ADDIS ABABA UNIVERSITY
COLLEGE OF LAW AND GOVERNANCE STUDIES
CENTER FOR FEDERALISM & GOVERNANCE STUDIES

Fiscal Federalism in Ethiopia
The Quest for Equitable Development

By: Debebe Barud Dera

A Dissertation Submitted to the Center for Federalism and Governance Studies, College of Law and Governance Studies of Addis Ababa University, in Partial Fulfillment of the Requirement of the Degree of Doctor of Philosophy in Federalism and Governance Studies

March, 2021,
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Supervisors:

Prof. Tegegne G/Egiziabher (Internal Supervisor)

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March, 2021,
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DECLARATION

I, undersigned, declare that this thesis is my own original work and has not been presented for a degree in any other university and that sources of materials used for this thesis are duly acknowledged.

Debebe Barud Dera
March, 2021

Certification

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DEDICATION

This thesis is dedicated to my LORD and SAVIOUR, JESUS CHRIST. “Who redeemed my life from destruction; who crowned me with loving-kindness and tender mercies” (Psalm 103: 4).

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Romans 11:33-36

O, the depth of the riches both of the wisdom and knowledge of God!

How unsearchable are his judgments, and his paths beyond tracing out!

“For who has known the mind of the Lord?

Or who has been his counselor?”

“Or who has first given to him, and it shall be

Recompensed unto him again?”

For of him, and through him, and to him, are all things:

To him be glory forever? Amen.

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Debebe Barud Dera

September, 2020

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List of Acronym

AAPO: Amhara people's Organizational

AC: Asphalt Concrete

BEmONC: Basic Emergency Obstruct and Neonatal Care

CAFPDE: Council of Alternative Forces for Peace and Democracy in Ethiopia

CGC: Common Wealth Grants Commission

CGE: Computable General Equilibrium

CPR: Contraceptive Prevalence Rate

CSA: Central Statistical Agency

DBST: Double Bituminous Surface Treatment

DLDP: District level Decentralization Program

DPT: Diphtheria, Pertussis and Tetanus

EDHS: Ethiopian Development Health Service

EIT: Employment Income Tax

EPRDF: Ethiopian Revolutionary Democratic Front

ERRP: Economic Recovery and Reconstruction Programme

FDRE: Federal Democratic Republic of Ethiopia

ERA: Ethiopian Road Authority

ESDP: Education Sector Development Program

ETP: Education and Training Policy

EU: European Union

FDRE: Federal Democratic Republic of Ethiopia

FSP: Food Security Program

FGPG: Federal General Purpose Grant

GDP: Growth Domestic Product

GER: Gross Enrollment Ratios

GPG: General Purpose Grants

GPI: Gender Parity Index

GSDP: Gross State Domestic Product

GTP: Growth and Transformation Program

HCSE: Household Consumption Expenditure Survey

HABP: Household Asset Building Program

HCSE: Human-Centered Software Engineering

HDA: Health Development Army

HoPR: House of the peoples Representative

HoF; House of the Federation

HSTP: Health Sector Transformation Plan

HEW: Health Extension Workers

HP፡ Health Posts

HSDP: Health Sector Development Program

IMF: International Monetary Fund

IGR: Institutional Government Review

MEFF: Medium-term Expenditure and Fiscal Frame

MDG: Millennium Development Goals

MoF: Ministry of Finance

MoFED: Ministry of Finance and Economic Development

MoT: Ministry 0f Transport

MDG: Millennium Development Goal

MMR: Maternal Mortality Rate

MoE: Ministry of Education

MoH: Ministry of Health

MoWIE፡ Ministry of Water, Irrigation and Electricity

MoSHE: Ministry of Science and Higher Education

MSE: Micro and Small Scale Enterprise

NAFTA: North American Free Trade Agreement

NA: Not Available

NDDC: Niger Delta Development Commission

NER: Net Enrolment Ratio

NEAEA: National Educational Assessment and Examination Agency

NGO: Non-Governmental Organization

NWCO: National Wash Coordination Office

OECD: Organization for Economic Co-operation and Development

OWNP: One WASH National Program

PSNP: Productive Safety Net Programme

PSNP: Productive Safety Net Programme

PSCAP: Public Sector Capacity Building Program

PMO: Office of the Prime Minister

PRSP: Poverty Reduction Strategy Paper

PASDEP: Plan for Accelerated and Sustained Development to End Poverty

PHC: Primary Health Care Coverage

PHS: Potential Health Service

PHC: Primary Health Coverage

PTR: Pupil Teacher Ratio

RES: Representative Expenditure System

RIT: Rental Income Tax

RTS; Representative Tax System

RSE: Robust Standard Errors

RSDP: Road Sector Development Program

SNNP: Southern Nation, Nationalities and Peoples State

SPSS: Statistical Package For Social Sciences

SWF: Social Welfare Function

SPG: Specific Purpose Grants

SDPRP: Sustainable Development and Poverty Reduction Program

TOT: Turnover Tax

TFR: Total Fertility Rate

UNDP: United Nations Development Program

USA: United States of America

ULGDP: Urban Local Government Development Project

URRAP: Universal Rural Roads Access Program

UNICEF: United Nations International Children's Emergency Fund

VAT: Value Added Tax

WB: World Bank

WMS: Welfare Monitoring Survey

WHO: World Health Organization

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ABSTRACT

One of the reform agenda of the EPRDF, following its control of state power in 1991, was the introduction of fiscal federalism. The goal of the agenda was to bring about equitable development and durable peace to Ethiopia, a home to diverse nations and nationalities. After two and half decades, though there are developmental progresses beyond controversies, there are widely held concerns about the equity of the development across regions. This thesis investigates the impact of fiscal federalism—devolution of assignment of responsibilities, taxation powers, and the intergovernmental transfer system—on equitable development in Ethiopia by taking four pro-poor sectors including eduation, health, water and road. To this end, both qualitative and statistical/ econometrics techniques were employed and both primary and secondary data were used.

The finding indicates that there is a connection between fiscal arrangement and equitable development in Ethiopia. This can be explained by the analysis made on the selected sectors. Despite a growing trend in all aspects of socioeconomic development as exemplified in the four selected sectoral development (education, health, water and road) for the last ten years, it is important to realize that the progresses in each of the four sectoral developments are not equitable and regions show significant variation in their emphasis on their achievements and their development outcomes. For instance, despite the achievements observed at the primary level, the analysis shows that the ESDP has been less successful at improving equity and filling the gap of the access at secondary level. Moreover, despite substantial increases in the enrolment of children in secondary schools, absolute enrolment levels are still very low and wealth, geographic and gender disparities remain considerable. The expenditure in the health, water and road sector increased in terms of both absolute amount and per capita basis. Consequently, output and outcome of their services have also increased substantially. However, equity and inclusiveness among regions are still not addressed and needs concerted action to reduce the inter-regional health, water and road access gap without compromising efficiency to fulfill each individual's right of equal access to government provided services stipulated in the Ethiopian Constitution.

Furthermore, regarding tax policy in Ethiopia, it was supposed to ensure balanced regional development. The Federal Constitution aims at creating strong states vested with extensive decision-making powers. Notably, the finding shows that there has been a steady increase in both direct and indirect tax collection. However, the finding shows that the federal government still centralizes the fiscal means of executing fiscal responsibilities which indicates that there is a de facto centralization of fiscal decision-making. This is reflected by excessive dependence of regional governments on federal grants to finance even recurrent expenditures within their jurisdictions. The fiscal system is characterized by both vertical and horizontal imbalances that require further decentralization of revenue sources that commensurate the expenditure responsibilities of the regional governments. The vertical fiscal imbalance in Ethiopia is thus explained more by monopolization of the Central Government over the most lucrative tax bases and partly by high expenditure requirement of regional governments. The study also found that the true practice of fiscal federalism in Ethiopia has been inhibited by several factors which include, the dominance of the federal government in the sharing of national financial resources, the imposition of the party structure of the EPRDF on fiscal federalism, the pattern of assignment of responsibilities by the constitution among federating units, and over-reliance of regional governments on the revenue from the Federal government grant. The analysis further shows that the federal grant that is expected to be as a glue to hold federal and regional states together is not able to narrow the vertical and horizontal fiscal imbalance of the country and that

suggests, fiscal federalism in Ethiopia failed to keep its constitutional promises. Therefore, based on the above findings this study concludes that fiscal federalism in Ethiopia is not promoting equitable development even if it has made contribution to the overall development.

Finally, central to the success of fiscal decentralization, is clarity in the assignments of revenue and expenditure responsibilities. The urgent reform that is required is the need for government to redress the prevailing vertical and horizontal fiscal mismatches through appropriate policies of increasing tax revenues to regional states as well as reforms of expenditure responsibilities to enhance their efficiency and capacity in the provision of public services.

Chapter one

1. Introduction

1.1 Background

Fiscal federalism, which mirrors the amount of fiscal autonomy and responsibility accorded to sub-national governments, has been an important subject in the policy equation of many developing and developed countries. It refers essentially to the allocation of government resources and spending authority to the various tiers of government (Oates, 1972; Tanzi, 1995). The allocation of funds within a federal or decentralized system of government is crucial for both political stability and economic development of a country. In general, fiscal decentralization is one major component of the broad policy agenda of decentralization. The later represents the clamor for greater autonomy and independence by communities and is informed by the desire to get more involved in government because of the dissatisfaction with the inability of the central government to deliver quality services (Chete, 1998). In this equation, fiscal federalism serves as a constraint on the behavior of revenue-maximizing central government, while it serves as a booster on behalf of underdeveloped sub national governments to make decisions that favor their interests.

There is yet another rationale why fiscal federalism is gaining prominence in the development discourse. Since the 1990s, there has been a resurgence of interest in the macroeconomic performance of developing countries. A prominent element in the policy advice given to developing countries to enhance growth and development potentials is the fundamental need to restructure the public sector to make it more responsive to efficient and equitable provision of public services to enhance growth and development potentials (Aigbokhan, 1999) in developing countries since 1990th. A trend that has emerged from this public sector restructuring is the devolution of spending and revenue-raising responsibilities to lower levels of government not only in federal systems, but also in many unitary countries. This trend is a reflection of the movement towards participatory democracy and the need to provide public goods and services that meet the preferences of people in each locality (Raoul, 2002, AddisAlem,2003,.Watts,2008, Shah,2009).

Recent interest in fiscal federalism fueled the debate about public sector reforms in general, and the role of sub-national governments in economic development in particular. In many federal countries, power is necessarily divided to some extent between the central and other levels of government. The extent of division of power has important implications for the functioning of the public sector and efficient provision of services. Division of policy-making powers influences not only delivery of services but also their financing that in turn determines equitable development of countries. The central policy issue in this perspective is fiscal decentralization, which requires that sub-central units of the government must be empowered to make decisions about provision of public services and their financing at the lower level (Yilmaz, 1999).

Ethiopia embarked upon the path of decentralization after nearly two decades of a long and devastating civil war under the Derg military dictatorial regime that ruled Ethiopia for nearly two decades 1974-1991. The regime was over thrown by a coalition of ethnic/nationality-based liberation forces in May 1991. The new government initiated a major policy of decentralization to reverse centuries-old tradition of highly centralized and unitary state. The main aim of the policy has been to promote equitable development and bring about political stability by enabling all citizens of the country to benefit fairly and equitably from the national resources and development achievements of the nation (FDRE Constitution, 1995; Art.89 (2)). The policy goal has also a broad agenda of empowering nations, nationalities and peoples to determine their destiny and develop their language, history and culture as equal citizens of the country (FDRE Const., 1995). One of the policy instrument to achieve these objectives has been the introduction of fiscal federalism: 'the federal government and the states shall share revenue taking the federal arrangement into account' (Art.95). The broad objective of this research is to investigate the extent to which fiscal federalism has promoted equitable development in Ethiopian federation and to assess the achievements and constraints that the country has experienced in the course of promoting the goal of equitable and sustainable development for all its peoples in four major sectors like Education, Health, Water and Road.

Ethiopia: Socio-Political Background

Ethiopia is one of the largest countries in Africa and the second most populous nation with an estimated population of more than 94.35 million (CSA, 2017) inhabitants and increasing at a rate of 2.6 percent per annum.

It is Africa's oldest independent nation that has never been colonized by a foreign power except a brief period of occupation by Fascist Italy during World War II. It is a diverse country consisting of more than 85 ethno-linguistic and different religious groups. The majority of the Ethiopian population is rural, largely due to the fact that the main resource of the country is agriculture. The economy is largely dominated by agriculture, which accounts for about 44 percent of GDP, 85 percent of export earnings and 85percent of total employment according to the 2007 census data. Hence, rural economic activity and production is the backbone of the national economy. Industry and services account for small but fast growing sectors of the national economy (UNDP, 2016).

Since 1991, Ethiopia has introduced many sweeping changes in government. The foremost among these is the introduction of a federal government structure in an attempt to resolve the political instability that the country has been experiencing for a long time. The primary goal of this move has been to restructure the hitherto unitary Ethiopian state to a federal one whereby all its citizens will enjoy democracy and the benefits of a participatory government. In addition, federalism was opted also to promote the economic development of the country by empowering all its peoples to benefit from the fruits of socio-economic development and avoid inequities in access to the country's national resources. One of the key policy instruments to achieve this objective has been the introduction of fiscal federalism according to which national resources will be divided among regions and communities in a fair, transparent and equitable manner. What has been achieved in this regard and the review of the policy challenges and constraints in implementing the fiscal decentralization agendas is the central issue for research in this thesis.

The allocation of funds within a federal or decentralized system of government is crucial for both political stability and economic development of a country. At the end of the military rule, the country was at the verge of disintegration.

The national question, which was the major cause of the demise of the regime, had to be solved in order to rectify the injustice and also accommodate the aspirations of the various armed groups. Abolishing command economy and creating an environment conducive to domestic and foreign investment had to be one of the priorities of the new government to revive the economy and create employment opportunities. Above all, the Ethiopian experience demonstrated that it is futile to attempt to achieve economic and social transformation through intimidation and brute force. Evidently, the realization of a federal and democratic system is a requisite for economic and social transformation in such fragmented and troubled nations. Thus, Ethiopia encountered the lone option of building a federal and democratic system that upholds the right of nationalities to self-determination as a means of survival in the first place, and then in order to achieve genuine development, durable peace, stability and national unity.

Against a background of pressing realities of poverty, income inequalities, lack of local capacity, spatial fragmentation, and rural backwardness and other challenges, Ethiopia is compelled to examine the contribution of various approaches for promoting equitable development. Fiscal federalism is one such approach that affects national development and political stability. The important question that remains to be answered is how fiscal federalism affects the equitable development of the country. This thesis examines the existing fiscal decentralization process of the country and its impact on equitable economic development by critically reviewing achievements and challenges in certain major sectors, particularly on education, health, water and road sector development since 1991.

Devolution: The Ethiopian Context

Ethiopia, unlike other African countries, initiated its decentralization process with a dramatic commitment to devolution, instead of deconcentration or delegation. This took place with the big push for decentralization of the early 1990s, which introduced:

- Political decentralization with the election of sub national politicians at the region and district (woreda) levels;
- Fiscal decentralization with the transfer of a significant portion of the national budget to the regions (starting in 1992) and woredas (starting in 2001), and the transfer of expenditures in major social service areas such as education, health care, and agriculture; and
- Administrative decentralization with the transfer of planning and administrative responsibilities in the expenditure areas noted above.

The system of power devolution is made possible through the establishment of the necessary institutions to lead and run government functions. Legislative, judicial, and executive branches of government are created at federal, regional, and local levels. The legislative bodies at sub national levels are regional and woreda councils. Regional councils have the authorities and powers of state legislatures found in certain other federations, including the ability to select representatives for the

House of Federation, the upper chamber of the parliament that has some influence on patterns of fiscal decentralization. Woreda councils are assemblies that meet once every three months. The council has the authority of approving the woreda's budget, and of reviewing the work progress of the different sectors and executive members. The judicial system is represented by the court and the executive branch is represented by the states and woreda administrations. Deconcentration and delegation are perhaps less prominent in Ethiopia than in many African countries or cases of decentralization elsewhere in the developing world. Nonetheless, deconcentration may be seen in the zones (with the regional states not the central government doing the deconcentrating). The roles of the zones vary from state to state with some working on a deconcentrated approach where the regions confer specified responsibilities to the zones, and others working on a more bottom-up approach—but in each case they are partially responsible for implementing regional initiatives.

The relatively limited nature of deconcentration in Ethiopia is especially noteworthy in one significant area where Sub national governments have greater autonomy than most of their African counterparts: control over the civil service. While Watson and Yohannes (2005, p. 15) note that the civil service is a federal institution, it seems clear that civil servants employed by Sub National Governments actually respond to sub national units of government, not directly to national government. As noted by Fessha and Kirk by (2008, p. 259), Ethiopia's regions have a separate civil service from the national civil service. This enables the regions to hire and fire personnel, including the large number of teachers each has under their purview. The full transfer of autonomy over personnel was crucial for the substantial big push for fiscal decentralization that occurred in Ethiopia, as many other countries decentralize expenditures, yet retain centralized patterns of control over nationally contracted civil services. It is important to conduct an empirical research on Ethiopia's fiscal federalism and its impacts on equitable development as there is no comprehensive study in this regard.

1.2. Statement of the Research problem

Until 1974, Ethiopia was ruled by a traditional and semi-feudal monarchy. Largely based on traditional notions of power and authority, the regime enjoyed relative stability and legitimacy but was devoid of any democratic credentials. The system of rule was based on a narrow class of feudal landlords and small educated elite. As a traditional state, it was unable to address the popular demands for democratic and participatory rule. As a result, it collapsed under the weight of popular pressure in 1974 and was replaced by a leftist military dictatorship known as the Derg (Clapham, 1988, Bahru, 2002, Assefa, 2006, Andargatchew, 1980, Harbeson, 1988, Keller, 1988, Perham, 1948). The Derg military dictatorship seized the mantle of power in 1974 and lasted until 1991. The regime threw the country into political turmoil and civil war unprecedented in its long history. The Derg period witnessed the flare-up of civil wars and bloodshed, a complete denial and brutal suppression of democratic and human rights and a system of governance that had no bounds to its excesses. On the economic front, the regime adopted irrational economic policies for the purported aim of building a socialist, state-led economy that nationalized the manufacturing, distribution and service sector. Its agricultural policies were equally disastrous that brought about forced collectivization of agriculture and resettlement of the rural peasantry. To deal with ethnic insurgencies and popular demands for democracy and equality of nations and nationalities, the regime resorted to force to maintain its survival. It diverted national resources to the widespread war effort and this compounded with severe fluctuations in weather conditions brought about untold suffering and economic hardship to the millions of people. Moreover, the pre 1991 regimes were undemocratic and oppressive. During this time, citizens of Ethiopia were compelled to spend a protracted time of oppression, deprived of their basic rights and interests. The diverse nations, nationalities and peoples of the country were politically alienated, economically underprivileged, and socially dominated by the culture, language and religion of the ruling elites.

One basic feature of the oppression was economic injustice. The pre-federal regimes were not committed to guarantee peoples equal opportunity to development. The ruling elites were rather striving to pursue their own self-interest at the expense of the interest of the diverse nationalities. Accordingly, the development activities that were carried out at that period were highly concentrated in certain areas. As a result, there were relatively better socio-economic infrastructures and services in some places whereas one could not find such infrastructures in other areas, especially in peripheral regions. This not only denied the different regions of the country equal opportunity to develop, but the situation also deprived the rights of the diverse peoples living in different parts of Ethiopia to equally benefit from the national wealth leading to a relative inquitable developments.

The last regime faced its demise after nearly two decades of miss-rule when it was overthrown by the sustained and hard fought struggle of a broad coalition of ethnic-based liberation movements led by the Ethiopian Revolutionary Democratic Forces (EPRDF). The EPRDF came to power in 1991; and inherited a country that was fractured by civil war and faced the eminent danger of disintegration. The economy was in shambles because of serious mismanagement of the country's economy and the diversion of resources to the war effort.

Upon coming to power the EPRDF formed a Transitional Government that was drawn from major ethnic-based liberation movements that bitterly fought against the Derg regime. A National Charter that was adopted in July 1991 brought some relief to a country that had suffered enormously from protracted civil war and disastrous political upheavals. This initiative heralded the introduction of a series of political and economic reforms that led to political, institutional and economic changes in the country. In the initial years, all these steps were intended to correct the ills of the Derg regime and put the country on a sound path of economic development and political stability brought about by two decades of mismanagement in the economic and political arenas.

In 1991, Ethiopia was faced with problems threatening the continuity of the country as a united nation. Apart from the Eritrean secession, citizens as well as the international community put the unity of the remaining part of Ethiopia into question. A number of liberation movements, some with a secessionist agenda, had been operating in the country and were attempting to protect their freedoms. On the other hand, the economic situation was extremely dismal and millions of people were once again threatened by famine that gripped most of northern and central Ethiopia. There was a sense of hopelessness in the air and people were extremely worried about the future of the country and, of course, themselves (Addis Alem, 2003). It was in such a grave situation that the Ethiopian government has embarked on extensive political and economic reforms.

The government also adopted major reforms to improve conditions for the heavily distressed economy. Steps were taken to transform the command economy into a market oriented one and to create a favorable environment for better performance. The government was able to successively devise programs in collaboration with its bi-lateral and multi-lateral development partners. The main objective of these programs has been to rehabilitate the economy, bring about sustainable development and reduce wide spread poverty that gripped the nation. In a country that is in an international comparison at the bottom of the ladder of economic wellbeing, the process of economic development has been arduous and trying. On the political front, the government has taken bold measures to restructure the Ethiopian state. A federal system of government administration was introduced; and this changed state-society relations in a fundamental manner. Hence, the new government faced head on the twin challenges of democratization and economic development simultaneously. At the national level, a federal state was created that consisted of 9 autonomous and ethnic-based regional states with considerable powers for self-rule and decision-making authority in economic and social development. The particular significance of this arrangement lies in the fact that the regions could develop their culture, language and history on an equal national footing (FDRE Constitution, 1995, Addis Alem, 2003, Meheret, 2002, Cohen, 1994).

Of particular importance and of far reaching consequence to the organization of the Ethiopian state in the reform agenda of the EPRDF has been the introduction of fiscal federalism. The agenda fundamentally changed the management and distribution of resources and the benefits of development at the national level. It has also been a turning point in the political development of the nation and its goal was to bring about equitable development and durable peace to a nation that was torn apart by civil war and endemic ethnic grievances.

So far, the system of intergovernmental fiscal relations seems to work somewhat smoothly and the legal framework accords extensive responsibilities to sub-national governments. It has also begun to reshape the economic setting of the country. Following the constitution, powers and responsibilities are devolved to the sub-national levels. Regional and local governments are able to play a vital role in the economy of the country. Hence, the diverse nationalities residing in the different regions have begun to engage directly in the decisions

However, there are still serious concerns and challenges that need to be addressed if the policies and strategies of Ethiopian fiscal federalism are to produce the desired outcome. The Ethiopian federation is fiscally categorized as highly centralized with more than 80% of the total government revenues collected by the federal government. Like in the case of revenue, higher degree of centralization characterizes the country's expenditure system, although to a lower extent. The extent of both horizontal and vertical imbalances is very high. While the high degree of vertical imbalance shows that the regional governments cover only a small portion of their expenditures, the horizontal imbalance entails the level of fiscal disparities across regional states owing mainly to regional differences in population size and composition, demography, resource endowment, human development, and tax effort (Solomon, 2008; Molla, 2005; Abu, 2003).

