

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF ECONOMICS

**“AN ANALYSIS OF THE DISBURSEMENT OF THE DISTRICT
ASSEMBLIES’S COMMON FUND IN GHANA ”**



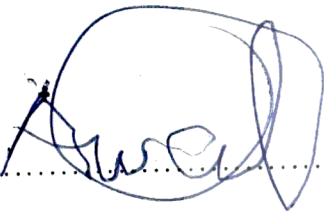
**A DISSERTATION PRESENTED TO THE DEPARTMENT OF ECONOMICS IN
PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF
THE DEGREE OF MASTER OF ARTS IN ECONOMICS**

**BY
ABU MOHAMMED AWAL
SEPTEMBER, 2007**

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DECLARATION

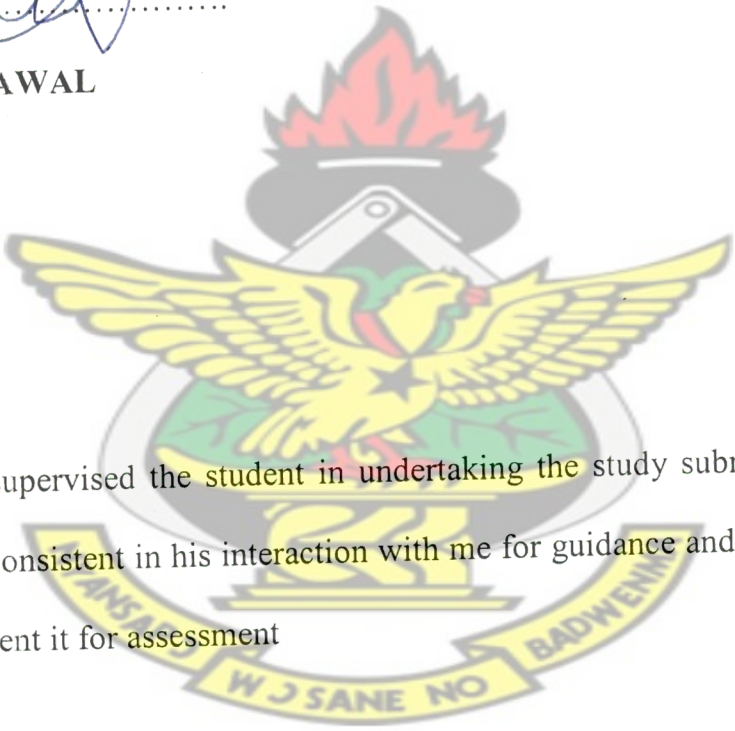
I hereby declare that, under supervision, I have personally undertaken the study herein submitted. This study was under taken independently and it is my original work. It is not a replication of any work either published or unpublished. All references made in this study are due acknowledged. Finally, all aspects of this study have been discussed with and approved by my supervisor, Mr. J Appiah-Nkrumah.

Signature.....

ABU MOHAMMED AWAL
(STUDENT)

KNUST

Date.....



I declare that I have supervised the student in undertaking the study submitted herein. The student has been consistent in his interaction with me for guidance and direction. He has my consent to present it for assessment

Signature.....

Date.....

Mr. J APPIAH-NKRUMAH
(SUPERVISOR)

DEDICATION

I dedicate this study to my late father, Alhaj Halidu Abu and mother, Hajia Amina Kalim

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ACKNOWLEDGEMENTS

IN THE NAME OF ALLAH THE BENEFICIENT, THE MOST MERCIFUL. Praises and thanks to the Almighty through whose guidance and protection I have been able to go through my education.

One cannot write a study of this nature without incurring a lot of indebtedness to those who helped in diverse ways to make the study possible.

First and foremost, I wish to express my sincere and immeasurable thanks to my supervisor, Mr.J. Appiah-Nkrumah for his constructive suggestions and criticisms and more so his tolerance and attentiveness in supervising the study to its successful completion.

I am also particularly grateful to my mother, Hajia Amina Kaleem for the love given to me.

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I would also like to express appreciation to my wife, Fulera Mahama and children Haris. Elham and Samira. I also thank my sisters and brothers especially Abdul Rauf Halid for the immense support they offered me.

I also wish to express appreciation to the Common Fund Administrator, Accra and workers of Ghana Statistical Service, Ministry of Education, Ministry of Health, The Controller and Accountant General Department, and finally Community and Sanitation Agency and Ghana Water Company.

While I am greatly indebted to all these people, I am solely responsible for any defect in this work.

ABU MOHAMMED AWAL

SEPTEMBER, 2007.



ABSTRACT

The main purpose of the study was to examine whether the fomular for the sharing the common fund (CF), as well as the variables employed by the Common Fund Administrator address the problem for which they were put. However, expenditure analysis of both the national and regional were also examined.

The decentralized government system implemented by the government of Ghana since 1988 has generated a lot of public interest. The main interest has been on the sources of revenue of District Assemblies (DA) and disbursement of this fund. One of the main sources of revenue to the local government all over the world including Ghana is inter-governmental transfers. Therefore inter-governmental grants are the main grants in Ghana. However, the disbursement of this fund to the Assemblies as well as how the Assemblies disburse these grants to the communities under their jurisdiction is a topical issue since some districts are still lagging behind others.

The study therefore employed ordinary least squares regression (OLS) analysis to examine empirically the fomular used by the administrator using 2003 data. However, a nonlinear result was preferred after linear OLS failed to pass through statistical tests. Bar graphs were employed to illustrate expenditure for the period of Ghana Poverty Reduction Strategy I (2002-2004)

The study revealed that the only significant variables in the Administrator's fomular are population (POP) and revenue (REV). They did not only meet the expected sign of the

Administrator, but were also significant, The parameter of POP indicated direct relationship with CF showing the higher the POP the more CF. This was the same for REV and thus the more the REV a district generated, the more the CF. However, the remaining variables used by the Administrator to represent need, DOC, schools (SCH), and water had their expected signs but not significant. The other two, clinics (CLI) and teachers (TEACH) did not only show wrong expected sign, they were also insignificant and therefore their inclusion in the formula is irrelevant and this can also be justified by R square of 27%.

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However, on expenditure, the study revealed that DA disburse fund according to the five priority areas of GPRS I but the expenditure pattern established that Good Governance received the highest allocation with modernize agriculture receiving the least. However, the latter has a direct impact on reducing poverty with the former having an indirect impact. Therefore the limitation of the GPRS I could partly be blamed on the expenditure pattern of DA.

This study recommends that districts must be classified into metropolitan, municipal, urban councils and rural districts to replace the current need factor. Also districts could be classified as poor and nonpoor putting weight on them and then disbursing the fund according to these.

To control expenditure, the study advocated education and sensitization on expenditure that directly affects the lives of the people and also putting upper limits on how much can

be spent on each sector. Lastly, a strong monitoring mechanism that includes periodic review on expenditure of DA's should be enforced.

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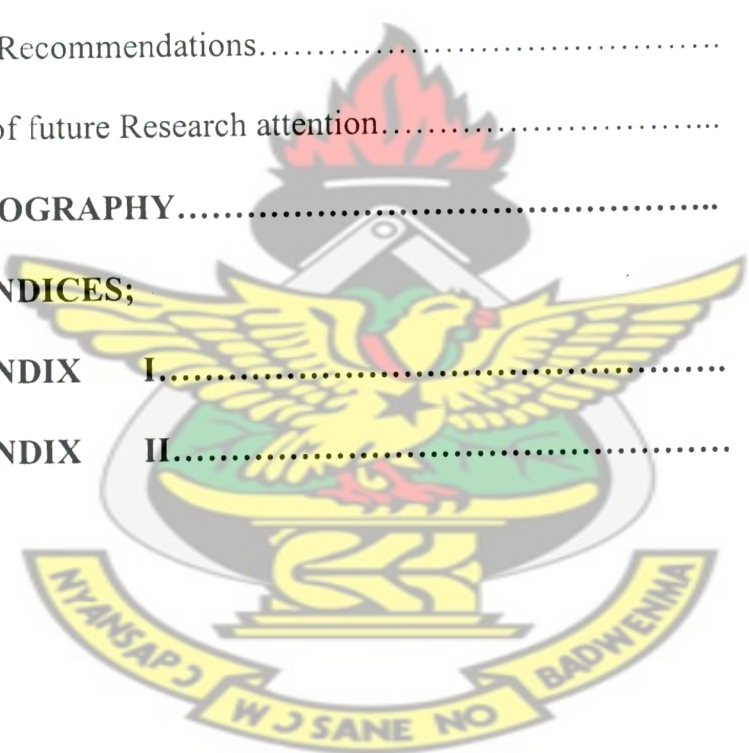
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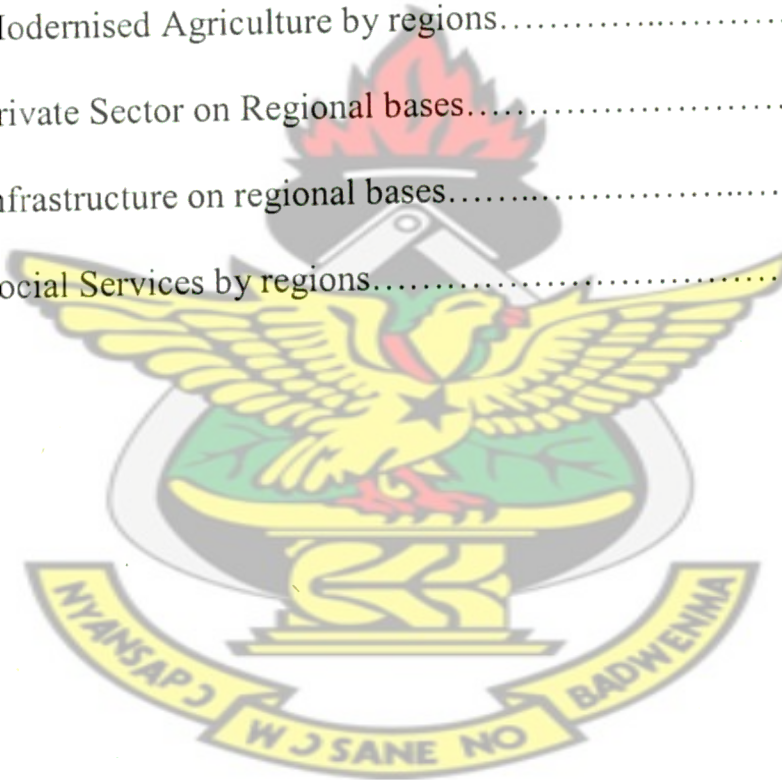
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CHAPTER ONE

INTRODUCTION

1.1 Background of study

Most countries including Ghana have several levels of Government. There are usually one or more levels of local authorities in addition to the central Government. Issues of multi-level government fall into two broad areas; the issue of assignment of functions i.e. which function can most appropriately be handled by the central Government and which by the local authorities and the issue of finance which raises several questions; to what extent should local authorities have independent tax raising powers and to what extent should they rely on transfers or grants from central Government. Given that some grants are paid in every decentralized country, the issue of how grants payment should be allocated between the various authorities and what effect grant payments have on the recipients spending level are topical issues (King 1993). The District Assemblies common fund is a major grant in Ghana given to local authorities. The establishment of the District Assemblies Common Fund by the 1992 constitution has generated interest in the operations of District Assemblies and raised the Development aspiration of the people.

The establishment of the Fund is as result of the decentralization policy pursued by government since 1988. Before then local Government had gone through several developments. The earliest attempts at local administration during the colonial era were the native authority system where local administration revolved around the chieftaincy institution. In 1859 the Municipal Ordinance was enacted, establishing municipalities in the coastal Towns of Ghana (then Gold Coast). In 1943 a new ordinance set up elected town councils for Accra, Kumasi, Secondi-

Takoradi and Cape Coast. In 1953 the municipal council's ordinance was passed. This was followed after independence by the Local Government Act, 1961 Act 54. In all these legislations a clear distinction was made between central and local government agencies at the local level. As a result of the problems generated by the ineffective decentralization and the slow pace of development at the local level, several committees and commissions of enquiry were set up to improve the system. One major effort at improving decentralization in Ghana was the enactment of the local administration Act 1971 Act 359. Though passed in 1971; it was not implemented until 1974 after significant changes in the original act. Though well intentioned, the 1974 Act which resulted in the creation of sixty-five (65) District Councils never worked to the satisfaction of the local people due to a number of factors. The major ones are;

- (i) No effective accountable and legitimate political authority was established at the district level to oversee the structure and its implementation was left to bureaucrats.
- (ii) Functions were transferred to the District Councils without the simultaneous transfer of competence and means.
- (ii) Very little effort was made to address the infrastructure, staffing and other logistic needs of the District Councils.

The developments above therefore led to PNDC Law 207 which finally resulted in Act 462 under the 1992 constitution.

All through these years Local authorities were grappling with the problem of generating adequate revenue to finance recurrent and development expenditure. Several attempts were made in the past to solve this problem through grants from Central Government. Under the 1979 (Third

Republican) constitution, provision was made for setting up Local Government Grants Commission. However, this never became operational. Then in 1988 the Government introduced the ceded revenue which brought slight improvements in the finances of District Assemblies. The ceded revenue was found to be inadequate and irregular. In recognition of this problem, the District Assemblies Common fund was created under section 252 of the Fourth Republican Constitution of 1992. The District Assemblies Common fund Act, 1993 Act, 455 was then passed by parliament. Under the Act, parliament is required to set aside 5% of the total revenue of Ghana for the District Assemblies Common Fund to be shared to the District Assemblies for development. The GPRS 1 represents comprehensive policies to support growth and poverty reduction over a three year period (2002-2004). The target of this policy was that the Ghanaian economy would grow by more than 7% annually in order for real poverty reduction to take place from 39% in 2000 to 32% in 2004. The priorities over the period were infrastructure (INFRA), modernized agriculture (Market-M AGRIC), enhanced social services (SOC SER), good governance (ADM-G GOV) and private sector development (Pov. Allv-PR SECT)

However, the purpose for which the fund was set up is far from being achieved. Could this be a disbursement problem? This study attempts to seek an answer to this question.

1.2 Statement of the Problem

The 1992 constitution stipulates that 5 percentage of total tax revenue should be transferred into the District Assemblies Common Fund. The beneficiaries of the fund include; the members of parliament, the office of the administrator, the Regional Co-coordinating Councils and the District Assemblies. Ten percent of the Fund is set aside as a reserve Fund. The Reserve Fund is set aside for the purpose of;

- (i) Funding MPs constituency projects.
- (ii) Funding Regional Co-coordinating Councils monitoring roles.
- (iii) Counterpart fund of projects co-financed with international donors.
- (iv) Meeting any emergency expenditure.

Basis of sharing the 90% to the District Assemblies has been a matter of great concern to policy makers and beneficiaries. The Act establishing the District Assemblies Common Fund enjoins the Administrator to present a formula to parliament for approval. Among the District Assemblies some are more endowed than others. In recognition of this, in a daily Graphic report on 3rd August 2006, the Deputy Minister of Finance said, that “one of the greatest challenges facing the country was the need to fully decentralize the District Assembly concept to ensure accountability and transparency. He said that some of the municipalities and District Assemblies did not have to rely on Government for funds, stating that those municipalities and Districts had the capacity to mobilize their own resources for Development”.

The view expressed above, indicate that, local revenue generation, central government grants and poverty reduction programs are topical issues for local Government. In addition to the above the medium term priorities of Government from 2002 – 2004 is to generate growth and reduce poverty.

Since 2002 District Assemblies in Ghana have produced Development plans on poverty reduction and growth. The disbursement and utilization of the fund has become topical issues among local citizens and public policy experts. Some policy experts have criticized the

disbursement criteria whilst local residents often accuse local Government officials of misuse or misapplication of the Fund.

