relevant information (such as cadastre roll), and aligning property tax reforms with other ongoing reforms on decentralization (Kelly 2000: 49-50). They also need to increase the yields from property taxes by aligning the revenue to the cost of improving the system and their overhead cost. More so, efforts at reducing administrative expenditures through the use of simplified valuation methods could be important (Bahl and Wallace 2008:26).

Three factors suggested to guide tax administration are implementation of relevant laws of countries, impartial treatment of tax payers during administration, and cost-effective administration (Almy, 2013:62). While these factors seem plausible, property tax administration should encompass tax base identification, tax base valuation, tax assessment, efficient tax collection and enforcement, resolution of tax challenges of tax payers, and provision of other services such as tax payer education (Kelly, 2000: 40). More detailed responsibilities may include subnational governments producing tax maps, managing a register of properties, updating property assessments, appropriately billing of tax payers, and improving collection efficiency (Bahl and Martinez- Vazquez, 2007:14). For most countries, they need to ensure the availability of technical expertise, local government capacity, political will and a solid administrative infrastructure before implementing administrative tax reforms (Bird and Slack 2002:37).

Proper identification of tax payers and the role of other stakeholders are essential to improving the effectiveness of property tax administration. Some of the stakeholders are local and central governments, legislators, tax administrators, property valuers, land title registrars and the private sector (Kelly, 2014:340). The role played by each of the stakeholders in determining the tax base is important because revenue systems usually allow for the discretion of these stakeholders during the preparation of laws, valuation of properties, collection of revenues and utilization of the revenues. For instance, Bahl, Martinez-Vazquez and Youngman (2010:10) describe the behavior of legislators in the United States when it comes to property taxes as radioactive because they make laws to satisfy their interest.

#### 2.7.1.1 Property tax base

Subnational governments have the responsibility to make budgetary and some policy decisions within their jurisdictions. Decisions concerning the tax base are sometimes taken at the national level to define the revenue potential in a country (McCluskey and Franzsen, 2013:162). The revenue assignment pillar of fiscal decentralization provides the opportunity for subnational governments to contribute to decisions that influence their potential revenues without competing with national governments. Subnational governments could make decisions to broaden the revenue potential of property taxes within their jurisdictions subject to national or state laws. In some cases, the constitution or local government law may define the revenue potential of property taxes and property tax systems in a country. The key components of property tax systems are “determining the tax base, assessing the base, setting the tax rate and running the system” (Slack and Bird, 2015:7). Below I review property tax base, rate setting and associated challenges.

The first policy variable governments must address in determining the performance of property taxes is its base (Bell, 1999:8; Norregaard, 2013:23; Slack, 2004:74). The government decides by law what should be taxed in the country and the properties that need to be excluded. The tax

may be applied uniformly across all properties within a jurisdiction (such as in South Africa) or selectively to some properties. Some countries such as Ghana, Tanzania, Mozambique and Sierra Leone tax only buildings (Fjeldstad and Heggstad, 2012:17). Other countries such as Jamaica, Bermuda, Kenya, and some jurisdictions in Australia and New Zealand tax only land (Kelly, 2000:39; Franzsen, 2009:28).

Some countries are able to obtain wider property tax bases than others. Several government policies and choices have the potential to affect property tax bases because real properties may be classified into different categories and the rates may vary based on the use of the properties. In addition, tax systems influencing land use may be different from systems in place for taxing buildings, and thus, allocative neutrality could be achieved when the property tax base is confined to land. Government policy that gives incentives for the use of land could potentially increase the value of buildings and thus the ratable values of property taxes (Dillinger, 1988:19; Bird and Slack, 2006:207). Franzsen and McCluskey (2017:6) describe the tax base of a “land only” property tax system as the unimproved value of the land and note that in efficient property tax markets, there is usually the availability of skills to undertake credible regular valuation. This is because a tax on improvements could create long term reallocation of capital to untaxed jurisdictions (Dillinger, 1988:18).

Three approaches are suggested for classifying the property tax base. These are assigning value to the property (valuation), property component in the base (land, building or both), and the use of property for residential or non-residential (Norregaard, 2013:23). Franzsen and McCluskey (2017:6) refer to the decision on the tax base as a key policy decision. The property tax base is determined by the value of taxable wealth and the quantity of property in a jurisdiction (Rosengard, 2012:8-10). It could also be determined as a function of the assessed value or market value of the property. In general, the base is affected by taxable wealth, number of

properties, general valuation, assessment ratios, exemptions, exclusions, deductions, credits and deferrals (Bahl, Martinez-Vazquez and Youngman, 2010:5; Rosengard, 2012:10).

Though numerous methods exist for measuring the property tax base, they could be put in three basic groups of approaches. The first are the market price-based methods (valuation based on rental values, capital (market) values, and area-based methods). The second relates to the dimension of the property when a decision have been made whether to tax only land, buildings or improvements. The third is purpose to which the land is used (Norregaard, 2013:23; McCluskey, Franzsen and Bahl, 2017b:50). Bahl and Linn (1992:79) list three common approaches used in the literature to be the annual or rental value of the property, the capital value of property and the site value of the land. The basis for their use differs based on the tax base selected by the country. McCluskey and Franzsen (2013:162-164) explain that area-based<sup>10</sup> systems are usually used when cities have difficulties with valuation. The biggest problem of area-based systems is the lack of buoyancy. Also, Franzsen and McCluskey (2017:6) note that countries with such skills prefer to use the capital value or rental value approaches for their valuations, which are also the preferred approaches in industrialized economies. The decision to use value or area-based systems should be driven by the availability of market data and information on properties.

The property tax base is often corroded when there are too many exemptions. These exemptions may be based on some criteria such as ownership of the property (e.g., government-owned properties such as schools, roads and office building), utilization of the properties (for social, charity and security), the characteristics of the owner (aged or poor based on national poverty threshold) and incentive for economy (relief for business such as for those in agriculture) when the tax has to be paid (Norregaard, 2013:25; Bird and Slack, 2002:13). Low value properties

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<sup>10</sup> Area based systems tax land at a fixed rate per unit and buildings based on a rate per unit of their sizes or usable floor area (Bird, 2010a:3; Franzsen and McCluskey, 2017:7).

may be exempted because of the high administrative cost required for valuing, processing and collecting the tax (Dillinger 1991:7). In developing countries, exemptions to the poor of their low-income houses may suggest progressivity of the burden of the tax (Bahl, Martinez-Vazquez and Youngman, 2010:9). However, when exemptions are given to the rich living in owner occupied houses, the tax may be regressive (Bahl and Martinez-Vazquez, 2008:38).

#### 2.7.1.2 Property tax rates

The property tax rate is an important policy variable that determines the revenue performance of subnational governments. Slack and Bird (2015:9) mention questions to be asked in determining tax rates. These are “Who sets them? Are they differentiated, and, if so, how? And can tax payers understand how the rate is applied to properties”? The tax rates may be set by the central governments or subnational governments. The choice of an entity within a country to set tax rates is sometimes political (Bird, 2010a:8). The government could also mandate a subnational government to set property tax rates, as well as to decide on properties that should be taxed, without a legal framework or a law. Where subnational governments set the tax rates, they should also have control over their revenue collections and retain them to improve their revenue autonomy (Bird, 2010a: 6-28; Almy, 2013:35). In Brazil, the Philippines and South Africa elected local councilors have control over tax setting (Work, 2002:14). In OECD countries, local governments have more discretion over property taxes, and in some cases, they have different levels of control over rate setting and reliefs of fragments of property tax revenues (Slack and Bird 2015: 5-6).

Subnational governments sometimes set property tax rates very low for political reasons. As a result, their revenue performance gets low, leading to slower attainment of revenue autonomy. Raising more revenue requires deliberate decision and willingness of the rating institution to impose property rates at higher levels. In other cases, higher rates must be accompanied by good valuation, annual adjustments of assessments of properties to reflect market prices and strong

enforcement of laws to raise expected revenue collections (Bell, 1999:3; Bahl and Martinez-Vazquez 2007:2). Some jurisdictions impose higher rates on business properties given the unpopularity of residential property taxes (Bird 2010b:5). Rich subnational governments with other sources of revenue could decide to impose lower property tax rates, even though this could lead to unequal treatment for citizens (Shah, 2004:23).

### 2.7.2 Challenges with property tax administration

Poor property tax administration is one of the major factors that contribute to low revenue in many countries (Bahl and Wallace 2008:10). However, the challenges of property tax administration vary across countries. In developing countries like The Gambia, low compliance level, accumulation of payment arrears, lack of capacity to undertake supplementary assessments and property registration, and inadequate enforcement of tax laws are major challenges affecting land and property tax administration (McCluskey and Jibao, 2017:209-216). In Ghana, property tax administration is plagued with a lack of political will of local governments to administer the tax, inadequate databases of properties, lack of logistics, poorly motivated staff and political interference (Jibao, 2017:226). In developed countries, the challenges relate to discrepancies between assessed properties values and their market values, and differences in assessments between classes of properties which are comparable in different jurisdictions (Bird, 2010a:30).

Reforms aimed at promoting property taxes may be challenging to implement (Slack and Bird, 2015:1). People are generally reluctant to pay taxes on their wealth and tend to dislike politicians who promote such taxes. Undertaking strategic reforms on the incentive structure of paying property taxes, refining policy and administrative interactions, improving valuations and collection methods, stronger enforcement and increased services to tax payers are some of the ways of resolving the challenges (Kelly, 2014:326). In addition, I am of the view that writing letters to tax payers to inform them of successful payments by their neighbors is likely to



encourage them to pay the tax<sup>11</sup>. Also, Rosengard (2012:3) is of the view that some of the challenges could be resolved when property taxes are revenue neutral and the proceeds are used for social, economic and administrative purposes. Norregaard (2013:34-35) notes that dealing with the challenges of property tax reforms requires strong political will.

In developing countries, lax enforcement, poor policies on rate setting, excessive exemptions, static and limited tax base and low collection mechanism and efficiency, and high administration cost often result in low revenue collection than anticipated by subnational governments (Dillinger, 1988:1; Bird, 1999:12; Bahl and Martinez-Vazquez 2007:11; Ayee and Dickovick, 2014:96; UNCDF, 2016:19)). Bird (2010a:28-33) identifies ineffective accountability, inadequate information, central government bailouts through transfers, and inappropriate allocation of tax bases between national and local governments as contributors to low collection of property taxes.

The administration of property taxes differs across countries because political leaders have control over both valuation and collections. Local governments can influence the tax paid by either changing the ratable values of property, or the tax rates, or both. Bahl and Linn (1992:79) found that wide variations in the structure and administration of property taxes in Bogotá and Cartagena, Colombia, affected the growth in revenue collections. They argue that property taxes are difficult to administer efficiently in developing countries and sometimes lead to undesirable land use effects. African countries are among the poorest in the world and tend to have low taxable capacity which affects the property tax administration (McCluskey, Franzsen and Bahl, 2017a:552). Most of the very poor countries have suffered military uprisings, political instability and upheavals, and the collapse of legitimate governments, which affects their ability to systematically build human capacity, including the required skills for property taxation.

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<sup>11</sup>This method was successfully applied in Poland with World Bank assistance in 2016-17. Hernandez et al (2017) presents a full description of the process and results obtained using different types of letters.

Sometimes challenges are as a result of the unwillingness to pay property taxes from unrealized funds (Heijman and Ophem, 2005:716).

Some authors suggest ways of addressing the challenges of property tax administration. First, regardless of the purpose of property tax administration, keeping it simple, focusing on revenue generation, following the general principles of taxation and recognizing behavioral changes of tax payers could enable tax administrators to overcome some of the challenges (Rosengard, 2012:6). Second, undertaking regular revaluation of the property tax base or reassessment of properties could solve the challenge of under-estimation of the value of properties (Slack, 2010:11). Third, technological improvement is one of the ways to improve the administration of property taxes, especially in developing countries (McCluskey, Franzsen and Bahl, 2017a:552). Fourth, tax administrators could create more flexibility with the payment of property taxes since collecting property taxes on accrued property wealth of owners, sometimes, causes discontent among tax payers (Bahl, Martinez-Vazquez and Youngman, 2010:6).

## 2.8 Conclusion

The above literature review has examined an extensive body of literature on decentralization, property taxation and fragmentation. It highlights the transfer of power from a higher level of government to a lower level or levels. It notes that central governments need to develop norms to share power with subnational governments, in order to enable clarity in their responsibilities. This chapter shows that intergovernmental transfers are equally important in other countries, but this could potentially affect the incentives to collect own-source revenues.

Fiscal decentralization is expected to empower the people through their subnational governments, in order to improve service delivery and growth of the economy (Bahl, 2008:4). It can be concluded that service delivery is a collective effort which could be led by subnational governments when they are given the authority to make decisions about revenues and expenditure at the subnational level. The literature was supportive of the expenditure assignment

pillar of fiscal decentralization, as many countries are gravitating towards that option, where subnational governments are increasingly given more complex tasks to perform.

It can be concluded that decentralization requires the active participation of citizens in monitoring the work of subnational governments, flexibility of subnational entities to new development approaches and results-based evidence that will cause central governments to share their power. In addition, the governance structure of subnational governments and their objectives have changed drastically toward focusing on technology and improvement in the standard of living of their citizens.

Revenue assignment is a pillar of fiscal decentralization that requires a lot of effort and deliberate policy to implement. Central governments easily pass expenditure responsibilities to subnational governments, but they find it challenging to give them the power to raise revenues that are commensurate with their functions. The mismatch between revenue and expenditure assignments is widespread in many countries. It can be concluded that these two pillars of decentralization pose the most challenges to subnational governments. Rather than granting subnational governments more taxing powers, countries are progressively increasing intergovernmental fiscal transfers for fiscal gap financing, a disincentive to the collection and use of own-source revenues. This contributes to the lack of revenue autonomy in many countries. The impact of revenue assignment on real GDP growth is also expected to be positive, but the literature thereon is inconclusive.

Many papers such as Slack (2010:1), Norregaard (2013:4), and Slack and Bird (2015:2) regard property taxes as reliable, efficient, equitable and good sources of revenue for subnational governments, although they are highly underutilized. It can be concluded that subnational governments should focus on improving the collection of residential property taxes (Slack, 2010:1-3). In addition, the property tax base must be wide, realistic, based on reliable and

evidence-based assessments and must reflect the market conditions. Property owners need to benefit from services financed by the property taxes, in order to encourage them to continue to pay the tax. As noted by Bird and Slack (2006:216), Property taxes must raise revenue in a relatively efficient, equitable and sustainable manner, irrespective of the country in which they are implemented (Bird and Slack, 2006:216).

Property tax reforms are plagued by many challenges in many countries. There is no standard solution to successfully implementing property tax reforms across countries and jurisdictions. However, there are suggestions for developing countries. These are: the need for developing countries to tailor their tax reform strategies to their country systems such as legal framework, political system and institutional conditions. In addition, these countries could intensify their enforcement efforts (using fines), compiling relevant information (such as cadastre roll), and aligning property tax reforms with other ongoing reforms on decentralization (Kelly, 2000: 49-50). Also, property tax administration needs to focus on revenue collection, regularly updating the valuation roll, and shifting towards mass valuation methods (Kelly, 2000:49; Franzsen and McCluskey, 2017:20; McCluskey, Franzsen and Bahl, 2017:63; Norregaard, 2013: 27-28). Countries could benefit from modern information technology in executing their responsibilities by producing tax maps, managing registries of properties, updating property assessments, appropriate billing of tax payers, and improving collection efficiency (Bahl and Martinez-Vazquez, 2007:14; McCluskey, Franzsen and Bahl, 2017a:552).

Another phenomenon that is observed in the literature is subnational fragmentation, which has both positive and negative impacts on service delivery. The literature provides mixed evidence on the effects of subnational fragmentation. When fragmentation is positive, it supports service delivery, but it could be negative when local governments lose the benefits of economies of

scale. It could be concluded that excessive fragmentation<sup>12</sup> could be harmful and result in inefficiencies related to service delivery (World Bank, 2015:32). However, there are no conclusive criteria to guide when a country has reached its optimal level of jurisdictional and functional fragmentation. The tradeoff between enjoying economies of scale when subnational entities are big and the risks of becoming less effective when fragmented into smaller entities is discussed extensively.

The setting of tax rates is a policy decision that requires in-depth analysis, local knowledge and deliberate revenue focus. Subnational governments require control over the setting of their tax bases and rates, in order to raise the necessary local revenues for their work. It is evident from the literature that many countries have not reached full revenue and expenditure autonomy. Countries are at different levels of implementation of subnational autonomy, but perhaps they have been intentional about not granting full autonomy to subnational governments because they do not desire it. Granting or achieving subnational autonomy requires deliberate policies embedded in law or the country's constitution.

Intergovernmental transfers are identified by many authors as a major source of subnational revenues in many developing countries. They are used to bridge the financing gap that results from low subnational revenues and high subnational expenditure. The literature notes that intergovernmental transfers have resulted in increased responsibilities (expenditure assignment) to subnational governments (Fölscher, 2007:82). It is expected that intergovernmental transfers support service delivery. When grants are tied, earmarked and require matching funds, it tends to limit the autonomy of subnational governments.

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<sup>12</sup>Though it is difficult to determine the precise time when the government size and efficiency in service delivery is optimal, jurisdictional fragmentation could be considered to be excessive when the size of subnational government make them less efficient.

Overall, the literature discusses efforts by subnational governments to address challenges that affect service delivery and local development, implementation of revenue and expenditure assignments, property tax reforms and fragmentation of subnational governments. To answer the research questions posed in Chapter 1, the following chapters will focus on the application of the literature to the case of Ghana, especially, the impact of fiscal decentralization and fragmentation on property taxes and subnational autonomy.

## CHAPTER 3

### FISCAL DECENTRALIZATION AND PROPERTY TAXATION IN GHANA

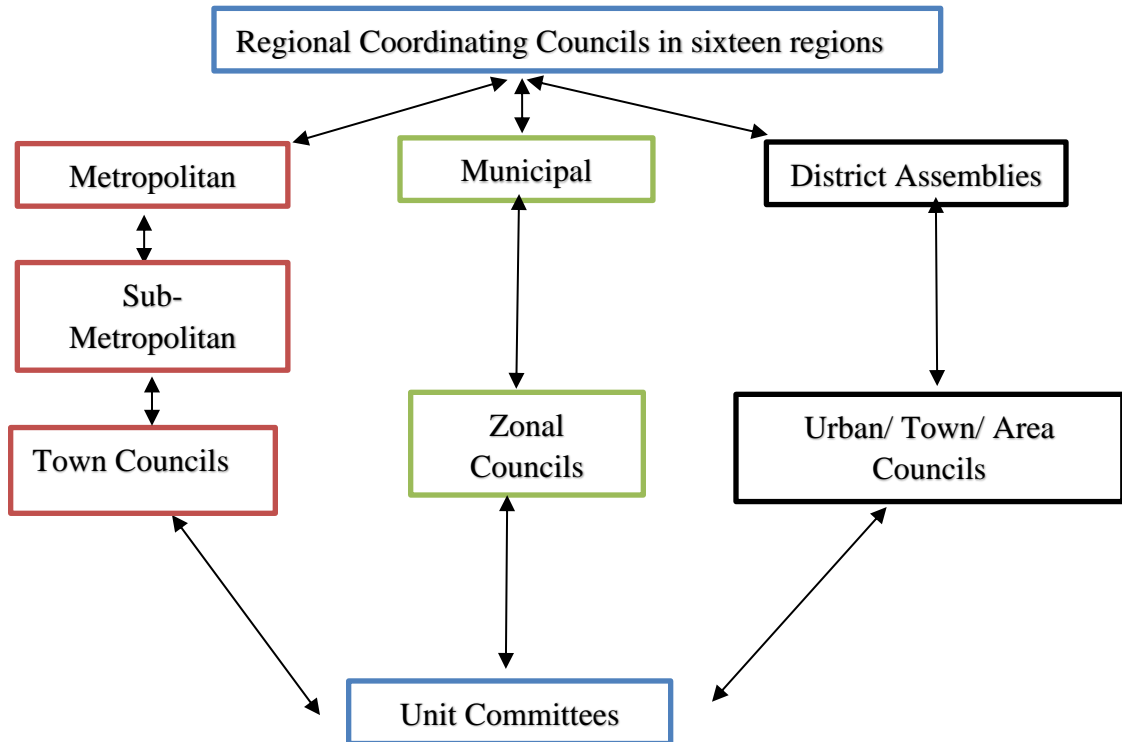
#### 3.1 Introduction

This section examines the implementation of fiscal decentralization in Ghana. It responds to the first question, “how effective is fiscal decentralization in supporting subnational autonomy in Ghana”. It discusses the nature of fiscal decentralization, challenges and underlying factors that affect its implementation and factors affecting the granting of fiscal autonomy in Ghana. It focuses on contextual issues, progress made, as well as challenges the country faces in implementing fiscal decentralization. It highlights one of the potentially significant sources of subnational revenues by discussing the legal regime and status of property taxes in Ghana. Property taxes are a part of own source revenues of subnational governments (when assigned to them) and are described in the literature as a likely rich source of revenue to subnational governments when properly designed and collections are efficient.

Ghana is a unitary state with a local government structure covering regional coordinating councils, assemblies and sub-assemblies as defined by the 1992 Constitution and Local Governance Act, 2016. Regional coordinating councils are the first tier of the local government structure in Ghana that play an oversight role over all assemblies. The Local Governance Act, 2016 categorizes assemblies (also referred to as district assemblies in the local government Act) into three groupings based on their population size and level of development. These are metropolitans, municipals and districts assemblies. Assemblies are the second tier of the local government structure in Ghana. The third tier of the structure comprises of the sub-assemblies (also referred to as sub-districts in the Local Governance Act, 2016). The sub-assemblies include sub-metropolitan, councils (urban, town, zonal and area) and unit committees. The sub-assemblies are required to facilitate the work of assemblies and to support a more decentralized

decision making within each assembly. Metropolitans have four sub-layers, but municipals and districts have three layers each, as shown in Figure 3.1. The assemblies are the highest political authorities within each jurisdiction and thus oversees the work of all sub-districts or sub-assemblies (Friedrich-Ebert-Stiftung, 2016:13; Local Governance Act 2016 (3)).

**Figure 3.1: Local Government Structure of Ghana, 2019**



Source: Government of Ghana 1996, the new Local Government System.

### 3.2 Implementation of fiscal decentralization reforms in Ghana

Ghana has been implementing fiscal decentralization within the context of a larger and more comprehensive decentralization package adopted by past governments since the Nineteenth Century. Dafflon and Madiès (2013:107) trace the roots of decentralization reforms to 1859 when Ghana adopted the Municipal Ordinance and established administrative structures at the local level. Decentralization was engraved in the development agenda of the colonial masters and accepted as part of the first Constitution of Ghana at independence in 1957. The administrative and political structure of decentralization was prepared and guided by various



pre-independence laws such as the Municipal Ordinance of 1859, Native Administrative Ordinance of 1927, Local Government Ordinance, 1951 (also called the Principal Ordinance in 1952), and Municipal Councils Ordinance of 1953. These laws established local government councils, defined the revenue sources of assemblies (such as levies, licenses, permits and dues) and amended the composition of the council membership from two-thirds to three-fourths. The colonial government put in place systems for intergovernmental fiscal transfers in order to support regions and districts to speed up their development and involved the citizens in decision making. Table 3.1 presents a list of laws affecting the local government system in Ghana.

The evolution of local government Acts led to changes in political and administrative decentralization, as well as transfer of authority to statutory bodies in all geographic areas in Ghana. After independence, the Local Government Act, 1961 was enacted to establish more local bodies, empower existing bodies and provide services to municipalities. The local government system became inefficient and weak after a decade because of inability of local governments to collect sufficient revenues and account for their expenditures as expected by the central government. In response, the government enacted the Local Administration Act, 1971 to support the deconcentration of more functions to local governments in the country (King et al, 2003:8). However, frequent military takeovers and policy change in the 1970s delayed the implementation of many decentralization reforms. The Local Administration Act, 1971 granted more powers to regional chief executives but was amended in 1974 to create the regional, metropolitan, municipal, district, urban and local councils, as well as town or village development committees (Clarke,2010:14).

In 1982, a military government took power and began consolidating past decentralization reforms. It aligned the Ghanaian Government's policies with international thinking on decentralization, with the aim of harnessing the benefits of decentralization for nation building. Issachar (2004:17) notes that the promulgation of the Provisional National Defense Council

(PNDC) Law 204, in 1982, initiated a process of transferring political powers from the central government to the grassroots. It marked the introduction of a new local government system in Ghana and led to the establishment of 22 decentralized departments.

**Table 3.1: Key legislation affecting local government operations in Ghana at independence and beyond.**

| Local Government Acts in Ghana   | Comment/ Repealed   |
|--|---|
| Government of Ghana, 1957.<br>Ghana Independence Act, 1957.                                      | Repealed with the 1960 Constitution.  |
| The Constitution of the Republic of Ghana, July 1960. Ghana Assembly Press.                      | Repealed in 1992.   |
| Local Government Act, 1961.  | Repealed in 1971.   |
| Local Administration Act, 1971.  | This conferred the appointive powers of the Prime Minister to the Regional Chief Executives to head the Regional Councils. Amended in 1974.   |
| Local Administration (Amendment) Decree 1974, NRCO 258.  | The Law created a four-tier structure of Local Government and established 65 district councils, 58 districts and 273 municipal, area, urban and local Councils.                             |
| The Constitution of the Republic of Ghana, 1979.   | Marks the return to civilian rule after a decade of Military coups. It empowered Parliament to enact a law to create district councils and committees (village, town and area development). |
| The Local Government Act, 1988 (also known as the Provisional National Defense Council Law 207). | Set up the new local government system. Number of Assemblies increased from 65 to 110 for the first time in Ghana.  |
| Constitution of the Republic of Ghana 1992, with amendments in 1996, Ghana Assembly Press.       | Setup the decentralized local government system and intergovernmental transfer system. Amended in 1996.   |
| The District Assemblies' Common Fund Act, 1993, (Act 455).                                       | Defined local government functions and resources, especially intergovernmental transfers. Repealed and replaced by the Local Governance Act, 2016.  |
| The Local Government Act, 1993.  | This was the main law that defined the local government structure, roles and resources between 1993 and 2016. Repealed and replaced by the Local Governance Act, 2016.                      |
| Local Government Service Act, 2003 (Act 656).  | Repealed and replaced by the Local Governance Act, 2016.  |
| National Development Planning (System) Act 1994 (Act 479)  | Established the National Development Planning Commission.   |
| National Development Planning Commission Act 1994 (Act 480)                                      | Lays out decentralized planning functions of assemblies and its link to national planning.  |

|  |  |
|--|--|
|  | The Act was amended by the Local Governance, Act 2016 by the repeal of sections 2 to 9 and section 20. |
| Institute of Local Government Studies Act 2003 (Act 647) and Local Government (Departments of District Assemblies) Commencement Instrument 2009 (LI 1961). | Provides legal framework for building the capacity of local government staff.                          |
| Local Governance Act, 2016.  | In force.  |

Source: Compiled from the various publications of local government laws and Friedrich-Ebert-Stiftung, 2016.

The government focused on administrative decentralization rather than fiscal decentralization in the 1980s. The passing of PNDC Law 207 supported the re-demarcation of the country and led to an increase in the number of districts from 65 to 110 in 1988 (Clarke, 2010:15). These districts remained the same until 2003/4 when 28 more were created to expand the number to 138 districts. The government created 32 new districts in 2007 by fragmenting existing districts that had become bigger, thereby increasing the number to 170 districts (Clarke, 2010:16). Ghana's appetite for creating more assemblies by fragmentation took a more political twist<sup>13</sup> when another political party (the National Democratic Congress) increased the number of districts to 216 in 2012. It was increased to 260 assemblies since February 2019 by the government that increased it in 2007 (the New Patriotic Party).

The Local Governance Act, 2016 Section (1-4) states the criteria and procedure for the creation of metropolitan, municipal, and district assemblies (MMDAs) to include population density, geographic contiguity and economic viability of the area. Ghana has a strong and useful criterion for creating assemblies, but the Local Governance Act does not spell out the process for its application, which makes it difficult for persons outside government to independently confirm whether the criteria has been followed or not. The strict minimum criteria for the creation of a

<sup>13</sup> Though previous creation of assemblies was equally political before 1992, the two main political parties in Ghana started creating assemblies to fulfill their campaign promises. The creation of new regions and assemblies are based on campaign promises rather than need.

district is a population size of 75,000 people, municipalities have 95,000 people, and metropolitan areas have 250,000 people<sup>14</sup>. Bening (2012:2) reports that districts created between 2004 and 2007 were made by simply splitting populous districts in order to increase the number of parliamentary constituencies from 200 to 230<sup>15</sup>. However, political parties may also use the creation of districts to consolidate power, with the Electoral Commission carving out constituencies that tend to tilt parliamentary elections to the advantage of the ruling party. The interplay of power where the 1992 Constitution invests the creation of districts in the President, but the creation of constituencies in the Electoral Commission may have contributed to the fragmentation of districts. Data from the 2010 National Population and Housing Census and 2019 population projections of the Ghana Statistical Service indicate that some MMDAs may do not satisfy the population criteria strictly for their formation (Appendix D.4 and D.5). Ghana's 1992 Constitution and the Local Governance Act, 2016 authorize the President of the Republic to create districts at any time subject to the minimum conditions mentioned above or risk being challenged in court.

The composition of metropolitan areas, municipal areas and districts have also changed with the creation of new districts. The changes in the composition are not merely a graduation of districts to municipal assemblies and then to metropolitan assemblies. As population of MMDAs increase, the government changes the geographic demarcation of assemblies as part of the fragmentation process. In Ghana, fragmentation of regions and assemblies is usually prompted by new data on the population size, demands by chiefs for the creation of new types of assemblies or political promises to improve service delivery by the creation of new administrative units. The central government creates new assemblies by submitting a bill to

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<sup>14</sup> This criterion is the same in the repealed Local Government Act of 1993.

<sup>15</sup> The decision to create constituencies depends on the Electoral Commission of Ghana which is independent and thus, it exercises the right either to create constituencies or not when assemblies are created by the government. However, the government could deliberately create assemblies in a manner that forces the Electoral Commission to exercise its power to create constituencies.

Parliament for approval. Once approved, the central government establishes physical, political and administrative structures in order to commence the work of the assembly or region. The government appoints the district or municipal or metropolitan chief executive to head the new local government unit.<sup>16</sup>

There were 6 metropolitan assemblies, 56 municipal assemblies, and 154 district assemblies in 2017. With all the reclassification of MMDAs, a photo of the 2010 population data from the Ghana Statistical Service (GSS) indicate that 32 percent of municipalities (16 of 49 municipals) and 42 percent of districts (68 out of 161 districts) did not meet the population criteria (Appendix D.4). A similar photo of 2016 population data shows that 9 out of 49 municipals have population below the 95,000 people as required by the Local Government Act, 1993 while 54 out of 161 districts did not meet the population criteria (Appendix D.4). Population projections of the Ghana Statistical Service (2019) show improved compliance with 6 out of 56 municipal assemblies with population size below the 95,000 people criteria and 49 of 161 districts not meeting the 75,000-population size mark (Appendix D.5). Population growth over the last decade accounts for the improved compliance to the population size requirement of the local government law, for creating assemblies. Of the total population, 19 percent of the people lived in metropolitan areas, 30 percent in municipalities, and 51 percent in districts in 2010. In 2018, a newly elected government fulfilled its electoral promise to create new districts and regions. The government created 38 new districts by fragmenting existing MMDAs in 2018. The total number of MMDAs in Ghana increased to 254 in 2018 from 216 in 2017. In 2019, six more assemblies were created by elevating sub-metros to Municipal Assemblies, increasing the number to 260 assemblies. Similarly, Ghana had five regions in 1948, but five more were created

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<sup>16</sup> The President is required to consult with traditional authorities and interest groups in an assembly before making his appointments. The President's appointee must be confirmed in vote by not less than two-thirds majority of members of an Assembly, otherwise the President will have to appoint a new person.

by 1982. In 2018, the government created six more regions by splitting some of the existing regions.

Many policy actions have been taken beyond simply increasing the number of regions and districts. The government passed the Local Government Act (Act 462) of 1993 in order to support deconcentration reforms, but it did not increase the functions performed by the local governments. Yilmaz (2009) confirms Ghana's successful deconcentration of the local government system in 1993 and observes that large powers were given to political leaders. These leaders are appointed by the President and are required by law to be endorsed by the various assemblies before they start working. Once they complete the appointment processes, they are held accountable for their activities by both regional authorities and the central government. The Local Governance Act, 2016<sup>17</sup> defines the powers, responsibilities, functions and potential sources of funds for subnational bodies. District assemblies receive basic transfers for their functions, but they are required to raise their own revenues to increase their financial autonomy. The 1992 Constitution sets aside 5 percent<sup>18</sup> of national tax revenue for transfers to local governments.

Since 1992, Ghana has had a legal and institutional environment conducive to the rollout of fiscal decentralization. At least two factors worked well for the country, namely a stable democracy and a legal framework supportive of local reforms. These include the provisions in the 1992 Constitution, the Local Government Act of 1993 (repealed), Local Governance Act, 2016 and many decentralization action plans. In addition, the government has produced various decentralization frameworks in order to guide the implementation of reforms and address pending challenges. Some of these are: the Decentralization Policy Review Document, produced

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<sup>17</sup> The provisions are the same as those in the repealed Local Government Act, 1993.

<sup>18</sup> The Parliament of Ghana increased the rate to 7.5 percent of tax revenues before the 2008 elections.

in 2007; the Decentralization Policy Framework, produced in April 2010; the Decentralization Policy Framework, produced in May 2012; the Ghana National Urban Policy Action Plan, produced in May 2012; the Performance Assessment Framework for the National Decentralization Action Plan 2015-2019, produced in July 2015; and the National Decentralization Policy Framework and Action Plan 2015-2019 Progress Report, produced in December 2016. There have also been various policy frameworks and guidelines on sanitation, rural development, intergovernmental fiscal policy, managing relationships between local and traditional authorities, composite budgeting and street naming.

The Government of Ghana through an inter-Ministerial Coordinating Committee in 2016 undertook a nationwide survey that interviewed stakeholders who work on decentralization in Ghana. The survey led to the preparation of the National Popular Participatory Framework Report for Ghana which identifies the types of challenges which district assemblies are confronted with in the country. The Government of Ghana (2016c:25-26) indicates that districts in Ghana are plagued by many challenges (See Table 3.2). These include vagueness in some aspects of the local government Acts, insufficient preparatory groundwork before commencing the reforms, large-scale transfer of functions without due consideration to capacity, lack of trained and experienced personnel at the local level, inadequate financial resources for responsibilities, corruption and other financial malpractice that occur without sanctions, bureaucratic obscurantism and apathy (Ahwoi, 2010:241; Sharma, 2010: 243).

**Table 3.2: Challenges facing district assemblies in Ghana**

| Challenges from the perspective of public officers   | Challenges from the perspective of citizens   |
|--|---|
| Inadequate and irregular flow of funds to ministries, departments, agencies and MMDAs for promoting popular participation. | Low level of awareness and understanding of the concept of decentralization could negatively affect popular participation.                            |
| Ineffective channels of communication, (examples are phones and websites) to support popular participation.                | A lack of awareness about institutions/persons to contact at the first instance of engagement and for follow ups could inhibit popular participation. |
| Non-functioning of sub-district structures e.g. zonal and area council to facilitate popular participation.                | Lack of commitment on the part of duty bearers to popular participation.  |
| Political victimization of public officers who give out information about political office holders.                        | Lack of commitment on the part of duty bearers to popular participation.  |
| Poor Information Communication Technology infrastructure to support popular participation.                                 | Mistrust of state institutions leading to apathy could obstruct the adoption and acceptance of popular participation.                                 |
| High population size could limit popular participation.  | Lack of capacity by technocrats to promote popular participation and to engage citizens in general.   |
| High expectations of citizens could undermine popular participation <sup>19</sup> .  | Low levels of knowledge on civil rights and responsibilities that underpin popular participation.   |
| Inadequate platforms for engagement could minimize the impact of popular participation.                                    | Internal conflicts including factionalism, chieftaincy disputes etc. in communities could limit popular participation.                                |
| Vast geographical land mass to be covered could be a limitation to popular participation.                                  | Inadequate consultation of citizens would reduce popular participation.   |
| Vast geographical land mass to be covered could be a limitation to popular participation.                                  | Too much bureaucracy at any level of government will negatively affect popular participation.   |

<sup>19</sup> Stakeholders in Ghana defined popular participation as a system of providing opportunities to individuals and groups at the national and subnational levels to be actively involved in shaping decisions that directly affect their wellbeing.



|   |   |
|---|---|
| Poor client relations skills of public officers could negatively impact popular participation.              | Participation fatigue especially where participation does not appear to have provided any tangible gains. |
| Change of government and lack of an effective or committed leadership to promote popular participation.     | The perception of corruption and the wrong notion that nothing can be done about it.                      |
| Lack of a relevant sub-committee of the district assemblies to implement the activities of the communities. | Selecting wrong engagement meeting times could negatively affect popular participation.                   |
| Lack of popular participation strategies and action plans inhibits offers.                                  | Lack of adherence to popular participation principles or guidelines could reduce impact.                  |
|   | Lack of active demand for popular participation action plans and process at the local level.              |

Source: Government of Ghana (2016c).

Irrespective of the perspectives of the challenges noted in Table 3.2, local governments do not have full control over their budgets and the flow of funds from the national to the local level. In practice, local governments are unable to match their expenditures with their own revenues and rely on transfer grants to close their fiscal gaps. Delays in the disbursements of transfers to local governments lead to delays in the implementation of projects and sometimes the payment of consultants or contractors who have completed their tasks. This challenge can be avoided if local governments are able to collect more own revenues.

Most district assemblies in Ghana have not demonstrated the capacity to collect all the taxes they have been authorized to impose under the Sixth Schedule of the Local Government Act of 1993<sup>20</sup>. Even the metropolitan assemblies (such as Accra, Tema and Kumasi Metros) are unable to fully collect property taxes within their jurisdictions. The Act empowers them to impose taxes such as property rates, levies, fees, licenses and income taxes on some self-employed persons. In addition, they are empowered to impose entertainments duty (Entertainments Duty Act, 1962

<sup>20</sup> These provisions are elaborated under the eighth to twelfth schedules of the Local Governance Act, 2016.

(Act 150)), casino revenue (the Casino Revenue Tax Act, 1973.12), betting tax (the Betting Tax Act, 1965 (Act 268)), income tax registration of trade (Business, Profession or Vocation Law, 1986.13), and gambling tax (Gambling Machines Act, 1973.14). However, MMDAs are saddled with various challenges (See Table 3.2) that limit their ability to tax. One could identify the lack of modern information and communication technology systems, inadequate or unavailable staff with tax skills, poor identification of tax payers and the lack of political will as some of the factors limiting the capacity of MMDAs to impose and collect tax revenues assigned to their expenditure role (Dzansi et al, 2018:40). The failure of MMDAs to assume the taxing authority has resulted in cyclical episodes of relying on central government transfers in order to enable them to implement their expenditure assignment.

**Table 3.3: Sources of local revenue available to metropolitan, municipal, and district assemblies in Ghana**

| Categories of local Revenue | Description   |
|-----------------------------|---|
| Rates                       | <p>There are two types of rates in Ghana. These are the basic rate and property rates. The basic rate is levied on individuals above 18 years of age.</p> <p>Property rates are levied on immovable properties based on valuation by the Land Valuation Division of the Lands Commission. Property tax is one of the local taxes in Ghana, collected by assemblies.</p> |
| Lands                       | <p>This is levied for the use of land owned by the metropolitan, municipal, and district assemblies for specific purposes such as burial ground and natural resource exploitation. There is also stool lands revenue that is not covered under this revenue type.</p>   |
| Rents                       | <p>These are levied for use of metropolitan, municipal, and district assemblies' residential accommodation, market stores and stalls, classrooms, lorry parks and grounds, among others. Charges for placement of billboards are categorized as rents.</p>  |
| Licenses/Permits            | <p>Licenses are levied on businesses operating in the territorial jurisdiction of the metropolitan, municipal and district assemblies. The levy is based on the sophistication of the economic activity that is undertaken and the capital of the firms. Bigger businesses pay more for the same activities as smaller firms.</p>                                       |

|             |  |
|-------------|--|
|             | Permits are authorisations given to businesses in a jurisdiction.  |
| Fees        | This refers to revenue from using the services and facilities provided by the MMDAs. They are user charges and depend on the extent to which the services are used.  |
| Fines       | Fines are penalties paid for non-compliance with assembly bylaws. This includes stray animals, parking restrictions and flouting building regulations, among others. |
| Investments | These are incomes from interests, dividends and properties owned by MMDAs.   |

Source: Government of Ghana, 2014.

Regional and district boundaries for tax purposes and interregional local tax sharing continue to be a challenge. In theory, regional borders are in place, although there are sporadic conflicts over boundaries due to the diverse ownership of land. Gilbert, Hugounenq and Vaillancourt (2013:109) report that Ghana had numerous issues related to delimitation of district borders in 1992, when the government decided to increase the number of districts from 88 to 110. Similar issues occurred when the MMDAs were increased to 170, with many new MMDAs lacking resources to meet their administrative costs. The demographic structure of the population is a criterion for determining the collection of subnational taxes. Other criteria for subnational taxes include revenue source and type, ease of levying and collection of the tax, and level of development. This is because, when subnational governments are given many responsibilities, they need to be equipped and assigned potential revenue sources to assist them to implement their mandate.

### 3.3 Progress and challenges faced in the implementation of fiscal decentralization in Ghana

Fiscal decentralization did not seem to be a top priority reform for the government until after 1980. Ghana endured a decade of political instability in the 1970s and structural adjustment programs in the 1980s, but the advent of democracy in the 1990s provided an opportunity to gain political capital through the implementation of fiscal decentralization. The government

identified decentralization as an opportunity to give a voice to the grassroots, and to grant them the power to manage a part of government and to avoid a repeat of the instability of the 1970s.

The 1992 Constitution made fiscal decentralization mandatory. Ghana committed to devolution of fiscal powers through a process that entrenched constitutional rule with the people at the center. This devolution was implemented through the provision of a framework to transfer funds to local governments in the Constitution of the Fourth Republic. Furthermore, districts were empowered to collect taxes by the Local Governance Act, 2016 in order to support local development activities. The establishment of local governments demonstrated the willingness of government to transfer power to the people and to involve them in decision-making. In addition, it made way for the four building blocks of fiscal decentralization to be provided for in the law. However, the legal provision did not necessarily guarantee implementation.

Ghana addressed the legal underpinning of its fiscal decentralization policy before attempting to implement the reforms. The Local Government Act, 1993 established the functions of each ministry involved in fiscal decentralization. The MLGRD was mandated to oversee the work of all subnational entities in Ghana. The ministry is responsible for ensuring that all decentralized local government systems are well resourced and governed with appropriate policies. The Ministry of Finance is responsible for preparing the national budget and submitting the budgets of subnational entities to Parliament. It also monitors the use of resources allocated to the MLGRD and its departments and agencies.

The expenditure and revenue assignments of subnational entities in Ghana are unambiguously stated in law. The 1992 Constitution and Local Governance Act, 2016 ascribe the role of local planning, budgeting (expenditure role) and revenue mobilization to MMDAs. These documents also cede the following responsibilities to the MMDAs (Local Governance Act, 2016 Section (12-13)). Some highlights of the functions are:

- Provision of political and administrative guidance of all other administrative authorities in the district;
- Exercise of deliberative, legislative and executive functions;
- Responsibility for overall development of the district, ensuring the preparation of development plans and budget execution;
- Effective mobilization of resources necessary for development in the district;
- Promotion of productive activity and social development; and
- Coordination, integration and harmonization of all programs and projects approved in the development plans for the district.

The Local Governance Act, 2016 provides MMDAs powers that requires them to be efficient in the execution of their assigned functions and responsibilities. It puts in place monitoring mechanisms to promote efficiency. At the regional level, the Constitution established the regional coordinating councils in order to provide governance on the implementation of the expenditure roles. The Constitution describes the district assemblies as the highest political authority in their jurisdiction (Article 241(3) of 1992 Constitution). The Constitution also established local government structures in order to give more people the opportunity to participate in their governance and ensure accountability. These administrative structures were established in order to support the implementation of fiscal decentralization.

Subnational entities were established as development planning authorities with the responsibility to make some financial and development decisions, but the scope and depth of their work were covered in other supporting legislation over time. Some of the other legislation included the DACF, the Local Government Establishment Instrument (1994), the National Development Planning (System) Act of 1994, and the Local Government Service Act of 2003.

Revenue assignment to the MMDAs and the authority to generate their own revenue is backed by Article 245(b) of the 1992 Constitution. This legal backing was further expatiated in the Local Governance Act, 2016 that succeeded the Local Government Act of 1993. District assemblies have fiscal authority to collect property rates (property taxes), licenses, fees and permits, yet they require three higher central government approvals in order to perform this task. These include approvals from the Minister of Local Government and Rural Development, the Minister of Finance, and Parliament, as prescribed by Section 142 (2) of the Local Governance Act, 2016.

Two political parties have won national elections in Ghana since 1992, but neither has been able to fully implement fiscal decentralization reforms that grant full fiscal autonomy<sup>21</sup> to MMDAs. The National Democratic Congress (NDC) Government championed laws in support of administrative decentralization. It included passage of the National Development Planning System Act, 1994 (Act 480), which defined the decentralized national development planning function and gave legal backing to the local planning system. In 2016, this law was merged with other laws to form the Local Governance Act, 2016. The Local Government Establishment Instrument (1994) also established town and area councils, in order to replace the town and village committees that had been responsible for rural development.

In 2003, the New Patriotic Party (NPP) championed the passage of the Local Government Service Act, 2003 and prepared the National Decentralization Action Plan of 2003 in a bid to further formalize and deepen the activities of local governments. In 2007/08, the government made public commitments to deepening fiscal decentralization ahead of the 2008 elections.

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<sup>21</sup> MMDAs have been granted legal right to collect some local taxes but many of them do not have the capacity to mobilize the required sources to finance their budgets. They have not been able to overcome political and administrative hurdles that limit their ability to fully exercise the legal provisions. From the perspective that outcomes matter in determining the impact of an event, I am of the opinion that if an MMDA is given all the legal powers to be fiscally autonomous and yet it is not able to exercise the authority for decades, then in practice, it has no fiscal autonomy.

Development partners bought into the government's commitment and helped to establish the District Development Facility in 2008, which increased transfers to local governments. During the rule of both the NPP and the NDC governments, no policies led to strengthening the capacity of local governments to have autonomy over their budgets and revenue collection.

In 2009, the NDC Government passed the Legislative Instrument (LI 1961) with the goal to reform the preparation of local budgets. The reform aimed to aggregate the budgets of the assemblies with those of the decentralized departments (such as health and education) within each jurisdiction. The reform also aimed to improve the effectiveness of local planning, budgeting and implementation of projects. It was to avoid duplication of activities within assemblies by the different departments. As a first step, the government decided to boost the budgeting capacity at the subnational level. About 30,000 staff were transferred from the civil service to the Local Government Service in order to boost MMDA capacity in lieu of rigorous implementation of fiscal decentralization reforms. The government organized nationwide training for stakeholders on the preparation of the composite budgeting<sup>22</sup>. Some of the stakeholders included district chief executives, coordinating directors, budget officers, planning officers, finance officers and heads of departments.

In addition, the government posted composite budgeting manuals and related information on the website of the Ministry of Finance and Economic Planning. In 2012, the government directed all MMDAs to prepare their budgets using a composite budget framework developed by the Ministry of Finance and Economic Planning. For the first time, MMDA budgets encompassed composite budgets of departments such as Agriculture, Community Development and Social Welfare, Town and Country Planning, Urban and Feeder Roads, and the Central Administration of the assemblies (Government of Ghana, 2015:25-26).

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<sup>22</sup> Aggregating the local budgets of assemblies with those of decentralized departments.

The initial phase of the implementation of the composite budgeting coincided with a period of severe macro-economic shocks at the national level (2009-2010), driven by wage reforms that doubled the salaries of civil service employees and the after effects of the 2008 global economic slow on central government finances. The central government could not continue transferring funds to MMDAs on time as required by law.<sup>23</sup> It resulted in some of the challenges mentioned above. The Ministry of Finance noted the challenges and addressed them in 2016 by circulating new guidelines on composite budgeting, requesting for budget support from the World Bank and Balance of Payments support from the International Monetary Fund. The budget support provided funds to ease the fiscal pressures while the IMF helped government to initiate measures to stabilize the economy and pay arrears.

The implementation of composite budgeting churned out another set of reforms and a switch from manual processes of budgeting to an automated system via a new software. The Activate software was used temporarily as government gradually rolled out the Ghana Integrated Financial Management Information System to all MMDAs. Activate allowed MMDAs to link their Medium-Term Development Plans with the national policy framework objectives and strategies. Again, MMDAs began to prepare their budgets using the harmonized Chart of Account which conforms to the national codes used by the central government.

The fiscal decentralization reforms are being guided by champions in a unit of the Ministry of Finance. In 2011, the Ministry of Finance established the Fiscal Decentralization Unit (FDU) within the Budget Department in order to lead the implementation of its 2010 Decentralization Policy Framework. The framework recognized fiscal decentralization as the critical reform required to secure resources for the local government. The FDU was resourced with well-trained experts on decentralization who advise the government on processes and policy required to

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<sup>23</sup> The timeliness of transfers affects the time value of funds that are allocated to MMDAs. Thus, some MMDAs spend in anticipation of their legally approved transfers provisioned in their annual budgets.



implement fiscal decentralization. The FDU monitors the implementation of composite budgeting, intergovernmental fiscal transfers, and design and implementation of fiscal decentralization guidelines.

### 3.3.1 Major challenges with implementation of fiscal decentralization

Ghana faced diverse challenges in the implementation of fiscal decentralization. Many of these challenges have been mentioned already in this chapter. Below are some factors that continue to impede the implementation of fiscal decentralization as explained by civil servants of the FDU of the Ministry of Finance, Agona West Municipal Assembly, Tema Metropolitan Assembly, and Accra Metropolitan Assembly through purposive data collection in 2015–16<sup>24</sup>.

The political elites' view of the role of subnational entities is critical for the implementation of fiscal decentralization. The political elites have persistently viewed the institutional framework of local governments as weak, dysfunctional and incapable of delivering the same services as the national administration. This ideology has influenced decisions on fiscal decentralization for over three decades and partly explained the transfer of staff from the National Government to the Local Government Service before the start of composite budgeting. All political parties that have won the seat of government have pursued policies aimed at strengthening the transfer mechanisms and the capacity of the local governments.

Ghana's public sector faces daunting challenges when implementing laws and major reforms. These challenges are not unique to fiscal decentralization because many other policy reforms that used a gradual approach have not been sustained. Many examples exist with the implementation of national development plans. This is not to suggest that all national plans have been unsuccessful, but long-term structural plans such as Vision 2020 have suffered from the same neglect as fiscal decentralization reforms. Besides, the 1992 Constitution and the Local

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<sup>24</sup> Through economic monitoring work as a World Bank Country economist for Ghana.

Governance Act, 2016 do not give a sunset clause on the transfers to local governments. Thus, there is no compelling need for them to work toward revenue autonomy.

The progress toward enhancing accountability and transparent governance in MMDAs has been mixed and challenging. Ghana has given a voice to grassroots through national and local elections after a long period of military rule in the 1980s, which tapered off in the early 1990s. District assembly members are elected in order to participate in local governance alongside their Parliament member. However, tracking expenditures of funds transferred from the national government to the local government remains a challenge. A major transfer to MMDAs, the District Assembly Common Funds, could be identified in the national budget statement, but it is difficult to trace all expenditures made with the fund. Its mere appearance in the national budget as a revenue source dampens the incentive for MMDAs to push for autonomy.

The current MMDA model does not include functional tax offices to aid the design and implementation of local tax policies and revenue collections. Most MMDAs outsource revenue collection to private companies that are paid 10–40 percent of their collections. The lack of tax capacities has increased MMDA reliance on transfers from the central government. Unlike the subnational entities, the central government has a stronger revenue administration.

Many local governments do not have the necessary software and hardware to maintain their economic and development databases. Some MMDAs are managing their information using manual processes. To collect revenue effectively, MMDAs are aware of the need to create a database of people that is linked to tax identification numbers, properties address (house and vehicle), and economic activities in their jurisdictions. However, many of them have not been able to create such databases in Ghana, partly because they are unable to purchase and maintain the software and information technologies systems. The situation is compounded by the absence of functional street addresses. Tema and Accra Metropolitan Assemblies reported increases in

revenue collection when they started putting together and maintaining databases of tax payers, using of point of sale devices and putting more information on their web sites. Many other MMDAs are struggling to keep pace with changing information in their jurisdictions and the lack of tools to capture the information.

The over-reliance of MMDAs on central government funding (especially the District Assemblies Common Fund) indicates their unpreparedness for full revenue autonomy (Table A.3 in Appendix A). MMDAs are guaranteed 5.0 percent of annual tax revenues (as fiscal transfers) from the central government on a quarterly basis.<sup>25</sup> A review of the budgets and financial statements found that internally generated revenues of MMDAs constituted 19 percent of their total revenues and 0.9 percent of total central government revenues in 2014. Of the total own-source revenue for 2014, the six metropolitan areas collected 39 percent, the 56 municipalities collected 34 percent, and the rest collected 27 percent of the total local revenues.<sup>26</sup> Aye and Dickovick (2014:97) note that transfers have made MMDAs in Ghana exhibit only a modest degree of subnational autonomy. This challenge is identified by Schroeder (2007:72) as prevalent in many developing countries, leading to design of many types of transfer programs and many allocation rules. The situation has reduced the local governments' control over their revenue and expenditure policies. It is obvious that politics and non-technical factors are more likely to influence the revenue and expenditure policies of local governments when they lose their control.

The administrative architecture for transferring funds from the central government to MMDAs is a major challenge to fiscal decentralization in Ghana. The Ministry of Finance is required by

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<sup>25</sup> MMDAs got 7.5 percent of tax revenue until 2016. In 2017, the government integrated the District Development Facility into the District Assemblies Common Fund and reallocated 2.5 percent of the total (7.5 percent) to the DACF Responsiveness Grant. The 2.5 percent of tax revenue funds the performance element of the DACF.

<sup>26</sup> As at 2018, the 6 metropolitans collected 31 percent of total national own source revenues, 88 municipal assemblies collected 44 percent and 160 district assemblies collected 25 percent. Also, Metropolitans received 9 percent total grants to assemblies, municipals got 39 percent and districts had 52 percent in 2018 from all sources.

law to transfer the funds for the District Assemblies Common Fund to its administrator, who determines the amount to allocate to each MMDA, based on a formula<sup>27</sup> approved by Parliament. The DACF administrator purchases some goods in bulk for all MMDAs and sends them the rest of the funds. This practice reduces the expenditure autonomy of MMDAs. Meanwhile, bureaucratic processes delay the transfer of funds, which affects MMDA budget execution.

### 3.4 Status and impact of fiscal autonomy on regional growth in Ghana

Local fiscal autonomy is associated with the relative size of local budgets to total public spending and thus, as this ratio increases, local fiscal autonomy is perceived to also improve in tandem (Mogues and Benin, 2012:1057). Fiscal autonomy has two components: expenditure autonomy and revenue autonomy. These components are discussed separately below.