There is a huge disparity between the de jure and de facto fiscal decentralization. What are formally constitutionally decentralized are not actually the powers which are being exercised by sub-national governments. Regional states are faced with implementation problems and lack of capacity to diffuse their responsibilities. Especially, the four emerging regions are severely deficient in their human and institutional capacities (Mehari, 2007).

These do in fact have adverse consequences in the country's endeavor to ensure equitable development. These problems prevent states from providing comparable level of public services to their citizens. The problems mentioned above also pose a great challenge for citizens of the federation in obtaining equal benefit from the fruits of the country's development. Serious attempts have been made by the federal government to change this situation using various mechanisms. The House of the federation has long been trying to resolve such problems using intergovernmental transfer system. The ministry of Federal Affairs and the Federal Board (the current Minsitry of Peace) have been providing special assistance to the four emerging regions to enhance the human and institutional capacities of the regions. Even if the attempts made so far by the federal government have produced good achievements, they are by no means adequate enough to ensure equitable development. The institutions have their own limitations and challenges in their human and institutional capacity that constrains them to effectively effectuate their responsibilities.

Therefore, the overall objective of this study is to examine the contributions of fiscal federalism to Ethiopia's quest for equitable development. As everywhere else, fiscal federalism in Ethiopia has become the product of the reciprocal and dynamic interaction between different tiers of government, and therefore poses questions as to how the nature and conditions of the financial relations in any federal system affect the production and distribution of the wealth of a nation. In this regard, of particular importance is how political decisions and interests influence the location of economic activities and the distribution of the costs and benefits of these activities.

Much of the empirical literature on Ethiopia has been concerned with explaining the pattern of fiscal federalism in the country's ethnic-based Federal system from a purely political perspective (Solomon, 2006; Assefa, 2006). Such an approach has largely provided an impressionistic view within the context of political economy of possible consequences of such relationships. Apart from some few exceptions (for example Addis Alem, 2003) which investigated the relationship between democracy and economic development, most studies have focused on the political dimension to decentralization. Missing from the literature on Ethiopia is an empirical analysis of the impact of fiscal federalism on equitable development. From the narrative of the ruling regime, Abraham Tekeste (2018) has made a rare effort to examine the fiscal resource allocation in federal Ethiopia from spatial and social equity perspective. However, he concludes that “therefore, the national development strategies, as well as the fiscal and resource allocation systems in federal Ethiopia, have been transparent and fair. The policy outcomes of the fiscal and resource allocation system have also been instrumental in countering inequality and promoting spatially and social inclusive development” (Abraham, 2018: p.208). He concludes that “Ethiopia’s fiscal and resource allocation system has been equitable” (p.205). His conclusions are not backed by tangible evidences. On the other hand, there are widely held views that development in Ethiopia is not equitable which suggests regional disparities. This study is an attempt to fill such a gap. In an attempt to comprehensively fill this gap, this empirical study aims to test the argument (hypothesis) that Ethiopia’s fiscal federalism has less likely brought about equitable development. This is mainly an attempt to critically review the achievements and challenges of Ethiopia’s policy of fiscal federalism by examining certain economic parameters, and key economic sectors, such as education, health, water, and road. The assumption taken for granted is inter-regional equity promotes stability.

Moreover, at a more practical level, fiscal federalism has been compatible with the endeavors of equitable development. Nevertheless, many questions still remain unanswered and the experiment has not been without challenges. For example, under what general conditions are fiscal federalism and equitable development compatible, and what conditions are necessary? What have been the challenges and constraints; and what tangible achievements have been gained? By analyzing and assessing the changes that have taken place in Ethiopia, it is hoped that the study will contribute to the debate on fiscal federalism in Ethiopian and equitable development. It can shed some light on whether it is worthwhile to strive for fiscal decentralization while attempting to reduce, and ultimately eliminate, poverty. The study can also indicate how the objectives of fiscal federalism and equitable development interact with each other: especially in a very poor country. Moreover, it should be noted that in the process of this study, many important government and other document will be assembled that are not generally available to the public. This research may be useful from many angles: (i) it can serve as a basis for further studies of Ethiopia; (ii) it can stimulate further studies by scholars interested in studying comparative fiscal federalism’ and (iii) finally will provide policy inputs to further institutionalize and consolidate the process of fiscal federalism in Ethiopia.

1.3. Research Objective

1.3.1. General

- The overall objective of this study is to investigate the extent to which fiscal federalism has promoted equitable development in Ethiopian federation.

1.3.2. Specific Objectives

The specific objectives are to:

- Examine the evolutions, structures and achievements of fiscal federalism in Ethiopia.
  - ✓ What are the main federal and regional sources of revenue?
  - ✓ What is the importance of these sources to consolidate fiscal autonomy in Ethiopia's federal structure at different levels of government?
  - ✓ What improvements need to be introduced in the fiscal regime to institutionalize fiscal autonomy and independence of sub-national levels of government?
  - ✓ To find out any relationship between fiscal federalism and equitable development in Ethiopia?
- Evaluate the underlying causes and implications of low regional fiscal capacity and hence fiscal imbalances observed within the federation; critically examine the quality of the transfer system in meeting its objectives of narrowing down the fiscal imbalances and equalizing the fiscal capacities of the regional states to maintain stability.
- Examine the role of fiscal federalism in promoting equitable/ balanced development in Ethiopian federation by scrutinizing outputs and outcomes in four sectors (Education, Health, Water and Road).

1.3.3 Research Questions

Given the sensitivity and dynamics of the issues involved in this research, the study seeks to provide answers to the following research questions;

1. What are the evolutions, structures and achievements of fiscal federalism in Ethiopia in promoting equitable development? Does the assignment of expenditure responsibilities and taxation powers promote equitable development in Ethiopia? Is there any relationship between fiscal federalism and equitable development in Ethiopia?

2. What is the nature and trend of fiscal disparities among regional states? What are the key factors responsible for the disparities? How can the problem of fiscal disparities among regions be overcome? To what extent is the transfer system effective in narrowing the prevailing fiscal disparities across the regions? What Constitutional principles, policies, practices and strategies are there in the transfer system to fairly benefit the under-served/ less developed regions of the country? Are the constitutional principles and policies adequate enough for the purpose?
3. To what extent the fiscal arrangement of Ethiopian federation promotes the equitable development in the four sectors?

1.4. Research methods and Conceptual Frameworks

In terms of design, this study employs a combination of exploratory, explanatory and descriptive analysis. The methodology combines both quantitative and qualitative types of data and information.

1.4.1. The Study Approach

There are several types or research methodologies in social research to choose from. There are at least three paradigms in research approach. These are positivism, constructivism and pragmatism. Positivists argue that reality is out there and can objectively be measured as it is value free through dedactive reasoning quantitatively. Constructivists, on the other hand, contend that truth is what people perceive, i.e., socially constructed subjectively through qualitative inductive reasoning (Quinn, 2002). But for the purpose of this study, mixed qualitative and quantitative method is pragmatically found to be appropriate. This is because; the aim of the study is to provide an in-depth elucidation of the existing problems of fiscal imbalance in the study areas. The study therefore, follows the pragmatism view that addressing problems logically and practically. The pursuit of practicality over aesthetic qualities; a concentration on facts rather than emotions or ideals. The study is designed by collecting information from key informants with the intention that other secondary sources of data has complemented to it. Interviews and discussions were held with the concerned government officials and practitioners at different levels.

As mentioned above, a combination of both quantitative and qualitative research is very useful for its convenience to help identify the nature and reasons (causes) of problems and consequences and for quantification of certain variables in study regions respectively. It is an efficient design in which both types of data are collected during the one phase of the research at the same time. Each type of data collected and analyzed separately and at the later phase merged and interpreted (Creswell and Plano 2011:78).

The use of the quantitative approach has the potential of covering the fiscal decentralization performance of the regional states and discusses the unique features of each regional states of Ethiopia. The qualitative approach especially key informant faces to face interview which is conducted with political authorities and experts in some selected sector offices were useful in complementing the quantitative date gathered from different secondary source. The key informant interview conducted with head of Ministries (Deputy Heads, experts in the field, academicians, opposition party members, and members of House of Federation) is helpful to get in-depth information about the opinion and perspectives of informants as articulated in their own words. The nine regional states and the two city administrations were the unit of analysis for this research.

1.4.2. Research Techniques

Data sources and methods of data collection

Both primary and secondary source of data has been used to collect data. The data for the study has been gathered from various sources. The main source includes:

(i) Secondary sources: A number of published and unpublished source; Libraries; archive sources; federal, State and local governments' official reports; minutes; proclamations and regulations…etc., reports including the FDRE constitution; internet source; magazines, newspapers, etc., were the main source of secondary data. Basically the researcher has depended on and utilized various secondary sources found at federal levels. The essential data for the study has been drawn from different sources including population and housing census, demographic and welfare indicator surveys, Government published documents, issues published by Ministry of finance, the House of Federation, statistical Abstracts published by Central statistical Agency of Ethiopia, the FDRE Constitution and other relevant proclamations. Besides the official websites of Ministry of Finance, Central statistical Agency, Ministry of Health, Ministry of Education, Ministry of Water, Irrigation and Electricity, Road Authority and other international organizations have also been accessed for collecting the appropriate data.

(ii) Primary Sources: Primary data were collected through an in-depth discussion with key in formants in a face to face interview by designing semi-structured questionnaires. Semi-structured open-ended qualitative interview was useful to know the perceptions, views, values, feelings, knowledge and direct experience of interviewees on the subject matter (Quinn 2002: 344-349). Accordingly, knowledgeable key informants were drawn from politicians at Federal and Regional levels of government and experts on the basis of their professional capacity and/or political assignments. Discussions were made with Chief Regional Administrators; Heads of Bureaus/ Offices of Finance, Education and Health, Water supply, and Road authorities. In addition, in order to solicit a wide variety of information, discussions were also held with members of Finance and Budget Committees of the HoPR, HoF, and Councils of the States and Heads of the selected urban Local Governments. Field observations were also used as part of primary information source.

Face to face interview method has its own strengths and weaknesses. The method is suitable for questions involving complex behavior, for groups difficult to reach by phone, for respondents who need to see materials or to consult records as part of the data collection. It is also suitable, when high response rates are essential. On the other hand, it is the most expensive method of data collection because it takes time to locate and contact respondents and travel to the respondents (Stier and Roger 2008:187).

1.4.3. Selection of key informants

According to article 47 of the 1995 Federal Democratic Republic of Ethiopia (FDRE) Constitution, there are nine Regional member States. These are the States of a) Oromiya; b) Amhara; c) Tigray; d) Southern Nation, Nationalities and Peoples State (SNNP); e) Harari; f) Gambela; g) Benishangul-Gumuz; h) Afar; i) Somali. The chartered cities of Addis Abeba (the Capital city of Ethiopia) and Dire Dawa also constitute the FDRE. The study was conducted in all regional states and two administrative cities.

Government institutions which are thought to be relevant for the study were purposely selected both at federal and regional level. These include seven institutions at regional level and ten institutions at the federal level. Two interviewees were selected from each institution to collect data except the Ministry of peace from which 5 interviewees were selected for the reason that Ministry of Federal Affairs, the office that monitors intergovernmental relations in Ethiopia, is integrated into Ministry of Peace. These interviewees were selected purposely and are those who are deemed to have relevant information on the subject of investigation (see table 1.1 and table 1.2)

Table 1.1 Key informants at the regional state levels.

Offices	SNNP	Amhara	Benishangul -Gumuz	Somali	Oromia	Tigray	Afar	Hareri	Dire Dawa	Gambella	Addia Ababa	Total
Bureau of Health	2	2	2	2	2	2	2	2	2	2	2	22
Bureau of Education	2	2	2	2	2	2	2	2	2	2	2	22
Bureau of Economic and Finance	2	2	2	2	2	2	2	2	2	2	2	22
Bureau of Revenue	2	2	2	2	2	2	2	2	2	2	2	22
Bureau of Water Resource	2	2	2	2	2	2	2	2	2	2	2	22
Bureau of road and Construction	2	2	2	2	2	2	2	2	2	2	2	22
President Office	2	2	2	2	2	2	2	2	2	2	2	22
Total	14	14	14	14	14	14	14	14	14	14	14	154

Table 1.2 Key informants at the Federal Level

	Federal Sector Office	**Sample size**
1	Ministry of Health	2
2	Ministry of Education	2
3	Ministry of Finance	2
4	House of Federation	2
5	Ministry of revenue	2
6	Ministry of Water Resources Development	2
7	Ethiopian Road Authority	2
8	Prime Minister’s offices	2
9	House of peoples representative	2
10	Ministry of Peace	5
	Total	23

1.4.4. Data Analysis

The qualitative and quantitative data which were collected on the basis of the information gathered from key informant interviews and various secondary and primary sources were organized, edited, cleaned, processed, analyzed and interpreted both quantitatively and qualitatively. In order to get the answer to the research questions designed, the data analysis was carried out by means of the Microsoft Excel package and statistical package for social sciences (SPSS version 18).

Descriptive and inferential statistics were employed for the simplification and interpretation of the data for the qualitative and quantitative data respectively. Tables, charts, different types of graphs, diagrams, scatter plots, figures, pie-charts, and percentages were used to analyze the quantitative data collected from the secondary sources. Coefficient of correlation and Gini coefficietns were also used to measure relationships and disparity respectively.

1.4.5. Key Concepts and Theories

For the purpose of this study, key concepts used in this dissertation work need to be briefly defined and conceptualized.

A) Decentralization can be seen a shift of authority towards local governments and away from central governments, focusing primarily on fiscal and to a lesser degree on policy and political authority (Rodden, 2004). There are different forms of decentralization: a) deconcentration: shift of workload; b) delegation: transfer of decision-making authority for specific functions; and c) devolution: political decentration by the center (also one should note that federalism is constitutional devolution or division of power).

B) Fiscal Federalism refers essentially to the allocation of government resources and spending authority to the various tiers of government (Oates, 1972; Tanzi, 1995).

C) Keynesian theory of fiscal federalism: It argues for an active role of the government in economic affairs to correct various forms of market failure, ensuring an equitable distribution of income and seeking to maintain stability in the macro-economy (Musgrave, 1983).

D) First generation theory: It states that different levels of government provide efficient levels of outputs of public goods, hence for fiscal decentralization.

E) Second generation theory: It argues that effects of fiscal federalism from political process and information asymmetry perspective muat be considered while assigning fiscal powers. In this study mixed theories are used to explain the impact of fiscal federalism on the equitable development in Ethiopia. What are these fiscal function assignments? Generally, the federal government is assigned with macroeconomic stabilization and redistribution functions; whereas lower levels of governments are given allocation functions. In this power balance, taxing power, that is, in Musgrave's wording 'Who should tax where and what' (1983), is very critical matter. Because, if one level of government has greater taxing power, then it would lead to the problem of fiscal imbalances.

F) Fiscal Imbalances: Vertical imbalance is a mismatch between expenditure and revenue assignments. Regional states' dependence on federal grants-in-aids compromises their autonomy. Horizontal imbalance is uneven distribution of resources across regions. Fiscal imbalances can be corrected through (1) transfers (revenue sharing & federal grants) which are either conditional or un-conditional grants; (2) borrowing powers. This study is limited to seeing only transfers. Fiscal equalization uses transfers as instrument.

G**) Equitable development:** It is a positive development strategy that ensures everyone participates in and benefits from the country's socio-economic transformation—especially low-income citizens. The other very important issue of this study is about **choosing variables** (dependent and independent). The dependent variable is the variable that this study aims to measure, that is inter-regional equity; and the independent variables are expenditure assignments, revenue powers and intergovernmental transfers. Especially, this study heavily relies on expenditure budgets assignments to measure levels of inequality across regions by taking four socioeconomic sectors.

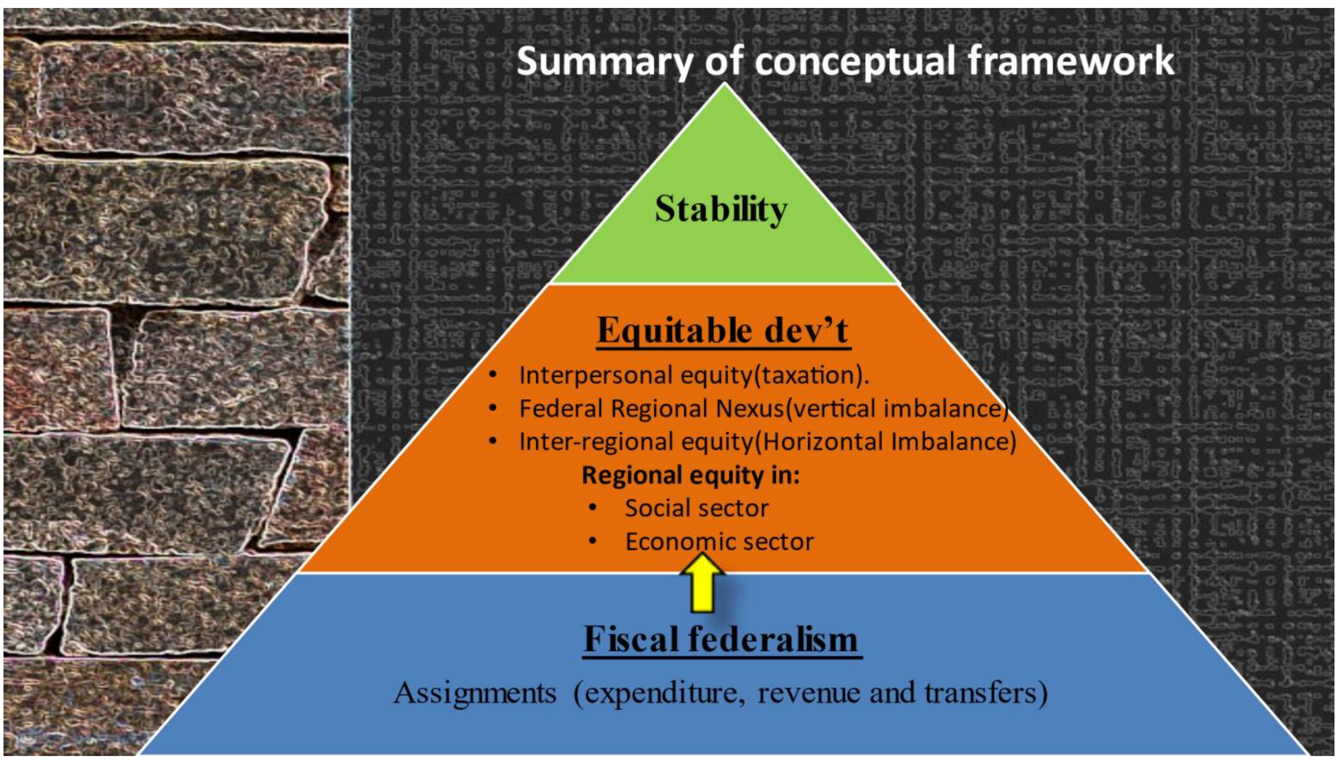

Figure 1.1: Summary of conceptual framework

1.5. Scope and Significance of the study

This research does not claim to cover the multifaceted fiscal federalism and its impacts on the socio-economic and political development of Ethiopia in general. It rather focuses on the equity aspect of it; even inter-regional equity aspect of it. In short, the impact of Ethiopia's fiscal arrangements on equitable development in the last two and half decades. In terms of time and issue, it is limited to post-1991 equitable development efforts. Geographically, it covers all the nine regional states, two city administrations and the federal government. Jurisdictionally, zonal and woreda level assignments are not included in this study. Methodologically, due to the COVID-19 pandemic, FGD is dropped from the lists of instruments of data collection.

There has been a resurgence of interest in many parts of the world in problems of multi-level government finance. While there are several reasons why fiscal decentralization has been adopted around the world, the most common motivating factor for the interest in research on fiscal decentralization is its potential to improve the performance of the public sector and thereby enhance prospects for higher and sustainable growth.

Established federations in developed countries have been the traditional focus of economic research on fiscal federalism. As a result, there is a broad range of literature regarding fiscal federalism and decentralization with respect to long established federations as well as a broad body of literature regarding theory on this topic. Simply put, there is very little empirical or academic research regarding fiscal federal systems in developing countries. By the same token, regarding fiscal federal arrangements and decentralization in Ethiopia, there have been a number of studies conducted on structural aspect of federalism, which are largely of a theoretical nature (Solomon, 2006). A great deal of the existing literature produced with respect to fiscal federalism in Ethiopia is not based on empirical evidence or a rigorous analysis of the potential to strengthening fiscal autonomy or independence of sub-regional levels of government. This research, therefore, is seeking to close this gap by examining the nexus between fiscal decentralization and sustainable growth and development within the multi-ethnic Ethiopian context.

This study is, therefore, important for a number of reasons. First, though the literature on fiscal federalism has blossomed over the years, yet these studies have focused more on developed countries

(Agiobenebo, 1999; Olowonini, 1999; Anyanwu, 1999). Simply put, the literature on fiscal federalism in developing countries like Ethiopia remains largely undeveloped. Secondly, the study aims to establish a foundation for policy-makers for sequencing structural and organizational reforms of government in developing countries by using Ethiopia as a case study.

Moreover, it needs to be noted that Ethiopia has had a very strong political centralization experience for more than a century; and, as a result institutionalizing a decentralized model has not been an easy challenge. Hence, the nearly two-decade' experiment in fiscal decentralization has not been by any means without challenges and constraints in the political and economic development dimension. Therefore, it is hoped that the finding of this study would provide inputs for policy makers and concerned officials to rethink about the shortcomings of the current fiscal decentralization practice in the country and take appropriate remedial steps. It is also hoped that the findings of this study will fill the knowledge gap on fiscal federalism in Ethiopia and to understand better the achievements and challenges of fiscal decentralization in the country. At a regional and continental level, the Ethiopian experience may be relevant for other African countries too and thus help them to draw useful lessons in constructing a workable fiscal federalism structure that can promote durable political stability and sustainable development.

1.6 Limitations of the Study

A major problem that is often associated with studies like this is the accuracy of data available on economic variables. Another is the issue of secondary data being filled with estimation errors. In addition, there are often discrepancies in the data presented by various organizations such as the Ministry of Finance, Central of Statistics Agency, Different Ministries and Regional government. Thus if there are errors in composition of data and its consequent effects on estimation results, this cast doubt on the validity and reliability of the econometric results generated in this study. But this is a common problem faced by studies which make use of secondary data. The study however tried to minimize these discrepancies in the data from various sources and verified with the primary sources as well. So, the estimation results and findings in this dissertation are correct and reliable to the extent that the data used are presumed accurate from the various secondary sources they were generated from. Another major limitation was the inability of the researcher to get the interviewers at full scale due to COVID-19 pandemic and also to acquire and master in time relevant econometric software and other related manuals for data analysis which hampered the timely completion of this study.

1.7 Organization of the Dissertation

This research work is organized into seven chapters. The first chapter presents the general introduction part, which is the overall roadmap of the dissertation work. Chapter two deal with theoretical and conceptual arguments surrounding fiscal federalism and equitable development. Chapter three separately focuses on the practice of fiscal federalism in the selected federal countries to draw lessons for the Ethiopian context and the study presents evolution of fiscal federalism in Ethiopia, in chapter four, the study presents Fiscal System and Equity in Ethiopia. Chapter five presents the analysis on fiscal federalism & equitable development in social sector of Ethiopia. Analysis on fiscal federalism & equitable development in economic infrastructure/sector of Ethiopia is presented in chapter six. The last chapter, chapter seven, attempts to summarize, conclude and produce policy recommendations.