According to a survey by the Ghana statistical service, giving a poverty line of 900,000 cedis, the percentage of the Ghanaian population defined as poor fell from almost 52 percent in 1991/92 to just under 40 percent in 1998/99. The decline was not evenly distributed geographically; poverty reduction were concentrated in Accra and the forest (Rural and Urban) localities. In the remaining localities i.e. both urban and rural, poverty fell only modestly, apart from urban savanna where the proportion of the population defined as poor increased during the period. (Ghana Statistical Service, October 2000). To the national Development Planning Commission (NDPC), five regions in Ghana have incidence of poverty above 50% with Northern region 70%, Upper west 81% and Upper east 83% (NDPC 2000). There is therefore the need to examine the formula for sharing the common fund among District Assemblies and also determine the extent of compliance of District Assembly expenditure with the government medium term priorities. This is the core of the study.

1.3 Objectives of the Study

Against this background and identification of the problem, the main objective of the study is to examine the formula for sharing the Common fund among the one hundred and ten District Assemblies and the supervising agencies. The specific objectives are;

- (i) To determine whether the formula is pro poor
- (ii) To examine the Disbursement of common fund expenditure in order to determine whether the disbursement complies with the objectives of Ghana Poverty Reduction Strategy (G.P.R.S.)

(iii) To determine the priority of District Assemblies through their expenditure

1.4 Justification of the study

There have been several studies on the subject of funding local Government authorities. Most of the studies have concentrated on the sources of revenue and expenditure of District Assemblies. It will therefore be useful to extend the study to revenue sharing between Central and local Government, and also examine the disbursement formula among the District Assemblies. The results of this study will therefore be useful in the following ways;

- i. It will enable policy makers improve the Disbursement formula.
- ii. It will also enable policy makers monitor District Assembly compliance with development plans.

1.5 Methodology

1.6.1 Data collection

The study relied mainly on secondary data. Data on factors used in disbursing the fund were collected from the Ministries of Health, Education, and Controller and Accountant General Department. The study used cross sectional analysis.

1.6.2 Data Analysis

This study used Ordinary least squares to estimate the formula used in Ghana for the disbursement of the fund. However, expenditure analysis was done using statistical tool such as graphs.

1.6 Hypotheses

(i) H_0 ; There is no significant direct relationship between a District's share of the Common Fund and population as well as locally generated revenue.

H_1 ; There is significant direct relationship between a district's share of the Common Fund and population as well as locally generated revenue.

(ii) H_0 ; There is no significant direct relationship between the level of poverty of a district and the district's share of the CF

H_1 ; There is significant direct relationship between the level of poverty of a district and its share of the CF

(iii) H_0 ; expenditures of district assemblies are not pro poor

H_1 ; Expenditures of district assemblies are pro poor

1.7 Scope of the study

The study concentrated on the examination of the 2003 disbursement of the fund. It also examined the formula used for the disbursement. Expenditures of the Assemblies were analyzed for the period 2002-2004 to ascertain its conformity with Ghana Poverty Reduction Strategy for that period.

1.8 Organization of the study

The study is organized as follows; chapter one deals with the introduction and the general background of the study. Chapter two reviewed the relevant literature and chapter three deals with the methodology of the study. However, chapter four contains presentation and analysis of results whiles chapter five, the final chapter deals with conclusion and. Recommendations.

1.9 Limitations of the study

Eventhough the study was successful, it was not without limitation. It is therefore prudent to reveal this limitation to the consumers of this study. The main problem of the study was the inability to get information on GPRS 2. Hence the analysis is limited to only GPRS 1.

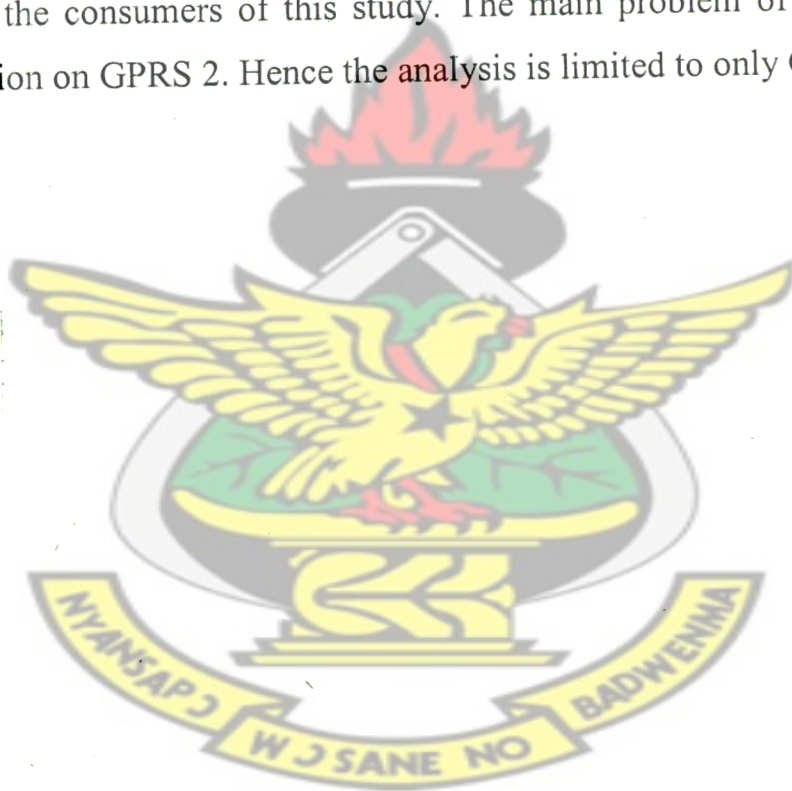


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CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews theoretical and empirical literature on fiscal federalism generally and grants to sub-national bodies in particular. From the nineties (1990's) to present, there has been increasing attention on local government economics, especially revenue generation and grants to local government bodies by central governments. This is due to the fact that experts are of the opinion that local government officials are closer to the people and are therefore likely to have appropriate information on local development aspirations. (Chris Elbers et al 2004). The issues at stake have been what responsibilities and revenue should be ceded to local authorities. In the process, are horizontal and vertical equity observed.

2.1 Theoretical framework

According to Hyman (2004), fiscal federalism is the division of tax and expenditure functions among levels of governments. Collective choices by citizens will probably result in the central government undertaking those functions most likely to have benefits that are collectively consumed at the National level. On the other hand public goods with benefits that are non rival only for a particular portion of the national population who live within a certain geographical area are likely to be most effectively produced by local governing units.

The main advantage of local supply and finance government provided services is that it allows the system of government to accommodate a wide array of tastes and demands for services in accordance with local variations.

2.2 Measurement of the capacity of the locality.

There are several ways of measuring the capacity or endowment of local governments. One way of measuring the capacity of the locality is fiscal capacity. Fiscal capacity of a jurisdiction is a measure of the locality's power to raise revenue for public purpose. Since most taxes are based on income, consumption or wealth, affluent jurisdictions have large tax bases and spend more on local public goods than poorer jurisdictions (Bruce, 1997).

Among the commonly used measures of fiscal capacity for local governments are per capita income, per capita retail sales and assessed valuation per capita. Because local governments rely heavily on property taxes, the measure most relevant for this level of government is assessed valuation per capita. In addition to measuring fiscal capacity, it is useful to measure the extent to which local governments provides services to the residents. A common measure of this is per capita expenditure. It is also useful to measure the extent to which the fiscal capacity of one local government compares with others. This is done by dividing measures of the fiscal capacity such as per capita income of that locality by the national average of that measure. Local governments with fiscal capacity less than the national average and per capita expenditure less than the national average would be candidates for fiscal equalization grants by the central government (Hyman, 2004).

A second measurement according to Hyman (2004) is the ability or performance of a local government is the revenue effort. Revenue effort is the ratio of tax collections from all sources in a taxing jurisdiction, as a percentage of personal income of that jurisdiction to the national average of that ratio for all jurisdictions. As a measure of the extent to which a local government

is tapping its tax base, revenue effort has a serious shortcoming. Firstly it does not consider the fact that jurisdictions with low levels of personal income require high revenue effort to maintain the same level of per capita public expenditure financed in jurisdictions that have high levels of personal income.

Secondly differences in revenue effort also can be explained by different cost and demands among the taxing jurisdictions. In general, areas with higher population densities and greater percentages of their populations living in cities require greater levels of local government expenditure.

Thirdly, difference in revenue effort also reflects differences in collective choices among communities for the allocation of resources between public and private uses.

A value for revenue effort that is greater than 100 percent for a given type of taxing jurisdiction implies that the jurisdiction is raising greater amount of revenue than the national average. Revenue effort statistics must be used in conjunction with data on per capita expenditure and per capita tax base values to provide useful information on the need for fiscal equalization of the capacity to finance goods and services (Hyman, 2002).

2.3 Types of Inter governmental Grants

One important feature of multi level government is intergovernmental Grants. Bruce (1997) explained intergovernmental grants as money transferred from one government to another, usually from the central to local government. In Ghana, the District Assemblies common fund is one major grant given to local governments. Functions or duties are usually transferred alongside

the grants. Intergovernmental grants are normally classified into various types depending on the effect of the grant on the recipients spending decisions. The main ones are;

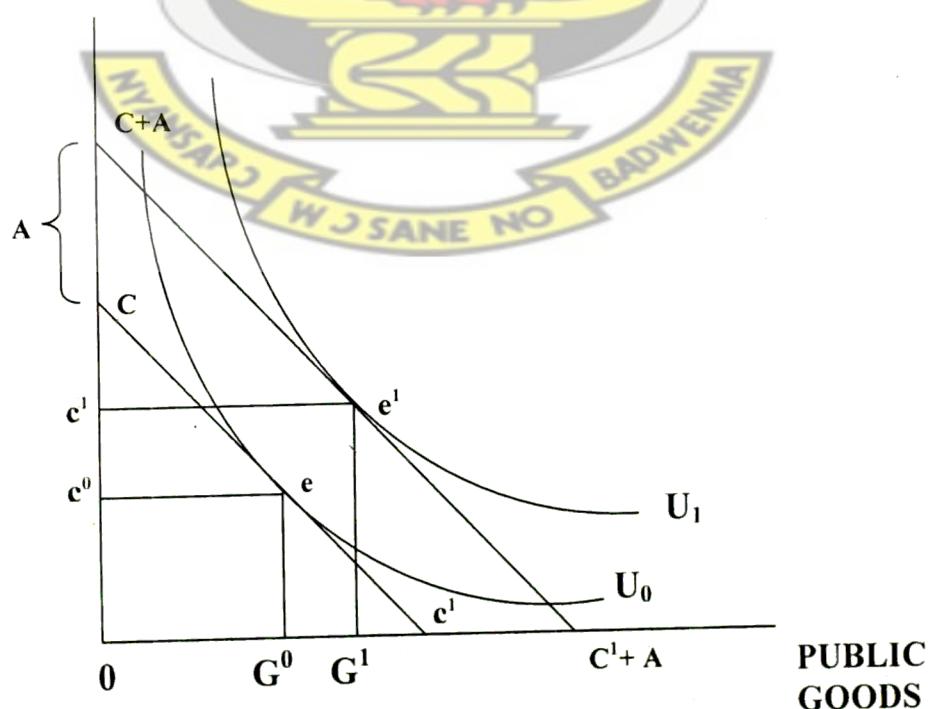
(i) Noncategorical grant

This is a lump sum that can be spent by a local government authority without restrictions. These types of grants are also referred to as revenue sharing because the central government effectively shares its general tax revenue with the local government.

The local authority can spend more on existing programs, execute new projects or use the grants to reduce local government taxes. The effect of a noncategorical grant on expenditure and its impact on tax relief by the local government is shown in fig 2.1.

Figure 2.1 showing the effects of noncategorical grant on expenditure and its impact on tax relief by local government

PRIVATE
CONSUMPTION



From fig 2.1, expenditure on local public goods is measured on the horizontal axis while private consumption expenditure by residents measured on the vertical axis. The initial budget without grants is shown by CC' . C is the total income within the local government jurisdiction if it is spent on private consumption. The slope of the budget line is 1. Assume that the local government maximizes the utility of its residents, whose preferences between local public and private goods are represented by the community indifference map. The local government maximizes the community's utility at point e when it spends G^0 on local public goods. Leaving residents with disposable income C^0 to spend on private goods.

Suppose the local government is given noncategorical grants of 'A' cedis. Such a grant shifts its budget constraint to the right with the same slope. The new budget line is $(C+A)(C'+A)$. Because the grant is noncategorical the whole amount could be used to reduce local taxes by 'A' cedis or used to increase local government spending by 'A' cedis. The non categorical grant is equivalent to an increase in local income. Its effect is described by the income effect of the grant.

With the grant the utility maximizing equilibrium is e' and local government spending increased to G' assuming that local public goods are normal goods. If private consumption is also a normal good, some of the noncategorical grant is used to provide tax relief to local residents and private consumption rises to C' .

The quantitative effect of a noncategorical grant on local government spending depends on the income elasticity of such spending. If the income elasticity is equal to 1, the local government allocates the grant to public and private spending in the same proportion that the community's

total income is used for these two purposes. Thus if the local government spends 20 percent of the community's income on local public goods 20 percent of a non categorical grant is spent on local public goods the remaining 80 percent is used for tax relief. According to public finance theory a large percentage of a noncategorical grant is used to lower local taxes or to avoid local tax increases that would have been necessary without the grant. (Bruce, 1997)

(ii) Categorical grants

According to Bruce (1997), categorical grants are grants given to local Government for a specific spending purpose or program. Grants for health must be spent on health while that for education must be spent on education. In addition categorical grants may also be subject to numerous other restrictions. Categorical grants often require bureaucratic "red tape". Recipient governments must document how grant is spent and the granting government audits recipient government to ensure compliance. A categorical grant can be a block grant or a matching grant. A block (no matching) grant is a fixed amount of money that must be spent on the specified purpose only. The size of the block grant is the same regardless of the level of spending on the purpose by the recipient. A matching grant on the other hand is a variable amount that increases as the recipient government spends more on the specified purposes. The granting government and the recipient government each pay a fraction of the total spending on the specified purposes. If the match rate is m , the tax price to local residents of government spending on the specified purpose is mathematically stated below;

$$\frac{1}{(1+m)} \text{ per cedi.}$$

However, the block grant affects local spending in exactly the same way as a noncategorical grant, provided that the local government spends more on the specified purpose than the value of the block grant.

A matching categorical grant stimulates more spending on the specified purpose than a block grant does, because the matching grant lowers the price of the specified public good to the recipient jurisdiction. However, there are several reasons why grants are given. The next section of the chapter outlines some of the reasons.

2.4 Rationale for Inter governmental Grants.

Some of the most important reasons for given grants to sub governments outlined by theory, include the following;

(i) Vertical Imbalances.

Vertical imbalances result in a situation where the most lucrative taxes such as VAT and income taxes are assigned to central government while the more difficult taxes to collect are assigned to local government. This has an effect of leaving local government with inadequate resources to meet its expenditure responsibilities. The fiscal imbalances may also be caused by existing vertical fiscal gaps at different levels of government arising out of incompatible own expenditure and own revenue assignments (Ahmad 1997 – Ahmad and Craig, 1997)

The fiscal gap may also be caused by local expenditure and policy choices made by local governments, for example where local spending is increased without corresponding increase in

assigned taxes. Such practices increase the vertical gap. In circumstances that are beyond the control of local government there is a clear justification for intergovernmental transfers to compensate for the fiscal gap (Bahl, 1994)

(ii) Horizontal Imbalances

Intergovernmental transfers could be made to address the horizontal imbalances among sub-national governments, by eliminating or at least narrowing inter-regional fiscal imbalances (Broadway and Keen, 1997). Inter-regional fiscal imbalances may be caused by a number of factors; including differences in Tax base. The tax base is largely beyond the control of local government. As a result of tax base differences some jurisdictions may enjoy a high taxable capacity and have a relatively low level of need than others. Thus central government may wish to equalize fiscal position of the fiscally weak region (Oates, 1997). The view is that central government should provide resources to each jurisdiction of local government in order to enable it to perform its assigned expenditure responsibilities as long as the fiscal gap is not caused by local fiscal effort.