#### 3.4.1 Status of fiscal autonomy in Ghana: Expenditure assignment

The expenditure assignment in Ghana is defined by the 1992 Constitution and the Local Governance Act, 2016 for central government, regions and MMDAs. The central government plays the overarching role, with responsibility for macro-economic management, collection of various taxes, and execution of national projects. Regions and MMDAs are allocated the meso-responsibilities. Ghana's framework for allocating expenditure functions is provisioned in Article 245 of the 1992 Constitution. The functions are based on principles of efficiency, effectiveness, scale of the role, scale of cost and population size. The MMDA roles are delineated in the Local Governance Act, 2016. These roles include responsibility for basic education, primary health, construction of roads, provision of drinking water, agriculture, conservation practices, welfare, community development and protection of cottage industries.

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<sup>27</sup> The formula has components for need, responsiveness, service pressure, equality, and contingency (also called reserve). The weights allocated to these components are not static and have been changing since 1994.

Ghana classifies the expenditure functions into three broad categories: policy, production and provision.<sup>28</sup> Policy responsibility involves setting the overall goal and standards, while production involves design, construction and management. The provision responsibility involves execution of the budget and delivery of services. All three functions are coordinated among central and local governments, in order to ensure efficiency in the delivery of public services. The functions of each layer of government are clearly defined and coordinated. Expenditure assignments to the national, regional and district levels are implemented without duplication. The system ensures efficient allocation of scarce resources. Central government performs functions related to policy, standards, guidelines and salary payments, while local governments are responsible for the actual service delivery. Regional coordinating councils are responsible for coordinating and monitoring the implementation of policies. Table 3.4 shows the responsibility of various government entities.

The provision responsibility encompasses decision-making on budget planning and execution. MMDAs play an active role in budget preparation, but their decisions require endorsement by the approving authorities. MMDA budgets are routed through the MLGRD to the Ministry of Finance, and then sent, together with other submissions, to Parliament for approval.

As noted in Chapter 2, expenditure autonomy is the percentage of own expenditure under the effective control of assemblies (Shah, 2004:17). MMDAs' control encompass their authority to conduct fiscal policy at the local level, ability to decide on the types of expenditures needed in

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<sup>28</sup> These categories allow Ghana's framework to satisfy the expenditure assignment principles of fiscal decentralization. For instance, the Local Governance Act provides a clear delineation of expenditure assignments needed for service delivery and avoids duplication of roles. It also provides the framework for the use of resources and provides for oversight of responsibilities. The 1992 Constitution of Ghana addresses challenges of unfunded mandates by providing local governments a minimum of 5 percent of central government tax revenues. The funding sources of each tier of government are properly defined in the Local Government Act (1993) and Local Governance Act (2016). Assemblies are required to implement their functions based on defined funding sources. There is a clear link between tasks assigned to assemblies and the financing, especially a constitutional provision to provide intergovernmental transfers. Assemblies also have tax assignments. The subsidiary principle is partly satisfied because assemblies are rightfully close to the citizens and they are expected to have sufficient capacity to undertake their tasks. However, many of assemblies are not sufficiently efficient at collecting taxes. In terms of budgeting, there is clarity about the use of resources for capital and recurrent expenditures in Ghana.

their jurisdictions, capacity to finance their expenditures, and to decide the time for implementing projects. In Ghana, MMDAs have authority to decide on some projects, policy reforms, and activities needed in their jurisdictions through a medium-term development policy framework. These frameworks identify challenges, potential and opportunities within each MMDA and how they can be addressed with a four-year period. The annual budget itself goes through a thorough internal process. The District Planning and Coordinating Unit prepares the list of projects for approval by an executive committee, and later assembly members before it is sent out for further approvals (Williams, 2017:6-7). The budget is submitted to the Regional Coordinating Council and the Ministry of Local Government and Rural Development for approval before implementation. On annual basis, Local Governance Act 2016, section 170 (1) authorizes assemblies to incur any expenditure for and incidental to carrying out conferred functions as approved in their budgets for the year and within the development plan. An MMDA budget is approved first by its assembly members before it is submitted to the central government approval.

Expenditure autonomy could be enshrined in a legislation, but it may not be really effective because of other central government laws, dependency on transfers and local norms (Bird and Wallich, 1993:7). In Ghana, the dependency on transfers is large. Expenditure autonomy is limited with respect to the financing of local budgets because approximately 80 percent of the expenditures are financed with grants from the government and development partners. Section 170 (2) of the Local Governance Act 2016 limits the use of the government transfers (known as the District Assemblies Common Fund) to projects approved by the Ministry of Local Government and Rural Development in an Assembly's development plan. Also, the Earmarked Funds Capping and Realignment Law, 2017 caps all earmarked funds including the DACF to 25 percent of central government tax revenue and thus, it allows the central government to fund national projects with earmarked funds assigned to assemblies. MMDAs expenditure autonomy

gets further limited through budget guidelines issued by Ministry of Finance which have expenditure ceilings and allocations to be followed annually by MMDAs. In the 2017 and 2018 national budgets, capped expenses are classified in appendix 6 as key policy initiatives. For instance, the 2017 national budget required the Ministry of Local Government and Rural Development to implement a national address system using statutory funds (in this case, the DACF). In 2020, the central government instructed all assemblies to use some of their district development fund for expenses related to Covid-19 pandemic. These directives and allocations limit the autonomy of assemblies in Ghana.

**Table 3.4: Distribution of expenditures of assemblies in Ghana from 2010 to 2016 (as a percentage of total local expenditure).**

| Expenditure items                     | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | Comment          |
|---------------------------------------|-------|-------|-------|-------|-------|-------|-------|------------------|
| Recurrent expenditure                 | 34.7  | 30.3  | 36.1  | 55.8  | 56.8  | 54.4  | 48.3  | Both LG and CG   |
| Of which: Compensation of Employees   | 19.4  | 17.0  | 23.9  | 26.5  | 22.5  | 20.8  | 21.4  | Mostly CG        |
| Of which: Goods and Services          | 7.5   | 7.7   | 7.3   | 16.5  | 21.2  | 21.4  | 18.3  | Mostly LG        |
| Of which: Other recurrent expenditure | 7.7   | 5.6   | 5.0   | 12.8  | 13.1  | 12.1  | 8.6   | Both LG and CG   |
| Capital expenditure                   | 65.3  | 69.7  | 63.9  | 44.2  | 43.2  | 45.6  | 51.7  | Mostly CG and DP |
| Total expenditure                     | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | Mostly CG        |

Source: Ministry of Local Government and Rural Development. Note: LG represents expenditure paid for using own source revenue by assemblies. CG represents expenditure paid for using by central government transfers. DP represents expenditure paid for with transfers from development partners.

Capital expenditure in assemblies are usually financed using transfers from the central government and development partners. Available data from the Ministry of Local Government and Rural Development for the period 2010 to 2016 show that the share of capital expenditure

in total MMDA expenditure declined during the period. Recurrent expenditure of assemblies is shared between the central government and local authorities. Compensation of employees is paid for mainly by the central government except those of contract workers engaged by assemblies. Local government own-source revenues are used to finance goods and services, and other recurrent expenditure items such as travels, maintenance, rehabilitation of government buildings and miscellaneous services. To a large extent, the expenditure of MMDAs are controlled by the source of funding, though MMDAs implement the projects in their jurisdictions. This is because the implementation of the projects is affected by the policy changes from the source of funds. For instance, in 2018, the government of Ghana re-allocated 2.5 percent of the District Assemblies Common Fund to finance its contribution of the District Development Facility upon the request of development partners in the country.

Expenditure autonomy requires subnational governments to be accountable for all the decisions they make in their budgets and need to match their own source revenues with their expenditures (Shah, 2004:17-18). In the case of Ghana, this accountability is enforced during the budget cycle through Minister of Local Government and Rural Development. Ineffective accountability of local governments could affect financing required for the local budgets (Bird, 2010a:28-33).



**Table 3.5: Assignment of responsibility at various levels of government in Ghana**

| Responsibility  | Government entity   |
|---|---|
| Policy responsibility involves setting overall service goals, standards & norms, monitoring & evaluation and guiding implementation.                                  | Central government, but with scope for local government to set norms within limits for local public services and local revenue rates. Local governments are also responsible for monitoring and evaluation. |
| Production responsibility involves designing, constructing, operating and managing service delivery.  | Local governments, deconcentrated line department service delivery units. They may work with the private sector, non-governmental organizations (NGOs) and community groups.                                |
| Provision responsibility involves providing goods and services through planning, budgeting, procuring, overseeing delivery and being answerable for service delivery. | Local governments, except for economies of scale and jurisdictional spillovers, but with financing and implementation assistance from the central government.   |

Source: Government of Ghana Intergovernmental Fiscal Framework (2014).

Having a clear assignment of expenditure responsibilities is the first step in improving service delivery. However, among countries that have been successful in their reforms such as the Czech Republic, Hungary, Poland, Estonia, Slovak Republic and Lithuania, the major problem that they faced is excessive fragmentation of municipalities (as part of their democratization in post-Soviet era) which has compromised the efficiency of service delivery. Hungary and the Czech Republic are good examples of countries that have traded off service delivery with municipal fragmentation (Dabla-Norris and Wade, 2002:10). Interestingly, the government of Albania implemented a project (called Star 2) in 2013 that consolidated territorial and administrative divisions of local government units (from more than 300 to 61 municipalities) with the objective to strengthen their capacities, increase efficiency of service delivery and enhance local democracy (UNDP, 2019).

In Ghana, the Local Governance Act clearly assigns the responsibilities for service delivery to assemblies. The exercise of greater central government control over the local budgets to improve service delivery should not be viewed as a negative attitude as long as local governments have flexibility to match the preferences of the locals to their needs (Joint United Nations Development Program and Government of Germany, 1999:12).

Table 3.6 shows a decline in the share of MMDA expenditure in total government expenditure from 4.3 percent in 2011 to 3.0 percent in 2016.<sup>29</sup> The share of capital expenditure also fell from 3.0 percent in 2011 to 1.6 percent in 2016. However, the share of recurrent expenditure increased from 1.3 percent to 1.7 percent in 2014 but fell to 1.5 percent in 2016. The deployment of local government staff to MMDAs did not affect the compensation to employees, which remained stable at 0.7 percent because the central government continued to absorb their salaries. However, the administrative cost associated with the deployments partly accounts for the rise in recurrent expenditure.

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<sup>29</sup> It is noted that proxies for expenditure decentralization or assignment may be limited. The ratio of own spending of subnational governments to general government spending was about 49 percent in South Africa, 15 percent in Kenya and 14.6 percent in Uganda in 2016 (IMF, 2019).

**Table 3.6: Metropolitan, municipal and district assemblies' expenditure as a percentage of total government expenditure in Ghana**

|                             | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------|------|------|------|------|------|------|
| Compensation of employees   | 0.7  | 0.7  | 0.7  | 0.7  | 0.6  | 0.6  |
| Use of goods and services   | 0.3  | 0.2  | 0.4  | 0.6  | 0.6  | 0.6  |
| Other recurrent expenditure | 0.2  | 0.1  | 0.3  | 0.4  | 0.3  | 0.3  |
| Total recurrent expenditure | 1.3  | 1.0  | 1.5  | 1.7  | 1.6  | 1.5  |
| Capital expenditure         | 3.0  | 1.8  | 1.2  | 1.3  | 1.3  | 1.6  |
| Total expenditure           | 4.3  | 2.9  | 2.6  | 2.9  | 2.9  | 3.0  |

Source: Compiled by the author with reference to MLGRD data, 2019.

The regional distribution of expenditure shows that local government expenditure decreased in percentage of central government expenditures in all regions. The fall in the expenditure share is underpinned by a decline in share of investment expenditures in all regions between 2011 and 2016. The share of recurrent expenditure increased in five regions (Eastern, Western, Northern, Volta and Central). In two regions (Upper West and Brong Ahafo), the share of recurrent expenditures remained the same, but it declined in Greater Accra, Ashanti and Upper East Regions. The distribution of the expenditure shares is shown in Table 3.7.

**Table 3.7: Regional distribution of aggregate subnational expenditures in percentage of total government expenditure in Ghana**

| Region/ Year | Recurrent expenditure |      | Capital expenditure |      | Total expenditure |      |
|--------------|-----------------------|------|---------------------|------|-------------------|------|
|              | 2011                  | 2016 | 2011                | 2016 | 2011              | 2016 |
| Eastern      | 0.11                  | 0.12 | 0.32                | 0.20 | 0.43              | 0.32 |
| Western      | 0.11                  | 0.17 | 0.30                | 0.13 | 0.41              | 0.30 |
| Northern     | 0.06                  | 0.15 | 0.39                | 0.17 | 0.45              | 0.32 |

|               |      |      |      |      |      |      |
|---------------|------|------|------|------|------|------|
| Volta         | 0.07 | 0.10 | 0.31 | 0.12 | 0.38 | 0.23 |
| Upper West    | 0.05 | 0.05 | 0.14 | 0.06 | 0.19 | 0.12 |
| Upper East    | 0.08 | 0.07 | 0.19 | 0.09 | 0.27 | 0.16 |
| Brong-Ahafo   | 0.13 | 0.13 | 0.34 | 0.20 | 0.47 | 0.33 |
| Ashanti       | 0.24 | 0.23 | 0.47 | 0.23 | 0.70 | 0.46 |
| Greater Accra | 0.38 | 0.31 | 0.27 | 0.24 | 0.64 | 0.55 |
| Central       | 0.08 | 0.13 | 0.29 | 0.11 | 0.37 | 0.24 |
| Total         | 1.3  | 1.5  | 3.0  | 1.6  | 4.3  | 3.0  |

Source: MLGRD (MMDA data) and Ministry of Finance (Total government expenditure).

### 3.4.2 Status of fiscal autonomy in Ghana: Revenue Assignment

In Ghana, fiscal autonomy is intimately linked to the relative size of own-sourced revenues of assemblies to the total revenues of government (Mogues and Benin, 2012:1057). Own-source revenues (also called internally generated funds) are the main source of revenues over which assemblies are empowered to exercise administrative control. Ghana's Local Governance Act, 2016 details the revenue sources of MMDAs to include levies, fees, property taxes, and licenses (See Table 3.3). These revenue sources have been exclusively given to MMDAs without any form of base or rate competition from the central government. In 2018, the 6 metropolitans collected 31 percent of total national own source revenues, 88 municipal assemblies collected 44 percent while 160 district assemblies collected 25 percent. Metropolitans received 9 percent total grants to assemblies, municipals got 39 percent and districts had 52 percent in 2018 from all sources. The central government has also taken exclusive right under the financial administration laws to collect personal and corporate income taxes, value added taxes and custom taxes. It also receives non-tax revenues from the Driver and Vehicle Licensing Authority and internally generated funds from ministries, departments and agencies. Thus, the distribution

of tax bases is defined under the laws of Ghana, whether the distribution has been equitable or not.

Revenue assignment needs to be equitable and periodically rebalanced in order to reflect the changing capacities of the central and local governments. The assignment of taxing rights to MMDAs brings to light the issues of MMDA capacity to tax, tax base competition, cost of tax administration, identification of tax payers and decision-making power on tax policy. The six metropolitan assemblies and some assemblies with higher capacity tend to collect substantial proportions of their tax potential because the high volume of economic activities in these areas and the associated rapid infrastructural development. However, a large number of low capacity assemblies are unable to fully exercise the taxing authority provided them under the Local Governance Act. In poor districts, high administrative cost could slow aggressive taxes collection and likely to reduce the incentive to go after defaulting tax payers. It is noted that the basic architecture to support revenue autonomy of assemblies in Ghana may be in place but low capacity of assemblies to take full advantage of the powers given them in the Local Governance Act, 2016 (and the repealed Local Government Act, 1993) reduces their ability to increase their autonomy. The capacity of assemblies is further weakened by fragmentation through the creation of more districts.

Other issues of concern include the setting up of the infrastructure and architecture for tax administration, and the ability to manage issues concerning tax compliance, tax evasion and tax avoidance. In Ghana, many districts have not developed the capacity to manage complex tax issues. MMDAs do not keep data on exemptions granted in terms of section 149 (1)-(2) of the Local Governance Act, 2016. The local government Acts and the financial administration Acts are not regularly reviewed with the aim to rebalance the revenue sources of local governments. Assemblies have had low revenue collections for decades partly because the leadership of assemblies are not elected directly by residents in their jurisdictions and hence not fully

accountable to the people. Also, there is low incentive for assemblies to go after tax revenues because of guaranteed transfers from the central government.

As discussed in Chapter 2, assigning revenue sources to local governments to enable them to finance their expenditures is critical for fiscal decentralization. Global evidence on tax assignment shows that rebalancing revenue sources to give more discretionary powers to subnational entities may not necessarily crowd out central government revenues. Subnational governments in industrial countries receive five times greater tax assignments than developing countries (Bahl and Cyan, 2011:274). This indicates that developing countries face specific challenges that constrain them from giving tax autonomy to subnational entities. Some of these include the cost of administration of taxes, inadequate local capacity, poverty, politics and underdevelopment. Bahl and Cyan (2011:271) identify fiscal disparities as one of the factors hindering tax assignment. Overall these factors tend to lower the confidence of central governments in the taxing abilities of local governments.

One important feature of tax administration that appears to be underdeveloped in many MMDAs in Ghana is the lack of established business process for revenue collection. The metropolitan assemblies tend to have better formal systems for identifying tax payers to pay licenses, fees and fines and to obtain business permits. There are generally capacity issues with the collection of property taxes. In many municipalities and districts, the business systems to collect local taxes are based on manual processes. Some districts do not have operational tax offices or publicly accessible bank account numbers that could be used by tax payers in order to voluntarily pay their taxes. Tax administration is influenced by informality and lack of modern business systems. As a result, groups and associations that help to identify tax payers in districts have become very powerful. Examples are market women and drivers' associations. These associations could resist increases in charges imposed by the assemblies. The nature of the

informality in district tax administration makes enforcement a very large and rather expensive task in Ghana.

Ghana is not an exceptional case where capacity to collect local taxes is a challenge. In jurisdictions where the law explicitly grants authority to subnational entities, the transition between the approval of the law and the implementation is often challenging. Dabla-Norris and Wade (2002:20-27) note that even advanced decentralization reformers across the world devolve limited revenue authority to subnational governments by regulating approaches for revenue collection. The rigidity in assigning revenue tasking powers and the difficulty in collecting the actual revenues is not limited to developing countries like Ghana. Subnational governments in advanced reform<sup>30</sup> countries such as the Czech Republic, the Slovak Republic, Hungary and Poland collect 30 – 40 percent of their subnational revenues, while subnational revenue autonomy in many transition countries is virtually non-existent. Some intermediate reformers have empowered their subnational governments to collect more, such as Romania (33 percent), Russia (43 percent) and the Ukraine (31 percent),<sup>31</sup> (Dabla-Norris and Wade, 2002:27). MMDAs in Ghana collect less than 2 percent of total government revenues (Table 3.8).

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<sup>30</sup> Dabla-Norris and Wade (2002:6) categorized countries into advanced reformers, intermediate reformers and slow reformers. The advanced reformers were the Eastern European and Baltic countries that made rapid progress in establishing fiscal institutions, controlling fiscal imbalances, and redefining the role of the state. The advanced reformers were able to maintain moderate overall public sector deficits, revenue shares in GDP, and have more stable macroeconomic conditions. Intermediate reformers and slow reformers are countries that have been less successful in achieving the factors mentioned above.

<sup>31</sup> Statistics from Dabla-Norris and Wade (2002:27).

**Table 3.8: Metropolitan, municipal and district assemblies' own revenue collections in percentage of total government revenues and total subnational revenues in Ghana**

| Year   | Rates | Lands | Rent | Licenses | Fees | Fines | Other revenue | Total local revenues |
|--|-------|-------|------|----------|------|-------|---------------|----------------------|
| <b>In percentage of Total Central Government Revenue</b> |       |       |      |          |      |       |               |                      |
| 2011   | 0.17  | 0.10  | 0.26 | 0.21     | 0.04 | 0.02  | 0.06          | 0.85                 |
| 2012   | 0.16  | 0.13  | 0.21 | 0.17     | 0.03 | 0.02  | 0.04          | 0.76                 |
| 2013   | 0.13  | 0.10  | 0.03 | 0.20     | 0.17 | 0.03  | 0.04          | 0.69                 |
| 2014   | 0.15  | 0.17  | 0.03 | 0.20     | 0.16 | 0.03  | 0.04          | 0.77                 |
| 2015   | 0.16  | 0.15  | 0.02 | 0.17     | 0.15 | 0.03  | 0.04          | 0.72                 |
| 2018   | 0.16  | 0.17  | 0.03 | 0.17     | 0.15 | 0.02  | 0.03          | 0.72                 |
| <b>In percentage of Total Subnational Revenue</b>        |       |       |      |          |      |       |               |                      |
| 2011   | 3.9   | 2.3   | 5.8  | 4.7      | 0.8  | 0.5   | 1.4           | 19.3                 |
| 2012   | 4.3   | 3.6   | 5.6  | 4.4      | 0.8  | 0.5   | 1.1           | 20.2                 |
| 2013   | 3.3   | 2.6   | 0.8  | 5.1      | 4.3  | 0.7   | 1.0           | 18.0                 |
| 2014   | 3.1   | 3.4   | 0.5  | 4.1      | 3.4  | 0.7   | 0.7           | 16.0                 |
| 2015   | 4.0   | 3.9   | 0.5  | 4.4      | 3.8  | 0.9   | 1.0           | 18.5                 |
| 2018   | 5.0   | 5.6   | 0.8  | 5.6      | 4.8  | 0.7   | 0.8           | 23.3                 |

*Source:* MLGRD (MMDA data) and Ministry of Finance (Total government revenue).

Like many other countries in the developing world, Ghana's MMDAs do not have full revenue autonomy. Smoke (2003:12) notes that countries that took political decisions to decentralize have begun to recentralize in order to resolve regional challenges and weak capacity problems. Two countries that took strong political decisions to decentralize local governments are Brazil and South Africa. They gave subnational governments enormous powers under their constitutions. Ethiopia created strong federal systems and relaxed central control, Uganda shifted a lot of power and finances to local governments by making changes to its constitution and passing a new local government act, and others such as Indonesia and Cambodia empowered the local governments. In Ghana, the Local Governance Act, 2016 has already empowered assemblies to impose local taxes and to benefit from intergovernmental transfers,<sup>32</sup> donations

<sup>32</sup> Section 124 (2) of the Local Governance Act 2016, list the intergovernmental transfers (also called decentralized transfers) to include the District Assemblies Common Fund, grants-in-aid from the central government, and any other revenue transferred from the central Government to assemblies. Own source revenues could be generated from licenses, fees and miscellaneous charges, taxes, investment income and rates.



and grants. As noted above, the main challenge affecting these assemblies is their inability to collect the revenues, implying that the granting of legal powers as in the case of Brazil, South Africa and other countries is not enough to motivate subnational governments in Ghana to significantly collect more revenues. Local own revenue collection in Ghana is below 1 percent of central government total revenue and revenue sharing agreements with Ghana Revenue Authority are rare (Table 3.8). Relative to 2011, subnational governments are collecting more own-source revenues in 2018. However, many MMDAs lack the capacity to collect their revenues as identified by Government of Ghana (2016c:25-26). Smoke (2003:12) concludes that in countries where there is strong political will, decentralized reforms could overwhelm local governments with weak capacity and result in a situation where accountability to local constituents becomes a challenge or remains unaddressed. Table 3.9 shows the distribution of own revenue collection and grants in Ghana from 2005 to 2016. It indicates the low revenue performance of subnational entities in Ghana.

**Table 3.9: Metropolitan, municipal and district assemblies' revenue in percentage of total subnational revenues in Ghana**

| Year | Own source revenue | Grants |
|------|--------------------|--------|
| 2005 | 18.3               | 81.7   |
| 2010 | 22.4               | 77.6   |
| 2011 | 19.3               | 80.7   |
| 2012 | 20.3               | 79.7   |
| 2013 | 18.2               | 81.8   |
| 2014 | 19.0               | 81.0   |
| 2015 | 18.3               | 81.7   |
| 2016 | 18.8               | 81.2   |
| 2018 | 23.3               | 76.7   |

Source: MLGRD.

In Ghana, political motivations dominate the process for setting tax rates in subnational entities because Metropolitan, Municipal and District Chief Executives are heads of the local governments. Districts are empowered by Section 144-145 of the Local Governance Act, 2016 to levy rates and other taxes. However, political appointees (especially district chief executives) often participate in the process, as they are involved in determining rates for the district. The rates are set in consultations with the residents in the community as well as with inputs from the locally elected assemblymen and women.<sup>33</sup> This process leads to a fee fixing resolution which is sent to government gazette to end the process. After districts decide on the rates and fees for any year, the Minister of Local Government must approve it before it can be implemented as part of his oversight and coordination role. This participation in the administrative processes for rate setting could undermine the decentralization process if not well managed or not simply procedural, but on the positive side it may be important in avoiding inequity across MMDAs. Smoke (2015:101) confirms that national politics could undermine decentralization policies. The political parties and governments could manipulate the rate setting to their advantage in elections.

The possibility of losing elections if local tax rates are raised influences the decisions of political heads when approving new rates. This has led to low rates and delays in the implementation of new rates across the districts in Ghana over the past decade. Section 150 of the Local Governance Act, 2016 authorizes the Minister of Local Government and Rural Development to issue guidelines for fixing rates, but this has not been done for almost two decades. Unfortunately, the last guidelines were produced in January-February 1993, leaving rate setting completely unguided until 2018. An enquiry in January 2018 to the MLGRD indicates that new guidelines for MMDAs are now under preparation.

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<sup>33</sup> These are locally elected representatives of the people to the assembly. They debate and approve development decisions at the local level.

Before 2018, local tax rates were kept artificially low in Ghana because each MMDA implemented its updated versions of the January-February 1993 guidelines on rate setting. According to Blöchliger and Nettley (2011:3) revenue autonomy encompasses the right to introduce or to abolish a tax, to set tax rates, to define the tax base, or to grant tax allowances or relief to individuals and firms. MMDAs in Ghana have authority to propose rates within their jurisdictions. While MMDAs can collect fees, licenses, permits, rents, user charges and property taxes, the responsibility to design and collect rates is within the purview of local governments. MMDAs do not own nor do they have control over the entire process. All taxes are submitted by the central government (through the Ministry of Finance) to Parliament for approval. The Revenue Administration Act of 2016, Act 915 Section 1 states that the Ghana Revenue Authority is responsible for administering and giving effect to laws in accordance with Act 791 of 2009. This law further centralizes the preparation and implementation of taxing laws and functions in Ghana. Judging by the definition provided by Blöchliger and Nettley (2011:3), local governments in Ghana do not seem to have tax autonomy.

Full control and autonomy over revenue requires financial and political accountability of subnational governments. Sud and Yilmaz (2013:107) stress the need for strong measures of accountability before devolving discretion or autonomy to local governments. The process of accounting for funds is yet to fully gain root in the policy decision-making of subnational governments in Ghana. While a robust system exists for reporting the financial statements to the central government, the reports are not made public. It is extremely difficult for any individual or institution to use the data to hold local governments or central government accountable for grants received or given, revenues collected, and expenditures made. It is difficult to get the data.

The lack of accountability in some subnational governments could be perpetuated by central government appointment of local government leadership. Instead of allowing the local people

to elect their own leaders, the central government appoints the district chief executive. This limits the extent to which the local people can practically hold them accountable. The Auditor General's Report of District Assemblies (2012:1-10) attributed the lack of accountability in Ghana to deficiencies and weaknesses in internal controls in most districts. The weaknesses were observed in areas such as non-compliance with existing legislative framework and instruments, managerial lapses and weak monitoring procedures at the ministerial, legislative and administrative levels of the MMDAs.

Local revenue generation is very low in Ghana. Own revenue generation by MMDAs is small (at about 1 percent) as a percentage of total government revenue and represents about 19 percent of total local government revenue between 2011 and 2016 (Table 3.9). While this ratio is unlikely to change unless deliberate policies are implemented in order to change the status quo, subnational units are comfortably entrenched in getting the central government to fund local projects, such as roads, health care, education and provision of water. The situation is further exacerbated by the attribution of success and failure to develop the rural areas to the central government by the local people.

Within African countries for which there are data, South Africa, Rwanda and Kenya report significant local revenue collection in percent of GDP.<sup>34</sup> In Kenya, significant decentralization occurred under the 2010 Constitution in 2013 after the election of the new county governments. As a result, there was significant progress in Kenya's local revenue collections from 0.6 percent of GDP in 2010 to 4.4 percent of GDP in 2016. South Africa is the highest revenue performer on the list (see Table 3.10), showing increased local revenue collection from 7.6 percent of GDP in 2010 to 8.3 percent in 2016. Mauritius and Malawi are among the countries that experienced slight deterioration of the revenue collection in percentage of GDP, or local revenue collection

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<sup>34</sup> Some of Rwanda's local government taxes are collected by the central government.

has not grown in line with the expansion of the economy between 2010 and 2016. It could be observed that countries that have embraced local reforms such as Kenya have been able to improve their revenue collection.

**Table 3.10: Local government revenues as a percentage of GDP in selected countries<sup>35</sup>**

| Country      | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------|------|------|------|------|------|------|------|
| Ghana        | 1.0  | 0.9  | 0.8  | 0.6  | 0.6  | 0.7  | 0.7  |
| Kenya        | 0.6  | 0.8  | 0.5  | Na   | 4.4  | 4.2  | 4.4  |
| Malawi       | Na   | 1.4  | 1.3  | 1.2  | 0.7  | 0.9  | 0.8  |
| Mauritius    | 1.1  | 1.0  | 1.0  | 0.9  | 1.0  | 0.5  | 0.9  |
| Rwanda       | Na   | Na   | Na   | Na   | 5.6  | 5.7  | 5.6  |
| South Africa | 7.6  | 8.3  | 7.7  | 7.8  | 8.0  | 8.2  | 8.3  |
| Tanzania     | Na   | Na   | 4.1  | 4.2  | 4.2  | 3.3  | 4.1  |
| Uganda       | 3.4  | 3.1  | 3.0  | 2.9  | 3.2  | 3.1  | 3.1  |

Source: IMF Government Finance Statistics, 2019. Note: Na = Not available

Local expenditure data available for African countries listed in Table 3.10 and Table 3.11 reveal that most countries spend less than the revenues they collect. For instance, in 2016, South Africa collected revenues equivalent to 8.3 percent of GDP but only spent 7.3 percent, Tanzania collected 4.1 percent of GDP but spent 3.7 percent of GDP, while Uganda collected 3.1 percent of GDP and spent 2.8 percent. These numbers indicate that many of the local governments in this sample may be running budget surplus and possibly low debt.

**Table 3.11: Local government expenditure as a percentage of GDP in selected African countries**

| Country           | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------|------|------|------|------|------|------|------|
| Republic of Congo | 0.4  | 0.4  | 0.5  | Na   | Na   | Na   | Na   |
| Cabo Verde        | 3.1  | 2.7  | 2.8  | Na   | Na   | Na   | Na   |
| Ghana             | 0.9  | 1.0  | 0.8  | 0.6  | 0.6  | 0.6  | 0.7  |

<sup>35</sup> The Government Finance Statistics manual (2014:407) describes local governments as “institutional units whose fiscal, legislative, and executive authority extends over the smallest geographical areas distinguished for administrative and political purposes”. Local governments expenditure is incurred at the level of districts.

|                       |     |     |     |     |     |     |     |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|
| Kenya                 | 0.6 | 0.6 | 0.7 | Na  | 2.1 | 2.8 | 2.9 |
| Malawi                | Na  | 1.1 | 1.1 | 1.0 | 0.6 | 0.7 | 0.6 |
| Republic of Mauritius | 0.8 | 0.8 | 0.7 | 0.8 | 0.8 | 0.4 | 0.8 |
| Rwanda                | Na  | Na  | Na  | Na  | 4.4 | 4.3 | 4.2 |
| South Africa          | 7.2 | 8.1 | 7.2 | 7.3 | 7.5 | 7.6 | 7.3 |
| Tanzania              | Na  | Na  | 3.3 | 3.5 | 2.8 | 3.3 | 3.7 |
| Uganda                | 3.1 | 2.9 | 2.8 | 2.8 | 2.9 | 2.9 | 2.8 |

Source: IMF Government Finance Statistics 2019.

### 3.5 Transfers and fiscal decentralization

The intergovernmental transfer is an important pillar of fiscal decentralization and constitutes a large proportion of MMDAs revenue in Ghana. Most MMDAs in the country consider intergovernmental transfers as the main source of revenue, even though the Ministry of Finance perceive it as being used to fill the gap between local revenue collections and the resources needed to undertake the expenditure assignment of subnational entities. Ghana's 1992 Constitution recognizes that the revenue collections of MMDAs are weak and thus makes provision for the central government to transfer a proportion of its tax revenue to all MMDAs. The MMDA own revenue performance against intergovernmental fiscal transfers confirm high dependence on these transfers across regions.

However, the dependence on intergovernmental transfers in 2016 (see Table 3.12) is more prevalent in regions of the north of Ghana - Northern (94.16 percent), Upper West (93.89 percent), Upper East (93.14 percent) and Volta (92.19 percent). These regions happen to be among the poorest areas of Ghana. The dependence is lower in richer regions such as Greater Accra (61.98 percent) and Western (72.03 percent). This is achieved through the intergovernmental transfers formula that allocates less grants to MMDAs that collect more own source revenues and more intergovernmental transfers to poorer areas. Compared to 2005, the dependence on intergovernmental transfers was reduced in eight regions. These are the Eastern,

Western, Northern, Upper West, Central, Ashanti, Brong Ahafo and Upper East Regions. However, it increased in the Greater Accra and Volta Regions.

The total revenue received by all regions in Ghana increased on average by about 10 times in 2010 per capita cedi terms between 2005 and 2016. Own revenue collection per capita more than doubled during the period in all regions, showing gradual progress toward MMDA autonomy. The three regions which had the strongest performance in own revenue collection were the Greater Accra, Western and Ashanti regions. Table 3.12 indicates that there is room for all MMDAs across the regions to improve own revenue collection and those that are improving to further develop a system to collect more revenue.

**Table 3.12: Total metropolitan, municipal and district assemblies' revenue in Ghana cedi disaggregated by region (based on per capita 2010 population)**

| Regions       | 2005          |      |           |       |           | 2016  |               |       |           |       |           |  |
|---------------|---------------|------|-----------|-------|-----------|-------|---------------|-------|-----------|-------|-----------|--|
|               | Total revenue |      | Own funds |       | Transfers |       | Total revenue |       | Own funds |       | Transfers |  |
|               | GHS           | GHS  | %         | GHS   | %         | GHS   | GHS           | %     | GHS       | %     |           |  |
| Eastern       | 2.42          | 0.27 | 11.27     | 2.14  | 88.73     | 56.21 | 7.99          | 14.21 | 48.22     | 85.79 |           |  |
| Western       | 5.92          | 1.37 | 23.14     | 4.55  | 76.86     | 61.45 | 17.19         | 27.97 | 44.26     | 72.03 |           |  |
| Northern      | 6.59          | 0.25 | 3.78      | 6.35  | 96.22     | 64.73 | 3.78          | 5.84  | 60.95     | 94.16 |           |  |
| Volta         | 6.24          | 0.58 | 9.35      | 5.66  | 90.65     | 56.53 | 4.42          | 7.81  | 52.11     | 92.19 |           |  |
| Upper West    | 11.22         | 0.53 | 4.76      | 10.68 | 95.24     | 79.63 | 4.86          | 6.11  | 74.77     | 93.89 |           |  |
| Upper East    | 8.59          | 0.46 | 5.32      | 8.14  | 94.68     | 66.81 | 4.59          | 6.86  | 62.22     | 93.14 |           |  |
| Brong-Ahafo   | 7.50          | 0.89 | 11.83     | 6.61  | 88.17     | 70.46 | 8.86          | 12.57 | 61.60     | 87.43 |           |  |
| Ashanti       | 5.29          | 0.82 | 15.49     | 4.47  | 84.51     | 48.31 | 10.67         | 22.09 | 37.64     | 77.91 |           |  |
| Greater Accra | 9.64          | 3.91 | 40.53     | 5.74  | 59.47     | 71.56 | 27.20         | 38.02 | 44.35     | 61.98 |           |  |
| Central       | 5.31          | 0.45 | 8.50      | 4.86  | 91.5      | 52.97 | 5.74          | 10.84 | 47.23     | 89.16 |           |  |

Source: Calculation based on data from the MLGRD. Note: GHS represents Ghana cedi (the currency of Ghana) while % represents the percentage.

There are nine identifiable sources of funds non-own revenue for MMDAs in Ghana. These are central government grants paid directly as salaries to local government staff, DACF, grants from development partners, District Development Facility, Highly Indebted Poor Countries Initiative Funds, Funds for School Feeding, decentralized transfers, and Urban Development Grant. Each of the funds has its own disbursement modalities and some have their own legal framework. The composition of the transfers, shown in Table 3.13 indicates that the DACF and the central government payment of salaries of the Local Government Services constitutes the highest proportion of the total transfers. Below is a discussion of the major transfers in Ghana.

The salary of local government staff in 2016 constituted 23.6 percent of total transfers to local governments. However, these grants are not sent to local governments in order to pay their staff. The practice of paying local government staff from the center reduces the control of the local government over the personnel emoluments of their staff. In fact, it takes the control of staffing expenditures from local governments. This contributes to the lack of motivation of local governments to raise their own revenues for development because they are not burdened with the responsibility to finance the wage bill of all their staff, including their pensions. The ability of local governments to undertake strategic staffing is limited by their budgeting control over staffing. One can conclude that paying salaries of most local government staff from the center is a major contributor to the lack of staffing control by the local governments and by implication the lack of expenditure autonomy.



**Table 3.13: Changing composition of intergovernmental transfers to MMDAs (percentage of total) in Ghana**

| Type of grant  | 2012  | 2013  | 2014  | 2015  | 2016  |
|--|-------|-------|-------|-------|-------|
| Central government grants to pay local government salaries | 26.0  | 25.6  | 21.1  | 20.4  | 23.6  |
| District Assembly Common Fund                              | 24.4  | 23.4  | 19.2  | 40.4  | 39.0  |
| MP's Common Fund   | 1.5   | 2.2   | 3.1   | 5.3   | 5.6   |
| Donor grants   | 11.5  | 12.2  | 11.0  | 9.5   | 9.5   |
| District Development Fund                                  | 12.0  | 12.3  | 16.7  | 7.5   | 11.6  |
| Highly Indebted Poor Countries (HIPC)                      | 6.2   | 0.3   | 0.3   | 0.2   | 0.1   |
| Central government support for school feeding              | 16.6  | 16.2  | 19.5  | 7.5   | 0.2   |
| Decentralized transfers                                    | 0.0   | 1.5   | 1.9   | 0.7   | 0.5   |
| Urban Development Grant                                    | 1.9   | 6.2   | 7.3   | 8.4   | 9.9   |
| Total transfers  | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Data from the MLGRD.

### 3.5.1 District Assemblies Common Fund

The DACF was established in line with a provision of the 1992 Constitution of the Republic of Ghana (Article 252) that requires at least 5 percent (7.5 percent from 2007 to 2017) of total tax revenue to be set aside for local investment or development expenditures. The DACF constituted about 39 percent of total transfers of local government in 2016. This compares with about 24.4 percent in 2012, indicating increasing relevance of the fund among all transfers to subnational entities in Ghana. It is considered as the most important intergovernmental transfer in Ghana due to its legal framework and the resources it transfers from the central government to MMDAs. Article 252 of the 1992 Constitution states that:

“(1) There shall be a fund to be known as the District Assemblies Common Fund.

(2) Subject to the provisions of this Constitution, Parliament shall annually make provision for the allocation of not less than five percent of the total revenues of Ghana

to the District Assemblies for development; and the amount shall be paid into the District Assemblies Common Fund in quarterly installments.

(3) The moneys accruing to the district Assemblies in the Common Fund shall be distributed among all the District Assemblies on the basis of a formula approved by Parliament.

(4) There shall be appointed by the President with the approval of Parliament, a District Assemblies Common Fund Administrator.

(5) Parliament shall by law prescribe the functions and tenure of office of the Administrator in such a manner as will ensure the effective and equitable administration of the District Assemblies Common Fund.

(6) Nothing in this Chapter or any other law shall be taken to prohibit the State or other bodies from making grants-in-aid to any District Assembly”.

An important take away from this constitutional provision is that parliamentarians who are elected from all constituencies in Ghana are mandated by law to approve allocation to the districts. This is important in order to ensure fairness and state oversight of the funds. It is the same Parliament that approves the budget statement each year for the executive arm of government. This provision puts Parliament in a position to monitor the proper allocation for funds to all districts. The main stakeholders involved with the DACF are the government, the administrator, councilors of MMDAs, the MLGRD, the Ministry of Finance, the Controller and the Accountant General’s Department, and civil society organizations that benefit from the fund.

The government is expected to transfer the funds to the District Assembly Common Fund (DACF) on a quarterly basis.<sup>36</sup> The Ministry of Finance reconciles its revenues on a weekly

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<sup>36</sup> The provision did not require payments to be made in a timely manner, so it does not prohibit transfers of funds in advance or in arrears. Often, payments are made in arrears during periods of economic shocks and thus, the

basis to ensure timely payment of required expenses. At the end of each month, the Ministry of Finance declares the amount of taxes that the government has collected and thus it is in the position to compute the DACF allocation every month. The constitutional provision gives the government enough time to transfer the money into the fund.

Another important constitutional provision which is not strictly followed is the determination of the base for the allocation to the DACF. The constitutional provision (Article 252 (2)) states that “five percent of total revenue” needs to be allocated to the fund. Total revenue includes all revenue received by government. That is, tax revenues, non-tax revenues, grants and loans. In practice, the DACF allocations are computed based on tax revenues. If Ghana had included the non-tax revenue, MMDAs would have benefited from dividends from other state-owned corporations such as the Ghana Oil Company and the Cocoa Marketing Board. Many ministries and departments collect non-tax revenues which could have increased allocations to MMDAs. In addition, a percentage of all donor funded projects and grants would have supported MMDA projects in Ghana. The working definition of total revenue used for computing DACF allocation is tax revenue collected from the domestic economy.<sup>37</sup>

Section 126 (2) of the Local Governance Act, 2016 introduces language which narrows the meaning of total revenue. It states that:

“The total revenues of the country include the revenues collected by or accruing to the central Government other than foreign loans and foreign grants, non-tax revenue, petroleum revenue paid into the Petroleum Holding Fund under Section 3 of the Petroleum Revenue Management

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clearance of arrears are used as a conditionality in World Bank and IMF programs before government makes the payments.

<sup>37</sup> Countries use different definitions. In Sierra Leone, local councils receive tied grants for the discharge of their functions and to cover their administrative costs. In Tanzania, a proportion of the revenue from vehicle tax is given to urban authorities.

Act, 2011 (Act 815) and revenues already collected by or for District Assemblies under any enactment”.

Admittedly, the constitutional provision will be difficult to follow given the nature of the revenue sources of government. Parliament endorsed the working definition of the Ministry of Finance in 2016 when they passed the new law.

MMDAs in Ghana cannot negotiate volume of DACF transfers that would be allocated to them on an annual basis. The executive arm of government requires Parliamentary approval to increase the DACF allocation to MMDAs if there is need for stronger central government support to aid rapid development. The Constitution provides that allocations are made to MMDAs based on a defined formula that is approved by Parliament. However, Parliament does not have control over district assemblies in Ghana. Section 254 of the 1992 Constitution states that:

“Parliament shall enact laws and take steps necessary for further decentralization of the administrative functions and projects of the Central Government but shall not exercise any control over the District Assemblies that is incompatible with their decentralized status, or otherwise contrary to law”.

The DACF was established in order to encourage effective local governance and to demonstrate the central government’s commitment to fiscal decentralization. Furthermore, the government enacted the District Assemblies’ Common Fund Act, 1993 (repealed in 2016 and incorporated in the Local Governance Act, 2016) and appointed an administrator who is required by law to annually propose a distribution formula in order to guide the allocation of funds to MMDAs, after parliamentary approval. The appointment of the administrator is political and based on the discretion of the President of the Republic of Ghana. Section 127 (1-2) of Local Governance

Act, 2016 does not prescribe any minimum qualification for persons that may be appointed as administrators. It states that:

“(1) The President shall, acting in consultation with the Council of State and with the approval of Parliament appoint a District Assemblies Common Fund Administrator.

(2) The Administrator shall hold office for four years and is eligible for re-appointment”.

The administrator has a four-year term of office and is eligible for re-appointment under the same government. However, the President is mandated by Section 128 of the Local Governance Act, 2016 to request the administrator to resign from the position at any time or simply remove him/her from office for a just cause. Once a new government assumes power, the administrator gets changed in Ghana, irrespective of his/her performance or qualification.

The function of the DACF Administrator is defined by Section 129(a)-(d) of the Local Governance Act, 2016. It requires the Administrator to:

- “(a) propose a formula annually for the distribution of the Common Fund for approval by Parliament;
- (b) administer and distribute moneys paid into the Common Fund among the District Assemblies in accordance with the formula approved by Parliament;
- (c) report in writing to Parliament on how allocations made from the Common Fund to the District Assemblies have been utilized by the District Assemblies; and
- (d) perform any other functions that may be directed by the President”.

The law makes the administrator the sole manager of the DACF in Ghana. The administrator prepares the formula used for sharing of the fund and submits it to Parliament. Once the allocations have been approved by Parliament, the administrator disburses the funds, monitors

their use and reports to the Minister of Local Government and Rural Development and Parliament about the utilization of the funds.

Since the inception of the fund, the Office of the Administrator of the Fund uses four main factors in developing the formula for the distribution of the fund. These are:

- a) the needs factor;
- b) the responsive factor;
- c) the equality factor; and
- d) the service factor;

Actual disbursements are based on MMDA budgets, which delineate the use of funds in line with their annual action plans and the national development strategy. The DACF is identified as one of the major sources of revenue under the Local Governance Act, 2016 (Section 126 (1)<sup>38</sup>).

The distribution of transfers is expected to promote equity in the allocation and use of resources across regions and districts. The DACF Administrator allocates resources to MMDAs based on a needs factor, responsiveness of MMDAs to generate their own revenues, an equality factor and a service factor. The funds allocated to the needs factor of the subnational entity are used to address development imbalances among all local governments. The various regions and districts are not at the same level of development, so by being deliberate with the allocation of DACF resources, the country has been promoting fair allocation of resources.

The needs factor addresses different endowments, opportunities and capacities of MMDAs in the provision of basic services. It focuses on the ability of MMDAs to provide health, education and water services, and includes the ability of MMDAs to build and maintain paved roads. Health services are measured by the number of health facilities in the MMDA, such as hospitals,

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<sup>38</sup> Section 126 (1) allocates 5 percent of total central government revenue.

clinics, health centers, the ratio of doctors to patients and the ratio of professional nurses to patients. In education, the teacher to pupil ratio is a major indicator. In the water sector, the DACF Administrator uses the proportion of homes with access to clean water as a key indicator. Overall, the administrator uses a location quotient technique in order to allocate more resources to less endowed subnational entities. These criteria are aimed at ensuring balanced growth and development across the country.

The Location Quotient is the method used to mathematically derive proportions from the data on the needs factor.

The Location Quotient is defined as:  $(S_i/S / N_i/N)$

Where  $S_i$  – the number of ‘S’ facility in district ‘I’

$S$  – the total number of facility ‘S’ in the country

$N_i$  – the population of district ‘I’

$N$  – the population of the country

The Location Quotient ranks all MMDAs in terms of the endowment of the facility in question. Since it is intended that the less endowed gain more than the better endowed, the reciprocal of the Location Quotient is used.

The responsiveness factor is one way of encouraging subnational entities to increase their efforts at mobilizing their own revenue and reducing dependence on the central government. The factor considered in the development of the formula was the response of MMDAs to their revenue generation. The factor measures the improvements in MMDA revenue collection. DACF (2014:4) notes that although some MMDAs have a high potential of raising their own revenues, they have not been responsive, resulting in an inability to provide basic services to their communities. This is congruent with Smoke (2016:1-3), that notes the performance of fiscal decentralization and intergovernmental fiscal relations have been disappointing when it comes

to policy formulation and outcomes. In Ghana, almost all MMDAs rely on transfers rather than their own revenues for the provision of basic services. The government policy has failed to direct MMDAs to enhance their own revenue collection.

The equality factor provides an equal portion of funds to all subnational entities. This is a base transfer with support projects in all MMDAs. It is targeted at self-help development projects in deprived areas. It also supports the creation of new infrastructure in economically viable areas, such as farming communities.

The service pressure indicator assumes that higher population density of a district is associated with higher service pressure on existing infrastructure facilities. The factor compensates for wear and tear on existing facilities. It is measured by the population of the subnational entity divided by its land area.

The distribution of funds varies annually as determined by the administrator and approved by Parliament. The allocations are also influenced by government priorities and the direction of development policy. Each year, the administrator presents different options to Parliament for their input and approval. The option that is approved by Parliament is implemented by the administrator. Overall, the DACF provided about US\$71 million annually in 2012 and 2013 and increased it to US\$128 million in 2016.

The Minister of Local Government and Rural Development is empowered by section 126 of Ghana's Local Governance Act, 2016 to make decisions on investment expenditures supported by the DACF for subnational governments. Section 126 (3) of Local Governance Act, 2016 states:

“The Minister shall, in consultation with the Minister responsible for Finance, determine the category of expenditure of the approved development budget of District Assemblies



that must in each year be met out of amounts received by the District Assemblies from the District Assemblies Common Fund.”

The Constitution does not give Parliament the power to control district assemblies, but the government through its executive arm exercises control over the MMDA expenditure. In 2016, the government passed this law in order to enable it to interfere with how MMDAs use their allocations. This takes the expenditure autonomy from MMDAs and puts the Minister of Finance in charge. Ghana is not learning from the good examples in Poland and other strong reformers, who have given expenditure autonomy to their subnational governments, but provided guidelines for their public financial management. MMDAs need transparent indicators and guidelines from the central government.

Act 936 Section 126-3 is a complete reversal of all gains made with subnational autonomy since 1988 and a direct move toward further centralization. This is so because all subnational governments are involved in the preparation of the composite budgets that are vetted by the Ministry of Finance. Hence the budget allocations and their use can be monitored by the Ministry of Finance, and local governments can be held responsible for either following or not following the expenditure directives of the central government

The Local Governance Act, 2016 (Section 130) encourages delays in transfers of local governments. The act allows the administrator to invest district funds in securities, pending distribution. The provision will lead to a situation where district transfers are held in government treasury bills,<sup>39</sup> particularly when the central government needs funds for macro-economic stability. In the past, the central government accumulated arrears in the transfer of funds, which

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<sup>39</sup> In 2006, some proportion of the National Health Insurance Scheme funds were invested in fixed deposits and other short-term investments before payments were made to suppliers (Government of Ghana, 2006:11). A joint expenditure review prepared by the government of Ghana and World Bank in 2011 also revealed that even when funds are released to the Administrator of the DACF, there is a lack of transparency and inefficiencies in the DACF releases. The Administrator regularly procures items on behalf of assemblies (called indirect transfer) which may not be the priorities of individual assemblies (Government of Ghana, 2011:56-57).

attracted the attention of the World Bank and the International Monetary Fund during their program and Article IV reviews, respectively.<sup>40</sup> This law provides an opportunity to avoid the scrutiny of the international community when the government decides to borrow from the transfers to local governments. It is counterintuitive to think that the funds could be invested in long-term securities when the district needs the money for development.

The administration of the DACF has faced many challenges since its inception. King, et al. (2003:19) found that the DACF was plagued with disbursement delays between 1999 and 2002. It is experiencing more challenges now than in the 1990s. DACF (2014:5) lists the challenges facing administration of the fund to include a non-transparent mechanism for determining revenue due the MMDAs by the Ministry of Finance and Economic Planning, inaccurate formula for disbursements, delays in disbursements, over-deduction by the administrator, and abuse of power by the Ghanaian Parliament during the approval process. In addition, Owusu-Mensah (2015:12-13) reports that the major challenges facing the administration of the DACF in Ghana include unchecked authority of the administrator, inflexibility in the transfer system, and unnecessary deductions by the administrator.

Adisah-Atta and Boahen (2017:1) conducted an impact evaluation of the DACF in the Western Region of Ghana and reported that DACF transfers had not been able to reduce poverty and improve health and education outcomes. Communities were not involved in projects supported by the DACF and felt left out in the development process.

Many members of Parliament in Ghana have expressed mixed feelings about the DACF which are reported on the official website of the Office of the DACF. It is important to note that 4 percent

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<sup>40</sup> Outstanding arrears rose from GHS142 million in 2007 to GHS1,429 million in 2010 (IMF, 2010). In 2009, a provision was made within the budget to settle GHS523million of domestic arrears carried over from 2008 (IMF Article IV, 2009:50). The 2010 budget statement of the government notes that the implementation of previous year budget was saddled with huge arrears and notes claims with respect DACF, Education FUND, National Health Insurance and Social Security to be around GHS 293.3 million (Government of Ghana 2010:311).

of the DACF allocation of MMDAs is given to the Member of Parliament (MP) for the jurisdiction, in order to pursue the priority projects of his or her choice. Below are summaries of the comments published by the government:<sup>41</sup>

- Hon. Samuel Ayeh-Paye, MP for Ayensuano in the Eastern Region: Notes the DACF allocation supports the development in his constituency. He used the funds to extend electricity to six communities, constructed six classroom blocks, and supplied computers to the public schools. He felt the major problem with the DACF was that the money was inadequate, and it was not released on time.
- Hon. Alhassan Dahamani, Independent MP for Tamale North: He used his funds to sponsor the education of many children, provided financial support for women groups to engage in agro-business and purchased furniture and sports kits for some basic schools. In addition, he supported service delivery in the areas such as education, water supply, farming, sports development and women empowerment. He mentioned delays in the releases of DACF as negatively impacting on the relationship between citizens and members of parliament.
- Hon. Samuel Okudzeto Ablakwa, MP for North Tongu: He used his allocation to provide food processing machines for women groups, computers for ICT labs in primary schools and to rehabilitate some schools. In addition, he provided scholarships to needy students and skills training for some youth. He identified delays in the release of funds as the major challenge facing the administration of the DACF.

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<sup>41</sup> [http://www.commonfund.gov.gh/index.php?option=com\\_content&view=article&id=336&Itemid=441](http://www.commonfund.gov.gh/index.php?option=com_content&view=article&id=336&Itemid=441).

### 3.5.2 District Development Facility

The District Development Facility<sup>42</sup> (DDF) is a performance-based grant system that has been developed in order to provide well-coordinated institutional and financial support to the metropolitan, municipal and district assemblies (MMDAs) in Ghana. It was introduced in response to the need to introduce incentives for performance to enable district assemblies to improve the rate and quality of implementation of their development programs. The DDF is an incentive-based grant that provides subnational entities with an opportunity to improve both the quality and rate of implementation of development programs in their jurisdictions. It is earmarked to supplement the provision of social infrastructure and local investments such as schools, hospitals and health centers. It is jointly financed by the government and development partners (including Canada, Denmark, France, Germany and Switzerland).

The objectives of the DDF are to:

- (i) mobilize additional financial resources for MMDAs,
- (ii) provide an incentive for performance for complying with the GoG legal and regulatory framework,
- (iii) establish a link between performance assessments and capacity building support, and
- (iv) ensure harmonized systems for investment funding and capacity building support to MMDAs.