Chapter Two

2. Fiscal Federalism, Equitable Development: Concepts and Theories

Governments are providers of public goods and services and engines for the promotion of the economic growth. They are also primary instruments for the redistribution of resources. Inequality in the spatial allocation of basic public services and disparities in the endowment of infrastructure and in economic growth may spark conflicts in federations and other multi-tiered systems of government. This happens more so in developing countries, such as African ones, where excessive disparities can threaten national unity.

Giorgio Brosio, 2010: p.1

2.1 Introduction

This chapter attempts to shade lights over the interactions between fiscal federalism on the one hand, and equitable development on the other hand at theoretical level. As indicated in the opening quote above, the major structural source of domestic political instability especially in the third world countries has been identified as regional or class or identity group-based unequal access to national development activities such as wealth, education, health, social service and status, and others. Johan Galtung (1969) regards this inequitable development as indicator of high degree of vulnerability to political instability. As a result, many scholars on federalism suggest that reasonable sharing of resources through innovative decentralized fiscal arrangement could reduce the potentials of instabilities (Watts, 2008; Elazar, 1987; Ljiphart, 1977). One of the major objectives of fiscal federalism is believed to promote equitable development among regions and peoples and thereby guarantee political stability. This is more so when it comes to developing federation like Ethiopia. In this chapter, the theoretical and conceptual foundations for the analysis and interpretation of the practice of fiscal federalism and its implications on equitable development in Ethiopia shall be established.

One of the fundamental precepts of economic theory is that the unit of decision making should be the lowest level possible in consonance with the objective of allocative efficiency. This is the primary motive behind fiscal federalism and decentralization. The institutions of fiscal federalism vary widely across the world, because each country's fiscal institutions are dependent on local circumstances, political and economic factors. It is therefore necessary to undertake a comparison of the divergent experiences of certain federal countries which shall be explored in chapter three. The present chapter is organized into four sections. The first section deals with the basic concept of federalism. Section two briefly discusses the conceptual nexus between federalism and decentralization. In section three, the notion of fiscal federalism and its dimensions are presented. Section four assesses the nexus between fiscal federalism and equitable development, and the impact of fiscal federalism on equitable development of a given country.

2.2 The Concepts of Federalism & Decentralization

By its very nature federalism is a form of government where power is divided and shared between a strong central government and strong member states. Nevertheless, federalism is not a one-day negotiation and distribution of power between governments, but rather a process structured by a set of institutions through which authority is distributed and redistributed (Rodden, 2004: 489). In his article, From Statism to Federalism, Elazar explicitly used the term ‘federal’ in its largest sense, not simply to describe modern federation like the United States, Canada, or Switzerland but all the various federal arrangements in use in the world today including federations, confederations and other confederal arrangements, associated states, special interest joint authorities with constitutional standing, and others (Elazar, 1995). Federation is seen as one specific form or species of federal political systems (Watts, 2000a, 14).

Though it is non-centralization of power, not decentralization, which characterizes federalism, it is also possible to find member states decentralizing powers to lower levels of government. Of course the federal government can decentralize its powers to regions in the form of delegation. There is no unique definition for the term decentralization and its scope and forms are also multifaceted. Despite this however, the most commonly used and widely accepted definition for the term ‘decentralization’ was provided by the UN as described below:

> Decentralization or decentralizing governance refers to the restructuring or reorganization of authority so that there is a system of co-responsibility between institutions of governance at the central, regional and local levels according to the principle of subsidiary, thus increasing the overall quality and effectiveness of system of governance, while increasing the authority and capacities of sub-national levels. Decentralization could have expected to contribute to key elements of good governance such as increasing people’s opportunities for participation in economic, social, and political decisions; assisting in developing people’s capacities; and enhancing governments responsiveness, transparency and accountability (UNDP, 1999:2).

Decentralization in its broad sense refers to the division of political, economic and administrative power/responsibility between the center and sub national levels of government. The degree of responsibility that is transferred by the center may vary from simply adjusting workloads among different units of government to diverting all government responsibilities for performing a set of what were previously considered to be central government functions.

Generally, decentralization is frequently viewed as a shift of authority towards local governments and away from central governments, with total government authority over society and economy imagined as fixed (Rodden, 2004). Therefore, attempts to define and measure decentralization have focused primarily on fiscal and to a lesser degree on policy and political authority. Most empirical studies of decentralization focus exclusively on the balance of expenditures and revenues of government (ibid).

There are variety models of decentralization that varies in its extent and scope of power and authority. For the purpose of this research, deconcentration, delegation and devolution were been briefly discussed under the following. Deconcentration is the least extensive form of decentralization, which merely involves the shifting of workload from central government ministry headquarters to staff located in offices outside of the national capital. The staff may not be given the authority to decide how those functions are to be performed. This form of decentralization may promote a feeling that government is close to the people. But it may not involve any decentralization of power, that is, it may not provide the opportunity to exercise substantial local discretion in decision-making.

Delegation is another form of decentralization and sometimes also called an agency relationship. It is the transfer of decision-making and management authority for specific functions to the organizations that are only under the indirect control of central government ministries. Often the organizations to which public functions are delegated have semi-independent authority or legal status to perform their responsibilities, and may not even be located within the regular government structure. This represents the more extensive form of decentralization than deconcentration. These entities with independent legal status and autonomous budgets are generally obliged to report to the central government. Local governments generally provide certain very specific services that are delegated to them by the central government or the next-higher level of government. If it takes the form of administrative decentralization, it transfers responsibility for the planning, financing and management of certain public functions from the central government and its agencies to field units of government agencies, subordinate units or levels of government. It has financial decentralization aspect.

Devolution is the most advanced form of decentralization aimed at strengthening or creating independent levels and units of government through political decentralization or federalism. It refers a situation in which the central government transfers or devolves authority for decision-making, finance and management to sub national or sub regional units of government (Solomon, 2008:44). According to Sherwood, devolution implies the divestment of functions by the central government and the creation of new units of governance outside the control of central authority. If the devolved authority is backed by constitutional reform, it will create federal arrangement. Devolution is the transfer of power to geographic units of legal government that lie outside the formal command structure of the central government. Devolution is common in federal systems since it transfers decision-making responsibilities to regional and local level of governments that elect their own governmental councils and authorities (Solomon, 2008:44). According to Sherwood, devolution is not decentralization; thus, it represents the concept of separateness or diversity of structures within the political system as a whole (Sherwood in Rondinelli, 1981:138). In this framework, devolution has certain distinct characteristics. First, it requires that local government be given autonomy and independence and be clearly perceived of a separate level over which central authorities exercise little or no direct control. Second, the local units must have clear and legally recognized geographical boundaries over which they exercise authority and within which they perform public functions. Third, devolution implies the need to "develop local governments as institutions "in the sense that they are perceived of by local citizens as organizations providing services that satisfy their needs and as governmental units over which they have some influence.

Federalism differs fundamentally from decentralization in two important respects. First, federalism relates to the delimitation of responsibilities between two separate political entities-one of which operates at national level while the other operates at the regional level. On the other hand, local governments and field administrations are based primarily at the community level. Second, and more importantly, federalism utilizes the principle of constitutional non centralization rather than decentralization. The idea is to create a system of governance, which at the same time provides opportunities for collaboration over a number of strategic areas while the federating units keep their relative independence in respect of other domestic matters. At present the federal principle is also being utilized at the supranational (e.g. the European Union) and metropolitan (e.g. Abidjan municipality comprising 10 city districts) levels (Elazar, 1987).

In federal political arrangement, one major element is power divisions which include resource and financial sharing primarily between constituent states and the federal government. It is all about who gets what and how much. As this dissertation explores the implementation of fiscal federal arrangement in Ethiopia, it is vital to have an understanding of the theoretical discussions and major contending views on the subject. The theoretical discussions in this chapter regarding fiscal federalism generally focus on the association between fiscal federalism on the one hand, equitable development on the other. It explores theoretical relationship between fiscal federalism and development thereby securing peace. This theoretical analysis thus aims to generate understanding concerning the factual or assumed tensions, conflicts or concurrence between equitable development and fiscal federalism. This meant to help the study in establishing an analytical framework or investigating tool to understand the fiscal federal arrangement in Ethiopia. Moreover, the theoretical discussion certainly helps to structure the observations of the operation of fiscal federalism in Ethiopia. However, before making an examination of the relationship between equitable development and fiscal federalism, a theoretical examination of fiscal federalism is in order.

2.3 Fiscal Federalism

Today, fiscal federalism, that is the proper location by level of government of various taxes, spending programs, grants and regulations, is becoming an important issue not only in the literature but also in the real world (Kibre, 1994:2). The design and implementation of an effective system of fiscal federalism is very imperative to the success of a federal polity (Solomon, 2008: 45). The study of fiscal federalism focuses on the allocation of expenditure responsibilities, the revenue raising powers and adjusting vertical and horizontal imbalances via intergovernmental fiscal transfers (Solomon, 2008:46). In other words, it emphasizes setting the appropriate expenditure and tax assignment for each tier of government and on designing inter-governmental transfers (Litvack, et al.1998:10). Fiscal federalism derives its nature and characteristics from constitutional provisions as well as the state of economic development, the pattern of income and resource distribution, and the institutional capacity of the system. The constitutional provisions define the framework within which decision-making would be exercised and establishes the vertical and horizontal structures that find meaning within the prevailing socio-economic environment of the system. The vertical structure defines the assignment of fiscal decision-making power between the federal and lower tiers of government. The horizontal structure outlines the nature of interaction across cross sections of government levels. This aspect addresses how regional governments interact with each other especially when there are externalities and spillovers.

Many developing countries are experimenting with it as a means of improving their governance and economic growth. For instance, in Canada fiscal decentralization is tied with the Quebec issue that threatens the national unity; Eastern Europe is looking into fiscal decentralization as one of the means with which to come out of their political and economic mess; in Germany a review of the earlier fiscal decentralization system is becoming a focal point to deal with the unification issue; and in the European Union, the United States and many other countries, fiscal decentralization is acquiring greater importance .

Fiscal decentralization covers the whole spectrum of intergovernmental fiscal relations coming under the literature of fiscal federalism (Bird, 1993). As a subfield of public finance, fiscal federalism addresses the vertical structure of public sector. It explores, both in normative and positive terms, the roles of the different levels of government and the ways in which they relate to one another through such instruments as inter-governmental grants. Moreover, fiscal federalism encompasses principles of fiscal relations between central and subnational levels of government that is the command over resources by the various levels of government and the direction and size of inter-governmental fiscal flows. This includes the division of tax powers and the means through which resources are adjusted to match expenditure responsibilities for central and subnational levels of government. What types of spending should be conducted by what level of government? Which level of government should levy what types of taxes? How should grants-in-aid be allocated? How should financial regulations be harmonized? These are the major issues of fiscal federalism. For any federation to be sustained there must be fiscal decentralization and financial autonomy. Each level of government, therefore, should be free to take decisions and allocate resources according to its own priorities in its own area of jurisdiction. In addition, the federating units should be able to act independently on matters within their own jurisdiction.

Thus under fiscal federalism, any constituent unit is subject to the influence of the fiscal operations of different tiers of government. This is akin to what Boadway (1979) referred to as economics of multilevel or federal systems of government when he opined that the public sector is stratified into more than one level of government, each having a different set of expenditure responsibilities and taxing powers. The term “fiscal federalism” itself is rooted in a political arrangement called federalism.

The fiscal relationships between and among the constituents of the federation is explained in terms of three main theories, namely, the theory of fiscal relation which concerns the functions expected to be performed by each level of government in the fiscal allocation; the theory of inter jurisdictional cooperation which refers to areas of shared responsibility by the national, state and local governments, and the theory of multijurisdictional community (Tella, 1999). In this case, each jurisdiction will provide services whose benefits will accrue to people within its boundaries, and so, should use only such sources of finance as will internalize the costs. Therefore, the main economic rationale behind fiscal federalism is improving efficiency of public resource utilization, creating enabling environment for private sector development and the growth of the national economy. The theory of fiscal federalism addresses three issues related to fiscal decision-making: assignment of responsibilities and functions between the federal and regional governments, the assignment of taxation power and the design of inter-governmental transfer (subsidy) of fiscal resources coupled with provisions about the borrowing windows to sub-national governments. Now, let see theories of fiscal federalism in a bit broader sense.

2.3.1. Theories of Fiscal Federalism

The basic foundations for the initial theory of fiscal federalism were laid by Kenneth Arrow, Richard Musgrave and Paul Sadweh Samuelson. Samuelson’s two important papers (1954, 1955) on the theory of public goods, Arrows discourse (1970) on the roles of the public and private sectors and Musgrave’s book (1959) on public finance provided the framework for what became accepted as the proper role of the state in the economy.

Within this framework, three roles were identified for the government sector. These were the roles of government in correcting for various forms of market failure, ensuring an equitable distribution of income and seeking to maintain stability in the macro-economy at full employment and stable prices.

The theoretical framework in question was basically a Keynesian one which canvassed for an activist role of the state in economic affairs. Thus the government was expected to step in where the market mechanism failed due to various types of public goods characteristics. Economics teaches us that public goods will be under-provided if left to private market mechanism since the private provider would under invest in their provision because the benefits accruable to the provider would be far lower than the total benefit to society. Government and their officials were seen as the custodians of public interest who would seek to maximize social welfare based on their benevolence or need to ensure electoral success in democracies.

Once a multi-level government setting is in place, this role of the state in maximizing social welfare then provides the basic ingredients for the theory of fiscal federalism. Each tier of government is then seen as seeking to maximize the social welfare of the citizens within its jurisdiction. This multi-layered quest becomes very important where public goods exists, the consumption of which is not national in character, but localized. In such circumstances, local outputs targeted at local demands by respective local jurisdictions clearly provide higher social welfare than centralized provision. This principle, which Oates (1972) has formalized into the "Decentralization Theorem" constitutes the basic foundation for what may be referred to as the first generation theory of fiscal decentralization (Oates, 2006a). The theory focuses on situations where different levels of government provide efficient levels of outputs of public goods "for those goods whose special patterns of benefits are encompassed by the geographical scope of jurisdictions" (Oates, 2006b). Such situation came to be known as "perfect mapping" or "fiscal equivalence" (Ma, 1995).

Nevertheless, it was also recognized that, given the multiplicity of local goods with varying geographical patterns of consumption, there was hardly any level of government that could produce a perfecting mapping for all public goods. Thus, it is recognized that there would be local public goods with inter-jurisdictional spill-over. For example, a road may confer public goods characteristics, the benefits of which are enjoyed beyond the local jurisdiction. The local authority may then under-provide for such a good. To avoid this, the theory then resorts to traditional Pigouvian subsidies, requiring the central government to provide matching grants to the lower level government so that it can internalize the full benefits.

Based on the following, the role of government in maximizing social welfare through public goods provision is assigned to the lower tiers of government. The other two roles of income distribution and stabilization are regarded as suitable for the central government. To understand the rationale for assignment of the redistribution function to the central government, there is the need to examine what the implications of assigning this responsibility to the lower tier would imply. Given that citizens are freely mobile across local or regional jurisdictions, a lower level jurisdiction that embarks on a programme of redistribution from the rich to the poor is faced with the out-migration of the rich to non-redistributing jurisdictions and in-migration of the poor from such jurisdictions to the redistributing one. If on the other hand, the powers to redistribute are vested in the central government, a redistribution policy would apply equally to citizen's resident in all jurisdictions. There would therefore be no induced migration.

The assignment of the stabilization function also follows from the chaos that would ensue if sub-central governments are assigned the responsibility. Sub national policies will lead to sub-optimal policies from the point of view of national welfare. Moreover, given the openness that characterizes the relationship between the regional governments, they are grossly constrained in carrying out effective stabilization policies. This is because these lower tiers of government have very limited capacity to influence local employment levels and inflation (Bonfim and Shah, 2007).

From the foregoing, the role assignment which flows from the basic theory of fiscal federalism is summarized as follows: The central government is expected to ensure equitable distribution of income, maintain macroeconomic stability and provide public goods that are national in character. Decentralized levels of government on the other hand are expected to concentrate on the provision of local public good with the central government providing targeted grants in cases where there are jurisdictional spill-over's associated with local public goods.

Once the assignment of roles had been carried out, the next step in the theoretical framework is to determine the appropriate taxing framework. In addressing this tax assignment problem, attention is paid to the need to avoid distortions resulting from decentralized taxation of mobile tax bases. Gordon (1983) emphasizes that the extensive application of non-benefit taxes on mobile factors at decentralized levels of government could result in distortions in the location of economic activity.

Following from the assignment of functions, taxes that matched more effectively the assigned functions are also assigned to the relevant tier or level of government. For example, progressive income tax is suited to the functions of income redistribution and macro-economic stabilization and is therefore assigned to the central government. On the other hand, property taxes and user fees were deemed more appropriate for subnational or local governments. Benefits taxes are also prescribed for decentralized government based on the conclusion that such taxes promote economic efficiency when dealing with mobile economic units, be they individual or firms (Olson, 1982).

The final element of this basic theory is the need for fiscal equalization. This is in the form of lump sum transfers from the central government to decentralized governments. The arguments for equalization are mainly two. The first which is on efficiency grounds sees equalization as a way of correcting for distorted migration patterns. The second is to provide assistance to poorer regions or jurisdictions. Equalization is important in a number of federations. For example, Canada has an elaborate equalization scheme built into its inter-governmental fiscal arrangements (Boadway and Hobson 2009)

It is necessary to point out that recent literature emphasizes the importance of reliance on own revenues for financing local budgets. A number of authors (Weingast, 1997; Mckinnon, 1997) draw attention to the dangers of decentralized levels of government relying too heavily on intergovernmental transfers for financing their budgets. These are lessons that Ethiopia's fiscal system should draw from in order to ensure equitable development and macroeconomic stability. The experience of many developing countries suggest that sub national governments are likely to contribute to the aggravation of macroeconomic problems, or make it difficult to correct such problems (Tanzi, 1995). This is particularly so in countries where expenditure assignment is not matched with taxing assignment. In such situations, sub national governments tend to accumulate debt.

In discussion of fiscal federalism, we are compelled to go back to sixty years to refer to Tiebout's work. He basically states the rationality of consumers of public services in that consumers are the best judges and the consumer voter relation is based on rational connection between them. According to his explanation, citizens can choose places that better satisfy their desires, which would create competition among governments (Tiebout, 1956). Basely and Smart (2007, cited in Porcelli, 2009) also state the effect of election on accountability from two perspectives – selection effect and an incentive discipline effect. The selection effect is that the principals will not be voted by their people because of their inefficient services. And the incentive discipline effect is related with government officials' motivation to improve their government quality aiming to increase their re-election probability. However, can the voters (citizens in a given territory) be the true judges of their government? In which type of community can they be true judges? Are there any other factors that make the voters either to vote for or not to vote for their government? These are the basic questions one needs to enquire as far as fiscal federalism is concerned.

The Tiebout's "Voter-Government" relationship may work within communities who are aware of their government's responsibility to the expected level and have sufficient information regarding their government's accountability and performance. Moreover, they have to have sufficient information about their government to compare their government's performance with other governments' performances. It has to be also underscored that governments are not in power because their citizens voted for them and any underachievement of their promise does not necessarily penalize them.

Thus, the Tiebout's government has to be very benevolent and judged against its achievement by its citizens. Moreover, the vote doesn't depend only on the existing achievement but also the promises and policy directions that the government has in the future. Of course, it is not deniable that public obligations have an impact on citizen-government relation. As said earlier, Tiebout's theory argues that searching for efficient provision of public goods would solve the inefficiency problems of lower tiers of government. His model of mobility would be determined by the information available to the public regarding what responsibilities and accountabilities do local governments have in their jurisdictions and choices available to consumers of public services to select the best service providers around them.

Second generation theory of fiscal federalism is related to the effects of fiscal decentralization from the view point of political process and the possibility of information asymmetry across the agents and the principals resulting in inefficiency in the government performance (Porcelli, 2009; Rodden, 2003). In general, sustainable decentralization would smoothly perform when state and local governments are accountable for their taxpayers in raising revenue and aggregation of their expenditure needs (Zhou, 2009, p. 16). This would happen when the benefits from public services are tailored with the revenues that the subnational governments raise from tax and non-tax sources. This relation would also create accountability for inefficiencies in public services and policy failures at lower jurisdictions. This general concept is practically challenged in many ways if revenue sources are not sufficiently tailored with public operations. It is better to extend the discussion further to fiscal assignments to understand the fiscal federalism theories more elaborative way.

2.3.2. Fiscal Function Assignment Issues

An important aspect of the exercise of fiscal federalism is the assignment of fiscal functions to the federal and the sub-national governments and the appropriate means of financing these responsibilities i.e., revenue assignment. The theory of fiscal federalism does not provide a clear-cut separation of fiscal responsibilities that would promote economic efficiency and resource distribution. The broad thrust of normative theory is that expenditure responsibilities in areas of macroeconomic stabilization and redistribution functions should remain within the domain of the federal government whereas allocation functions should be assigned to lower levels of government (Oates, 1999; Shah, 1999; Musgrave, 1983). The argument is based on the reasoning that lower levels of government have limited capacity and policy instruments to provide stabilization and redistribution functions. Due to the nature of the responsibilities, the federal government usually assumes macroeconomic stabilization and income redistribution functions and make sure that regional governments would not take measures that are not compatible with such functions. Moreover, there are functions such as national defense and foreign affairs that have national public good character and hence usually assigned to the central government.

Fiscal decentralization and the assignment of functions can generate economic efficiency of the public sector. If preferences are heterogeneous across jurisdictions, which is most likely the case, decentralized decision-making power as to the provision of local public goods and services improves efficiency by tailoring services to the preferences of the local population. The main argument is that local governments are closer to the local population and can identify their choice and preferences better than the central government. Accordingly, when the decision to provide a bundle of public goods is made by local officials and these officials are directly accountable to the local voters, there is an incentive for the local public officials to provide services that reflect the preferences of the local population. Moreover, as long as there is close relation between the benefits from public services and taxes on the local taxpayers, there is additional incentive to utilize resources efficiently and cost effectively. At least by implication, the theory recognizes the need for local authorities to exercise choice in the provision of public services that are of higher local demand instead of resorting to the unitary solution. The decentralization theorem suggests that, under such conditions, decentralization of fiscal decision-making can improve efficiency of the public sector and the welfare of the local population.

Once the allocation of expenditure responsibilities is conducted according to such broad principles, the fiscal system needs to address the issue of assigning taxing power that broadly identifies who should tax, where and what (Musgrave, 1983). The imposition of taxes, in the absence of lump-sum source of taxation, always involves a certain degree of economic inefficiency. In the context of fiscal federalism, the assignment process needs to identify the comparative efficiency and effectiveness of providing the fiscal instruments to the multi-tier decision-making centers so as to finance public functions and activities in the most efficient manner possible. What kind of taxes should be assigned to the federal government and which should be assigned to the sub-national or local governments? The theory and practice in the assignment of taxation power identifies the following main criteria in assignment process: taxes on mobile tax bases, redistributive taxes, taxes that could easily be exported to other jurisdictions, taxes on unevenly distributed tax bases, taxes that have large cyclical fluctuations, and taxes that involve considerable economies of scale in tax administration should be assigned to the national or federal government (Sobel, 1997; Musgrave, 1983; Tanzi and Zee, 2000, Oates, 1996). There are efficiency and equity considerations behind such principle of tax assignment.