Notwithstanding the argument for the provision of similar patterns and standard of services across local government jurisdiction, while levying more or less similar local taxation rate, a transfer system should not necessarily mean uniformity in political or expenditure choices of the recipient local government. Transfers should only be aimed at addressing differences in objective measures of need or revenue capacity (Khululekile and Maze, 2003).

(iii) External spill over effects.

Intergovernmental transfers are also used to address external spill over effects (Boadway and Keen, 1997). Spill over effects refer to a situation where an authority's services spill-out benefits to citizens in other authorities. An example is a situation where people live in one jurisdiction and work in another jurisdiction. This results in public expenditure benefits in one jurisdiction being carried over to another. The consequence however is that the jurisdiction would not provide optimal quantity of local public goods to its citizens thus leading to collective inefficiencies (Musgrave and Musgrave, 1980). Therefore benefits and cost spill over from one jurisdiction to another do occur. This justifies the use of transfers from higher level government to compensate for such costs.

(iv) Relative costs of service provision

Intergovernmental grants are also justified on the basis of jurisdictional variations on cost of service provision, provided that such differences are not caused by inefficiencies or local expenditure choices. The difficulty is how to measure these variations in an objective and appropriate manner. For instances such allowances in cost variations need to be based on indices relevant to public spending patterns (Davey, 1983).

(v) Inter – regional Equity and Interpersonal Equity

It is necessary to clarify that fiscal transfer equalization does not necessarily correct the inter personal inequity or distribution of income to individuals, rather it is an attempt to address the inter – regional and intergovernmental fiscal imbalances by equalizing the terms at which local

social goods are provided. It would require other wealth distribution measures to address inter personal inequities.

2.5 Intergovernmental fiscal transfer and poverty reduction

Many of the services that are typically to be provided at the local level have the potential of significantly impacting poverty reduction. At the same time sub national governments own source revenues have limited capacity in reducing poverty. As such, the intergovernmental fiscal transfer system can play an important role in financing the delivery of services at the sub national level in a pro – poor manner.

The potential of the transfer system to impact public spending in a pro poor manner is especially significant in many developing countries where sub national government often receive a large proportion of their resources from intergovernmental transfers. Usually fiscally weaker, rural local communities receive between 80 – 90% of their budgetary resources from central government grants. Ultimately the sound and pro-poor (equalizing) design of the transfer system will indicate to a large extent whether local governments are able to deliver quality government services and the extent to which sub national governments are able to engage in pro-poor expenditure programs.

Irrespective of the specific design of the intergovernmental transfer mechanism, every transfer mechanism consist of three main stages or elements, each of which can have a distinct impact on the pro – poor nature of intergovernmental fiscal transfer. These are;

(i) In order for an intergovernmental scheme that is intended for pro – poor function to indeed be pro – poor, it should be funded adequately in the central budget. The vertical allocation of financial resources between different levels of government dictates the ability of local governments to engage in pro – poor spending.

(ii) The horizontal distribution of the resources between qualifying local government jurisdictions; more resources should go to local needs and / or smaller revenue potential in order for the transfer scheme to be pro – poor.

(iii) The use of funds at the local level; in order for intergovernmental fiscal transfer to have a pro – poor impact transferred resources should be spent in a pro – poor manner at the local level.

If the intended goal is for the transfer scheme to generate pro – poor outcomes, all three elements of transfer design have to be consistently pro – poor. (Jamie Boex et al, 2005)

2.6 Empirical Review

Maccini (2001) estimated health returns to local funds across tiers of local government in the Philippines fiscal and administrative devolution. After 1992 the Philippine national government increased markedly the amount of national tax revenue transferred in block grants to the highest level of government, the provinces and cities. Fiscal devolution coincided with transfer of administrative responsibilities for public health care system for the provinces. The formula used to distribute funds among provinces and cities in the Philippine is as follows, 50% population 25% land area, and 25% equal sharing. Accordingly, total province or city resources for

jurisdiction j at time t sums a population based portion, a land based portion and an equal share portion. The formula is as follows;

$$PROVGRANT_{jt} = A_t (POP_{jo} / totPOP_0) + B_t (land_{jo} / totland) + C_t = D_t (POP_{jo} + E_t (land_{jo})) + C_t$$

By replicating the national governments procedure for allocating the transfers to local government she calculated the block grant to each province and city as well as the local governments on lowers tiers. In a fixed effects model, the study estimated the effects of the total province or city per capita block grant on infant mortality rates using annual vital statistics data. The model estimated is as follows.

$$H_{jt} = b_0 + b_1 totalcapgrant + b_2 \varepsilon_t (LNDENSITY_{jo} . YEAR) + b_3 \varepsilon_t (school_{jo} . YEAR_t) + \gamma_t + \vartheta_j + \varepsilon_{jt}$$

Where H_{jt} is the infant mortality rate for province / city j at time t ;
 $(LNDENSITY_{jo} . YEAR)$ and $(school_{jo} . YEAR)$ represent the interaction between initial population density (population/land area) and average years of schooling, respectively, with the set of year dummies; γ_t is a fixed effect for year t , ϑ_j is a fixed effect for province / city and ε_{jt} is the random error term with mean 0.

The study suggested that 30% of the decrease in the registered infant mortality rate in cities between 1990 and 1997 is explained by the increase in the per capita transfer over that period. By contrast the study did not find a significant effect for provinces, suggesting that the return to

local funds is higher when there are no large scale administrative changes occurring simultaneously.

Mase (2003) in a similar study, examined South Africa's system of intergovernmental transfers to assess whether it achieves the objectives of vertical and horizontal fiscal balance as stated in the South African constitution. The paper showed that to a large extent, the design and intention of South Africa's transfer system go a long way towards achieving fiscal balance. On the basis of local government share of nationally collected revenue, it is then horizontally divided into individual municipal transfers that are transferred directly to each municipality. The equitable share is divided into the basic services grant (S, grant) and institutional grant (I, grant).

The S grant element supports the operating cost of providing basic services to low income households. It is based on the estimated cost of delivering a package of basic services and the number of low income households in each municipality. Its design indicates that the aim of the transfer is to subsidize the cost of services to poor households, rather than to the local population as a whole. The formula for the S grant is.

$$S = \alpha \beta L H$$

α Is phase in parameter between zero and one based on the municipality's classification as metropolitan, or rural?

β ; is a budget – adjusted parameter set to adjust the size of grants to the available budget.

L ; is the annual per capita cost of providing basic services to households in poverty.

H_i is the number of households in poverty.

At the inception of the new transfer system in 1998/99 the value was set at 0.6 for urban areas and 0.1 for rural areas on the rationale that the proportion of the poor population actually in receipt of basic services would differ between urban and rural areas.

The I grant on the other hand, is designed to finance the operation of municipal institutions. It takes into account the population size and average income.

It assumes that there are economies of scale in the overhead operating costs in relation to population, so that as the population rises, the I grant per capita falls. It declines as the average income of the local authority increase, so that for a given population size, poor local authorities receive a higher grant than rich ones (RSH 2001).

The I grant formula is;

$$I = I_2 P^x - 0.05(y - 180)p$$

Where;

I is the institutional grant.

I_2 is the parameter defining how much in aggregate will be distributed through the I grant.

P is the population in the local authority.

X defines the economies of scale. (Which has been set at 0.25?)

Y is the average income per capita in the local authority.

0.05 ($y - 180$) p represents normative rates of income and assumes that individuals will pay 5% of their income towards property taxes.

The study concluded that even though the present system of intergovernmental fiscal transfers in South Africa is new and evolving, it has a solid base in the sense that local government has strong revenue powers and clear expenditure responsibilities. The system of transfers seems to have strong redistributive element. The use of a formula in the horizontal division of revenue has the potential to address fiscal imbalances. On the basis of available evidence, it can be argued that it contains a strong component of jurisdictional equalization and poverty targeting in its formula.

Chaparo et al (2004) writing on intergovernmental transfers and municipal finance in Colombia indicated that since 1986, Colombia has been engaged in a grand experiment in decentralization. This has increased spending by subnational governments dramatically. The regions have assumed greater control of health and education programs and other local services, and an increasing percentage of national revenues have been earmarked for transfer to lower level governments. The paper examined fiscal data for a large number of Colombian municipalities for the 1985 -99 periods.

The objective is to describe the effects of the transfer system on horizontal balance among municipalities. By their estimates, the fiscal capacities of Colombian municipalities differ substantially which according to the paper is a major challenge to designing an effective system of decentralization. The other objective is to draw some inferences on how the current system of transfers has affected the level of local taxation and spending and the pattern of spending across functional categories.

Broadway and Hobson, (1993) adopted the representative tax system approach which simply assumes the observed average effective tax rate among municipalities as the appropriate benchmark. Each municipality's estimated fiscal capacity is then defined as its per capita assessment, multiplied by the benchmark tax rate. Thus if B_j and R_j are tax base and own source revenues per capita and P_j is population in municipality j fiscal capacity is defined as;

$$FC_i = \beta_i \frac{\sum_j P_j R_j}{\sum_j P_j B_j}$$

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To assess the equalizing effects of the transfer system, per capita transfers is added to municipality from all sources TR_i to obtain equalized fiscal capacity.

$$EFC_i = FC_i + TR_i$$

The relationship between EFC_i and FC_i then indicate the degree of equalization in the transfer system

The study also applied the same logic to the expenditure side of government budget constraints. To the extent that unit cost of providing government services differs among jurisdictions, the horizontal equity principle implies that grants should be adjusted to equalize these differences as well.

According to the paper, cost differences among municipalities might reflect (exogenous) differences in wage rates capital costs, and general price level across municipalities. Equally, it might be desirable to adjust transfers to reflect the differences in local endowments. To measure

differences in fiscal need among municipalities the study used a new measure that may better represent the cost of providing local services in each area.

The need measure was constructed as;

$$Need = 1 - 0.695 \times ICV - 0.205 \times health\ coverage + 0.690 \times rural\ enrollment - 0.0064 \times libraries$$

The index is normalized by dividing by its maximum value so that resulting index lies between zero and one. With one representing the highest level need, for example Bogotá's index value is 0.09 while Providencia (Narino) has a score of 0.73 the highest among all 977 municipalities for which the index was calculated.

The study also touches on the effects of grants on local revenue generation and spending from 1984 – 2000 especially since the 1993 reform in Colombia, when transfer growth accelerated, local revenues have grown faster than GDP. Local revenues have been moving in the right direction in spite of transfer growth. The correlation between aggregate taxes and transfers cannot be constructed as evidence of a causal relationship between that two nor can it indicate how local revenues would respond, if transfers were reduced in the future. It is likely that both municipal and national revenues respond in the same direction to other unobservable changes in the economy over time.

Using panel data allowed them to separate the effects of a change in transfers for a particular municipality from other unobservable changes affecting all municipalities simultaneously. The study used the following linear model to estimate the relationship:

$$TAXTOT_{it} = \alpha_i + \gamma_t + \beta \cdot TRPM_{it} + \varepsilon_{it}$$

Where $TAXTOT_{it}$ and $TRPM_{it}$ are real own –source tax revenues per capita and real transfers per capita respectively, α_i and γ_t are fixed for municipality and year that are to be estimated.

and β is the parameter of interest. Based on annual data for 802 municipalities during the 1985 – 99 period, the study found a small (but statically significant), positive effect of per capita transfers on per capita local tax revenues. This lends some further support to the view, that transfers have done nothing to discourage fiscal effort of municipalities. The study concluded that, given the current fiscal position of the national government, further reforms appear likely in future and so it is important to understand the effects transfers have on local service provision and spending in the municipalities and on the taxation decisions of local governments.

Because own source fiscal capacity is extremely unequally distributed among municipalities and current transfer formulas are only weakly linked to fiscal capacity, future attempts to curb the growth of transfers are likely to increase horizontal imbalance in undesirable ways. Further more the analysis suggest that cuts in transfers would for the most part be passed through as reductions in program spending with only small offsetting effects on local own-source revenues and administrative expenditures.

Bahl and Wallace (2005) in a study on intergovernmental transfers, attempted to establish the criteria used to determine the vertical share of intergovernmental grants. There are two dimensions to the structure of an intergovernmental transfer: The vertical share and the horizontal share. The vertical share is the pool of funds to be allocated to sub national governments, while the horizontal shares are the amounts received by eligible local governments. The goal of the study was to undertake quantitative analysis of trends and cross-country variations in vertical sharing.

The second goal is description of the range of the practice in vertical sharing. The study indicates that there is a substantial variation across countries in the percent of taxes of higher level governments that are devoted to intergovernmental transfers. The range for industrialized economies is from 2.3 percent in Luxembourg to 46 percent in Switzerland. For developing countries the range is from less than 1 (one) percent in Ethiopia to over 60 percent in South Africa.

The regression below is used to explain this variation in the ratio of transfers to total central taxes. The dependent variable is measured as the average of the 1996 – 2000 periods. Data for 20 developed and 51 developing countries were used. The results of the analysis are as follows;

$$\log(\text{transfer} / \text{central tax}) = -1.32 + 1.22^* \log(\text{decentralization}) + 0.23^* \log(\text{corruption}) - 0.39^* \text{federal} - 0.57^* (\text{LDC})$$

pseudo R sq = 0.25

$$N = 62$$

The results suggest that for countries with more decentralization, central governments support sub national governments through a larger vertical share. While this finding is not surprising, the study found that as decentralization increases, the share of central taxes allocated to transfers increases more than proportionately.

The practice of defining the vertical share is very different from country to country. Countries choose tax sharing adhoc determination and cost reimbursement approaches. The institutional arrangements explain much of the growth or lack of growth in the vertical shares.

Boex et al (2001) in a study on Malawi intergovernmental fiscal transfer system were to establish objective mechanism for the allocation of revenue from central government to local assemblies. The study made recommendations in specific areas of intergovernmental fiscal transfers;

- Options for the types of fiscal grants
- Options for the formulas which are needed to accomplish the government' s objectives and
- how the grant system should be phased to provide financial support for local government during the transition period

The study in its concluding recommendations indicated that the Government of Malawi determine funding rules for the GRF (General resource Fund) and the sectoral transfer funds that specify the transfer pools as a share of a broad based national revenue base.

Due to the existence of notable macro-economic fluctuations in Malawi the study recommended that actual collections figures are used for the purpose of determining transfers as opposed to relying on the nominal amount contained in the budget plan. Based on historical expenditure patterns preliminary recommendation for the size of the respective funds (as percentage of the national revenue base) are

- (i) Education Fund: 15 percent
- (ii) Health Fund: 9 percent
- (iii) General resource Fund: 4 percent.

On the General resource fund the study recommended that the level of funding for the general resource fund should be based on the recurrent expenditure needs for local governments to engage in minor local government activities (for which no sectoral grants are given) plus 20% overhead on all sectoral expenditures for the general operating cost of the local government level. The study further recommended using the Resource supplementary Grant (RSG) as a guide in determining the formula for the General Resource fund (GRF). However several modifications to the formula that is currently being used by RSG are suggested as follows;

Factor	R S G	G R E
“Equal Shares”	50	0
Population	30	80
Drought stricken districts	13	0
Least Developed District.	7	20

In summary, the study recommended that the General Resource Fund be allocated between the districts based on the following formula.