The District Development Facility is an additional discretionary development fund linked to regular performance assessment under the Functional and Organizational Assessment Tool (FOAT) developed by the Government of Ghana and development partners. The term discretionary is used to denote the multi-sectoral nature of the DDF, which distinguishes it from

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<sup>42</sup> Starting from 2018, DDF has officially become the responsiveness grant of the DACF after 10 years of its operation. The government decided to mainstream the DDF into the DACF alongside a new tool called the District Assemblies Performance Assessment Tool. The Office of Head of Local Government Service is expected to consolidate the capacity needs for the new tool and prepare capacity plans for review and approval of its Steering Committee (Government of Ghana, 2018).

the wide array of conditional, sector specific grants that are transferred to the district level. It is, however, important to note that “discretionary” does not mean that there are no constraints on the use of the DDF. The constraints of the DDF are provided by a legal and regulatory framework for financial management and administration, including those relating to the preparation of medium-term and annual action plans. The DDF is assessed using nine weighted performance indicators. These are shown in Table 3.14.

**Table 3.14: Summary of scores for each DDF thematic area in Ghana**

| <b>Performance Measures</b>               | <b>Maximum Score</b> |
|---|----------------------|
| Management and organization               | 10                   |
| Transparency, openness and accountability | 11                   |
| Planning system                           | 18                   |
| Human resource management                 | 5                    |
| Relationship with sub structures          | 3                    |
| Financial management and auditing         | 20                   |
| Fiscal capacity                           | 20                   |
| Procurement                               | 7                    |
| Environmental sanitation management       | 6                    |
| <b>Total</b>                              | <b>100</b>           |

Source: Government of Ghana (2013).

The DDF is performance-based but offers discretionary non-matching funds. MMDAs are required to meet a minimum set of criteria and performance targets before qualifying to receive the funds. Subnational entities can use the DDF to finance multi-sector projects, especially those identified in the Medium-Term Development Plan and Annual Action Plan. The fund is a reliable source of revenue for the MMDAs. Overall, DDF funding increased from US\$34 million in 2012 to US\$46.5 million in 2014 but fell to US\$33.2 million in 2016.

**Functional and Organization Assessment Tool (FOAT):** Local governments in Ghana are assessed on agreed indicators on a yearly basis using the FOAT. The assessments are carried out by a team of independent consultants recruited by the MLGRD. A technical working group made up of civil servants of the MLGRD, Local Government Service,<sup>43</sup> Ghana Audit Service, and Controller and the Accountant General's Department (CAGD) supervises and reviews the work of the independent consultants. Assemblies that perform well are rewarded with financial resources from the DDF.

The objectives of the FOAT are to:

- (i) provide an incentive for performance for complying with the GoG legal and regulatory framework; and
- (ii) establish a link between performance assessments and capacity building support.

The FOAT process assesses whether MMDAs are fulfilling the eligibility criteria for the DDF by adhering to the minimum conditions (MCs), as well as measuring their performance on an agreed set of indicators. MMDAs need to fulfill the MCs in order to access the basic grant component of the DDF. The MCs are formulated under five sub-themes: (i) Development Planning, (ii) Financial Management and Accounting, (iii) Public Procurement, (iv) Implementation Capacity, and (v) Functioning of the General Assembly.

When MMDAs meet the minimum requirements and get scored using the indicators listed in Table 3.14, they have an opportunity to receive the DDF grants. The DDF was the third most relevant grant in 2016. As shown in Table 3.13, it has maintained its relevance since 2012. All MMDAs qualify to be assessed and to benefit from the DDF.

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<sup>43</sup> The Local Government Service was established by the repealed Local Government Service Act, 2003 to secure effective administration and management of the decentralized local government system in the country. The office of the Head of the Office of the Local Government Services plays an important role in supporting local governments in Ghana to deliver value for money in service delivery. The office champions, mobilizes, and utilizes quality human resources needed for local development in Ghana.

### 3.5.3. Urban Development Grant

Ghana's cities face significant challenges, as do many other growing cities in the world. Metropolitan assemblies are saddled with the challenge of dealing with increased urban population growth, urban poverty, the development of slums, poor access to water, poor sanitation and the high demand for modern services such as internet services. In 2010, the Government of Ghana developed a National Decentralization Action Plan (2010-2014) which recognized some of these challenges. In addition, the government developed the National Urban Policy which recognized the need for a deliberate intervention in order to address urban poverty and economic development in Ghana. It also recognized that the DACF was not sufficiently addressing the fiscal needs of the urban areas, due to the demand for capital intensive investments into local roads, sanitation and water supply.

The Urban Development Grant (UDG) was established in 2011 in order to provide additional financing for urban development in 46 subnational urban entities. The fund supports expenditure on local public goods and services in urban areas which were identified in the 2010 National Decentralization Action Plan. Like the DDF, fund disbursements are based on an independent annual assessment prepared concurrently with the FOAT process. The assessment criteria for the UDG include the ability of urban MMDAs to undertake reforms in budgeting, revenue management, monitoring and reporting, auditing and social accountability. The grant finances projects approved in the budgets of the metropolitan or municipal assemblies selected. Overall, funding from the UDG to districts increased from US\$5.3 million in 2012 to US\$20.2 million in 2014. The UDG accounts for an increasing proportion of MMDA budgets. Overall, it rose from 7.5 percent of total own revenue of MMDAs in 2012 to 42.2 percent in 2016, in nominal terms (Table 3.15).

**Table 3.15: Evolution of Urban Development Grant 2012–2016**

|   | 2012 | 2013  | 2014 | 2015  | 2016  |
|---|------|-------|------|-------|-------|
| UDG (Ghs million)                         | 9.7  | 43.0  | 59.5 | 87.0  | 119.1 |
| UDG (US\$ million)                        | 5.3  | 22.0  | 20.2 | 22.96 | 28.4  |
| % of own funds                            | 7.5  | 27.9  | 31.0 | 37.5  | 42.2  |
| Year on Year growth of UDG (dollar value) | NA   | 315.1 | -8.2 | 13.7  | 23.7  |

Source: Calculation based on data from the MLGRD.

There are five performance measures for accessing the UDG. These are budgeting, reporting and auditing, asset management, revenue management and social accountability. These measures are scored from a range of zero to 25. The higher the score of an MMDA, the higher the funds it gets in any fiscal year. Table 3.16 shows the weights of these measures.

**Table 3.16: Summary of performance measures used for UDG in Ghana**

| Performance Measures   | Maximum Score (Weight) |
|------------------------|------------------------|
| Budgeting              | 15                     |
| Reporting and Auditing | 15                     |
| Asset Management       | 20                     |
| Revenue Management     | 35                     |
| Social Accountability  | 15                     |
| Total                  | 100                    |

Source: Government of Ghana (2013).

The UDG funds are used to finance expenditure on local public goods and services, and the grant finances only legally assigned functions from the central government. To meet these criteria, the expenditures must be approved through formal appropriation of the local budget and be aligned to development priorities expressed in medium-term development plans, associated annual action plans and budgets of the assembly. The allocation and use of the UDG funds are strictly monitored in order to ensure that the grant funds respond to local needs.



As more resources were given to the urban centers, the Ghana Audit Service was charged with the responsibility to carry out external audits of local governments in order to ensure that they are held accountable for the funds which they receive. These audits serve as one of the channels through which the government strengthens the linkages between service delivery and citizens' participation in development, while encouraging cities to address their pressing needs.

### 3.6 Performance of property rates collection in Ghana

Ghana became a lower middle-income country after the rebasing of its national accounts in 2010. With annual population growth of 2.6 percent, Ghana's gross national income reached US\$38.9 billion in 2016, up from nearly US\$27 billion in 2006. Accompanying the income growth was a massive construction of houses and other physical property across the country. However, the subnational governments did not capitalize on the boom in wealth to significantly raise property rates collections. The subnational governments in Ghana obtain their revenues from transfers, fees and permits. Transfers formed about 80 percent of subnational revenues and the rest is the own revenue local revenue. On average, property taxes<sup>44</sup> constituted about 18 percent of own revenue collections between 2010 and 2016.

Section 124 (1) of the Local Governance Act, 2016 lists three main sources of revenues to MMDAs in Ghana. These are decentralized transfers from the national government, internally generated fund MMDAs can collect for themselves to support their activities, and grants from other sources (such as development partners and private sector). The decentralized transfers comprise of all forms of transfers from central government to subnational governments such as the District Assembly Common Fund and government allocations for the payment of the salary of subnational staff. The internally generated fund comprises of licenses; fees and miscellaneous

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<sup>44</sup> Property taxes are collected at the local level in Ghana. It is discussed as a local tax collected by assemblies in this thesis.

charges; taxes, investment income and rates. The law prescribes two types of rates- the general and specific rates. The general rates are paid by property owners based on the value of their residential properties or premises. General rates also encompass a rate assessed on any form of possessions of a person residing in an assembly. Thus, property taxes also referred to as property rates are classified as a portion of general rates imposed in Ghana. On the other hand, specific rates are basic rates imposed on any person considered to be an adult who resides in an assembly. That is, persons of age between eighteen and below seventy years (Section 146 (2), Local Governance Act, 2016).

Property taxes are imposed on ratable immovable properties and form a small proportion of local government revenues in Ghana. On average, property taxes represented less than a fifth of local own revenue and 4 percent of total grants between 2010 and 2016 (Table 3.17). The structure of MMDA revenue sources did not change between 2007 and 2016. Progress in the collection of property tax has been slow due to the many challenges facing assemblies. There are huge data challenges related to property tax administration in Ghana. Most homeowners in Ghana do not officially record capital improvements to their properties, nor do they keep records of their building cost (except commercial properties). The construction of privately-owned and non-commercial buildings often takes more than five years and in some cases over the working life of property owners. These people (mostly civil servants) complete and occupy their properties for their retirement, when they vacate government bungalows. Furthermore, the purchase or sale of houses are not recorded or documented for tax purposes in Ghana, which limits the database of houses within assemblies. These factors make the administration of property rates at the subnational level challenging. Table 3.17 shows the evolution of property rates in Ghana since 2007. It shows that property taxes as a percentage of total grants have been relatively stable, ranging from 3.9 percent to 5.2 percent.

**Table 3.17: Property tax revenues and other revenues in Ghana (in local currency-Ghana cedi or otherwise stated)**

| Year | Property Rates | Total internally generated revenue | Total grants from all sources | Property taxes as percentage of own revenue | Property taxes as percentage of grants |
|------|----------------|------------------------------------|-------------------------------|---|--|
| 2007 | 6,883,658      | 42,056,471                         | 193,355,580                   | 16.0  | 4.6                                    |
| 2010 | 16,684,270     | 104,579,111                        | 362,619,794                   | 17.6  | 4.2                                    |
| 2011 | 19,239,926     | 109,528,032                        | 457,013,197                   | 20.5  | 5.2                                    |
| 2012 | 25,938,066     | 126,379,716                        | 495,754,766                   | 17.4  | 3.9                                    |
| 2013 | 23,342,766     | 134,361,043                        | 605,020,969                   | 18.6  | 4.4                                    |
| 2014 | 35,622,596     | 191,727,260                        | 817,354,644                   | 19.7  | 4.3                                    |
| 2015 | 49,245,654     | 249,778,251                        | 1,142,250,998                 | 17.1  | 4.5                                    |
| 2016 | 55,066,903     | 322,611,705                        | 1,216,642,571                 | 16.0  | 4.6                                    |

Source: Author computation with data from MLGRD, Ghana.

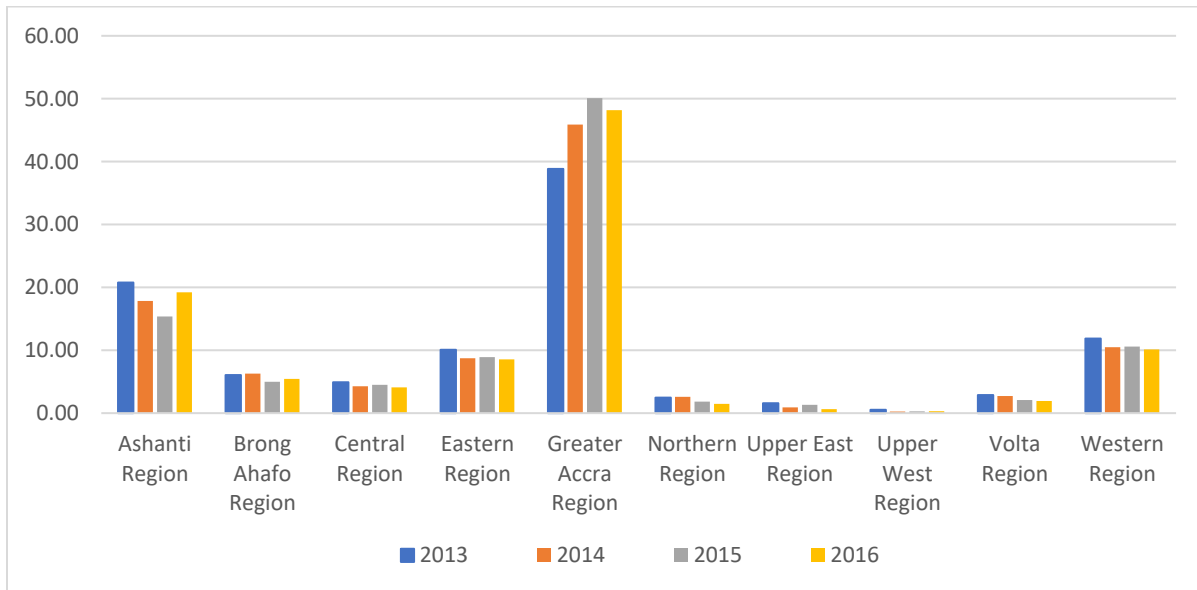
Property taxes are differentiated based on the location of the properties. There are different rates across regions, assemblies, urban areas and rural communities. Below is a brief discussion comparing the performance across regions, metropolitan and municipal assemblies. The district assemblies are small collectors of property taxes as noted below.

### 3.6.1 Regional performance of property taxes in Ghana

Regions in Ghana could be classified into three groups based on the revenue collection performance. These are the high, medium and low performers. The high performing group collect at least 8-10 percent of the total subnational property taxes every year. Four regions that qualify as higher performers are Greater Accra, Ashanti, Western and Eastern Regions, as shown in Figure 3.2. These regions collect over 80 percent of all property taxes in Ghana. Their total collection ranged from 82 percent in 2013 to 86 percent in 2016. The second group (medium performers) collect at least 4 to 7 percent of the property taxes in the country. These regions are Brong Ahafo and Central Region. In total, these medium performers collected about 10 percent of all property taxes in Ghana between 2013 and 2016. The third group are low performers that

collect less than 4 percent of the total property taxes in Ghana. These are Northern, Upper East, Upper West and Volta Regions. In total the four low performers collected between 4 and 7 percent of the total property taxes between 2013 and 2016. Over the period, their share in total property taxes reduced from 7.49 in 2010 to 4.38 in 2016.

**Figure 3.2: Share of property taxes across regions in Ghana, 2013-2016**



Source: Data from MLGRD.

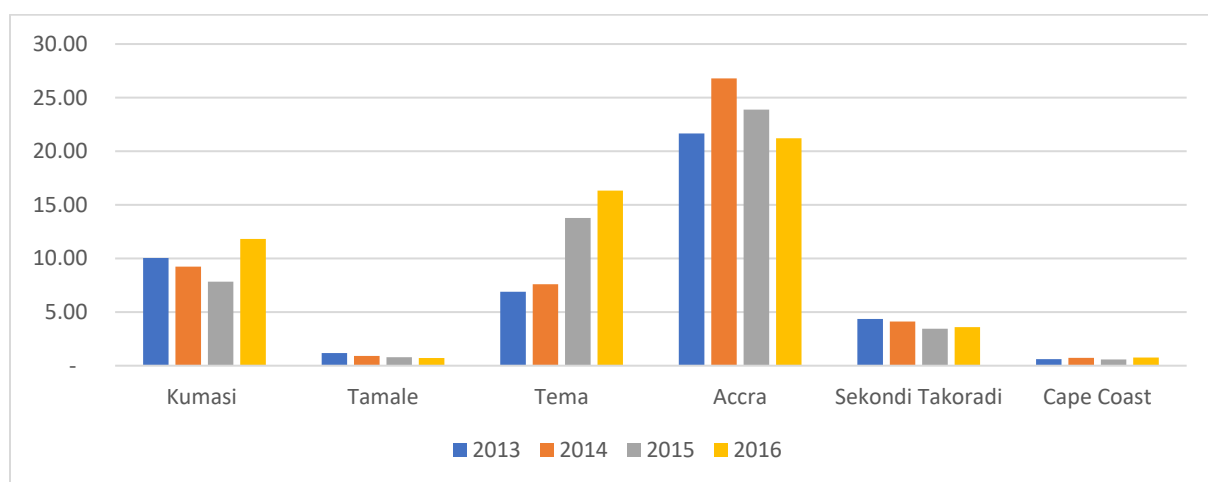
Greater Accra Region collected an average of 46 percent of total property taxes between 2013 and 2016. Ashanti Region collected an average of 18.3 of total property taxes between 2013 and 2016. In the case of Western Region, the total property taxes averaged about 10.7 percent of total collections during the period.

### 3.6.1.1 Performance among metropolitans

Greater Accra Region has two metropolitan assemblies that collected about a third of the total property rates revenue in the country. In the Accra Metropolitan Assembly, the share of property taxes averaged around 23.4 percent over 2013-16, while in Tema Metropolitan it averaged about 11.2 percent. The share of collections in Tema Metropolitan has been rising since 2013 when it introduced a revenue sharing policy with neighborhood associations in communities in 2013. When neighborhood associations get their members to pay their property taxes, Tema

Metropolitan directly finances one most important development project in the neighborhood. This policy has contributed to improved compliance in the payment of property taxes in Tema Metropolitan Assembly. In Greater Accra, the rapid development of properties by individuals and organizations underpins the higher collections. Overall, the metropolitan assemblies in Greater Accra Region collected about 35 percent of the total property taxes in the country. The breakdown is shown in Figure 3.3.

**Figure 3.3: Share of property taxes among metropolitan assemblies in Ghana, 2013-2016**



Source: Data from MLGRD.

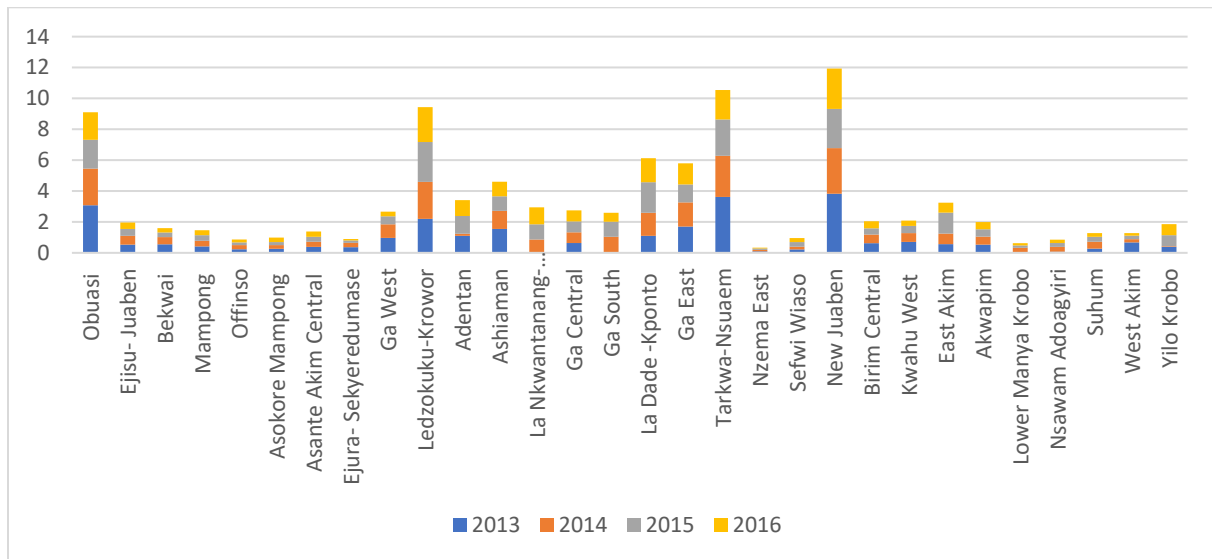
Kumasi Metro collected close to 10 percent of total property taxes in Ghana between 2013 and 2016. Its share of collection fell from 10 percent in 2013 to 7.8 in 2015 but rose to 11.8 percent in 2016. In Sekondi Metro, collections were below 5 percent of total property taxes in the country. Its share of collections declined from 4.4 percent in 2013 to 3.6 percent in 2016, partly due to the lack of systems to capture the new properties and political will to collect the tax. Tamale and Cape Coast collected less than one percent of the total property taxes on annual basis between 2013 and 2016.

### 3.6.1.1 Performance of municipals

Four municipal assemblies made good efforts at collecting property rates. These are Obuasi (Ashanti Region), Ledzokuku-Krowor (Greater Accra Region), Tarkwa-Nsuaem (Western

Region) and New Juaben (Eastern Region). Obuasi, Tarkwa-Nsuaem and New Juaben Municipals are mining communities and thus benefit from rates imposed on mining properties. Ledzokuku-Krowor Municipal benefits from development of properties for business and real estates' due to its proximity to Tema and Accra. Figure 3.4 shows that these municipals collected more than 8 percent of total property taxes from 2013 to 2016.

**Figure 3.4: Property tax performance of municipal assemblies in Ghana, 2013-2016**



Source: Data from MLGRD.

### 3.6.2 Administration of property taxes in Ghana

The collection of property rates is a shared responsibility between many stakeholders in Ghana. These stakeholders are the MLGRD, the Lands Commission (valuers across assemblies), assemblies (budget and revenue officers), revenue collectors, chiefs and communities. In some cases, development partners and private sector agents are invited to aid in data management and revenue collection. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) is one of the main development partners that champion property tax administration at the subnational level and provides resources in order to train tax experts in Ghana.

Historically, property rates were charged on immovable properties in Ghana, as indicated in the Municipal Rating Act, 1959 (No. 4) and the Municipal Rating Regulation (L.N. 212/59). These laws, and the local government acts, authorize municipal councils to impose property taxes on

immovable items, especially buildings, structures and other physical developments. At present, the Local Governance Act, 2016 still imposes property taxes on immovable properties. The rationale for focusing on immovable properties is to ease the collection of the tax and reduce the administration cost of collection. After much debate on the Local Governance Act, 2016 districts are yet to determine whether taxing movable items other than vehicles is plausible. Currently, vehicle owners do not pay property ownership taxes on their vehicles in Ghana, nor do they pay for parking their vehicles in the assemblies. Commercial vehicle owners pay taxes to districts in the form of licenses.

Property taxes are imposed based on two main variables, usually the “rate input” and the “ratable value.” MMDAs decide the rate input, which is the tax rate for different categories of properties, while the Land Commission determines the ratable value, which is the taxable amount derived from the estimated nominal value of the property. The Valuation Division of the Lands Commission is responsible for all valuations in the country. Private valuation companies are, in practice, not allowed to value property for the MMDAs. The estimations from the two government institutions result in the tax that property owners pay. The assignment of these tasks is explicitly stated in Section 146(8) of the Local Governance Act, 2016, which mandates the Minister of Local Government and Rural Development to liaise with the Lands Commission, in order to appoint a valuer to determine the ratable value of properties. This arrangement leaves districts out of the determination of property values and limits their ability to influence valuation of properties.

Subsections 146(9) and (10) of the Local Governance Act, 2016 state:

“(9) The ratable value of premises shall be the replacement cost of the buildings, structures and other structural development that comprises the premises after the

deduction of the amount it would cost at the time of valuation to restore the premises to a condition in which they would be as serviceable as they were when new.

(10) The ratable value shall not be

(a) more than fifty per cent of the replacement cost for the premises that are owner-occupied; and

(b) not be less than seventy-five per cent of the replacement cost in any other case”.

The Local Governance Act, 2016 envisaged a uniform approach to valuation across the country, irrespective of the staffing and capacity constraints. District valuation officers from the Lands Commission are expected to estimate the cost of properties based on the market cost of building materials in the year of estimation. Some elements used in estimating the replacement cost of immovable properties include size of floor area, walls, doors, windows, ceilings, roofing, drainage and general furnishing of the property. This also includes additional value based on the availability of water supply and electricity, and proximity to public services. All ancillary structures, such as fence walls, swimming pools and basements are valued and added, in order to determine the replacement cost of the property. The depreciation value of the property is then calculated based on the age of the structure and observable defects. Finally, the ratable value is determined as the difference between the replacement cost and the depreciated amount.

The determination of the actual property tax imposed on property owners is supervised by a committee within each assembly that determines the “rate input”. After receiving the ratable values from the Valuation Division of Lands Commission, assemblies set up committees in order to determine the actual tax to be paid on each property (which is determined by multiplying ratable value by the rate input). The determination of the rate input is influenced by the average cost of local services provided in each assembly. Assemblies that provide more services have



high average costs that are difficult to pass to property owners. However, the Local Governance Act, 2016 requires districts to use the cost of collection as the basis for the tax.

The adjustment of the rate input is not regular and systematic across all MMDAs. Evidence gathered as part of World Bank economic monitoring work at the Tema and Accra Metropolitan Assemblies revealed that these districts publish their new rates at their premises and gazette them in order to inform the public of their rates for each category of immovable properties. The rate input serves as the channel through which political appointees influence the collection of property taxes. Mensah (1999:1) notes that rate inputs represent the engine of growth and development that could support the revenue autonomy of districts in Ghana. Assemblies that want to develop rapidly are likely to charge higher rates and use the resources effectively.

Many assemblies indicate in their annual financial reports that the collection of property taxes is a challenge for many reasons, including the difficulties associated with collection and maintenance of a credible database of properties. The evidence from Accra Metropolitan Assembly (highest performer) shows that these challenges are real. The Ghana Statistical Service (2014c:48) indicates that there were 149,689 houses in the Accra Metropolitan area as shown in Table 3.18. Of these, Accra Metropolitan Assembly collected revenue of Ghs11.7 million. At an average exchange rate of Ghs4.9 to one United States dollar, it implies that the average payment per house irrespective of size is \$16 per annum. This indicates the low level of effort in collecting property rates by the highest performer in Ghana.

**Table 3.18: Stock of houses and households in Accra metropolis in 2010**

| Category             | Total Country | Total Accra Metropolis |
|----------------------|---------------|------------------------|
| Total population     | 24,658,823    | 1,665,086              |
| Number of houses     | 3,392,745     | 149,689                |
| Number of households | 5,467,054     | 450,749                |

Source: Ghana Statistical Service, 2010 Population and Housing Census.

Bafour-Awuah, et al. (2016:7) list factors affecting the collection of property taxes in Ghana to include “paucity of the property market data, lack of standardization in the application of valuation methods, complexity of properties and the lack of transparent property market data.”<sup>45</sup> Ghana’s property market is still in its infancy stage and lacks the dynamics associated with the purchase and sale of properties. The formal sector is almost never present in such transactions or in the transfer of immovable properties. The lack of government presence in the market and consequent lack of data affects valuation of properties.

As noted by Franzsen and McCluskey (2013:44), the absence of a reliable market or evidence of transactions and appropriate skills for assessments are major challenges for collection of property rates in many developing countries. For instance, in Ghana, the housing market is not well developed and thus there is not market information for many properties. In many cases, there are no valuation data for properties (Jibao, 2017:226). Family properties are transferred without formal documentation, which makes the ownership of some properties difficult to determine. Property owners in Ghana tend to keep their immovable properties for life, because there is an incentive to hold assets when they do not attract any annual cost. Some family houses served as the central meeting place for several generations even when the owners are deceased. Occupants of these houses are not the owners and thus, the tax does not fall on them based on the Local Governance Act, 2016 requiring property owners to pay the tax.

On the supply side, properties are rarely valued by government agencies for tax purposes across the country, or at least there is no standardized timing for valuing properties. Districts are not permitted to use their own private valuation officers in order to assess the immovable properties in their jurisdictions. It is not surprising that the pricing of properties is arbitrary, with some properties in prime areas commanding exorbitant prices and other rather lower than market

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<sup>45</sup> A sample of an area block and a property record sheet used for valuation in the central region of Ghana is shown in Appendix B as Chart B.1 and Chart B.2.

prices. The enforcement of the payment of property rates has not been effective in generating debate and disagreement on the value of properties. It is broadly true that locations with basic utilities are priced higher than those without such facilities. In my view, it is time for Ghana to undertake a housing survey in every assembly, accompanied by mass assessments of all properties, which is linked to property owners in order to create the database for property taxation.

Many other factors contribute to the inability of districts in Ghana to efficiently collect property taxes, though given legal powers in the Local Government laws to collect property taxes. First is the poor address system, which is broadly unresolved. Efforts to provide consistent address systems across districts have not resulted in significant improvement. Second is the lack of a unified identification system. Efforts to create a national identification system have been overly politicized and remain a major challenge to properly identifying tax payers and matching them to immovable properties. Third is the lack of comprehensive electronic payment systems in order to decrease time spent in undertaking transactions or to link financial transactions to the district tax office. Most payments are made in cash, which makes it difficult to trace funds and transaction outside the banking system.

### 3.7 Conclusion

The chapter discussed the effect of fiscal decentralization in supporting subnational autonomy in Ghana, with a focus on property taxes. It was found that fiscal decentralization has been part of Ghana's development strategy since the colonial era, but the country focused more on administrative and political decentralization.

Ghana has made substantial progress with administrative and political decentralization reforms. It can be concluded that Ghana has made significant progress in defining the expenditure assignments of the different tiers of government. The Local Governance Act, 2016 adequately consolidates the expenditure assignments and repeals various enactments assigning

responsibilities to subnational governments such as the Local Government Act (1993), District Assemblies' Common Fund Act (1993), National Development Planning Commission Act (1994), and Local Government Service Act (2003). The consolidation of laws provides subnational governments with a single law that is well-defined and coordinated assignments. The Local Governance Act provides all auxiliary functions and institutions that assemblies need to coordinate with in order to delivery services, such as Ghana Fire Service, Ghana Police Service, National Disaster Management Organization and Department of Social Welfare and Community Development (Section 114 of the Local Government Act, 2016).

The Fiscal Decentralization Unit in the Ministry of Finance is one of the effective institutions that coordinates government policy and reforms on fiscal decentralization alongside MLGRD. The coordination between these two institutions is observed to be effective in terms of data sharing and policy formulation. They also coordinate well during the implementation of subnational government budgeting reforms across the country.

It is observed that there has been a recent decline in expenditure autonomy for metropolitan, municipal and district assemblies due to limitations imposed by the central government on the use of intergovernmental transfers. The central government pays for capital projects and the salaries of most local government staff and thus determines the extent to which assemblies could deliver services. Expenditure responsibilities devolved to metropolitan, municipal and district assemblies are not executed without interference from the central government. Ghana's new Local Governance Act, 2016 imposes more restrictions on use of intergovernmental transfers. The restrictions on the use of funds through policy directives hamper the flexibility of subnational budgets, and thus limit expenditure autonomy of regions and assemblies. Regardless of the above noted restrictions, the basic architecture to support expenditure and revenue autonomy in Ghana is in place. The observed situation may be a result of low capacity of assemblies to take full advantage of the powers and responsibilities in the Local Governance

Act, 2016 to increase their autonomy. Also, fragmentation through the creation of more districts could further weaken the capacity and the available resources at the local level to adequately collect local tax revenues. In addition, there is low incentive for assemblies to go after tax revenues because of guaranteed transfers from the central government. Besides, the leadership of assemblies are not elected directly by residents in their jurisdictions and hence they are not accountable to the people.

The revenue sources of assemblies are equally well defined in the Local Governance Act, 2016 and being implemented in Ghana using different modalities. However, the effectiveness of fiscal decentralization is mixed. It can be concluded that subnational revenues are low and declining in Ghana. In the case of the subnational tax sources, it can be concluded that assemblies are not taking full advantage of the revenue sources. The shares of subnational governments' revenues in Ghana have been declining and remains low at 0.72 percent of total government revenue in 2018, from 1 percent in 2007.

The Government of Ghana increased intergovernmental transfers to subnational governments substantially, in order to fill the fiscal gap between subnational revenue collections and their expenditure. It can also be concluded that intergovernmental transfers are the most important source of revenue to subnational governments in Ghana (on average, 80 percent of subnational revenues). It is provisioned in the 1992 Constitution and Local Governance Act, 2016. Besides government financed intergovernmental transfers, there are also donor supported and performance based intergovernmental transfers providing funds to subnational governments. Government policies and legal provisions are congruent on the use of intergovernmental transfers to finance services at the local level. It can be concluded that government's policy to increase intergovernmental transfers has resulted in a high dependence on transfers across all regions in Ghana.

District Assemblies Common Fund continues to have implementation challenges associated with the timely release of resources to subnational governments to finance their budgets. There are incentives for these delays because, the Administrator of the Fund is allowed by the Local Governance Act, 2016 to continue to invest the funds (released by the Ministry of Finance) before it is transferred to subnational governments.

It can be concluded that property taxes are low in Ghana and yet the Local Governance Act, 2016 does not provide the incentives for assemblies to collect more property taxes. The metropolitan and municipal assemblies in the more developed regions of Ghana are collecting most of the property taxes. Many challenges still remain and are mainly associated with valuation of properties, collection of property taxes, identification of tax payers and underdeveloped property market. These challenges require innovative approaches at the level of assemblies to improve the collection of property.

Regions and assemblies in Ghana do not incur excessive debt. While there is no legal framework that allows regions to borrow, there is also no subnational debt market that could finance trans-regional development projects in Ghana. Regions and assemblies do not keep detailed record of their debt because they do not borrow for infrastructural projects. The central government finances and guarantees the loans needed for large infrastructural projects. It was observed that subnational government debts relate to transitory payments, which get financed when intergovernmental transfers are released. It can be concluded that subnational debt is not a challenging issue in Ghana.

Overall, Ghana has made moderate progress toward fiscal decentralization through the provision of legal systems that support central government transfers, but this has not translated to revenue and expenditure autonomy of regions and assemblies. I conclude that the effectiveness of fiscal decentralization reforms in Ghana depends on the intergovernmental transfers. The inability of

local governments to finance their budget from own source revenues limits their expenditure autonomy. Also, the low revenue collection capacity and effort of subnational governments limit their ability to gain revenue autonomy. One of the main challenges facing subnational governments in Ghana is the inability of the government to use policy measures in order to motivate own revenue collection of subnational government. In a broader sense, over-reliance on intergovernmental fiscal transfers has become deeply embedded in the culture, practice and implementation of decentralization in Ghana. Fiscal decentralization reforms in Ghana is not effectively focused on promoting subnational government autonomy. The central government has been managing challenges affecting the local government system and implementing some solutions. Some of these solutions have informed the changes in the local government Acts, policy frameworks and action plans. The results are mixed showing a fine architecture of a local government system, lack of subnational budget autonomy and inadequate willingness of subnational governments to raise own sourced revenues.

# CHAPTER 4

## RESEARCH METHODOLOGY

### 4.1 Introduction

This section discusses the methods used to answer the three questions identified, based on their relevance to this thesis and the gap in the reviewed literature. The first question is “how effective is fiscal decentralization in supporting subnational autonomy in Ghana?” The second question is “to what extent do revenue and expenditure assignments as well as intergovernmental transfers impact on regional gross domestic product in Ghana?” The third question is “To what extent do subnational fragmentation and intergovernmental transfers impact on own-source revenue and more specifically property tax revenue in assemblies in Ghana?”

The thesis uses both qualitative and quantitative analyses in order to answer the three questions. In Chapter 3, the first questions on the effectiveness of fiscal decentralization is answered. A qualitative technique is employed in order to respond to the first question, while a quantitative approach is used to answer the second and third questions in Chapters 5 and 6.

### 4.2 Step by step approach to answering the three overarching questions

1. **Literature review:** The first step to answering the questions was a review of relevant literature on fiscal decentralization in Ghana, peer reviewed academic literature on decentralization, and the history of decentralization in Ghana. The review encompassed changes in local government Acts in Ghana that directly addressed decentralization reforms, decentralization policies and action plans, and announcements in various budget statements of government plans on decentralization. Ghana has an extensive list of colonial reports prepared by governors of the Gold Coast which explained actions that the British government took in relation to decentralization during the colonial era. These reports were reviewed and used as part of supporting literature for this thesis. I also reviewed academic and peer reviewed literature. The literature review guided



formulation and review of the objectives, questions and type of data needed for the thesis.

2. **Data collection:** The thesis uses panel data obtained from different sources in Ghana. The data consist of statistics from 10 regions and 216 districts over the period 2005 to 2016. District financial data were obtained from the MLGRD. The central government fiscal data was collected from the Ministry of Finance. Real GDP, population size and inflation data were obtained from the National Accounts Unit of the Ghana Statistical Service. Other publicly available data such as mobile subscription information by region was obtained from the website of the National Communication Authority. The data from these institutions were used for the econometric analysis.

#### 4.3 Justification for approach chosen to answer the questions

The analysis is at regional and district assembly levels, in order to permit triangulation of the findings and results. In the case of Question 1, “how effective is fiscal decentralization in supporting subnational autonomy in Ghana”, the qualitative approach allowed the discussion about sources of subnational revenues in Ghana, and identification of the underlying challenges affecting fiscal decentralization and subnational autonomy. It also allowed an assessment of the sections of the Local Governance Act, 2016 which pertains to the thesis. It discussed the implementation of property taxes in Ghana based on the provision in the Local Governance Act, 2016. It presented the foundation for further econometric analysis in Chapter 6 of this thesis.

The second question, “to what extent do revenue and expenditure assignments as well as intergovernmental transfers impact on regional gross domestic product in Ghana”, is answered using regional level analysis. The regional analysis presents the global picture of subnational entities in Ghana. It covers ten regions in Ghana between 2005 and 2016. It is important to emphasize that, in 2018, the Government of Ghana decided to split four regions in Ghana (Western, Brong Ahafo, Volta and Northern), thereby, adding six new regions. The new regions

are Oti (from Volta Region), Ahafo (from Brong Ahafo), Bono East (from Brong Ahafo) and Western North (from Western Region). The others are North East (from Northern Region) and Savanna (from Northern Region). These new regions are not covered in this thesis, partly because there are no data covering their activities. In addition, the government has not completed recalibrating existing data to cover the new regions.

The third question, “to what extent do subnational fragmentation and intergovernmental transfers impact on own-source revenue and more specifically property tax revenue in assemblies in Ghana”, is answered using district level analysis. This analysis is a step lower than the regions and gives the perspective of the actual implementers of subnational government programs in Ghana. The question focuses on the impact of fragmentation on own source revenues and in particular property taxes of assemblies in Ghana. The analysis uses data between 2013 and 2016. A panel regression analysis is used to explain the “between” and “within” variations among districts.

#### 4.4 Methodology for question 2

The second question of the thesis is stated as follows:

- Question 2: To what extent do revenue and expenditure assignments as well as intergovernmental transfers impact on regional gross domestic product in Ghana?

I restated the second question into three specific sub-questions below to ease the application of a quantitative approach for analysis:

- Question 2a: To what extent does expenditure assignment impact the real regional GDP in Ghana?
- Question 2b: To what extent does revenue assignment impact real regional GDP in Ghana?

- Question 2c: To what extent do intergovernmental transfers impact the real regional GDP in Ghana?

The following three hypotheses below correspond to questions 2a, 2b and 2c respectively:

- a) H<sub>1</sub>: Expenditure assignment negatively impacts real regional GDP in Ghana.
- b) H<sub>2</sub>: Revenue assignment negatively impacts real regional GDP in Ghana.
- c) H<sub>3</sub>: Intergovernmental transfers negatively impact real regional GDP in Ghana.

The three specific questions are answered in Chapter 5. The underlying theoretical model used to answer the questions is the augmented Solow's Growth Model presented by Mankiw, Romer and Weil (1990:27). It states that "output is produced from physical capital, human capital and labor and is used for investment in physical capital, investment in human capital and consumption". To answer Question 2, I deploy fixed and random effects specifications. Robustness tests are carried out using generalized method of moments, because the regressors may be correlated with the error term. Total regional revenue is split into own revenue and intergovernmental transfers, and total expenditure into recurrent and capital expenditure. These variables are used in sections 4.4.1 and 4.4.2.

#### 4.4.1 Model specification for Question 2

The literature review indicates that the dependent variable for models determining the relationship between fiscal decentralization and economic growth is real GDP per capita growth (see section 2.6). However, in Ghana, population is an important policy variable for decision making. I, therefore isolate population in all my models to assess its relevance. The dependent variable used in Model 1 is real GDP. Regional inflation is used as a control variable in the model and a proxy for macroeconomic stability. This variable has been added because inflation in Ghana has been very high until recently. None of the other variables is a share of GDP. High

inflation represents a lack of macroeconomic stability and it is expected to lower economic growth and output in the economy. Two measures of fiscal decentralization are carefully included in the models. Many empirical studies isolate government grants on the revenue side (see Chapter 2). That is, revenue assignment is measured using share of own revenue to general government. I present these types of results in appendix and innovate by removing the impact of grants from the expenditure side. This technique enables the assessment of the ability of local governments to provide services and their capacity to fund their responsibilities. The thesis achieves this result through the construct of a variable known as the share of direct regional expenditure to total national government expenditure. To obtain parameter estimates that have elasticities, I specify a semi-log model.

Model 1 is specified as follows:<sup>46</sup>

$$\text{Ln}Y_{it} = \alpha_1 + \alpha_2 \text{Ln}Y_{t-1} + \alpha_3(\text{Ln}(\text{DE}/\text{CEXP}))_{it} + \alpha_4(\text{RREV}/\text{CREV})_{it} + \alpha_5(\text{Infl})_{it} + \alpha_6(\text{Ln popn})_{it} + \alpha_7(\text{Ln GR})_{it} + \alpha_8\text{LnMT}_{it} + \varepsilon_{it} \dots\dots\dots \text{Model 1}$$

Where subscript  $_{it}$  stands for region  $i$  ( $=1, 2, \dots, 10$ ) and at time  $t$  ( $=2005, 2006, \dots, 2016$ ).  $\alpha_1, \dots, \alpha_8$ , are scalar parameters. The error terms for region  $i$  at time  $t$  are represented by  $\varepsilon_{it}$ .  $\text{Ln}Y$  is the log of the regional real gross domestic product.  $\text{Ln}Y_{t-1}$  is a one-year lag of real GDP.  $\text{Ln}(\text{DE}/\text{CEXP})$  represents log of the ratio total direct regional expenditure to total national government expenditure.  $\text{RREV}/\text{CREV}$  represents the share of total regional revenue<sup>47</sup> in total government revenue.  $\text{Infl}$  represents regional inflation.  $\text{Ln popn}$  represents the log of regional population size.  $\text{Ln GR}$  stands for the log of regional gross enrollment rate to high school, and  $\text{LnMT}$  stands for the log of regional mobile phone subscriptions.

Model 2 is specified as follows:

$$\text{Ln}Y_{it} = \beta_1 + \beta_2 \text{Ln}Y_{t-1} + \beta_3(\text{Rrcur}/\text{CEXP})_{it} + \beta_4(\text{RGREV}/\text{CREV})_{it} + \beta_5(\text{Infl})_{it} + \beta_6(\text{Ln popn})_{it} + \beta_7(\text{RGR})_{it} + \beta_8\text{LnMT}_{it} + \lambda_{it} \dots\dots\dots \text{Model 2}$$

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<sup>46</sup> The semi-log specification provides some parameter estimates that are elasticities and allows the inclusion of rates and binary dummies into the model. This specification is used in the entire thesis.

<sup>47</sup> This is an aggregation of revenues received by assemblies in a region.

Where subscript  $i_t$  stands for region  $i$  ( $=1, 2, \dots, 10$ ) and at time  $t$  ( $=2005, 2006, \dots, 2016$ );  $\beta_1, \beta_2, \dots, \beta_8$ , are scalar parameters. The error terms for region  $i$  at time  $t$  are represented by  $\lambda_{it}$ .  $\ln Y$  is the log of the regional real gross domestic product.  $\ln Y_{t-1}$  is a one-year lag of real GDP.  $(Rrcur/CEXP)$  represents the share of recurrent regional expenditure in central government expenditure.  $(RGREV/CREV)$  represents the share of total regional intergovernmental transfers to central government revenue,  $\ln$  popn represents the log of regional population size,  $RGR$  represents regional gross enrollment rate to high school, and  $\ln MT$  stands for the log of regional mobile phone subscriptions.

The dependent variable is real gross domestic product. I note that other studies<sup>48</sup> have used per capita GDP as an independent variable but in this case, the study intends to validate the use of population size as criteria for decision making in Ghana and thus, population size is isolated. Ghana does not have regional GDP data. The regional GDP data for this thesis were generated from the national GDP data based on regional shares of employment produced by the Ghana Statistical Service (2016a:34-35) as a part of the Labor Force Survey. Ghana Statistical Service produces the labor survey with estimates of economic activities in both private and public sectors across regions in Ghana. The level of economic activities and the number of active labor force within each region could guide the estimate of regional GDP. The approach assumes that businesses will employ more productive labor to expand the production, given that capital and technology do not expand rapidly in the short run. Therefore, the labor survey data is likely to reflect changes in output of regions. Ghana produces oil but the sector is capital intensive, managed mainly by foreigners offshore. The estimation assume that oil production is not region specific for 2010 to 2016 and the labor force survey's employment data reflects output of the region that is closest to the oil production site. In this case, the oil related output in the Western region of Ghana is captured in the employment data. Gross domestic product measures the

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<sup>48</sup> Such as Akai and Sakata, 2002; Espasa, 2008; Zhang and Zou, 1998.

market value of an economy's final output of goods and services during a year. In order to isolate the price effect from one year to the other, the thesis uses the gross domestic product in constant terms (that is the real GDP) from Ghana Statistical Service.

The variable  $\ln(\text{DE}/\text{CEXP})$  is the log of the ratio of total direct regional expenditure to total national government expenditure. Direct regional expenditure is defined as total regional expenditure minus current total grants. It provides information on the resources needed to support the functions of subnational government. It could take either a negative or positive value. It measures the expenditure assignment pillar of fiscal decentralization. The numerator, DE is the total direct regional expenditure (that is, the total regional expenditure minus total grants to the region). The denominator, CEXP represents the total national government expenditure. The higher this measure gets, the higher the degree of the expenditure assignment and autonomy over expenditures. That is, a positive sign of the coefficient of  $\ln\text{DE}/\text{CEXP}$  indicates that regional governments are financing their expenditures with funds other than grants.<sup>49</sup> A negative sign means regional governments are financing their expenditures with grants and depending on the central government. This interpretation is consistent with Davoodi and Zou (1997:248), who use the same indicator to measure the degree of fiscal decentralization. It is also consistent with Neyapti (2003:10), who measures expenditure assignment using the share of total spending by the state and provincial governments in total spending of the state, provincial and central governments combined. Jia, Guo and Zhang (2014:111) measure expenditure assignment using the share of expenditure categories for each county in the total province expenditure.

Revenue assignment is measured by  $L(\text{REV}/\text{CREV})$  and  $\text{LGREV}/\text{CREV}$ . The numerator of  $\text{REV}/\text{CREV}$  is the total regional revenue received (total own revenue collected by districts in

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<sup>49</sup> A positive coefficient from the regression will mean that a higher expenditure assignment will have a positive impact on regional GDP growth, while a negative coefficient from the regression will mean higher expenditure assignment is bad for regional GDP growth because it is not funded.

the regions plus intergovernmental transfers received by districts in the regions). The denominator of REV/CREV stands for central government revenue as reported by the Ministry of Finance in Ghana. Similarly, the numerator of RGREV/CREV is the sum of all intergovernmental transfers received by each regional government. The measure RGREV/CREV is consistent with literature on revenue assignment. Bahl and Martinez-Vazquez (2007:18-20) measure revenue assignment as the total subnational revenue as percentage of total national revenue. Lin and Liu (2000:7-10) measure revenue assignment using the marginal retention rate of locally collected revenue in provincial government revenues. Blöchliger and Nettley (2011:4) measure revenue assignment and autonomy using own-source tax revenue as a percentage of total central tax revenues. The definition of revenue assignment varies in the literature with some authors using proportions of subnational revenues to central government revenues. The results from Model 1 (using total regional revenue) obtained are compared with an alternative measure of revenue decentralization (a stricter definition) from the International Monetary Fund. That is, revenue decentralization defined as a share of own revenue to central government revenue (Lledó et al, 2018:13). The results will be compared because total revenue in a region includes transfers received from central government and development partners. The signs of the coefficients are expected to be similar to results in Model 1, but the magnitude of the coefficients will vary. In that case, Model 1 will be used as specified below.

I use the regional end period (December) consumer price index. Ghana Statistical Service rebased the consumer price index in 2012. Thus, there are two series of data (2005-2012 and 2012-2016). In order to obtain one series with the same base, the data was rebased to align with the 2012/13 data produced by the Ghana Statistical Service. In 2012, data were not available after July 2012 under the old series (2010-2012), thus I could not use annual average inflation. The inflation for the region was assumed for the assemblies holding constant the variations across assemblies within every time period. Within the panel, it allowed variations across

regions as published by the Ghana Statistical Service. The expected sign of inflation in the model is referenced to Barro (2013:85) who examined data from 100 countries between 1960 and 1990 and found a negative and significant causal influence of inflation on real GDP growth. Similarly, Ghosh and Phillips (1998:672) found a negative relationship between inflation and growth after studying a large set of IMF countries between 1960 and 1996.

I use regional population data from 2005 to 2016. Regional population data for 2010 to 2016 were obtained from the Ghana Statistical Service (2016b:3-5). They also provided national population data (2005 to 2016). Regional population data for 2005 to 2009 was generated from collation of district population (based on the national data 2005-2009) obtained from the 2010 population census.

Ln GR is the log of gross enrollment rate to secondary or high schools in Ghana. It is a control variable that represents initial human capital. Barro (1991:407) uses school enrollment as a proxy for the initial human capital for 98 countries between 1960 and 1985 and finds a negative relationship between school enrollment and real per capita GDP. The main drawback of this proxy is that the effectiveness of the students' contribution to human capital is usually after the completion of their education. Romer (1990:71) found that the stock of human capital was a better determinant of the rate of growth than a large population. Gross enrollment rate at high school level could be considered as a good proxy of the initial stock of human capital. Other measures of human capital are adults' skills (Romer, 1990), the average years of schooling (Psacharopoulos and Arriagada, 1986) and accumulated years of schooling (Nehru, Swanson, and Dubey, 1993).

LnMT is the log of mobile phone subscriptions which a proxy used here to represent the use of technology. Barro (1991:407) expressed the opinion that low income countries which have low



capital to labor ratios tend to have higher growth rates with improvement in technology. Similarly, Mankiw, Romer and Weil (1990:27) note that the augmented Solow Growth Model identified investment in physical capital as one of the factors that contribute to the output of the economy. The research uses mobile phone subscriptions as a measure of the spread of technology across regions in Ghana. Real GDP and mobile phone subscriptions are positively correlated at the national level in Ghana as shown in Table 4.1. The results of the Pearson's correlation of 0.9903 between mobile phone subscriptions and real GDP indicates a strong positive association.

**Table 4.1: Pearson's correlation coefficient between mobile subscriptions and real GDP in Ghana, 2007 -2017**

|                            | Mobile phone subscriptions | Real GDP (2013 base year) |
|----------------------------|----------------------------|---------------------------|
| Mobile phone subscriptions | 1                          |                           |
| Real GDP (2013 base year)  | 0.9903                     | 1                         |

Source: Ghana Statistical Service (GDP data) and Ghana National Communication Authority (Mobile subscriptions data).

Mobile phone subscriptions are a good indicator of real GDP growth. At the regional level, it is used to indicate the penetration of the use of technology by the citizens. The number of mobile phone subscribers was obtained from published data by Ghana's National Communication Authority and Ghana Statistical Service district census reports. The National Communication Authority data are not disaggregated by region and district. However, I extracted the number of mobile phone subscriptions from the district census reports. The Ghana Statistical Service district census reports for the 216 districts contain the number of mobile phone holders in each district for 2010. Regional and district ratios for 2010 were used to generate the number of subscriptions per district from 2011 to 2016. It is noted that mobile penetration in Ghana is high, even in the rural areas. As at November 2019, voice subscriptions reached 41,173,115 (nationwide) from 38,305,078 in 2016, 17,436,949 in 2010 and 900 in 1992. The continuous

increase in the subscriptions is partly because of web-based revolution alongside stronger demand for smart phones. These explain the usefulness of the mobile subscriptions' variable as a measure of technological advancement. In a growth model, the variable is a good proxy for measuring the impact of technology.

#### 4.4.2 Expected signs of expenditure and revenue and variables

Expenditure assignment is measured by Bahl and Martinez-Vazquez (2007:20) as subnational expenditure as a share of total government expenditure. This measure of expenditure assignment is consistent with other measures used in the empirical literature summarized in Table 3.19. Jin and Zou (2005) find that expenditure assignment is positively associated with real GDP growth in China. Yilmaz (2000:251) also finds expenditure decentralization to have a positive and significant impact on economic growth in 17 unitary states. Lin and Liu (2000:11) find that fiscal decentralization has a positive and significant impact on per capita GDP growth rate. Jia, Guo and Zhang (2014:107) also find expenditure decentralization to increase with government spending. Yushkov (2015:404) note that when expenditure assignment is not followed by revenue autonomy, the sign reverses. Neyapti (2003:7-10) explain that both revenue and expenditure assignments must be reviewed together, because when revenue autonomy is limited in any country, the expenditure autonomy is also likely to be limited.

**Table 4.2: Expected signs of expenditure assignment**

| Literature on expenditure assignment | Findings on expenditure assignment  |
|--------------------------------------|---|
| Yilmaz (2000:251)                    | Finds expenditure decentralization to have statistically significant and positive impact on economic growth in 17 unitary states.   |
| Lin and Liu (2000:11)                | Find that fiscal decentralization has a positive and significant impact on growth rate of per capita GDP. Fiscal decentralization is measured by the marginal retention rate of locally collected budgetary revenues by provincial governments. |
| Jin and Zou (2005:1047)              | Expenditure assignment has positive association with real GDP growth.   |

|                                   |   |
|-----------------------------------|---|
| Neyapti (2003:15)                 | The paper investigates the relationship between fiscal decentralization and budget deficits. It finds a negative relationship between expenditure decentralization and budget deficits when country size (population per kilometer square) is large. Expenditure decentralization has a positive relationship with budget deficit when there is good governance and stronger ethnolinguistic fractionalization. Expenditure decentralization is measured by the “share of total spending of state and provincial governments to total spending of the state, provincial and central government”. It uses other measures of expenditure decentralization that replaces total spending with current spending in the above definition. |
| Iimi (2005:449)                   | Finds significant and positive impact of expenditure decentralization on per capita GDP growth.   |
| Feltenstein and Iwata (2005:481). | Find economic decentralization to be positively related to growth in real output for the entire postwar period in China. Finds fiscal decentralization to have adverse implications for the rate of inflation.  |
| Jia, Guo and Zhang (2014:107)     | Find that expenditure decentralization increases government spending.   |
| Yushkov (2015:404)                | Finds that excessive expenditure decentralization within the region of Russia without corresponding revenue decentralization is negatively related to regional economic growth. Finds regional dependence on intergovernmental fiscal transfers to be positively associated with economic growth.   |

Source: Author produced from different sources – as indicated in Column 1.