The assignment of taxing power between the federal and the regional governments and the provision for concurrent power to share establishes the basic link in which the behavior of one of the parties would influence the decision making power of the other and its effective tax base. There is a possibility for vertical tax externality that might require additional policy instruments to correct their effect on other levels of government (Keen, 1998). When there are clear cases in which vertical tax externalities are prevalent, the tension between the federal and the state governments would arise. This in turn would require mechanisms for the assignment of taxing power and revenue based on the nature and characteristics of the tax base.

The assignment of taxing power is a thorny issue in fiscal policy and its application is influenced by a number of considerations. First, despite the legislative assignment of taxes, the actual potency of the tax network depends on the nature and development of the national economy, the relative distribution of economic activities across jurisdictions, and the administrative efficiency of the taxation system. Second, the practice of fiscal federalism, especially when citizens across regions with diverse economic and demographic situations are treated unequally, gives rise to the violation of one of the core principles of horizontal fiscal equity. Moreover, fiscal decentralization might also potentially breach the principle of vertical fiscal equity by not treating taxpayers with different capacity to pay differently. Third, despite the monopoly of taxing power resides at the disposal of the government, the reach of the taxation network depends on the economic circumstances of the potential taxpayers.

2.3.3. Fiscal Imbalances and Intergovernmental Transfers

The distribution of the tax base and the demand for public goods and services does not follow symmetrical pattern and this gives rise to the emergence of fiscal imbalances. A number of reasons, both economic and social, contribute to the mismatch between the expenditure responsibilities and the capacity of the lower levels of government to raise sufficient revenue to finance their expenditure. Vertical fiscal imbalances are the result of allocation of functions the cost of provision of which is higher than the sources of revenue assigned to local governments. This indicates the case in which the level of revenue source decentralization is lower than the decentralization of expenditure responsibilities. Horizontal fiscal imbalance emerges usually as a result of concentration of tax bases due to uneven distribution of economic resources and economic activity across regions whereas expenditure requirements are spread more evenly.

The problems of fiscal imbalances require measures that include the provision of subsidies as well as policies that promote balanced growth of regional economies. The process of changing the taxation base of regional economies is slow and requires consistent policies that address the underlying sources of inequalities across regional economies. Inter-governmental transfers or grant systems, however, might generate their own problems of the commons. When vertical fiscal imbalance is significant and local governments depend excessively on the federal fiscal grants, their fiscal autonomy would be compromised. Moreover, local government officials and the population would have the incentive to maximize their federal grant receipts as long as they do not proportionately share the burden of taxation. Where local governments do not bear the cost of their spending decisions, there are incentives for local governments to expand their budget beyond their means and this behavior is prevalent when the benefits are concentrated whereas the cost of financing such benefits is drawn from the common pool.

Inter-governmental fiscal transfers involve two main decisions even if most federal systems pursue different approaches. The federal government needs to decide on the aggregate pool of federal grants and then the pool has to be distributed among the respective lower sub-national governments. The federal government can decide on the size of the federal grant pool based on certain parameters or on some ad hoc mechanisms. Once the pool of federal grants is decided, the distribution of such grants across regions or local levels of government follows a number of possibilities. The federal government may exercise discretionary decisions to distribute such resources. However, the risk of such discretionary exercise is that allocation might be influenced by political considerations instead of real need for assistance at the local levels. The most conventional way is the use of some grant distribution formula that takes into account indicators of needs and other factors at the sub-national government levels.

2.3.4. Intergovernmental Transfers

As indicated earlier, there may not necessarily be correspondence between expenditure assignment and tax assignment. Revenue sharing, otherwise called intergovernmental transfer that encompass revenue sharing and other transfers from higher to lower level governments have, therefore, formed a part of fiscal arrangements in multilevel governments. For example, central transfers account for 85 per cent of sub national expenditures in South Africa, 72 per cent and 85 per cent of provincial and local expenditures in Indonesia, 67 per cent to 95 per cent of state-local expenditures in Nigeria, and 70 per cent to 90 per cent of expenditure in less prosperous states in Mexico (Shah, 1994). The design of these transfers is equally important for efficiency and equity in local public service provision. Such transfers could be used to ameliorate the imbalance that may arise from expenditure and tax assignments.

Intergovernmental transfers or grants fall into two broad categories, namely, matching and non-matching grants. Matching or conditional grants require that the recipient uses the grant for a specific purpose as well as provide a specific proportion of the total programme cost to supplement the amount granted. Non-matching grants, which may either be conditional or unconditional, do not require the recipient to provide a matching or supplementary amount. Where conditional, such a grant would, nonetheless, need to be spent on specific programme. Such grants are usually spent where it may be necessary to subsidize programme considered to be of high priority by a higher level government but lower priority by a lower government (Aigbokhan, 1999).

Market failure may derive from the presence of public goods, externalities, increasing returns to scale as well as risk and uncertainty. Economists have proposed some theoretical justification or criteria for inter- governmental transfers- usually from the federal to state and local government levels, and they rest largely on vertical and horizontal imbalances. Vertical imbalance occurs in the form of an imbalance of revenues and expenditures between levels of government. Horizontal imbalances referred to as the problem of equalization occur as a result of differences in revenue generating abilities of units of government at the same level of government in a federation.

One of such criteria is the interjurisdictional spillover theory. The proponents of this view argue that more resources should be allocated (perhaps via matching or conditional grants) to states or regions that undertake public expenditure which benefits residents of other regions. A second criterion is the "differences in taxing powers or fiscal imbalance". The proponents of this argue that efficiency in revenue sharing will be achieved by taking into consideration the needs or fiscal capacities of the various recipients. The third criterion is that of "equity". It is argued that different regions (states) will have different "fiscal residual" where the latter is defined as the difference between benefits and taxes due to public sector activity. In the light of this, if residents are found to be immobile, fiscal residual attainable over regions should be equalized through a system of unconditional grants or revenue allocation. In other to achieve this, it is proposed that the federal government should take into consideration the taxing capacity of the region and its needs in determining the size of the grant or allocation. For instance, the federal government could base its revenue allocation on an objective of enabling all states to be able to attain a certain level of public expenditures with reasonable tax rates by correcting for per capita differences in state tax bases (Boadway, 1979; Boadway, 1992; Heber, 1979).

Of these criteria, the equity rationale seems to be the most appealing and more appropriate for Ethiopia. Thus, the principles which should guide intergovernmental transfers are:

- Fiscal imbalance or fiscal gap;
- Redistributive role of the public sector which would sometimes require the central government to redress regional disparity;
- Preservation of internal common market, which may require the federal government to ensure a common minimum level for public services;
- Stabilization objectives; and
- Inter jurisdictional spillovers which may otherwise lead to under- or overproduction of public services.

Efficiency in resource allocation contributes to macroeconomic performance and for equity. The concept of economic efficiency is derived directly from the Pareto principle, central to an understanding of modern welfare economics. Pareto optimality is defined as a state of affairs such that no one can be made better off without, at the same time, making at least one person worse off. In the same way, a gain in economic efficiency is equivalent to Pareto improvement. Any judgment on whether a change improves society's economic welfare involves making interpersonal comparisons between gainers and losers in any change in resource allocation. This interpersonal comparison would involve value judgment, and this is an important problem for welfare economists. Rather than making interpersonal comparison, economists have attempted to extend the use of the Pareto principle to such circumstances in a variety of ways. According to Boadway (1979), one of such ways is to judge a move not according to whether a “potential Pareto improvement occurs”. Hypothetically, the gainers from the change must be able to compensate the losers and still be better off. The change is potentially an improvement since, if the gainers actually did compensate the losers, everyone would be better off. Again, the notion of a hypothetical compensation is fraught with ambiguities. Under perfect competitive conditions, allocation of resources, resulting from competitive markets under laissez faire condition, will be Pareto-optimal. In real life, however, conditions of perfect competition will not always be satisfied, which leads to market failure and provides the rationale for government involvement in resource allocation (Okoh and Egbon, 1999; Taiwo, 1999).

2.3.5. Borrowing powers and Mechanisms

Notwithstanding the transfer mechanisms indicated above to fill the revenue-expenditure gap, additional financial requirements may also arise (and do often arise in practice) to implement all plan projects in each jurisdiction. To this end, the last resort is borrowing either in the open market or from governmental funds if such a pool is available.

However, as available resources need to be utilized efficiently as well as equitably, there may be a need to coordinate borrowing requirements of all sub national units of government. If so, should there be a common formula for a loan mechanism to all sub national units? Should borrowing from domestic or foreign sources be channeled through the central government? This section deals with such issues.

As there is no clear –cut theoretical guide with respect to borrowing, it is perhaps useful to outline some key issues based on country experiences, as a rule, direct foreign borrowing by lower government units should be resisted, particularly in developing economies, as this could run counter to the political as well as the overall stabilization objectives of a central or federal government.

Regarding domestic borrowing by lower level governments, perhaps this needs to be assessed in light of both the macro and micro aspects of borrowing. The overall central credit to regional governments should be consistent with the central government’s stabilization objective. This implies setting a ceiling on total credit. It is also preferable to use a uniform rate and mechanism of credits across regions (may be not across sectors). Credit to any jurisdiction should be part and parcel of its overall revenue-expenditure balance or account. That is, determination of the amount of credit should take account of tax revenue and grants. As credit involves not only repayment but also imposes strict financial conditionality, it has the merit of enhancing greater efficiency relative to grants. Hence, in this respect, it might be advantageous to encourage or incline more towards credit rather than grants to a certain degree.

The underlying point of these issues is that the central government should impose certain conditions, with respect to both magnitude and purpose, on borrowing by lower level government units. The mechanism of control may take into account the following considerations:

As such credit is largely for capital expenditure, projects should satisfy a standard evaluation or appraisal by an appropriate centrally commissioned body. Also, the implementation capacity of the concerned local government should be assessed. Consistency with overall total central credit should be maintained. Total debt outstanding as well as the amount of credit in any given year should be taken into account, perhaps in relation to its average revenue.

The overarching objective of such a mechanism should be to encourage jurisdictions to be involved in self-motivated development projects while simultaneously moving increasingly towards efficient economic management. This should be the case because lowest level governments' financial discipline, particularly in connection with borrowing, will have a strong influence on the overall financial condition of the country.

2.3.6. Fiscal Federalism and Common Market

There are various gradations of economic integration among political jurisdictions, ranging from a free trade area, in which goods and services and possibly capital are free to flow across borders, to a customs union, in which a common external tariff exists, to a common market, in which labor is also free to move, to an economic union, in which various degrees of harmonization exist. A federation shares some important features in common with a common market or an economic union, although a federation is much more than either of these. In particular, a federation, unlike an economic union, has two distinguishing features. First it has a central government that can legislate on matters that affect residents of all jurisdictions, and may even have some oversight over lower-level jurisdictions. Second, Residents of the federation are citizens of the entire federation, which entitles them to some significant rights not just of mobility but also of equal treatment. These two features of a federation will be prominent in our discussion of the assignment of powers and the fiscal arrangements. For now, however, we concentrate on those features that a federation has in common with common markets or economic unions. We speak of the market of a federation as comprising an internal economic union or an internal common market (Boadway and Shah, 2009).

The internal common market of a federation has a number of characteristics. For ease of reference, where we are not referring to specific countries, we follow the convention of referring to the central government as the federal government, and to subnational governments as state governments. Because there are no border controls in a federation, goods, services, labor, and capital are able to flow freely across state borders. A common external trade policy exists with the rest of the world. But internally, the states are able to engage in tax, expenditure, and regulatory policies with in their own borders that can affect the cross-border flows of products and factors of production. A reasonable efficiency objective of a federation might be to attain the unimpeded and non-distorted flows of all goods, services, labor, and capital across political borders with in the country. There should be no barriers to movement imposed by governments with in the federation, whether by taxes and subsidies, by regulation, by preferential procurement policies, or by the design of local public goods and services. Of course, there may be natural costs to trade, such as transportation costs, language, and so on. We are concerned instead with government-imposed barriers. The absence of this will contribute to resources being allocated efficiently with in the federation (Ibid: p.31).

In a federation in which decision making is decentralized, violations of the efficiency in the internal common market may be imposed by state governments either wittingly or unwittingly. In the former case, governments may use policies like taxes, subsidies, and regulations to improve local conditions at the expense of nonresidents. This is referred to as interjurisdictional fiscal competition, and it is discussed in more detail later. If all states engage in it, the result may be that all are worse off, akin to the outcome of tariff wars between countries. On the other hand, distortions may arise simply because states adopt differing policies in an uncoordinated fashion. After all, state fiscal policies cannot avoid being distortionary; almost all taxes necessarily are. If different states adopt different policy mixes, cross-border transactions will inevitably be distorted. The exception to this might be the case in which products and factors of production are so mobile that states are forced by competition to adopt similar fiscal policies as their neighbors. Such a high degree of mobility is unlikely to exist because mobility is costly (Ibid: p.31).

The possibility of lower-level jurisdictions adopting policies that distort the efficiency of the internal common market has implications for the division of responsibilities. For example, the case for decentralizing some types of tax, expenditure, and regulatory policies may be compromised by the fact that they could lead to inefficiencies in the internal economic union (Ibid: p.32).

2.4 Equitable Development

Equitable development is a positive development strategy that ensures everyone participates in and benefits from the country's economic transformation—especially low income residents, communities of color, immigrants, and others at risk of being left behind. It requires an intentional focus on eliminating racial inequities and barriers, and making accountable and catalytic investments to assure that lower-wealth residents:

- live in healthy, safe, opportunity-rich neighborhoods that reflect their culture (and are not displaced from them);
- connect to economic and ownership opportunities; and
- have voice and influence in the decisions that shape their neighborhoods.

In the foregoing sections, it is argued that one of the major objectives of fiscal federalism in developing countries is to promote equitable development through resource sharing and power devolution. Conversely, if it does not promote equity among regions or groups or citizens, what would be the consequences? This question is dealt with in the following part of this chapter. Before getting into indicating the nexus between fiscal federalism on the one hand and equitable development on the other hand, clarification of key terms is in order.

First, the concept of development can be defined from various approaches. Economic growth is often understood as development. Though the two terms are different they are very much confused here and there including in Ethiopia. According to Todaro (1996: 49)' development is seen in terms of planned alteration of the structure of production and employment so that agriculture's share declines and that of both the manufacturing and service industries increase. As a result, development strategies have thus usually focused on rapid industrialization, often at the expense of agriculture and rural development.

This seems 'goods-centered' view of development than 'people-centered' one. In this study, the term development is used to refer to progresses made in the basic socio-economic infrastructures (education, health, water, and road construction). Gross economic growth is part of development, though that of distribution aspect has been very important due to the fact that citizens have equal entitlements to the development (Sen, 1981). There must be some level of development to measure its equitability. Therefore, development is a means to political stability.

2.4.1 Equity in opportunities versus equity in outcomes

A common theme in the fiscal equalization literature is the need for transfers to equalize or minimize differences in fiscal capacity (Albouy 2012; Boadway 2006; Shah 2006). This often leads to progressive transfers as discussed above with the primary objective of enabling subnational authorities to provide the same coverage and quality of public goods and services to residents of its jurisdiction. In essence, regions are given equal fiscal opportunity to provide goods and services. As noted by Brennan and Pincus (2010) this equalization of opportunities across regions, should filter to equalization of opportunities at the individual level. However, this is different from equity in outcomes. The difference arises for two reasons: due to differences in demographic characteristics across regions and due to the autonomy of subnational authorities.

Firstly, in an ideal case where there is perfect fiscal equalization and all regions are given a sum (in real terms) which can achieve the same level of output, this may not achieve the same level of outcomes because of differences in the characteristics of the respective populations. For example, if each region received a grant to build 100 new schools with the ultimate goal of improving literacy, even if each region successfully built 100 schools as an output, the outcome (literacy) is very likely to vary across regions. Differences may arise if there are different attitudes to education across regions or the opportunity cost of attending school varies across regions. Secondly, the autonomy of subnational authorities may limit the extent to which there is equalization across regions (Boadway 2006). Even if all regions were fully funded to build 100 schools, each region has the autonomy and authority to decide to build schools (or not). This autonomy is a defining feature of many federal systems, and, as we discuss below, fiscal autonomy in federal systems has significant implications for equity.

Fiscal equalization is therefore a necessary, but not sufficient condition for equity in outcomes. The World Bank (2006, p.78) is cognizant of the opportunities-outcome distinction, and as such, defines equity (in relation to development) as "focusing on opportunities, rather than on welfare, utilities, or some other corresponding individual outcome."

2.4.2 Federalism and fiscal equity

Just as devolved decision making in a federation lead to possible inefficiencies, it also gives rise to inequalities. In addressing the sources of inequalities, it is helpful to make a distinction between horizontal equity and vertical equity (Boadway & Shah, 2009). According to Boadway and Shah,

> The principle of horizontal equity says that persons who are equally well-off in the absence of government ought also to be equally as well-off in its presence. It is thus essentially a principle of 'equal treatment of equal'. This notion of equity turns out to be critical in the design of federal fiscal systems. Vertical equity is concerned with the appropriate amount of redistribution from the better-off to the less well-off members of society (ibid: p.54).

A federal objective of horizontal equity and/or vertical equity often involves regional grants and transfers that promote fiscal equalization. However, this may not imply fiscal equity in reality. In effect, pure horizontal equity is likely to be violated if states have autonomy to set taxes and distribute transfers at their local level (Boadway, 2006). It follows that similar individuals may be treated differently because of their area of residence. As such, horizontal equity may be a principal objective at the federal level and federal governments may target the fiscal capacity of regions through block grants, but this may not necessary lead to equitable opportunities or outcomes among regions. Differences may continue if there is heterogeneity in redistributive policies and/or needs across regions (Boadway 2006; Buchanan 1950).

In terms of redistributive policies, even though equitable transfers are made to regions, there may not be equity in opportunities or outcomes if regions embark on different redistributive policies. For example, one region may opt to spend more on health over education or vice versa. According to (Grand 1975) inequity that results from the decisions of local authorities is not a source of fiscal inequity from the federal system. Federal governments often use conditional or specific-purpose transfers to ensure alignment of national and regional policies, but this diminishes local spending autonomy (Shah 2006).

Furthermore, differences in population distributions and in the needs of the population may also lead to different types of spending, and therefore outcomes (Boadway 2006). For example, there may be greater need for health or education spending in some regions, while road infrastructure may be more needed in others. Such differences in needs and fiscal policies at the regional or state level violate the principle of horizontal equity, as it implies that households that are otherwise identical are treated differently because of their region of residence. As such, (Boadway 2006) defines fiscal equity as a concept not fully synonymous with horizontal equity: fiscal equity should ensure that transfers are designed in such a way that regions can achieve horizontal equity, without compelling them to do so (see Boadway's definition of fiscal equity in Annex table 1). Based on this definition, the objective of fiscal equity represents a compromise between pure horizontal equity and preserving regional policy autonomy.

2.4.3 Equity versus efficiency

No discussion on fiscal equity would be complete without mentioning the equity-efficiency trade-off. The extent to which such a trade-off may be accepted has been documented in the academic discourse since the 1950s (Buchanan 1950; Scott 1950) and still continues in more recent times (Boadway 2006; Cyrenne and Pandey 2015; Kaplow 2006). At the heart of the debate is that transfers from richer to poorer regions, though equitable, may slow growth, thereby reducing overall national income. This follows from two arguments (i) equalization transfers may be distortionary as less well-off regions modify their behavior and (ii) some regions have a competitive advantage that would make some types of spending more efficient in these regions.

Cyrenne and Pandey (2015) argue that regions which benefit more from fiscal equalization transfers are less incentivized to generate tax revenue; and predict that there is a negative effect on the composition of spending. The predictions are confirmed using empirical data from Canada and the authors show that the share of unproductive expenditures was higher in provinces that were net receivers of federal tax revenues. Moreover, using a large sample of European countries, Checherita et al. (2009 cited in Cyrenne and Pandey, 2015) find that regional redistribution impedes output growth in the receiving regions. Such distortions indicate the fiscal system is not neutral (Kaplow 2006), and is a sign of inefficiency or social welfare loss.

The second cause of potential inefficiency follows from the notion that the marginal returns to a dollar spent differ by region and that some regions may be more efficient at maximizing the returns to transfers or infrastructure spending in their region. Federal governments may thus need to consider how responsive labor and capital are to transfers in each region, as this determines the output consequences of the transfer (Boadway, 2006). Qiao et al., (2008) document such a trade-off between growth and regional equity in China.

There are no one-size-fits all solution to balancing efficiency and equity arguments. Ultimately, this depends on how the national government specifies the social welfare function. A social welfare function (SWF) describes how a state weights various individuals in society in order to achieve a given outcome. The desired outcome is subjectively superior and incorporates a view of distributive justice (Brennan and Pincus 2010; Kaplow 2006). This in turn affects the design of fiscal policy. Two common examples of Social Welfare functions extensively discussed in the literature are based on Utilitarian versus Rawlsian perspectives. A Utilitarian SWF formally counts all individuals equally and maximizes expected welfare on this basis (Brennan and Pincus 2010). However, this may not be desirable if the society requires more redistributive policies that target the least advantaged. In this case, maximizing the welfare of the minimum as proposed by Rawls (1971 cited in Kaplow, 2006 and Brennan and Pincus, 2010) may be more appropriate. Applying these concepts to Federalism in Ethiopia, a Utilitarian approach would favor the highest welfare for the highest number of regions in the country, while a Rawlsian approach would aim to see no region being left behind. Brennan and Pincus (2010, p.360) provide an apt example of this using tertiary education.

> In all such cases the question arises: to what extent should sub-national public goods be supplied so that everyone, however remotely situated, has access to exactly the same level of public service - so the same access to higher education or medical services or operatic performances or whatever, irrespective of where she [or he] lives? A strictly egalitarian procedure (a Rawlsian social welfare function) will require just such equality of service. A strictly utilitarian ('efficiency'-based) rule will restrict public goods supply to those areas where the number of individuals who consume the public good is largest - that is, all public goods consumption will take place in the largest 'consumption' area!

Buchanan (1950), succinctly notes this trade-off by recognizing that although the basic principle of horizontal equity is widely assumed to be desirable, this may not be consistent with maximizing social utility overall. It may be possible that transfers to more “efficient” regions or regions with higher consumption of public goods stimulate growth, which in turn increases tax revenue and the capacity for further redistribution. The argument does not suggest that growth and equity are incompatible, but that growth may be higher if transfers and spending were based on efficiency rather than equity arguments.

2.5 The nexus between Fiscal Federalism and Economic development

In the forgoing sections, it is argued that one of the major objectives of fiscal federalism in developing countries including Ethiopia is to promote equitable development through resource sharing. The following discusses the relation between fiscal federalism and economic development.

Decentralized public governance continues to invite controversy and debate. Proponents of decentralization consider it a panacea for reforming the public sector in developing countries (Shah, 1996a, 1998a, 1999d, 2003, 2004a), whereas opponents consider it as a road to wreck and ruin (Tanzi, 1996). This disagreement primarily arises from perspectives on the potential impact of such policies in the institutional environment of developing countries.

Moreover, a couple of decades ago decentralization used to be a matter of marginal importance for public economics scholars and for policy makers. Countries were constitutionally divided into federal or unitary systems and there were hardly any political or economic initiatives for restructuring. This was the post-World War II period, characterized by rapid growth in public spending. The resulting large government involvement in the economy eventually raised concerns over public sector performance and over its further potential in sustaining permanent economic growth rates. This brought the issue of optimal allocation of fiscal authority between different government layers to prominence in the academic and policy debates.

Fiscal federalism of course remains a complex multidimensional phenomenon, but an important trade-off that has attracted much academic attention is whether the growth-stimulating benefits from making decisions at appropriate levels are outweighed by the costs of duplicating government efforts. There for, the contesting different views of the discussions of the nexus between fiscal federalism and economic development are in order.