- 80 percent in proportion to populating
- 20 percent is proportion to above average poverty.

The study concluded that the use of the equality principle is ill – advised as it causes inefficiency and inequality into the transfer system. The equality share;50% and the population share ;30% were combined and distributed 80% according to population.

Secondly the two remaining factors included in the RSG, attempt to catch disadvantaged regions. However, the measures chosen seem rather arbitrary and ineffective. For instance the formula

targeted drought, stricken regions, but does not tie the funding provided to these regions in any way to possible relief of the drought situations. The study therefore recommended that 20 percent (i.e. equivalent to the 13 + 7 for drought stricken and least developed districts) of the general Resource Fund should be allocated to rural districts with above – average level poverty. Only rural districts would be eligible for these funds since urban areas and townships have significantly higher fiscal capacity.

2.7 Studies on Ghana

Devas and Korboe (2000) in a study on city Governance and poverty; the case of Kumasi; sought to examine the ways in which the poor in Kumasi may or may not be benefiting from the current economic situation, the objectives of the study were to determine;

- I. how the present arrangements for the provision of services impact on the poor and
- II. whether and how the poor have been able to influence the agenda of the institutions of city governance.

Using data from the Ghana living standards survey, a number of indicators of increased poverty and vulnerability in Kumasi were identified as;

- i .Visible evidence of growing numbers of working children and homelessness.
- ii Increase number of young people unable to find formal or semi formal sector employment
- iii Growing number of refugees sleeping in open spaces.
- iv Older women without children or husbands
- V.Teenage girls carrying children and doing strenuous work

They also noted that the poorest are generally politically and socially excluded. The study concluded that available evidence suggest that despite some improvement in the national economy, the position of the poor has not really been bettered and may have worsened in recent years. In this case, Kumasi Metropolitan Assembly must share part of the blame. The essential services for which KMA is responsible, sanitation, waste disposal, drainage, environmental health remain woefully inadequate.

In terms of accountability to the consumers of services and particularly to the urban poor who are often not served at all, the lines of political accountability are weak.

Asante and Ayee (2004) in a study on Decentralization and poverty reduction examined the capacity of decentralized governments to implement pro poor policies and programmes. Decentralized governments because of their closeness both institutionally and spatially to citizens in the rural areas are more responsive to the needs of the poor than the central government and thus are more likely to formulate and implement pro-poor policies and programmes. Using the Ghanaian experience of decentralization, which started with the creation of 110 decentralized governments in 1988/89, the paper examines the impact of decentralization on poverty reduction.

According to the study, the successes of Ghana's decentralization programme can be measured against some of the main objectives for which it was implemented. One of the objectives of the decentralized programme was to ensure that people living in the rural areas have access to basic

services and infrastructure. Indeed, the District Assemblies (DAs) have undertaken development projects such as the construction and maintenance of classroom blocks, feeder roads, clinics, public toilets, markets and provision of streetlights in previously neglected rural areas that were denied access to these services.

The paper concluded that, even though decentralization has an impact on poverty reduction this impact is dependent on certain variables. According to the study, it is not sufficient to look at any type of decentralization, such political decentralization in isolation when assessing the impact of decentralization on poverty reduction, political, administrative and fiscal decentralization need to be considered simultaneously and the sequencing and pace of different types of decentralization seem to play an important role.

Owusu (2005) on a study on small towns in Ghana, examined the reasons accounting for the growth of small urban centers (including district capitals), and the justification for the promotion of these urban centers under the present decentralization programme in Ghana given the fact that their growth and proliferation have not slowed the growth of the large urban centers.

The examination was based on data derived largely from the Ghana statistical service (GSS) reports on the 2000 population and housing census and other studies on population and settlements in Ghana as well as fieldwork carried out in two district capitals in Ghana. Evidence from the 2000 population and housing census reports indicate that the urban centers of Accra, Tema, Kumasi and Sekondi /Takoradi account for about 44% of the total urban population. Accordingly, Ghana statistical service report on the census noted that a balanced spatial distribution of the population is not likely to be achieved unless the opportunities for

improvements in the lives of the people are more evenly distributed. A study by the Ghana statistical service (GSS), poverty Trends in Ghana in the 1990s noted that even though there was a general decline in the incidence and level of poverty in the country in the 1990s except in urban savannah, the reduction was particularly sharp in Accra.

The paper indicates that, even though Ghana's decentralization programme has several objectives, a basic goal is rural development as a means of reducing migration to the large towns and cities, and generally redirecting population movement from areas of over concentration to other areas previously regarded as deprived. In addition, the creation of new districts meant that new district capitals had to be found and assigned. This in itself provided the basis for the growth of hitherto rural settlements into urban centers and increase in the number of small towns. Administrative status tended to attract public infrastructure and influx of population allowing centers to rapidly develop into towns. The paper concludes that promoting small towns especially the district capitals under the current decentralization programme, is a positive response to rural development and the development of dispersed urbanization in the long term.

Tsekpo and Jebuni (2004) examined the contribution of budgetary policy towards relieving poverty among the poor in their different locations and sectors. Among the medium term actions suggested to support long – term growth and poverty reduction, the Ghana Poverty Reduction Strategy(GPRS) was to target:.

- I. A better sectoral composition of expenditure
- II. A better balance between administrative and development cost, and
- III. A geographical distribution sensitive to a rational assessment of need for social protection and potential for growth.

Specifically, the share of overhead (administrative) cost is expected to reach between 20 – 25% of total expenditure with between 80 – 85% of total expenditure being applied to development cost. Between the social sector budget and the economic sector budget the desired distribution of total expenditure is 60% and 40% respectively.

The paper indicates that the overall framework document for guiding the medium to long term policy decision in Ghana is the GPRS. Thus the budget and macro economic policy must flow from the GPRS. In this respect the GPRS has identified three ways in which public spending programmes will benefit the poor and reduce poverty. These are;

- Expenditure targeted at providing the basic social services to the poor and also assistance to enable the poor increase their production and productivity that ultimately affect the level of their incomes and assets
- Spending to improve the awareness and participation of the poor in the economy and
- Spending to improve the performance of the public sector including institutions of governance.

The study concluded among others that; central government transfers to the local government sector are consistent with the poverty reduction agenda. However some argued that this is a reflection of the allocation of the D A C F, because the DACF is an important component of the transfers to the local government sector.

From the studies obtained on Ghana, much credence was not given on the District Assembly's share of the common fund which is the focus of this study.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the factors and formula used by the Administrator in disbursing the Common Fund among the District Assemblies. However, the methodology of the study for analyzing the disbursement of the CF is also presented. Various investigative tests that were conducted on the estimation are also presented.

3.2 Factors and Formula used in disbursing the Common Fund

In 2003 the following factors and ratios were used in disbursing the fund among the District Assemblies.

Equality

35%

Need

50%

[Of which]

Health:

Health Facilities

12.5%

Doc

7.5%

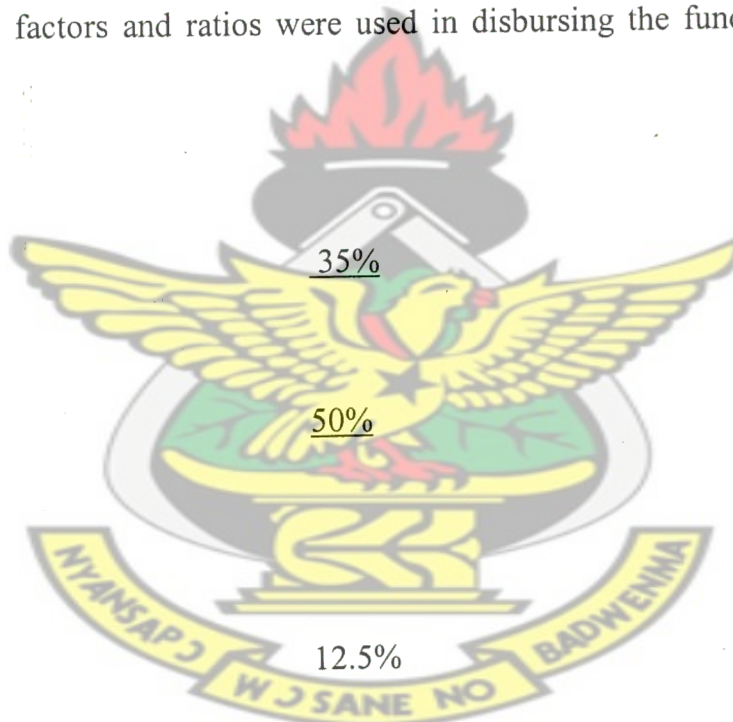
Education;

Education facilities

12.5%

Teachers

7.5%



Water;

Water Coverage 10%

Responsiveness; 5%

[Of which]

Revenue Improvement 5%

Service pressure; 5%

[Of which]

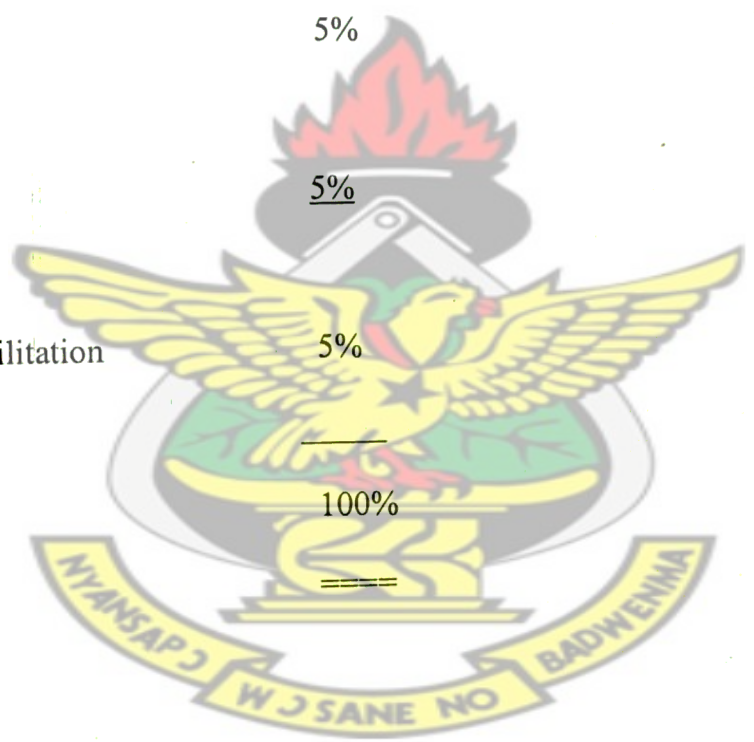
Population Density 5%

Poverty 5%

[Of which]

Schools Major Rehabilitation 5%

100%



3.3 Mathematical structure of proposed formula by the Administrator:

The mathematical formula used by the Administrator is expressed below:

$$Y_{Di} = \frac{X (0.35) + \alpha_{Di} (0.075X) + Q_{EDi} (0.125X) + \beta_{Di} (0.075X)}{110 + \frac{\sum \alpha_{Di}}{\sum Q_{EDi}} + \frac{\sum \beta_{Di}}{\sum Q_{HDi}} + \frac{\sum R_{PDi}}{\sum W_{CDi}} + \frac{\sum S_{D_i}}{\sum P_{Di}} + P_{ri}} (0.05X)$$

- Y_{Di} = share of District "I"
- X = 90% of District Assemblies Common Fund.
- α_{Di} = The reciprocal of Teacher / Pupil location quotient Of District "i"
- $\sum \alpha_{Di}$ = the sum of the reciprocals of Teacher / Pupil Location quotient for all Districts.
- Q_{EDi} = the reciprocal of Education facility location quotient District "I"
- $\sum Q_{EDi}$ = the sum of reciprocal of Educational facility Location quotient of all Districts
- β_{Di} = The reciprocal of Doctor / Pop location quotient of District "I"
- $\sum \beta_{Di}$ = the sum of the reciprocals of Doctor / pop. Location quotient for all Districts
- Q_{HDi} = Reciprocals of the Health facility location quotient Of District "I"

$\Sigma QHDi$ = Sum of the reciprocals of the Health facility location Quotient of all Districts.

$RPDi$ = Percentage increase in revenue collection of District "I"

$\Sigma RPDi$ = sum of all District percentage increase in Revenue collection

SDi = Population Density of District i

ΣSDi = Sum of population Density of all Districts.

$WCDi$ = the reciprocal of the percentage water Coverage of District i

$\Sigma WCDi$ = the sum of the reciprocal of the percentage water Coverage of District 'i'

PRi = Number of schools needing major rehabilitation

ΣPDi = Sum of all schools that need major rehabilitation

3.3.1 Location Quotient:

Location quotient is the method used to mathematically derive proportions from data on need factors:

It is defined as

$$\frac{Si / S}{Ni / N}$$

Where Si is the number of S facility in district i and S is the total number of facility S in the country Ni is the population of district i and N is the population of the country.

The location quotient ranks all the districts in terms of the endowment of the facility in question. Since it is intended that the less endowed gains more than the better endowed, the reciprocal of the location quotient is what is used.

3.4 Model specification of the study

The model for the study employs a modification of the administrator's formula for disbursing the common fund. This was done to investigate whether the method used as well as the variables chosen by the CF Officer are appropriate in addressing the purpose for which they are put in the formula. OLS regression for cross sectional data of 110 districts for 2003 was processed. The method therefore considered linear and nonlinear regressions. The general specification of the model is therefore expressed specifically as;

$$CF = f(CLI, DOC, SCH, TEACH, WATER, REV, POP, REP)$$

3.5 The Model

This was specified as;

$\log CF = \log (CLI, DOC, SCH, TEACH, WATER, REV, POP, REP)$ and expressed specifically as;

$$\log CF = \beta_0 + \beta_1 \log CLI + \beta_2 \log DOC + \beta_3 \log SCH + \beta_4 \log TEACH + \beta_5 \log WATER + \beta_6 \log REV + \beta_7 \log POP + \beta_8 \log REP + \mu$$

Where β ($i = 0, 1, 2, 3, \dots, 8$) are the coefficients of the independent variables and u is the error term. All the variables denote their original meanings.

However, statistical tools such as bar graphs were employed for the analysis of the of expenditure.

CF; Represents the share of each District of the Common Fund. This is the Dependent variable.

CLI; (-) Represents Health facilities in each of the 110 Districts. It includes Hospitals, clinics Health post, etc. This variable is one of the need factors and it is expected to have negative co-efficient. It is thus inversely related to the CF. This is because the formula after calculating the location quotient takes its reciprocal to ensure that the less endowed Districts gets more of the Fund allocated to need.

DOC; (-) is the number of Doctors in each District. It is also one of the need factors and therefore expected to have a negative coefficient. Thus, the higher DOC of a particular district, the less CF to that district.

SCH; (-) represent Educational facilities in each District. It includes primary basic education, secondary and tertiary Education, as one of the need factors it is also expected to be inversely related to CF therefore has a negative coefficient. This is because, according to the CF Officer, more EF means more endowment and so less of CF to that district.

TEACH; (-) Number of Teachers in each District which is also a need factor and like EF is expected to have a negative coefficient and therefore inversely related to CF.

WATER ;(-) represents the percentage of each District population who have access to potable water. This is expected to be inversely related to CF as the more of Districts population with access to potable water the less of the common fund the District gets.

REP; Represents poverty levels in each District and this is represented by the number of schools that need major repaired. As a measure of poverty it is also expected to be positively related to CF.

POP; (+) Is population Density. This is aimed at compensating Districts who have higher populations as a result of migration and therefore expected have a positive coefficient.

REV; (+) the percentage increase in revenue using 2001 as the base year and 2002 as the current.

This is expected to have positive co-efficient as it is expected to reward Districts who perform well by generating more revenue.