**Revenue assignment:** In Model 1, a negative sign of the coefficient is expected because higher taxes reduces the income of economic agents and reduces their ability to reinvest in activities that could stimulate economic growth. It is assumed that the government will be more efficient at reinvesting the taxes to support growth and improve social welfare. In Ghana, own revenue represents 20 percent of total own revenues of assemblies, but they also benefit from additional funds from national tax revenues which could reduce growth if not reinvested in the economy. Thiessen (2003:237) finds the sign of the coefficient between revenue assignment and growth to be inconclusive but notes that the relationship between revenue assignment and growth is positive when fiscal decentralization is increasing from low levels. However, the relationship

tends to reach a peak and becomes negative as a country continues to implement fiscal decentralization reforms. On the other hand, Jin and Zou (2005:1047) find a positive association between revenue assignment and real GDP growth. Table 4.3 shows some of the findings about the signs of coefficient of revenue assignment in the literature.

**Table 4.3: Expected signs of revenue assignment**

| Literature on Revenue Assignment               | Findings about Revenue Assignment   |
|--|---|
| Jin and Zou (2005:1047)                        | Find a positive association between revenue assignment and real GDP growth.   |
| Jia, Guo and Zhang (2014:107)                  | Find revenue decentralization has little influence on local government expenditures. Revenue decentralization is defined as a ratio of own revenue per capita of a county, prefectural, provincial and central government to the total.   |
| Gil-Serrate, Lopez-Laborda and Mur (2011:2643) | Find regional governments' revenue autonomy to have a marginal positively related to regional growth in Spain.  |
| Thiessen (2003:237)                            | Finds the relationship between revenue autonomy and growth to be positive when fiscal decentralization is increasing from low levels, however, the relationship tends to reach a peak and becomes negative as a country continues to implement fiscal decentralization reforms. |

Source: Author produced from different sources – as indicated in Column 1.

#### 4.5 Methodology for Question 3

As mentioned, Question 3 is “to what extent do district fragmentation and intergovernmental transfers impact own revenue and property tax revenue in assemblies in Ghana”. I restate Question 3 into three specific sub questions to facilitate the quantitative analysis. The three specific questions will be answered in Chapter 6. These are:

- Question 3a: to what extent does fragmentation of assemblies impact on own source revenue in Ghana;

- Question 3b: to what extent does fragmentation of assemblies impact on property tax revenues in Ghana; and
- Question 3c: to what extent does intergovernmental transfers impact on property taxes in Ghana?

I will test the following three research hypotheses:

- H<sub>4</sub>: Fragmentation of MMDAs negatively impacts on own revenues of MMDAs in Ghana.
- H<sub>5</sub>: Fragmentation of MMDAs negatively impacts on property tax collection of MMDAs in Ghana.
- H<sub>6</sub>: Intergovernmental transfers negatively impacts on property taxes of MMDAs in Ghana.

The creation of new assemblies<sup>50</sup> in Ghana takes the form of splitting old or existing MMDAs. I noted in Chapter 3 that the creation of assemblies is expected to improve service delivery at the local level. The Local Governance Act, 2016 mandates the President of the Republic to create new assemblies as may be required, based on population growth and the economic viability of the district to be created. Thus, the policy of fragmentation is generally accepted in Ghana. However, the creation of new assemblies has implications on the proper functioning of the subnational governments and the revenues they collect and retain. In this thesis, I focus on the revenue implications of fragmentation and the trade-off between own revenue collection and intergovernmental transfers.

When the government creates new assemblies, some local political authorities lose their power over certain jurisdictions to the new political entity that is created. Within a region, the more assemblies are fragmented, the smaller the geographical jurisdiction the local governments will

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<sup>50</sup> Metropolitan, Municipal and District Assemblies.

have. Fragmentation has advantages and disadvantages as it creates winners and losers. One of the advantages is that fragmentation of local governments takes local political authorities closer to the people when geographic boundaries are smaller. Local authorities are more likely to address critical needs of citizens as they give them the opportunity to participate in governance, and service delivery could improve with the establishment of more service delivery centers and more local people could access their leaders. The disadvantages of fragmentation of local governments may include the loss of jurisdictional power by some local governments, the local market may become smaller, the political clout of large local governments or metropolitans may diminish, local governments may have smaller jurisdictions to collect revenues, projects that require large financing may not be implemented, smaller districts are less likely to attract large companies that depend on local markets, and local tax policies are likely to differ across different jurisdictions.

At the time of this analysis, the district level data for 2017 and 2018 were not complete, thus I used panel data from 2010 to 2016. MLGRD in Ghana did not have complete disaggregated annual data for all regions during the period 2007 to 2009. Given that the data was scanty and with large gaps across the three years, I decided to exclude 2007-2009 data from the panel regression.

The panel data for the regression is obtained by aggregating data from 216 assemblies to 170 based on the classification before new assemblies were created after 2010. In order to compare the districts across a fragmented period (2012–2016), the weights of districts are held constant from 2010 to 2016. By implication, the names and weights of districts in 2010 to 2012 remained unchanged, while those between 2013 and 2016 were aggregated from 216 to 170 districts. Mother and offspring districts are put together, in order to ascertain whether the districts are performing better after fragmentation. For instance, if the revenue collected or received falls, a negative sign will be expected and vice versa. The control is the set of districts that were not

fragmented. This aggregation allows comparison between districts before fragmentation and after fragmentation.

I construct two measures of fragmentation. Firstly, I construct a binary variable with a score of 1 if the assembly was altered or created in 2013 due to the government's fragmentation policy, otherwise the variable takes the score 0. This variable is expected to measure the full short-term impact of fragmentation. It measures the impact of fragmentation on newly created assemblies and the old assembly. The impact of fragmentation is expected to be aggregated when I run regressions with 170 assemblies that existed in 2012, rather than the 216 assemblies that were available between 2013 and 2016.

Secondly, I construct a variable to measure a longer-term impact of fragmentation on assemblies between 1988 and 2016. The variable is called "age of assembly". It allots numerical number 1 for all assemblies that existed in 1988, and thereafter counts the age of the assembly until 2016. This means that assemblies that have never been fragmented will have higher ages than those created thereafter (between 1988 and 2016). Those created in 2013 will only be 4 years by the end of 2016 and thus have numerical number 4.

Next, I construct three sets of dummies variables for each metropolitan, municipal and district assembly which takes the score of 1 for each assembly and 0 otherwise. That is, the binary dummy for metro has a score of 1 if the assembly was a metropolitan between 2013 and 2016 and otherwise. Similarly, the municipal dummy has a score of 1 if the assembly was a municipal between 2013 and 2016, and 0 otherwise. Furthermore, I construct a district dummy which has a score of 1 if the assembly was a district between 2013 and 2016, and 0 otherwise.

Finally, I construct a variable called administration cost. This variable is calculated as the sum of general expenses, staff salaries, cost of travels and transportation, and cost of repairs and

renewables of the assembly. It excludes miscellaneous expenses of assemblies which sometimes includes capital expenses.

#### 4.5.1 Model specifications Question 3

I answer the specific question: “What is the impact of fragmentation on own revenue and property tax revenues in Ghana”? I estimate two models (Model 3a and Model 3b). Model 3a responds to the impact of fragmentation on own revenue in Ghana. Model 3b responds to answer the question of the impact on fragmentation on property taxes and the impact of intergovernmental transfers on property taxes. Model 3b is specified slightly differently from Model 3a, because the year in which property taxes are paid is relatively important. Property taxes in Ghana are by law required to be paid annually and thus, modeling the effect of the law improves the reliability of the results. Thus, I include dummy variables for 2011 to 2016 to capture the responsiveness of the payment of property taxes to the law. In both models, the interactive variables are introduced as defined below so as to distinguish the impact in metropolitans, municipals and districts.

#### **When log of own revenue is a dependent variable:**

$$(LRev)_{it} = \rho_0 + \rho_1 (Lpopn)_{it} + \rho_2 (LCap)_{it} + \rho_3 (AgeAA)_{it} + \rho_4 (Frag)_{it} + \rho_5 (Tgrantpc)_{it} + \rho_6 (CPI)_{it} + \rho_7 (Admin)_{it} + \rho_8 (year)_{it} + \mu_{it} \dots \dots \dots \text{Model 3a}$$

Where subscript it stands for assemblies i (=1, 2 ..., 170) and at time t (=2010, 2011 ... ,2016).

$\rho_1, \dots, \rho_8$  are scalar parameters. LRev is the log of own revenue collected by assemblies. Lpopn is the log of population size of assemblies. LCap is the log of capital expenditure of assemblies. AgeAA is the age of assemblies between 1988 and 2016. Frag is binary fragmentation of assemblies’ dummy. Tgrantpc is the total grants received by the assembly in capita terms. Admin is the log of administrative expenditure of assemblies. Year is aggregate year dummy and  $\mu_{it}$  is the error term.



**When log of property taxes is a dependent variable:**

$$(LPTax)_{it} = \gamma_0 + \gamma_1 (Lpopn)_{it} + \gamma_2 (LCap)_{it} + \gamma_3 (AgeAA)_{it} + \gamma_4 (Frag)_{it} + \gamma_5 (Tgrantpc)_{it} + \gamma_6 (CPI)_{it} + \gamma_7 (Admin)_{it} + \gamma_8 (dyear)_{it} + \eta_{it} \dots \dots \dots \text{Model 3b}$$

Where subscript *it* stands for assemblies *i* (=1, 2 ..., 170) and at time *t* (=2010, 2011 ... ,2016).  $\gamma_1, \dots, \gamma_8$  are scalar parameters. LPTax is the log of property taxes by assemblies. Lpopn is the log of population. LCap is the log of capital expenditure at the local level. AgeAA is the age of assemblies between 1988 and 2016. Frag is the fragmentation of assemblies’ dummy which takes the value of 1 when the assembly was fragmented and 0, otherwise. Tgrantpc is the total grants received by the assembly in capita terms. CPI is the consumer price index for housing and utility. Admin is the log of administrative expenditure at the local level. Year is aggregate year dummy and dyear represents individual year dummies for 2011 to 2016.  $\eta_{it}$  is the error term.

Next, I define interactive terms to distinguish the result in the selected estimators of Models 3a and 3b. I construct three separate dummies for metropolitan assemblies, municipal assemblies and district assemblies. These are binary variables that take 1 for the status of an assembly and 0 otherwise. I define an interactive variable (Metrofrag) for the metropolitan assemblies to be the product of the fragmentation of assemblies’ dummy and a dummy for metropolitans. The dummy for metropolitan assemblies is a binary variable which takes a value of 1 if the assembly is a metropolitan in Ghana and 0 otherwise. I include interaction variable “Metrofrag” with the fragmentation of assemblies’ dummy and re-estimate the model<sup>51</sup> with the dummies.

Next, I define an interactive variable (Munifrag) for the municipal assemblies as the product of the fragmentation of assemblies’ dummy and a dummy for municipals. The dummy for

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<sup>51</sup> See Chapter 6 for the selected model and the conclusion after the estimation.

municipal assemblies is a binary variable which takes a value of 1 if the assembly was a municipal in Ghana after 2012, or 0, otherwise. Finally, I define an interactive variable (Distfrag) for the district assemblies as the product of the fragmentation of assemblies' dummy and a dummy for districts. The dummy for district assemblies is a binary variable which takes a value of 1 if the assembly was a district in Ghana after 2012, or 0 otherwise. I include the interaction variables Munifrag and "Distfrag" into the models and re-estimate. The rationale for separating the models into two is because the dummies will become linear when together in the same model. Therefore, I will estimate the two models separately. For each of these models, the fixed and random effects estimators will be deployed for the analysis. There are not enough data points to have restricted analysis for metropolitan assemblies, since there are only 6 metropolitan assemblies. Moreover, only a few years (2010-2016) are taken into account and thus the thesis will have very limited analysis for each of the assemblies.

#### 4.6 Data sources

**Regional data:** The regional data for real GDP were constructed with guidance from the Ghana Statistical Service. Central government data (2008–2016) were obtained from the Ministry of Finance. The fiscal data are published by the government on its website. These include total revenue, total tax revenue and total expenditure. These are prepared based on Government Finance Statistics 2001. The Ministry did not have 2007 data available, but they were available in the International Monetary Fund fiscal tables.

The mobile phone subscription data were obtained from the National Communications Authority. It publishes national data of telecom voice subscription trends. The thesis used the data for the period 1997–2016. Regional data were constructed using the 2010 Census report from the Ghana Statistical Service which provided data on mobile subscriptions for all districts and regions. The regional data for this thesis were constructed using shares of 2010 subscriptions for each region provided by the Ghana Statistical Service in the 2010 census. The approach was

purposely selected due to lack of regionally distributed subscriptions data across all the regions from 2005 to 2016.

**District data:** Subnational data were obtained from the MLGRD. The data received included detailed own revenue by sources, detailed expenditure of local governments by type, detailed grants by sources, and detailed property tax rates by location. Own source revenue, also known as internally generated funds, comprises property rates, other rates, licenses, fees and levies collected by districts.

Property rates are property taxes imposed by districts on immovable properties. Property rates in Ghana exclude taxes on land. The incident of the tax is on the building or structure. Fragmentation of assemblies' dummy is defined as a dichotomous variable and it is created to take the value 1 if the district was fragmented in 2012 and the value 0 if it was not fragmented.

The administration cost of local government is calculated as the sum of general expenses, staff salaries, cost of travels and transportation, and cost of repairs and renewables. This variable excludes miscellaneous expenses of MMDAs, which sometimes includes unclassified capital expenses. Recurrent expenditure is the sum of the administration cost plus miscellaneous expenses.

Consumer price index (CPI) of housing and utilities are end period (December) data. The CPI data was rebased to align with the 2012/13 data produced by the Ghana Statistical Service. As noted by Llanto (2012:51), inflation influences tax collections and should be included in the model.

The regional and assembly population size for 2010 to 2016 were obtained from the Ghana Statistical Service (2016b:3-5). The Ghana Statistical Service (GSS) also provided national population. Regional and assembly population were generated from collation of district

population obtained from the 2010 population census. The other years were generated based on the 2010 estimates. Population size is recognized as an important variable for the fiscal decentralization estimations in various papers such as Bahl and Cyan (2011:276), Panizza (1999:99), Bahl and Martinez-Vazquez (2007:18) and Jia, Guo and Zhang (2014:111). Grossman, Pierskalla and Dean (2016:15) argue that population size is an important variable that gives a sense of supportive opportunities for thinking of fragmentation and it should be added to the fragmentation model even if it is a control variable. The population size is expected to have a positive relationship with local revenues. Assemblies with higher productive population size are expected to contribute more to subnational revenues.

#### 4.7 Conclusion

The thesis had three main questions answered using qualitative and quantitative methods. It involved a desk literature review, data collection and analysis. The literature review enabled me to collect relevant data for the analysis. The Fiscal Decentralization Unit of the Ministry of Finance in Ghana provided sources of data and explained government policies on fiscal decentralization. In addition, they shared the draft government strategy on own revenue collection, explained the relationship between composite budgeting and fiscal decentralization, and progress made on the government's action plans on decentralization. Most of the literature used are from peer reviewed journals.

The qualitative analysis was informed by information received from portfolio analysis, and the desk review of the literature. The quantitative analysis depended on regional and assembly level data, Stata coding, use of different estimators (Random, Fixed Effects Model, and General methods of moments). Finally, I constructed interactive variables to capture assembly-specific results for metropolitan, municipal and district assemblies. Overall, the methods allow for triangulation of findings at the regional and assembly levels.

## CHAPTER 5

### FISCAL DECENTRALIZATION AND LOCAL GOVERNMENT AUTONOMY IN GHANA

#### 5.1 Introduction

Fiscal decentralization provides the opportunity for citizens to be empowered to participate in their own local development by fiscally empowering subnational governments. The fiscal empowerment occurs through expenditure assignment, revenue assignment, intergovernmental transfers and borrowing. In Ghana, section (73-74) of the Public Financial Management Act, 2016<sup>52</sup> provides an opportunity for local governments to borrow within the country and be liable for the debt unless explicitly guaranteed by the central government. However, local governments do not have the authority to determine the amount to be borrowed. They can borrow only up to the limit determined by the Minister of Finance, in consultation with the Minister of local Government and Rural Development. Since, there is no public data on whether any local government has attempted to implement this provision, the chapter does not discuss local government debt in Ghana. It will use a quantitative approach to discuss control over financial resources in terms of the expenditure assignment, revenue assignment and inter-governmental transfer in Ghana.

The authority for local governments to incur expenditure is provisioned by section (170) of the Local Governance Act, 2016.<sup>53</sup> All expenditure of assemblies in Ghana must be approved in the annual budget approved by the assembly members within their jurisdiction. The local budget is

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<sup>52</sup> Before 2016, section 88 (1) of the Local Government Act, 1993 empowered assemblies to raise loans or obtain overdrafts within Ghana with the approval of the Minister of Local Government and Rural Development. The terms of the loan must be approved by the Minister responsible for Finance. The law also put a limit on the amount of loan an Assembly can borrow.

<sup>53</sup> Before 2016, section (11 -13) of the Local Government Act, 1993 gave the Assemblies the responsibility to prepare their budgets, perform planning functions and to perform functions assigned by the regional coordinating council. Section 87 (1) of the same law empowers assemblies to incur expenditure necessary for or incidental to the performance of their functions.

always prepared based on guidelines provided by the Ministry of Finance. This provision is underpinned by section (173) of the Local Governance Act, 2016 that empowers the Minister of Local Government and Rural Development to give financial instructions for the improved control and efficient management of the finances of District Assemblies after consultation with the Minister responsible for Finance. Assemblies are obliged by this provision to comply with such instructions whether it is congruent with the local priorities or not.

Revenue assignment is supported by section 142 (1) of the Local Governance Act, 2016 that empowers assemblies to collect taxes chargeable on the income of income earners in a wide range of sectors and activities such as traders, some manufacturers, restaurants operators, photographers, workshop owners, and a variety of small businesses. In addition, section 144 (1) of the Local Governance Act, 2016 establishes assemblies as Rating Authorities within their jurisdictions. It states that “a District Assembly shall be the only authority to levy rates for a district despite any customary law to the contrary.” Assemblies are empowered to charge licenses, fees and other miscellaneous charges within their jurisdictions. However, many assemblies lack the capacity to take full advantage of the powers and responsibilities in the Local Governance Act, 2016 to increase their autonomy. At the local level, the Chief Executive of the assembly has strong influence over the bureaucrats and use “transfer of staff” from the assembly as a sanction for those who do not comply with their instructions (Brierley 2020, 217-218). But the Chief Executives of assemblies are not elected by the residents and therefore, they yield a lot of power at the local level. They are accountable mainly to the President who could remove them at his discretion. The political discretion over the revenue assignment is largely influenced by the chief executives of assemblies in consultation with their colleague Ministers in charge of Local Government and Rural Development or Finance.

Intergovernmental transfers are provisioned in Article 252 of the 1992 Constitution of Ghana and Section 126 of the Local Governance Act 2016, Act.<sup>54</sup> Parliament allocates not less than 5 percent of the total tax revenue of the country to the District Assemblies for local development every year. Before the DACF Act, 1993 was repealed in 2016, it required the Administrator of the Common Fund, in consultation with the Ministers of Local Government and Rural Development and Finance, to develop guidelines on the expenditure headings under which the funds can be spent at the local level. Section 9 of the DACF Act, 1993 allowed members of Parliament to also benefit from the allocation to the constituencies. They decide on development projects to fund within the constituencies with the funds allocated to them. The guaranteed transfers from the central government lowers the incentive of many assemblies to aggressively collect local taxes.

Central government transfer which is the single largest source of funding to assemblies is beset with many challenges. The Administrator of DACF makes bulk purchases for assemblies and deducts some amounts from approved allocations of assemblies even if the expenses are at variance with local development priorities. Given that the DACF is the single largest source of funds to assemblies for infrastructure projects, its release affects the ability of assemblies to effectively implement their budgets. Unfortunately, the major challenge of intergovernmental transfers in Ghana is delays in the release of the funds. Also, the Administrator of the Common Fund communicates the total allocation to each assembly without demonstrating how much they receive under the four factors used in the allocation of the funds.<sup>55</sup> This reduces the transparency of the disbursement of the funds. The use of intergovernmental transfers is not strictly within the domain of assemblies in Ghana. To a large extent, the task of the DACF administrator could

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<sup>54</sup> Before 2016, Section 86 (2) of the Local Government Act, 1993 required the Administrator of the District Assemblies Common Fund to distribute funds in accordance with the District Assemblies Common Fund Act, 1993 (Act 455). Assemblies budget for these revenues.

<sup>55</sup> The allocation of funds is discussed in Chapter 3.

be absorbed under the Ministry of Local Government and Rural Development to allow the Ministry of Finance to send funds directly to Assemblies. However, this is currently not a policy option in Ghana because the effectiveness and tradeoffs associated with the office of the DACF Administrator has not been assessed.

This chapter examines the implementation of revenue and expenditure assignments and intergovernmental transfers in Ghana. It responds to the second question is “to what extent do revenue and expenditure assignments as well as intergovernmental transfers impact on regional gross domestic product in Ghana?” The second question is restated as follows:

- Question 2a: to what extent does expenditure assignment impact the real regional GDP in Ghana?
- Question 2b: to what extent does revenue assignment impact real regional GDP in Ghana?
- Question 2c: to what extent do intergovernmental transfers impact the real regional GDP in Ghana?

This chapter responds to Question 2 and the specific sub-questions. The dependent variable for the models is log of real GDP. The models will be estimated using three estimators (Fixed Effect and Random Effect). The robustness test is done using General Methods of Moments.

The research or alternative hypotheses for Question 2 are respectively:

- a) H<sub>1</sub>: Expenditure assignment negatively impacts real regional GDP in Ghana.
- b) H<sub>2</sub>: Revenue assignment negatively impacts real regional GDP in Ghana.
- c) H<sub>3</sub>: Intergovernmental transfers negatively impact real regional GDP in Ghana.



## 5.2. Impact of revenue and expenditure assignment on real growth

The first two estimations are based on a total of 120 data points for ten regions and 12 years. Table 5.1 shows the variations across, between and within regions for 2005 – 2016. The dependent variable (the log of real GDP) has an overall deviation of 0.645. The result indicates larger variation for real GDP between regions (0.628) than the within region variation of 0.242. Two variables used to measure the degree of fiscal decentralization are the log of “direct regional expenditure to total government expenditures” and share of local revenue to total government revenue. The variations in the log of direct regional expenditure to total government expenditures is large (at 1.341) indicating that the data points are spread widely around the mean. However, the variation between regions tends to be relatively smaller (at 0.960) compared to the within region variation (0.995). The standard deviation of the “share of local revenue to central government revenue” is small (0.002), indicating that the data points are close to the mean. It is also the case for the between and with variations of the same variable.

The four control variables that will be used are inflation, log of population, log of mobile subscriptions and gross school enrollment. Inflation had a standard deviation of 4.655 indicating a wider variation of the data points from its mean (Table 5.1). Within region variation was equally high at 4.622, while the between regions was small at 0.580. Less variation is found with the within regions variation of population size compared to the between regions variation. The log of mobile phone subscriptions had larger between regions variation (1.046) around the mean, compared to the within regions variation (0.780). With respect to the gross enrollment rate of senior high school students, the data points are relatively clustered around the mean of the within regions (standard deviation of 8.976) compared to the spread of the data points around the mean of the between regions (standard deviation of 9.534).

**Table 5.1: Detailed descriptive statistics of the data used for the analysis**

| Variable   | Effect  | Mean   | Standard Deviation | Min    | Max    | Observations |
|--|---------|--------|--------------------|--------|--------|--------------|
| Region   | Overall | 5.5    | 2.884              | 1      | 10     | N = 120      |
|  | Between |        | 3.028              | 1      | 10     | n = 10       |
|  | Within  |        | 0.000              | 6      | 6      | T = 12       |
| Year   | Overall | 2011   | 3.467              | 2005   | 2016   | N = 120      |
|  | Between |        | 0.000              | 2011   | 2011   | n = 10       |
|  | Within  |        | 3.467              | 2005   | 2016   | T = 12       |
| Log of real GDP (LnY)  | Overall | 22.854 | 0.645              | 21.213 | 23.997 | N = 120      |
|  | Between |        | 0.628              | 21.585 | 23.681 | n = 10       |
|  | Within  |        | 0.242              | 22.482 | 23.171 | T = 12       |
| Log of the share of direct regional expenditure to total government expenditure in Ghana cedi (Ln (DE/CEXP)) | Overall | -3.042 | 1.341              | -7.494 | -0.327 | N = 102      |
|  | Between |        | 0.960              | -4.464 | -1.400 | n = 10       |
|  | Within  |        | 0.995              | -6.774 | -0.504 | T-bar = 11.9 |
| Share of local revenue to total government revenue in Ghana cedi (RREV/CREV)                                 | Overall | 0.005  | 0.002              | 0.002  | 0.015  | N = 120      |
|  | Between |        | 0.002              | 0.002  | 0.009  | n = 10       |
|  | Within  |        | 0.001              | 0.002  | 0.011  | T = 12       |
| log of population size (Ln popn)   | Overall | 14.591 | 0.547              | 13.339 | 15.503 | N = 120      |
|  | Between |        | 0.566              | 13.429 | 15.371 | n = 10       |
|  | Within  |        | 0.092              | 14.419 | 14.755 | T = 12       |
| Year on year inflation (Infl)  | Overall | 10.755 | 4.655              | 0.00   | 21.187 | N = 119      |
|  | Between |        | 0.580              | 9.76   | 11.595 | n = 10       |
|  | Within  |        | 4.623              | -0.84  | 21.250 | T-bar = 11.9 |
| Log of mobile phone subscriptions (LnMT)   | Overall | 13.804 | 1.266              | 10.366 | 16.312 | N = 120      |
|  | Between |        | 1.046              | 12.020 | 15.415 | n = 10       |
|  | Within  |        | 0.780              | 12.150 | 14.701 | T = 12       |
| Gross enrollment rate (high schools)-Ln GR   | Overall | 37.677 | 12.770             | 13.800 | 73.200 | N = 120      |
|  | Between |        | 9.535              | 23.717 | 53.600 | n = 10       |
|  | Within  |        | 8.976              | 16.877 | 60.885 | T = 12       |

Source: Author produced with data from MLGRD.

I restate the two models that will be estimated.

The first model is specified as follows:

$$\text{LnY}_{it} = \alpha_1 + \alpha_2 \text{LnY}_{t-1} + \alpha_3(\text{Ln}(\text{DE}/\text{CEXP}))_{it} + \alpha_4(\text{RREV}/\text{CREV})_{it} + \alpha_5(\text{Infl})_{it} + \alpha_6(\text{Ln popn})_{it} + \alpha_7(\text{Ln GR})_{it} + \alpha_8 \text{LnMT}_{it} + \varepsilon_{it} \dots \dots \dots \text{Model 1}$$

Where subscript  $i$  stands for region  $i$  ( $=1, 2, \dots, 10$ ) and at time  $t$  ( $=2005, 2006, \dots, 2016$ );  $\alpha_1, \alpha_2, \dots, \alpha_8$ , are scalar parameters. The error terms for region  $i$  at time  $t$  are represented by  $\varepsilon_{it}$ .  $\ln Y$  is the log of the regional real gross domestic product.  $\ln Y_{t-1}$  is a one-year lag of real GDP.  $\ln(\text{DE}/\text{CEXP})$  represents log of the ratio total direct regional expenditure to total national government expenditure,  $\text{RREV}/\text{CREV}$  represents the share of total regional revenue in total government revenue,  $\text{Infl}$  represents regional inflation,  $\ln \text{popn}$  represents the log of regional population size,  $\ln \text{GR}$  stands for the log of regional gross enrollment rate to high school, and  $\ln \text{MT}$  stands for the log of regional mobile phone subscriptions.

The second, Model 2 is estimated using recurrent regional expenditure and intergovernmental transfers. The rationale is that intergovernmental transfers are used in Ghana by subnational governments to pay for capital projects. Thus, I isolate capital expenditure and own revenue from the model, in order to avoid correlation among the independent variables.

Model 2 is specified as follows:

$$\ln Y_{it} = \beta_1 + \beta_2 \ln Y_{t-1} + \beta_3 (\text{Rrcur}/\text{CEXP})_{it} + \beta_4 (\text{RGREV}/\text{CREV})_{it} + \beta_5 (\text{Infl})_{it} + \beta_6 (\ln \text{popn})_{it} + \beta_7 (\text{RGR})_{it} + \beta_8 \ln \text{MT}_{it} + \lambda_{it} \dots \dots \dots \text{Model 2}$$

Where subscript  $it$  stands for region  $i$  ( $=1, 2, \dots, 10$ ) and at time  $t$  ( $=2005, 2006, \dots, 2016$ ).  $\beta_1, \dots, \beta_8$ , are scalar parameters. The error terms for region  $i$  at time  $t$  are represented by  $\lambda_{it}$ .  $\ln Y$  is the log of the regional real GDP.  $\ln Y_{t-1}$  is a one-year lag of real GDP.  $(\text{Rrcur}/\text{CEXP})$  represents the share of recurrent regional expenditure in central government expenditure.  $(\text{RGREV}/\text{CREV})$  represents the share of total regional intergovernmental transfers to central government revenue.  $\text{Infl}$  represents regional inflation.  $\ln \text{popn}$  represents the log of regional population size.  $\text{RGR}$  represents regional gross enrollment rate to high school, and  $\ln \text{MT}$  stands for the log of regional mobile phone subscriptions.

### 5.3 Fixed Effect estimation of Model 1 with log of GDP as the dependent variable

Model 1 is estimated using a fixed effect estimator. This model is relevant because it corrects correlation of the unobserved individual specific regional effects with the regressors (Greene, 2019:418). The coefficients measuring the degree of fiscal decentralization (expenditure and revenue assignments) were both significant and negative (Table 5.2).

**Table 5.2: Fixed Effect estimation results of Model 1 using log of real GDP as dependent variable**

| Variable  | Coef.   | Standard Error | T- statistics | P>t   |
|---|---------|----------------|---------------|-------|
| One-year lag of log of real GDP   | 0.025   | 0.020          | 1.250         | 0.214 |
| Log of the share of direct regional expenditure to total government expenditure | -0.009  | 0.004          | -2.020        | 0.047 |
| Share of regional revenue in total government revenue                           | -11.100 | 4.213          | -2.630        | 0.010 |
| Year on year Inflation  | -0.003  | 0.001          | -2.960        | 0.004 |
| Log of Population   | 1.268   | 0.158          | 8.000         | 0.000 |
| Log of mobile phone subscriptions   | 0.115   | 0.018          | 6.290         | 0.000 |
| Gross enrollment rate (high schools)  | 0.003   | 0.001          | 3.600         | 0.001 |
| Constant  | 2.122   | 1.938          | 1.090         | 0.277 |
| Number of observations in regression  |         | 101            |               |       |
| Number of groups in regression  |         | 10             |               |       |

Source: Data from MLGRD and GSS.

### 5.4 Random effect estimator of Model 1 with real GDP as the dependent variable

The random effect estimator assumes that the individual specific effects of regions are distributed independently of the regressors. The random effect estimates are a weighted average of the between and within estimates of the regions. It is an efficient and consistent estimator when the regressors are not correlated with the error term. The results of the random effects estimation model confirm that the coefficients of the variables measuring the degree of fiscal decentralization are negative and significant at 5 percent as shown in Table 5.3. That is, the

coefficients of the log of the share of direct regional expenditure to total government expenditure and the share of regional revenue in total government revenue are negative and significant in the model at 5 percent.

**Table 5.3: Random effects estimation results of Model 1 with log of real GDP as dependent variables**

| Variable  | Coef.   | Standard Error | T- statistics | P>t                |
|---|---------|----------------|---------------|--------------------|
| One-year lag of log of real GDP   | 0.042   | 0.018          | 2.330         | 0.020              |
| Log of the share of direct regional expenditure to total government expenditure | -0.010  | 0.004          | -2.430        | 0.015              |
| Share of regional revenue in total government revenue                           | -14.758 | 3.805          | -3.880        | 0.000              |
| Year on year Inflation  | -0.004  | 0.001          | -3.180        | 0.001              |
| Log of Population   | 0.884   | 0.063          | 13.930        | 0.000              |
| Log of mobile phone subscriptions   | 0.146   | 0.014          | 10.660        | 0.000              |
| Gross enrollment rate (high schools)  | 0.004   | 0.001          | 4.740         | 0.000              |
| Constant  | 6.912   | 0.675          | 10.240        | 0.000              |
| Hausman test  |         |                |               | Prob>chi2 = 0.1255 |
| Number of observations in regression  |         | 101            |               |                    |
| Number of groups in regression  |         | 10             |               |                    |

Source: Data from MLGRD and GSS.

The results from the Hausman test are insignificant, suggesting that the individual specific effects are distributed independently of the regressors. Hence, the random effects model is preferable. It is noted that signs of the coefficients in the random effects estimation of Model 1 does not change when variable for “the share of total regional revenue in total central government revenue” is replaced with the share of own revenue to central government revenue (Appendix D.6). The magnitude of the coefficients differs for all variables in Model 1 and the Hausman test was insignificant pointing to the random effect estimation as preferable. The results for both fixed effects and random effects estimation using own revenues of assemblies

in Model 1 is presented in appendix D.6. Thus, the results of the estimation of Model 1 above will be interpreted in the section below.

## 5.5 Interpretation of the random effects model results and conclusions for Model 1

From the random effects model results shown in Table 5.3 the following interpretation could be given:

- The coefficient of the log of the share of direct regional expenditure to total government expenditure is significant at 5 percent level. The coefficient is -0.01, indicating that a percentage change in the expenditure assignment of fiscal decentralization could lead to 0.01 percent decline in the regional real GDP. This implies that a higher level of fiscal decentralization measured by the variable  $\ln(DE/CEXP)$  results in lower regional GDP. Thus, as expenditure assignment increases, regional GDP growth reduces. The negative relationship between expenditure decentralization and regional real GDP is not congruent with expectation of theory that expects expenditure to increase real GDP growth. Local expenditure funded by own source revenues of subnational governments is relatively small compared to those of the central government in Ghana. It is therefore not surprising that the coefficient is almost negligible. Similar results were obtained for provinces in China and interpreted as the need to allow the central government to undertake public investments (Zhang and Zou, 1998:221; Jin and Zou, 2005:1059). In the case of Ghana, assemblies have the responsibility to undertaking expenditure though mainly with financing from the central government.
- Government taxes reduce the income of economic agents and their ability to invest in growth enhancing ventures. Higher government taxes are expected to reduce economic growth, unless the revenues are reinvested in growth enhancing projects or put into investments that yields higher output. Without measuring the net effect of taxes, higher

local taxes are expected to reduce economic growth. In line, with conventional thinking, the coefficient of the share of regional revenue in total government revenue variable is significant at the 1 percent level, and the coefficient is negative (-14.76). The results indicate that a 1 percentage point increase in the share of regional revenue could lead to a 14.76 percent decrease in real regional GDP. Some of the reasons that account for the negative sign is that lower growth could result from wrong revenue assignment among various levels of government. For example, subnational governments may be raising revenues using a tax instrument which could have been used by the central government more effectively. Also, the efficiency gains from fiscal decentralization may not materialize for developing countries like Ghana, since revenue collection and expenditure decisions by local governments may still be constrained by the central government. Finally, local governments may not be responsive to local citizens' preferences and needs.

- The effect of inflation is negative and significant at the 1 percent level. The results indicate that a 1 percentage point increase in inflation could lead to 0.004 percent reduction of the real regional GDP, at 1 percent significance level.
- The log of population is significant at the 1 percent level and the sign of the coefficient is positive. This implies a 1 percentage increase in population leads to 0.88 percentage increase in the real regional GDP.
- Log of mobile phone subscriptions is significant, and the sign of the coefficient is positive. This indicates that a percentage increase in mobile subnational is associated with 0.146 percent increase in real regional GDP. Hence mobile subscription and real regional GDP exhibit an inelastic relationship.
- Gross enrollment rate at the level of high schools was significant at 1 percent. The results indicate that a percentage point increase in gross enrollment rate at the level of high schools is associated with 0.004 percent increase in the real regional GDP.

It can be concluded from the results in Table 5.3 that the revenue and expenditure assignments of regions negatively impact on real regional GDP. I perform robustness tests to validate the results using a General Methods of Moments estimator. The objective is to test if other estimators provide similar results and confirm the signs of the coefficients in the final random effects model.

### 5.6 Robustness test of Model 1 using General Methods of Moments with real GDP as the dependent variable

The robustness test is carried out by first determining the most appropriate estimator that addresses potential endogeneity problems in the model. That is, I choose between either using a difference or system General Methods of Moments (GMM) estimator based on the relevant empirical literature. Bond, Hoeffler and Temple (2001:23-24) provided guidance on the choice of GMM estimators for growth related research, when they found bias estimates for the case of first and second difference GMM estimators due to weak instrumentation, after testing the Solow type growth models. They recommended the use of a System GMM estimator because it is more efficient and exploits stationarity restrictions to give reasonable results. I applied the two-step system GMM estimator for the robustness test because it is efficient and robust in dealing with heteroscedasticity and autocorrelation. The GMM estimation requires that the number of groups be larger than the number of years. Thus, the Model 1 is estimated for the period 2009 to 2016 (9 years), given that the data set has 10 regions.

**Table 5.4: Results of robustness test of Model 1 using two-step system GMM with log of real GDP as the dependent variable**

| Variable  | Coefficient | Standard Error | T- statistics | P>t   |
|---|-------------|----------------|---------------|-------|
| One-year lag of log of real GDP   | 0.90897     | 0.208          | 4.380         | 0.002 |
| Log of the share of direct regional expenditure to total government expenditure | 0.00002     | 0.009          | 0.000         | 0.998 |
| Share of regional revenue in total government revenue                           | -4.22711    | 1.674          | -2.530        | 0.032 |
| Year on year Inflation  | -0.00554    | 0.003          | -2.040        | 0.072 |



|  |          |        |        |                     |
|--|----------|--------|--------|---------------------|
| Log of mobile phone subscriptions            | 0.06391  | 0.143  | 0.450  | 0.665               |
| Gross enrollment rate (high schools)         | -0.00450 | 0.002  | -1.900 | 0.090               |
| Year   | 0.00206  | 0.010  | 0.200  | 0.844               |
| Constant                                     | -2.63705 | 22.482 | -0.120 | 0.909               |
| Arellano-Bond test for AR (1)                |          |        |        | Pr > z = 0.252      |
| Arellano-Bond test for AR (2)                |          |        |        | Pr > z = 0.249      |
| Hansen test of overid. restrictions: chi2(7) |          |        |        | Prob > chi2 = 0.664 |
| Number of observations in regression         | 63       |        |        |                     |
| Number of groups                             | 10       |        |        |                     |

Source: Data from MLGRD and GSS.

Table 5.4 shows the results of the robustness estimation using two step GMM estimator. The estimator uses moment conditions related to the parameters. In the case of this estimation, log of population and year dummy are used as instruments for the model. It was assumed in this estimation that log of real GDP variable is persistent and the model assumes a random walk. The following variables in the model were confirmed to be significant: lagged variable of the dependent variable (log of real GDP) at 1 percent significance level, revenue assignment indicator (log of the share of subnational revenue to central government revenue) at 5 percent significance level, regional inflation at 10 percent significance level and high school enrolment rate at 10 percent significance level. The sign of secondary school enrolment is not surprising because most students join the labor force after university education or vocational training in Ghana. The sign and significance of the coefficient of the revenue assignment confirmed the initial results obtained in the random effect model (Table 5.3). Next, I compare the result from the final models.

**Table 5.5: Results of robustness test (two-step system GMM) and random effects Model using log of real GDP as the dependent variable**

| Variable  | Results of two-step system GMM |                |       | Results of random effects model |                |       |
|---|--------------------------------|----------------|-------|---------------------------------|----------------|-------|
|   | Coefficient                    | Standard Error | P>t   | Coefficient                     | Standard Error | P>t   |
| One-year lag of log of real GDP   | 0.90897                        | 0.208          | 0.002 | 0.042                           | 0.018          | 0.020 |
| Log of the share of direct regional expenditure to total government expenditure | 0.00002                        | 0.009          | 0.998 | -0.010                          | 0.004          | 0.015 |
| Share of regional revenue in total government revenue                           | -4.22711                       | 1.674          | 0.032 | -14.758                         | 3.805          | 0.000 |
| Year on year Inflation  | -0.00554                       | 0.003          | 0.072 | -0.004                          | 0.001          | 0.001 |
| Log of mobile phone subscriptions   | 0.06391                        | 0.143          | 0.665 | 0.884                           | 0.063          | 0.000 |
| Gross enrollment rate (high schools)  | -0.00450                       | 0.002          | 0.090 | 0.146                           | 0.014          | 0.000 |
| Year  | 0.00206                        | 0.010          | 0.844 | 0.004                           | 0.001          | 0.000 |
| Constant  | -2.63705                       | 22.482         | 0.909 | 6.912                           | 0.675          | 0.000 |
| Number of observations in regression  |                                | 63             |       |                                 | 101            |       |
| Number of groups  |                                | 10             |       |                                 | 10             |       |

Source: Data from MLGRD and GSS.

The results of the two estimators were consistent with each other in terms of the signs and the significance for all of the variables except for two variable and the constant - Log of the share of direct regional expenditure to total government expenditure and gross enrolment rate at high school. In the case of the log of the share of direct regional expenditure to total government expenditure, the sign of the coefficient was negative in the Random effects model but reversed in the GMM model. Also, the variable was significant at 5 percent significance level in the Random effects model, but it was not significant at 20 percent significance in the GMM model.

Therefore, I conclude that regional revenue assignment negatively impacts on regional GDP in Ghana. This can be partly attributed to low capacities of assemblies which does not allow them to take full advantage of powers assigned in the Local Governance Act, 2016 to collection

revenues. In addition, the continuous weakening of capacity of some assemblies through splitting of assemblies and guaranteed intergovernmental transfers create low incentives for revenue collection in many assemblies. The expenditure assignment was not confirmed by the robustness estimation since the variable is not significant. The random effects estimation is accepted to explain the results of the expenditure and revenue assignments for Ghana. The Hansen statistic which tests for the validity of overly identified restriction was 0.664 which is mid-range in the GMM model. Next, the test for correlation of the error terms shows, there is no serial correlation with both AR 1 ( $Pr > z = 0.252$ ) and AR2 ( $Pr > z = 0.249$ ). This implies that the original error term is serially uncorrelated, and that the moments are correctly specified in the model. Next is the estimation of Model 2, introducing the shares of recurrent expenditure and intergovernmental transfers to central government expenditure and government revenue respectively.

## 5.7 Estimation of Model 2

I re-state the Model 2 as follows:

$$\text{Ln}Y_{it} = \beta_1 + \beta_2 \text{Ln}Y_{t-1} + \beta_3(\text{Rrcur}/\text{CEXP})_{it} + \beta_4 (\text{RGREV}/\text{CREV})_{it} + \beta_5(\text{Infl})_{it} + \beta_6(\text{Ln popn})_{it} + \beta_7(\text{RGR})_{it} + \beta_8\text{LnMT}_{it} + \lambda_{it} \dots\dots\dots \text{Model 2}$$

Where subscript  $_{it}$  stands for region  $i$  ( $=1, \dots, 10$ ) and at time  $t$  ( $=2005, \dots, 2016$ ).  $\beta_1, \dots, \beta_8$ , are scalar parameters. The error terms for region  $i$  at time  $t$  are represented by  $\lambda_{it}$ .  $\text{Ln}Y$  is the log of the regional real gross domestic product.  $\text{Ln}Y_{t-1}$  is a one-year lag of real GDP.  $(\text{Rrcur}/\text{CEXP})$  represents the share of recurrent regional expenditure in central government expenditure.  $(\text{RGREV}/\text{CREV})$  represents the share of total regional intergovernmental transfers to central government revenue,  $\text{Infl}$  represents regional inflation,  $\text{Ln popn}$  represents the log of regional population size,  $\text{RGR}$  represents regional gross enrollment rate to high school, and  $\text{LnMT}$  stands for the log of regional mobile phone subscriptions.

## 5.8 Fixed and random effects estimation of Model 2 with log of real GDP as the dependent variable

From Table 5.6, it is observed that the coefficient of the lag of real GDP is statistically significant at 10 percent and positive in the Fixed effects model. The results show that a percentage increase in the lagged endogenous variable leads to 0.032 percent increase in the log of real GDP. Also, the coefficient of the share of recurrent regional expenditure to total government expenditure is statistically significant at 5 percent and positive.<sup>56</sup> This indicates that a percentage point increase in the share of recurrent regional expenditure to total government expenditure could cause real GDP to increase by 9.28 percent.

Also, the coefficient of the share of regional intergovernmental transfers to total government revenue was significant at 1 percent level and negative. It indicates that, a percentage point increase in the share of regional intergovernmental transfers to total government revenue could create a 17.20 percent reduction in the log of real GDP. This is likely to be impacted by the use of intergovernmental transfers and accountability systems in the assemblies. Residents do not elect local government leaders and thus not likely to hold them fully accountable for their decisions. In addition, some expenditure financed by intergovernmental transfers may not be growth enhancing, given that assemblies receive a lump sum as required by Law. Also, the administrator of the District Assemblies Common Fund sometimes finances some local expenses from the center which may not be growth enhancing. For instance, some expenditure related to sanitation services for all assemblies are deducted at source and billed to assemblies. In addition, the selection of projects may be politically influenced for the benefit of some actors in assemblies rather than the entire region (Williams 2017:12). Such decisions and actions are likely to reduce the effectiveness of intergovernmental transfers to regions.

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<sup>56</sup> This result is similar to Yilmaz (2000:251) and Iimi (2005:449) as shown in Chapter 4.

The results of the fixed and random effects estimations are presented in Table 5.6. The Hausman test was significant with  $\text{Prob}>\chi^2 = 0.000$ , indicating that the fixed effects estimation is preferred. Thus, there is no need to interpret the results of the Random effects model.

**Table 5.6: Dynamic fixed and random effects estimation results of Model 2 with log of real GDP as dependent variable**

| Variable  | Fixed Effect Estimation Results |                |       | Random Effect Estimation Results |                |       |
|---|---------------------------------|----------------|-------|----------------------------------|----------------|-------|
|   | Coefficient                     | Standard Error | P>t   | Coefficient                      | Standard Error | P>t   |
| One-year lag of log of real GDP   | 0.032                           | 0.017          | 0.062 | 0.043                            | 0.018          | 0.017 |
| The share of recurrent regional expenditure to total government expenditure   | 9.287                           | 4.307          | 0.033 | 6.975                            | 3.906          | 0.074 |
| The share of regional intergovernmental transfers to total government revenue | -17.198                         | 6.116          | 0.006 | -31.636                          | 6.079          | 0.000 |
| Year on year Inflation  | -0.003                          | 0.001          | 0.001 | -0.003                           | 0.001          | 0.002 |
| Log of Population   | 1.335                           | 0.147          | 0.000 | 0.851                            | 0.037          | 0.000 |
| Log of mobile phone subscriptions   | 0.115                           | 0.017          | 0.000 | 0.135                            | 0.011          | 0.000 |
| Gross enrollment rate (high schools)  | 0.003                           | 0.001          | 0.000 | 0.005                            | 0.001          | 0.000 |
| Constant  | 1.034                           | 1.793          | 0.566 | 7.554                            | 0.287          | 0.000 |
| Hausman: $\text{Prob}>\chi^2 = 0.000$ , $\chi^2(7) = 81.85$                   |                                 |                |       |                                  |                |       |
| Number of observations in regression  | 119                             |                |       | 119                              |                |       |
| Number of groups  | 10                              |                |       | 10                               |                |       |

Source: Data from MLGRD and GSS.

The control variables were statistically significant in Model 2 at 1 percent. From Table 5.6, it can be noted that a 1 percentage point increase in inflation would cause a 0.03 percent reduction in real GDP. Also, a 1 percentage increase in population could cause a 1.335 percent increase in real GDP. Finally, a percentage point increase of gross enrollment rate at the high school level could cause a 0.003 percent increase in real GDP, all other variables in the regression being held constant.

## 5.9 Robustness test of the fixed effect model

I test the model using similar instruments (log of population and year) in a GMM model. This estimation is important because of the large values obtained for the coefficients of the share of recurrent regional expenditure to total government expenditure and share of regional intergovernmental transfers to total government revenue.

**Table 5.7: Dynamic Model 2 with log of real GDP as dependent variable and using GMM estimator**

| Variable   | GMM Estimation Results<br>(population and year as<br>instruments) |                   |                     | GMM Estimation Results<br>(second lag of real GDP and<br>Central government revenue<br>as instruments) |                   |                        |
|--|---|-------------------|---------------------|--|-------------------|------------------------|
|  | Coefficient   | Standard<br>Error | P>t                 | Coefficient  | Standard<br>Error | P>t                    |
| One-year lag of log of<br>real GDP   | 0.7644  | 0.3801            | 0.0750              | 0.6182   | 0.5397            | 0.2820                 |
| The share of recurrent<br>regional expenditure to<br>total government<br>expenditure   | 33.5781   | 70.7000           | 0.6460              | 78.0544  | 90.8159           | 0.4120                 |
| The share of regional<br>intergovernmental<br>transfers to total<br>government revenue | -30.4843  | 44.9953           | 0.5150              | -64.4257   | 70.2825           | 0.3830                 |
| Year on year inflation   | -0.0079   | 0.0086            | 0.3810              | -0.0101  | 0.0067            | 0.1690                 |
| Log of population  | 0.1467  | 0.4317            | 0.7420              | 0.4420   | 0.5604            | 0.4510                 |
| Log of mobile phone<br>subscriptions   | 0.0747  | 0.2050            | 0.7240              | -0.0015  | 0.2056            | 0.9940                 |
| Gross enrollment rate<br>(high schools)  | -0.0025   | 0.0016            | 0.1520              | -0.0034  | 0.0021            | 0.1360                 |
| Year   | 0.0057  | 0.0237            | 0.8140              | 0.0215   | 0.0251            | 0.4140                 |
| Constant   | -9.0836   | 48.6337           | 0.8560              | -40.6241   | 49.9170           | 0.4370                 |
| Arellano-Bond test for<br>AR (1)   |   |                   | Pr > z =<br>0.518   |  |                   | Pr > z<br>=<br>0.892   |
| Arellano-Bond test for<br>AR (2)   |   |                   | Pr > z = 0.798      |  |                   | Pr > z = 0.948         |
| Hansen test of overid.<br>restrictions: chi2(7)  |   |                   | Prob > chi2 = 0.510 |  |                   | Prob > chi2 =<br>0.798 |
| Number of<br>observations in<br>regression   |   | 80                |                     |  | 80                |                        |
| Number of groups   |   | 10                |                     |  | 10                |                        |

Source: Data from MLGRD and GSS.

Two GMM regression results are presented in Table 5.7. The first results show the estimation where population and year are instruments,<sup>57</sup> while in the second estimation the lag of real GDP and central government revenues are used as instruments. The results of the robustness tests indicate that the lag of real GDP is significant at 10 percent in the model that has population and year as instruments. However, none of the coefficients of the other variables are significant.

Again, the standard errors of the share of recurrent regional expenditure to total government expenditure and the share of regional intergovernmental transfers to total government revenue are very large compared to the fixed effects results in Table 5.6. When I introduced new sets of the instruments (second lag of real GDP and central government revenue), the results did not improve, and the standard errors increased. In a final check, I re-estimate the model without the lagged variable of the log of real GDP.

The model is estimated using the fixed and random effects estimators without a lagged endogenous variable. The results show that the model without the lagged dependent is better compared to the initial results in Table 5.7. As shown in Table 5.8, the Hausman test was significant, indicating that the fixed effect model is preferred. By comparing the fixed effects results in Table 5.7 and Table 5.8, it is obvious that the coefficients of all the variables except the constant term were significant at 1 percent. Thus, the results of the non-dynamic fixed effects model in Table 5.8 is preferred and thus considered the final model.

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<sup>57</sup> As noted in Chapter 2, instruments help to improve the robustness of regression results. Population size is an important policy variable that influences decisions taken by the central government. Some of these decisions impact on the capacity and effectiveness of subnational governments in Ghana. For instance, population size is considered among other variables when creating assemblies. Regions with large population size require more expenditure and are likely to receive higher intergovernmental transfers. Largely populated regions have more seats in the Parliament of Ghana that makes laws for the country. They also have a large influence in deciding the President of Ghana.

**Table 5.8: Non-dynamic fixed and random effects estimation results of Model 2 with log of real GDP as dependent variables**

| Variable  | Fixed Effect Estimation Results |                |        | Random Effect Estimation Results |                |        |
|---|---------------------------------|----------------|--------|----------------------------------|----------------|--------|
|   | Coefficient                     | Standard Error | P>t    | Coefficient                      | Standard Error | P>t    |
| The share of recurrent regional expenditure to total government expenditure | 10.2312                         | 4.3306         | 0.0200 | 6.9078                           | 4.2040         | 0.1000 |
| Share of regional intergovernmental transfers to total government revenue   | -19.2994                        | 6.0872         | 0.0020 | -28.1199                         | 6.2384         | 0.0000 |
| Year on year Inflation  | -0.0037                         | 0.0009         | 0.0000 | -0.0046                          | 0.0010         | 0.0000 |
| Log of Population   | 1.4730                          | 0.1293         | 0.0000 | 0.8904                           | 0.0356         | 0.0000 |
| Log of mobile phone subscriptions   | 0.1006                          | 0.0158         | 0.0000 | 0.1414                           | 0.0123         | 0.0000 |
| Gross enrollment rate (high schools)  | 0.0033                          | 0.0008         | 0.0000 | 0.0050                           | 0.0006         | 0.0000 |
| Constant  | -0.0525                         | 1.7184         | 0.9760 | 7.8660                           | 0.3892         | 0.0000 |
| Hausman: Prob>chi2 = 0.0033, chi2(7) =19.59                                 |                                 |                |        |                                  |                |        |
| Number of observations in regression  | 80                              |                |        | 80                               |                |        |
| Number of groups  | 10                              |                |        | 10                               |                |        |

Source: Data from MLGRD and GSS.

It is observed from Table 5.8 that the coefficients of the share of recurrent regional expenditure to total government expenditure is statistically significant at 5 percent and positive. The coefficient indicates that a 1 percentage point increase in the share of recurrent regional expenditure to total government expenditure could cause the log of real GDP for the region to increase by 10.23 percent. Similarly, the coefficients of the share of regional intergovernmental transfers to total government revenue is significant at 1 percent level and negative. It indicates that a 1 percentage point increase in the share of regional intergovernmental transfers to total government revenue could cause the log of real GDP at the region to decrease by 19.30 percent.



Next, I carry out a robustness test on a non-dynamic fixed effects model (that is, without lagged value of the dependent variable).

### 5.10 Further robustness test of the fixed effect model

The fixed model is subjected to a robustness test using two step system GMM, with the lagged value of log of real GDP and log of central government total revenue as instrumental values. I also estimate the same model with new instruments (second lag of real GDP and central government revenue as instruments).

The results show a trade-off between the level of significance and standard errors of the variables. That is, improvements in the level of significance (toward 5 percent level), the standard errors became larger for the variables. An example of the results is shown in Table 5.9. Also, the introduction of new instruments leads to large changes in the value of the coefficients of the variables, indicating the importance of the instruments in determining the final model, if the GMM is to be used.