The nexus between fiscal federalism and economic development has been debatable among scholars and it seems there exist substantially diverse views on the effect of the interaction. On the one hand, some theorists argue that fiscal federalism and economic development are mutually reinforcing and compatible. On the other hand, others say that fiscal federalism is detrimental to development. Still, there are some who advocate that there exists no tangible relationship between fiscal federalism and economic development. Finally, some theorists argue that there is negative relationship among the two. In this regards, in the last three decades, many researchers have attempted to seek confirmation for their respective positions, but ended up with divergent conclusions.

This section provides a synthesis of the empirical literature on the impact of fiscal federalism on service delivery and economic growth to inform this debate.

2.5.1 Impact of Decentralization on Service Delivery

Recent studies have explored the impact of fiscal decentralization in various countries. In the following paragraphs, we have grouped these studies by their results-positive, negative, and inconclusive.

2.5.1.1 Positive Impacts

Several studies found a positive impact of decentralization on growth. In the classic case fiscal federalism leads to growth by a more productive and possibly smaller public sector through higher preference homogeneity (Oates, 1972) and enhanced inter-jurisdictional competition (Tiebout, 1956, Brennan and Buchanan, 1980). Akai and Sakata (2002), using state-level data for the united states, concluded that fiscal decentralization contributed positively to U.S. growth. These results are further confirmed by (Akai, Sakata, and Ma, 2003). (Lin and Liu, 2000) found that fiscal decentralization had a positive impact on china's growth. (Thiessen, 2000) found a positive and direct relationship between decentralization and growth for panels of high-income, western European, and middle-income countries. (Zhang and Zou, 1997) found the same for regional growth in India. (Martinez-Vazpuez and McNab, 2005). On the basis of international cross-section and time series data, found a positive impact of fiscal decentralization on economic growth through its direct positive influence on macroeconomic stability.

Moreover, (Alderman, 1998) found that decentralization had a positive impact on targeting of social assistance in Albania. Bardhan and Mookherjee (2003) similarly found that decentralized management advanced poverty alleviation goals in West Bangal, India. The same results were confirmed by Galasso and Ravallion (2001) for Bangladesh. Eskeland and Filmer (2002) using cross-section data from Argentina schools found that decentralization of education led to improvement in school achievement scores. Faguet (2001) also found that decentralization in Bolivia helped improve consistency of public services with local preferences and quality and access to social services. Foster and Rosenzweig (2002) found that in India democratic decentralization led to improved allocation for pro-poor local services. Santos (1998) discovered the same effect in Porto Alegre, Brazil, with participatory budgeting. Isham and Kahkonen (1999) observed improvements in water services in Central Java, Indonesia, with local community management. King and Ozler (1998) observed that decentralized management of schools led to improvement in achievement scores in Nicaragua. Estache and Sinha (1995) using data on a cross section of industrial and developing countries found that decentralization leads to increased spending on public infrastructure. Huther and Shah (1998) and Enikolopov and Zhuravskaya (2003) using cross section and time series data for a large number of countries found that decentralization contributed to improved delivery of public goods provision.

A joint study by the World Bank, Asian Development Bank, and the U.K. Department for International Development (World Bank, 2004b), utilizing survey data for six districts and twelve tehsil municipal administrations on the impact of 2001 local devolution in Pakistan, found that service delivery access for health and education uniformly improved in all sample areas whereas water and sanitation services showed improvements only in a few areas. Faguet and Sanchez (2006) carried out a comparative study of the impact of decentralization on education outcomes in Bolivia and Colombia. They found that in Bolivia decentralization made government more responsive by redirecting public investment to areas of greatest need. In Colombia, decentralization of education financing improved enrollment rates in public schools. In both cases, smaller, poorer and more rural municipalities proved to be catalysts for improving educational outcomes.

2.5.1.2 Negative impacts

Davoodi and Zou (1998), and Xie, Zou, and Davoodi (1999), Rodriguez-Pose and Ezcurra (2010), Bodman (2011), Baskaran and Feld (2013) are among those authors who provide evidence for a negative relation between federalism and growth), using various data sets for the developing countries, developed countries, and time series data of the United States, discovered that decentralization was associated with slower growth. Zhang and Zou (1998) found that fiscal decentralization in China contributed to lower provincial growth. Rodriguez-pose and Bwire (2003) found a negative impact of decentralization on economic growth for Mexico and the United States but no impact for Germany, India, Italy, and Spain.

Stansel (2005), using data for 314 metropolitan areas in the United States, found a negative relationship between the central-city share of metro area population and economic growth and a positive relationship between the number of municipalities per 100,000 residents and the number of countries per 100,000 residents and economic growth. Those findings provide support for the hypothesis that decentralization enhances economic growth. Atsushi (2005), using data for fifty-one countries, found a positive impact of fiscal decentralization on economic growth. Bodman and ford (2006), on the basis of panel data for OECD countries found positive relationship between fiscal decentralization and physical and human capital accumulation.

Akai, Nishimura, and Sakata (2007) examined the relationship between fiscal decentralization and economic growth by using state-level cross-section data for the United States, using a panel data set of the fifty states over the period of 1992-1997. They found that the relationship between fiscal decentralization and economic growth is not linear, so that the economic growth implication of fiscal decentralization depends on the structure of complementarity. Their analysis shows that the optimal degree of fiscal decentralization conducive to economic growth is higher than the average of the data in some cases, and hence further decentralization is recommended for economic growth.

Ravallion (1998) found that in Argentina poorer provinces were less successful in benefiting their poor areas and decentralization generated substantial inequality in public spending in poor areas. Azfar and Livingston (2002) did not find any positive impacts of decentralization on efficiency and equity of local public service provision in Uganda. West and Wong (1995) found that in rural China, decentralization resulted in lower levels of public services in poorer regions. A study of health services by the local governments in the Nigerian states of Lago and Kogi showed inefficient service delivery performance (Khemani, 2004).

2.5.1.3 Inconclusive impacts

Several other studies found that the impact of fiscal decentralization on growth is either, negative or inconclusive. (Musgrave, 1959, Oates, 1972) found that decentralized political decisions create inter-jurisdictional spillovers which negatively affect growth by distorting local tax and fiscal incentives. Less conventional arguments that could go in both directions range from economies of scale (Prud'homme, 1995, Rodriguez-Pose and Ezcurra, 2010) and macroeconomic stability (Ter-Minassian, 1997, Fukasaku and de Mello, 1999, Martinez-Vazquez and McNab, 2006) to government accountability (Martinez-Vazquez and McNab, 2003) and institutional quality (Ahmad and Tanzi, 2002).

Azfar et al. (2000a ,2000b) concluded for the Philippines and Uganda that, while local governments do appear to be aware of local preferences, their response is often inadequate as they are hamstrung by procedural, financing, and governance constraints. Khaleghian (2003) using data for 140 countries found that, while decentralization improved the coverage of immunization in low-income countries, opposite results were obtained for middle-income countries. Winkler and Rounds (1996) reviewed Chile's experience with education decentralization and concluded that it resulted in improvement in efficiency of provision but also experienced decline in scores on cognitive tests. Elhiraika (2007), using provincial-level data for South Africa, found an inclusive impact on service delivery of limited fiscal decentralization to provinces.

Phillips and Woller (1997) and Martinez-Vazquez and McNab (2003) could not find a statistically significant relationship between fiscal decentralization and economic growth. Thornton (2007), on the basis of a sample of nineteen OECD countries, found that the impact of decentralization on economic growth was insignificant. According to Davoodi and Zou (1998) and Zhang and Zou (1998), the negative association between the fiscal decentralization and economic growth may indicate that in practice local governments may not be responsive to local citizens' preferences and needs-for example, when local officials are not elected by local citizens and when local citizens may be too poor to "vote with their feet." For the case of China, the central government is constantly constrained by the limited resources for public investment in national priorities, such as high ways, railways, power stations, telecommunications, and energy. Such key infrastructure projects may have a far more significant impact on growth across Chinese provinces than their counterparts in each province. This finding has some implications for other developing countries and transitional economies. The merits of fiscal decentralization have to be measured relative to existing revenue and expenditure assignments and stage of economic development. The central government may be in much better position to undertake public investment with nation-wide externalities in the early stage of economic development. More important, if local share in total fiscal revenue and expenditure are already high, further decentralization may result in slower overall economic growth.

In general, the following figure tries to depict the nexus between fiscal federalism, economic development and political stability in a simple linear manner as follows:

Fig. 2.1: Links between Fiscal Federalism and Equitable Development

According to this conceptual lens, fiscal federalism lays ground work for government policies to target on bringing about equitable development among regions, groups and citizens which would likely cause political stability in a federation. If fiscal federalism fails to bring about equitable development, then, political instability is highly likely.

The main critic is that there is a debate over the supposed correlation between fiscal federalism and equitable development as discussed above. Of course, the two variables are very much inter-connected. But it is wrong to conclude that it is the negative effect of fiscal federalism, that is, development inequalities are the sole cause of political instability. If one approaches development from broader definition, as is widely believed, issues of freedom and liberty, human rights, democracy and identity are also included. In this thesis, the major unit of analysis is inter-regional comparison, i.e., the distribution of socio-economic developments in Ethiopia. As it is a federation of nine ethnic based regional states, it would be of great interest to assess the extent to which regions are on the same chapter.

2.6 Summary

This chapter has attempted to show the theoretical nexus between fiscal federalism on the one hand, and equitable development on the other hand. To this end, seven major points have been thoroughly discussed. First, federalism is basically seen as a combination of self-rule and shared-rule in a polity. Secondly, federalism is very much related to decentralization especially in its phase of devolution of power. Thirdly, fiscal federalism is identified as one aspect of federal arrangement. In this part of the chapter, it is argued that, governments are expected to design effective fiscal arrangements (expenditure and revenue assignments) so as to fill both vertical and horizontal imbalances thereby promote equitable socio-economic development in federations. Fourthly, the chapter has also shown that regional development inequalities effect of fiscal arrangement would obviously cause political tensions and instabilities in federations.

Fifthly, the chapter attempted to show that local governments are empowered to make all policy and program decisions on behalf of their resident-voters represents a complex system of political, administrative, and fiscal autonomy and associated accountability to voters. In theory, such a system is expected to have positive impacts on the efficiency and equity of public service provision and provide an enabling environment to foster economic growth. In practice, these out comes depend on the existing institutional arrangements (including power relations) and the coherence of decentralization policies to create the proper incentive environment for bottom-up accountability. The complexity of the system explains the myriad outcomes that we see in practice. Nevertheless, the empirical evidence presented here is broadly supportive of a positive influence of fiscal decentralization policies on service delivery and economic growth. Six, the chapter also attempted to assess the economic development concepts

Finally, the chapter also attempted to show the nexus between fiscal federalism and economic development and its debatable views among scholars on the effect of the interaction. In the above sections, the study has attempted to review the main notion of fiscal federalism and economic development. The diverse conceptions of the interaction of fiscal federalism and economic development are also discussed.

From the above analysis, it is not difficult to observe that these concepts create different impressions to different people. Moreover, they are dynamic and have developed in their definitions over a long span of years.

The study uses the definition of fiscal federalism provided by (Bird, 1993), as a subfield of public finance, fiscal federalism addresses the vertical structure of public sector. It explores, both in normative and positive terms, the roles of the different levels of government and the ways in which they relate to one another through such instruments as inter-governmental grants. Moreover, fiscal federalism encompasses principles of fiscal relations between central and subnational levels of government that is the command over resources by the various levels of government and the direction and size of inter-governmental fiscal flows. This includes the division of tax powers and the means through which resources are adjusted to match expenditure responsibilities for central and subnational levels of government. What types of spending should be conducted by what level of government? Which level of government should levy what types of taxes? How should grants-in-aid be allocated? How should financial regulations be harmonized? These are the major issues of fiscal federalism. Similarly, the market –oriented economic polices whose orientation originates from the neo-classical paradigm will be the other components in the approach used to investigate the interaction of fiscal federalism and economic development. Here, great emphasis will be given to the Agricultural Development-Led Industrialization Strategy.

As Todaro pointed out, development has to target objectives that have tangible effect on the lives of the people. The availability of basic-life sustaining commodities, incremental increase in the level of standard of living and the provision of a substantial range of economic and social choices are supposed to be the purpose of a credible economic development strategy.

Finally, the interaction of fiscal federalism and economic development has been debatable for decades. The research conducted to investigate whether fiscal federalism advances or hinders development remains inconclusive. Nevertheless, it is the principal purpose of this study to analyze how these concepts interact in Ethiopia, which has simultaneously embarked on the process of democratization and economic reform. It also attempts to find out under what general conditions they are compatible, and whether these conditions can gradually be created in this country.

Chapter Three

3. The practice of Fiscal Federalism in the Federal Countries: A Comparative Review

Federations may devise their own system to regulate the business of intergovernmental fiscal transfers. Soliciting the experience of some federal countries on the issue at hand is important to compare the matter with the Ethiopian system and help to make necessary modifications, if any. For this purpose, the experience of federal countries is discussed in this chapter. Particularly the experience of the Republic of Germany, the Republic of India and Nigeria is discussed in detail. A separate discussion of the experiences of such countries in this chapter is believed to give a better picture of the experience of a given country on fiscal transfers at a time so that we could see what lessons to extract for Ethiopia's equitable development.

To give a somehow comprehensive system of the experience of each country, an attempt is made to briefly discuss how expenditure and revenue responsibilities are assigned, how far prevalent is fiscal imbalance, how far state borrowings are being treated and how it is trying to prevent soft budget constraints, how is it undertaking intergovernmental fiscal transfer be it grant or revenue sharing, and what are the challenges persisted in the fiscal transfer system of the country and how is it progressing to fix same. After this is communicated, the chapter also has a final important section to deal with the possible lessons that Ethiopia could draw from the comparative experiences for its equitable development.

3.1. Fiscal Federalism in the federal Countries

Fiscal federalism is one of the most important aspects of federalism to be examined in order to determine whether there is real devolution of power to regional governments. The trend of devolution of the powers of spending and raising revenues to lower levels of government has increased in recent years in many countries. While there may be many reasons for this in differing countries, a key factor is the recent drive towards more democratic and open government. Ter-Minassian explains that "this trend is partly a reflection of the political evolution toward more democratic and participatory forms of government, seeking to improve the responsiveness and accountability of political leaders to their electorate, and to ensure a close correspondence of the quantity, quality, and composition of publicly goods and services to the preferences of their beneficiaries" (Ter-Minassian,1997).

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In fiscal decentralization the main issue is the division of responsibilities among the various level of government concerning taxation, expenditure and regulatory powers. Such assignment of functions is usually linked with a structure or a mechanism of resource transfers between those levels of government (Boadway, 1994).

Expenditure assignments are mostly related to the responsibilities of each and every levels of the government and are defined by the constitution or relevant law of the country. Oates promotes "the decentralization theorem" to be applied in the attempt to divide expenditure assignments between various levels of government. It is stated that "for a public good- the consumption of which is defined over geographical subsets of the total population, and for which the costs of providing each level of output of the good in each jurisdictions are the same for the central or the respective local government- it will always be more efficient (or at least as efficient) for local governments to provide the Pareto-efficient levels of output for their respective jurisdictions than for the central government to provide any specified and uniform level of output across all jurisdictions" (Oates,1993). From the above argument, the states should be responsible for the provision of public goods that can be provided efficiently and effectively at their level. Accordingly, the states would be responsible for providing local services including health care, education, welfare services, state transportation and communication, family and child support services, natural resources management, and other local utilities (Boadway, 1994).

On the other hand, Oates argues that "the central government should assume primary responsibility for resolving the stabilization and distribution problems and for providing efficient outputs of those public goods that significantly affects the welfare of individuals in all jurisdictions'' (Oates,1993). Hence, the responsibilities of the federal government are mostly set in relation to the tasks of the provision of national public goods and services, the maintenance of the efficiency of the internal market and the objective of achieving redistributive equity in the country as a whole. Accordingly, the federal affairs, international trade, macroeconomic stability, and other services that transcend state borders (Boadway,1997).

Division of expenditure assignments between the central and sub-national governments varies in its extent from one country to the other depending on historical, political and cultural circumstances. Ahmed et.al., note that "among the six industrial federations (Australia, Austria, Canada, Germany, Switzerland, and the United States), the share of local (municipal) expenditures in the total government expenditures various from 7 per cent in Australia to 24 per cent in Switzerl and; the state or provincial share of total expenditures varies from 14 percent in Austria to 43 per cent in Australia" (Ahmed, 1997). As indicated, the share of federal expenditures is a significant part of the total expenditures in all the mentioned countries because of the high costs of the assignments such as defense bestowed on the central governments (Musgrave and Musgrave, 1989).

The issue of financing the expenditure tasks assigned to all levels of government is another important aspect of decentralization addressed by constitutions in many federal countries (Finer et.al., 1995; Sawer, 1995; Cooding, Jr., 1961; Sarkar, 1991). The financing sources are mainly tax assignment and the arrangements of transfers of resources from one level to the other level of government. Boadway et.al. note that" the nature of the decentralization of revenue raising responsibilities will depend upon the role of the federal government in addressing the problem of redistributive equity" (Boadway, 1994). On the other hand, the decentralization process has to take into account that the state governments need to finance some of their expenditures with their expenditures with their own resources. In this regard, Musgrave suggests the following principles, which are basically based on equity and efficiency criteria as follows.

1. Middle and especially lower lever jurisdictions should tax those bases which have low inter-jurisdictional mobility;
2. Personal taxes with progressive rates should be used by those jurisdictions within which a global base can be implemented most efficiently;
3. Progressive taxation, designed to secure redistribution objectives, should be primarily central;
4. Taxes suitable for purpose of stabilization policy should be central, while lower-level taxes should be cyclically stable;
5. Tax bases, which are distributed highly unequally among sub-jurisdictions, should be used centrally; and
6. Benefit taxes and user charges are appropriate at all levels (Ter-Minassian (ed.), 1997; Oates, 1998;

and Shah, 1990).

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These principles are useful to the discussion of allocation of revenue sources to each and every level of government. Direct taxes such as corporate taxes, capital taxes, and personal income taxes, taxes on wealth and wealth transfers, and trade taxes are good candidates for the central government and indirect taxes such as excises and general sales, and property taxes and users' taxes are suitable for state and other lower levels of government (Boadway et.al., 1994).

Although the general trend is as discussed above, experiences differ from one country to the other depending on historical, geographical, ethnic, and constitutional particularities of a specific country. Australia have has a two-tiered highly centralized system. The commonwealth government administers and collects about 80 percent of the taxes. Its dominance is created because of its control of the major sources of tax revenue such as the personal income tax, customs and excise, company income tax, and sales tax (Ter-Minassian,1997). On the other hand; Canada has a two-tiered highly decentralized system where the provinces have substantial revenue collection powers. Taxes such as the personal income tax, the corporate income tax, the goods and services tax are at the hands of the federal government while the personal income tax and the corporate income tax (collected by the federal government but remitted in part to provinces), the retail sales tax, and resource taxes are the prerogatives of the provinces. The property tax is left to lower local administrations (Ter-Minassian, 1997).

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Germany has a three-tiered tax assignment system where tax legislation is fully centralized. The federal government is in control of taxes such as surcharge on income and corporation tax, road transport tax, customs tax, excises on mineral oil, tobacco, and alcohol (except beer), capital transactions tax and insurance tax. The Lander collect revenue from net wealth tax, motor vehicle tax, beer tax, real property transfer tax, and betting and lottery tax while municipalities administer business profits tax, property taxes and communal levels on public services (utilities) (Ibid). In addition, taxes such as wage tax, assessed income tax, non-assessed taxes on earnings, corporation tax, turnover tax (VAT), and import turn over tax are common taxes or shared taxes between the federal and lander governments (Ibid).

The above-discussed expenditure and tax assignments to various levels of government usually create vertical and horizontal imbalances in their fiscal capabilities. Vertical imbalances emerge when the revenues and expenditures at particular levels of government within a federation are unequal. On the other hand, horizontal imbalances evolve when the own fiscal capabilities of various sub national government of the same level show disparity (Ibid). Federal countries normally attempt to address the imbalances by adopting a variety of resources transfer and borrowing mechanisms in order to bridge the gap between expenditure responsibilities and resources capabilities of sub national governments.

Bahl and Linn explain that intergovernmental grants are "a compromise solution in the debate over the division of revenue-raising authority and expenditure responsibility. They permit national governments to retain the authority to tax productive resource bases, but guarantee state and local governments a flow of revenues"(Oates,1998). These inter-governmental resource transfer mechanisms are supposed to be designed to advance equity and at the same time, efficiency, of the economy. These grants are needed to address inter-jurisdictional spillovers (Shah, 1990); bridge the fiscal gap between revenue means and expenditure needs; attain minimum standards of services all over the country; narrow differential net fiscal benefits across sub national territories (Ibid); and to achieve economic stabilization objectives (Ibid). These transfer mechanisms can be grouped in to two categories: conditional transfers (or specific purpose payments) and unconditional transfers. Conditional transfers include various types of grants such as matching grants, non-matching grants for specific purposes, and block grants. In these types of grants, the grantor defines, to a certain extent, their specific purposes. On the other hand, unconditional transfers include revenue-sharing mechanisms, with or without distributional criteria, and general-purpose grants. These grants are usually provided to the recipients to use them according to their own priorities (Ter-Minassian, 1997; Oates, 1993).

Federal countries employ different resource transfer mechanisms depending on their internal situations and their respective policies. As discussed above, Australia's vertical imbalance is wider than many federal countries and resource transfers from the commonwealth government play a large role in enabling the sub national governments to cover their expenditures. Resource transfers are handled by a permanent institution, the common wealth grants commission (CGC), which assesses the claim forwarded by the states. The CGC functions in accordance with the terms of reference provided by the commonwealth after consultation with states and territories (Ter-Minassian, 1997). The CGC determines the needs according to the principle "that each state should be given the capacity to provide the same standard of state-type services as the other states, if it makes the same effort to raise revenues from its own sources and conducts its affairs with the same operational level of efficiency" "(Ibid). The assessment includes both revenue- raising capacities and expenditure needs. The CGC produces recommendations and usually, but not automatically, accepted by the commonwealth and state governments (Ibid).

In Switzerland, the need for revenue transfers to the disadvantaged cantons is reflected in the constitution. Article 42 of the constitution notes that "the confederation encourages financial equalization among the cantons. In particular, when federal subventions are granted, the financial capacity of the cantons and the situations of the mountainous regions must be considered in an appropriate fashion" (Oates, 1993). Revenue transfers are made with the objective of enabling the cantons to provide similar levels of services without forcing them to levy taxes that are heavier than other better-endowed cantons. Such redistributive objectives are implemented through three types of vertical financial adjustments: federal tax reimbursements, tax sharing, and specific purpose grants (Ter-Minassian, 1997).

These redistributive grants are partly based on a cantonal fiscal capacity measure, which is determined by a formula. The formula contains four ingredients: the cantons fiscal revenue per capita, the canton's GDP per capita, regional (cantonal and local) tax effort, and the canton's specific expenditure requirements (Ibid).

Similarly, the German constitution contains provisions that provide for equalization considerations among the Landers. Article 107(2) of the basic law states that "such statute {federal statute with the consent of the Bundestrat} shall ensure a reasonable equalization between financially strong and financially weak Lander, due account being taken of the financial capacity and financial requirements of communes or association of communes… such statue may also provide for grants to be made by the federation from federal funds to financially weak Lander in order to complement the coverage of their general financial requirements (supplementary grants)" (Finer et.al.,1995). The federal government provides grants that are conditional and intended to co-finance specific state projects. These conditional grants are mainly provided for education, health, welfare, and infrastructure. It also provides unconditional grants to support the poorer states of the federation. Both these grants have distributional objectives on the provision of public services (Ter-Minassian, 1997).