μ ; is the error term.

To ensure that the explanatory variables do not exhibit severe multicollinearity between them, the correlation matrix was also conducted to test for the existence of multicollinearity.

In addition, the white test for heteroscedasticity was also conducted. The presence of heteroscedasticity does not invalidate ordinary least squares. However ignoring it may result in loss of efficiency in the estimated parameters.

The Ramsey RESET test is a general test for model specification errors resulting from omitted variables, incorrect functional form and correlation between the independent variables and the residuals. Under such specification errors, least square estimate will be biased and inconsistent and therefore conventional inference procedures will be invalidated. Therefore the Ramsey RESET Test was carried out to find whether such model specification error existed.

3.6 Sources of Data

The study employs annual cross sectional data for the one hundred and ten Districts for 2003. 2003 was chosen because; the number of districts was increased to one hundred and thirty eight from one hundred and ten in 2004 and data were not easily disaggregated.

Data used in the study were obtained mainly from secondary sources at the national level instead of the districts. Population data was obtained from the statistical service where as data on education was obtained from the Ministry of Education, health data was supplied by the Ministry of Health. The Controller and Accountant General's Department provided data on districts revenue performance with the Community Water and Sanitation Agency and the Ghana Water

Company provided information on water coverage in the districts. Finally, data on 2003

Common Fund allocation to the districts was obtained from the office of the CF Administrator.

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CHAPTER FOUR

ANALYSIS OF RESULTS

4.1 Estimation of Results.

Two regressions were estimated (linear and nonlinear). However the linear model faced specification problem (see APPENDIX I) and therefore the nonlinear model was adopted as seen in table 4.1 below:

Table 4.1 Showing estimated results of nonlinear regression.

Dependent Variable: LOG(CF)
Method: Least Squares

Sample: 1 110
Included observations: 94
Excluded observations: 16

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(CLI)	0.024158	0.056093	0.430677	0.6678
LOG(DOC)	-0.028654	0.037063	-0.773103	0.4416
LOG(POP)	0.284775	0.076855	3.705363	0.0004
LOG(PV)	-0.122317	0.137484	-0.889684	0.3761
LOG(REV)	0.045941	0.026731	1.718631	0.0893
LOG(SCH)	-0.039916	0.208864	-0.191112	0.8489
LOG(TEACH)	0.033889	0.064371	0.526460	0.5999
LOG(WATER)	-0.079590	0.063575	-1.251918	0.2140
C	19.44217	0.757292	25.67329	0.0000
R-squared	0.269468	Mean dependent var	22.24718	
Adjusted R-squared	0.200712	S.D. dependent var	0.306186	
S.E. of regression	0.273739	Akaike info criterion	0.337563	
Sum squared resid	6.369314	Schwarz criterion	0.581070	
Log likelihood	-6.865478	F-statistic	3.919187	
Durbin-Watson stat	2.065788	Prob(F-statistic)	0.000557	

White Heteroskedasticity Test:

F-statistic	0.703524	Probability	0.781999
Ramsey RESET Test:			
F-statistic	0.407900	Probability	0.524775

Source: Author's estimation 2007.

From the table above, diagnostic test performed on the model revealed that the F statistic is statistically significant at one percent (1%), implying that the variables are jointly significant at one percent. The overall model is statistically significant and can be used for analysis. However

there is absence of autocorrelation revealed by DW of 2.0657. The model is free of autocorrelation and therefore efficient for prediction. Using the white test for Heteroscedasticity the probability value is 0.71999 indicating the absence of heteroscedasticity in the model. Correlation matrix (see APPENDIX II) indicates very high positive correlation between schools and teachers of 0.818. Schools and repairs are also highly positively correlated at 0.837. Though not a formal test it is an indication of the presence of multicollinearity. The rest of the variables exhibit normal correlation.

The independent variables in the model determine almost 27% of variations in a district's share of the Common Fund as indicated by an R square of about 27%. However the Ramsey RESET test with a probability value of 0.524775 indicated that the model is correctly specified. This gives justification for the acceptance of this over the linear model which suffered specification problem. (See APPENDIX I)

From table 4.1 again the regression reveals interesting results showing only POP, REV and the constant are significant. However the rest are not significant even at 10%.

Clinics have a coefficient of 0.02415. This does not only negate the expected sign it also shows that it is insignificant even at 10%. The results showed direct relationship between CLI and CF. the more clinics or health facilities (need factor) a district has the higher the amount the district gets for health facilities. If a district's number of Health facilities increases by one percent its share of the Common Fund for Health facilities will increase by less than proportionately at

0.02415%. The results therefore did not confirm the expected sign of the administrator's formula. This study therefore finds its inclusion in the formula as misspecification

However the Doctor variable (DOC) met the expectation of negative co-efficient but was insignificant. The result showed a negative co-efficient of a magnitude of 0.02654. As a need factor the expectation was that the more Doctors a District has the lower its share of the Fund. The negative co-efficient indicated this. If Doctors in a District increase by 1% the CF that will be allocated to the district will fall by less than proportionately to 0.02654%. This means rich urban Districts with more doctors will be given less than deprived and poor Districts. However the variable is not significant even at 10% level. Since the variable is insignificant much credence should not be given to this assertion.

With regard to the impact SCH exert in the allocation of the common fund to a district the result showed a negative co-efficient of 0.039916 which is in the same direction with the expectations of the Common Fund Administrator. The results revealed that the more schools a District has the less money it gets. An increase in the number of SCH by 1% will cause a less than proportionate fall in CF to the district. However the probability value is 0.9936 showing the variable is not significant even at 10%. The variable is not a good determinant of the changes in a districts share of the common fund.

The estimates confirmed the Common Fund Administrator's expectation of negative co-efficient for the water variable. The estimated co-efficient is -0.079590. As a need factor the percentage of WATER coverage is inversely related to the amount of Common Fund a district gets.

Alternatively a 1% increase in water coverage in a district will cause the district's share to fall by 0.079590. However the variable is insignificant as shown by the probability value of 0.2140. Even though the variable met the expected sign it does not significantly affect the changes of the fund that a district gets. Therefore its inclusion in the formula could be irrelevant.

Teachers are one of the need factors and expected to have negative co-efficient. However the results indicated a positive co-efficient of 0.0339 with a t-statistic of 0.526460 and probability value of 0.5999 showing insignificance. Interestingly the variable being an insignificant determinant of the variation in the common fund acts in the opposite direction; it tends to reward districts that have more teachers instead of rewarding poor districts that have few teachers.

The study therefore concluded that the variables subscribed or proxied as need factors (CLI and TEACH) did not all show the expectation of the administrator. More importantly they were all not significant and therefore do not address the interest of the needy districts.

As mentioned before service pressure is another factor considered by the Administrator represented by population. The result showed the expected positive relation between CF and pop. The co-efficient is 0.24775. The higher a Districts population density the higher the amount of Common Fund it gets. This shows that urban and metropolitan Districts whose POP are high and whose facilities suffer from population pressure receive more of CF. The probability value is 0.0004 showing significance at 1%. The variable is a good determinant of the changes in a districts share of the common fund. And hence much credence should be given to it.

Responsiveness represented by revenue revealed direct relationship with CF. This means the more revenue a district generates the more CF it gets. The estimated coefficient is not only significant but also met the expectation. Revenue is designed to reward districts which collect more revenue. It is therefore expected to have a positive co-efficient which the results 0.045941 confirmed. The variable is significant at 10% significant level. Revenue is therefore a significant and a good determinant of variations in a districts share of the common fund.

Poverty is represented by repairs (REP). The variable did not meet the expectation of positive co-efficient. The results revealed a negative co-efficient of 0.122317 which indicated that as the number of schools that need repairs increase by one percent, a districts share of the Fund will fall by less than proportionately by 0.122317%. This factor is the main factor representing poverty. It is indicated by the Common Fund office that poor districts have more schools that need repairs and should be given more money to repair the schools. However the test has failed to confirm the expectation of the Common Fund office. The variable has a probability value of 0.3579 showing insignificance even at 10%. This implies that schools that need major repairs is not a good determinant of the variations in a districts share of the common fund. The use of the variable does not help poor districts to get more funds from the common fund. Therefore this proxy for poverty should be discarded.

In conclusion of the analysis, the result of the examination of the administrator's formular does not conform to David N Hyman (2002) which explains that districts with higher fiscal capacity should have less governmental grants than the relatively poor districts.

4.2 Expenditure Analysis

This section deals with the analysis of expenditure of District Assemblies in Ghana from 2002 to 2004. These expenditures are classified under the following major sub headings; health, sanitation, water, basic education, secondary education, administration, markets, roads, electricity, community initiated projects (C.I.Ps), and poverty alleviation. The sub headings have been re-classified under the priority areas of the Ghana poverty reduction strategy one (GPRS I). The purpose of the GPRS I was to develop new and comprehensive policies in support of poverty reduction and growth. The priority areas of the Ghana poverty reduction strategy are social services, infrastructural development, Good Governance, modernized agriculture and private sector development. The GPRSI was implemented from 2002 to 2004. The national and regional expenditure analyses are discussed below.

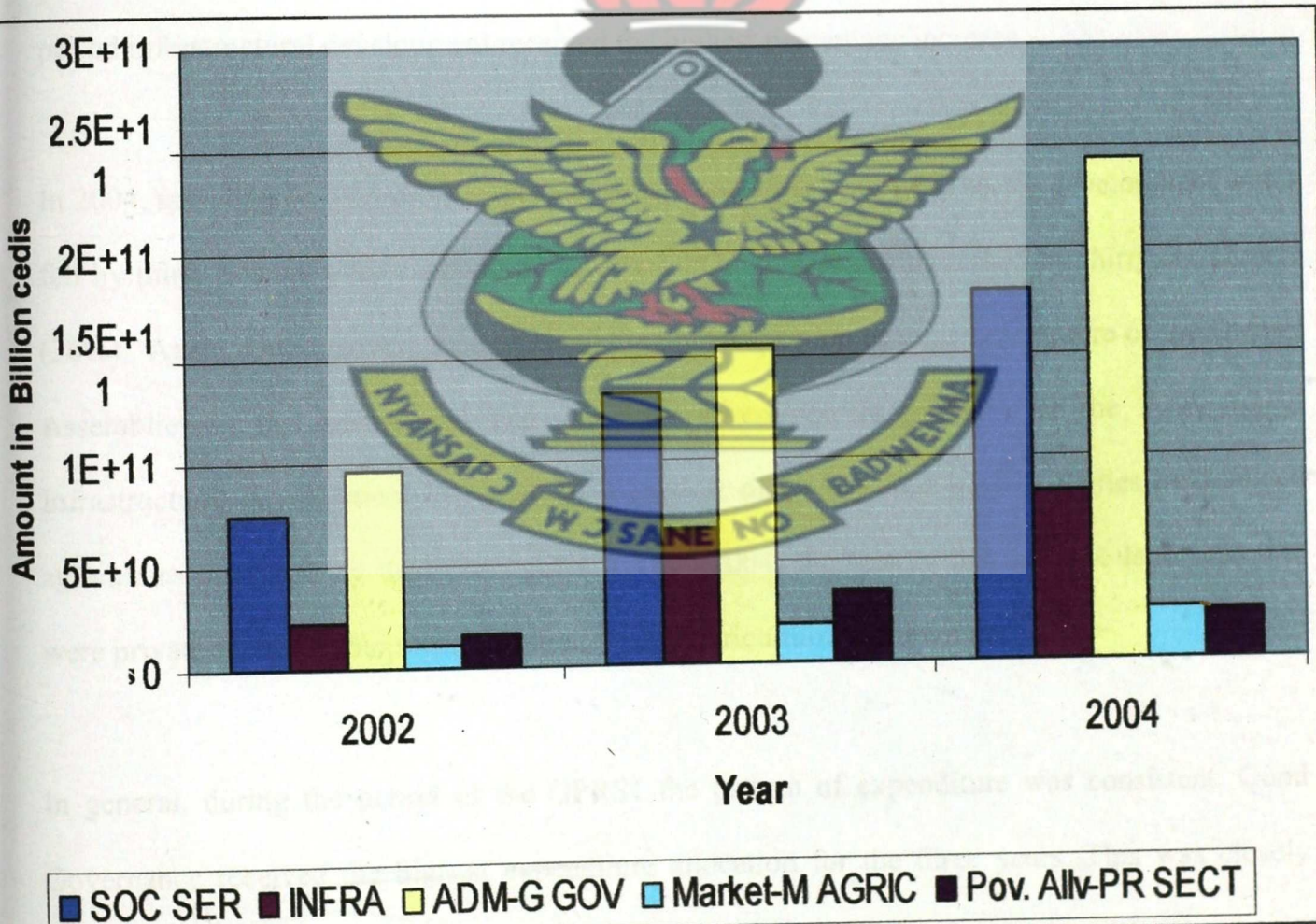
4.2.1 National Expenditure Analysis

For the three years covered by the study, the national expenditure analysis indicated that for the year 2002, District Assemblies spent about 95 billion cedis on good governance which was made up of mainly administrative infrastructure composing of vehicles, offices and residential accommodation. This received the highest expenditure of the total districts' spending in the year 2002. This was followed by social services which attracted an expenditure of almost 74 billion cedis. The social services sector is made up of health, education (Basic and Secondary education), water and sanitation (see fig 4.1).

However, in the same year, infrastructural development which includes road construction, extension of electricity to rural communities and community initiated projects (C I P) had a total

expenditure of 22 billion cedis and was the third most important priority area of District Assemblies expenditure. The other two sectors modernized agriculture; the development of modern markets had an expenditure of about 11 billion cedis whilst private sector development had almost 17 billion cedis made up mainly of poverty alleviation funds disbursed to small scale businesses and farmers. By the above analysis for 2002 Good Governance was the top most priority of District Assemblies and least of the priorities was modernized agriculture. Social services followed Good Governance closely as shown in fig 4.1.

Fig 4.1. A group bar graph showing national expenditure of District Assemblies for The period 2002 -2004



Author's own construct 2007

From fig 4.1, over all expenditure in 2003 by District Assemblies increased by 86% over 2002 expenditure figures. This was mainly due to increased common fund allocation to district Assemblies. However spending by District Assemblies followed almost the same pattern as in 2002, with good governance with the highest bar of 155 billion cedis representing sixty three percent (63%) increase over the 2002 expenditure. This was again followed by social services with total expenditure of 132 billion cedis showing an increase of seventy eight percent (78%) over 2002. The area that attracted the least spending in 2003 was modernized agriculture. The 2003 expenditure increase on modernized agriculture was ninety four percent over the 2002 expenditure. Despite being the least priority for 2003, the area attracted an appreciable percentage increase. Infrastructural development increased by one hundred and ninety eight percent and Private Sector development increased by one hundred and seven percent. During the period infrastructural development received the highest percentage increase.

In 2004, spending on all sectors increased, except spending on private sector development which fell by thirty percent over expenditure for 2003. Social services increased by thirty six percent (36%). Again, Good Governance received the highest portion of total expenditure of the District Assemblies in this period and this was fifty seven percent (57%) over the 2003 figure. Infrastructural development increased by a modest of twenty four percent while modernized agriculture increased by thirty two percent. For 2004, the sectors that had the least attention were private sector development and modernized agriculture as shown in fig 1.