From Table 5.9, the sign of coefficients of the two main exogenous variables of fiscal decentralization (the share of direct regional expenditure to total government expenditure and the share of regional revenue in total government revenue) were similar to the results of the fixed effects model shown in Table 5.8. However, the standard errors were large, and the variables were less significant.

**Table 5.9: Results of robustness test of non-dynamic Model 2 using two-step system GMM with Log of real GDP as the dependent variable using different instruments**

| Variable  | GMM Estimation Results<br>(population and year as instruments) |                |        | GMM Estimation Results<br>(second lag of real GDP and Central government revenue as instruments) |                |        |
|---|--|----------------|--------|--|----------------|--------|
|   | Coefficient  | Standard Error | P>t    | Coefficient  | Standard Error | P>t    |
| The share of recurrent regional expenditure to total government expenditure   | 119.5274   | 77.0880        | 0.1550 | 138.3601   | 65.7619        | 0.0650 |
| The share of regional intergovernmental transfers to total government revenue | -103.4860  | 63.5589        | 0.1380 | -121.1171  | 55.9318        | 0.0590 |
| Year on year Inflation  | -0.0093  | 0.0080         | 0.2780 | -0.0107  | 0.0076         | 0.1930 |
| Log of Population   | 0.8476   | 0.7827         | 0.3070 | 1.0567   | 0.6217         | 0.1230 |
| Log of mobile phone subscriptions   | 0.1996   | 0.4348         | 0.6570 | 0.0743   | 0.3619         | 0.8420 |
| Gross enrollment rate (high schools)  | -0.0040  | 0.0023         | 0.1080 | -0.0045  | 0.0023         | 0.0880 |
| Year  | 0.0265   | 0.0428         | 0.5520 | 0.0381   | 0.0344         | 0.2970 |
| Constant  | -45.1113   | 90.2476        | 0.6290 | -69.6637   | 72.0808        | 0.3590 |
| Arellano-Bond test for AR (1)   | Pr > z = 0.567   |                |        | Pr > z = 0.951   |                |        |
| Arellano-Bond test for AR (2)   | Pr > z = 0.697   |                |        | Pr > z = 0.429   |                |        |
| Hansen test of overid. restrictions: chi2(7)                                  | chi2 = 0.687   |                |        | Prob > chi2 = 0.873  |                |        |
| Number of observations in regression  | 80   |                |        | 80   |                |        |
| Number of groups  | 10   |                |        | 10   |                |        |

Source: Data from MLGRD and GSS.

Finally, I present a summary of the key results in the estimations in Table 10. The main conclusions from these results are presented in section 5.10.

**Table 5.10: Comparison of the main results from Fixed effect and GMM estimators**

| Variable  |                | Fixed Effect no lag | GMM with no lag | Fixed effect with lag | GMM with lags |
|---|----------------|---------------------|-----------------|-----------------------|---------------|
| One-year lag of log of real GDP.  | Coefficient    | ****                | ****            | 0.032                 | 0.7644        |
|   | Standard Error | ****                | ****            | 0.017                 | 0.3801        |
|   | P>t            | ****                | ****            | 0.062                 | 0.075         |
| The share of recurrent regional expenditure to total government expenditure   | Coefficient    | 10.2312             | 119.5274        | 9.2870                | 33.5781       |
|   | Standard Error | 4.3306              | 77.088          | 4.3070                | 70.7          |
|   | P>t            | 0.0200              | 0.155           | 0.0330                | 0.646         |
| The share of regional intergovernmental transfers to total government revenue | Coefficient    | -19.2994            | -103.486        | -17.1980              | -30.4843      |
|   | Standard Error | 6.0872              | 63.5589         | 6.1160                | 44.9953       |
|   | P>t            | 0.0020              | 0.138           | 0.0060                | 0.5150        |
| Year on year Inflation  | Coefficient    | -0.0037             | -0.0093         | -0.0030               | -0.0079       |
|   | Standard Error | 0.0009              | 0.008           | 0.0010                | 0.0086        |
|   | P>t            | 0.0000              | 0.278           | 0.0010                | 0.3810        |
| Log of mobile phone subscriptions   | Coefficient    | 1.4730              | 0.1996          | 0.1150                | 0.0747        |
|   | Standard Error | 0.1293              | 0.4348          | 0.0170                | 0.2050        |
|   | P>t            | 0.0000              | 0.657           | 0.0000                | 0.7240        |
| Gross enrollment rate (high schools)  | Coefficient    | 0.1006              | -0.004          | 0.0030                | -0.0025       |
|   | Standard Error | 0.0158              | 0.0023          | 0.0010                | 0.0016        |
|   | P>t            | 0.0000              | 0.108           | 0.0000                | 0.1520        |
| Log of population   | Coefficient    | 1.4730              | 0.8476          | 1.3350                | 0.1467        |
|   | Standard Error | 0.1293              | 0.7827          | 0.1470                | 0.4317        |
|   | P>t            | 0.0000              | 0.307           | 0.0000                | 0.742         |
| Year  | Coefficient    | ****                | 0.0265          | ****                  | 0.0057        |
|   | Standard Error | ****                | 0.0428          | ****                  | 0.0237        |
|   | P>t            | ****                | 0.552           | ****                  | 0.814         |
| Constant  | Coefficient    | -0.0525             | -45.1113        | 1.0340                | -9.0836       |
|   | Standard Error | 1.7184              | 90.2476         | 1.7930                | 48.6337       |
|   | P>t            | 0.9760              | 0.6290          | 0.5660                | 0.856         |

Source: Data from MLGRD and GSS. Note: \*\*\*\* means not in model.

### 5.11 Summary of main results and conclusions

The chapter responds to Question 2. It examined the extent to which revenue and expenditure assignments on the one hand and intergovernmental transfers on the other hand impact regional gross domestic product in Ghana. The results of the control variables population, inflation and

gross enrollment rate at high school level were overall consistent with theory and empirical literature on fiscal decentralization and real GDP. The following conclusions could be made based on the results of the regression analyses and the three hypotheses:

- **Expenditure assignment:** The results from Model 1 were inconclusive about the sign of the coefficient of the expenditure assignment variable (Log of the share of direct regional expenditure to total government expenditure) in the final two-step system GMM and the Random Effects Model 1. However, the share of direct regional expenditure to total government expenditure was not significant in the two-step system GMM. This implies that the robustness results for this variable is not verified. Therefore, based on the results of the Random Effects Model 1 (Table 5.5), I conclude that when the regions have more direct expenditure, it negatively affects the regional real GDP. The negative sign of the coefficient of direct regional expenditure to total government expenditure in the Random Effects Model, depicts the fiscal arrangement in Ghana where MMDAs in the regions finance their expenditures mainly with grants the central government and donors rather than own source revenues. A negative sign is obtained for the decentralization assignment coefficient when the quality of the direct expenditure is poor, the composition of local government expenditure is not supportive of growth and if direct expenditure is financed by local taxes that impede growth. It may also occur when there are large inefficiencies in local government expenditure, especially capital and infrastructure spending or when central governments are persistently restrained by the resources allocated to public investments (Davoodi and Zou, 1997:248; Zhang and Zou, 1998:237, Williams, 2017:38). In the case of Ghana, additional factors may account for the negative sign observed such as, the collective nature of expenditure decisions which could lead to less optional growth outcomes, the informal but restrictive use of own source funds for relatively small capital or maintenance projects, the higher cost of

uncompleted of development projects at the local level and the use of intergovernmental transfers to mainly fund large capital projects (Williams, 2017:6-7). In addition, it may reflect corruption among mayors, bureaucrats and auditors with respect to procurement and local investments (Brierley, 2020:216). I accept the research hypothesis that expenditure assignment of regions negatively impacts real regional GDP in Ghana.

However, the coefficient of recurrent regional expenditure to total government expenditure was positive and significant indicating that recurrent regional expenditure supports regional real GDP. An increase in government expenditure is expected to increase output in the region. Some empirical studies using panel data found fiscal decentralization to reduce provincial economic growth (Zhang and Zou, 1998; Jin and Zou, 2005:1059). Other studies find a positive relationship between expenditure and growth (Lin and Liu, 2000:11; Yilmaz, 2000:251; Iimi, 2005:449; Jin and Zou, 2005:1047). In Ghana, positive relationship observed may be because a large proportion of the non-personnel recurrent spending is financed with own source revenue such as the cost of maintenance and administrative costs. The personal emoluments are mainly financed by the central government. In the dynamic fixed effect Model 2, log of the share of recurrent regional expenditure to total government expenditure was significant at 5 percent level, with a positive coefficient. The results are consistent with other studies (listed in Table 4.2) that found the sign of the coefficients of expenditure assignment to be positive. It can be concluded from the dynamic fixed effect Model 2 that regional recurrent expenditure assignment positively impacts regional real GDP. However, I note that the impact of regional capital expenditure was not captured by the model given that subnational investments are mostly financed by the central government and donors in Ghana. The results fully depict the situation of Ghana where subnational governments are not fully autonomous because of the financing of their capital expenditure, and

limited control over their recurrent expenditures. A meaning expenditure assignment requires local governments to have service autonomy over clearly assigned responsibilities and to exercise discretion in making their own spending allocation with the necessary monitoring and sanctions (Yilmaz, Beris and Serrano-Berthet, 2010: 279). In Ghana, the responsibilities are clearly assigned but local governments do not have service autonomy partly because their leaders are not elected by the residents.

- **Revenue assignment:** The coefficient of the revenue assignment variable in all models (Model 1, Model 2 and robustness tests) were negative and significant at 5 percent level. I conclude that regional revenue assignment is not growth enhancing in Ghana. This can be partly attributed to low capacities of assemblies which does not allow them to take full advantage of powers assigned in the Local Governance Act, 2016 to collect revenues. In addition, the continuous weakening of capacity of some assemblies through splitting of assemblies and guaranteed intergovernmental transfers create low incentives for revenue collection in many assemblies. Many assemblies do not on their own have the financial capacity to pursue their mission and fulfil the legal and social responsibilities. Also, given that the leaders of assemblies are appointed by the President, they tend to be less accountable to the residents, in that, they focus on easier options for raising funds, mainly relying on transfers. In addition, it may be a result of the strong relationship between political discretion at the local level and corruption which could be affecting local revenue collection (Brierley 2020:218). I accept the research hypothesis that revenue assignment of regions negatively impacts real GDP in Ghana.
- **Intergovernmental transfers:** The share of regional intergovernmental transfers to total government revenue was significant at the 1 percent level in the dynamic fixed effects model shown in Table 4.20. On balance, I accept the research hypothesis that

intergovernmental transfers negatively impact real GDP in Ghana, noting the possibility of reverse causality, where lower GDP could lead to more transfers from government.

## CHAPTER 6

### SUBNATIONAL FRAGMENTATION AND PROPERTY RATES IN GHANA

#### 6.1 Introduction

Low revenue collection is identified in the empirical literature as one of the major challenges facing local governments. In Ghana, it is a key challenge facing metropolitan, municipal and district assemblies (MMDAs). Own revenue collection averaged about 20 percent of total revenues of MMDAs in Ghana between 2005 and 2016. Of the total own revenue, property taxes are about a fifth annually during the same period. This chapter investigates the impact of MMDA fragmentation on own revenue collections (especially property taxes) in Ghana. It further examines whether intergovernmental transfers impact the property tax revenues. Thus, the third major question for the thesis is “to what extent do district fragmentation and intergovernmental transfers impact own revenue and property tax revenue in assemblies in Ghana”.

The main question is further restated in three specific questions as follows:

- Question 3a: to what extent does fragmentation of assemblies impact on own source revenue in Ghana;
- Question 3b: to what extent does fragmentation of assemblies impact property tax revenues in Ghana; and
- Question 3c: to what extent does intergovernmental transfers impact property taxes in Ghana?

I will test the following three research hypotheses:

- H4: Fragmentation of MMDAs negatively impacts own revenues of MMDAs in Ghana.



- H<sub>5</sub>: Fragmentation of MMDAs negatively impacts property tax collection of MMDAs in Ghana.
- H<sub>6</sub>: Intergovernmental transfers negatively impact property taxes of MMDAs in Ghana.

By using econometric techniques and panel data for 170 MMDAs that existed in Ghana as of 2010, the chapter presents evidence on the impact of MMDA fragmentation. Of the 170 MMDAs, 6 were metropolitans, 40 were municipals and 124 were districts. The government created new MMDAs which increased the number to 216 between 2013 and 2016. The data for the 216 MMDAs were consolidated to 170 MMDAs in order to ensure a balanced panel. By using the Stata software, I estimate models with different estimators as explained below so as to answer the questions.

The above-mentioned main question focuses on two policy decisions in Ghana's Constitution. These are the provision to allow the creation of new districts, as well as the allocation of fiscal transfers to subnational governments as a source of funding for their budgets. These policies affect the behavior of local governments with regard to collecting their own revenues as provided in the Local Governance Act, 2016. In Chapter 3, I discussed the various types of intergovernmental transfers in Ghana and the modalities used in accessing them. I restate that intergovernmental transfers constitute the largest proportion of MMDA revenue in Ghana. As shown in Table 3.13, there are nine different types of intergovernmental transfers in Ghana, namely central government grants that pay salaries of subnational government employees, the District Assembly Common Fund, the Members of Parliament Common Fund allocation, donor grants, the District Development Fund, grants from the Highly Indebted Poor Countries Initiatives, central government support for school feeding, decentralized transfers, and the Urban Development Grant. The main objective of these transfers is to fill the gap between subnational revenue collections and the resources needed in order to undertake the expenditure assignment

of subnational entities. Given that transfers in Ghana have been extensively discussed in Chapter 3, I focus more on fragmentation of MMDAs in this chapter.

The policy decision on fragmentation empowers the government to alter boundaries of regions and create assemblies, in order to boost democracy and improve service delivery. Section 5(a-c) of the 1992 Constitution provides the framework for jurisdictional fragmentation. Furthermore, Section 2 (d) of the Local Governance Act, 2016 states that: “The President may, by Executive Instrument: (a) declare any area within the country to be a district; and (b) assign a name to the district”.

The Local Governance Act, 2016 makes fragmentation a nationally accepted policy in Ghana and mandates the President to use a prescribed procedure in order to implement the policy. While this legal provision puts the responsibility to create assemblies in the domain of the President of the country, many stakeholders are involved in MMDA fragmentation. Among these stakeholders are chiefs, the Electoral Commission, deconcentrated departments of ministries, Parliament, businesses and citizens. Some of these stakeholders are simply consulted by the President before new assemblies are created, while others are deeply involved, due in part to the implications on their work and the need to create social cohesion within the country.

Fragmentation of assemblies or districts<sup>58</sup> is a policy aimed at the splitting of existing assemblies into smaller units, thereby creating new assemblies in order to improve service delivery to citizens. The reasons for fragmentation are to boost democracy, improve citizen participation in development, ensure a fair distribution of government resources to all assemblies and to encourage the MMDAs to develop new ways in which to collect more revenues. When a government decides to fragment an assembly, the policy is implemented with good reasons supported by a constitutional mandate. Different procedures are applied when a decision is made

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<sup>58</sup> Fragmentation of districts is the terminology used in Ghana to mean fragmentation of assemblies.

to fragment a subnational unit (say assemblies) in Ghana, some of which are the selection of regions where a new MMDA could be created, demarcation of the jurisdictions, preparation of the legislative instrument by government, Parliamentary debates, announcement of new MMDAs, appointment of staff and the setting up of the logistics for administrative work to commence at the local level.

Schneider (1986:258) defines fragmentation as the number of suburban municipalities in a standard metropolitan statistical area made up of 100,000 residents. Each fragmented unit has similar characteristics to other existing non-fragmented units. That is, there should be a standard criterion for fragmenting subnational units in order to ensure homogeneity across units after the fragmentation exercise. However, there may be other contextual characteristic besides the common criteria “population size” which subnational units may have. These may include the level of economic activities, public facilities and types of housing units.

Bahl (2013:87-88) indicates that historically, countries fragmented subnational structures in order to empower local governments and improve efficiencies of services provided. In Ghana, the fragmentation of MMDAs is perceived by some policy makers and councilors as an opportunity to deepen administrative decentralization and to support poverty reduction. Kwadwo and Mensah (2016:2) refute this claim and note that MMDAs in Ghana are fragmented for political convenience rather than service delivery. Similarly, Gilbert, Hugounenq and Vaillancourt (2013:125) reports that many Ghanaian citizens felt the proliferation of MMDAs was opportunistic and not related to promoting effective and efficient delivery of local public services. Fragmentation of MMDAs could be beneficial to the citizens if it aims at helping to resolve critical challenges faced by subnational units. It underscores the need for governments to rely on evidence and facts in order to fragment subnational units, which could be obtained from analytical work that focuses on economic viability, equitable distribution of wealth and human capital, accessible opportunities for all people and provision of necessities of life.

Vestal (1971:155) explains that as population increases in any area, fragmentation of subnational units becomes necessary for all countries. However, fragmentation should not only satisfy the interest of subnational governments and citizens, it must impact the whole region and country by resolving the problems associated with population growth. Indeed, population growth comes with stronger pressure and demand for basic goods and services such as health, education, sanitation and security. The government may need to construct new highways and promote trade across its borders in order to ensure food security.

Other services that the citizens may demand from subnational governments are jobs, markets, parks and housing. The primary role of subnational government will be to equitably tax the people and to provide the services demanded. It broadly also includes responsibilities for planning the subnational units, formulating and implementing regulations, influencing behavior of the people using its policy instruments, construction services, public transportation services and resolving conflict and litigation through legal processes. When these responsibilities are assigned to fragmented subnational governments, it is expected to improve the allocative efficiency of resources in any country. Ter-Minassian (1997:4) notes that the responsibilities that should be allotted to subnational governments are “defense, foreign affairs, infrastructure for interstate transport and telecommunication”.

There are very limited nationwide assessments of the quality of services delivered by subnational governments in Ghana from official government sources. Mensah, Adamtey and Mohammed (2015:224-225) studied challenges facing newly created MMDAs in Ghana and note that they are unable to improve service delivery, mainly due to the lack of adequate staffing, delays in putting in place institutional arrangements, weak management of the MMDAs and lack of logistics. One laudable initiative to address this issue is the process of naming and shaming in the preparation of the District League in 2013 by development partners (mainly UNICEF) of Ghana and the Ghana Centre for Democratic Development, and the MLGRD. The four main

objectives of the District League are to showcase progress in development across the country, to increase transparency of development information, to support debate and dialogue on accountable development and to increase state responsiveness in the provision and delivery of essential services across the country (UNICEF, 2016). The District League assesses progress made in six sectors, including education, sanitation, rural water, health, security and governance. Furthermore, it ranks all MMDAs on a scale of high, medium and low. UNICEF (2016:6) noted that as part of the 2016 District League, inequity within regions remains a major issue to service delivery of many subnational governments in Ghana. It thus called on all levels of government to be flexible with the allocation of intergovernmental transfers, especially the District Assemblies Common Fund, in order to support needy suburbs to improve service delivery.

Fragmentation has advantages and disadvantages as it creates winners and losers. Some advantages are that fragmentation of subnational units takes subnational political authorities closer to the people. When geographic boundaries are smaller, local authorities are more likely to address the critical needs of citizens, the responsiveness of political leaders to service delivery could improve with the establishment of more service delivery centers, and citizens can more easily access their leaders. In addition, political leaders of subnational units are likely to have a better sense of the quality and quantity of the goods and services needed and provided within their jurisdictions. By being closer to the people, the preferences of the people are likely to influence the choices and expenditure patterns of subnational governments.

The disadvantages of fragmentation of local governments may include the loss of jurisdictional power by some local governments, local markets may become smaller, the political clout of large subnational governments or metropolitans may diminish, local governments may have smaller jurisdictions to collect revenues, projects that require large financing or matching funds may not be implemented, smaller districts are less likely to attract large companies that depend on local markets, and local tax policies are likely to differ across different jurisdictions.

## 6.2 Brief evolution of the regional fragmentation

Fragmentation is not limited to only MMDAs in Ghana, it also encompasses regions. In the colonial era, regions simply referred to the territories captured by the colonial masters. However, after Ghana's independence these territories were divided as the country's population increased. Regions could simply be referred to as a group of districts or deconcentrated administrative bodies, headed by regional coordinating councils designated by the laws of Ghana in order to supervise the activities of MMDAs within their jurisdiction.

As of 2018, subnational entities in Ghana are governed by the Local Governance Act of 2016, Act 936. Section 49 of this law provides the legal backing for regions and districts to be established with a corporate governance structure. The sub-districts, such as the sub-metropolitan, urban, town and area councils derive their authority from the Local Governance Act, 2016. It is important to note that these sub-districts are not the focus of analysis of this thesis. In addition, the establishment of regional coordinating councils was discussed in Chapter 3, but I re-state that their monitoring responsibilities are critical for the effective management of MMDAs' development activities at the subnational level. When MMDAs are fragmented, the regional council has the responsibility to develop guidelines in order to ensure that standards are maintained within the new MMDA.

The 1992 Constitution of Ghana recognizes regions as deconcentrated administrative bodies with coordinating and monitoring roles over MMDAs. The mandate of regional coordinating councils is derived from Article 255 of the Constitution that states:

“(1) There shall be established a Regional Co-ordinating Council in each region, which shall consist of -

- (a) the Regional Minister and his deputy or deputies;
- (b) the Presiding Member and the District Chief Executive from each district in the Region;

(c) two chiefs from the Regional House of chiefs; and

(d) the Regional Heads of the decentralized ministries in the region as members without the right to vote;

(2) The Regional Minister shall be the Chairman of the Regional Coordinating Council.

(3) Subject to this Chapter, the functions of a Regional Co-ordinating Council shall be as prescribed by Act of Parliament”.

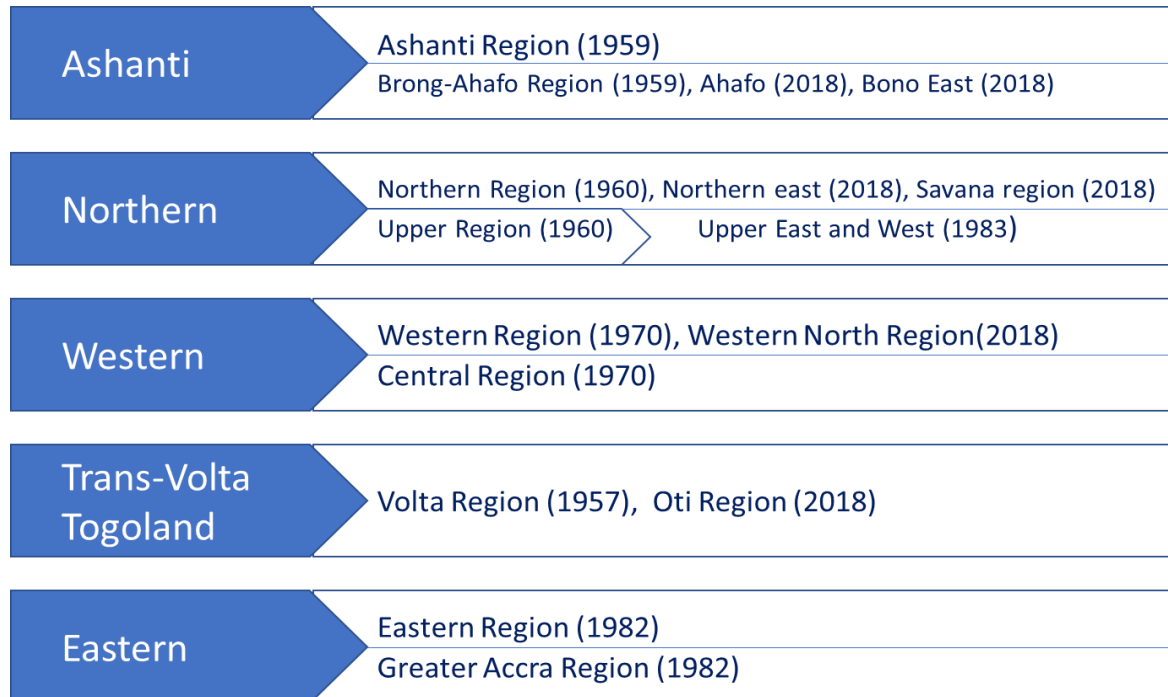
This constitutional provision is important because it underpins the provision in the Local Governance Act, 2016 (Sections 186 to 203) which defines the mandate, functions and power of the regional coordinating councils. It defines the decision-making power of regional coordinating councils and their relationship with the President of the Republic of Ghana. The constitutional provision also mandates Parliament to make the laws in order to guide the work of the councils in each fragmented region in Ghana.

Other legislative provisions that relate to fragmentation in Ghana are: the Civil Service Law 1993 (PNDCL 327), the District Assemblies’ Common Fund Act of 1993 (Act 455), the National Development Planning (System) Act of 1994 (Act 479), the National Development Planning Commission Act of 1994 (Act 480), the Local Government Service Act of 2003 (Act 656), the Institute of Local Government Studies Act of 2003 (Act 647) and the Local Government (Departments of District Assemblies) Commencement Instrument of 2009 (LI 1961). These laws contribute to providing an overall framework for the governance of MMDAs in Ghana.

Regional fragmentation in Ghana has not been rampant relative to the districts. Historical information indicates that Ghana had 5 regions before 1948: Ashanti, Eastern, Northern, Trans-Volta Togo and Western. These regions were split between 1959 to 1982 into ten regions (Figure 6.1). The regions remained relatively stable after 1983 when the government focused on fragmenting districts within each region. In 2018, the Government of Ghana decided to split

four regions in Ghana (Western, Brong Ahafo, Volta and Northern) in order to make six new ones. The new regions were named Oti (from Volta Region), Ahafo (from Brong Ahafo), Bono East (from Brong Ahafo) and Western North (from Western Region). The others are North East (from Northern Region) and Savanna (from Northern Region).

**Figure 6.1: Regional fragmentation from 1948 to 2018**



Source: Information from <http://www.statoids.com/ugh.html>, June 2018. Note: The four regions fragmented in 2018 retained their original names.

### 6.3 Evolution of district fragmentation in Ghana

Decentralization reforms have been accompanied by rampant fragmentation of districts in Ghana. Fragmentation of existing districts in order to create new ones is perceived to provide opportunities for stronger economic growth and better delivery of services. Ghana has had three tiers of local government since independence, although many attempts were made in the 1970s to increase the number of tiers. The three are regional governments, district assemblies and sub-districts. The regional coordinating councils and assemblies are the most prominent and thus perceived to be the two effective tiers of local governments in Ghana. There is a regional



coordinating council in each of the sixteen regions (since 2018). The assemblies are the implementing institutions with jurisdictional authority. As mentioned in Chapter 3, there are sub-districts that are subsidiaries to assemblies such as sub-metropolitan councils, zonal councils, town councils, urban councils and unit committees, created in order to support the work of the MMDAs. The functions of these lower levels of government are subsidiary to assemblies and thus are not covered in this thesis.

Assemblies are the political heads within their geographic areas and exercise authority over sub-assemblies. When assemblies are fragmented, the sub-assemblies are automatically fragmented and renamed based on their new jurisdictions. Their names are changed to reflect those of the new set of assemblies, just as their reporting structure also changes. There are 254 assemblies in Ghana as of 2019, resulting from gradual fragmentation of 65 assemblies in 1988 (Table 6.1). Ashanti region had the highest number of assemblies in 1998 (10 MMDAs) and still has highest in 2018 (43 MMDAs) because it has the highest population size in Ghana (estimated at 4.5 million people in 2018). Similarly, the Upper West region has had the lowest number of assembly fragmentation from 3 MMDAs before 1988 to 11 MMDAs in 2018. The new regions created in 2018 have not been included in Table 6.1.

**Table 6.1: Distribution of fragmented MMDAs by regions in Ghana, 1988 to 2018 (number of assemblies before 2018 regional fragmentation)**

| Region        | Before 1988 | 1989–2007 | 2008–2012 | 2013–2017 | 2018 |
|---------------|-------------|-----------|-----------|-----------|------|
| Ashanti       | 10          | 18        | 27        | 30        | 43   |
| Brong-Ahafo   | 8           | 13        | 22        | 27        | 29   |
| Central       | 8           | 12        | 17        | 20        | 22   |
| Eastern       | 9           | 15        | 21        | 26        | 32   |
| Greater Accra | 3           | 5         | 10        | 16        | 26   |
| Northern      | 7           | 13        | 20        | 26        | 28   |
| Upper East    | 4           | 6         | 9         | 13        | 15   |
| Upper West    | 3           | 5         | 9         | 11        | 11   |
| Volta         | 8           | 12        | 18        | 25        | 25   |
| Western       | 5           | 11        | 17        | 22        | 23   |
| Total         | 65          | 110       | 170       | 216       | 254  |

Source: Derived from data received from MLGRD.

The creation of 38 new assemblies in 2018 led to the demarcation of 59 assemblies, of which 31 were municipal assemblies and 28 district assemblies across the country. In November 2017, the government laid before the Parliament of Ghana legislative instruments in order to cover all the assemblies. The list of assemblies is presented in Tables 6.2 and 6.3.

**Table 6.2: List of new municipal assemblies created in 2018**

| New municipal assemblies |                                     | New municipal assemblies |                                   |
|--------------------------|-------------------------------------|--------------------------|-----------------------------------|
| 1                        | Oforikrom municipal assembly        | 17                       | Ablekuma North municipal assembly |
| 2                        | Kwadaso municipal assembly          | 18                       | Ablekuma West municipal assembly  |
| 3                        | Old Tafo municipal assembly         | 19                       | Ayawaso East municipal assembly   |
| 4                        | Asokwa municipal assembly           | 20                       | Ayawaso North municipal assembly  |
| 5                        | Suame municipal assembly            | 21                       | Ayawaso West municipal assembly   |
| 6                        | Juaben municipal assembly           | 22                       | Ga West municipal assembly        |
| 7                        | Ejisu municipal assembly            | 23                       | Ga North municipal assembly       |
| 8                        | Atwima Nwabiagya municipal assembly | 24                       | Weija municipal assembly          |
| 9                        | Berekum east municipal assembly     | 25                       | Ga South municipal assembly       |
| 10                       | Assin Fosu municipal assembly       | 26                       | Tema West municipal assembly      |
| 11                       | New Juaben south municipal assembly | 27                       | Krowor municipal assembly         |
| 12                       | Birim Central municipal assembly    | 28                       | Ledzokuku municipal assembly      |
| 13                       | Abuakwa South municipal assembly    | 29                       | Savelugu municipal assembly       |

|    |                                  |    |                                       |
|----|----------------------------------|----|---------------------------------------|
| 14 | Abuakwa North municipal assembly | 30 | Bolgatanga municipal assembly         |
| 15 | Akwapim North municipal assembly | 31 | Effia Kwesimintsim municipal assembly |
| 16 | Okaikwei municipal assembly      |    |                                       |

Source: Data received from MLGRD.

**Table 6.3: List of district assemblies created in 2018**

| New district assemblies |                                   | New district assemblies |  |
|-------------------------|-----------------------------------|-------------------------|--|
| 1                       | Asene Manso district assembly     | 15                      | Ahafo Ano South West district assembly   |
| 2                       | Okere district assembly           | 16                      | Ahafo Ano South East district assembly   |
| 3                       | Atiwa West district assembly      | 17                      | Amansie South district assembly          |
| 4                       | Fanteakwa South district assembly | 18                      | Amansie West district assembly           |
| 5                       | Fanteakwa North district assembly | 19                      | Atwima Nwabiagya north district assembly |
| 6                       | Nanton district assembly          | 20                      | Adansi South district assembly           |
| 7                       | Bunkpurugu district assembly      | 21                      | Akrofrum district assembly               |
| 8                       | Yunyoo district assembly          | 22                      | Adansi North district assembly           |
| 9                       | Bolga East district assembly      | 23                      | Adansi Asokwa district assembly          |
| 10                      | Garu district assembly            | 24                      | Obuasi East district assembly            |
| 11                      | Tempane district assembly         | 25                      | Afigya Kwabre south district assembly    |
| 12                      | Gomoa Central district assembly   | 26                      | Pru West district assembly               |
| 13                      | Gomoa East district assembly      | 27                      | Pru East district assembly               |
| 14                      | Assin North district assembly     | 28                      | Berekum West district assembly           |

Source: Data received from MLGRD.

### 6.3.1 Fragmentation in Ashanti region

I review the fiscal developments in a few assemblies that were fragmented from 2013 to 2016 by the Government of Ghana. In Ashanti Region, three assemblies were fragmented in 2012. These are Mampong municipal, Asante Akim Central municipal and Sekyere Afram Plains district.

**Table 6.4: Fiscal position of mother assemblies in Ashanti region, Ghana (per capita cedi), unless otherwise stated**

| <b>Revenue per capita</b>        |       |       |        |       |       |       |        |
|----------------------------------|-------|-------|--------|-------|-------|-------|--------|
| Assemblies                       | 2010  | 2011  | 2012   | 2013  | 2014  | 2015  | 2016   |
| Mampong municipal                | 28.35 | 28.32 | 35.70  | 38.01 | 41.12 | 52.42 | 60.55  |
| O/W Own revenue (percentage)     | 9.4%  | 7.7%  | 7.3%   | 8.7%  | 11.2% | 11.8% | 12.6%  |
| Asante Akim North municipal      | 58.71 | 40.72 | 44.94  | 13.56 | 18.93 | 55.48 | 53.88  |
| O/W Own revenue (percentage)     | 10.0% | 15.3% | 23.6%  | 8.8%  | 20.4% | 8.2%  | 11.2%  |
| Sekyere Afram Plains district    | 49.77 | 94.79 | 102.39 | 53.69 | 59.74 | 83.22 | 106.35 |
| O/W Own revenue (percentage)     | 13.7% | 6.4%  | 8.0%   | 2.4%  | 4.3%  | 2.7%  | 3.5%   |
| <b>Expenditure per capita</b>    |       |       |        |       |       |       |        |
|                                  | 2010  | 2011  | 2012   | 2013  | 2014  | 2015  | 2016   |
| Mampong municipal                | 25.48 | 34.25 | 31.24  | 15.61 | 34.48 | 25.37 | 61.56  |
| Asante Akim North municipal      | 51.24 | 46.51 | 44.79  | 13.16 | 16.64 | 47.41 | 58.47  |
| Sekyere Afram Plains District    | 48.75 | 84.59 | 94.73  | 56.19 | 57.33 | 66.42 | 125.31 |
| <b>Budget balance per capita</b> |       |       |        |       |       |       |        |
|                                  | 2010  | 2011  | 2012   | 2013  | 2014  | 2015  | 2016   |
| Mampong municipal                | 2.87  | -5.93 | 4.46   | 22.39 | 6.64  | 27.05 | -1.01  |
| Asante Akim North municipal      | 7.47  | -5.79 | 0.15   | 0.40  | 2.29  | 8.06  | -4.58  |
| Sekyere Afram Plains district    | 1.01  | 10.20 | 7.66   | -2.50 | 2.41  | 16.81 | -18.96 |

Source: Data from MLGRD and GSS.

It is observed from Table 6.4 that when the three assemblies were fragmented in 2013<sup>59</sup>, the results are mixed in the first year. In Mampong municipal, the revenue per capita continued to increase from Ghs35.70 in 2012 to Ghs38.01 in 2013 and Ghs60.55 in 2016. The share of own revenue collection increased after the fragmentation in 2012 from 7.3 percent of total revenue to 12.6 percent. However, their expenditure fell by half in per capita terms in 2013 during the implementation of the reforms but picked up in the second year. In Asante Akim North municipal, revenue and expenditure per capita fell to a third of normal for two years after 2012.

<sup>59</sup> The policy was decided in 2012 but the implementation started in 2013.

The own revenue collection plummeted from 23.6 percent of total revenue in 2012 to 8.8 percent in 2013. The municipal was unable to retain the trend of revenue collection as of 2016.

The share of own revenue had started trending downwards in Sekyere Afram Plains district when the government implemented the fragmentation policy. In this case, share of own revenue fell below 5 percent of total revenue and did not recover even in 2016. It is observed that all three of the assemblies started running fiscal deficits in 2016. While I do not have enough data to make attributions, 2016 was an election year in Ghana and thus it may be possible that these assemblies spent more than their revenues in anticipation of additional revenues from the central government.

Overall, the average growth in per capita revenue for 2011 to 2012 (before fragmentation) and 2013-16 (after fragmentation) was slightly higher at 14.4 percent (after) compared to 13.0 percent (before) in Mampong municipal. In Asante Akim North municipal, the growth of per capita revenue increased during the same period from -10.1 percent (before) to 40 percent (after). In the case of Sekyere Afram Plains district, the average growth was higher at 49.2 percent (before) compared to 7.7 (after). From the results, I conclude that in Ashanti region, fragmentation of MMDAs led to mixed results on revenue performance. Municipal assemblies that are expected to have higher capacity were able to obtain more revenue in per capita terms after fragmentation.

The fragmentation of districts did not result in better revenue performance. The growth in expenditure per capita was generally higher in the second year after fragmentation in all assemblies (Table 6.5). The average growth in expenditure per capita before fragmentation in Mampong municipal was higher at 46.8 percent (2013/16) compared to 12.8 percent in (2011/12). Similarly, in Asante Akim North municipal, it was higher at 41.0 percent (after) compared to -6.5 percent (before). In Sekyere Afram Plains district, the average growth in expenditure per capita was lower at 16.5 percent (after) compared to 42.7 percent (before).

From the results, I conclude that in Ashanti region, fragmentation has different implications on municipal and district assemblies. While municipals were able to increase their expenditure per capita, the district expenditure per capita fell, as observed in Sekyere Afram Plains district.

**Table 6.5: Growth of fiscal position in per capita Ashanti region, Ghana cedi, (in nominal terms)**

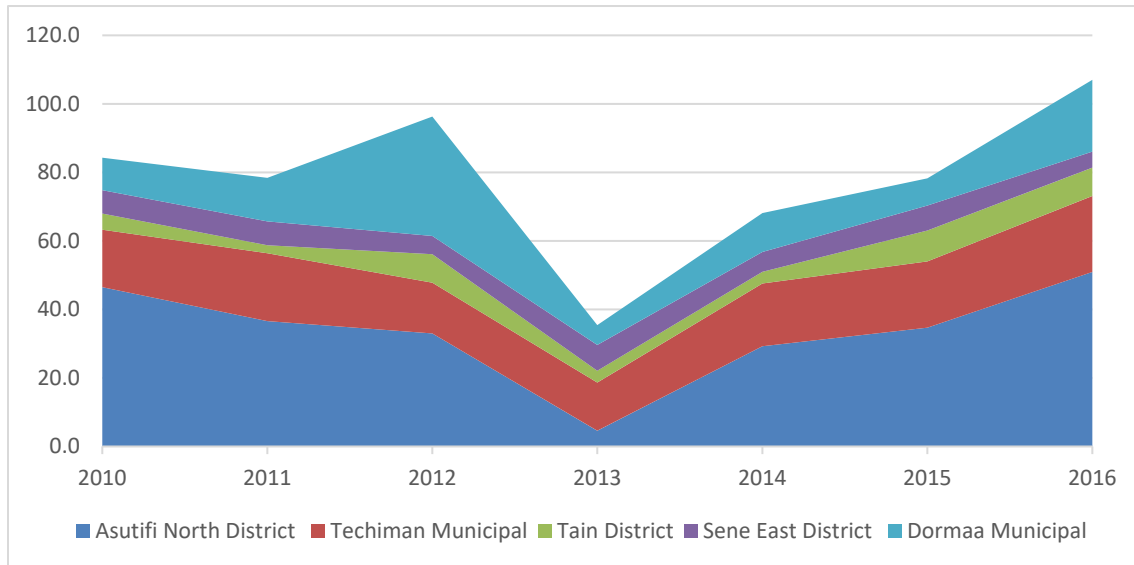
| <b>Growth of revenue per capita</b>        |        |        |        |        |       |            |
|--|--------|--------|--------|--------|-------|------------|
|  | 2011   | 2012   | 2013   | 2014   | 2015  | 2016       |
| Mampong municipal                          | -0.1   | 26.1   | 6.4    | 8.2    | 27.5  | 15.5       |
| Asante Akim North municipal                | -30.6  | 10.4   | -69.8  | 39.6   | 193.0 | -2.9       |
| Sekyere Afram Plains district              | 90.5   | 8.0    | -47.6  | 11.3   | 39.3  | 27.8       |
| <b>Growth of expenditure per capita</b>    |        |        |        |        |       |            |
|  | 2011   | 2012   | 2013   | 2014   | 2015  | 2016       |
| Mampong municipal                          | 34.4   | -8.8   | -50.0  | 120.9  | -26.4 | 142.7      |
| Asante Akim North municipal                | -9.2   | -3.7   | -70.6  | 26.5   | 184.9 | 23.3       |
| Sekyere Afram Plains district              | 73.5   | 12.0   | -40.7  | 2.0    | 15.8  | 88.7       |
| <b>Growth of budget balance per capita</b> |        |        |        |        |       |            |
|  | 2011   | 2012   | 2013   | 2014   | 2015  | 2016       |
| Mampong municipal                          | -306.4 | -175.2 | 402.1  | -70.4  | 307.5 | -<br>103.7 |
| Asante Akim North municipal                | -177.5 | -102.6 | 169.8  | 474.2  | 252.2 | -<br>156.9 |
| Sekyere Afram Plains district              | 907.6  | -24.9  | -132.7 | -196.3 | 597.0 | -<br>212.9 |

Source: Data from MLGRD and GSS.

### 6.3.2 Fragmentation in Brong Ahafo region

Five assemblies were fragmented in 2013. These were Asutifi North district, Techiman municipal, Tain district, Sene East district and Dormaa municipal. Of these, Asutifi North district collected the highest revenue compared to Dormaa and Techiman municipalities in 2010. However, the own revenue collection plummeted as government fragmented the assemblies in 2013 as shown in Figure 6.2. It took another three years for the assemblies to recover to the 2010 ratios.

**Figure 6.2: Share of own revenue in total revenue of fragmented assemblies in Brong Ahafo region, Ghana**



Source: Data from MLGRD.

As noted above, Asutifi North district is a higher performer in respect of revenue collection, mainly because it receives mining royalties from Newmont (a mining company) due to its rich natural resources (Table 6.6). However, the mining royalties were capped in 2003 by the central government, when it signed an investment agreement with three mining companies in the country including Newmont, in order to fix the fiscal regime of taxation. Although Ghana has a mining law (Minerals and Mining Act, 2006), the stability agreement with Newmont exempted the company from paying property taxes and further capped royalties at 3 percent of total revenue (although other mining companies pay 6 percent of their revenue as royalties).

**Table 6.6: Fiscal situation of fragmented MMDAs in Brong Ahafo region, Ghana- (per capita cedi), unless otherwise stated**

| Revenue per capita           |       |       |       |       |       |       |       |
|------------------------------|-------|-------|-------|-------|-------|-------|-------|
|                              | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  |
| Asutifi North district       | 53.6  | 89.4  | 123.5 | 44.3  | 64.9  | 75.6  | 155.7 |
| O/W Own revenue (percentage) | 46.5% | 36.6% | 33.0% | 4.6%  | 29.2% | 34.7% | 50.9% |
| Techiman municipal           | 30.0  | 26.9  | 32.2  | 39.5  | 53.6  | 62.3  | 66.4  |
| O/W Own revenue (percentage) | 16.8% | 19.8% | 14.8% | 14.1% | 18.3% | 19.3% | 22.2% |
| Tain district                | 34.6  | 36.9  | 48.5  | 30.3  | 40.4  | 59.4  | 55.4  |

|                                  |       |       |        |       |       |        |        |
|----------------------------------|-------|-------|--------|-------|-------|--------|--------|
| O/W Own revenue (percentage)     | 4.7%  | 2.3%  | 8.3%   | 3.4%  | 3.4%  | 9.0%   | 8.3%   |
| Sene East district               | 26.3  | 45.5  | 78.2   | 25.5  | 44.3  | 58.0   | 72.1   |
| O/W Own revenue (percentage)     | 6.9%  | 7.0%  | 5.3%   | 7.5%  | 5.8%  | 7.3%   | 4.7%   |
| Dormaa municipal                 | 25.6  | 40.9  | 18.0   | 74.7  | 81.5  | 103.3  | 100.7  |
| O/W Own revenue (percentage)     | 9.4%  | 12.7% | 34.8%  | 5.8%  | 11.3% | 7.9%   | 21.0%  |
| <b>Expenditure per capita</b>    |       |       |        |       |       |        |        |
|                                  | 2010  | 2011  | 2012   | 2013  | 2014  | 2015   | 2016   |
| Asutifi North district           | 55.24 | 88.59 | 104.02 | 48.37 | 67.75 | 100.34 | 118.31 |
| Techiman municipal               | 30.72 | 29.74 | 33.36  | 35.85 | 51.75 | 63.64  | 65.12  |
| Tain district                    | 34.27 | 36.50 | 49.84  | 33.03 | 36.27 | 46.23  | 61.70  |
| Sene East district               | 26.36 | 42.14 | 70.86  | 25.68 | 42.19 | 54.50  | 75.91  |
| Dormaa municipal                 | 28.23 | 27.60 | 58.55  | 60.48 | 84.43 | 91.31  | 74.82  |
| <b>Budget balance per capita</b> |       |       |        |       |       |        |        |
|                                  | 2010  | 2011  | 2012   | 2013  | 2014  | 2015   | 2016   |
| Asutifi North district           | -1.67 | 0.77  | 19.44  | -4.06 | -2.87 | -24.74 | 37.38  |
| Techiman municipal               | -0.70 | -2.79 | -1.14  | 3.64  | 1.84  | -1.33  | 1.33   |
| Tain district                    | 0.30  | 0.43  | -1.33  | -2.72 | 4.10  | 13.14  | -6.28  |
| Sene East district               | -0.08 | 3.31  | 7.38   | -0.20 | 2.10  | 3.50   | -3.86  |
| Dormaa municipal                 | -2.67 | 13.30 | -40.53 | 14.21 | -2.91 | 11.99  | 25.84  |

Source: Data from MLGRD and GSS.

Adu-Gyamerah (2018)<sup>60</sup> reported that in June 2018, the Regional Minister for Brong Ahafo (Kwaku Asomah Kyeremeh) remarked in a press statement (Daily Graphic) that the district had lost Ghs12.7 million in royalties between 2008 and 2016 to Newmont Limited. Notwithstanding the adverse effects of this agreement on tax revenues, Asutifi North district's own revenue amounted to about 33 percent of its total revenue in 2012, but this plummeted to 4.6 percent in 2013 after the fragmentation. This demonstrates the negative short-term impact of fragmentation of own revenue collection.

Similarly, total revenue per capita fell from Ghs123.5 in 2012 to Ghs44.3 in 2013. In the Tain district, the revenue per capita rose from Ghs34.6 in 2010 and reached Ghs48.5 by 2012 and fell to Ghs30.3 in 2013 after the fragmentation. It later rose to Ghs55.4 in 2016 when the impact of fragmentation had fizzled out. In Sene East district, the revenue per capita dropped to a third

<sup>60</sup> Reported in the media quoting daily graphic as the source: <https://www.graphic.com.gh/news/politics/asutifi-north-assembly-loses-gh-12-7-million-royalties-from-newmont.html>.



from Ghs78.2 in 2012 to Ghs25.5 in 2013. A similar pattern is observed with expenditure per capita, where all the districts reduce their expenditures in the first year of the fragmentation.

Revenue per capita continued to increase after fragmentation (2012) in Dormaa municipal and Techiman municipal. In the former, it increased from a low of Ghs18 in 2012 to Ghs74.7 in 2013 and continued to rise to Ghs100.7 in 2016. In the case of Techiman, it rose from Ghs32.2 in 2012 to 66.4 in 2016 (Table 6.6). Similarly, the expenditure per capita for Dormaa municipal and Techiman municipal continued to rise after 2012, as shown in Table 6.6. In Dormaa municipal, it rose persistently from Ghs27.60 in 2011 to Ghs91.31 in 2015. In Techiman municipal, it rose from Ghs29.74 in 2011 to Ghs65.12 in 2016. It is observed here that fragmentation did not significantly reduce revenues collected below those of the previous years.

**Table 6.7: Growth of fiscal position in per capita terms, Brong Ahafo region (Ghana cedi- in nominal terms)**

|                        | Growth of revenue per capita     |        |        |       |       |        | Average |         |
|------------------------|----------------------------------|--------|--------|-------|-------|--------|---------|---------|
|                        | 2011                             | 2012   | 2013   | 2014  | 2015  | 2016   | 2011-12 | 2013-16 |
| Asutifi North district | 66.8                             | 38.2   | -64.1  | 46.4  | 16.5  | 106.0  | 52.5    | 26.2    |
| Techiman municipal     | -10.2                            | 19.6   | 22.5   | 35.7  | 16.3  | 6.6    | 4.7     | 20.3    |
| Tain district          | 6.8                              | 31.3   | -37.5  | 33.2  | 47.1  | -6.7   | 19.1    | 9.0     |
| Sene East district     | 73.0                             | 72.1   | -67.4  | 73.8  | 31.0  | 24.2   | 72.6    | 15.4    |
| Dormaa municipal       | 60.0                             | -55.9  | 314.4  | 9.2   | 26.7  | -2.6   | 2.0     | 86.9    |
|                        | Growth of expenditure per capita |        |        |       |       |        | Average |         |
|                        | 2011                             | 2012   | 2013   | 2014  | 2015  | 2016   | 2011-12 | 2013-16 |
| Asutifi North district | 60.38                            | 17.42  | -53.50 | 40.06 | 48.10 | 17.91  | 38.9    | 13.1    |
| Techiman municipal     | -3.18                            | 12.15  | 7.46   | 44.37 | 22.97 | 2.34   | 4.5     | 19.3    |
| Tain district          | 6.50                             | 36.56  | -33.74 | 9.80  | 27.48 | 33.45  | 21.5    | 9.2     |
| Sene East district     | 59.88                            | 68.15  | -63.76 | 64.33 | 29.18 | 39.28  | 64.0    | 17.3    |
| Dormaa municipal       | -2.24                            | 112.13 | 3.29   | 39.60 | 8.15  | -18.06 | 54.9    | 8.2     |

Source: Data from MLGRD and GSS.

It is observed from Table 6.7 that the average growth in revenue per capita in Asutifi North district, Tain district and Sene East district was higher between 2011/12, compared to that after

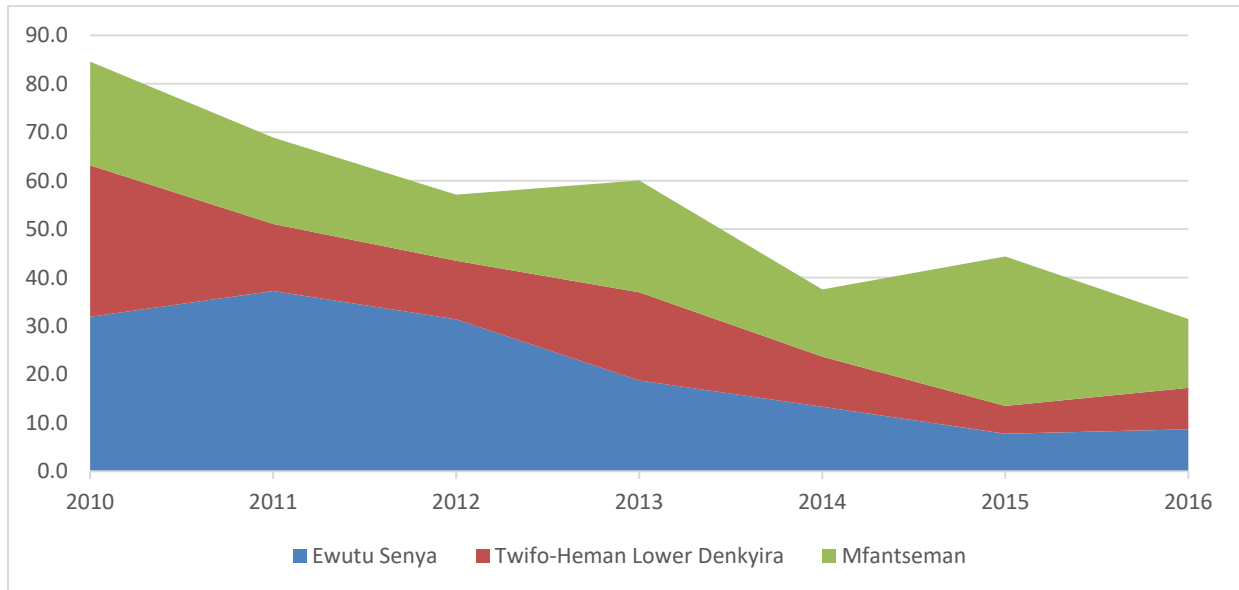
the fragmentation (2013/16). On the other hand, the average revenue per capita for municipalities (Techiman and Dormaa) was higher between 2013 and 2016, compared to the average of 2011/12. As observed with the revenues, the expenditure per capita followed the same pattern, with the districts spending more in per capita terms before fragmentation and less thereafter, while the municipalities spent relatively more after fragmentation than before.

From the results above (Tables 6.6 and 6.7) it can be concluded that in Brong Ahafo region, the immediate impact of fragmentation after 2012 was a reduction in the revenue and expenditure. However, all the districts managed to increase both revenue and expenditure per capita after two years. Also, the per capita revenues and expenditures of districts were higher before fragmentation and lower thereafter. In the case of municipalities, their per capita revenues and expenditures were higher after fragmentation than before. This indicates that the short-term impact of fragmentation varies across different types of MMDAs in Brong Ahafo region.

### 6.3.3 Fragmentation in Central region

Three assemblies were fragmented in Central Region in 2013. These are Ewutu Senya District, Twifo-Heman Lower Denkyira District and Mfantseman Municipal. It is observed from Figure 6.3 that own revenue performance generally declined between 2010 and 2016. Mfantseman Municipal appears to have cycles in revenue collection, but its own revenue performance trended downwards.

**Figure 6.3: Share of own revenue in total revenue of selected fragmented assemblies in Central region, Ghana**



Source: Data from MLGRD.

In the Central region, the revenue per capita reduced for both municipal and district assemblies after the fragmentation. As shown in Table 6.8, the revenue per capita for Ewutu Senya district fell from Ghs29.9 in 2012 to Ghs20.97 in 2013, and the share of own revenue in total revenue fell from 31.4 percent to 18.8 percent within the same period. Thereafter, the share of own revenue continued to fall until it reached 8.7 percent in 2016. The district was unable to achieve strong own revenue performance after fragmentation. This indicates that fragmentation could impair the ability of some districts to collect own revenues in Ghana because it weakens both their capacity and the available resources at the local level to tax their residents.