In addition, horizontal grants and equalization schemes are applied to enhance the distributional mechanism. First, the Lander share of the turnover tax (VAT) which is about 45 per cent of the total is shared among the Lander using an equalizing method. About one quarter of the Lander VAT share is distributed to support the financially weaker ones and the rest is distributed according to the population of the Lander. Secondly, a horizontal scheme of interstate equalization without federal government interference provides another source of revenue for the relatively poorer Landers. Revenue transfers are made from the richer to the poorer in order to bring the fiscal capacity of the latter to an acceptable standard (Ibid).

In India, as discussed above, the revenue sharing scheme created vertical imbalances that have to be narrowed through grants by the central government. These are several groups of grants provided to the state governments. The grants-in-aid account for about 7 per cent of the transfers, which are recommended by financial commissions in order to address the residual deficits of non-plan revenue accounts of state government (Ter-Minassian, 1997). There are also grants decided by the planning commission on the condition that it approves the state development programs. These grants are provided in accordance with a formula that comprises weights of 60 per cent for population, 25 per cent for per capita income, 7.5 per cent for a combined index of tax effort, literacy, and completion of foreign aid project, 7.5 per cent for special problems (Ibid). In addition, transfers are made for specific purpose programs such as assistance for hill area development, matching grants for foreign aid projects, emergencies and to improve specific services. Although these transfers are made by taking into consideration the need to favor relatively poorer states, there exist substantial horizontal imbalances among them (Ibid).

The other means of closing the gap between expenditures and revenue resources available to subnational governments is borrowing either in the open market or from central government funds if these are available. In most cases, borrowing is not left to subnational governments to decide. The approaches used by various countries in respect of control of subnational borrowing can be grouped into four broad categories. Of course, countries are not confined to using one or the other but to a mix of them. These categories are: 1) sole or primary reliance on market discipline; 2) co-operation by different levels of government in the design and implementation of debt controls; 3) rules- based control; and 4) administrative controls (Ibid). Although the first approach has been used in countries like Canada and Brazil until recently, most countries exercise some level of controls to avoid unnecessary subnational indebtedness (Ter-Minassian, 1997; Shah1998). These controls of borrowing take various forms such as setting of annual limits on the overall debt of each subnational government; reviewing and authorization of individual borrowing undertaking; and/or centralizing all government borrowings with the objects of lending subnational government for approved investment projects (Ter-Minassian, 1997).

Fiscal co-ordination among central and subnational governments is important to ensure fiscal discipline and stability. In Switzerland, fiscal co-ordination is advanced through some budget directives: a) the growth rates of public expenditures should not exceed the expected growth of nominal GNP; b) the budget deficit should not be higher than that of the previous year; c) the number of civil servants should stay the same or increase only very slightly; d) the volume of public sector building should remain constant and an inflation indexation clause should be avoided (Shah, 1998). In Germany, the constitution stresses that "the federation and the Lander shall have due regard in their budget management to the requirements of overall economic equilibrium" (Finer et.al., 1995). It further indicates that "through federal legislation requiring the consent of the bundestrat, principles applicable to both the federation and the Lander may be established governing budgetary law, responsiveness of budget management to economic trends, and financial planning to cover several years ahead" (Ibid). As mentioned, an effective federal-Lander co-ordination is ultimately ensured through the bundestrat where the Lander sends their representatives.

Fiscal decentralization is in vogue. Both in the industrialized and in the developing world, nations are turning to devolution to improve the performance of their public sectors. In the United States the central government has turned back significant portions of federal authority to the states for a wide range of major programs, including welfare, medical, Legal services, housing, and job training. The hope is that state and local governments, being closer to the people, will be more responsive to the particular preferences for their constituencies and will be to find new and better ways to provide these services. In the United Kingdom, both Scotland and Wales have opted for their own regional parliament. And in Italy the movement towards decentralization has gone so far as to encompass a serious proposal for the separation of the nation into two independent countries. In the developing world, we likewise see wide spread interest in fiscal decentralization with the objective of breaking the grip of central planning that, in the view of many, has failed to bring these nations onto a path of self-sustaining growth.

While the theoretical justification for fiscal federalism is sound, its practicability differs in federal systems, based on historical antecedents and culture. This section provides a selective review of policy issues and recent trends in a number of different countries and regions. The aim is to highlight a few of the issues of fiscal federalism, intergovernmental fiscal relations, and fiscal decentralization that have emerged throughout the world in recent years to draw experiences and lessons for Ethiopia.

Problems of fiscal centralization and decentralization by their nature tend to have important institutional and economic dimensions that vary from one country or region to another. Shifting the locus of fiscal responsibility among levels of government may occur relatively incrementally, as in stable federation like the US, or they may occur with dramatic speed, as in the disintegration of the Soviet Union or the unification of Germany.

In all cases, however, there are specific historical and institutional factors that channel the process of fiscal adjustment within the broader context of overall economic and political change. Widely varying political and economic systems, levels of economic development, and legal, constitutional, and fiscal traditions form the milieu within which the responsibilities of different levels of government are determined. The institutions of fiscal federalism vary widely across the world, and it is worthwhile to undertake a comparison of the divergent experiences of different countries to draw a lesson for Ethiopia.

3.1.1. Federal Republic of Germany

The German federal system is known as an administrative fiscal federalism, and, again is highly centralized, although in 1949, primary functions were given to the states (Landers). Over the years, the federal government has encroached on these functions through the establishment of the concurrent legislative list. Therefore, the powers of the Landers have diminished to ordinary implementation of federal government programmes. The financial arrangement is highly centralized in terms of legislation, administration and right to collect revenue. All important revenue sources are centrally collected and shared among the levels of government (Spahn and Fottinger, 1997).

The Constitution defines revenue sharing (vertical and horizontal) and allows for negotiated changes. The distribution of income taxes (personal and corporation) is based on derivation principle. The distribution of VAT is based on population and equalization payments to the poor Landers.

Furthermore, several grants are made to the sub national governments for co-financing of specific programmes. The grants are largely influenced by the principle of uniformity-of-living conditions among the citizens.

The government is prohibited from borrowing from the Central bank and whatever borrowing it makes is restricted to the amount for capital budget. The stringent borrowing criteria laid down by the federal government appears to restrict national debt. Likewise, the restrictions transcend other levels of government thereby providing a good platform for monitoring macroeconomic targets (Watts and Hobson 2009, Vincent 2001).

3.1.1. 1 On Assignment of Expenditure and Revenue Responsibilities

As per article 70 (1) of the Basic Law of Germany, the Lander have legislative powers as long as the Constitution does not assign a legislative competency to the federal government. The competence of the Lander on law making is non-existent or compromised if the federal government is given an exclusive jurisdiction on the matter, in which case Lander would only have law making power if they are expressly authorized by the federal law (article 71), or if the matter falls under their concurrent jurisdiction where the federal government would only have legislative competence "to the extent that the establishment of equivalent living conditions throughout the federal territory or the maintenance of legal or economic unity renders federal regulation necessary in the national interest"(Article 72 (2) of the Basic Law of Germany)

The long history of dominance of the federal government over the Lander which is strengthened by the federal government winning most of the concurrent jurisdictions and that established a peculiar unitary federal state is described in the following manner:

> The strong federal role as laid down in the Constitution and the strong emphasis on the equality of living conditions in Germany, together with a historically rooted skepticism about decentralized solutions have led to Germany's cooperative model of (fiscal) federalism. The range of Land responsibilities is limited because the federal government has used concurrent legislation extensively and thus expanded its responsibilities across time(Lars P. Feld and Jurgen Von Hagen 2007, P. 133).

On the other hand, there are different areas where both orders of government have common financial responsibility over matters provided in the Basic Law. For instance, article 91a of the Basic Law enunciates that in cases of joint tasks, where the federal government participates in the discharge of the responsibilities of the Lander in areas that are beneficial for all citizens in the federation and are necessary for improvements of living conditions, the federation is required to finance at least half of the expenditures of such responsibilities in each Land.

As far as the revenue assignments between the federal and the Lander government are concerned, we could discern that each order is somehow restricted from unilaterally changing its tax revenue without the consent of the other though the restriction is more lenient for the federal government. The federal government has some autonomy to change the tax revenues on some taxes without the need to secure the consent of the other compared to Lander tax revenues, whose bases and rates are passed by the federal parliaments owing to its concurrent jurisdiction (except for real estate purchase tax whose tax rate could be fixed by the Lander)(Article 105 (2a) of the Basic Law of Germany).

Article 108 of the Basic Law specifies the allocation of responsibilities for collecting, handling, and spending taxes. The Lander have the principal responsibility for tax administration. While the federal government administers federal taxes, the Lander are responsible not only for administering state taxes, but also the common taxes.

Generally, it is provided that the federal government accounts for almost half of total government spending in Germany followed by the Lander that spend more than one-third and the local governments 17% of the total government spending(Feld and Hagen, supra note 75, P. 138). Even if this figure signifies that the federal government covers greatest share of the spending, the Lander and the local governments are still unable to effectively finance their expenditure responsibilities. This creates a vertical fiscal imbalance.

3.1.1.2On Vertical Fiscal Imbalance

It is asserted that the Lander could not derive enough revenue sources required for their expenditure responsibilities and spending creating a vertical fiscal imbalance between them and the federal government. This fiscal imbalance is attributed to many factors. First, the most important taxes as measured by their revenue; the personal and corporate income taxes as well as the value added tax are joint taxes (while 66% of the federal tax revenue comes from such shared taxes, 85.4% of the Lander's tax revenue and 64.2% of their total revenue comes from same source) the revenue from which is shared among the federal, Lander, and local governments(Article 106 (3) of the Basic Law of Germany).Second, it is attributed to the disproportional tax revenue which is accompanied by the inability to fix the tax base and rate (save for determining the rate of the tax for acquisition of real estate as per article 105 (2) of the Basic Law) for ensuring uniformity of tax-base and tax-rate across the Lander resulting in weak tax performance of the Lander. It is contended that the federal government collects up to 65% of all the revenues of the federation(George Anderson, supra note 24, P. 37).

3.1.1. 3 On State Borrowing and Soft Budget Constraints

The fact that the Lander are not autonomous either in the revenue and expenditure side that requires them to provide minimum public services forces them to rely on transfers and to use borrowing as a means of financing their expenditure responsibilities. The borrowing on its part creates a high burden on the Lander that they could not pay it from their own sources. As a result, some Lander sued the federal government before the Constitutional Court for a bailout which was provided by the federal government in the form of vertical conditional grants mandated to reduce the public debt of the Lander(Feld and Hagen, supra note 75, P. 139). Some argue that this bailout creates a soft budget constraint on the Lander. This result for Lander officials to face strong incentives to finance public expenditures via debts because they know that, in the end, there will be a bailout(Beate Jochimsen, 2010, P. 85.). In 2006, the Constitutional Court of Germany rules that a bailout is only given when the federal government declares a state of emergency(George Anderson, supra note 24, P. 24). Accordingly, it is made clear that it is difficult in the future for a single Land to bring a suit for a bailout against the Constitutional Court.

3.1.1.4. On Intergovernmental Fiscal Transfers

As a means of bridging the vertical and horizontal fiscal imbalances, the German fiscal equalization system provides for four steps(Feld and Hagen supra note 75, P. 143). First, the Lander would collect taxes from the revenue sources assigned to them (article 106 (2) of the Basic Law). The revenue of the Lander is particularly important from the joint taxes where the Federation and the Lander shall share equally the revenues from income taxes and corporation taxes (article 106 (3) of the Basic Law) on the principle of residence and the revenue from the value added tax shall accrue to the individual Lander on a per capita basis (population based) (article 107 (1) of the Basic Law). The Lander as a group receive 42.5% of the revenue from the income taxes, 50% from the corporate income taxes (in both cases equal with the share of the federal government) divided among the Lander on the basis of the amount of taxes collected by revenue authorities within the territory. 48.4 of the revenue from the VAT would be devolved to the Lander in general and apportioned among them on an equal per capita basis which is a simple form of equalization(Boadway and Shah, supra note 31, P. 199).

The second step in the equalization system is that up to 25% of the revenue of the VAT is used to increase the fiscal position of the poorer states. This step does also have a constitutional basis under article 107 (1) of the Basic Law.

Accordingly, while three quarters of VAT are apportioned to the Lander according to population, another quarter is reserved for those states that are considered financially weak. They receive supplementary transfers from VAT in order to foster their fiscal potential.

The third form of the fiscal equalization in Germany is "the horizontal fiscal equalization between the Lander where the states with a measure of fiscal capacity below the measure of equalization receive grants from those states with a measure of fiscal capacity above the measure of equalization." It is important to note that state-state equalization is a second-tier equalization process. That is, states‟ fiscal capacities include revenues from the VAT which are already "equalized".

With this method of usually unconditional nature, the fiscal capacity of the poorer Lander is lifted up to 90% of the national average. One could as such note here that the equalization system only concerns on fostering only the fiscal capacity of the Lander with little or no regard to expenditure needs.

This form of equalization arrangement accounts for 62% of the equalization among the Lander(Ronald Watts, supra note 25, P. 110).Its unconditional nature is imperative for the Lander in conferring some level of autonomy on the manner of spending on the fund. The costs of this solidarity are yearly transfers of resources from West to East the volume of which is enormous: it corresponds to more than twice the official development aid of all industrialized countries to all developing countries in the world (Paul Bernd Spahn, Maintaining fiscal equilibrium in a federation).

In the fourth step we would find a vertical grant system where some Lander are entitled to receive funds from the federal government as per article 107 (2) of the Basic Law. The Lander that could get this, usually conditional, fund should either be those in need of assistance to further lift their fiscal capacity or the new Lander to reduce specific burdens before the unification and to deal with high structural unemployment. This step is expected to lift the fiscal capacity of the Lander to 97.5% of the national average. In addition to such steps, specific grants may flow from the federal government to the Lander for projects under the joint tasks category for reimbursement of Lander for federally mandated expenditures, and for specific projects related to the creation of uniformity of living conditions(Article 91a cum article 104a of the Basic Law of Germany). One surprising feature of the system in this regard is that on average the federal government only covers 13.3 of the expenditure responsibilities of the Lander(Feld and Hagen, supra note 75, P. 144).

One problem of the equalization system in Germany is that it has perverse incentive effect in that it leads to higher borrowing and spending by the Lander which puts a premium on fiscal imprudence although it has an advantage of closing the fiscal gap and more importantly that it smoothest the income shocks among the Lander significantly through the years(Id., P. 144). It is usually underlined that the intergovernmental fiscal transfer of the German system is not welcomed by either richer or poorer Lander(Ronald L. Watts and Paul Hobson, Fiscal Federalism in Germany).

The poorer Lander argues that the equalization system is not enough for them to cover their increasing expenditure responsibilities and the higher per capita expenditure requirements. This is because the system only takes in to account the fiscal capacity of the Lander, not their expenditure needs. The richer Lander, on their part, contends that the system encourages financial mismanagement and penalizes those that are good financial managers. They have also been supported with the view that excessive solidarity is seen to entail absence of accountability, absence of regional growth initiatives, lack of interest to develop own resources, and even moral hazard and waste at the state level. They also argue that the federal government is intentionally favoring this policy to win more power in its favor. This necessitates for a louder call for reforming the German fiscal federalism.

3.1.1.5 Contemporary Issues on the German Fiscal Federalism

There are different disputes concerning the present functioning of the fiscal system in Germany. As it was considered above, the current equalization system has incorrect incentives for both poorer and richer states to raise more revenue. This as it may, it is also contended that given their disparate territorial areas, population size, and, since re-unification, levels of economic development, it has been argued that territorial reform is necessary if the country is to achieve its goal of equivalence of living conditions, but the earlier attempts to do so are all futile(Ibid).Without the special assistance of the federal government, poorer states could not perform the joint tasks as required.

It is even argued that unless such territorial reorganization takes place, it is inevitable that the richer states would sue the federal government before the Constitutional Court praying for decreasing their financial obligation to the poorer states. Also, it is recommended that not only the revenue capacity, but also the fiscal need of the Lander should be equalized.

On the other hand, the conflict on equalization, and hence the degree of interregional solidarity, as opposed to greater freedom to the act of lower tiers of government, and hence subsidiarity, is illustrative for the fundamental issues that are at stake in Germany(Paul Bernd Spahn, supra note 87)

That is to say, the equalization arrangement that requires richer Lander to contribute to the poorer Lander to foster solidarity is in direct confrontation with the principle of subsidiarity that principally advocates for power to remain at the lower level of government so long as they are capable of regulating it. This requires a mechanism to strike a balance between introducing rules that grant states more autonomy over taxes and promoting competition among them without undermining the principle of solidarity. However, as it stands now, reforming the financial Constitution (Reform II) and territorial reform (Reform III) are considered the “two hard boxes” which are difficult to intrude and realize in the near future(Carolyn Moore, Wade Jacoby, and Arthur B. Gunlicks 2010, P. 9).

One remarkable feature of the German federation is its proximity for adoption to change. Adjustments in the federal balance have been accomplished via Constitutional amendment, intergovernmental relations, and judicial review all of which have proved relatively flexible. However, as far as intergovernmental relationships are concerned, the institutional culture which puts a premium on consensus can mean the indefinite postponement of difficult policy choices, the so called joint decision trap.

In this connection, Jonathan Rodden submits that:

> Attempts to improve the efficiency of the public sector in Germany often fail because of the difficulty of bringing together a reform coalition in a system with so many effective veto players. For these reasons, battles over fiscal federalism will continue to be a key feature of the German political landscape in the year's ahead(Jonathan Rodden 2003, P.59).

The system is also faced with transparency and accountability concerns(Watts and Hobson, supra note 91). On accountability, it is submitted that accountability is decreased as the Lander pay the bill for some federally mandated initiatives. Transparency is also alleged to be decreased through the interdependent network of shared taxes, equalization transfers, expenditure responsibilities, and even decision making institutions which renders it practically impossible for voters to identify which government is taxing or spending for particular purposes.

3.1.2 The Republic of India

India has an established federal system and highly elaborate programmes of intergovernmental revenue sharing and fiscal transfers. Both the Planning Commission and the Finance Commission provide extensive grants to state governments in order to promote development and fiscal equalization. The system has come under criticism for creating perverse and conflicting incentives for state governments and for failing to promote equity objectives (Rao and Agarwal, 2004; Murty and Nayak, 2006). State government borrowing from the central government has created serious fiscal stress for a number of states (World Bank 2009). In part, this seems to be the consequence of increases in the interest rates at which state government are allowed to borrow from the central government. Like any reduction in central government transfers to states, this has the immediate effect of reducing the central government deficit while raising deficit at the state level.

As a result state governments are compelled to strengthen their revenues and cut expenditures. One consequence has been a push toward privatization of public enterprise in the electricity, water, and transportation sectors, a move which typically allows these enterprises to restructure employment and other aspects of their operations more freely than could occur in the public sector and which allows them to raise capital more easily from market sources.

The states of India, however, continue to face many demands for public expenditures for economic development and poverty reduction. The attempt to meet these demands was a principal motivation for the establishment of the system of grants and loans to the states in the first place. While many states have strengthened their own-source revenues, substantial disparities among the states still persist. Some states face fiscal crises as they attempt to undertake expenditures in excess of their revenues, which have prompted fiscal and regulatory interventions by the central government. Other states, in cutting expenditures, for example, for basic health and education, may also produce significant political pressures for assistance from the center. In such circumstances, the question arises as to how intergovernmental transfers and borrowing arrangements can be structured so as to provide states with adequate fiscal resources without weakening their incentives for fiscal discipline? A sufficiently high level of transfers from the center to the states would obviate any need for state borrowing, but this might just shift fiscal imbalances back to the center. The resolution of these and related issues are likely to occupy a prominent place in discussions of overall macroeconomic performance, management, development, and income distribution in India for some time to come.

3.1.2.1 On Expenditure and Revenue Assignments in India

The division of responsibilities between the union government and the states in India is provided under schedule seven of the Constitution. It could be generally said that while the Constitution has separate stipulations to the union, state, and concurrent lists with the residual power reserved to the Union government, it opted to follow a separatist approach on division of the taxing responsibilities without providing concurrent jurisdiction of taxing power between the union and the state governments. As such both the central and the state governments collect their own source of revenue(George Anderson, supra note 24, P. 38).

This in effect means that the right of levying a tax belongs exclusively to which it is assigned in contrast to that of concurrence. In fact, this separatist approach is viable only in the legal sense because there are in practice various areas of concurrency between the two orders of government. As such, we could discern that the Indian system is with a substantial contrast with its German counterpart where concurrent taxes constitute for the most important revenue of both the federal and Lander governments.

In India, “the states share in expenditure on administrative services is about 68 percent; on social services, 83 percent; and on economic services, about two- thirds; on providing education, public health, and family welfare, their role is 90%”(M. GovindaRao, 2007, P. 156).

GovindaRao has indicated that the assignment of responsibilities in India is centralized(Id., P. 159).The first indicator of the centralization of the assignments is that residual power belongs to the union government unlike the case of USA and Ethiopia where residual power, at least, in principle belongs to the states. Further, the union government is authorized to reorganize the territory of the states and could dismiss the state government alleging that it is not functioning according to the Constitution. It is also the union government that controls major plan strategies and control over major financial institutions.

As far as assignment of revenues is concerned, it is the central government that wins most of the broad-based and progressive taxes. The states have also their assigned taxes, the most important on revenue productivity being the sales tax.

3.1.2.2. On State Borrowing in India

State borrowing is a serious concern in India. It is alleged that over the years, the States of India have sought to finance their increasing needs for expenditures through loans rather than by raising additional tax revenues and/or charging for services delivered(Eunice Heredia Ortiz and Mark Rider 2006).This has led to the States running large revenue and fiscal deficits and accumulating unsustainable debt burdens. In India, borrowings are used not only for financing capital expenditures but also recurrent expenditures. It is reported that in 1998-1999 only half of the states“ borrowings were used to finance capital expenditures so that the remaining share was consumed for recurrent expenditures(Govinda Rao, supra note 99, P. 169).Unlike the case of Germany, where the Lander could borrow from external sources, the Indian states could only borrow from domestic sources. Even this borrowing is with important condition that if the states are indebted to the central government, which is the case for all states for assistance is given for the states as a loan by the central government as part of the central plan, securing the consent of the central government is necessary (Id., P. 160).

It is contended that the center has not fully exercised hierarchical control over state borrowing and market borrowings of the states do not reflect creditworthiness, which contribute to the lack of fiscal discipline among the states(Ortiz and Rider, supra note 101). On the other hand, it is the expectation of being bailed out by the centre that underlies the tendency on the part of a state to incur expenditure beyond its available revenues and resort to improvident borrowing. In fact, it is argued that the existence of hierarchical federal structure in India where the central government has much dominance over the states and the legal restrictions on the borrowing abilities of the states is capable to create a hard budget constraint. The federal arrangement has also succeeded in imposing a relatively high hard budget constraint (William J. McCarten2003, P.249). The federal arrangement has also succeeded in imposing a relatively high hard budget constraint.