In general, during the period of the GPRS1 the pattern of expenditure was consistent. Good Governance received the highest expenditure allocation for the three years. This was closely

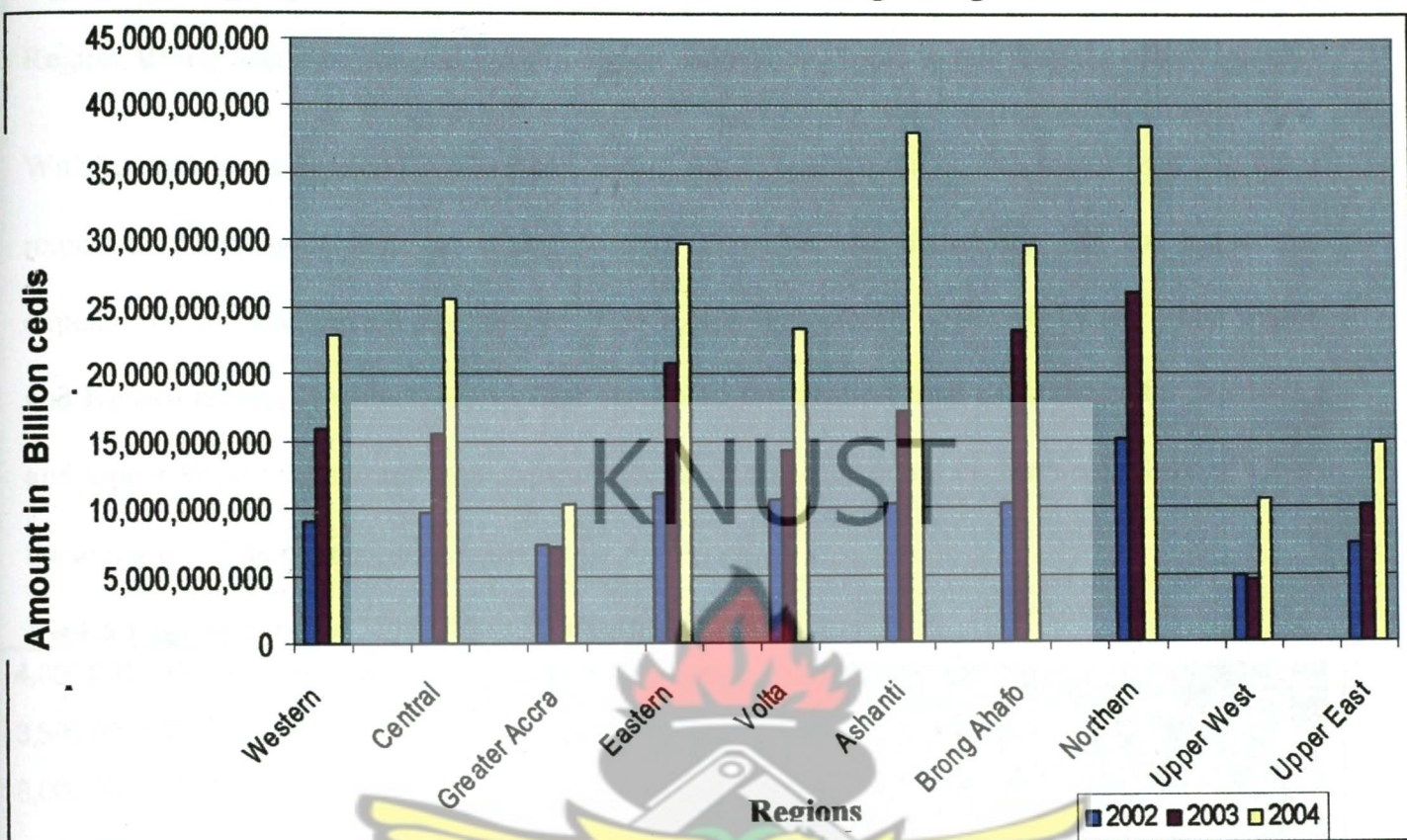
followed by social services Infrastructure, modernized agriculture and private sector development followed in that order. The pattern of expenditure indicates that Good Governance is the priority of District Assemblies in Ghana. Taking into consideration the indirect effect of good governance on poverty reduction and direct effect of sectors like social services, infrastructure and agriculture, if the expenditure pattern continues in the same direction, it will take time for the objectives of GPRS to be realized.

4.2.2 Regional Expenditure Analysis

Having examined the aggregate National Sector patterns of expenditures, it will be worthwhile to disaggregate the expenditure and examine which region is contributing to what pattern of expenditure for the period of the GPRS1

In disaggregating the expenditure data, interesting trend was revealed in the expenditure pattern of the various regions making up the country. For Good Governance, expenditure of the Northern Region stood very high for the three years (2002-2004) of GPRS 1 with 2004 being the highest. Inference can therefore be made that the more the CF to the Northern Region, the more the expenditure on Governance. The Ashanti Region and Brong Ahafo Region closely followed Northern Region. However, poverty incidence in the Northern Region is 70% according to GPRS 1 2002. The region with the least total expenditure on this sector was the Upper West Region registering her highest in 2004 as seen in Fig4.2

Fig4.2 Showing Expenditure on Good Governance according to Regions



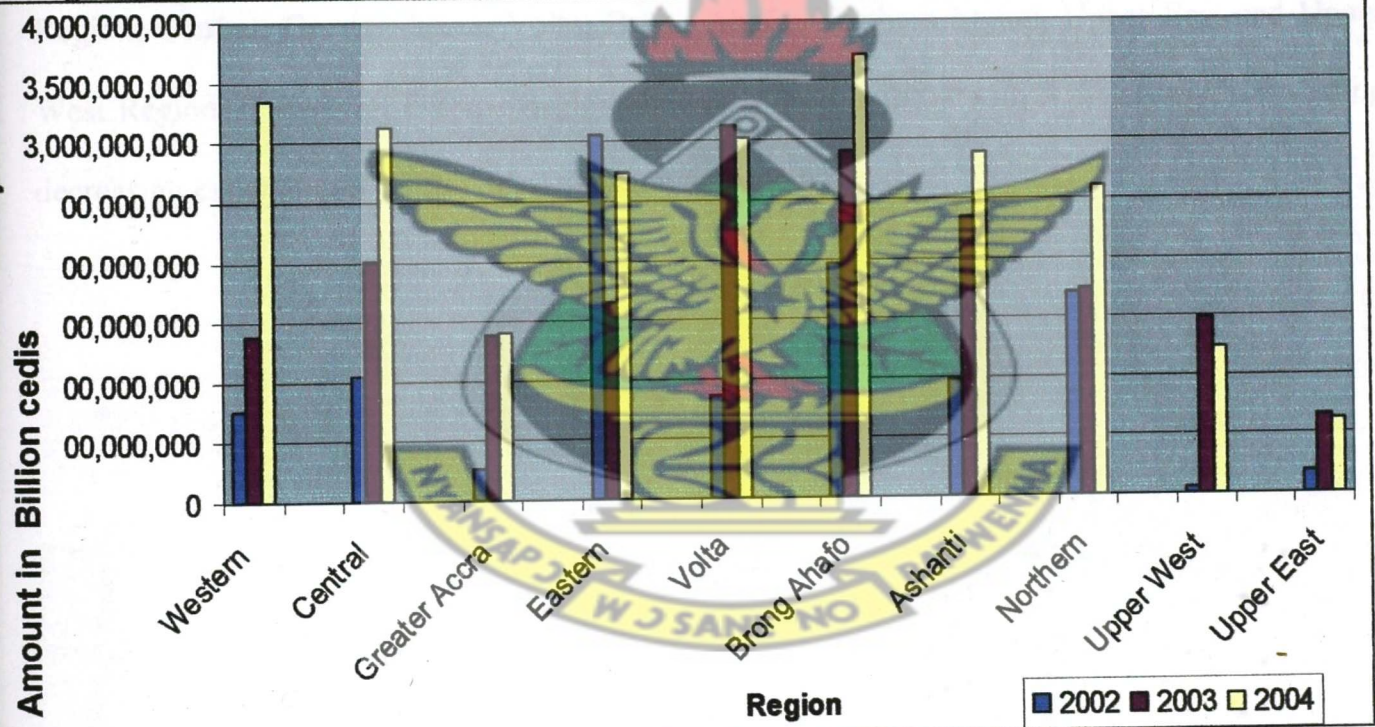
Author's own construct 2007

From Fig4.2, expenditures on Good Governance of all the regions revealed increasing pattern with the exception of Greater Accra and Upper West that showed a decreased expenditure pattern from 2002 to 2003. However, the general trend indicated that expenditures on Good Governance for all regions in Ghana increased from 2002 to 2004. Expenditure on this sector directly affects administration in the various regions of the country and could be the reason for the large allocation of expenditure as compared to Modernise agriculture that directly affects the lives of the citizenry and not administrators. The study therefore concludes that, in general, as CF increased, more expenditure was made on Good Governance for the GPRS 1 period as portrayed in Fig4.2. The national expenditures trend observed in the national expenditure analysis is

collective responsibility of all the ten regions of the country with the Northern region, Ashanti Region, Brong Ahafo region and Eastern region contributing more to this than the other regions.

With regards to modernized Agriculture, Brong Ahafo spent more on this sector than any other region in the country with increasing pattern. Therefore the higher the CF, the higher the expenditure on Modernized Agriculture. This region was closely followed by the Volta region and Eastern region. However, Upper East registered the smallest total expenditure for the period and Upper West with almost zero expenditure for 2002. This could be the small share of CF to these regions. The expenditure is seen in fig 4.

Fig4.3 Expenditure on Modernize Agriculture by Regions



Author's own construct 2007

Regions

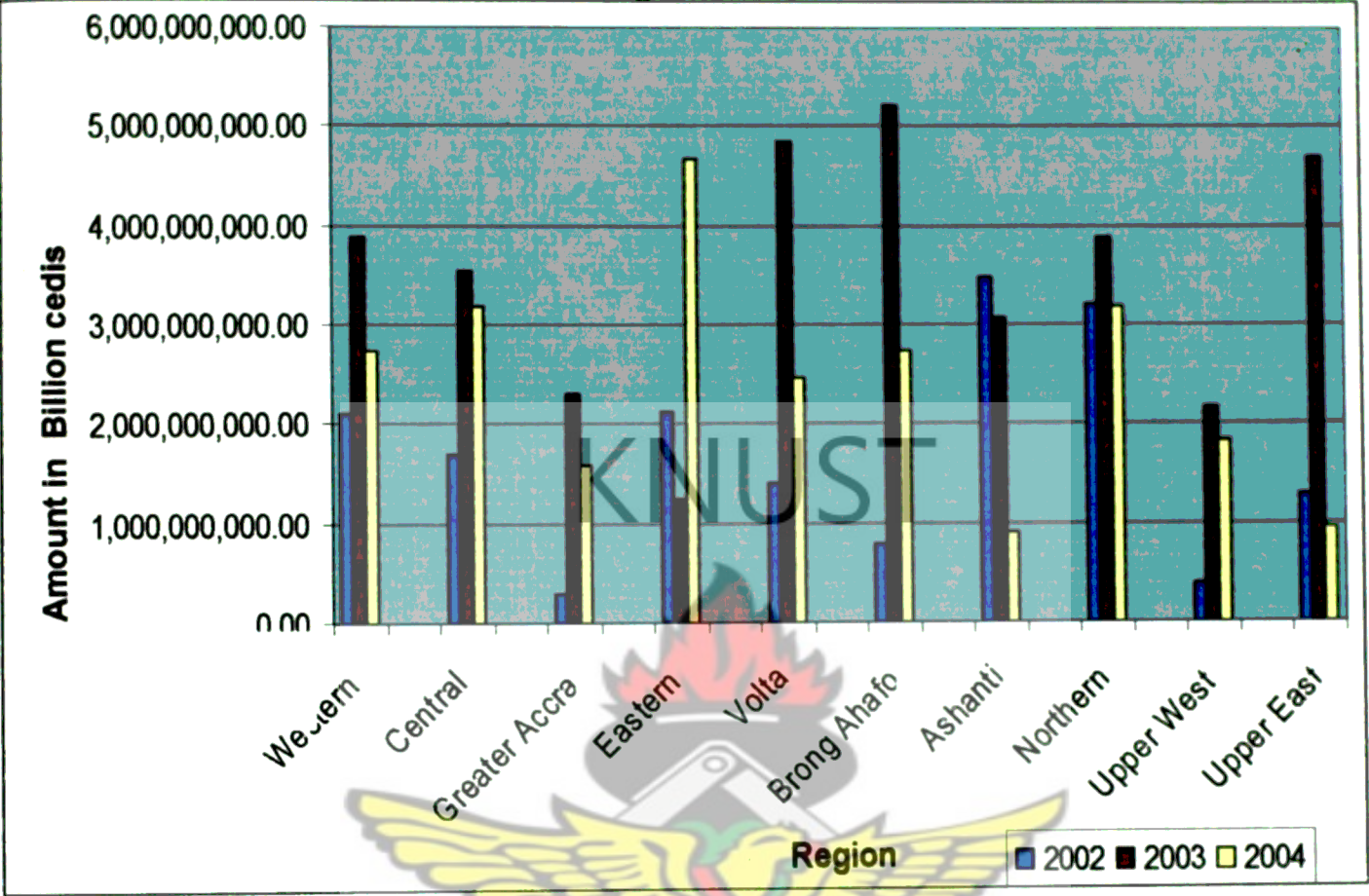
Fig 4.3 reveals that even though the general pattern showed an increasing expenditure on

Modernized agriculture, an exception was found for Eastern, Volta, Upper East and Upper West Regions. Volta, Upper East and Upper West Regions indicated a decline in expenditure on modernized agriculture from 2003 to 2004 with Eastern Region showing a decline in 2003. Comparing the highest expenditure on modernized agriculture to that of Good Governance, it comes out that expenditure on the latter in 2004 is almost ten times the expenditure on the former in Ghana. However, modernized agriculture has direct impact in reducing poverty against an indirect impact of Good Governance.

With the Private Sector expenditure, a mixed trend was revealed. Eight regions showed expenditure increasing from 2002 to 2003 and dropping in 2004. These included Western Region, Central, Greater Accra, Volta, Brong Ahafo, Northern region, Upper East and Upper West Regions. However, Eastern Region showed a drop in 2003 with Ashanti region revealing decreasing expenditures on this sector as seen in Fig 4.4.



Fig 4.4 Expenditure on Private Sector on Regional bases



Author's own construct 2007

In Fig 4.4, the highest expenditure ever made on this sector was Brong Ahafo totaling almost 5.5 billion cedis in 2003 and lowest ever recorded was By Greater Accra (almost 250 million cedis) in 2002.

From the examination and the analysis, a pattern of expenditure revealed that 2003 registered the peak of expenditure on this sector. It can therefore be said that expenditure on Private Sector for the period of the GPRS1 had a dome shape. This is reflected in the national expenditure analysis

and the regions responsible for the peak in the expenditures are Western region, Central region, Greater Accra, Volta region, Brong Ahafo, Northern region, Upper East and Upper West. However, Western region, Central region, Greater Accra, Volta region, Brong Ahafo, Ashanti region, Northern region, and Upper-East and West regions were responsible for the over all fall in national expenditure on Private sector in 2004. This sector that represents poverty alleviation was not given the needed allocation of expenditure by each region as compared to the expenditure allocations to other areas such as Good Governance and Social Services. The highest ever allocation to this area was about 5.4 billion cedis by the Brong Ahafo region in 2003. Eastern region was the only region with exceptional expenditure showing the highest in this area in the country in 2004.

Infrastructure which composed of roads, extension of electricity to rural areas and community initiated projects registered its highest expenditure allocation in 2004 of almost 15 billion cedis by Ashanti Region. This figure is about five times that of the previous year's expenditure. The Greater Accra region was not only the lowest for the same year but also the lowest in terms of total expenditure for the whole country as observed in Fig 4.5.