In the case of Twifo-Heman Lower Denkyira district, while revenue per capita declined from Ghs55.8 in 2012 to Ghs 11.5 in 2013, the share of own revenue collection increased in 2013, indicating either a fall in the intergovernmental transfers to the district, or that the authorities might have taken additional measures (such as assisting assemblies to identify tax capacity gaps and providing technical assistance to close the gaps) to replace shortfall in transfers with own revenue. This performance was however short lived, as the share of own revenue declined after

2013. The revenue per capita for Mfantseman municipal declined in 2013 but rose to Ghs41.8 in 2016 from Ghs15.6 in 2013.

**Table 6.8: Fiscal situation of fragmented MMDAs in Central region, Ghana (per capita cedi), unless otherwise stated**

| <b>Revenue per capita</b>           |       |       |       |       |       |       |       |
|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|
|                                     | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  |
| Ewutu Senya district                | 28.85 | 31.00 | 29.94 | 20.97 | 26.01 | 56.21 | 60.09 |
| O/W Own revenue (percentage)        | 31.9% | 37.2% | 31.4% | 18.8% | 13.3% | 7.8%  | 8.7%  |
| Twifo-Heman Lower Denkyira district | 18.92 | 53.63 | 55.78 | 11.54 | 32.05 | 50.67 | 64.23 |
| O/W Own revenue (percentage)        | 31.2% | 13.8% | 12.1% | 18.2% | 10.3% | 5.7%  | 8.6%  |
| Mfantseman municipal                | 11.85 | 21.64 | 29.94 | 15.64 | 36.41 | 18.59 | 41.75 |
| O/W Own revenue (percentage)        | 21.4% | 17.8% | 13.7% | 23.1% | 13.9% | 30.9% | 14.2% |
| <b>Expenditure per capita</b>       |       |       |       |       |       |       |       |
|                                     | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  |
| Ewutu Senya district                | 23.77 | 33.70 | 31.21 | 21.13 | 25.65 | 51.87 | 62.51 |
| Twifo-Heman Lower Denkyira district | 19.69 | 51.99 | 55.93 | 11.40 | 30.10 | 47.48 | 65.56 |
| Mfantseman municipal                | 8.17  | 20.52 | 26.38 | 19.99 | 31.16 | 23.18 | 43.38 |
| <b>Budget balance per capita</b>    |       |       |       |       |       |       |       |
|                                     | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  |
| Ewutu Senya district                | 5.07  | -2.70 | -1.27 | -0.16 | 0.36  | 4.34  | -2.42 |
| Twifo-Heman Lower Denkyira district | -0.77 | 1.63  | -0.16 | 0.14  | 1.95  | 3.19  | -1.33 |
| Mfantseman municipal                | 3.68  | 1.12  | 3.56  | -4.35 | 5.25  | -4.58 | -1.63 |

Source: Data from MLGRD and GSS.

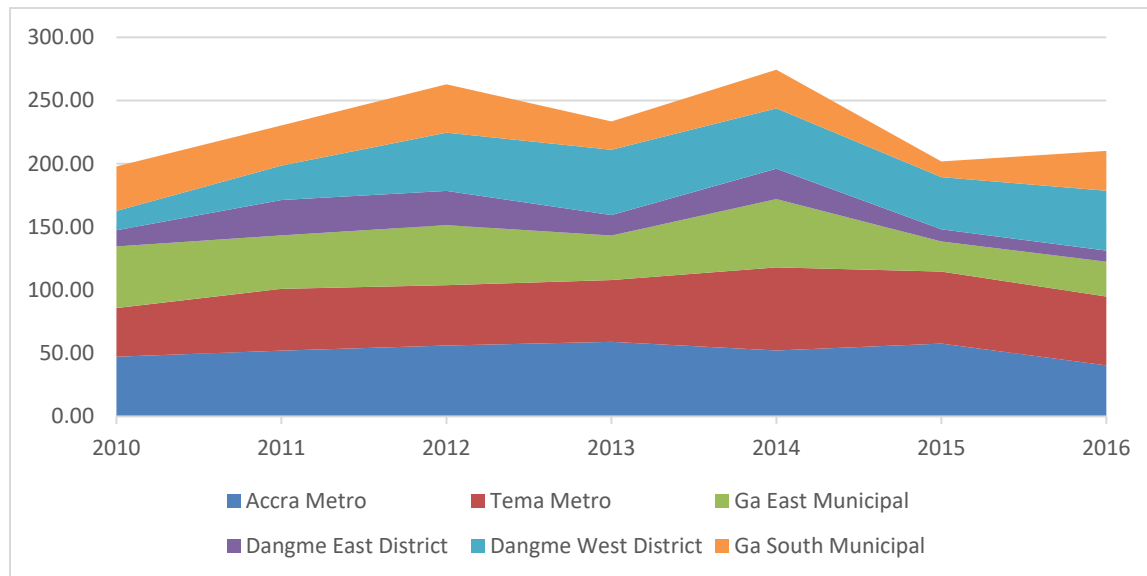
On the other hand, expenditure per capita in all three assemblies fell in 2013 and rose thereafter until 2016. As a result, all three assemblies had budget deficits by 2016. These deficits are debt that is financed through intergovernmental transfers. From the results, it can be concluded that fragmentation of some districts could impair own revenue performance. In addition, municipals in the Central region may not be as revenue resilient as those in the other regions that are able to increase their revenue and expenditure per capita when the government implements a fragmentation policy.

#### 6.3.4 Fragmentation in Greater Accra region

Six assemblies were fragmented in the Greater Accra Region. These are Accra Metro, Tema Metro, Ga East and South municipalities, and Dangme East and West districts. Ghana's capital is Accra located in Greater Accra region. Accra has a large coastal strip and is the seat of government and ministry departments and agencies. Accra has been the capital of Ghana since 1877 and is one of the fastest growing cities in the country. Accra metropolitan assembly is the largest MMDA in the Greater Accra region and the first target for fragmentation. Accra Metropolitan Assembly was established in 1898 and draws its legal mandate from the Local Governance Act, 2016 (ACT 936), and Legislative Instrument (L.I) 2034. Greater Accra region is a high own-source revenue performer.

Greater Accra region also has Tema metropolitan which is the industrial city of Ghana, with a harbor and many of Ghana's largest companies. Tema was constructed in 1961 in order to support Ghana's trade and rapid development. Tema Metropolitan Assembly is the second MMDA that is commonly targeted due to its population growth and ability to attract people. Fragmentation of the Accra and Tema metros does not seem to have impacted on their own revenue collection, as shown in the Figure 6.4. However, own revenues contracted slightly in municipalities and districts during the 2013 fragmentation.

**Figure 6.4: Share of own revenue in total revenue of selected fragmented assemblies in Greater Accra region, Ghana**



Source: Data from MLGRD.

In per capita terms, Tema Metropolitan Assembly obtained more revenue than Accra Metropolitan Assembly between 2010 and 2016. Tema metro's revenue increased from Ghs51.5 in 2010 to Ghs132.2 in 2016, as shown in Table 6.9. Furthermore, Accra metro increased its revenue per capita from Ghs16.2 in 2010 to Ghs46.5 in 2016. On average, both Tema and Accra Metropolitan Assemblies collected about 52 percent of the total revenue in the region. Fragmentation of these metros did not significantly affect the revenue performance.

In Ga East municipal, revenue per capita increased significantly from Ghs27.7 in 2010 to Ghs 87.15 in 2016, but the share of own revenue (local effort) declined from around 49 percent in 2010 to 28 percent in 2016, mainly due to increased intergovernmental transfers. It is observed from Figure 6.4 that the revenue of the municipality declined after 2014, although it had begun to recover from the temporary decline in revenues due to fragmentation in 2013. In Ga South municipal, the revenue per capita increased by about five times between 2010 and 2016 from Ghs5.3 to Ghs25.3 respectively (Table 6.9).

In Dangme East district, revenue per capita increased to Ghs61.4 in 2016, after falling in 2013 to Ghs22.7, from Ghs38.4 in 2010. In 2016, own revenue in the district represented 8.8 percent

of total revenue, although it represented about 23 percent between 2010 and 2012 before the fragmentation in 2013. In Dangme West district, the revenue per capita fell from Ghs82.6 in 2010 to Ghs60.8 in 2016, after plummeting to Ghs30 in 2013 due to fragmentation. There is no doubt that fragmentation of the two districts adversely reduced their revenue performance in the first year of the policy.

On the expenditure side, it is observed that the fragmentation policy of government impacted the trend of expenditure per capita in districts and municipals more than the two metropolitan assemblies. In the case of Tema Metropolitan Assembly, expenditure per capita continued to increase, even in the year of fragmentation, resulting in a fiscal deficit in per capita terms of Ghs3.76 in 2013. Accra Metropolitan Assembly reduced its expenditure per capita slightly, resulting in a fiscal surplus per capita of Ghs5.4 in 2013.

**Table 6.9: Fiscal situation of fragmented MMDAs in Greater Accra region, Ghana (per capita cedi), unless otherwise stated**

| <b>Revenue per capita</b>     |       |       |       |       |       |        |        |
|-------------------------------|-------|-------|-------|-------|-------|--------|--------|
|                               | 2010  | 2011  | 2012  | 2013  | 2014  | 2015   | 2016   |
| Accra metro                   | 16.23 | 22.91 | 23.47 | 22.96 | 34.81 | 37.17  | 46.47  |
| O/W Own revenue (percentage)  | 47.2% | 52.1% | 56.2% | 59.0% | 52.2% | 57.6%  | 40.4%  |
| Tema metro                    | 51.53 | 56.67 | 56.71 | 77.25 | 65.91 | 101.80 | 132.21 |
| O/W Own revenue (percentage)  | 38.6% | 48.9% | 47.7% | 48.9% | 65.8% | 57.0%  | 54.5%  |
| Ga East municipal             | 27.66 | 35.62 | 26.26 | 31.48 | 32.40 | 116.14 | 87.15  |
| O/W Own revenue (percentage)  | 48.7% | 42.3% | 47.5% | 35.3% | 54.1% | 23.9%  | 27.6%  |
| Dangme East district          | 38.40 | 42.21 | 35.32 | 22.68 | 27.43 | 57.25  | 61.37  |
| O/W Own revenue (percentage)  | 12.8% | 28.0% | 27.2% | 16.2% | 24.0% | 9.5%   | 8.8%   |
| Dangme West district          | 82.57 | 66.01 | 52.75 | 29.61 | 38.93 | 62.42  | 60.81  |
| O/W Own revenue (percentage)  | 15.4% | 27.2% | 46.1% | 51.6% | 47.8% | 41.3%  | 47.3%  |
| Ga South municipal            | 5.29  | 8.29  | 8.44  | 11.51 | 10.86 | 27.64  | 25.33  |
| O/W Own revenue (percentage)  | 35.3% | 31.7% | 38.2% | 22.5% | 30.6% | 12.4%  | 31.6%  |
| <b>Expenditure per capita</b> |       |       |       |       |       |        |        |
|                               | 2010  | 2011  | 2012  | 2013  | 2014  | 2015   | 2016   |
| Accra metro                   | 16.5  | 17.8  | 19.9  | 17.5  | 31.9  | 25.0   | 45.0   |
| Tema metro                    | 49.9  | 65.6  | 52.9  | 81.0  | 56.1  | 103.7  | 128.0  |
| Ga East municipal             | 27.9  | 32.4  | 30.7  | 30.4  | 31.4  | 58.3   | 84.9   |
| Dangme East district          | 32.3  | 40.8  | 38.9  | 17.1  | 29.5  | 52.0   | 75.5   |
| Dangme West district          | 74.6  | 69.1  | 59.1  | 26.9  | 35.6  | 64.3   | 53.6   |

|                                  |       |       |       |       |       |       |        |
|----------------------------------|-------|-------|-------|-------|-------|-------|--------|
| Ga South municipal               | 6.2   | 7.7   | 9.3   | 9.7   | 10.6  | 24.5  | 25.3   |
| <b>Budget balance per capita</b> |       |       |       |       |       |       |        |
|                                  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016   |
| Accra metro                      | -0.25 | 5.14  | 3.53  | 5.41  | 2.90  | 12.21 | 1.50   |
| Tema metro                       | 1.64  | -8.93 | 3.79  | -3.76 | 9.81  | -1.88 | 4.20   |
| Ga East municipal                | -0.21 | 3.26  | -4.43 | 1.12  | 0.97  | 57.86 | 2.25   |
| Dangme East district             | 6.05  | 1.42  | -3.54 | 5.56  | -2.11 | 5.29  | -14.11 |
| Dangme West district             | 7.98  | -3.06 | -6.34 | 2.71  | 3.34  | -1.84 | 7.22   |
| Ga South municipal               | -0.94 | 0.59  | -0.85 | 1.84  | 0.24  | 3.18  | 0.05   |

Source: Data from MLGRD and GSS.

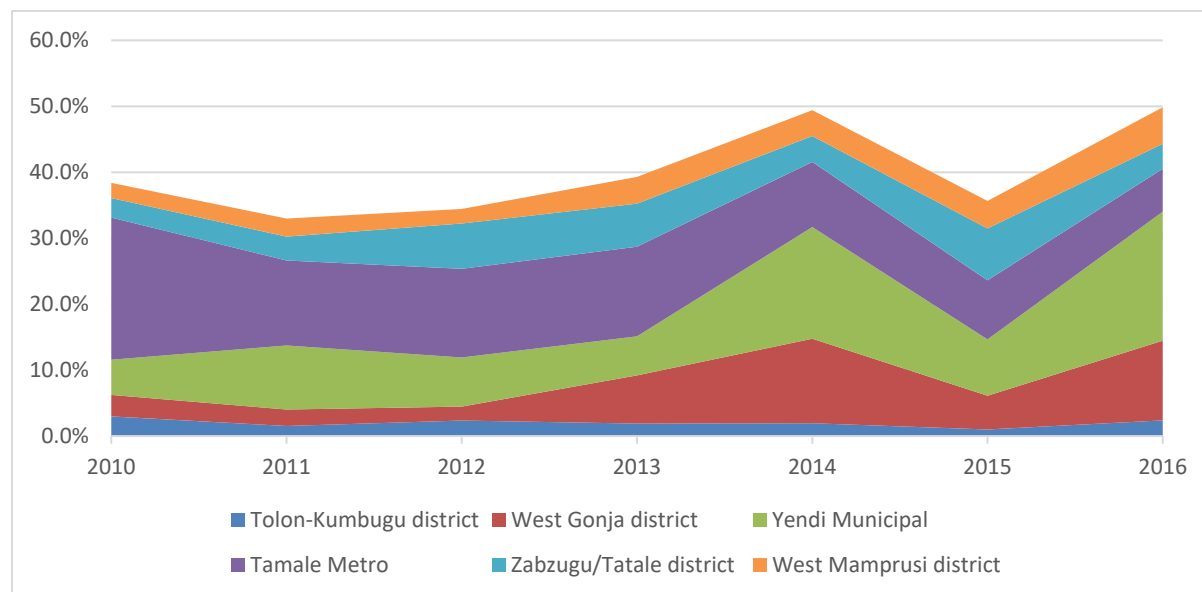
I conclude that in Greater Accra region, the revenues of the fragmented metropolitan assemblies were on balance not adversely impacted by the government decision on fragmentation. The metros tended to be more resilient than the municipal and district assemblies. On balance, the revenues and expenditures per capita of district assemblies were significantly reduced by the fragmentation, contributing to a large fiscal deficit in Dangme East district in 2016, for example.

#### 6.3.5 Fragmentation in Northern region

The Northern region of Ghana is made up of about eighteen heterogeneous ethnic groups with varied history and customs. Some of the ethnic groups are the Dagbon, Gonja, Nchumuru, Tampluma, Kalande, Bassari, Mo, Nawuri, Choruba, Vagalla, Damptu, Safalba, Kpariba and Lobi. It is among the poorest parts of Ghana and the most conflict prone area. In the Northern region, the impact of fragmentation is observed after two years. In all MMDAs, the share of own revenue to total revenue continued to increase through 2014 until 2015 and then it declined. The observed pattern may be explained by the time lag between the passing of the law and actual implementation of the policy. It was observed that in low capacity areas, it takes a longer time to implement government policies compared to the relatively strong capacity areas of Ghana such as the Greater Accra region.



**Figure 6.5: Share of own revenue in total revenue of selected fragmented assemblies in Northern region, Ghana**



Source: Data from MLGRD.

It is observed from Figure 6.5 that the share of own revenue in total revenue of Tamale metro contracted between 2010 and 2016, especially after 2013. In the case of Yendi municipal and West Gonja district, the shares of own revenue in total revenue increased in 2014 and 2016, after the government had announced the fragmentation.

**Table 6.10: Fiscal situation of fragmented MMDAs in Northern region, Ghana (per capita cedi), unless otherwise stated**

|                              | Revenue per capita |       |       |       |       |       |        |
|------------------------------|--------------------|-------|-------|-------|-------|-------|--------|
|                              | 2010               | 2011  | 2012  | 2013  | 2014  | 2015  | 2016   |
| Tolon-Kumbugu district       | 33.69              | 51.40 | 56.16 | 35.88 | 43.09 | 60.56 | 59.31  |
| O/W Own revenue (percentage) | 3.0%               | 1.5%  | 2.4%  | 1.9%  | 2.0%  | 1.0%  | 2.4%   |
| West Gonja district          | 67.91              | 59.70 | 61.50 | 47.82 | 39.31 | 87.10 | 120.00 |
| O/W Own revenue (percentage) | 3.3%               | 2.5%  | 2.1%  | 7.3%  | 12.8% | 5.1%  | 12.1%  |
| Yendi municipal              | 32.86              | 27.80 | 53.65 | 43.09 | 36.50 | 45.28 | 52.77  |
| O/W Own revenue (percentage) | 5.3%               | 9.7%  | 7.5%  | 5.9%  | 16.9% | 8.6%  | 19.6%  |
| Tamale metro                 | 16.74              | 33.51 | 30.35 | 31.16 | 51.07 | 67.70 | 83.46  |
| O/W Own revenue (percentage) | 21.6%              | 12.9% | 13.4% | 13.6% | 9.9%  | 8.9%  | 6.5%   |
| Zabzugu/Tatale district      | 47.96              | 39.66 | 53.08 | 31.51 | 61.39 | 44.70 | 78.90  |
| O/W Own revenue (percentage) | 3.0%               | 3.6%  | 6.9%  | 6.5%  | 3.9%  | 7.9%  | 3.8%   |
| West Mamprusi district       | 27.09              | 23.29 | 31.85 | 25.88 | 27.93 | 45.28 | 40.46  |
| O/W Own revenue (percentage) | 2.3%               | 2.7%  | 2.2%  | 4.1%  | 3.9%  | 4.2%  | 5.5%   |

| <b>Expenditure per capita</b>    |        |         |       |         |        |        |        |
|----------------------------------|--------|---------|-------|---------|--------|--------|--------|
|                                  | 2010   | 2011    | 2012  | 2013    | 2014   | 2015   | 2016   |
| Tolon-Kumbugu district           | 4.70   | 45.10   | 51.30 | 36.04   | 39.49  | 53.17  | 63.46  |
| West Gonja district              | 48.19  | 100.90  | 50.20 | 53.48   | 41.45  | 77.58  | 124.31 |
| Yendi municipal                  | 25.22  | 30.63   | 35.03 | 43.97   | 42.86  | 43.78  | 57.40  |
| Tamale metro                     | 15.59  | 33.88   | 27.51 | 35.49   | 36.55  | 72.37  | 84.83  |
| Zabzugu/Tatale district          | 45.93  | 41.06   | 35.77 | 49.07   | 54.27  | 46.92  | 77.23  |
| West Mamprusi district           | 23.96  | 26.01   | 30.86 | 27.01   | 32.31  | 41.57  | 41.51  |
| <b>Budget balance per capita</b> |        |         |       |         |        |        |        |
|                                  | 2010   | 2011    | 2012  | 2013    | 2014   | 2015   | 2016   |
| Tolon-Kumbugu district           | (1.01) | 6.29    | 4.86  | (0.15)  | 3.60   | 7.39   | (4.15) |
| West Gonja district              | 19.72  | (41.20) | 11.30 | (5.66)  | (2.14) | 9.53   | (4.31) |
| Yendi municipal                  | 7.64   | (2.83)  | 18.61 | (0.88)  | (6.35) | 1.50   | (4.62) |
| Tamale metro                     | 1.15   | (0.37)  | 2.84  | (4.32)  | 14.53  | (4.67) | (1.37) |
| Zabzugu/Tatale district          | 2.03   | (1.40)  | 17.31 | (17.56) | 7.12   | (2.22) | 1.67   |
| West Mamprusi district           | 3.13   | (2.72)  | 0.99  | (1.14)  | (4.38) | 3.71   | (1.05) |

Source: Data from MLGRD and GSS.

In per capita terms, the revenue of Tamale Metro continued to increase, despite the fragmentation. Similarly, its expenditure per capita increased throughout 2010 and 2016 but at a faster rate, leading to fiscal deficits in 2013, 2015 and 2016. In the case of Yendi municipal, revenue per capita fell in 2013 and rose thereafter. However, the expenditure per capita fell in 2014, and remained at the level for two years before rising. Nonetheless, Yendi municipal had per capita fiscal deficits in 2011, 2013, 2014 and 2016, as shown in Table 6.10, but these deficits were larger after fragmentation in 2013. In Tolon-Kumbugu and West Mamprusi districts, the revenue per capita declined in 2013 and 2014, as did the expenditure per capita. In West Gonja and Zabzugu/Tatale districts, the revenue per capita only fell in 2013. The expenditure per capita in the two districts also fell in 2013 after the fragmentation policy. Most of the fragmented assemblies in the Northern region had fiscal deficits in 2016.

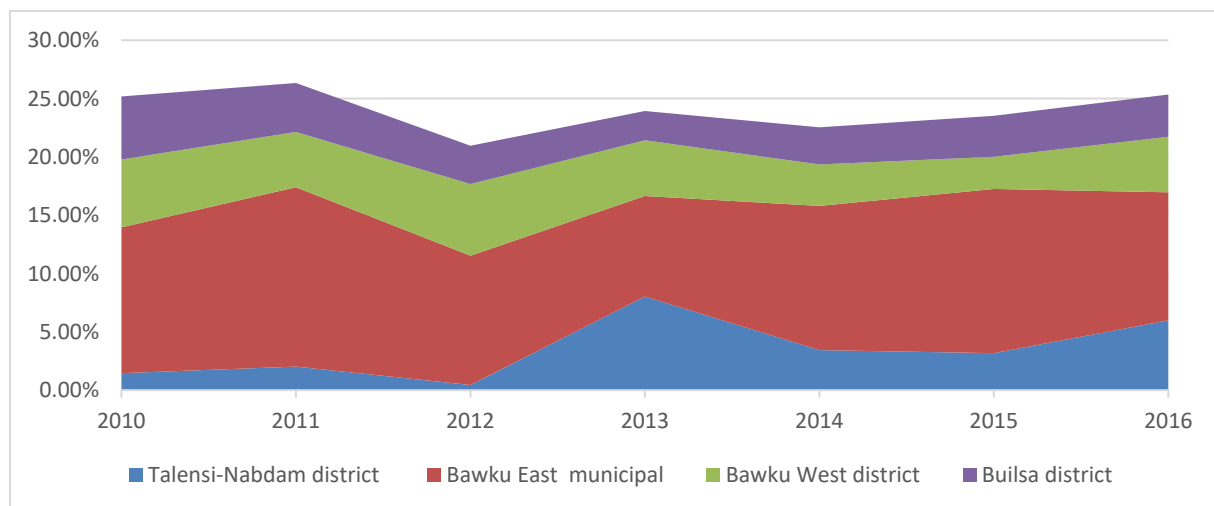
It can be concluded that in the Northern region, fragmentation had a medium-term impact on own revenues which resulted in fiscal deficits by 2016. In Tamale metropolitan, the own revenue collection contracted systematically between 2010 and 2016. In Yendi municipality, the revenue and expenditure per capita began to recover after two years. In most of the districts,

fragmentation revenue per capita recovered after declining for either a year or two. Fragmentation in this region may have contributed to the decline in revenue performance.

### 6.3.6 Fragmentation in Upper East region

The Upper East region was part of the northern territories during the colonial era. It was carved out of the Upper region and was part of the Northern region in 1960. As part of the creation of regions in 1983, the government divided the Upper region into Upper East and Upper West regions. The major ethnic groups in the Upper East region of Ghana are the Mole, Dagbon, Grusi, Mande-Busanga and Gurma. Based on the regional fragmentation in 1983, the Upper East region had 13 assemblies, of which four were fragmented in 2013. The fragmented assemblies are Talensi-Nabdam district, Bawku East municipal, Bawku West district and Builsa district. Bawku East municipal collected about 13 percent of its total revenue before 2013. During the year of fragmentation (2013), the own revenue collection share fell to about 9 percent and picked up thereafter to reach around 11 percent in 2016 (Figure 6.6).

**Figure 6.6: Share of own revenue in total revenue of selected fragmented assemblies in Upper East region, Ghana**



Source: Data from MLGRD.

In Talensi-Nabdam district, own revenue performance increased from an average of 1.3 percent between 2010 and 2012 to 5.2 percent between 2013 and 2016. This pattern is not observed in

many district assemblies including Bawku West District and Builsa district in the Upper East region, which had a slight narrowing of revenue performance in 2015.

In per capita terms, the revenue of Bawku East municipal increased from Ghs44.1 in 2010 to Ghs73.7 in 2016 after a slight decline in 2014 (Table 6.11). Among the three other districts that were fragmented, Talensi-Nabdam district obtained the highest revenue per capita in 2010, but this amount fell from its peak of Ghs124.6 in 2011 to Ghs26.2 in 2013. The expenditure per capita of Talensi-Nabdam district equally declined from Gh116.5 in 2011 to about Ghs28.7 in 2013, before rising to Ghs47.4 in 2016. In Bawku East municipal, Bawku West district and Builsa North district the expenditure per capita continued to rise after 2013 irrespective of the revenue performance. All three assemblies had fiscal deficits by the end of 2016.

**Table 6.11: Fiscal situation of fragmented MMDAs in Upper East region, Ghana (per capita cedi), unless otherwise stated**

| <b>Revenue per capita</b>        |       |        |        |       |        |        |        |
|----------------------------------|-------|--------|--------|-------|--------|--------|--------|
|                                  | 2010  | 2011   | 2012   | 2013  | 2014   | 2015   | 2016   |
| Talensi-Nabdam district          | 80.50 | 124.55 | 115.18 | 26.15 | 53.97  | 48.88  | 44.29  |
| Bawku East municipal             | 44.13 | 39.76  | 44.07  | 49.07 | 46.97  | 54.62  | 73.67  |
| Bawku West district              | 22.39 | 34.14  | 27.04  | 34.21 | 55.07  | 54.96  | 63.83  |
| Builsa North district            | 42.60 | 49.80  | 45.30  | 43.03 | 34.99  | 60.92  | 59.50  |
| <b>Expenditure per capita</b>    |       |        |        |       |        |        |        |
|                                  | 2010  | 2011   | 2012   | 2013  | 2014   | 2015   | 2016   |
| Talensi-Nabdam district          | 62.13 | 116.51 | 107.47 | 28.69 | 52.51  | 45.78  | 47.36  |
| Bawku East municipal             | 37.63 | 40.50  | 32.23  | 48.60 | 46.49  | 46.60  | 87.23  |
| Bawku West district              | 21.49 | 31.28  | 25.14  | 33.33 | 59.71  | 52.19  | 64.10  |
| Builsa North district            | 34.87 | 59.39  | 40.24  | 42.35 | 54.46  | 54.74  | 71.03  |
| <b>Budget balance per capita</b> |       |        |        |       |        |        |        |
|                                  | 2010  | 2011   | 2012   | 2013  | 2014   | 2015   | 2016   |
| Talensi-Nabdam district          | 18.37 | 8.04   | 7.71   | -2.54 | 1.47   | 3.11   | -3.06  |
| Bawku East municipal             | 6.50  | -0.74  | 11.84  | 0.47  | 0.48   | -11.53 | -13.57 |
| Bawku West district              | 0.90  | 2.87   | 1.90   | 0.88  | -4.63  | 4.79   | -0.27  |
| Builsa North district            | 7.73  | -9.60  | 5.06   | 0.68  | -19.47 | 6.18   | -11.53 |

Source: Data from MLGRD and GSS.

I conclude that in Upper East region, fragmentation led to marginal contraction of revenues and expenditures in Bawku East municipal.<sup>61</sup> However, in Talensi-Nabdam district, own revenue

<sup>61</sup> The area was prone to land and chieftaincy related conflicts. The conflicts were localized among ethnic groups and contributes to reduced responsiveness to policy actions. Ghana Living Standard Survey 5 recorded poverty rate to be at 74 percent in Bawku East. It is a low capacity area (World Bank, 2011:10-15).

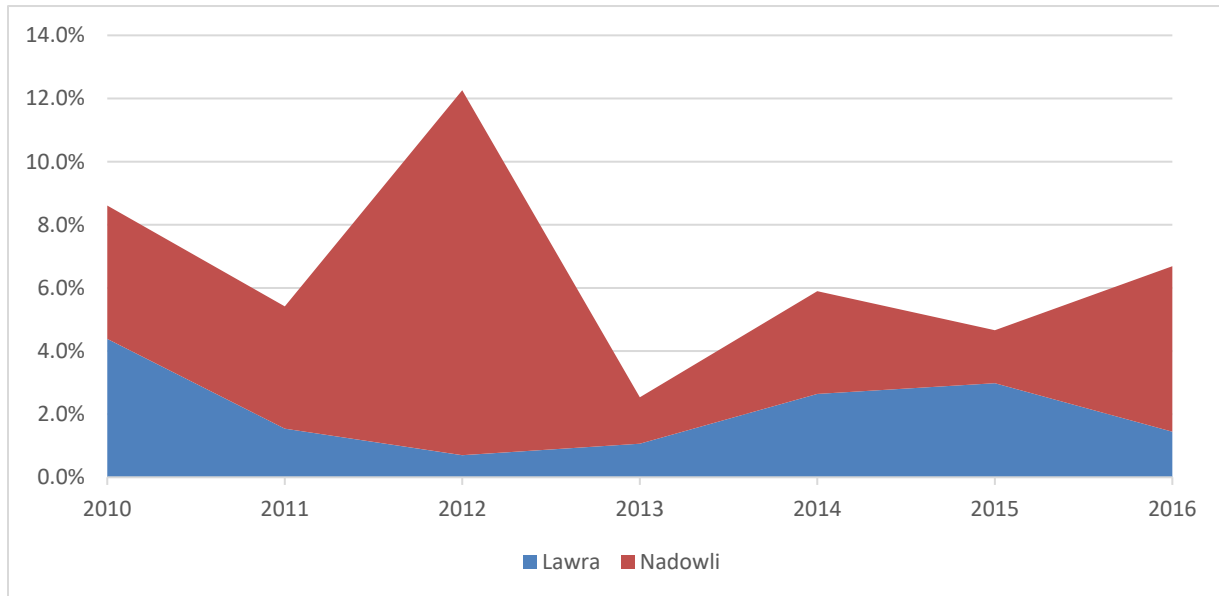
performance improved after the fragmentation of 2013. On balance, the revenues did not grow as much as the expenditure in per capita terms between 2013 and 2016, leading to fiscal deficits by 2016. The adverse impact of fragmentation was observed in revenues rather than with the expenditures in almost all fragmented assemblies in the region.

### 6.3.7 Fragmentation in Upper West region

The Upper West region was created in 1983 as part of the splitting of the Upper region. It had eleven assemblies in 2012, of which two were fragmented in 2013. These are Lawra and Nadowli district assemblies. The region has four major ethnic groups. These are the Mole Dagaba, Grusi, Sisaala and Wala. The region is highly dependent on intergovernmental transfers due to the low level of internally generated funds. In 2010, Lawra district assembly collected only 4.4 percent of its total revenue.

Average own revenue collection between 2010 and 2012 was about 2.2 percent but fell to 2.0 percent between 2013 and 2016. In Nadowli district, the share of own revenue in total revenue of the assembly increased from 4.2 percent in 2010 to 11.6 percent in 2012, but it declined to 1.5 percent after fragmentation. On average, the share of own revenue in total revenue declined from 6.6 percent between 2010 and 2012 to 2.9 percent between 2013 and 2016 (Figure 6.7).

**Figure 6.7: Share of own revenue in total revenue of selected fragmented assemblies in Upper West region, Ghana**



Source: Data from MLGRD.

In per capita terms, own revenue in Lawra assembly declined after 2011 until 2016, although it rose temporary in 2013. In Nadowli assembly, the revenue per capita increased from an average of Ghs83.37 between 2013 and 2016 from an average of Ghs40.8 for the 2010-12 period. Expenditure per capita in Lawra and Nadowli increased in 2013 but fell in 2012 as shown in Table 6.12. In Lawra expenditure per capita fell after 2013 while in Nadowli it trended upwards.

**Table 6.12: Fiscal situation of fragmented MMDAs in Upper West region, Ghana- (per capita cedi), unless otherwise stated**

| <b>Revenue per capita</b>        |       |        |       |       |       |        |        |
|----------------------------------|-------|--------|-------|-------|-------|--------|--------|
|                                  | 2010  | 2011   | 2012  | 2013  | 2014  | 2015   | 2016   |
| Lawra district                   | 92.7  | 111.2  | 57.4  | 71.4  | 68.4  | 68.8   | 100.9  |
| Nadowli district                 | 49.8  | 47.6   | 31.0  | 86.8  | 79.5  | 108.7  | 49.3   |
| <b>Expenditure per capita</b>    |       |        |       |       |       |        |        |
|                                  | 2010  | 2011   | 2012  | 2013  | 2014  | 2015   | 2016   |
| Lawra district                   | 87.25 | 110.78 | 46.57 | 72.16 | 65.14 | 59.99  | 63.65  |
| Nadowli district                 | 47.30 | 39.82  | 35.15 | 66.30 | 69.39 | 106.00 | 91.80  |
| <b>Budget balance per capita</b> |       |        |       |       |       |        |        |
|                                  | 2010  | 2011   | 2012  | 2013  | 2014  | 2015   | 2016   |
| Lawra district                   | 5.48  | 0.38   | 10.80 | -0.73 | 3.21  | 8.79   | 37.26  |
| Nadowli district                 | 2.52  | 7.78   | -4.11 | 20.50 | 10.11 | 2.72   | -42.53 |

Source: Data from MLGRD and GSS.

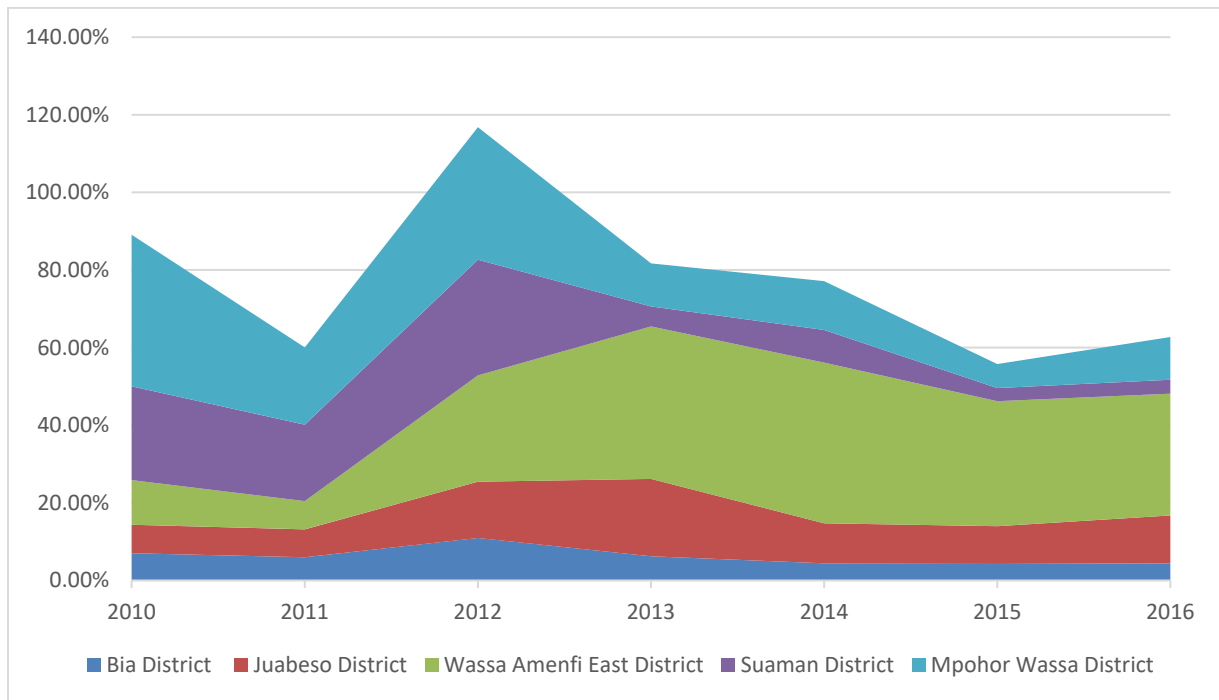
In conclusion, fragmentation of districts in Upper West region seems to have negatively impacted revenue and expenditure per capita terms two years after 2013. Again, Upper West region is among the low capacity regions of Ghana where there are lags with policy implementation. In Nadowli district, the expenditures per capita fell in 2016 but the revenues declined more, resulting in a large per capita fiscal deficit. In Lawra, revenue per capita increased to cover the increase in expenditure, resulting in a fiscal surplus. Thus, the fiscal performance of the districts after the fragmentation was mixed due in parts to policy implementation lags.

#### 6.3.8 Fragmentation in Western region

The Western region is part of the coastal lands of Ghana and shares a boundary with the Ivory Coast (Cote d'Ivoire) in the south west of the country. The region is rich in timber and mining resources and thus, obtained about 44 percent of its own-sourced revenue from natural resource royalties paid to assemblies between 1994 and 2004 (Mogues and Benin, 2012:1056). In 2007, crude was discovered in this region at Cape Three Point. It has about 22 assemblies of which one is a metropolitan (Sekondi) and three are municipals (Tarkwa-Nsuaem, Nzema East and Sefwi Wiaso). In 2013, the government fragmented Bia, Juabeso, Wassa Amenfi East, Suaman and Mpohor Wassa district assemblies.

It is observed from Figure 6.8 that the own revenues of all five districts increased between 2010 and 2012 before the fragmentation and perhaps contributed to their selection for fragmentation based on their performance. However, the 2013 fragmentation contributed to a general decline in the share of own revenues in total revenue between 2013 and 2016. In Wassa Amenfi East district, more revenues were collected after 2013 at a decreasing rate compared to the period 2010-2012.

**Figure 6.8: Share of own revenue in total revenue of selected fragmented assemblies in Western region, Ghana**

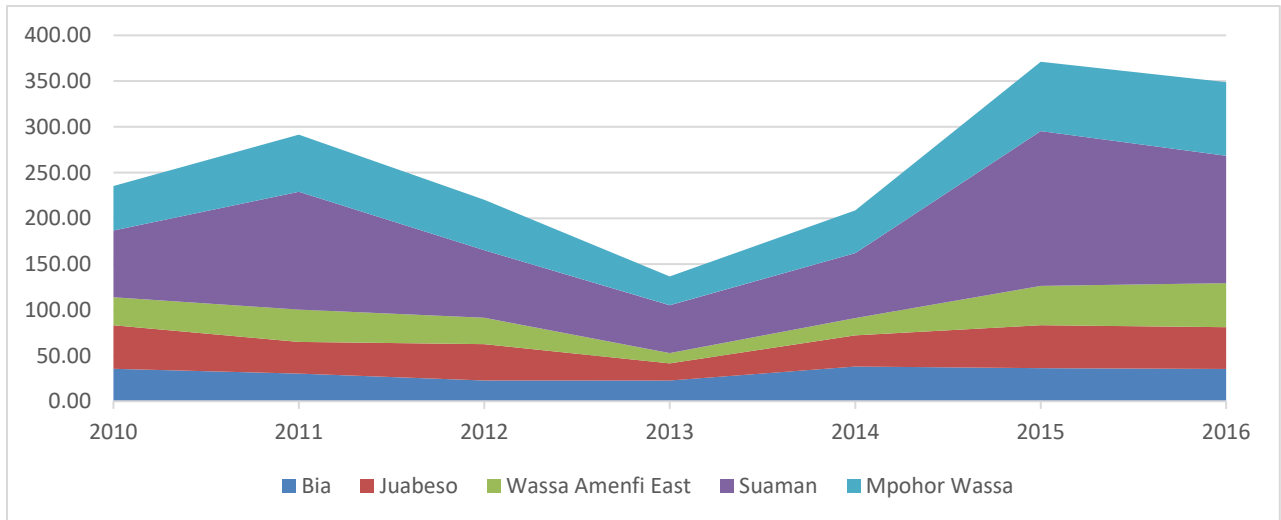


Source: Data from MLGRD.

In per capita terms, the revenue declined in districts between 2011 and 2016 making a U-shape, with the minimum in the year of the implementation of the fragmentation policy as shown in Figure 6.9. In almost all districts, the revenue per capita was higher in 2016 than the level in 2010. In Bia district, the revenue per capita fell from Ghs35.4 in 2010 to Ghs22.6 in 2013, but it rose thereafter to Ghs35.3 in 2016. In Juabeso district, the revenue per capita fell from Ghs47.7 in 2010 to Ghs18.7 in 2013 and rose to Ghs45.6 in 2016.



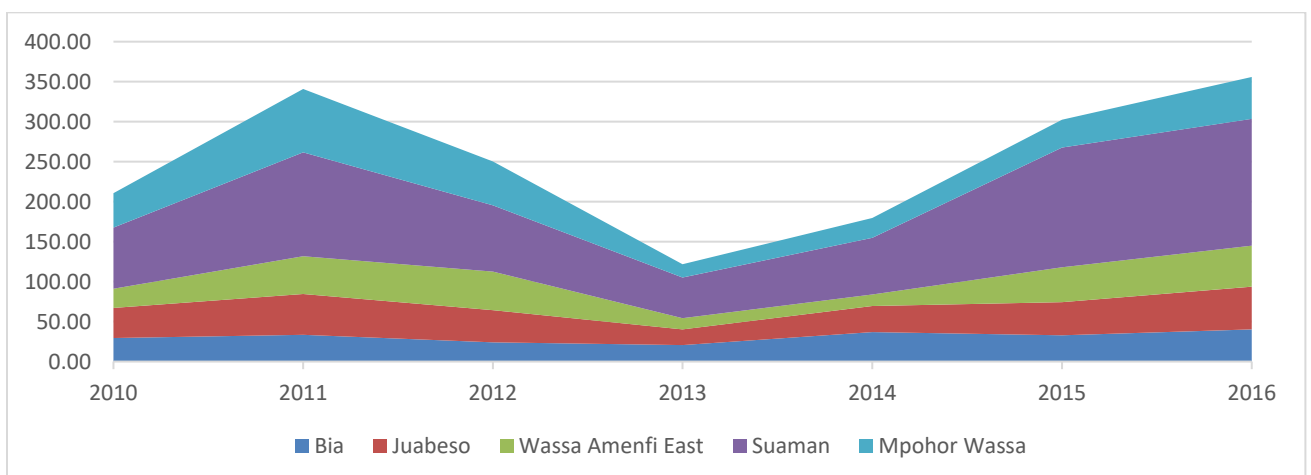
**Figure 6.9: Revenue per capita of fragmented MMDAs in Western region, Ghana- (per capita cedi)**



Source: Data from MLGRD.

The expenditure per capita across all the districts moved towards their 2011 levels in 2016. Suaman District reduced its expenditure in line with the government’s fragmentation policy and increased it to the 2011 level by 2016. Similarly, all of the other districts increased their expenditures after three years as shown in Figure 6.10.

**Figure 6.10: Expenditure per capita of fragmented MMDAs in Western Region, Ghana- (Per Capita Cedi)**



Source: Data from MLGRD.

As shown in Table 6.13, almost all districts had fiscal deficits in 2016. This indicates that expenditure had been increasing faster than revenues in the fragmented districts. Compared to

2016, the districts that had fiscal deficits in 2012 continued to have fiscal deficits in 2016, but of varied degrees. Examples were Bia, Juabeso, Wassa Amenfi East and Suaman districts.

**Table 6.13: Fiscal situation of fragmented MMDAs in Western region, Ghana (per capita cedi), unless otherwise stated**

| <b>Revenue per capita</b>        |       |        |        |       |       |        |        |
|----------------------------------|-------|--------|--------|-------|-------|--------|--------|
|                                  | 2010  | 2011   | 2012   | 2013  | 2014  | 2015   | 2016   |
| Bia district                     | 35.42 | 30.33  | 22.80  | 22.66 | 38.00 | 36.14  | 35.31  |
| Juabeso district                 | 47.66 | 34.63  | 39.65  | 18.72 | 34.03 | 47.04  | 45.62  |
| Wassa Amenfi East district       | 30.55 | 35.29  | 28.83  | 11.28 | 19.00 | 42.91  | 48.22  |
| Suaman district                  | 72.97 | 128.71 | 73.78  | 52.38 | 71.02 | 169.27 | 139.17 |
| Mpohor Wassa district            | 48.73 | 62.58  | 55.26  | 31.34 | 46.63 | 75.78  | 80.51  |
| <b>Expenditure per capita</b>    |       |        |        |       |       |        |        |
|                                  | 2010  | 2011   | 2012   | 2013  | 2014  | 2015   | 2016   |
| Bia district                     | 29.52 | 33.52  | 24.05  | 20.62 | 36.79 | 32.92  | 40.18  |
| Juabeso district                 | 37.48 | 51.01  | 40.15  | 19.55 | 32.69 | 41.33  | 53.44  |
| Wassa Amenfi East district       | 24.00 | 47.23  | 48.26  | 14.09 | 14.45 | 43.62  | 51.29  |
| Suaman district                  | 76.44 | 129.77 | 82.87  | 50.82 | 70.70 | 149.76 | 158.59 |
| Mpohor Wassa district            | 43.20 | 79.40  | 54.81  | 16.64 | 24.93 | 34.82  | 52.33  |
| <b>Budget balance per capita</b> |       |        |        |       |       |        |        |
|                                  | 2010  | 2011   | 2012   | 2013  | 2014  | 2015   | 2016   |
| Bia district                     | 5.90  | -3.20  | -1.25  | 2.05  | 1.21  | 3.22   | -4.87  |
| Juabeso district                 | 10.18 | -16.38 | -0.50  | -0.83 | 1.34  | 5.71   | -7.82  |
| Wassa Amenfi East district       | 6.55  | -11.94 | -19.43 | -2.81 | 4.55  | -0.71  | -3.07  |
| Suaman district                  | -3.47 | -1.06  | -9.08  | 1.56  | 0.32  | 19.51  | -19.42 |
| Mpohor Wassa district            | 5.52  | -16.81 | 0.45   | 14.71 | 21.69 | 40.96  | 28.18  |

Source: Data from MLGRD and GSS.

In conclusion, fragmentation of districts in the Western region resulted in a temporary decline in both revenues and expenditures in per capita terms. It took about two to four years for districts to get back to their 2011 fiscal positions. On balance, there is evidence that fragmentation of districts in Western region negatively affected the per capita fiscal situations in the district assemblies in the Western region.

#### 6.4 Revenue performance of fragmented MMDAs in 2016

The thesis sought to answer the specific question:

- Question 3a: to what extent does fragmentation of assemblies impact on own source revenue in Ghana?

In the sections above, the impact of 2013 fragmentation was discussed for various regions. Next, econometric techniques are used in order to directly tackle each of the specific questions, using district level data. I first respond to the question, “What is the impact of fragmentation on own revenue in Ghana?”

As noted in Chapter 4, I construct a measure of fragmentation. This is a binary variable with a score of 1 if the assembly was altered or created in 2013 due to the government’s fragmentation policy, otherwise the variable takes the score 0. Second, I construct a variable to measure the age of assemblies between 1988 and 2016. The variable is called “age of assemblies”. It allots numerical number 1 for any assembly that existed in 1988, and thereafter starts counting the age of the assembly until it is fragmented again. As soon as it is fragmented, the new assemblies formed start counting the age from 1 whilst the mother assemblies’ ages are kept constant. This means that assemblies that have never been fragmented will assume the number of years between 1988 and 2016, while those created in 2013 will be only four years old by the end of 2016. Assemblies with larger ages are either not fragmented or not often fragmented.

Next, I construct three sets of binary dummies variables for each metropolitan, municipal and district assembly which take the score of 1 for each type of assembly and 0 otherwise. That is, a binary dummy for metro has a score of 1 if the assembly was a metropolitan between 2013 and 2016 and otherwise. Similarly, the municipal dummy has a score of 1 if the assembly was a municipal between 2013 and 2016, and 0 otherwise. Lastly, I construct a district dummy which has a score of 1 if the assembly was a district between 2013 and 2016, and 0 otherwise.

Finally, I construct a variable called administration cost. This variable is calculated as the sum of general expenses, staff salaries, cost of travels and transportation, and cost of repairs and renewables of the assembly. It excludes miscellaneous expenses of assemblies which sometimes include unclassified capital expenses of MMDAs. As noted in Chapter 4, the research hypothesis

is: H<sub>1</sub>: On average, fragmentation of MMDAs negatively impacts on own revenues of MMDAs in Ghana.

#### 6.4.1 Descriptive statistics of Model 3a

As noted earlier, there were 216 assemblies in Ghana between 2013 and 2016. However, in order to capture the full impact of the fragmentation, I aggregate the fragmented assemblies to their 2010 grouping before the 2013 fragmentation. This construct provides 170 assemblies and aggregates the full impact of the 2013 fragmentation. The 170 assemblies (n) gives 1190 observations (N) over the seven-year period (T=2010-2016).

It is observed that within assembly, variation of the dependent variable “own revenue” is smaller (0.45) than the between assembly variation (1.03). However, the within and between variations of the fragmentation of assemblies’ dummy were similar at 0.25 and 0.26 respectively. The within variation within districts was smaller at 1.92 for the age of assemblies between 1988 and 2016, compared to the between assemblies variation of 9.46. The variation within assemblies for the consumer price index is larger at 157.4 compared to the between assemblies variation of 47.4. Also, the variation of the between variation for the administrative expenditure is lower at 0.78 compared to the within variation of 0.86. These descriptions of the variables are shown in Table 6.14.

**Table 6.14: Descriptive statistics for Model 3a, with own revenue as a dependent variable in Ghana cedi, unless otherwise stated**

| Variable                                |         | Mean   | Std. Dev. | Observations |
|---|---------|--------|-----------|--------------|
| Log of own revenue                      | Overall | 12.84  | 1.12      | N = 1189     |
|   | Between |        | 1.03      | n = 170      |
|   | Within  |        | 0.45      | T = 7        |
| Log of population size                  | Overall | 11.67  | 0.55      | N = 1190     |
|   | Between |        | 0.52      | n = 170      |
|   | Within  |        | 0.17      | T = 7        |
| Log of capital expenditure              | Overall | 14.50  | 0.83      | N = 1164     |
|   | Between |        | 0.51      | n = 170      |
|   | Within  |        | 0.66      | T = 7        |
| Age of assemblies between 1988 and 2016 | Overall | 13.89  | 9.63      | N = 1189     |
|   | Between |        | 9.46      | n = 170      |
|   | Within  |        | 1.92      | T = 7        |
| Fragmentation of assemblies' dummy      | Overall | 0.15   | 0.36      | N = 1190     |
|   | Between |        | 0.25      | n = 170      |
|   | Within  |        | 0.26      | T = 7        |
| Grants per capita                       | Overall | 34.02  | 27.70     | N = 1190     |
|   | Between |        | 16.16     | n = 170      |
|   | Within  |        | 22.53     | T = 7        |
| Consumer price index                    | Overall | 302.30 | 164.37    | N = 1190     |
|   | Between |        | 47.40     | n = 170      |
|   | Within  |        | 157.43    | T = 7        |
| Log of administrative expenditure       | Overall | 13.80  | 1.16      | N = 1186     |
|   | Between |        | 0.78      | n = 170      |
|   | Within  |        | 0.86      | T = 7        |

Source: Data from MLGRD and GSS. Note: N is the total number of observations, n is the number of districts and T is the number of years.

#### 6.4.2 Results of the fixed effects estimation of the 3 Models

The results of the fixed effects estimator show that the coefficient of fragmentation of assemblies' dummy variable is negative and significant at 10 percent level. The results show that a one-time fragmentation of assemblies in Ghana, will on average reduce the own revenue by 10.6 percent (Table 6.15). The variable "age of assemblies between 1988 and 2016" of fragmentation was not significant. The log of capital expenditure was significant at 5 percent level indicating that a 1 percent increase in capital expenditure could lead to 0.036 percent increase in the own revenue collection (Table 6.15).

**Table 6.15: Results of Fixed Effects estimator for Model 3a, with log of own revenue as a dependent variable**

| Variables                               | Coef.     | Standard Error | T- statistics | P>t    |
|---|-----------|----------------|---------------|--------|
| Log of population size                  | 0.3147    | 0.0814         | 3.8700        | 0.0000 |
| Log of capital expenditure              | 0.0361    | 0.0161         | 2.2500        | 0.0250 |
| Age of Assemblies between 1988 and 2016 | -0.0020   | 0.0174         | -0.1100       | 0.9090 |
| Fragmentation of assemblies' dummy      | -0.1063   | 0.0555         | -1.9100       | 0.0560 |
| Grants per capita                       | -0.0007   | 0.0005         | -1.5100       | 0.1310 |
| Consumer price index                    | 0.0003    | 0.0001         | 5.2300        | 0.0000 |
| Log of administrative expenditure       | 0.0900    | 0.0180         | 5.0000        | 0.0000 |
| Year                                    | 0.1344    | 0.0191         | 7.0500        | 0.0000 |
| Constant                                | -263.1815 | 38.0240        | -6.9200       | 0.0000 |
| Number of observations                  | 1163      |                |               |        |
| Number of groups                        | 170       |                |               |        |

Source: Data from MLGRD and GSS.

I estimate the model using the Random effects estimator in order to compare the results.

#### 6.4.3 Results of the random effects estimation of the Model 3a

The Hausman test for fixed versus random effects estimations was not significant (Prob>chi2 = 0.9984). It indicates that the random effects model is preferable. The fragmentation of assemblies' dummy was significant but at 1 percent level in the Random effects model, indicating that fragmentation could result in 22 percent reduction own revenue collection. On the other hand, the age of assemblies was not significant at 20 percent. Grants per capita was significant at 10 percent, indicating that a unit increase could lead to 0.09 percent reduction in own revenues. The results of all other variables were significant at 1 percent as shown in Table 6.16.

**Table 6.16: Results of random effects estimator for Model 3a, with own source revenue (in logs) as a dependent variable**

| Variables                                    | Coef.     | Standard Error | Z-statistics | P>t                |
|--|-----------|----------------|--------------|--------------------|
| Log of population                            | 0.6740    | 0.0657         | 10.2500      | 0.0000             |
| Log of capital expenditure                   | 0.0514    | 0.0169         | 3.0500       | 0.0020             |
| Age of Assemblies between 1988 and 2016      | -0.0063   | 0.0050         | -1.2500      | 0.2100             |
| Fragmentation of assemblies' dummy           | -0.2201   | 0.0521         | -4.2200      | 0.0000             |
| Grants per capita                            | -0.0009   | 0.0005         | -1.8400      | 0.0660             |
| Consumer price index                         | 0.0003    | 0.0001         | 4.4900       | 0.0000             |
| Log of administrative expenditure            | 0.1389    | 0.0187         | 7.4500       | 0.0000             |
| Year   | 0.1123    | 0.0103         | 10.8600      | 0.0000             |
| Constant                                     | -223.6008 | 20.6191        | -10.8400     | 0.0000             |
| Number of observations                       | 1163      |                |              |                    |
| Hausman test for fixed versus random effects |           |                |              | Prob>chi2 = 0.9984 |
| Number of observations                       | 1,163     |                |              |                    |
| Number of groups                             | 170       |                |              |                    |

Source: Data from MLGRD and GSS.