However, the fact that the lines of authority and accountability have become blurred across levels of government which results in softening of budget constraints or in state level expectations that their budget constraint might soften(Ibid). Further, the existence of the vertical imbalance and lack of sufficient incentives for better performance by the states creates a moral hazard problem and expectations for fiscal adjustments from the center. William McCarten has concluded his article on the Indian state challenges of fiscal discipline saying:

> Political fragmentation, coalition governments at the center, and governments of short duration at the state level have made coordinating politics between the center and the states difficult and reduced the center's effective will to curtail populist policies by the states. This has led to difficulties, but hierarchical controls, even if enforced in a cautious or halfhearted manner, have prevented unfettered state access to credit…. Although debt obligations for most states are manageable with reasonable programs, efforts to date at fiscal correction have not been equal to the challenge (Id., P. 283).

3.1.2.3. On Fiscal Imbalance in India

As it is the case in other countries, there are also both vertical and horizontal fiscal imbalances in India. It is argued that the presence of horizontal imbalances made it necessary to constitutionally create vertical imbalance. As far as the vertical fiscal imbalances are concerned, Govinda Raoprovides that: "The state governments in 2002-03 collected only 41% of total current revenues, but their share in total current expenditure was 57 percent. From the revenue sources assigned to them, they could finance only 54% of their current expenditures. In other words, the states depend on central transfers to finance about 46% of their current expenditures"(Govinda Rao, supra note 99, P. 162).

It could be pointed out that centralization of power of levy of taxes and duties is higher than the centralization of collection thereof, which in turn is higher than the centralization of appropriation, which in turn is higher than the centralization of expenditure(P. K. Chaubey (ed), 2004, P. 31). With all its shortcomings, however, it is generally argued that both the finance and the Planning Commissions are increasingly favoring states in order to make them execute tasks due to them by making available more and more resources(Id., P. 41).

There are also horizontal fiscal imbalances in addition to the vertical fiscal imbalances. Let alone the expected variation between the 11 mountainous states (designated as special- category states) and the general category states, it is submitted that great variation also exists among the general or special category states. There is a marked variation in size, revenue raising capacity, expenditure needs, fiscal efforts, economic characteristics and other variables. Generally, it is said that though there is considerable devolution of resources to the states, the transfer system is less progressive in its allocation among the states(A. C. K. Nambiar2004, P. 54).

3.1.2.4. On Intergovernmental Fiscal Transfers

As a way of bridging the fiscal gap, the Indian Constitution provides for revenue sharing from the central taxes and grants. As per article 280 of the Constitution, it is the Finance Commission that is authorized to recommend the proceeds of the revenue sharing and the grants to the states. There is also the Planning Commission which gives plan assistance by way of grants. While the Finance Commission orders unconditional grants, the transfers of the Planning Commission(which is mainly concerned with development projects) are substantially conditional(Ronald Watts, supra note 25, P. 113). Thirdly, various central ministries also give specific purpose transfers for various central schemes with or without matching requirements. In India, the central government is authorized to provide grants to state governments for any purpose, whether that purpose is under federal government jurisdiction or not(Id., P. 101).Accordingly, the central government could also spend on areas on which it has no legislative authority.

It is the Planning Commission that plays a great role in supplementing funds for the state plans and also in providing funds for several schemes, sponsored by the union government ministries, which are carried out by the state level administrations (P. K. Chaubey (ed), 2004, P. 7).

The last form of transfer is criticized for its conditionality (which will affect local autonomy) and for its being discretionary. However, it takes important share of the planning assistance for it accounts for 40% of the total plan assistance and 14% of total current transfers(Govinda Rao, supra note 99, P. 167).

3.1.2.5. Finance Commission Transfers

The first transfer of the commission is revenue sharing. This is a mechanism where the states are entitled to claim a certain portion of the proceeds from all the central taxes. It is only in 2000 that the Constitution, through its 80th amendment, entitles the states to claim revenue sharing from all central taxes but before that it provides only for personal income tax and union excise duties. One reason for amending the Constitution in this regard is because the federal government began to pay more emphasis on revenue sources which are not subject to revenue sharing and a disincentive on effectively handling those taxes which are subjects to the revenue sharing(Boadway and Shah, supra note 31, P. 302).

Revenue sharing is a dominant form of transfer to the states within the Finance Commission transfers. In the year 2005, the twelfth financial commission has recommended the distribution of 30.5 percent of the net proceeds of central taxes to be distributed among the states(Govinda Rao, supra note 99, P. 165). In the year 2010, the recommendation of the thirteenth Finance Commission to devolve 32% of the net proceeds of the central taxes was accepted by the central government expected to last until the year 2015(Government of India Ministry of Finance Department of Economic Affairs).After assessing and determining the amount that should be devolved to the states, the Finance Commission first devolves the shared revenue from the central taxes to the states. It is only after apportioning the shared revenues among the states that the commission would go on to devolve grants- in- aid if there are post devolution budgetary gaps. The apportioning is made through grant formulas. The percentage share of the grants-in-aid by the Finance Commission is much less than the same of the revenue transfers through tax sharing. It is also experienced that the proportion of tax

Action Taken on the Recommendations Made by the Thirteenth Finance Commission in its Report Submitted to the President on December 30, 2009 shares to total financial resources recommended by the Finance Commission has been increasing while that of grants- in- aid has been constantly declining(Sailabala Debi, 2004, P. 202). It is submitted that with tax devolution accounting for nearly 90 percent of the revenue transfers ordained by the Finance Commission, the grants-in-aid have lost their teeth as an equalizing and disciplining instrument(Amaresh Bagchi, Fifty Years of Fiscal Federalism in India:). On the other hand, the special category states obtain more than 80% of the transfer of the Finance Commission in the form of grants (P. K. Chaubey (ed), supra note 110, P. 37).

The Finance Commission adopts transfer formulas that are meant to play an equalization function. While the Finance Commission transfers tend to have an equalization effects taking account of differences among states in population, per capita income (to determine the taxable capacity of the states), area, economic and rural infrastructure needs, and tax efforts; Planning Commission transfers for specific purpose projects tend to defy equalization effects(Ronald Watts, supra note 25, P. 110).
It is submitted that the Finance Commission's transfers are much more equalizing than the Planning Commission's because the criterion of per capita income disparities is much more equalizing than the population criterion. The Finance Commission's formula weights income disparities much more heavily than the Planning Commission's formula (62.5 versus 25 per cent, respectively); and the Planning Commission weights population more heavily than the Finance Commission (60 versus 10 per cent, respectively)(Ortiz and Rider, supra note 101).The element of backwardness is also included in the tax devolution to serve as an equalization factor although it is criticized as being not specifically targeted to fiscally disadvantaged states.

However, it could be said that the formula of the Finance Commission is pursuing more than an equalization objective because tax effort and fiscal discipline are also in the formula(Ibid). Equalization has been further blunted by the fact that the parliamentary resolution requires the commissions to use the 1971 population figures in the transfer formula whenever it is used for interstate distribution to provide an incentive for population control(Govinda Rao, supra note 99, P. 166).The criticisms against this stipulation are whether it is proper to incorporate population planning policies in the transfer system and if it is proper there remains a problem for those states with increased population not because of more fertility rates but because of increase in the migration rates in to the states and effective measures in reducing mortality rates(Govinda Rao, Changing Contours in Fiscal Federalism in India).

This as it may, the gap filling methodology of the Finance Commission is criticized for two grounds(Govinda Rao, supra note 99, P. 166).First, it is criticized that the methodology does not take in to account the fiscal disabilities or expenditure needs of the low income states that resulted the existing interstate difference in expenditures to perpetuate. Second, the gap filling methodology creates perverse incentives in that it leads to negative incentives to tax effort and expenditure economy. In effect, states showing large deficits in their budget get rewarded while those that manage their finances better suffer. It is because of such problems that it is argued that the transfer system lacks both equity and incentive although there are different attempts being undertaken to rectify that.

3.1.2.6 Plan Commission Transfers

Unlike the Finance Commission, the plan commission is not established by the Constitution of India and it is argued that this commission is one of the many instances that reflect the central dominance in the country and that greatly undermines and overlaps the jurisdiction of the constitutionally mandated organ- the Finance Commission. It is pointed out that around 30% of the revenue flaws from the union budget to the states are dispensed for state plans through the Planning Commission (Sharawan K. Singh2004, P. 12).These transfers are made through devising a formula that may be modified by the National Development Council, which is chaired by the Prime Minister and is composed of higher officials from both the central and state governments and members of the Finance Commission. Some argue that since both the state and the union officials are represented in the Council that approves the rules based On which the Planning Commission makes the award for plan assistance for the states, it has the merit of transparency (Ibid).

The transfer is divided in two parts (Govinda Rao, supra note 99, P. 167). First, 30 percent of the fund is reserved for the special category states. The 70 percent fund of the commission is reserved for the general category states which are apportioned between the states based on a formula the variables and the weights of which is 60% to population, 25% to per capita GSDP, 7.5% to fiscal management, and the remaining 7.5% percent to special problems. The fiscal transfers in India have witnessed various problems (Govinda Rao, supra note 127). First, the multiple institutions with overlapping jurisdictions have blurred the objective of the transfer. Second, accommodating different purposes has complicated the transfer formula. Third, the system is not well designed to achieve equalization and to ensure minimum service levels in the states. Finally, it does also have a disincentive effect on fiscal management in the states.

3.1.2.7 On Challenges of the Indian Fiscal Federalism

It is contended that the Indian fiscal federalism has faced different challenges attributed to problems related to both policies and institutions and changing political and economic environment(Govinda Rao, supra note 99, P. 170). The first challenge is deterioration in state finances that result in under providing for the maintenance of infrastructure and social development. The fiscal health of the states is being increasingly deteriorated. Second, there has been a significant increase in the fiscal inequalities of the states. This increased inequality is due to the fact that states with a stronger manufacturing base and with better market access have benefited through the economic liberalization undertaken in the country in 1990s. The Economic liberalization has also created interstate sales tax on exports from one state to another the consequence of which is to divide the economy in to several tariff zones.

Globalization is also another challenge to the Indian fiscal federalism. It has influence on the states for they are principally liable for the provision of competitive services and physical infrastructures that may also call a policy towards encouraging the participation of the private investor. The opening of the Indian economy has also resulted in loss of revenue from customs which remains an important challenge to replace it by other sources of revenue.

The most important challenge on the Indian fiscal federalism is argued to come from the changing political environment. The flourishing of many political parties up on the demise of the Congress Party with competitive relationship between the center and the states and among the states has caused conflicts whose resolution become a vital challenge for there are no effective mechanism for conflict resolution. Moreover, they also lack to reach a consensus on major policy issues of the nation, and with little probability of being re- elected; they prefer to pursue for short term policies through which to win election than resorting to soliciting for medium and long term policies. Finally, these all challenges have called for reforming the Indian fiscal federalism.

3.1.3 Federal Republic of Nigeria

3.1.3.1. On Expenditure and Revenue Assignments

In the Nigerian federation, the 1999 Constitution (Section four) provides the exclusive federal powers and the concurrent powers where both the state and the federal government have powers with federal dominance and the residuary power which is reserved to the states. As such, one could note that the Nigerian states do not have exclusive enumerated powers save for the residuary powers. On assignment of expenditure responsibilities, it is expected that those functions whose benefits are national are given to the federal government and those whose benefits are local but has a tendency of creating spillover effects are grouped under the concurrent list. On revenue raising powers, the legislative power of important revenues such as import duties, mining rents and royalties, petroleum profit tax, corporate income tax, excise duties and value added tax, and personal income tax come under the jurisdiction of the federal government while the states are required to do the collection and the administration business(Ronald Watts, supra note 25, P. 213).

3.1.3.2. On Fiscal Imbalances in Nigeria

Nigeria is one of those countries where we can witness a great variation between the surplus unit (the federal government) and the deficit unit (the state governments). It is reported that in the 43year 2000-2004, the federal government has 98% of the total revenue generated in the Nigerian federation before the intergovernmental fiscal transfers (Id., P. 102).

There are different factors declared responsible for the centralization trends of the revenue raising powers in Nigeria. Emmanuel Ojo has discussed that there is no fiscal federalism in Nigeria, rather fiscal centralism. He cited that "discontinuation of export duties and sales tax on agricultural produce, standardization of personal income tax rates throughout the country, thereby ensuring that the state governments become powerless to change the rates; introduction of uniform fuel prices throughout the country thereby removing the power of state governments to levy petroleum sales taxes; the takeover by the federal military government of all off-shore oil royalties and rent and with it the erosion of the principle of derivation principle in fiscal allocation from about 50 percent to less than 10 percent before rising to the current level of 13 percent of the distributable pool" are the instances signifying the incapacitating trends of states from their revenue raising power in the Nigerian federation(Emmanuel Ojo vol. 7 no. 1, 2010, pp. 15-38).

Attempts were made in the past to go away with such imbalances (Akpan Ekpo, supra note 32, P. 215). The first attempt was to assign more allocation roles to the federation which was not successful because it is the role that could efficiently be performed by lower level governments. The other option was reassigning more taxing powers to the lower level governments which was again not successful because of the low enforcement capacity of the lower level governments. The only remaining option in the Nigerian case then becomes to devise a formula for revenue sharing. It is manifested that intergovernmental fiscal transfer accounts for 89% of the total state revenues in Nigeria (Ronald Watts, supra note 25, P. 105).

3.1.3.3 On Borrowings In Nigeria

Among the exclusive lists conferred to the federal government, the Constitution empowers it to borrow money from domestic and external sources for the purpose of either the federal or the state governments. Despite such stipulation, it does not seem that the federal government has effectively pursued regulation mechanisms to control borrowings of the states(Akpan Ekpo, supra note 32, P. 210).The state governments in Nigeria could get a loan from external sources so long as it is approved and guaranteed by the Federal government and it is contended that the debt accumulation of the 36 states is frightening (J. Isawa Elaigwu2007, P. 255).There are critics that blame the federal government for it does not devise effective means of supervision on those states unable to pay their debts.

3.1.3.4. On Intergovernmental Fiscal Transfers in Nigeria

It is usually contended that in Nigeria, the allocation of expenditure responsibilities and tax jurisdiction has raised fewer contentions compared to the issue of intergovernmental revenue redistribution. There is a broadly held view that “the vital problem of federal finance in Nigeria is not so much that of allocating taxing powers, as of allocating the revenues produced by federal taxes between the various governments of the federation.”(Nkwachukwu Orji2008, P. 121) There are two main categories of revenue bases where the three tiers of government jointly pool their revenue for future intergovernmental redistribution. They include the Federation Account Revenues and Value Added Tax Revenues; each of these pool accounts is shared with a distinct sharing arrangement(Id., P. 122).Vertical revenue transfer in Nigeria comes in a variety of ways such as tax sharing, unconditional grants, block grants, conditional grants and matching grants(Id., P. 123).

As per section 162 of the Constitution, Nigeria established the Revenue Mobilization Allocation and Finance Commission which is entrusted to review and recommend revenue sharing rules in the federation every five years and to solicit to ensure modifications with changing realities. As such, although virtually all revenues are levied and collected by the federal government, the Constitution provides for a "Federation Account" in to which most of the revenues are paid with allocations from this account being made to federal, state, and local governments (which the Constitution recognize as the third tier of government). In this sense, the federal government administers and collects most of the lucrative taxes, but it does so, on behalf of the entire federation since the proceeds from the taxes are to be shared among the various tiers(Id., P. 119).

The recommendation of the commission needs approval by both houses of the parliament. The Commission is representative in that it consists of a chair person and one member from each of the states and the federal capital. However, it is sometimes the case that the recommendations of the Commission are subject to the modification of the federal government in its favor. Among the contentious issues prevalent in the Nigerian federation concerning the Federation Account, we could mention the special fund which is deducted from the Federation Account(Akpan Ekpo, supra note 32, P. 216).Although the Supreme Court of Nigeria was successful in voiding the deduction of the special fund from the Federation Account(Nkwachukwu Orji, supra note 244, P. 125), the decision was not effective because the President of the Federation, through his constitutional power of presidential order, simply increased the share of the federal government from the Federation Account from 48.5% to 56% that impliedly includes the special funds. It is reported that in redistributing the special fund, the federal government appropriated more than 82.4 of the special funds which resulted the federal government's actual share in the Federation Account to 54.7 percent (Id., P. 225).

Assigning substantial share of the Federation Account to the federal government may be justified because the federal government is also assigned with more expenditure responsibilities than the lower level governments. The Nigerian federal government covers almost 60% of the total expenditure of the government of the federation(George Anderson, supra note 24, P. 23).However, it is boldly argued that the federal government should reduce its involvement in most of its production and allocation roles by creating conducive environment for the participation of the private sector so that its share from the Federation Account is also reduced to allow more share to the lower level governments(Akpan Ekpo, supra note 32, P. 218).

The federal government has different areas to spend in different states and it may be sometimes the case that a state may get itself at a great advantage because of the federal spending in the state than its share through the revenue sharing. But the Nigerian system is challenged as it tends to give preferential treatment for some states and argued for the minimization of the sur plus funds from the hands of the federal government without compromising the role to be played by the federal government to maintain the unity of the sub national units and to give the country a sense of national direction(Ibid).Among the factors taken in to account in the fiscal transfers to the states, it is population (25.6%) that plays one of the dominant roles in the Nigerian federation. In Nigeria, population has been used as an index of need (Isawa Elaigwu, supra note 140, P. 206). Essentially, however, the principle of need emphasizes the need to meet expenditure demands of sub national units in order to carry out desirable services. One challenge on population is the tendency of some states to manipulate the census report to win much revenue than they would have lawfully obtained(Akpan Ekpo, supra note 32, P. 215).The other factor taken is internal revenue effort (8.31). Although this factor is meant to encourage states to look inward and try to maximize their internal revenue generating potentials, it has serious obstacles in reducing it in to practice. The main criticism of this factor is that it fails to recognize that revenue effort is a result of a combination of two factors- taxable capacity and tax effort.
Akpan Ekpo submits:a state with high taxable capacity but with lower tax rates and inefficient tax administration may still have higher internal revenue or a higher ratio of internal revenue to recurrent expenditure relative to another state with lower taxable capacity but high tax effort. There is, therefore, an urgent need to devise a better index of tax effort. And until such index is devised, the weight currently given to internal revenue effort in horizontal revenue allocation should be very minimal(Id., P. 220).

Land mass (terrain) (10.7% in aggregate) was another factor considered in the horizontal revenue allocation but whose weight is argued to be reduced due to their problem of not been thrown open to national debate as it is the case with most variables(Ibid).

In Nigeria great emphasis is given for **equality of states (equity)** for the variable is given more than 45% of the transfer from the Federation Account. Compatible with the logic of federalism that considers each state equal and independent, this principle argues that sub national entities should receive equal shares of federally derived revenues irrespective of population and contribution to the account of the federation (Isawa Eliagwu, supra note 140, P. 206). This means that each state receives an equal share of this portion of the Federation Account regardless of the state's population or contribution to the Federation Account. There are various justifications given for incorporating this criterion and conferring it with principal weight in the Nigerian federation. Nkwachukwu Orji discussed that:

> First, it is argued that the principle recognizes the reality that each state government has a minimum responsibility, which is to sustain a basic set of public functions and institutions irrespective of its geographical size, population or fiscal capacity. Secondly, the principle of equality of states represents the fiscal aspect of the overarching practice of symmetrical federalism in Nigeria. This practice manifests in the commitment of the elite to create states of relatively equal population, as well as equal constitutional, legal, and fiscal powers. Thirdly, the principle of equality of states compensates states that could not benefit from other criteria due to their small geographical size, population or financial capacity (Nkwachukwu Orji, supra note 141, P. 136).

As a sole criterion of distribution, however, an argument has been made that the logic of political equality of sub national units, which ignores population, is likely to create inequality of development in the country(Isawa Eliagwu, supra note 140, P. 207).This has meant that because of large differences in the size of the states, per capita revenues have in fact varied(Ronald Watts, supra note 25, P. 111). It is also argued that according the variable of equality of states substantial weight in Nigeria could create an endless demand of different groups for statehood for they would get great transfer in the name of equality afterwards(Nkwachukwu Orji, supra note 141, P. 136). It is also challenged that equity would be better guaranteed by distributing resources in per capita terms since the citizens through their states are the ultimate recipients of the federal funds.

Probably the most controversial of the variables in the revenue allocation formula is **derivation principle** or revenue control(Akpan Ekpo, supra note 32, P. 221).It is challenged because it makes rich states richer and poor states poorer and generates intergroup tension in a federation that strives for the unity of the component units. Opponents of the derivation principle claim that it would encourage the development of the rich regions while the regions endowed with less resource would lag behind in socio-economic development. However, proponents of derivation principle see it as efficient because it enables each region to receive revenues that are proportionate to their contributions, thereby promoting national/regional economic development by encouraging all the regions to identify and exploit revenue sources within their localities(Nkwachukwu Orji, supra note 141, P. 134).The principle is even defended from equity grounds which alleges that a state with a bulk of resources should benefit more than what others receive. It is also defended because the principle encourages using one"s resources effectively without a substantial expectation of transfer from others and to discourage a claim for statehood or recognition as a local government expecting transfers from others. The Constitution also provides that at least 13% of the revenues from natural resources should be devolved based on the principle of derivation to give more capita revenue to natural resources producing states. The fact that this weight is being reduced through the years from 50% to one percent and now 13 % is still claimed as unjust and unfair to answer for the expenditure needs of the region. The region is greatly exposed to high environmental degradation and pollution which is indicative of the extra ordinary expenditure needs of the region. Further, the manner in which the federal government manages the resources together with the poor management and corrupt practices of the officials of the region has exposed the peoples of the region to severe hardships(Ronald Watts, supra note 25, P. 51).To alleviate such problems of the region and in a manner that is considered as a welcome move, the federal government has established the Niger Delta Development Commission (NDDC) with various revenue sources in 2000 although some have still challenged its institutional competence in effectively undertaking its mandate(Nkwachukwu Orji, supra note 141, P. 156).

In addition to the Federation Account, the other source of revenue subject to fiscal transfer in Nigeria is the Value Added Tax which was introduced in 1994 replacing the states" sales tax (Id., P. 125).Since 1999, it is distributed at the ratio of 15%, 50%, and 35% to the federal, state, and local governments respectively. The horizontal formula for allocating revenues from VAT is based on the following criteria: derivation, equality of states, and population; while the revenues are shared as follows: fifty percent based on derivation, forty percent based on equality, and ten percent based on population(Id., P. 126).Some states where the bulk of VAT revenues are derived have expressed dissatisfaction with the VAT horizontal allocation formula calling for the application of hundred percent derivation principle in the distribution of VAT revenues in order to maximize their revenue from the source(Ibid).

3.1.3.5. On Challenges of Fiscal Transfers in Nigeria

Various problems are witnessed on fiscal transfers in Nigeria (Apkan Ekpo, supra note 32, P. 230). One problem is that the federal government is engaged in activities of diverting some proceeds of the federal revenue from including it in the Federation Account. Such proceeds from the illegal diversion are used in activities which are not the responsibility of the state and local governments. The proceeds are also being used for the development activities of some states in the south in a manner that signify preferential treatment. It is in order to avert this problem and to provide for the proper custodial of the Federation Account that it is recommended to establish Accountant General of the Federation to make it responsible for the maintenance and operation of the Federation Account. On the other hand, it is difficult to devise a horizontal revenue sharing formula that would be acceptable to all parties concerned. It is reported that since 1946, the government has devised about twenty horizontal revenue sharing formulas but none of them have enjoyed complete acceptance(Nkwachukwu Orji, supra note 141, P. 132).