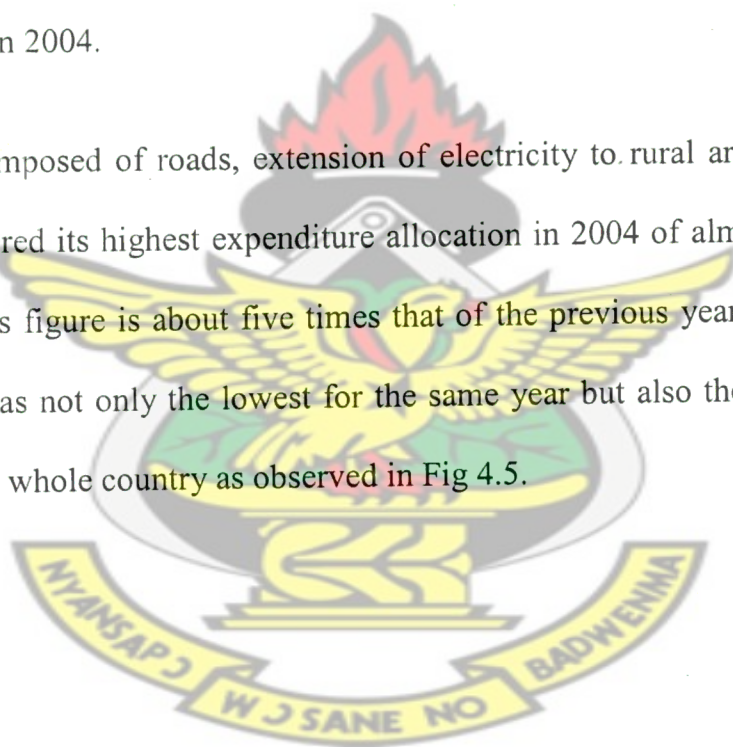
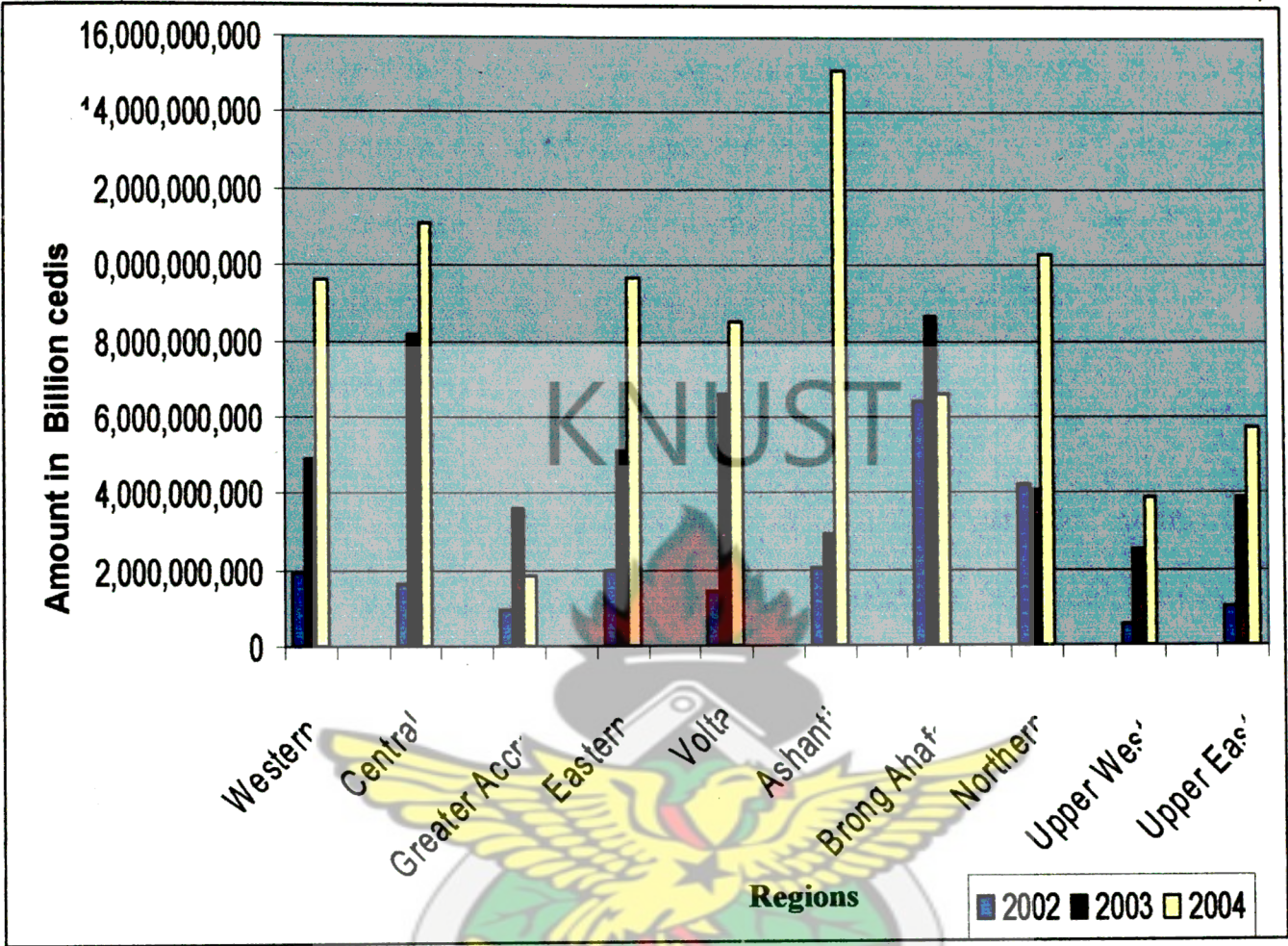


Fig 4.5 Expenditures on Infrastructure on Regional bases



Author's own construct 2007

From the figure above, Greater Accra region has the lowest total expenditure on infrastructure followed by Upper West. The rest of the regions registered their highest expenditures on infrastructure in 2004 with Greater Accra and Brong Ahafo regions revealing a decline in expenditure from 2003 to 2004. Therefore, the highest expenditure for Greater Accra region was in 2003 which is the lowest for the Northern region. The highest in 2003 for Brong Ahafo and Greater Accra were respectively 8.4 billion cedis and 3.8 billion cedis.

From the analysis, inference can be made that the general expenditure pattern on Infrastructure in Ghana for the GPRS1 period, revealed that the higher the CF, the higher the expenditure on Infrastructure. This is basically rational since infrastructural development is the bedrock of every economy and more relevant for a growing economy like Ghana. Even though the analysis revealed increasing expenditure on infrastructure, this was not enough as compared to the expenditure on Good Governance. The highest expenditure on infrastructure was about 14.5 billion cedis compared with that of Good Governance of 38 billion cedis which has an indirect impact on poverty reduction.

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Lastly, expenditure on Social Services was no different to the general trend of increasing expenditures. Only Western Region showed a decline in the expenditure from 2003 to 2004. The rest of the nine regions conformed to the general trends as shown by Fig 4.

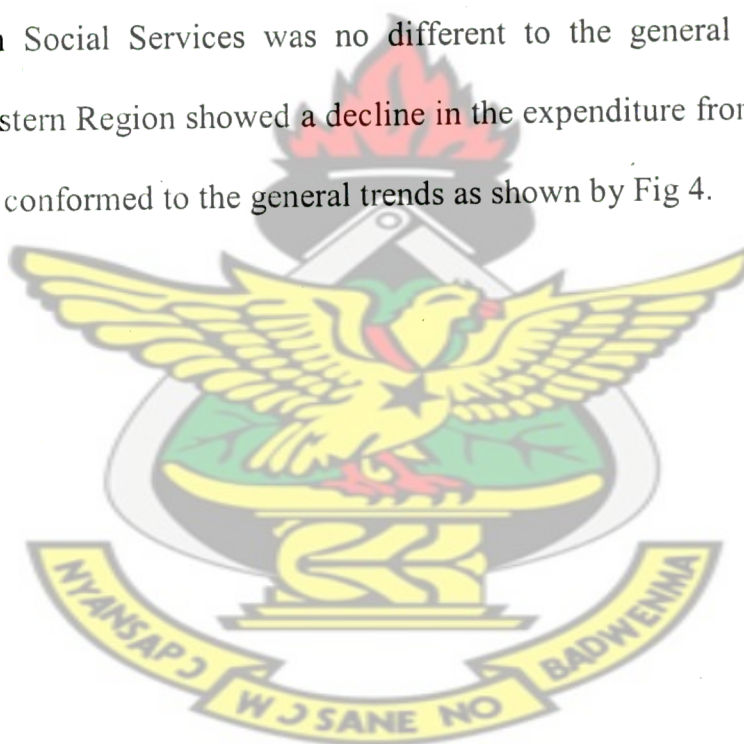
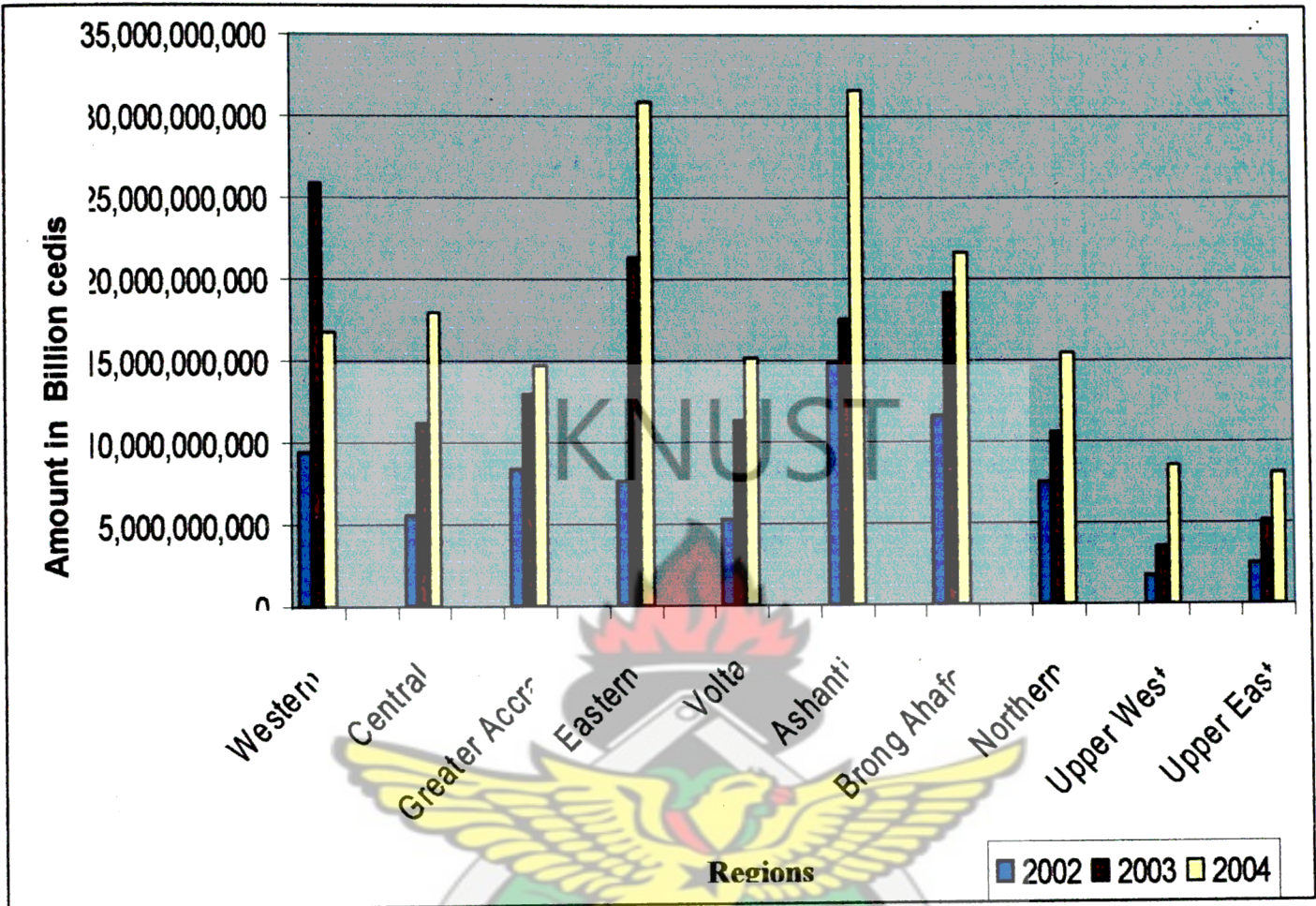


Fig 4.6 Expenditures on Social Services by Regions



Author's own construct, 2007

In Fig 4.6, the highest expenditure on Social Services was registered in 2004 by Ashanti region with 32 billion cedis and was closely followed by Eastern Region with almost 31 billion cedis. The least expenditure on this sector was made by Upper East followed by Upper West in 2002.

Expenditure figures for 2003 indicated Western region allocating the highest for the whole country and was followed by Eastern Region. Again the Upper West allocated the least followed by her neighbor Upper East. Even though these two regions followed the general expenditure patterns, their small allocations could be the result of their relatively small share of the CF.

From the disaggregated expenditure data analysis, it is seen clearly that concentration of regional expenditure was basically on Good Governance, Social Services and Infrastructure with Good Governance receiving the highest regional allocation for the period of GPRS1.

The findings above on expenditure analysis conform to the earlier findings by Devas and Korboe (2000) that the position of the poor has not been bettered despite improvement in the economy and the DA's are to blame.

In conclusion, a review of the GPRS I by GPRS II concluded that despite a 5% growth rate of GDP and improvement in the macroeconomy, the GPRS I has its limitations and bottlenecks. These included service delivery constraints and persistence of regional differences in some key outcomes in health and educational sectors. The pattern of expenditure of DAs should partly be blamed for the limitations.

4.3 Hypothesis Tested

(i) H_0 ; There is no significant direct relationship between a district's share of the Fund and population as well as locally generated revenue.

H_1 ; There is significant direct relationship between a district's shares of the Common Fund and population as well common as locally generated revenue.

From the analysis of the results above, not only does population showed direct effect on the Common Fund, but also it is significant and therefore the null hypothesis is rejected in favour of the alternative. However, locally generated revenue is insignificant but shows direct relationship with the Common Fund, hence the null hypothesis is accepted.

(ii) H_0 ; There is no significant direct relationship between the level of poverty of a

District and the district's share of the Common Fund

H_1 ; There is significant direct relationship between the level of poverty of a district and

Its share of the Common Fund

Poverty measure did not only fail to show direct relationship with its share of the Common Fund, also it is insignificant at all levels. Hence the null hypothesis is accepted.

(iii) H_0 ; Expenditures of District Assemblies are not pro poor.

H_1 ; Expenditures of District Assemblies are pro poor.

In both the national and regional expenditure analysis, District Assemblies's expenditures pattern revealed that it is largely not pro poor, hence, the null hypothesis is accepted



CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 An Overview of the Study

The decentralized government implemented by the Ghana government since 1988 has generated a lot of public interest. This interest has centered on the sources of revenue of District Assemblies and the disbursement of this revenue. One of the main of source of revenue for local governments all over the world including Ghana is inter – governmental transfers. In Ghana, the District Assemblies Common Fund is the main inter – governmental grant given to District Assemblies in Ghana. The disbursement of this grant to District Assemblies is a topical issue. Equally topical is how the District Assemblies disburse this grant to communities under them. The topical nature of the issues raised above has necessitated the study to investigate the disbursement of the District Assemblies Common Fund among District Assemblies and also how the Assemblies in turn disburse these funds to communities under their jurisdiction.

5.2 Summary of Major Findings;

The study established that the only significant determinants of the variations in a district's share of the Common Fund are population and revenue. The variables met the expected sign of the Administrator of the common fund, as well as passed the test of significance. The co-efficient of the population variable was positive which implies that districts that have high populations or experience high population growth stand to benefit from the inclusion of this variable. As expected by the Administrator of the fund, the variable was expected to compensate Districts whose facilities suffer pressure as a result of high population growth like metropolitan and municipal Assemblies.