#### 6.4.4 Final results of Model 3a

The results for the coefficient of the Fragmentation of assemblies' dummy is negative and significant at 1 percent in the Random Effects Model (Table 6.16). A one-time fragmentation of assemblies in Ghana will on average lead to 22 percent reduction in the own revenue collection.<sup>62</sup> It can therefore be concluded that fragmentation of assemblies has on aggregate a negative short-term impact on own revenue collection of assemblies in Ghana. The finding is consistent with the thinking that fragmentation could hamper service delivery and reduce the per capita revenues available for executing program assigned to subnational governments (Eberts and Gronberg, 1990:165, World Bank, 2015:32). Fragmentation divides the human resources available to assemblies and could reduce the capacity of both old and newly created assemblies to collect its revenues. Similarly, in localities where the economic activities and large tax payers are not evenly distributed, fragmentation could disadvantage some assemblies while

<sup>62</sup> Eberts and Gronberg (1990:165) found that in urban public sector, increased jurisdictional fragmentation negatively related to the ratio of own source revenues to suburban income.

others benefit. Meanwhile, creating of new assemblies causes the government to incur new administrative overhead which if financed by local revenues or intergovernmental transfers could reduce the resources available for service delivery.

Other authors argue that the transmission mechanism of the negative impact of increased fragmentation is observed through a reduction in the number of people living rural areas, whereas in municipalities, it reduces the per capita GDP growth (Bartolini, 2015:2). Fragmentation could also make some assemblies become too small to be economically viable, suffer from the lack of economies of scale which could increase the cost of providing public goods, and in some cases, the economic convening power of assemblies may reduce. If the institutional and administrative capacities of assemblies are lost due to fragmentation, they are likely to be less motivated go after all the taxes assigned to them (Work, 2002:8; Neyapti, 2003:5-7).

The coefficient of the variable measuring assembly age on own revenue collection was not significant at 20 percent, although negative. This is evidence that the age of an assembly does not significantly determine the amount of own revenue it can collect in Ghana in the long run.

The result for the coefficient of the capital expenditure was positive and significant at 1 percent. It shows that a one percent increase in relevant subnational capital expenditure could lead to 0.05 percent increase in own revenue collection of assemblies in Ghana. This implies that as government invests in the construction of roads and the provision of capital goods, it aids the collection of revenues of assemblies in Ghana. It can thus be concluded that capital expenditure at the local level is supportive of own revenue collection in Ghana. The above results are similar to those obtained in Mogues and Benin (2012:1064) that found capital expenditure to have a



weak positive effect on own revenue growth in Ghana between 1994 and 2004<sup>63</sup>. Beyond 2008, the funding of capital spending changed in Ghana when government increased intergovernmental transfers by raising the allocation of the DACF from 5 percent to 7.5 percent of tax revenue and supported the introduction of performance-based grants to assemblies through the Urban Development Grant and District Development Facility (discussed in Chapter 3).

The coefficient of administrative expenditure was positive and significant at 1 percent. It shows that a 1 percent increase in administrative expenditure could result in a 0.14 percent increase in own revenues. This suggests that proper incentive systems, remuneration of staff and provision of logistics are likely to increase own revenue collection in Ghana. The results for Ghana are consistent with Jia, Guo and Zhang (2014:111), who also found administrative expenditure to have a positive relationship with local revenues. It can thus be concluded that administrative expenditures are supportive of own revenue collection at the level of assemblies in Ghana.

Grants per capita was significant at a 10 percent level, but had a small negative coefficient indicating that increases in central government transfers tends to reduce collection of own revenue in assemblies. That is, a unit increase in the grants per capita reduces own revenues by 0.09 percent. It also suggests that some substitution is taking place between grants and own revenue, rather than the transfers becoming complementary to revenue efforts at the local level. It is important to note that this is an aggregate impact of all MMDAs. It is possible that the impact will be different among different types of assemblies. The results are similar to those of Mogues and Benin (2012:1062), that found past intergovernmental transfers to be significantly and negatively associated with own-source revenues of assemblies in Ghana between 1994 and

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<sup>63</sup> Note that while Mogues and Benin (2012) uses data for 110 districts from 1994 to 2004, this thesis uses a panel data covering 170 districts from 2005 to 2016 (regional analysis) and from 2010 to 2016 for assembly level analysis. Thus, it is possible to have divergent results due to the different samples.

2004. It further observed that higher levels or adjustments of external grants to local governments could not spur growth of own-source revenues in Ghana.

Finally, population was significant and had a positive coefficient, which indicates that higher population improves own revenue collection. That is, assemblies with higher populations tend to collect more revenues than those with lower population. The results support the negative relationship observed between the fragmentation variable and own revenue collection. When government splits assemblies, they become smaller and the immediate impact is a lower revenue collection. The positive results are consistent with the empirical literature. It is noted that population is an important variable when discussing fragmentation of subnational governments. Population density is used as one of the instruments for the endogenous variable (subnational share of GDP) by Bahl and Cyan (2011:276). In other cases, population size is included as variable to estimate the models (Panizza, 1999:99; Bahl and Martinez-Vazquez, 2007:18; Jia, Guo and Zhang, 2014:111). Grossman, Pierskalla and Dean (2016:15) also argued that population size is an important variable when discussing fragmentation. It was used as one of the control variables in Model 3a and 3b. Assemblies with a higher working population are expected to collect more subnational revenues. I provide further analysis by introducing interaction variables in Section 6.5.

From the results in Model 3a, I conclude that fragmentation of assemblies tends to have a negative impact on own revenue collection in Ghana, but this negative impact is only in the short term. The age of assemblies does not significantly influence the own revenues which they collect. As government spends more on capital and administration of local government, assemblies could increase their collection of their own revenue. However, transfers from the central government tend to replace own revenue collection of assemblies in Ghana, rather than complement the revenue effort of assemblies.

## 6.5 Further test using fixed and random effects models with interaction variables for different MMDAs.

The interaction variables are defined for each type of assembly. These are metropolitan assemblies (“Metrofrag”), municipal assemblies variable (“Munifrag”) and for district assemblies variable (“Distfrag”).

As noted in Chapter 4, I define an interaction variable (Metrofrag) for the metropolitan assemblies as the product of the fragmentation of assemblies’ dummy and a dummy for metropolitans. The dummy for metropolitan assemblies is a binary variable which takes a value of 1 if the assembly is a metropolitan in Ghana, or 0, otherwise. Furthermore, I include interaction variable “Metrofrag” in a fully specified random effects model with metropolitan, municipal and district dummies.

Similarly, I define an interaction variable (Munifrag) for municipal assemblies as the product of the fragmentation of assemblies’ dummy and a dummy for municipals. The dummy for municipal assemblies is a binary variable which takes a value of 1 if the assembly was a municipal in Ghana after 2012, or 0, otherwise. Then I define an interactive variable (Distfrag) for the district assemblies as the product of the fragmentation of assemblies’ dummy and a dummy for districts. The dummy for district assemblies is a binary variable which takes a value of 1 if the assembly was a district in Ghana after 2012, or 0, otherwise. I re-estimate a fully specified random effects model with interaction variables for “Munifrag” and “Distfrag”, all dummies for all assemblies.

### 6.5.1 Results of Model 3a with metropolitan interactive variable (variable of interest) and own revenue (dependent variable)

The metropolitan interactive variable is “metropolitan fragmentation” in Table 6.17. Out of six metropolitan assemblies in Ghana, three of them were fragmented in 2012/2013. These were in Accra, Tema and Tamale. The results after re-estimating Model 3a are presented in Table 6.17. The model still used own source revenue of metropolitan assemblies as the dependent

variable. The results show that the metropolitan fragmentation variable is significant and positive. Here again, the age of assemblies continues to be insignificant, while the coefficient of grants per capita is significantly negative.

**Table 6.17: Results of fixed and random effects Model 3a with metropolitan interactive variable, and own revenue as a dependent variable**

| Variable                                | Random effects estimation |                |           | Fixed effects estimation |                  |                    |
|---|---------------------------|----------------|-----------|--------------------------|------------------|--------------------|
|   | Coef.                     | Standard Error | P>t       | Coef.                    | Standard Error   | P>t                |
| Log of population                       | 0.4805                    | 0.0670         | 0.0000    | 0.3213                   | 0.0815           | 0.0000             |
| Log of capital expenditure              | 0.0450                    | 0.0163         | 0.0060    | 0.0352                   | 0.0161           | 0.0290             |
| Age of assemblies between 1988 and 2016 | -0.0095                   | 0.0047         | 0.0410    | -0.0014                  | 0.0174           | 0.9370             |
| Fragmentation of assemblies' dummy      | -0.1829                   | 0.0514         | 0.0000    | -0.1250                  | 0.0565           | 0.0270             |
| Metropolitan fragmentation              | 0.4168                    | 0.1832         | 0.0230    | 0.3067                   | 0.1818           | 0.0920             |
| Grants per capita                       | -0.0010                   | 0.0005         | 0.0480    | -0.0007                  | 0.0005           | 0.1250             |
| Consumer price index                    | 0.0003                    | 0.0001         | 0.0000    | 0.0004                   | 0.0001           | 0.0000             |
| Log of administrative expenditure       | 0.1220                    | 0.0181         | 0.0000    | 0.0903                   | 0.0180           | 0.0000             |
| Year                                    | 0.1265                    | 0.0100         | 0.0000    | 0.1337                   | 0.0190           | 0.0000             |
| Metro dummy                             | 1.8011                    | 0.2625         | 0.0000    | (omitted)                | (omitted)        | (omitted)          |
| Municipal dummy                         | 0.8145                    | 0.0945         | 0.0000    | 0.4715                   | 0.3561           | 0.1860             |
| District dummy                          | (omitted)                 | (omitted)      | (omitted) | (omitted)                | (omitted)        | (omitted)          |
| Constant                                | -                         | 19.9553        | 0.0000    | -261.9489                | 38.0055          | 0                  |
|   | 249.9038                  |                |           |                          |                  |                    |
| Number of observations                  | 1,163                     |                |           | 1,163                    |                  |                    |
| Hausman test                            |                           |                |           |                          | chi2(9) = 807.48 | Prob>chi2 = 0.0000 |

Source: Data from MLGRD and GSS. Note: district dummy omitted to avoid dummy variable trap.

From Table 6.17, the Hausman test indicated that the fixed effects estimation is preferred. The main variable of interest in this estimation is the interaction variable for metropolitans. It is observed that relative to the non-metropolitan areas, the coefficient is significant at 10 percent level. It shows that a unit change (fragmentation of metropolitan assemblies relative to non-

metropolitans) ‘causes’ a net effect of 30.67 percent and an overall effect of 18.17 percent<sup>64</sup> increase in own source revenues, all other variables in the regression being held constant. One could also observe that the fragmentation of assemblies’ dummy is in itself significantly negative in the estimations.

Here again, the coefficient of grants per capita was negative, indicating that a unit increase in this variable could potentially reduce the revenue collection in metros. Population remains significant in Model 3a with metropolitan interactive variable (Table 6.17), confirming my initial argument that there are other population related factors that may influence how much taxes people pay to subnational governments, such as their level of education, types of industries they work in, their wealth and skills. I conclude that fragmentation of metropolitan assemblies in Ghana positively affects their own revenue collection.

#### 6.5.2 Results of Model 3a with municipal and district interactions variable and own revenue (dependent variable)

The municipal interactive variable is “municipal fragmentation”. As shown in Table 6.18 the municipal fragmentation variable is only significant at 20 percent<sup>65</sup> and the coefficient negative. This weak significance may imply that there are some municipalities whose own revenue is negatively affected by fragmentation, but there are others whose own revenue continues to increase after fragmentation.

The results of the Hausman test shown in Table 6.18 indicates that the fixed effects estimation is preferable, given that  $\text{Prob} > \chi^2 = 0.0000$ . From the fixed effects estimation, the coefficients of the interaction variable for municipal fragmentation is negative but weakly significant only at 20 percent.

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<sup>64</sup> Calculated as the sum of coefficients of fragmentation of assemblies’ dummy and metropolitan fragmentation multiplied by 100. That is  $(-0.1250 + 0.3067) * 100 = 18.17$

<sup>65</sup> Normally, the level of significance is accepted up to 10 percent when the sample size is large. At 20 percent significance level it is either insignificant or weakly significant for a small size.

**Table 6.18: Results of random effects Model 3a with municipal interactive variable and own revenue as a dependent variable**

| Variable                                | Random effects estimation |                |        | Fixed effects estimation |                    |           |
|---|---------------------------|----------------|--------|--------------------------|--------------------|-----------|
|   | Coef.                     | Standard Error | P>t    | Coef.                    | Standard Error     | P>t       |
| Log of population                       | 0.4455                    | 0.0684         | 0.0000 | 0.3150                   | 0.0822             | 0.0000    |
| Log of capital expenditure              | 0.0421                    | 0.0163         | 0.0100 | 0.0353                   | 0.0161             | 0.0280    |
| Age of assemblies between 1988 and 2016 | -0.0085                   | 0.0047         | 0.0700 | -0.0006                  | 0.0174             | 0.9750    |
| Fragmentation of assemblies' dummy      | 0.2128                    | 0.1813         | 0.2410 | 0.1837                   | 0.1801             | 0.3080    |
| Municipal fragmentation                 | -0.3747                   | 0.1913         | 0.0500 | -0.2735                  | 0.1902             | 0.1510    |
| District fragmentation                  | -0.3835                   | 0.1852         | 0.0380 | -0.3223                  | 0.1837             | 0.0800    |
| Grants per capita                       | -0.0010                   | 0.0005         | 0.0470 | -0.0008                  | 0.0005             | 0.1120    |
| Consumer price index                    | 0.0003                    | 0.0001         | 0.0000 | 0.0004                   | 0.0001             | 0.0000    |
| Log of administrative expenditure       | 0.1205                    | 0.0181         | 0.0000 | 0.0909                   | 0.0180             | 0.0000    |
| Year                                    | 0.1271                    | 0.0100         | 0.0000 | 0.1330                   | 0.0191             | 0.0000    |
| Metro dummy                             | 0.3782                    | 0.5695         | 0.5070 | (omitted)                | (omitted)          | (omitted) |
| Municipal dummy                         | -0.9593                   | 0.6376         | 0.1320 | 0.4519                   | 0.3577             | 0.2070    |
| District dummy                          | -1.7823                   | 0.6338         | 0.0050 | (omitted)                | (omitted)          | (omitted) |
| Constant                                | -                         | 19.9080        | 0.0000 | -                        | 38.0985            | 0.0000    |
|   | 248.9293                  |                |        | 260.4734                 |                    |           |
| Number of observations                  | 1163                      |                |        | 1163                     |                    |           |
| Hausman test                            |                           |                |        |                          | chi2(10) = 671     |           |
|   |                           |                |        |                          | Prob>chi2 = 0.0000 |           |

Source: Data from MLGRD and GSS.

The coefficient of the interaction variable of district assemblies was significant at 10 percent. It shows that relative to metropolitan and municipal assemblies, the net effect of the fragmentation of districts is -32.23 percent while the overall effect is a reduction of 13.86 percent<sup>66</sup> in own source revenues. Also, the net effect for municipal assemblies relative to non-municipal assemblies is -27.35 percent while the overall effect is a reduction of 8.98 percent of own source revenues. I conclude here that fragmentation has a negative short-term impact on own source

<sup>66</sup> Districts net effect is calculated as:  $(0.1837-0.3223)*100 = -13.86$  percent.

revenues of district assemblies. Fragmentation is shown to have no long-run impacts of own revenues.

### 6.5.3 Overarching conclusions for Model 3a after interactive testing

The results of the estimation lead to the conclusion that fragmentation of assemblies tends to have a negative impact on own revenue of assemblies (as shown in Table 6.16). However, the impact varies across different types of assemblies. It is observed that among metropolitan assemblies, fragmentation has a positive impact on own revenue relative to non-metropolitan assemblies. That is, metropolitan fragmentation leads to higher own source revenue collection, partly because they tend to have better systems for revenue collection in Ghana. However, fragmentation of municipal and district assemblies negatively affects own revenue collection. The impact is higher among districts compared to municipal assemblies.

The results of metropolitan fragmentation are consistent with some conventional thinking that fragmentation facilitates effective and efficient service delivery and makes governments more responsive to the needs of their citizens, especially the rural poor (Bardhan, 2002 :185; Wildasin, 1995:5; and Gómez-Reino and Martínez-Vázquez, 2012:20 ). The results for the municipal and district assemblies support the argument that government fragmentation could result in too much competition among local governments, resulting in lower own source revenues (Grassmueck and Shields, 2010: 644). The net effect of fragmentation on own-source revenue in municipal and district assemblies (found above) provide credence to arguments by Bartolini (2015:2) that advocates for a reduction in municipal fragmentation because of its heterogenous impact in a country, one of which is the lowering of per capita GDP and the other is own-source revenue (found in this thesis). This conclusion is applicable to policies affecting fragmentation of municipalities and district assemblies.

The age of assemblies does not significantly impact on the amount of own revenues collected by subnational entities in Ghana, irrespective of the type of assembly. In all estimation models

(Table 6.17 and 6.18), the coefficients of the age of assemblies between 1988 and 2016 were not significant. Thus, the age of assemblies does not significantly impact on the collection of own revenue of assemblies. Intergovernmental transfers were found to have a negative impact on own revenue collection. The results were confirmed in separate models for metropolitans and municipal and district assemblies, where it had significant and negative impact on own revenues in each case.

These results show the net effects of both conditional and unconditional inter-governmental transfers in Ghana, some of which are transferred to subnational governments for efficiency, equalization and equity reasons. Most of the intergovernmental transfers do not require subnational governments to raise matching proportions from their own source revenue. At best, subnational governments that raise more own source revenue benefit from higher performance-based transfer as in the case of the Urban Development Grant and the District Development Facility. Conditional non-matching transfers used to finance capital expenditure or property development at the subnational level have no substitution in the local government budget. Unconditional non-matching grants in Ghana which could be substituted in the local government budget have lesser impact on own source revenue performance, given central government restrictions on the use of the funds (for instance the DACF). The net effect shows more of local government preferences for the use of the intergovernmental transfers rather than the objectives for transferring the funds.

The coefficient of capital expenditure was positive and significant at 1 percent level (Table 6.16). The results of the interaction models 3a confirmed the positive impact at 5 percent level (Table 6.17 and Table 6.18). Similarly, administrative expenditure had positive impact on own revenues (Table 6.16). The sign and significance of the coefficients were similar in all interactive models. Here again, the sign of the coefficient is explained by the net effect of the impact of the provision of capital expenditures rather than the source of the funds for the capital



expenditure. Two budgetary systems run in parallel in Ghana (central government and local government budgets). Capital projects (such as highways, hospitals and higher-level public schools) are mostly funded directly by the central government in Ghana. Similarly, some conditional intergovernmental transfers are earmarked for the provision of capital projects (such as basic schools and feeder roads). In the case of Ghana, the low volume and relative size of subnational own source revenues have traditionally caused subnational governments to channel these funds to administrative expenditures and in some cases for maintenance of capital projects. Given that most own source revenues finance the administrative expenses of subnational governments budgets, there is a possibility of reverse causality (that is, higher own source revenues will imply higher provisioning of capital expenditures in local government budget), though plausible from a theoretical view point, is not likely to be the case in Ghana for the period covered by this thesis.

Finally, based on the analysis and results of the regressions noted above, I accept the research hypothesis that, fragmentation of MMDAs negatively impacts on own source revenues of municipalities and districts in Ghana.

## 6.6 Fragmentation of districts and property rates

Property rates, which are also referred to as property taxes in the literature, could be an important source of revenue to local governments in Ghana. It is currently not the largest contributor to own revenue collection in almost any of the assemblies in Ghana. As noted in Chapter 3, property rates are low due to several constraints that confront subnational governments in designing and effectively collecting this tax. Thereafter, I estimate Model 3b as indicated in Chapter 4 of this thesis. In this model, the dependent variable is property rates revenues of metropolitan, municipal and district assemblies. Questions 3b and 3c are answered in this section.

Two research hypotheses are tested in this section:

- H<sub>5</sub>: Fragmentation of MMDAs negatively impacts property tax collection of MMDAs in Ghana.
- H<sub>6</sub>: Intergovernmental transfers negatively impact property taxes of MMDAs in Ghana.

### 6.6.1 Regression results for hypothesis on fragmentation of districts

The thesis has sought to ascertain the impact of fragmentation on property tax revenues in Ghana. I use a quantitative approach to determine the impact using Stata. As noted in Chapter 4, the estimation is based on the model:

$$\begin{aligned}
 (\text{LPTax})_{it} = & \gamma_0 + \gamma_1 (\text{Lpopn})_{it} + \gamma_2 (\text{LCap})_{it} + \gamma_3 (\text{AgeAA})_{it} + \gamma_4 (\text{Frag})_{it} + \gamma_5 (\text{Tgrantpc})_{it} + \\
 & \gamma_6 (\text{CPI})_{it} + \gamma_7 (\text{Admin})_{it} + \gamma_8 (\text{dyear})_{it} + \eta_{it} \dots\dots\dots \text{Model 3b}
 \end{aligned}$$

Where subscript *it* stands for assemblies *i* (=1,2, ..., 170) and at time *t* (=2010, 2011, ..., 2016).  $\gamma_1, \dots, \gamma_8$  are scalar parameters. LPTax is the log of property taxes by assemblies. Lpopn is the log of population. LCap is the log of capital expenditure at the local level. AgeAA is the age of assemblies between 1988 and 2016. Frag is the fragmentation of assemblies' dummy which takes the value of 1 when the assembly was fragmented and 0, otherwise. Tgrantpc is the total grants received by the assembly in per capita terms. CPI is the consumer price index for housing and utility. Admin is the log of administrative expenditure at the local level. Dyear represents individual year dummies for 2011 to 2016;  $\eta_{it}$  is the error term.

Model 3b is specified slightly differently from Model 3a, because the year in which property taxes are paid is relatively important. Property taxes in Ghana are by law required to be paid annually and thus, modeling the effect of the law should improve the reliability of the results. Thus, I include a dummy for 2011 to 2016 in order to capture the responsiveness of the payment of property taxes to the law.

The estimations use 1,190 observations from 2010 to 2016 (Table 6.19). The dependent variable (log of property taxes) has 1,181 observations because a few assemblies did not report their property tax information during the period. The standard deviations of most of the variables are relatively low except for grants per capita. The variations are mainly because different types of assemblies benefit from different types of grants as explained in Chapter 3 of this thesis. For instance, the Urban Development Grants do not apply to all types of assemblies.

**Table 6.19: Basic descriptive statistics of the variables for Model 3b**

| Variable                                | Observations | Mean    | Std. Dev. | Min     | Max      |
|---|--------------|---------|-----------|---------|----------|
| Year                                    | 1,190        | 2013    | 2         | 2010    | 2016     |
| Log of property taxes                   | 1,181        | 10.5680 | 1.8836    | 1.9459  | 16.3584  |
| Log of population                       | 1,190        | 11.6693 | 0.5496    | 10.2589 | 14.5702  |
| Log of capital expenditure              | 1,164        | 14.5030 | 0.8278    | 8.2353  | 17.4824  |
| Age of Assemblies between 1988 and 2016 | 1,189        | 13.8865 | 9.6291    | 0.0000  | 31.0000  |
| Fragmentation of assemblies' dummy      | 1,190        | 0.1546  | 0.3617    | 0.0000  | 1.0000   |
| Grants per capita                       | 1,190        | 34.0156 | 27.7017   | 0.7329  | 607.3773 |
| Log of consumer price index             | 1,189        | 5.5597  | 0.5633    | 4.6287  | 6.6467   |
| Log of administrative expenditure       | 1,186        | 13.8026 | 1.1551    | 9.4761  | 17.7363  |

Source: Data from MLGRD and GSS.

First, I estimate the fixed and random effects models. The key policy variable continues to be the “fragmentation of assemblies dummy” but the dependent variable is the log of property taxes. The Hausman test was significant indicating that the fixed effects model should be preferred.

From the fixed effects model (Table 6.20), it is observed that the coefficient of the fragmentation of assemblies dummy was negative and significant at 1 percent, indicating that when assemblies are fragmented the property taxes are reduced on the average by 59.24 percent, all other variables in the regression being held constant. In this model, the coefficient of the age

of assemblies is negative and significant at 5 percent level, indicating that a 1-year reduction in the age of assemblies as a result of fragmentation could lead to a 15.88 percent reduction in the property taxes of assemblies (Table 6.20). Fragmentation has both a short- and long-term negative effect on property tax collection.

**Table 6.20: Results fixed and random effects estimation results of Model 3b, with log of property rates as a dependent variable**

| Variables                               | Fixed Effect Estimation                  |                |        | Random Effects Estimation |                |        |
|---|--|----------------|--------|---------------------------|----------------|--------|
|   | Coef.                                    | Standard Error | P>t    | Coef.                     | Standard Error | P>t    |
| Log of population                       | -0.0710                                  | 0.2837         | 0.8020 | 0.9488                    | 0.1628         | 0.0000 |
| Log of capital expenditure              | 0.0714                                   | 0.0589         | 0.2260 | 0.1035                    | 0.0588         | 0.0790 |
| Age of Assemblies between 1988 and 2016 | -0.1588                                  | 0.0621         | 0.0110 | 0.0022                    | 0.0098         | 0.8190 |
| Fragmentation of assemblies' dummy      | -0.5924                                  | 0.2101         | 0.0050 | -0.6797                   | 0.1832         | 0.0000 |
| Grants per capita                       | -0.0013                                  | 0.0017         | 0.4530 | -0.0022                   | 0.0017         | 0.2080 |
| Log of consumer price index             | 0.7469                                   | 0.2319         | 0.0010 | 0.6196                    | 0.2332         | 0.0080 |
| Log of administrative expenditure       | -0.0196                                  | 0.0641         | 0.7600 | 0.2197                    | 0.0609         | 0.0000 |
| Dummy 2011                              | -0.2424                                  | 0.1345         | 0.0720 | -0.3556                   | 0.1336         | 0.0080 |
| Dummy 2012                              | 0.9484                                   | 0.3649         | 0.0090 | 0.4479                    | 0.3601         | 0.2140 |
| Dummy 2013                              | 1.0334                                   | 0.3592         | 0.0040 | 0.1649                    | 0.3253         | 0.6120 |
| Dummy 2014                              | 1.2664                                   | 0.3437         | 0.0000 | 0.1755                    | 0.2647         | 0.5070 |
| Dummy 2015                              | 1.4081                                   | 0.3531         | 0.0000 | 0.1436                    | 0.2105         | 0.4950 |
| Dummy 2016                              | 1.6625                                   | 0.4076         | 0.0000 | 0.1322                    | 0.2130         | 0.5350 |
| Constant                                | 7.9349                                   | 3.5993         | 0.0280 | -8.4495                   | 2.2298         | 0.0000 |
| Number of observations                  | 1156                                     |                |        | 1156                      |                |        |
| Hausman test                            | chi2(13) = 1228.91<br>Prob>chi2 = 0.0000 |                |        |                           |                |        |

Source: Data from MLGRD and GSS.

**Conclusion:** The results from the fixed effects model show that fragmentation (represented by the fragmentation of assemblies' dummy) and the age of assemblies negatively impact property rates in Ghana. Thus, I accept the research hypothesis that fragmentation of MMDAs negatively impacts on property tax collection in Ghana.

Furthermore, the coefficient of grant per capita was not significant in the fixed effects estimation. Therefore, I reject the research hypothesis that, intergovernmental transfers negatively impact on property taxes in Ghana.

**6.6.2 Estimation using different interaction variables for metros, municipals and districts**  
 As noted, the interaction variables are “Metrofrag” for metropolitan assemblies, “Munifrag” for municipal assemblies and “Distfrag” for district assemblies. The “Metrofrag” is included in a fully specified Model 3b with dummies for metros, municipals and districts. In addition, I present the results for fixed and random effects estimations, and the results of the Hausman test. The results of the Hausman test point to the fixed effects model as preferable (as shown in Table 6.21).

**Table 6.21: Results fixed and random effects estimation results of Model 3b with interaction variable for metropolitan assemblies, with log of property rates as a dependent variable**

| Variables                               | Fixed effect estimation |                |           | Random effects estimation |                |        |
|---|-------------------------|----------------|-----------|---------------------------|----------------|--------|
|   | Coef.                   | Standard Error | P>t       | Coef.                     | Standard Error | P>t    |
| Log of population                       | -0.0185                 | 0.2845         | 0.9480    | 0.4941                    | 0.1756         | 0.0050 |
| Log of capital expenditure              | 0.0648                  | 0.0590         | 0.2720    | 0.0783                    | 0.0578         | 0.1750 |
| Age of Assemblies between 1988 and 2016 | -0.1586                 | 0.0622         | 0.0110    | -0.0004                   | 0.0093         | 0.9670 |
| Fragmentation of assemblies’ dummy      | -0.6049                 | 0.2114         | 0.0040    | -0.5760                   | 0.1792         | 0.0010 |
| Metropolitan fragmentation interaction  | 1.2839                  | 0.6305         | 0.0420    | 1.5199                    | 0.6002         | 0.0110 |
| Grants per capita                       | -0.0013                 | 0.0017         | 0.4590    | -0.0024                   | 0.0017         | 0.1630 |
| Log of consumer price index             | 0.0013                  | 0.0005         | 0.0120    | 0.0012                    | 0.0005         | 0.0210 |
| Log of administrative expenditure       | -0.0158                 | 0.0642         | 0.8050    | 0.1392                    | 0.0604         | 0.0210 |
| Dummy 2011                              | -0.2420                 | 0.1353         | 0.0740    | -0.3509                   | 0.1312         | 0.0070 |
| Dummy 2012                              | 0.3430                  | 0.2420         | 0.1570    | 0.0252                    | 0.2280         | 0.9120 |
| Dummy 2013                              | 0.5782                  | 0.2891         | 0.0460    | -0.0601                   | 0.2406         | 0.8030 |
| Dummy 2014                              | 0.9888                  | 0.3173         | 0.0020    | 0.1435                    | 0.2262         | 0.5260 |
| Dummy 2015                              | 1.2639                  | 0.3471         | 0.0000    | 0.2453                    | 0.1980         | 0.2150 |
| Dummy 2016                              | 1.5526                  | 0.4050         | 0.0000    | 0.3084                    | 0.2059         | 0.1340 |
| Metro dummy                             | (omitted)               | (omitted)      | (omitted) | 0.2398                    | 1.0452         | 0.8190 |
| Municipal dummy                         | 1.2384                  | 1.2368         | 0.3170    | -0.7918                   | 1.1897         | 0.5060 |
| District dummy                          | (omitted)               | (omitted)      | (omitted) | -2.2056                   | 1.1885         | 0.0630 |

|                        |   |        |        |        |        |        |
|------------------------|---|--------|--------|--------|--------|--------|
| Constant               | 10.9605   | 3.4191 | 0.0010 | 3.1934 | 2.6027 | 0.2200 |
| Number of observations | 1,156   |        |        | 1156   |        |        |
| Hausman test           | $\text{chi2}(14) = 53.86$<br>$\text{Prob} > \text{chi2} = 0.0000$ |        |        |        |        |        |

Source: Data from MLGRD and GSS.

The coefficient of metro fragmentation was positive and significant at 5 percent which indicates that fragmentation of metropolitan assemblies could improve property rates collection. The results show that relative to non-metropolitan assemblies, fragmentation of metropolitans in Ghana leads to a net effect of 128.39 percent and an overall effect of 67.90 percent increase in property taxes (calculated as  $(-0.6049 + 1.2839) * 100$ ). The coefficient for the grants per capita was not significant in the fixed effects estimation with the introduction of the metro fragmentation variable which confirms the earlier results.

### 6.6.3 Results of Model 3b with interaction variables of municipal and district assemblies

The results in Table 6.22 show the fixed and random effects estimation with interaction variable for “municipal fragmentation” and “district fragmentation”. The Hausman test was significant pointing to the fixed effects estimation as the preferred results. The results show that the municipal fragmentation variable is negative but not significant. However, the coefficient of the district fragmentation variable is negative and significant at 5 percent, indicating that fragmentation leads to an overall reduction in the property taxes collected by 79.38 percent (calculated as  $((0.7100 - 1.5038) * 100)$  in districts. As a robustness test of the impact of these models are re-estimates for restricted data for only municipals and only districts.

**Table 6.22: Results of fixed and random effects estimations using an interaction variable for municipal and district assemblies, and with property rates as a dependent variable**

| Variables                               | Fixed Effect Estimation               |                |           | Random Effects Estimation |                |        |
|---|---------------------------------------|----------------|-----------|---------------------------|----------------|--------|
|   | Coef.                                 | Standard Error | P>t       | Coef.                     | Standard Error | P>t    |
| Log of population                       | -0.1082                               | 0.2863         | 0.7050    | 0.4419                    | 0.1765         | 0.0120 |
| Log of capital expenditure              | 0.0641                                | 0.0589         | 0.2760    | 0.0797                    | 0.0577         | 0.1670 |
| Age of Assemblies between 1988 and 2016 | -0.1454                               | 0.0623         | 0.0200    | 0.0002                    | 0.0092         | 0.9850 |
| Fragmentation of assemblies' dummy      | 0.7100                                | 0.6295         | 0.2600    | 0.9580                    | 0.6007         | 0.1110 |
| Municipal Fragmentation interaction     | -0.8188                               | 0.6578         | 0.2130    | -1.0829                   | 0.6243         | 0.0830 |
| District Fragmentation interaction      | -1.5038                               | 0.6355         | 0.0180    | -1.7391                   | 0.6053         | 0.0040 |
| Grants per capita                       | -0.0017                               | 0.0017         | 0.3120    | -0.0028                   | 0.0017         | 0.0990 |
| Log of consumer price index             | 0.0014                                | 0.0005         | 0.0110    | 0.0012                    | 0.0005         | 0.0180 |
| Log of administrative expenditure       | -0.0060                               | 0.0641         | 0.9260    | 0.1525                    | 0.0605         | 0.0120 |
| Dummy 2011                              | -0.2513                               | 0.1350         | 0.0630    | -0.3536                   | 0.1309         | 0.0070 |
| Dummy 2012                              | 0.3345                                | 0.2414         | 0.1660    | 0.0298                    | 0.2275         | 0.8960 |
| Dummy 2013                              | 0.5485                                | 0.2886         | 0.0580    | -0.0632                   | 0.2401         | 0.7920 |
| Dummy 2014                              | 0.9459                                | 0.3170         | 0.0030    | 0.1373                    | 0.2257         | 0.5430 |
| Dummy 2015                              | 1.2114                                | 0.3469         | 0.0010    | 0.2402                    | 0.1975         | 0.2240 |
| Dummy 2016                              | 1.4869                                | 0.4049         | 0.0000    | 0.2998                    | 0.2055         | 0.1450 |
| Metro dummy                             | (omitted)                             | (omitted)      | (omitted) | 0.1989                    | 1.0425         | 0.8490 |
| Municipal dummy                         | 0.9624                                | 1.2390         | 0.4380    | -0.9583                   | 1.1884         | 0.4200 |
| District dummy                          | (omitted)                             | (omitted)      | (omitted) | -2.2670                   | 1.1856         | 0.0560 |
| Constant                                | 11.8126                               | 3.4288         | 0.0010    | 3.6925                    | 2.6041         | 0.1560 |
| Number of observations                  | 1156                                  |                |           | 1156                      |                |        |
| Hausman test                            | chi2(9) = 70.87<br>Prob>chi2 = 0.0000 |                |           |                           |                |        |

Source: Data from MLGRD and GSS.

**Conclusion:** I conclude from the main and interaction estimations that fragmentation has a negative impact on property rates in Ghana. However, the impact varies among the different types of assemblies. Among metropolitan assemblies, fragmentation has a positive impact of property rates revenue. On the other hand, fragmentation has a negative impact on district assemblies, but it does not seem to have any effect on municipal property tax collection.

The age of assemblies negatively impacts the property taxes overall. The coefficients of the age of assemblies remained negative for regressions with interactive variables for metropolitan and municipal and district assemblies. Also, the coefficient of grants per capita was negative and not significant overall. In all regressions (Table 6.20, Table 6.21 and Table 6.22), it had no impact on property taxes.

## 6.7 Main conclusions

In this chapter, I established that fragmentation of jurisdictions and intergovernmental transfers in Ghana are supported by the 1992 Constitution of Ghana and the Local Governance Act, 2016. These legal provisions allow the Government of Ghana to split regions and assemblies as needed, in order to promote democracy and service delivery. However, while intergovernmental transfers are a main source of revenue for some districts, this does not necessary lead to improved revenue collection.

The following conclusions could be made about MMDAs that existed in the ten regions in Ghana over the period of the assessment.

With regard to the Ashanti Region, I conclude that fragmentation of MMDAs led to mixed results on revenue performance. Municipal assemblies that had higher capacity were able to obtain more revenue in per capita terms. The fragmentation of districts did not result in better revenue performance. In Ashanti Region, fragmentation has different implications for municipal and district assemblies. While municipalities increased their expenditure per capita, district expenditures fell, as observed in the Sekyere Afram Plains District.

In Brong Ahafo Region, I conclude from the results that the immediate impact of fragmentation in 2012 reduced the per capita revenue and expenditure of fragmented districts. However, all the districts managed to increase both revenue and expenditure per capita after two years. In the case of municipals, their per capita revenues and expenditures were higher after fragmentation.



In the Central Region, I conclude that the government needs to exercise restraint when fragmenting assemblies. Fragmentation of municipals and districts led to a persistent decline in revenue performance. Fragmented municipals in the region were not as resilient as those in the other regions, which were able to increase the revenue and expenditure per capita a year after fragmentation.

I conclude that in the Greater Accra Region, the revenues of the fragmented metropolitan assemblies were not adversely impacted by the government decision on fragmentation. The metros tend to be more resilient than the municipal and district assemblies, which experienced a fall in revenues. On balance, the revenues and expenditures per capita of districts were significantly reduced by the fragmentation, contributing to large fiscal deficits in Dangme East District in 2016.

On balance, I conclude that in the Northern Region, fragmentation has a medium-term impact on own revenues which resulted in fiscal deficits by 2016. In Tamale Metropolitan, the own revenue collection fell between 2010 and 2016, while in Yendi Municipality, the revenue and expenditure per capita began to only recover after two years. In most of the districts, fragmentation revenue per capita reverted to the 2010 levels after declining for two years, partly because this region is one of the poorest regions in Ghana that experiences lags in policy implementation.

I conclude that in the Upper East Region, fragmentation led to marginal contraction of revenues and expenditures in Bawku East Municipal. However, in Talensi-Nabdam District, own revenue performance improved after the fragmentation of 2013. On balance, the revenues did not grow as much as the expenditure in per capita terms between 2013 and 2016, leading to fiscal deficits by 2016. The adverse impact of fragmentation was observed in revenues rather than with the expenditures in almost all fragmented assemblies in the region.

In the Upper West Region, I conclude that the impact of fragmentation is mixed. In Nadowli District, the expenditures fell less in 2016 compared to the revenues resulting in a fiscal deficit.

In Lawra, revenue per capita increased to cover the increase in expenditure, resulting in a fiscal surplus. Thus, the fiscal performance of the districts after the fragmentation is mixed.

In the Western Region, fragmentation of districts resulted in a temporary decline in both revenues and expenditures in per capita terms. It took about two to four years for districts to get back to their 2011 fiscal position. On balance, there is evidence that fragmentation of districts in the Western Region negatively affected the fiscal situation in the district assemblies in the region.

Based on the results of the three research hypotheses investigated in this section, I conclude that on average:

- Fragmentation of assemblies has on aggregate a negative short-term impact on own revenue collection of assemblies in Ghana. The interaction between fragmented metropolitans with subnational revenues was positive, leading to the conclusion that own revenues tend not to decline when metropolitans are fragmented. In the case of district assemblies, however, the coefficients of the interaction variables were negative, leading to the conclusion that fragmentation leads to lower own revenue.
  - It was also observed that the capital expenditure encourages the payment of subnational taxes (own revenue). It is concluded that capital expenditure at the subnational level is supportive of subnational own revenue collection in Ghana.
  - The age of assemblies does not significantly impact on the amount of own revenues that get collected at the local level in Ghana. This is true for all categories of assemblies. This means fragmentation have no long-term effects on own revenue collection.
  - Intergovernmental transfers have an aggregate negative impact on own revenue collection. The results were confirmed in models with interaction variables for metropolitan, municipal and district assemblies

- Capital expenditure had a positive impact on own revenue collection. The results of individual interactive models confirmed the positive and significant impact. Similarly, administrative expenditure had aggregate positive impact on own revenues.

Next, I conclude from Model 3b that fragmentation has a negative impact on property taxes in Ghana. Thus, I accept the research hypothesis that, fragmentation of MMDAs negatively impacts property tax collection in Ghana. However, the interaction variable capturing fragmentation for metropolitan indicates a positive impact on property taxes.

The coefficient of grants per capita was negative but not significant overall. It had no significant impact on property taxes in both fixed effects regressions with and without interaction variables. Therefore, I reject the research hypothesis that, intergovernmental transfers have a negative impact on property taxes in Ghana. I conclude that intergovernmental transfers do not have a significant impact on property taxes in MMDAs in Ghana.

The coefficient for the age of assemblies between 1988 and 2016 was negative and significant in all regressions where property tax was a dependent variable. This indicates fragmentation tends to reduce property tax collection by assemblies in the long term, and not just in the short term as in the case of own-source revenues. I conclude that fragmentation has a short- and long-term negative impact on property tax revenue. Thus, when it comes to property tax revenue, the impact of fragmentation should be addressed with both short and a long-term measure.

The chapter has responded to the question “to what extent do district fragmentation and intergovernmental transfers impact own revenue and property tax revenue in assemblies in Ghana?”. The analyses found that fragmentation of MMDAs, except for metropolitan areas, negatively impacts own source revenues and property taxes of MMDAs in Ghana. Also, it rejects the research hypothesis that, intergovernmental transfers negatively impact property taxes in Ghana.

# CHAPTER 7

## CONCLUSIONS AND RECOMMENDATIONS

### 7.1 Conclusions

#### 7.1.1 Introduction

The thesis focused on three main objectives, namely, the implementation of fiscal decentralization in Ghana, assessment of the impact of revenue and expenditure assignments and intergovernmental transfers and evaluation of the impact of the fragmentation policy in Ghana. Three questions were asked and answered in this thesis. Question 1, “how effective is fiscal decentralization in supporting subnational autonomy in Ghana”, was answered using qualitative approach based on portfolio analyses and desk-based literature review. Questions 2, “to what extent do revenue and expenditure assignments as well as intergovernmental transfers impact on regional gross domestic product in Ghana”. Question 3, “to what extent do subnational fragmentation and intergovernmental transfers impact on own-source revenue and more specifically property tax revenue in assemblies in Ghana”. These questions were answered using qualitative and quantitative approaches. The approaches involve regional and assembly level analyses.

The literature on fiscal autonomy indicates that the scope of subnational entities reform must cover political, administrative, and fiscal decentralization. Local governments’ control over the setting of tax base and rates are important factors for raising local revenues to match expenditure. It is evident from the literature that the implementation of fiscal decentralization reforms does not necessarily lead to achieving subnational revenue and expenditure autonomy. The granting of subnational autonomy is a policy decision and it requires deliberate policies embedded in the country’s Constitution or other laws. It does not occur by simply implementing fiscal decentralization reforms. As a result, countries have granted subnational governments different partial autonomy. Granting full autonomy to subnational governments did not come

out in the literature review as a desired policy choice by governments. Rather, subnational governments are increasingly being empowered to either have autonomy over their revenues or expenditure but not both. Furthermore, reforms that promote subnational autonomy encompass other forms of decentralization, especially administrative and political decentralization, and are accompanied by accountability systems or frameworks to ensure proper monitoring of the activities of subnational governments. In the case of reforms aimed at promoting fiscal decentralization, the literature supports transparency in the use of intergovernmental transfers and other subnational revenues to promote accountability and good governance. In some cases, the reporting requirements are embedded in the public finance administration laws.

#### 7.1.2 Expenditure assignment

It can be concluded that Ghana has made significant progress in defining the expenditure assignments of the different tiers of government. The expenditure assignments are the responsibilities allocated to subnational governments by the central government in the country's laws. The Local Governance Act, 2016 adequately consolidates the expenditure assignments and repeals various enactments assigning responsibilities to subnational governments such as the Local Government Act (1993), District Assemblies' Common Fund Act (1993), National Development Planning Commission Act (1994), and Local Government Service Act (2003). The consolidation of laws provides subnational governments a single law with well-defined and coordinated assignments. The Local Governance Act, 2016 provides all auxiliary functions and institutions that assemblies need to coordinate with in order to delivery services, such as Ghana Fire Service, Ghana Police Service, National Disaster Management Organization and Department of Social Welfare and Community Development (Section 114 of the Local Governance Act, 2016).

The introduction of composite budgeting and the establishment of the unit in charge of fiscal decentralization in the Ministry of Finance is supporting operational work on subnational budgeting. The establishment of the Fiscal Decentralization Unit in the Ministry of Finance to

coordinate government policy and reforms was a positive step towards deepening the governing structures for effective policy implementation. The implementation of composite budgeting across the country is a major step toward improving monitoring of local budgets.

Expenditure autonomy of metropolitan, municipal and district assemblies is limited in Ghana, given that MMDAs have limited control over their expenditures. Expenditure autonomy is the extent to which MMDA have authority to make decisions about their priorities and expenditure allocations in their budgets. This conclusion is similar to Mogues and Benin (2012:1064-1065) that finds local governments to have limited fiscal autonomy due to the relative size of their budgets and revenues compared with those of the central government. In Ghana, the central government controls a large proportion of these expenditures because of the low level of own source revenue and the President appoints the head of MMDAs and Ministers for each of the regions. The central government has a strong hold on decisions of MMDAs. The central government pays for capital projects and the salaries of most local government staff and thus determines the extent to which assemblies could deliver services. Expenditure responsibilities devolved to metropolitan, municipal and district assemblies are not executed without interference from the central government and President's appointees at the subnational level. Ghana's new Local Governance Act, 2016 makes use of intergovernmental transfers subject to additional policy directives from the central government. These directives have further limited expenditure autonomy of regions and assemblies.

The current legal framework, budget guidelines and strong dependence of MMDAs limits their ability to independently execute their budgets. It can be concluded that the low revenue collection effort of subnational governments also contributes to the inability of MMDAs in Ghana to gain expenditure autonomy. On average, over 80 percent of MMDA budgets are funded by the administration of the central government. One of the main challenges facing subnational governments in Ghana is the inability of the government to use policy measures to motivate own revenue collection of subnational governments. In a broader sense, over-reliance

on intergovernmental fiscal transfers has become deeply embedded in the culture, practice and implementation of decentralization in Ghana.

I conclude that both expenditure and revenue assignments are limited in Ghana. The coefficients of the share of direct regional expenditure to total government expenditure and share of local revenue to total government revenue were negative indicating limited funding to support for local expenditures required for stronger regional real GDP. Relative to central government expenditure and revenues, regions do not have adequate resources to boost regional real GDP. In addition, regional governments have limited control over expenditures in their regions. I accept the research hypothesis that expenditure assignment of regions negatively impacts real regional GDP in Ghana. However, the coefficient of recurrent regional expenditure to total government expenditure was positive and significant indicating that recurrent regional expenditure supports regional real GDP. The results depict the current fiscal arrangement in Ghana where subnational investments are mostly financed by the central government and donors. Subnational governments have limited control over the financing decisions of their capital expenditures.

### 7.1.3 Revenue assignment

Ghana has made substantial progress in reforms with administrative and political decentralization. It can be concluded from Chapter 4 that fiscal decentralization has been part of Ghana's development strategy since the colonial era, but the country focused more on administrative and political decentralization and has made substantial progress in both these areas. However, Ghana has granted limited revenue autonomy to subnational governments and promoted the use of intergovernmental transfers in order to finance infrastructure projects at the subnational level. MMDAs do not have the authority to independently set rates and administer local taxes. Also, subnational revenue administration remains weak, with limited capacity to collect own revenues at the level of MMDAs.

It can be concluded that revenue sources of assemblies are well defined in the Local Governance Act, 2016. MMDAs are not taking full advantage of the revenue sources. The shares of subnational governments' revenues have been declining and remain low at 0.72 percent of total government revenue in 2018, from 1.0 percent in 2007. The low levels of these revenues could be partly attributed to structural challenges that have engulfed subnational revenue collection, such as the unavailability and use of proper address systems, weak property valuation systems, lack of a harmonized tax payer identification systems, non-existence of subnational capacity for tax revenue administration, and over reliance on the central government for resources. The systems for property tax administration and data collection are manual and undeveloped, and characterized by weak property valuation systems and the lack of an operational local housing market.

Subnational governments in Ghana have limited revenue autonomy, partly because they do not have control over the setting of rates and the determination of ratable values for properties. The Ministry of Local Government and Rural Development directly controls the extent to which MMDAs set tax rates and collect various types of own source revenues. The limited subnational control over their revenues is supported by the results of the regional regressions that found the coefficient of the revenue assignment variable in Model 1 to be negative and significant. Therefore, I conclude that there was limited revenue assignment of fiscal decentralization in Ghana between 2010 and 2016. I accept the research hypothesis that revenue assignment of regions negatively impacts real GDP in Ghana.

#### 7.1.4 Intergovernmental transfers

The government's policy to increase intergovernmental transfers has resulted in a high dependence on transfers across all regions in Ghana. This conclusion is similar to Mogues and Benin (2012:1064) that notes that external transfers discouraged the generation of own-source revenues in Ghana between 1994 and 2004. The 1992 Constitution and the Local Governance



Act, 2016 provide the framework for the implementation of fiscal decentralization by allocating 5 percent of total tax revenue to intergovernmental transfers. In 2008, this allocation was increased to 7.5 percent, in order to enable subnational governments to get more resources for development. This is a major pillar supporting fiscal decentralization in Ghana. Intergovernmental transfers are the lifeline for subnational budgets in Ghana, and the most successful pillar of fiscal decentralization, as a source of revenue to all subnational governments.

It can be concluded that performance-based transfers (such as the District Development Fund and the Urban Development Grant) are beginning to play an important catalytic role in motivating subnational government to double efforts at collecting more own revenue. These transfers tend to be more reliable sources of finance, although relatively small compared to the District Assemblies Common Fund. Given the delays in the release of the District Assemblies Common Fund, performance-based transfers are potentially becoming the next most important source of revenue to subnational governments, which may drive own revenue collection up.

#### 7.1.5 Subnational debt

Subnational debt is not a challenge in Ghana. Regions and assemblies in Ghana do not incur excessive debt. While there is no legal framework that allows regions to borrow, there is also no subnational debt market that could finance trans-regional development projects in Ghana. Regions and assemblies do not keep detailed record of their debt because they do not borrow for infrastructural projects. However, some MMDAs take short term facilities from banks to finance their recurrent expenses and pay back within the fiscal year when their cashflows improve. The central government finances and guarantees the loans needed for large infrastructural projects. It can be concluded that subnational debt is not a challenging issue in Ghana.

## 7.2 Impact of fragmentation of assemblies on own revenues

The impact of fragmentation on own revenues of MMDAs varies across regions when assessed in per capita terms. The initial impact of regional and MMDA fragmentation is a decline in both revenues and expenditures per capita in less endowed MMDAs. MMDAs with stronger capacity are more resilient to the shocks emanating from regional and MMDA fragmentation. For instance, in the Greater Accra region the revenues of the fragmented metropolitan assemblies were not adversely affected. However, municipal and district assemblies experienced declines in their revenues, especially in the year of implementation of the policy. In less endowed regions such as Upper East and Central regions, fragmentation led to contraction of per capita revenues and expenditures. In the case of municipals and districts affected by fragmentation, the Ghana evidence further shows that it takes more than 2 years for the per capita revenues and expenditures in MMDAs to be restored. Thus, it can be concluded that the impact of fragmentation on revenues and expenditures depends on the type of MMDA and their resilience against shocks.

Based on the regression results where other variables were controlled, fragmentation of assemblies has on aggregate a negative short-term impact on own revenue collection of assemblies in Ghana. However, own revenues do not decline when metropolitans are fragmented. In the case of municipal and district assemblies, though, fragmentation lower own revenues of subnational governments.

Capital expenditure had an aggregate positive impact on own revenue collection. The results of individual interactive models confirmed the positive impact. Similarly, administrative expenditure had aggregate positive impact on own revenues. It is concluded that capital expenditure and administration at the subnational level are supportive of subnational own revenue collection in Ghana. The results were confirmed in separate models with interaction variables for metropolitans and municipal and district assemblies. Two budgetary systems run in parallel in Ghana: central government and local government budgets. Capital projects are

mostly funded directly by central governments. Similarly, some conditional intergovernmental transfers are earmarked for the provision of capital projects (such as basic schools and feeder roads). The Ghana evidence shows that the low volume, and relatively small size of subnational own source revenues have traditionally caused subnational governments to channel these funds to administrative expenditures and in some cases for maintenance of capital projects.

### 7.3 Impact of fragmentation of assemblies on property taxes

The results from the analyses on property taxes and fragmentation lead to the conclusion that fragmentation has a negative impact on property taxes in Ghana. Thus, there is evidence in support of the research hypothesis that, on average, fragmentation of MMDAs negatively impacts property tax collection in Ghana. However, the interaction regression model indicates a positive impact of fragmentation on property taxes in metropolitan areas, but negative effects in the case of municipal and district assemblies. In particular, the evidence suggest fragmentation has a negative impact on property taxes of municipalities and district assemblies in Ghana.

The age of assemblies negatively impacts the property taxes overall. The coefficients of the age of assemblies was negative for regressions with interactive variables for metropolitan and municipal and district assemblies. I conclude that reducing the age of assemblies through fragmentation could reduce the property taxes collected by MMDAs in Ghana.

Finally, the coefficient of grants per capita was negative and not significant overall. In all regressions, including those with interactive variables for metropolitan, municipal and district assemblies, it had no impact on property taxes. I conclude that intergovernmental transfers do not significantly impact on property taxes in MMDAs in Ghana. I reject the research hypothesis that intergovernmental transfers negatively impact on property taxes in Ghana.

### 7.4 Recommendations

In light of the conclusions reached, I propose the following policy recommendations:

- As noted in Chapter 3, the President of Ghana is empowered by Section 5 of the 1992 Constitution to create and merge regions, and by Section 1 (2) of Local Governance Act, 2016 to declare an area a new district. Ahead of this declaration, it is proposed that the MLGRD conducts detailed analysis of the impact of fragmentation on the revenue performance of assemblies, service delivery and regional growth, to inform decision of the President. It is also proposed that fragmentation is limited to metropolitan assemblies and municipal assemblies with strong capacity to improve their revenue performance to avoid a reduction in per capita revenues and expenditure. Given the negative impact of fragmentation of the revenues of municipal and district assemblies, and suggestions from the literature that fiscal autonomy eventually depends on the MMDA ability to raise local revenues (Mogues and Benin, 2012:1064), it is proposed that Ghana should not fragment districts assemblies, unless it is confirmed that the impact will be revenue neutral across different types of own source revenues.
- It is recommended that the central government and assemblies increase their expenditure on capital projects if subnational governments intend to increase their own source revenue collections. Further, assemblies may publicize projects that are partly or fully funded with subnational taxes, in order to demonstrate to the citizens that they are benefiting from their taxes. This recommendation could be implemented through regular town hall meetings in each MMDAs with media coverage, regular newspaper publications of ongoing projects in MMDAs, publication of new and ongoing projects on web sites of assemblies and labeling of new capital projects with sign posts that have tax related inscriptions to encourage tax payers to pay their taxes.
- Tema and Accra metropolitan assemblies are large own source revenue collectors. It is recommended that all MMDAs adopt some of the good practices being implemented in these two assemblies such as putting together and maintaining databases of tax payers,

working with large shops with point of sale devices to accept payments for property taxes and transferring same to MMDAs bank accounts in real time, and putting more information on their web sites. Also, it is recommended that assemblies adopt a revenue sharing approach being implemented in Tema Metropolitan assembly, whereby the assembly gives back a proportion of taxes paid to tax compliant communities to undertake development projects of their interest. Assemblies with low revenue collecting capacity could opt for the use of mobile money for the payment of property taxes or the use of artificial intelligence in the identification and collection of their taxes. Assemblies in high capacity areas could create websites that are enabled with payment systems and linked to the bank accounts to facilitate online payments from tax payers. Overall, all assemblies should have local tax administration offices within their jurisdiction with government designated staff who work on taxes.

- Valuation of properties for the purposes of taxes is one of the challenges affecting the administrations of property taxes. The relevant law that requires amendment to resolve the challenge is Section 146 (8) of the Local Governance Act, 2016 that restricts valuation to Lands Commission. In order to allow districts to choose private sector companies to value properties for them, an amendment is proposed. Sections 146 (8) of the Local Governance Act, 2016 reads:

“The Minister shall in consultation with the Minister responsible for valuation cause to be determined by the Lands Commission or by a valuer appointed by the Lands Commission, the ratable value of premises and may cause a valuation list to be prepared for each district”.

- I propose that it is amended to read:

An Assembly shall appoint a Valuation Surveyor to undertake a valuation, in consultation with the Minister, to prepare a main roll or supplementary roll for

the Assembly every three years or as may be deemed appropriate by the Assemblies. Where the Minister disapproves of the appointed Valuation Surveyor, the Minister shall within thirty days of being informed of the appointment communicate in writing the reasons for such disapproval to the affected Assembly. An Assembly shall take into consideration the reasons given by the Minister for disapproving the selection of the Valuation Surveyor in finalizing a contract with a proposed Valuation Surveyor. Under such situation, an Assembly shall appoint another Valuation Surveyor for consideration of the Minister. An appointed Valuation Surveyor shall be an officer affiliated with the Department responsible for property valuation in the Lands Commission or be registered with the National Association of Private Surveyors. Where appointed Valuation Surveyor is not from the Lands Commission, the selection process shall be subject to the Public Procurement Act, 2003 (ACT 663). Subject to the Public Procurement Act, 2003, and approval of the Minister, Assemblies shall pay fees and expenses incurred by the appointed Surveyor in preparing the main valuation roll as well as all supplementary rolls. Once the valuation roll is prepared, it shall be owned by the assembly and used as it deems appropriate.

## 7.5 Future research

Further studies should explore the possibility of collecting primary data on subnational exemptions. Data on exemptions provided by assemblies was not available at the Ministry of Local Government and Rural Development at the time of this thesis. At the national level, tax exemptions are estimated to be about 5.2 percent of GDP in 2013 and 5.0 percent of GDP in 2014 (Oppong and James, 2016). Collecting exemptions data would reveal the volume of revenue forgone at the subnational level in Ghana. Such research could provide information on

the opportunity cost of revenue collections and indicate the potential revenue lost by assemblies in Ghana.

There are other types of subnational revenues that could have been modelled in order to determine whether they are impacted by fragmentation. This thesis modelled property taxes, but there are other types of own revenues that are less studied, such as fees and licenses that contribute more to the total own source revenues in Ghana than property taxes. Finally, further studies could also explore the possibility of modelling these other types of own-source revenues.

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## Appendix A

**Table A.1: Revenues and expenditures in pounds of the three municipalities 1917-1922, Gold Coast**

| Year | Accra municipal |        |        | Cape Coast municipal |       |        | Sekondi municipal |       |        |
|------|-----------------|--------|--------|----------------------|-------|--------|-------------------|-------|--------|
|      | Rev.            | Exp.   | Grants | Rev.                 | Exp.  | Grants | Rev.              | Exp.  | Grants |
| 1917 | 13,986          | 15,766 | 0      | 4,137                | 4,538 | 0      | 5,923             | 5,564 | 0      |
| 1918 | 13,454          | 13,251 | 0      | 4,346                | 3,649 | 0      | 6,180             | 6,089 | 0      |
| 1919 | 14,046          | 13,963 | 0      | 4,396                | 3,935 | 0      | 5,981             | 6,147 | 0      |
| 1920 | 18,486          | 16,603 | 0      | 6,752                | 6,068 | 0      | 8,091             | 8,002 | 0      |
| 1921 | 15,512          | 23,194 | 7,000  | 2,920                | 7,000 | 4,250  | 5,106             | 9,586 | 4,250  |
| 1922 | 27,759          | 26,734 | 6,437  | 4,568                | 6,559 | 3,375  | 7,411             | 8,707 | 3,375  |

Source: Gold Coast, 1924 - Annual reports number 1255.

Note: Rev. = revenue, and Exp. = expenditure.

**Table A.2: Evolution of regional population in Ghana after 1960**

| Region/ Year         | 1960            | 1970             | 1984             | 2000             | 2010             | 2018             |
|----------------------|-----------------|------------------|------------------|------------------|------------------|------------------|
|                      | Base Population | Change from 1960 | Change from 1960 | Change from 1960 | Change from 1960 | Change from 1960 |
| <b>Western</b>       | 626,155         | 143,932          | 531,652          | 1,298,422        | 1,749,866        | 2,397,374        |
| <b>Central</b>       | 751,392         | 138,743          | 390,943          | 842,431          | 1,450,471        | 1,769,726        |
| <b>Greater Accra</b> | 541,933         | 361,514          | 889,166          | 2,363,793        | 3,468,121        | 4,289,777        |
| <b>Volta</b>         | 777,285         | 169,983          | 434,622          | 858,136          | 1,340,967        | 1,771,971        |
| <b>Eastern</b>       | 1,044,080       | 165,748          | 636,810          | 1,062,616        | 1,589,074        | 2,127,660        |
| <b>Ashanti</b>       | 1,109,133       | 372,565          | 980,967          | 2,503,817        | 3,671,247        | 4,552,595        |
| <b>Brong Ahafo</b>   | 587,920         | 178,589          | 618,688          | 1,227,488        | 1,723,063        | 2,198,480        |
| <b>Northern</b>      | 531,573         | 196,045          | 633,010          | 1,289,233        | 1,947,888        | 2,462,316        |
| <b>Upper East</b>    | 468,638         | 74,220           | 304,106          | 451,451          | 577,907          | 776,345          |
| <b>Upper West</b>    | 288,706         | 31,159           | 149,302          | 287,877          | 413,404          | 541,278          |

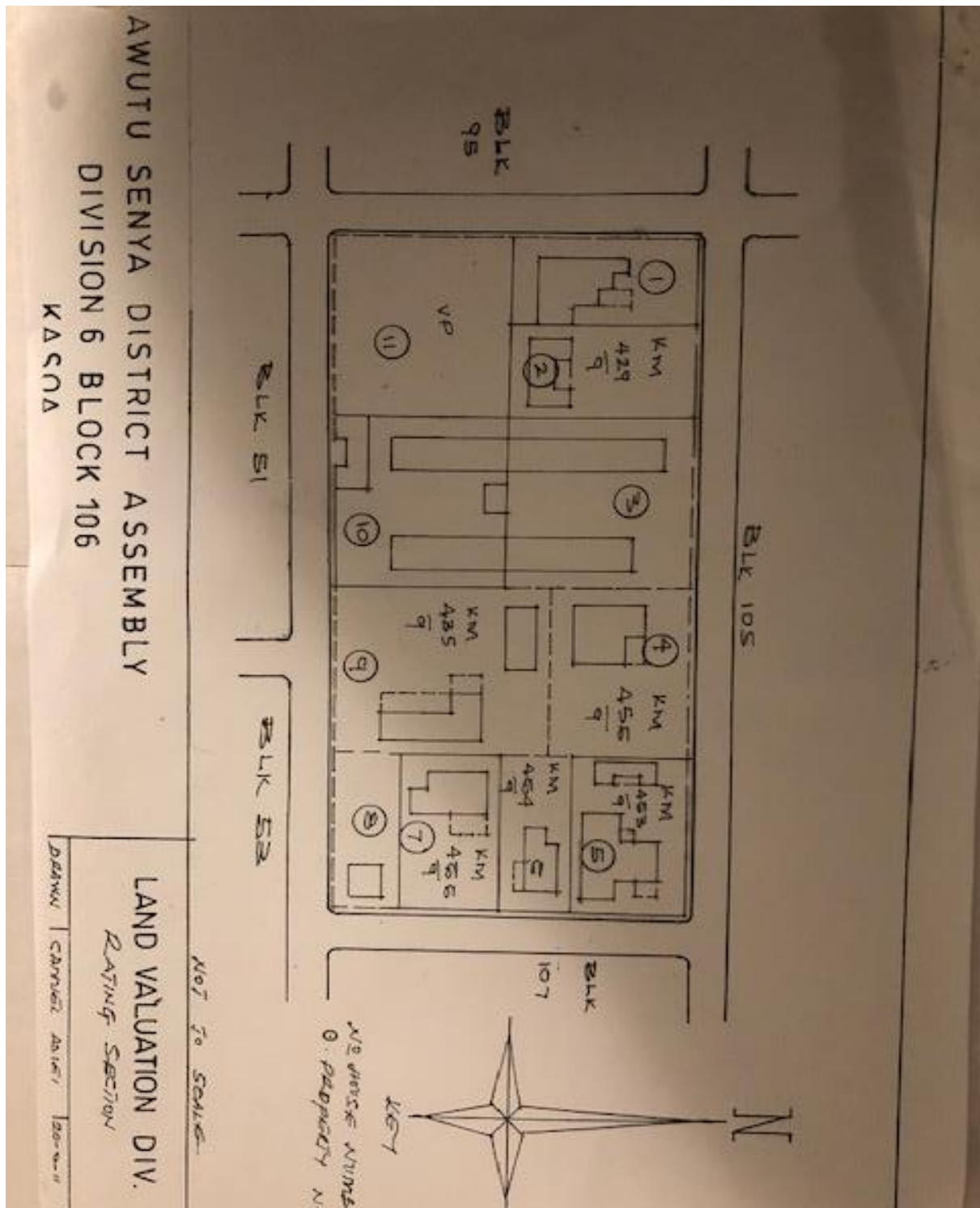
Source: Ghana Statistical Service, 2014a and 2014b.

**Table A.3: Tabular summary of challenges and proposed recommendations**

| No. | Challenges   | Recommendations  |
|-----|--|--|
| 1   | Over-reliance on central government funding.   | Disseminate the local revenue strategy mobilization and train local governments on the implementation of the actions.  |
| 2   | Many local governments do not have adequate databases and those that exist for some are poorly maintained.   | Support local governments to undertake cadastral mapping and develop a database in their jurisdictions.  |
| 3   | The borrowing regime of subnational governments is not clearly defined by the statutes.  | Develop a new policy and regulation on borrowing by local governments.   |
| 4   | Unclear expenditure assignments.   | It is necessary to re-align the functions of the Ghana Health Service and others to remove the conflicts with the functions assigned to local governments in the Local Governance Act, 2016. |
| 5   | The requirement to only use the Land Valuation Board of the Lands Commission to value properties prevents private valuation firms being engaged by local governments, resulting in the stagnation of the tax base. | Open the valuation to allow private firms to be engaged by local governments under the guidance of the LVD.  |
| 6   | Delays in the transfer of funds to local governments.  | Revise the requirement to use a certain percentage of tax revenue of the previous year as undertaken in certain jurisdictions such as in Turkey.   |

## Appendix B


Chart B.1: A typical block prepared during the assessment of properties in Awutu Senya district in the central region of Ghana.



Source: Awutu Senya district.



**Chart B.2: Sample of a property record sheet used for valuation in Agona West municipality in the central region of Ghana.**



## PROPERTY RECORD SHEET

Property..... Zoning..... P.U.C.....  
 House No..... Suburb..... V.L. No.....  
 Owner..... Address.....  
 Occupier.....  
 Use..... Date of Valuation.....  
 CATEGORY..... Date of Inspection.....  
**PLANT & MACHINERY**.....

| Main Building Construction | Q | D       |
|----------------------------|---|---------|
| Floors.....                |   |         |
| Walls.....                 |   |         |
| Doors.....                 |   |         |
| Windows.....               |   |         |
| Ceilings.....              |   |         |
| Roof.....                  |   |         |
| Drainage.....              |   |         |
| Water Supply.....          |   |         |
| Electricity.....           |   |         |
| General Finishing.....     |   |         |
| Remarks.....               |   | 80% 15% |

| Measurements       | Length | Width | Area | Rate   | Amount              |
|--------------------|--------|-------|------|--------|---------------------|
| Ground Floor.....  | 10     | 10    | 100  | 106.78 | 10,678.00           |
| GF Verandah.....   |        |       |      | 80%    | <del>8,542.40</del> |
| First Floor.....   |        |       |      |        | 8,542.40            |
| FF Verandah.....   |        |       |      |        |                     |
| Second Floor.....  |        |       |      |        |                     |
| SS Verandah.....   |        |       |      |        |                     |
| Other Floors.....  |        |       |      |        |                     |
| OF Verandah.....   |        |       |      |        |                     |
| Outbuildings.....  |        |       |      |        |                     |
| OB Verandah.....   |        |       |      |        |                     |
| Other Items.....   |        |       |      |        |                     |
| <b>Ancillaries</b> |        |       |      |        |                     |
| Fence wall.....    |        |       |      |        |                     |
| Pavement.....      |        |       |      |        |                     |
| Swimming Pool..... |        |       |      |        |                     |
| Basement.....      |        |       |      |        |                     |

|                        |                        |            |
|------------------------|------------------------|------------|
| Valuation Officer..... | Replacement Cost       | 10,678     |
| Checked By.....        | Less Depreciation      | - 2,135.40 |
| Assembly.....          | Dep. Replacement Cost  | 8,542.40   |
|                        | Rateable Value Adopted | 7,200.00   |

## Appendix C

**Table C.1: List of MMDAs in Ashanti region by 2017**

| <b>Metropolitan assemblies</b> | <b>Capital</b>   | <b>Legislative Instrument</b> |
|--------------------------------|------------------|-------------------------------|
| Kumasi                         | Kumasi           | 2059                          |
| Municipal Assemblies           | Capital          | Legislative Instrument        |
| Obuasi                         | Obuasi           | 1795                          |
| Ejisu- Juaben                  | Ejisu            | 1890                          |
| Bekwai                         | Bekwai           | 1906                          |
| Mampong                        | Mampong          | 1908                          |
| Offinso                        | Offinso          | 1909                          |
| Asokore Mampong                | Mampong          | 2112                          |
| Asante Akim Central            | Konongo- Odumase | 2056                          |
| Ejura- Sekyeredumase           | Ejura            | 2098                          |
| District Assemblies            | Capital          | Legislative Instrument        |
| Ahafo-Ano South                | Mankraso         | 1401                          |
| Anafo- Ano North               | Tepa             | 1402                          |
| Amansie West                   | Manso-Nkwanta    | 1403                          |
| Asante- Akim South             | Juaso            | 1409                          |
| Atwima Nwabiagya               | Nkawie           | 1738                          |
| Adansi South                   | New Edubiase     | 1752                          |
| Adansi North                   | Fomena           | 1758                          |
| Amansie Central                | Jacobu           | 1774                          |
| Atwima Mponua                  | Nyinahin         | 1785                          |
| Sekyere Central                | Nsuta            | 1841                          |
| Bosome Freho                   | Asiwa            | 1852                          |
| Atwima Kwanwoma                | Foase            | 1853                          |
| Offinso North                  | Akomadan         | 1856                          |
| Afigya-Kwabre                  | Kodie            | 1856                          |
| Kwabre East                    | Mamponteng       | 1894                          |
| Sekyere South                  | Agona            | 1898                          |
| Sekyere East                   | Effiduase        | 1900                          |
| Bosomtwe                       | Kuntense         | 1922                          |
| Asante Akim North              | Agogo            | 2057                          |
| Sekyere Afram Plains           | Drobonso         | 2058                          |
| Sekyere Kumawu                 | Kumawu           | 2060                          |

Source: Compilation of legislative Instruments, shown in column 3.

**Table C.2: List of MMDAs in Brong Ahafo region by 2017**

| Municipal assemblies | Capital         | Legislative Instrument |
|----------------------|-----------------|------------------------|
| Kintampo North       | Kintampo        | 1871                   |
| Asunafo North        | Goaso           | 1873                   |
| Berekum              | Berekum         | 1874                   |
| Wenchi               | Wenchi          | 1876                   |
| Sunyani              | Sunyani         | 1927                   |
| Dormaa Central       | Dormaa- Ahinkro | 2087                   |
| Nkoranza South       | Nkoranzo        | 2089                   |
| Techiman             | Techiman        | 2096                   |
| District Assemblies  | Capital         | Legislative Instrument |
| Tano North           | Duayaw Nkwanta  | 1754                   |
| Tano South           | Bechem          | 1755                   |
| Atebubu- Amantin     | Atebubu         | 1770                   |
| Asunafo South        | Kukuom          | 1773                   |
| Jaman south          | Drobo           | 1777                   |
| Pru                  | Yeji            | 1778                   |
| Jaman North          | Sampa           | 1779                   |
| Kintampo South       | Jema            | 1781                   |
| Nkoranza North       | Busunya         | 1844                   |
| Dormaa East          | Wamfie          | 1851                   |
| Sunyani West         | Odumasi         | 1881                   |
| Asutifi South        | Hwidiem         | 2054                   |
| Sene West            | Kwame Danso     | 2088                   |
| Tain                 | Nsawkaw         | 2090                   |
| Sene East            | Kajaji          | 2091                   |
| Banda                | Banda Ahenkro   | 2092                   |
| Asutifi North        | Kenyasi         | 2093                   |
| Dormaa West          | Nkran Nkwanta   | 2094                   |
| Takyiman North       | Tuobodom        | 2095                   |

Source: Compilation of legislative Instruments, shown in column 3.

**Table C.3: List of MMDAs in Northern region by 2017**

| Metropolitan assemblies | Capital    | Legislative Instrument |
|-------------------------|------------|------------------------|
| Tamale                  | Tamale     | 2068                   |
| Municipal Assemblies    | Capital    | Legislative Instrument |
| Yendi                   | Yendi      | 2070                   |
| Savelugu- Nanton        | Savelugu   | 2071                   |
| District Assemblies     | Capital    | Legislative Instrument |
| Bunkpurugu- Yunyoo      | Bunkpurugu | 1748                   |
| Central Gonja           | Buipe      | 1750                   |
| Nanumba North           | Bimbilla   | 1754                   |
| Nannumba South          | Wulensi    | 1763                   |
| Sawla Tuna Kalba        | Sawla      | 1768                   |
| East Mamprusi           | Gambaga    | 1776                   |
| Gushiegu                | Gushiegu   | 1783                   |
| Bole                    | Bole       | 1787                   |
| Karaga                  | Karaga     | 1787                   |
| Kpandai                 | Kpandai    | 1845                   |
| Chereponi               | Chereponi  | 1854                   |
| Saboba                  | Saboba     | 1904                   |
| East Gonja              | Salaga     | 1938                   |
| Zabzugu                 | Zabzugu    | 2053                   |
| West Mamprusi           | Walewale   | 2061                   |
| Kumbungu                | Kumbungu   | 2062                   |



|                  |           |      |
|------------------|-----------|------|
| Mamprugu Moaduri | Yagaba    | 2063 |
| Mion             | Sang      | 2064 |
| North Gonja      | Daboya    | 2065 |
| Sagnarigu        | Sagnarigu | 2066 |
| Tatale Sanguli   | Tatale    | 2067 |
| West Gonja       | Damango   | 2069 |
| Tolon            | Tolon     | 2142 |

Source: Compilation of legislative Instruments, shown in column 3.

**Table C.4: List of MMDAs in Upper West region by 2017**

| Municipal assemblies | Capital   | Legislative Instrument |
|----------------------|-----------|------------------------|
| Wa                   | Wa        | 1800                   |
| District Assemblies  | Capital   | Legislative Instrument |
| Wa East              | Funsi     | 1746                   |
| Wa West              | Weichiau  | 1751                   |
| Sissala East         | Tumu      | 1766                   |
| Sissala West         | Gwollu    | 1771                   |
| Lambussie/Kami       | Lambussie | 1849                   |
| Jirapa               | Jirapa    | 1902                   |
| Daffiama-Bissie-Issa | Issa      | 2100                   |
| Nadowli- Kaleo       | Nadowli   | 2101                   |
| Nandom               | Nandom    | 2101                   |
| Lawra                | Lawra     | 2099                   |

Source: Compilation of legislative Instruments, shown in column 3.

**Table C.5: List of MMDAs in Upper East region by 2017**

| Municipal assemblies | Capital    | Legislative Instrument |
|----------------------|------------|------------------------|
| Bolgatanga           | Bolgatanga | 1797                   |
| Bawku                | Bawku      | 2103                   |
| Kassena/Nankana      | Navrongo   | 2106                   |
| District Assemblies  | Capital    | Legislative Instrument |
| Bawku West           | Zebilla    | 1442                   |
| Bongo                | Bongo      | 1446                   |
| Garu Tempane         | Garu       | 1769                   |
| Kassena/Nankana West | Paga       | 1895                   |
| Builsa South         | Fumbisi    | 2104                   |
| Nabdam               | Nangodi    | 2105                   |
| Binduri              | Binduri    | 2107                   |
| Pusiga               | Pusiga     | 2108                   |
| Talensi              | Tongo      | 2110                   |
| Builsa North         | Sandema    | 2148                   |

Source: Compilation of legislative Instruments, shown in column 3.

**Table C.6: List of MMDAs in Greater Accra region by 2017**

| Metropolitan Assemblies | Capital       | Legislative Instrument |
|-------------------------|---------------|------------------------|
| Tema                    | Tema          | 2033                   |
| Accra                   | Accra         | 2034                   |
| Municipal Assemblies    | Capital       | Legislative Instrument |
| Ga West                 | Amasaman      | 1858                   |
| Ledzokuku-Krowor        | Teshie-Nungua | 1865                   |
| Adentan                 | Adentan       | 1888                   |

|                       |          |                        |
|-----------------------|----------|------------------------|
| Ashiaman              | Ashiaman | 1889                   |
| La Nkwantanang-Madina | Madina   | 2030                   |
| Ga Central            | Sowutuom | 2036                   |
| Ga South              | Weija    | 2037                   |
| La Dade -Kponto       | La       | 2038                   |
| Ga- East              | Abokobi  | 2136                   |
| District Assemblies   | Capital  | Legislative Instrument |
| Ada West              | Sege     | 2028                   |
| Ada East              | Ada-Foah | 2029                   |
| Kpone Katamaso        | Kpone    | 2031                   |
| Ningo Prampram        | Prampram | 2035                   |
| Shai Osudoku          | Dodowa   | 2039                   |

Source: Compilation of legislative Instruments, shown in column 3.

**Table C.7: List of MMDAs in Volta region by 2017**

| Municipal assemblies | Capital        | Legislative Instrument |
|----------------------|----------------|------------------------|
| Keta                 | Keta           | 1868                   |
| Hohoe                | Hohoe          | 2072                   |
| Kpando               | Kpando         | 2073                   |
| Ho                   | Ho             | 2074                   |
| Ketu South           | Denu           | 2155                   |
| District assemblies  | Capital        | Legislative Instrument |
| Kadjebi              | Kadjebi        | 1465                   |
| South Tongu          | Sogakope       | 1466                   |
| South Dayi           | Kpeve          | 1753                   |
| Krachi East          | Dambai         | 1755                   |
| Ketu North           | Dzodze         | 1843                   |
| Nkwanta North        | Kpasa          | 1846                   |
| Biakoye              | Nkonya-Ahenkro | 1887                   |
| Nkwanta South        | Nkwanta        | 1892                   |
| Jasikan              | Jasikan        | 1901                   |
| North Dayi           | Amfoega        | 2076                   |
| Central Tongu        | Adidome        | 2077                   |
| Krachi West          | Kete- Krachi   | 2078                   |
| Afadzato South       | Ve Golokwati   | 2079                   |
| Agortime Ziope       | Agortime Ziope | 2080                   |
| North Tongu          | Battor Dugame  | 2081                   |
| Akatsi North         | Ave Dakpa      | 2082                   |
| Ho West              | Dzolokpuita    | 2083                   |
| Krachi Ntsumuru      | Chinderi       | 2084                   |
| Adaklu               | Adaklu Waya    | 2085                   |
| Akatsi South         | Akatsi         | 2086                   |

Source: Compilation of legislative Instruments, shown in column 3.

**Table C.8: List of MMDAs in Eastern region by 2017**

| Municipal assemblies | Capital                | Legislative Instrument |
|----------------------|------------------------|------------------------|
| New Juaben           | Koforidua              | 1426                   |
| Birim Central        | Akim Oda               | 1863                   |
| Kwahu West           | Nkawkaw                | 1870                   |
| East Akim            | Kibi                   | 1878                   |
| Akwapim              | North Akropong Akwapim | 2041                   |
| Lower Manya Krobo    | Odumasi-Krobo          | 2046                   |

|                          |             |                        |
|--------------------------|-------------|------------------------|
| Nsawam Adoagyiri         | Nsawam      | 2047                   |
| Suhum                    | Suhum       | 2048                   |
| West Akim                | Asamankese  | 2127                   |
| Yilo Krobo               | Somanya     | 2051                   |
| District Assemblies      | Capital     | Legislative Instrument |
| Fanteakwa                | Begoro      | 1411                   |
| Asuogyaman               | Atimpoku    | 1431                   |
| Kwahu South              | Mpraeso     | 1742                   |
| Atiwa                    | Kwabeng     | 1784                   |
| Kwahu East               | Abetifi     | 1839                   |
| Upper Manya Krobo        | Asesewa     | 1842                   |
| Birim South              | Akim Swedru | 1850                   |
| Akyemansa                | Ofoase      | 1919                   |
| Birim North              | New Abirem  | 1923                   |
| Akwapim South            | Aburi       | 2040                   |
| Denkyembour              | Akwatia     | 2042                   |
| Kwaebibirem              | Kade        | 2043                   |
| Kwahu Afram Plains North | Donkorkrom  | 2044                   |
| Kwahu Afram Plains South | Tease       | 2045                   |
| Upper West Akim          | Adeiso      | 2049                   |
| Ayensuano                | Coaltar     | 2052                   |

Source: Compilation of legislative Instruments, shown in column 3.

**Table C.9: List of MMDAs in Western region by 2017**

| <b>Metropolitan assemblies</b> | <b>Capital</b>   | <b>Legislative Instrument</b> |
|--------------------------------|------------------|-------------------------------|
| Sekondi Takoradi               | Sekondi          | 1928                          |
| Municipal Assemblies           | Capital          | Legislative Instrument        |
| Tarkwa-Nsuaem                  | Tarkwa           | 1886                          |
| Nzema East                     | Axim             | 1917                          |
| Sefwi Wiaso                    | Sefwi Wiaso      | 2015                          |
| District Assemblies            | Capital          | Legislative Instrument        |
| Bibiani- Anhwiaso              | Bibiani          | 1387                          |
| Jomoro                         | Half Assini      | 1394                          |
| Ahanta West                    | Agona Nkwanta    | 1395                          |
| Amenfi West                    | Wassa Akropong   | 1757                          |
| Prestea Huni Valley            | Bogoso           | 1840                          |
| Shama                          | Shama            | 1882                          |
| Sefwi Akontombra               | Sefwi Akontombra | 1884                          |
| Ellembelle                     | Nkroful          | 1918                          |
| Wassa Amenfi Central           | Manso Amenfi     | 2011                          |
| Wassa Amenfi West              | Asankragua       | 2012                          |
| Bia West                       | Essam Dabiso     | 2013                          |
| Bia East                       | Adabokrom        | 2014                          |
| Suaman                         | Dadieso          | 2016                          |
| Aowin                          | Enchi            | 2017                          |
| Wassa East                     | Daboase          | 2018                          |
| Mpohor                         | Mpohor           | 2019                          |
| Juaboso                        | Juaboso          | 2020                          |
| Bodie                          | Bodie            | 2021                          |

Source: Compilation of legislative Instruments, shown in column 3.

**Table C.10: List of MMDAs in Central region by 2017**

| Metropolitan assemblies     | Capital         | Legislative Instrument |
|-----------------------------|-----------------|------------------------|
| Cape Coast                  | Cape Coast      | 1927                   |
| Municipal Assemblies        | Capital         | Legislative Instrument |
| Komenda-Edina-Eguafo-Abirem | Elmina          | 1857                   |
| Assin North                 | Assin Foso      | 1859                   |
| Effutu                      | Winneba         | 1860                   |
| Upper Denkyira East         | Dunkwa-on-Offin | 1877                   |
| Agona West                  | Swedru          | 1921                   |
| Awutu Senya East            | Kasoa           | 2025                   |
| Mfantisman                  | Saltpong        | 2026                   |
| District assemblies         | Capital         | Legislative Instrument |
| Ahafo- Ano South            | Mankraso        | 1401                   |
| Ahafo- Ano North            | Tepa            | 1402                   |
| Amansie West                | Manso- Nkwanta  | 1403                   |
| Asante- Akim South          | Juaso           | 1409                   |
| Atwima Nwabiagya            | Nkawie          | 1738                   |
| Adansi South                | New Edubiase    | 1752                   |
| Adansi North                | Fomena          | 1758                   |
| Amansie Central             | Jacobu          | 1774                   |
| Atwima Mponua               | Nyinahin        | 1785                   |
| Sekyere South               | Nsuta           | 1841                   |
| Sekyere East                | Asiwa           | 1852                   |
| Atwima Kwanwoma             | Foase           | 1853                   |
| Offinso North               | Akomadan        | 1856                   |
| Afigya- Kwabre              | Kodie           | 1856                   |
| Kwabre East                 | Mampong         | 1894                   |
| Sekyere South               | Agona           | 1898                   |
| Sekyere East                | Effiduase       | 1900                   |
| Bosomtwe                    | Kuntenase       | 1922                   |
| Asante Akim North           | Agogo           | 2057                   |
| Sekyere Afram Plains        | Drobonso        | 2058                   |
| Sekyere Kumawu              | Kumawu          | 2060                   |

Source: Compilation of legislative Instruments, shown in column 3.

**Table C.11: Distribution of assemblies by type and region in Ghana by 2017**

| Summary of MMDAs                 |        |
|----------------------------------|--------|
| Type of Assembly                 | Number |
| Metropolitan Assemblies          | 6      |
| Municipal Assemblies             | 56     |
| District Assemblies              | 154    |
| Total number of Assemblies       | 216    |
| Regional breakdown of Assemblies | Number |
| Greater Accra                    | 16     |
| Central                          | 20     |
| Western                          | 22     |
| Brong Ahafo                      | 27     |
| Volta                            | 25     |
| Eastern                          | 26     |
| Ashanti                          | 30     |
| Northern                         | 26     |
| Upper East                       | 13     |
| Upper West                       | 11     |

Source: Data from MLGRD and GSS.

**Table C.12: List of 38 new assemblies created in 2018 by the government of Ghana**

| District                        | District capital  | District Legislative Instrument | Assembly is carved from             |
|---------------------------------|-------------------|---------------------------------|-------------------------------------|
| Oforikrom municipal             | Oforikrom         | 2291                            | Kumasi metropolitan                 |
| Kwadaso municipal               | Kwadaso           | 2292                            | Kumasi metropolitan                 |
| Old Tafo municipal              | Old Tafo          | 2293                            | Kumasi metropolitan                 |
| Asokwa municipal                | Asokwa            | 2294                            | Kumasi metropolitan                 |
| Suame municipal                 | Suame             | 2295                            | Kumasi metropolitan                 |
| Juaben municipal                | Juaben            | 2296                            | Ejisu Juaben municipal              |
| Ahafo Ano South East district   | Dwinyama/Adugyama | 2324                            | Ahafo Ano South district            |
| Amansie South district          | Manso Adubia      | 2325                            | Amansie West district               |
| Atwima Nwabiagya South district | Barekese          | 2327                            | Atwima Nwabiagya district           |
| Akrofuom district               | Akrofuom          | 2329                            | Obuasi municipal                    |
| Adansi Asokwa district          | Adansi Asokwa     | 2331                            | Adansi North district               |
| Obuasi East district            | Tutuka            | 2332                            | Obuasi municipal                    |
| Afigya Kwabre North district    | Boamang           | 2333                            | Afigya Kwabre district              |
| Brong Ahafo region              |                   |                                 |                                     |
| Pru East district               | Prang             | 2335                            | Pru district                        |
| Berekum West district           | Jinijini          | 2337                            | Berekum municipal                   |
| Assin North district            | Assin Bereku      | 2338                            | Assin North municipal (Now Central) |
| Gomoa East district             | Potsin            | 2339                            | Gomoa East district                 |
| Okere district                  | Adukrom           | 2342                            | Akuapem North municipal             |
| Atiwa East district             | Anyinam           | 2344                            | Atiwa district                      |
| Fanteakwa South district        | Osino             | 2345                            | Fanteakwa district                  |
| Asene Manso Akroso              | Manso             | 2341                            | Birim Central municipal             |
| Abuakwa North municipal         | Kukurantumi       | 2305                            | East Akim municipal                 |
| New Juaben North municipal      | Effiduase         | 2302                            | New Juaben municipal                |
| Okaikwei North municipal        | Abeka             | 2307                            | Accra metropolitan                  |
| Ablekuma North municipal        | Darkuman          | 2308                            | Accra metropolitan                  |
| Ablekuma West municipal         | Dansoman          | 2309                            | Accra metropolitan                  |
| Ayawaso East municipal          | Nima              | 2310                            | Accra metropolitan                  |
| Ayawaso North municipal         | Accra New Town    | 2315                            | Accra metropolitan                  |
| Ayawaso West municipal          | Dzorwulu          | 2312                            | Accra metropolitan                  |
| Ga North municipal              | Ofankor           | 2311                            | Ga West municipal                   |
| Weija Gbawe municipal           | Weija             | 2316                            | Ga South municipal                  |
| Tema West municipal             | Tema Community 18 | 2317                            | Tema metropolitan                   |
| Krowor municipal                | Nungua            | 2318                            | Ledzokuku-Krowor municipal          |
| North region                    |                   |                                 |                                     |
| Nanton district                 | Nanton            | 2347                            | Savelugu-Nanton municipal           |
| Yunyoo-Nasuan district          | Yunyoo            | 2349                            | Bunkpurugu-Yunyoo district          |
| Upper East region               |                   |                                 |                                     |
| Bolgatanga East district        | Zuarugu           | 2350                            | Bolgatanga municipal                |
| Tempene district                | Tempene           | 2352                            | Garu-Tempene district               |
| Effia Kwesimintsim municipal    | Kwesimintsim      | 2322                            | Sekondi Takoradi metro              |

Source: MLGRD- Ghana Districts, 2019.

**Table C.13: DACF received by assemblies and reported.**

| Year | Allocations Ghs (Million) | Year | Allocations Ghs (Million) |
|------|---------------------------|------|---------------------------|
| 1994 | 2.60                      | 2004 | 85.72                     |
| 1995 | 5.40                      | 2005 | 70.19                     |
| 1996 | 7.80                      | 2006 | 139.16                    |
| 1997 | 7.90                      | 2007 | 173.34                    |
| 1998 | 15.53                     | 2008 | 217.01                    |
| 1999 | 11.24                     | 2009 | 188.57                    |
| 2000 | 14.95                     | 2010 | 340.40                    |
| 2001 | 18.87                     | 2011 | 392.96                    |
| 2002 | 26.54                     | 2012 | 571.70                    |
| 2003 | 64.86                     | 2013 | 648.13                    |

Source: DACF website ([www.commonfund.gov.gh](http://www.commonfund.gov.gh)).

## Appendix D

**Table D.1: List of six metropolitan assemblies in Ghana as of January 2019**

| Metropolitan | District capital | Legislative Instrument number |
|--------------|------------------|-------------------------------|
| Kumasi       | Kumasi           | 2059                          |
| Cape Coast   | Cape Coast       | 1927                          |
| Accra        | Accra            | 2034                          |
| Tema         | Tema             | 2033                          |
| Tamale       | Tamale           | 2068                          |
| Sekondi      | Sekondi          | 1928                          |

Source: MLGRD- Ghana Districts, 2019.

**Table D.2: List of 104 municipal assemblies in Ghana as of January 2019**

| Municipal           | District capital | Legislative Instrument Number |
|---------------------|------------------|-------------------------------|
| Ahafo Ano North     | Tepa             | 1402                          |
| Asante Akim Central | Konongo          | 2056                          |
| Asokore Mampong     | Asokore Mampong  | 2112                          |
| Bekwai              | Bekwai           | 1906                          |
| Ejisu               | Ejisu            | 2297                          |
| Ejura Sekyedumase   | Ejura            | 2098                          |
| Mampong             | Mampong          | 1908                          |
| Obuasi              | Obuasi           | 1795                          |
| Offinso             | Offinso          | 1909                          |
| Asunafo North       | Goaso            | 1873                          |
| Berekum             | Berekum          | 1874                          |
| Dormaa Central      | Dormaa           | 2087                          |
| Kintampo North      | Kintampo         | 1871                          |
| Nkoranza South      | Nkoranza         | 2089                          |
| Sunyani             | Sunyani          | 1924                          |
| Techiman            | Techiman         | 2096                          |
| Wenchi              | Wenchi           | 1876                          |
| Agona West          | Swedru           | 1920                          |
| Assin Central       | Assin Fosu       | 1859                          |
| Awutu Senya East    | Kasoa            | 2025                          |
| Effutu              | Winneba          | 1860                          |
| Mfantseman          | Saltpond         | 2026                          |
| Upper Denkyira East | Dunkwa-On-Offin  | 1877                          |
| Akuapem North       | Akropong         | 2041                          |
| Birim Central       | Akim Oda         | 1863                          |
| Abuakwa South       | Kibi             | 1878                          |
| Kwahu West          | Nkawkaw          | 1870                          |
| New Juaben South    | Koforidua        | 1426                          |
| Nsawam Adoagyire    | Nsawam           | 2047                          |
| Suhum               | Suhum            | 2048                          |
| West Akim           | Asamankese       | 2050                          |
| Yillo Krobo         | Somanya          | 2051                          |
| Adentan             | Adenta           | 1888                          |
| Ashaiman            | Ashaiman         | 1889                          |
| Ga Central          | Sowutuom         | 2036                          |
| Ga South            | Ngleshie Amanfro | 2316                          |
| Ga East             | Abokobi          | 1864                          |
| Ga West             | Amasaman         | 1858                          |
| La Dade-Kotopon     | La               | 2038                          |

|                             |                   |      |
|-----------------------------|-------------------|------|
| Ledzekuku                   | Teshie            | 1865 |
| La-Nkwantanang-Madina       | Madina            | 2030 |
| Savelugu                    | Savelugu          | 2347 |
| Yendi                       | Yendi             | 2070 |
| Bawku                       | Bawku             | 2103 |
| Bolgatanga                  | Bolgatanga        | 1797 |
| Kassena Nankana             | Navrongo          | 2106 |
| Wa                          | Wa                | 1800 |
| Ho                          | Ho                | 2074 |
| Hohoe                       | Hohoe             | 2072 |
| Keta                        | Keta              | 1868 |
| Ketu South                  | Denu              | 2155 |
| Kpando                      | Kpando            | 2073 |
| Amenfi West                 | Asankrangwa       | 2284 |
| Nzema East                  | Axim              | 1917 |
| Tarkwa Nsuaem               | Tarkwa            | 1886 |
| Oforikrom                   | Oforikrom         | 2291 |
| Kwadaso                     | Kwadaso           | 2292 |
| Old Tafo                    | Old Tafo          | 2293 |
| Asokwa                      | Asokwa            | 2294 |
| Suame                       | Suame             | 2295 |
| Juaben                      | Juaben            | 2296 |
| Abuakwa North               | Kukurantumi       | 2305 |
| New Juaben North            | Effiduase         | 2302 |
| Okaikwei North              | Abeka             | 2307 |
| Ablekuma North              | Darkuman          | 2308 |
| Ablekuma West               | Dansoman          | 2309 |
| Ayawaso East                | Nima              | 2310 |
| Ayawaso North               | Accra New Town    | 2315 |
| Ayawaso West                | Dzorwulu          | 2312 |
| Ga North                    | Ofankor           | 2311 |
| Weija Gbawe                 | Weija             | 2316 |
| Tema West                   | Tema Community 18 | 2317 |
| Krowor                      | Nungua            | 2318 |
| Effia Kwesimintsim          | Kwesimintsim      | 2322 |
| Ahanta West                 | Agona Ahanta      | 1395 |
| Aowin                       | Enchi             | 2017 |
| Asante Akim South           | Juaso             | 2263 |
| Atebubu Amantin             | Atebubu           | 2266 |
| Atwima Nwabiagya            | Nkawie            | 1738 |
| Bibiani-Anhwiaso Bekwai     | Bibiani           | 2284 |
| East Gonja                  | Salaga            | 2275 |
| East Mamprusi               | Gambaga           | 2274 |
| Gushegu                     | Gushegu           | 1783 |
| Jaman South                 | Drobo             | 2269 |
| Jirapa                      | Jirapa            | 1902 |
| Jomoro                      | Half Assini       | 1394 |
| Ketu North                  | Dzodze            | 1897 |
| Komenda Edina Eguafo Abirem | Elmina            | 1857 |
| Kpone Katamanso             | Kpone             | 2031 |
| Krachi East                 | Dambai            | 1755 |
| Kwabre East                 | Mamponteng        | 2265 |
| Kwaebibirem                 | Kade              | 2270 |
| Lawra                       | Lawra             | 2099 |
| Lower Manya Krobo           | Odumase           | 2046 |
| Nanumba North               | Bimbilla          | 1754 |
| Nkwanta South               | Nkwanta           | 1892 |
| Prestea-Huni Valley         | Prestea           | 1840 |



|                   |                |      |
|-------------------|----------------|------|
| Sagnarigu         | Sagnarigu      | 2066 |
| Sefwi Wiawso      | Wiawso         | 2015 |
| Sissala East      | Tumu           | 1766 |
| Tano North        | Duayaw Nkwanta | 2267 |
| Tano South        | Bechem         | 2268 |
| Wassa Amenfi East | Wassa-Akropong | 1757 |
| West Mamprusi     | Walewale       | 2061 |

Source: Compilation of legislative Instruments, shown in column 3.

**Table D.3: List of the 144 districts in Ghana as of January 2019**

| District Name              | District Capital  | Legislative Instrument Number |
|----------------------------|-------------------|-------------------------------|
| Adansi North               | Fomena            | 1758                          |
| Adansi South               | New Edubiase      | 1752                          |
| Afigya Kwabre              | Kodie             | 1856                          |
| Ahafo Ano South West       | Mankranso         | 1401                          |
| Amansie Central            | Jacobi            | 1774                          |
| Amansie West               | Manso Nkwanta     | 1403                          |
| Asante Akim North          | Agogo             | 2057                          |
| Atwima Kwanwoma            | Atwima Foase      | 1853                          |
| Atwima Mponua              | Nyinahin          | 1785                          |
| Bosome Freho               | Asiwa             | 1852                          |
| Bosomtwe                   | Kuntanse          | 1922                          |
| Offinso North              | Akomadan          | 1856                          |
| Sekyere Afram Plains       | Drobonso          | 2058                          |
| Sekyere Central            | Nsuta             | 1841                          |
| Sekyere East               | Effiduase         | 1900                          |
| Sekyere Kumawu             | Kumawu            | 2060                          |
| Sekyere South              | Agona             | 1898                          |
| Asunafo South              | Kukuom            | 1773                          |
| Asutifi North              | Kenyasi           | 1873                          |
| Asutifi South              | Hwidiem           | 2054                          |
| Banda                      | Banda Ahenkro     | 2092                          |
| Dormaa East                | Wemfie            | 1851                          |
| Dormaa West                | Nkrankwanta       | 2094                          |
| Jaman North                | Sampa             | 1779                          |
| Kintampo South             | Jema              | 1781                          |
| Nkoranza North             | Busunya           | 1844                          |
| Pru East                   | Yeji              | 1778                          |
| Sene East                  | Kajaji            | 2091                          |
| Sene West                  | Kwame Danso       | 2088                          |
| Sunyani West               | Odomasi           | 1881                          |
| Tain                       | Nsawkaw           | 2090                          |
| Techiman North             | Tuoabodom         | 2095                          |
| Abura Asebu Kwamankese     | Dunkwa            | 1381                          |
| Agona East                 | Nsaba             | 1921                          |
| Ajumako Enyan Essiam       | Ajumako           | 1383                          |
| Asikuma Odoben Brankwa     | Breman Asikuma    | 1378                          |
| Assin South                | Nsuaem-Kyekyewere | 1760                          |
| Awutu Senya West           | Awutu Breku       | 2024                          |
| Ekumfi                     | Apam              | 2027                          |
| Gomoa Central              | Afransi           | 1883                          |
| Gomoa West                 | Essarkyir         | 1896                          |
| Twifo Atti Morkwa          | Twifo Praso       | 2023                          |
| Twifo Heman Lower Denkyira | Hemang            | 2022                          |
| Upper Denkyira West        | Diaso             | 1848                          |
| Akuapim South              | Aburi             | 2040                          |

|                          |              |      |
|--------------------------|--------------|------|
| Akyemansa                | Ofoase       | 1919 |
| Asuogyaman               | Atimpoku     | 1431 |
| Atiwa West               | Kwabeng      | 1784 |
| Ayensuano                | Coaltar      | 2052 |
| Birim North              | New Abirim   | 1923 |
| Birim South              | Akim Swedru  | 1850 |
| Denkyembour              | Akwatia      | 2042 |
| Fanteakwa North          | Begoro       | 1411 |
| Kwahu Afram Plains North | Donkorkrom   | 2044 |
| Kwahu Afram Plains South | Tease        | 2045 |
| Kwahu East               | Abetifi      | 1839 |
| Kwahu South              | Mpreaso      | 1742 |
| Upper Manya Krobo        | Asesewa      | 1842 |
| Upper West Akim          | Adeiso       | 2049 |
| Ada West                 | Sege         | 2028 |
| Ada East                 | Ada Foah     | 2029 |
| Ningo Prampram           | Prampram     | 2035 |
| Shai Osudoku             | Dodowa       | 2039 |
| Bole                     | Bole         | 1786 |
| Bunkpurugu Nyankpanduri  | Bunkpurugu   | 2348 |
| Central Gonja            | Buipe        | 1750 |
| Chereponi                | Chereponi    | 1854 |
| Karaga                   | Karaga       | 1787 |
| Kpandai                  | Kpandai      | 1845 |
| Kumbungu                 | Kumbungu     | 2062 |
| Mamprugu Moagduri        | Yagaba       | 2063 |
| Mion                     | Sang         | 2064 |
| Nanumba South            | Wulensi      | 1763 |
| North Gonja              | Daboya       | 2065 |
| Saboba                   | Saboba       | 1904 |
| Sawla-Tuna-Kalba         | Sawla        | 1768 |
| Tatale/Sanguli           | Tatale       | 2067 |
| Tolon                    | Tolon        | 2142 |
| West Gonja               | Damango      | 2069 |
| Zabzugu                  | Zabzugu      | 2053 |
| Bawku West               | Zebilla      | 1442 |
| Binduri                  | Binduri      | 2107 |
| Bongo                    | Bongo        | 1446 |
| Builsa North             | Sandema      | 2148 |
| Builsa South             | Fumbisi      | 2104 |
| Garu                     | Garu         | 1769 |
| Kassena Nankana West     | Paga         | 1895 |
| Nabdam                   | Nangodi      | 2105 |
| Pusiga                   | Pusiga       | 2108 |
| Talensi                  | Tongo        | 2110 |
| Daffiama Bussie Issa     | Issa         | 2100 |
| Lambussie Karni          | Lambussie    | 1849 |
| Nadowli Kaleo            | Nadowli      | 2101 |
| Nandom                   | Nandom       | 2102 |
| Sissala West             | Gwollu       | 1771 |
| Wa East                  | Funsi        | 1746 |
| Wa West                  | Weichiau     | 1751 |
| Adaklu                   | Adaklu Waya  | 2085 |
| Afadzato South           | Ve-Golokwati | 2079 |
| Agotime Ziope            | Kpetoe       | 2080 |
| Akatsi North             | Ave Dakpa    | 2082 |
| Akatsi South             | Akatsi       | 2086 |
| Biakoye                  | Nkonya       | 1887 |

|                        |                   |      |
|------------------------|-------------------|------|
| Central Tongu          | Adidome           | 2077 |
| Ho West                | Dzolokpuita       | 2083 |
| Jasikan                | Jasikan           | 1901 |
| Kadjebi                | Kadjebi           | 1465 |
| Krachi Nchumuru        | Chinderi          | 2084 |
| Krachi West            | Kete Krachi       | 2078 |
| Nkwanta North          | Kpassa            | 1846 |
| North Dayi             | Anfeoga           | 2076 |
| North Tongu            | Battor Dugame     | 2081 |
| South Dayi             | Kpeve             | 1753 |
| South Tongu            | Sogakope          | 1466 |
| Amenfi Central         | Manso Amenfi      | 2011 |
| Bia East               | Adabokrom         | 2014 |
| Bia West               | Essam             | 2013 |
| Bodi                   | Bodi              | 2021 |
| Ellembelle             | Nkroful           | 1918 |
| Juaboso                | Juaboso           | 2020 |
| Mpohor                 | Mpohor            | 2019 |
| Sefwi Akontombra       | Akontombra        | 1884 |
| Shama                  | Shama             | 1882 |
| Suaman                 | Dadieso           | 2016 |
| Wassa East             | Daboase           | 2018 |
| Ahafo Ano South East   | Dwinyame/Adugyama | 2324 |
| Amansie South          | Manso Adubia      | 2325 |
| Atwima Nwabiagya North | Barekese          | 2327 |
| Akrofuom               | Akrofuom          | 2329 |
| Adansi Asokwa          | Adansi Asokwa     | 2331 |
| Obuasi East            | Tutuka            | 2332 |
| Afigya Kwabre North    | Boamang           | 2333 |
| Pru West               | Prang             | 2335 |
| Berekum West           | Jinijini          | 2337 |
| Assin North            | Assin Bereku      | 2338 |
| Gomoa East             | Potsin            | 2339 |
| Okere                  | Adukrom           | 2342 |
| Atiwa East             | Anyinam           | 2344 |
| Fanteakwa South        | Osino             | 2345 |
| Asene Manso Akroso     | Manso             | 2341 |
| Nanton                 | Nanton            | 2347 |
| Yunyoo-Nasuan          | Yunyoo            | 2349 |
| Bolgatanga East        | Zuarugua          | 2350 |
| Tempane                | Tempane           | 2352 |

Source: Compilation of legislative Instruments, shown in column 3.

**Table D.4: Assemblies that do not meet population size criteria in Local Government Act, 1993 in 2010 and 2016.**

| Region        | Districts with population less than 75,000 in 2010 | Municipal with population lower than 95,000 in 2010 | Metros with population less than 250,000 in 2010 | District population greater than 75,000 in 2016 | Municipal s with less than 95,000 in 2016 | Metros with population less than 250,000 in 2016 |
|---------------|--|---|--|---|---|--|
| Ashanti       | 7  | 3   | 0  | 5   | 2   | 0  |
| Brong Ahafo   | 8  | 2   | 0  | 7   | 1   | 0  |
| Central       | 4  | 2   | 1  | 4   | 2   | 1  |
| Eastern       | 3  | 4   | 0  | 1   | 0   | 0  |
| Greater Accra | 4  | 2   | 0  | 2   | 2   | 0  |
| Western       | 6  | 2   | 0  | 5   | 1   | 0  |
| Volta         | 12   | 1   | 0  | 10  | 1   | 0  |
| Northern      | 10   | 0   | 1  | 8   | 0   | 0  |
| Upper East    | 7  | 0   | 0  | 6   | 0   | 0  |
| Upper West    | 7  | 0   | 0  | 6   | 0   | 0  |
| Total         | 68   | 16  | 2  | 54  | 9   | 1  |

Source: 2010 population data is based on GSS data. 2016 data is based on author's population estimates.

**Table D. 5: Assemblies that do not meet population size criteria required by the Local Governance Act, 2016 in 2019.**

| Region        | Population of regions in 2019 | Number of districts with population less than 75,000 in 2019 | Number of municipals with population lower than 95,000 in 2010 | Number of metros with more than 250,000 in 2010 |
|---------------|-------------------------------|--|--|---|
| Western       | 2,165,241                     | 1  | 1  | 0   |
| Central       | 2,563,228                     | 4  | 2  | 1   |
| Greater Accra | 4,943,075                     | 2  | 0  | 0   |
| Volta         | 1,865,332                     | 6  | 1  | 0   |
| Eastern       | 3,244,834                     | 1  | 0  | 0   |
| Ashanti       | 5,792,187                     | 3  | 2  | 0   |
| Western North | 927,960                       | 3  | 0  | 0   |
| Ahafo         | 599,852                       | 2  | 0  | 0   |
| Bono          | 1,082,520                     | 2  | 0  | 0   |
| Oti           | 742,664                       | 3  | 0  | 0   |
| Northern      | 1,905,628                     | 2  | 0  | 0   |
| Savannah      | 581,368                       | 2  | 0  | 0   |
| North East    | 575,558                       | 2  | 0  | 0   |
| Savannah      | 581,368                       | 2  | 0  | 0   |
| North East    | 575,558                       | 2  | 0  | 0   |
| Upper East    | 1,273,677                     | 5  | 0  | 0   |
| Upper West    | 849,123                       | 7  | 0  | 0   |
| Total         | 30,269,173                    | 49   | 6  | 1   |

Source : Source: Data from GSS.

**Table D.6: Estimation of Model 1 using the ratio of own source revenue to central government revenue**

| Variables   | Fixed Effect Estimation |                |        | Random Effects Estimation |                |        |
|---|-------------------------|----------------|--------|---------------------------|----------------|--------|
|   | Coef.                   | Standard Error | P>t    | Coef.                     | Standard Error | P>t    |
| One-year lag of log of real GDP   | 0.0295                  | 0.0195         | 0.1340 | 0.0468                    | 0.0180         | 0.0090 |
| Log of the share of direct regional expenditure to total government expenditure | -0.0063                 | 0.0043         | 0.1460 | -0.0067                   | 0.0042         | 0.1150 |
| Share of regional own revenue to total government revenue                       | -26.3516                | 10.4222        | 0.0130 | -33.4175                  | 8.6693         | 0.0000 |
| Year on year Inflation  | -0.0036                 | 0.0011         | 0.0020 | -0.0039                   | 0.0011         | 0.0010 |
| Log of Population   | 1.1869                  | 0.1674         | 0.0000 | 0.8373                    | 0.0613         | 0.0000 |
| Log of mobile phone subscriptions   | 0.0031                  | 0.0009         | 0.0010 | 0.0035                    | 0.0008         | 0.0000 |
| Gross enrollment rate (high schools)  | 0.1329                  | 0.0183         | 0.0000 | 0.1649                    | 0.0120         | 0.0000 |
| Constant  | 2.9373                  | 2.0571         | 0.1570 | 7.2141                    | 0.6830         | 0.0000 |

|                        |                                       |     |
|------------------------|---------------------------------------|-----|
| Number of observations | 101                                   | 101 |
| Hausman test           | chi2(13) = 5.97<br>Prob>chi2 = 0.2012 |     |

Source: Source: Data from MLGRD and GSS.