The revenue variable like the population variable also had a positive expected sign. This implies that districts with bigger revenue capacities with the potential to increase their revenue generation stand to benefit from the inclusion of this variable. Districts that have limited revenue capacity and are unlikely to improve their revenue will not benefit from the inclusion of this variable.

The variables used by the common fund administrator to represent need produced mixed results whilst three of the variables; Doctors, schools, and water had the right expected sign, i.e, negative, they were not significant. The other two variables had both a wrong expected sign and were also not significant. This implies that the need factors do not actually contribute significantly in determining the variations of a district's share of the Common Fund and can be excluded from the formula, however rejecting those with the right sign should be done cautiously.

The results also showed a negative co-efficient for the poverty variable whilst the expected sign was positive. Number of schools that need major repairs was used as proxy for poverty and it was expected that the higher the number of schools that need repairs in a district the poorer the district. Therefore a district with higher number of schools that need repairs gets more of the fund. The results rejected the idea. The results showed that the variable was not significant. In addition to the above a correlation matrix of variables showed a very high positive correlation between number of schools and number of schools that need repairs. Whilst on one hand number of schools was expected to be inversely related to the Common Fund, the number of schools that need repairs was expected to positively relate to the common fund. This is conflicting and

therefore one of the variables should be dropped. The findings above suggest that the poverty variable is not a good measure of poverty and should be discarded.

In conclusion the results indicated that variables representing need and poverty did not contribute significantly in determining a district's share of the Common Fund. However variables that rewarded rich Metropolitan District were found to be very significant. It can therefore be safely concluded that the formula used by the Administrator in disbursing the fund is pro rich urban communities. An R-squared of 27% is a confirmation of the low determination of the variables used by the administrator of the fund in sharing the fund among district assemblies.

On expenditure of District Assemblies, it was established that District Assemblies conformed in disbursing the fund according to the five priority areas of the Ghana poverty Reduction Strategy 1. However the analysis revealed very interesting expenditure patterns which can help regulate the expenditure of District Assemblies. During the period 2002-2004 it was observed that good governance received the highest expenditure by District Assemblies consistently for the three years. This was followed by social services and infrastructural development. The areas that received the least attention were modernized agriculture and private sector development, while all the other four sectors had an increasing expenditure allocation. Expenditure on private sector development increased from 2002 to 2003 and fell in 2004. The general increase in expenditure from year to year during the period can be attributed to increased common fund allocation to the districts.

At Regional level it was found that almost all the regions contributed to the National expenditure patterns. However the regions that had the highest expenditure on good governance were Northern, Ashanti, Eastern and Brong Ahafo regions with Northern region consistently being the highest spender on good governance. The regions with the lowest expenditure on good governance were the Upper West, Upper East and Greater Accra regions.

The other outstanding results were that where as Northern Region was on top of the good governance chart, it was among the lower half bottom of the social services chart with the Upper East and West regions. Ashanti, Eastern, Western and Brong Ahafo regions were on top of the social services chart. The analysis revealed that expenditure on private sector development did not reveal a consistent pattern except that eight regions showed increasing expenditures during the period. The sector generally did not receive much attention from District Assemblies. On modernized agriculture, the study found an increasing general pattern of expenditure from 2002 to 2004. With infrastructural development it is observed that Greater Accra region registered the lowest expenditure followed by Upper West. In general, the analysis showed general expenditure on infrastructure increases with increases in allocation of the common fund during the period of the G P R S1.

5.3 Policy recommendations

This study has discovered that the factors chosen by the Administrator of the fund to represent need; Doctors, Clinics, Schools, Teachers and Water were not significant in assisting needy Districts. Clinics and Teachers had the wrong expected sign. The study recommends that instead of using the above factors to determine need, the Administrator of the fund can rely on the

classification of District Assemblies into metropolitan, municipal, urban and rural districts by the Ministry of local Government. This classification though not directly based on need is a reflection of the level Development of District Assemblies. Districts will therefore be weighted according to their status and those found in the same category will be given equal amounts. This implies that rural Districts deemed to be more needy will be given more funds than Metropolitan and Municipal Assemblies.

On Poverty, the study has revealed that using major repairs as proxy for poverty is not a good measure of poverty. In addition the variable has been found to be positively correlated with the number of schools, while the number of schools is expected to be inversely related to a district's share of the fund, number of schools that need major repairs (poverty) is expected to be positively related to a district's share of the fund. This is conflicting and confirms the wrong expected sign produced by the results. In addition the variable was found to be insignificant and should be discarded. In its place the Administrator should adopt one of the studies on poverty trends in Ghana, (GPRS 1 2002) which clearly indicates which regions and districts are poor. The Administrator can therefore classify the districts into poor and non poor, put weights on them and disburse the funds according to these weights. In Malawi twenty percent (20%) of the general Resource fund is allocated to the rural districts with above average level of poverty; only rural districts are eligible to access these funds since urban and townships have significantly higher fiscal capacity, (Roy Bahl and Sally Wallace 2005). The revenue and population variable met their expected sign and were also found to be significant. The two variables therefore serve the purpose for which the Administrator of the fund put them in the formula. However with these two variables, the District Assemblies could again be classified using the Ministry of local

government classification as explained before since the classification is a good reflection of service pressure and the fiscal capacity of the Assemblies. Districts found in the same category can therefore be treated the same.

Expenditure analysis of District Assemblies in Ghana during the implementation of the GPRS1 indicated that District Assemblies spent their allocation of the Common Fund in conformity with the GPRS. However the revelation that good governance which is composed mainly of administrative infrastructure including official vehicles received the highest allocation of expenditure during the period is quite disturbing. The Ministry of local government should either mount educational campaign among Assembly members to sensitize them on the need to take control of Assembly budgets and spend funds on issues that directly affect the lives of the people.

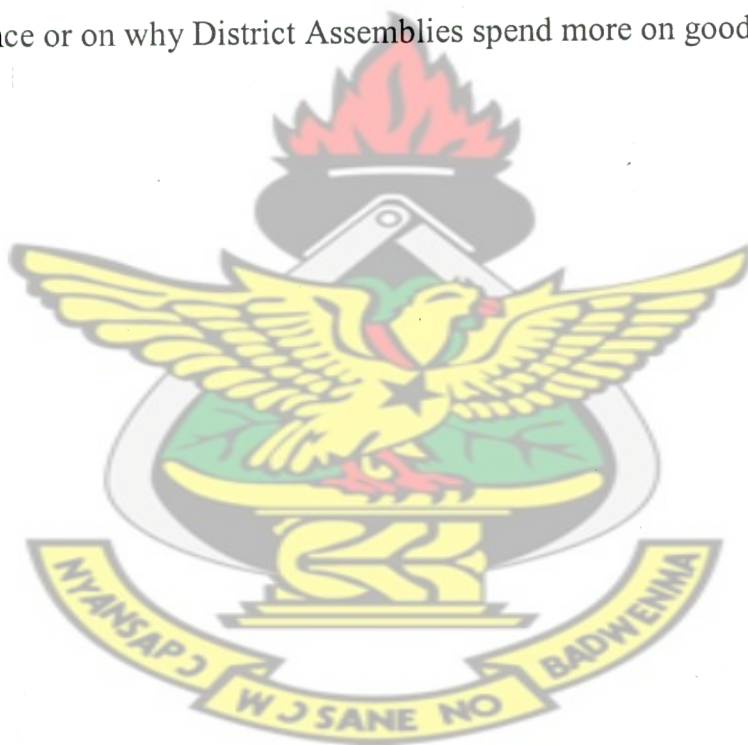
Alternatively, the Ministry of local Government in issuing guidelines on the disbursement of the fund by district assemblies can put upper limits on how much can be spent on each sector.

In addition a strong Monitoring mechanism which includes periodic review of expenditure of District Assemblies should be enforced. The three Northern Regions, particularly Northern Region's attention should be drawn to the fact that, they cannot change the poverty status of the people by spending more on good governance. Efforts should be made to redirect their priority to social services, infrastructural development and private sector development.

5.4 Areas of future research attention

The study analyzed the formula used by the common fund Administrator in disbursing the fund to District Assemblies in Ghana. It identified the weaknesses of the Administrators formula but could not produce an alternate mathematical formula. Future research can develop on the policy recommendations offered above and attempt to develop a model for a fair disbursement of the fund.

On the part of expenditure of District Assemblies, future research can attempt to find out whether good governance is actually the priority of the people and who makes the decisions to spend more on good governance or on why District Assemblies spend more on good governance.



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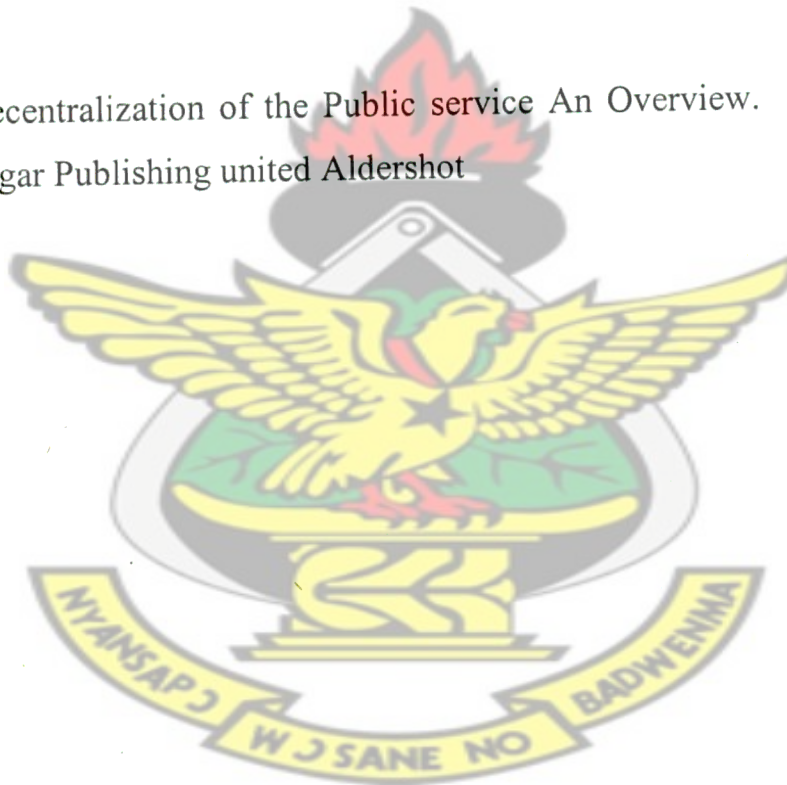
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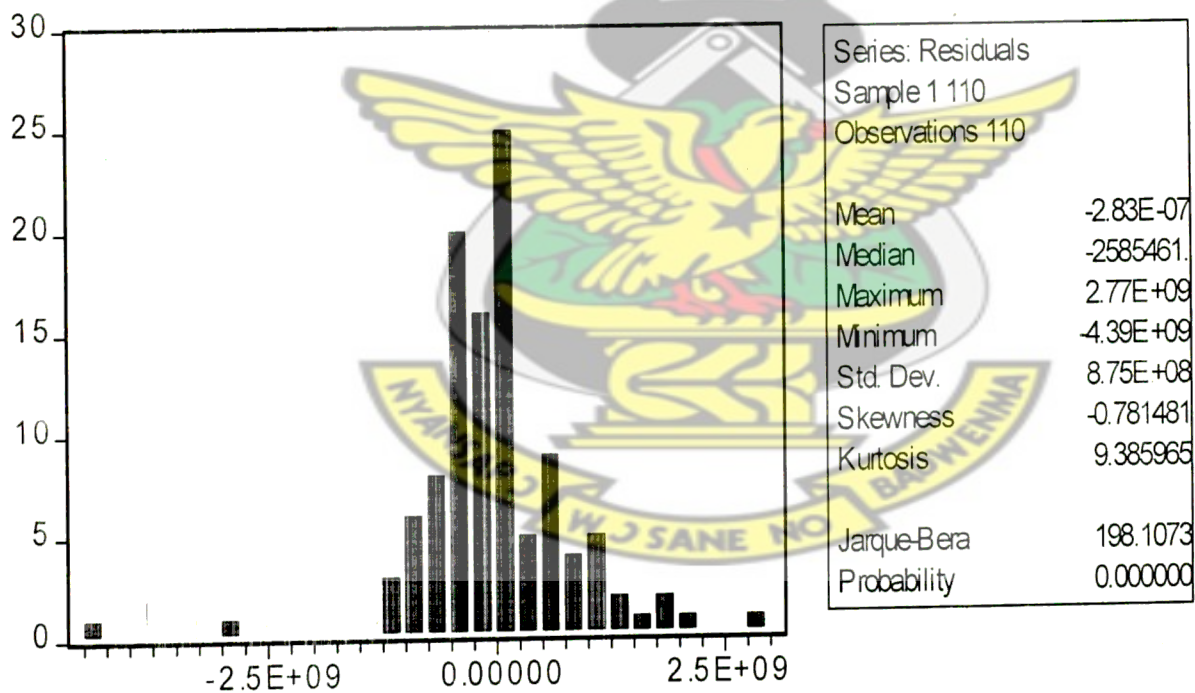


APPENDIX I linear Regression Result

jDependent Variable: CF
Method: Least Squares

Sample: 1 110
Included observations: 110

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CLI	-31669577	16871391	-1.877117	0.0634
DOC	2256748.	9924689.	0.227387	0.8206
POP	2171.977	594.3556	3.654339	0.0004
REP	-5181260.	5610246.	-0.923535	0.3579
REV	3734651.	1228314.	3.040470	0.0030
SCH	22872.38	2842135.	0.008048	0.9936
TEACH	651478.0	275531.3	2.364443	0.0200
WATER	-4452117.	4671110.	-0.953118	0.3428
C	4.23E+09	3.36E+08	12.59085	0.0000
R-squared	0.531208	Mean dependent var	4.71E+09	
Adjusted R-squared	0.494076	S.D. dependent var	1.28E+09	
S.E. of regression	9.08E+08	Akaike info criterion	44.17072	
Sum squared resid	8.34E+19	Schwarz criterion	44.39167	
Log likelihood	-2420.390	F-statistic	14.30595	
Durbin-Watson stat	1.954888	Prob(F-statistic)	0.000000	



APPENDIX II Correlation Matrix.

	CF	CLINICS	DOCTORS	POP	REPAIR	REVENUE	SCHOOLS	TEACHERS	WATER
CF	1.000000	0.098729	0.550749	0.629366	0.043387	0.285525	0.345197	0.553471	0.053046
CLINICS	0.098729	1.000000	0.442021	0.301123	0.451167	-0.045524	0.558617	0.565245	0.235826
DOCTORS	0.550749	0.442021	1.000000	0.720881	0.194327	0.079638	0.557180	0.799565	0.248976
POPULATION	0.629366	0.301123	0.720881	1.000000	0.190708	0.049631	0.522016	0.700194	0.202725
REPAIR	0.043387	0.451167	0.194327	0.190708	1.000000	-0.114333	0.837887	0.500361	-0.168192
REVENUE	0.285525	-0.045524	0.079638	0.049631	-0.114333	1.000000	-0.007081	0.048715	-0.082308
SCHOOLS	0.345197	0.558617	0.557180	0.522016	0.837887	-0.007081	1.000000	0.818159	0.015215
TEACHERS	0.553471	0.565245	0.799565	0.700194	0.500361	0.048715	0.818159	1.000000	0.154767
WATER	0.053046	0.235826	0.248976	0.202725	-0.168192	-0.082308	0.015215	0.154767	1.000000