In a manner that considers the Nigerian federalism as a fragile experiment together with the problems of power sharing, it is said that "the heated debate on resource control and some unpleasant pronouncements on the matter by some delegates highlight the fundamental problems in Nigeria‟s fiscal federalism"(Apkan Ekpo, supra note 32, P. 231).

3.2. Comparative Lessons to be Drawn

What lessons could Ethiopia learn from the comparative perspectives studied in the previous sections? The legal, institutional and political arrangements of the federal countries studied in this chapter could serve us a necessary reference point from which we could justify the incorporation or relinquishment of a certain idea in the Ethiopian intergovernmental fiscal transfers system. We hasten to add here that the challenge that each country faces on its fiscal transfer system may differ with the same that Ethiopia faces. The same is true on means of handling the problems which differ based on the capacity and readiness of the country for a desired change even when the problems are similar. The solutions countries discovered to tackle the problems on their transfer system may only be unique and local to fit their circumstances. However, soliciting the foreign perspectives on fiscal transfers is beneficial to test the Ethiopian case against it and rule on whether Ethiopia has valid grounds or excuses to incorporate or not of a certain principle or idea. Accordingly, we could discern some principles that are being applied in the countries reviewed above. This section is then to reflect some of such lessons that may be domesticated (or be strengthened if there are any) or avoided here in Ethiopia.

The first federal country whose fiscal transfer system was reviewed in this chapter is Germany. With the principal aim of ensuring balanced regional development and maintaining equal living standard of the people irrespective of their place of residence in the federation, the German fiscal transfer system has given special emphasis on the equalization transfer where the richer Lander directly contribute to the poorer Lander an amount which is comparable to two fold of the assistance that all industrialized countries render for developing nations. There are also instances of revenue sharing either on per capita or derivation basis, reserving one quarter of the VAT revenue to the poorer states and direct transfer by the federal government for poorer Lander.

Although such transfer systems are not devoid of criticisms both from the poorer and richer states, the German system is telling of the fact that we should worry much about equity considerations in the grant formula. Stating otherwise, efficiency should not be the only, if not the principal, objective of the transfer system.

The German system is also admiring in accommodating the interest of states by directly representing them in the second chamber of the Federal Houses, the Bundesrat, where it has a law making power. This enabled the Lander to attack any legislation that has a potential to jeopardize their interest. The existence of cooperative federalism that expects the Lander to administer the bulk of federal laws and the dominant role of the federal government with regard to the concurrent powers creates a strong federal government in Germany at the expense of undermining the autonomy of the Lander.

Like most federal countries, the lower level governments in Germany are also unable to fully finance their responsibilities in spite of the fact that it is the federal government that covers almost half of the government spending. This is because the federal government collects almost two thirds of the revenues of the federation and the states do not have the autonomy to fix the tax base and rate. In addition to the fiscal transfer, the German Lander also use borrowing as another option of financing their expenditure and the absence of strong regulatory role of the federal government on state borrowing accompanied by the prevalence of perverse incentive on generating own revenues has in practice created a soft budget constraint in Germany.

On the other hand, the existence of perverse incentive, the need for reorganization of the territories of the Lander, striking a balance between subsidiarity and solidarity, the prevalence of important veto players capable of blocking any reform agenda especially concerning the transfer system and accountability and transparency problems are the challenges faced by the fiscal transfer system in the contemporary Germany.

It was India whose transfer system was reviewed in the second place in this chapter. We can also discern some glaring features of the Indian transfer system. India has a Finance Commission that studies and recommends a grant formula to determine the proceeds of the states from all the federal taxes and the gap filling non- plan transfers that the federal government devolves afterwards every five years. The grant formula has attempted to incorporate both equity and efficiency considerations although it is criticized as it does not take account of expenditure needs of poorer states and create perverse incentives.

However, the functioning of the extra Constitutional organ-plan commission, for devolving plan transfers and the centrally sponsored schemes to the states has greatly jeopardized the working of the Finance Commission. Unlike the German system where the joint taxes constitute the major form of revenues of both the federal and state governments, the Indian system in principle follows a separatist approach where there is no concurrency in taxing powers. Although the inevitable fiscal imbalance also concerns India, the states could collect 41% of the total revenues in the country which enables them to finance 54% of their current expenditures.

Borrowing in India is extensively pursued by the states that even half of the borrowing goes to covering the recurrent expenditures even if they could only borrow from internal sources with the approval of the central government. The expectation of being bailed out by the federal government is a mere indicator of soft budget constraint in India. The deterioration of the fiscal health of the states through the years, the increasing fiscal inequalities between the states, the economic liberalization in India followed by undermining the taxable capacity of the government and creating different tariff zones, and changing political environments that created multi party coalitions to come to power and the subsequent problems of reconciling the various interests are some of the challenges of the Indian fiscal transfer system these days.

Nigeria was the last federal country whose fiscal transfer system was reviewed in this chapter. In a manner that reflects a great vertical fiscal imbalance in Nigeria, the federal government collects 98% of the revenues in the federation which leaves the states to be substantially dependent on the federal transfers to execute their responsibilities. Of course, 60% of the expenditure responsibility of the federation lies on the federal government. The debt accumulation of the states is also declared frightening together with the low regulatory role of the federal government on state borrowing. Most of the revenues collected by the federal government (other than revenues from the VAT) in Nigeria would go to the Federation Account where the state and local governments could also claim entitlement from it. In Nigeria, the revenue sharing formulas are recommended every five years by the National Revenue Mobilization Allocation and Fiscal Commission and approved by the national assembly.

Among the contentious issues raised in the Nigerian fiscal transfer system, one is that the federal government is blamed for retaining some revenues from subjecting it in to the Federation Account alleging special funds for some activities declared illegal by the Supreme Court. Further, some variables of the transfer formula such as granting dominant weight to equality of states variable (irrespective of population size) and 13% reserve for the oil producing areas, internal revenue effort are very controversial up on which there is no consensus to retain or change the status quo. Especially the oil producing states are loudly demanding a higher percentage consideration of the derivation principle as opposed to those who want to maintain the status quo.

In general, it could be said that there are various lessons learned from the comparative reviews. For instance, we should not be surprised by the existence of fiscal imbalance in Ethiopia since all the three federal countries discussed above have similar problem. As it would be discussed below, however, the fiscal imbalance in Ethiopia is huge than Germany and India but better than Nigeria. It is because of such huge fiscal imbalances in Ethiopia that we would tend to come up with different options of rectifying it in the following discussions. Further, even if the comparative reviews called for the necessity of erecting regulatory mechanisms for protecting soft budget constraints (a phenomenon in all the three countries), the situation we have in Ethiopia is totally different. As it would be discussed in the following section, inexistence of detailed rules on how states could borrow from internal sources and the low fiscal capacity of the states prevented them from making borrowing as a viable option. The experiences are telling that we should create conducive environment for state borrowing without undermining the role to be played by the federal government to avoid disincentives (soft budget constraints).

On the other hand, the countries have devised their own means on reducing the fiscal imbalances. For instance, Germany has made important taxes (income and corporation taxes where the Lander and the federal government have equal share) to be subjected to concurrent jurisdiction so that it is the main revenue source of the Lander. About half percent of the revenues of the VAT is also devolved to the state. In India and Nigeria, all the federal taxes are subjected to revenue sharing that help states to have a better share. In India up to 32% of the federal tax revenues would be devolved to the states through this mechanism. Although federal dominance is predominantly the rule of the game in these countries, the experience of Germany is important in that we should involve the states in areas affecting their interests calling same practice to be developed in Ethiopia than neglecting them.

In general, review of international practices yields a set of practices to avoid and a set of practices to emulate. A number of important lessons also emerge (table 3.1).

3.2.1 Negative Lessons: Types of Transfers to Avoid

Policymakers should avoid designing the following types of intergovernmental grants:

1. Grants with vaguely specified objectives.
2. General revenue–sharing programs with multiple factors that work at cross purposes, and undermine accountability and do not advance fiscal efficiency or fiscal equity objectives. Tax decentralization or tax-base sharing offer better alternatives to a general revenue– sharing program, as they enhance accountability while preserving subnational autonomy.
3. Grants to finance subnational deficits, which create incentives for running higher deficits in future.

4. Unconditional grants that include incentives for fiscal effort . Improving service delivery while lowering tax costs should be public sector objectives.
5. Input- (or process-) based or ad hoc conditional grant programs, which undermine local autonomy, flexibility, fiscal efficiency, and fiscal equity objectives.
6. Capital grants without assurance of funds for future upkeep, which have the potential to create white elephants.
7. Negotiated or discretionary grants in a federal system, which may create dissention and disunity.
8. One size fits all grants to local governments, which create huge inequities.
9. Grants that involve abrupt changes in the total pool and its allocation.

. **Principles and Better Practices in Grant Design**

3.1 Principles and Better Practices in Grant Design

Grant objective	Grant design	Examples of better practices	Examples of practices to avoid
To bridge vertical fiscal gaps	Reassignment of responsibilities, tax abatement, tax-base sharing	Tax abatement and tax-base sharing (Canada, Thailand)	Deficit grants, wage grants (China, Indonesia), tax by tax sharing (China)
To reduce regional fiscal disparities	General non-matching fiscal capacity equalization transfers	Fiscal capacity equalization with an explicit standard that determines total pool as well as allocation (Canada, Denmark, Germany and	General revenue sharing with multiple factors (Brazil and India); fiscal equalization with a fixed pool (Australia, Indonesia, China)

		Finland))	
Compensate for benefit spillovers	Open-ended matching transfers with matching rate consistent with spill-out of benefits	Grant for teaching hospitals (South Africa)	Closed-ended matching grants
Set national minimum standards	Conditional non-matching output-based bloc transfers with conditions on standards of service and access	Road maintenance and primary education grants (Indonesia before 2000) Education transfers (Brazil, Chile, Colombia, Thailand) . Health transfers (Brazil, Canada),	Conditional transfers with conditions on spending alone (most countries), pork barrel transfers (USA e.g. $200 million earmark in 2006 for a "bridge to nowhere" in Alaska), ad hoc grants
	Conditional capital grants with matching rate that varies inversely with local fiscal capacity.	Capital grant for school construction (Indonesia before 2000), highway construction matching grants to	Capital grants with no matching and no future upkeep requirements

		states (United States)	
Promoting competition among local governments	Project or output based grants using pre-set benchmarks (“certification”) or higher ranks in relative quantitatively measured performance (“tournaments”).	Competitive grant program for local public investment in Albania and Russia (ongoing)	Subjective selection processes
Influence local priorities in areas of high national but low local priority	Open-ended matching transfers (preferably with matching rate varying inversely with fiscal capacity)	Matching transfers for social assistance (Canada before 2004)	Ad hoc grants
Provide stabilization and overcome infrastructure deficiencies	Capital grants, provided maintenance possible.	Capital grants with matching rates that vary inversely with local fiscal capacity	Stabilization grants with no future upkeep requirements

Source: Shah (2007) and Boadway and Shah (2009)

3.2.2. Positive Lessons: Principles and practices to Adopt

Policymakers should strive to respect the following principles in designing and implementing intergovernmental transfers:

1. Keep it simple. In the design of fiscal transfers, rough justice may be better than precise or full justice, if it achieves wider acceptability and sustainability.
2. Focus on a single objective in a grant program and make the design consistent with that objective. Setting multiple objectives in a single grant program runs the risk of failing to achieve any of them.
3. Introduce ceilings linked with macro indicators and floors, to ensure stability and predictability in grant funds.
4. Introduce sunset clauses. It is desirable to have the grant program reviewed periodically—say, every five years—and renewed (if appropriate). In the intervening years, no changes to the program should be made, in order to provide certainty in budgetary programming for all governments.
5. Equalize per capita fiscal capacity to a specified standard in order to achieve fiscal equalization. Such a standard would determine the total pool and allocations among recipient units. Calculations required for fiscal capacity equalization using a representative tax system for major tax bases are doable for most countries. In contrast, expenditure need equalization requires difficult and complex analysis, inviting much controversy and debate; as desirable as it is, it may not therefore be worth doing. In view of this practical difficulty, it would be best to deal with fiscal need equalization through output-based sectoral grants that also enhance results-based accountability. A national consensus on the standard of equalization is critically important for the sustainability of any equalization program. The equalization program must not be looked at in isolation from the broader fiscal system, especially conditional transfers. The equalization program must have a sunset clause and provision for formal review and renewal. For local fiscal equalization, one size does not fit all.
6. In specific-purpose grant programs, impose conditionality on outputs or standards of access and quality of services rather than on inputs and processes. This allows grantors to achieve their objectives without undermining local choices on how best to deliver such services. Most

countries need to establish national minimum standards of basic services across the nation in order to strengthen the internal common market and economic union.

7. Recognize population size class, area served, and the urban/rural nature of services in making grants to local governments. Establish separate formula allocations for each type of municipal or local government.
8. Establish hold harmless or grandfathering provisions that ensure that all recipient governments receive at least what they received as general-purpose transfers in the pre-reform period. Over time, as the economy grows, such a provision would not delay the phase-in of the full package of reforms.
9. Make sure that all stakeholders are heard and that an appropriate political compact on equalization principles and the standard of equalization is struck. Politics must be internalized in these institutional arrangements. Arms-length institutions, such as independent grant commissions, are not helpful, as they do not allow for political input and therefore tend to opt for complex and nontransparent solutions.

Moving from a public sector governance culture of dividing the spoils to an environment that enables responsive, responsible, equitable and accountable governance is critical. Doing so requires exploring all feasible tax decentralization options, instituting output-based operating and capital fiscal transfers, establishing a formal fiscal equalization program with an explicit standard of equalization, and ensuring responsible access to borrowing.

The necessity of establishing a fiscal commission or organ capable of devising a transfer system (formula) that foster result based accountability, enhance competition, promote regional equity, avoid transfer dependencies, and be open for periodic reviews was also emphasized in the countries reviewed and calls for incorporating same in Ethiopia as it would be discussed in chapter four. There are also different challenges facing each of the countries to justify that challenges to the fiscal transfer is an everywhere phenomenon. There are also actions being taken by the countries. It is in this general idea that chapter four of the paper discussed the challenges of the fiscal transfer system in Ethiopia and the possible options of reducing the huge fiscal imbalances prevalent in Ethiopia.

3.3 Decentralization, Regional Disparities and National Unity

Nigeria, Canada, United States of America, India, Sudan, Spain, Switzerland- what can this diverse set of countries possibly have in common? One important answer is that each contains within its boundaries a significant territorially-based group of people who are, or who consider themselves to be, distinct and different in ethnicity, in language, in religion, or just in history (ancient or recent) from the majority of the population. Indeed, contrary to the common view-one might say mythology-that the most ‘natural’ nation state is a unified and homogeneous entity, such ‘fragmented’ countries (Bird and Stauffer, 2001)- are found throughout the world. Homogenous nations are more the exception than the rule. Indeed, heterogeneity, whether ethnic or economic, is a more common feature of most countries than homogeneity. A second important characteristic of many countries is that they exhibit, to greater or lesser degrees, some ‘asymmetry’ in the way in which different regions/states is treated by their intergovernmental fiscal systems. While such asymmetry is often most obvious in formal federal countries, it comes up, sometimes in surprising ways, in almost every instance. The way and manner asymmetry is managed could help or hinder the maintenance of an effective nation state. The Nigerian experience in this regards clearly illustrates this with respect to an effective nation state.

‘Effectiveness’ in this context may be understood in two ways. The first relates to the normal focus of economic analysis of public sector activities: how effectively, efficiently, and perhaps equitably are public services provided throughout the national territory? The second meaning however lies well outside the normal field of expertise of economist: what are the connections between how a country’s public finances are structured and how a nation state that is fragmented holds together in the first place? This question has risen to the forefront of public policy analysis in an especially important way when it comes to creating ‘new’ countries out of regions torn by civil conflicts, such as those in Bosnia-Herzegovina and Sudan. But it is also much on the minds of those concerned with public policy in such long-established countries as Canada, Spain and Belgium.

In many fragmented countries like Nigeria, it is not surprising that the majority group dominates politically. Sometimes, a particular minority exerts more influence, perhaps because of its wealth and power, perhaps owing to historical factors. The rising influence of Oil producing region in Nigeria is a typical case in point. The recent creation of the Ministry of Niger-Delta by the Yar’adua administration at the federal level is recognition of this rising influence in the political landscape. Occasionally, as may be argued to be the case, even in such large federal countries as the United States and Brazil, important overriding factors may suppress much or all of the potential political influence of ethnicity. Even in countries such as Germany, Brazil and Argentina, in which most people are ethnically and linguistically homogeneous, the economic situation of different regions may be extreme, ranging from large, rich metropolitan areas to remote, impoverished settlements, or to regions rich in petroleum or other highly-valued natural resources versus other with little but an expanse of barren lands. Such problems may become more pronounced when regions are dominated by people of a different ethnicity from the majority of the population, and may become bitterly contested when ethnic and economic factors combine, but such problems are by no means confined to countries with this combination of characteristics.

Some potentially fragmented countries have often through a prolonged historical process, sometimes including civil wars reached an equilibrium in which their political, fiscal and institutional structure balances the diverse forces and sustains the maintenance of an effective national state. Switzerland, the UK and US in different ways provide examples. Others, however, remained in turmoil and then fell apart under such pressures, for example, the ‘former’-Czechoslovakia, Yugoslavia and the Union of Soviet Socialist Republics. And the integrity and effectiveness of other countries, even such long-established and prosperous countries as Belgium, Canada and Spain, remain under constant threat. In recent years such pressures have increased in many such countries, in part because of globalization and the related (but not fully consistent) phenomenon of new regional economic unions- the European Union (EU) and North American Free Trade Agreement (NAFTA) - that have upset the established balance of wealth and power and hence called into question the desirability and sustainability of some established nation states.

In a decentralized setting, and especially when ethnic differences characterize the population and these differences are characteristics of different parts of the country, the various regions of a country may begin to see themselves as different from the rest of the country thus putting in motion centrifugal forces. This problem tends to have serious implications for countries with important natural resources located in particular regions. In a centralized country, such as France if, for example, large oil deposits were found, it would not matter where in the country they were located. The government would be able to exploit or tax them and use the money to finance its national activities.

In highly decentralized countries, such as Nigeria, Indonesia, or Russia if natural resources are discovered in one region, problems often arise because that region will attempt to claim for its own use the revenue from the resources discovered. This leads to political problems and occasionally, even to conflicts and wars between regions. It also creates problems for the income redistribution role of the government. One of the major functions of a national government is precisely to redistribute income from richer regions and individuals to poorer regions and individuals through the broadly uniform provision of public goods and services.

When the income levels of regions within a country are relatively equal, and when important natural resources are not concentrated in one region, it is easier to have a well-functioning decentralized system. However, when income levels are vastly different among regions, so that one region has to subsidize another on a significant scale, it becomes much more difficult to pursue an effective policy of income redistribution. When the difference in income is due to the concentration of natural resources in one region, in a decentralized environment the difficulty in pursuing such a policy can become particularly great.

Whatever one thinks of, whether decentralization in any of its myriad forms helps or hurts macroeconomic and political stability is clearly a key question in many countries. It seems unlikely; however that anyone can answer that question in the abstract. As in the case of the economic arguments for and against decentralization, something like the Nigerian legal decision of ‘Littoral States’ is perhaps the best that can be offered at present with respect to such political arguments. None the less, it is clearly political factors that are leading even long-centralized countries like the United Kingdom to decentralize (particularly with respect to Scotland).

Similar decentralization to varying degrees can be seen in many countries- for example, Italy (South Tyrol), Finland (Aland Islands) and even France (Corsica). Ethnic groups in countries as different as Nigeria (Ogoni), China (Tibetans and Uighurs), Iraq (Kurds), Turkey (Kurds), and Georgia (Abkhaz and Ossetians) are seeking similar (or greater) territorial autonomy. In part in response to such factors, decentralization is on the leading edge of policy. Developed countries, developing countries, transitional countries, federal countries and unitary countries wherever one looks some kind of decentralization is taking place, or is at least being discussed.

Given the issues the study has examined, the study concludes that, if decentralization is an important economic objective for a particular country; if the country can establish the institutions that will make decentralization work with a reasonable degree of efficiency- institutions related to tax policy, tax administration, expenditure management systems, budgets and so forth, especially institutions that allow the central government to transfer resources to local government with some assurance that the resources will be used effectively and for the purpose for which they are passed on, then decentralization can be a good policy for equitable development..

Given the above theoretical and conceptual implications of fiscal decentralization, Ethiopia has established regional governments with corresponding laws on decentralization of fiscal powers, and substantial institutional changes in the fiscal and monetary management of the country. The decentralization of fiscal powers has been sought as part of the general trend away from central government control of economic activities as part of the effort to meet demands for democratization and local political autonomy (Girma,1994:121). It is this observation that will serve as a basis for examining Ethiopia’s system of fiscal federalism that is anchored on achieving equitable development and durable political stability in a multi-ethnic nation.

3.4 Summary

In this chapter, a comparative review of the practice of fiscal federalism in three federal countries—Germany, India and Nigeria—is presented. The review is made on key aspects of fiscal federalism including assignment of expenditure and revenue responsibilities, fiscal imbalances, state borrowing, intergovernmental fiscal transfers, and challenges they faced during implementations. There are similarities and differences among these federations regarding fiscal arrangements and outcomes. The conclusion is that fiscal powers are more centralized leading to greater imbalances in developing federations than developed ones. Finally, this chapter has tried to show that greater decentralization, filling regional disparities could promote better national integration.

Chapter Four

4. Fiscal System and Equity in Ethiopia

Fiscal Equity requires a balance between growth objectives and fairness in the distribution of opportunities to all members of the population irrespective of their region of residence. The federal fiscal system should aim to promote inclusive growth and to reduce imbalances in access to public goods and services, while respecting the fiscal autonomy of regional states.

This definition draws upon academic studies which consider equity in relation to horizontal and vertical equity, equity in opportunities versus outcomes, how equity manifests in a federal system where regions have fiscal autonomy, and the likely trade-offs between equity and efficiency. Importantly, the definition is grounded in the constitution of the FDRE (Article 41) which prioritises access as a measure of equity, and also takes into consideration national development objectives presented in GTP-I and GTP-II.

The objectives of fiscal policy in Ethiopia are promoting sustainable, accelerated and inclusive economic development and macroeconomic stability. The fiscal policy has the critical role of streamlining the allocation and distribution of public resources to achieve the development and stabilization objectives of the country. The four main function of fiscal policy, namely allocation, distribution, stabilization and development are realized through the implementation of policy choices regarding taxation, spending and fiscal deficit management. This reason, the goal of the government's fiscal policy is to contribute to Ethiopia's ambition to become an inclusive middle-income country by 2025 through sustained, accelerated, broad-based and equitable economic growth.

4.1 The Evolution and structure of Fiscal Federalism in Ethiopia

4.1.1. Devolution of Power

The devolution of power in Ethiopia was carried out by adopting a federal system. Assessment of the extent of the devolution of power can be made by looking at the federal system provided by the Transitional Period Charter and then reinforced by the Constitution of 1994. Federal systems in different countries have their own history of evolution. Some federations such as the United States, Switzerland and Australia were created by aggregation of previously established political unities while others have been created by devolution of unitary states as it was in Germany. The Ethiopian experience resembles the latter one.

4.1.2 Fiscal Federalism and its development

Fiscal federalism should not be seen alienated from decentralization of power. In the regimes of centralization, it is hard to find fiscal decentralization. In light of decentralization, Ethiopia has been experiencing uniform governments and ruling systems which were mostly associated with the personal expertise of kings, rulers or Emperors. In the following discussion the evolution of the Ethiopian fiscal federalism will be presented in detail.

4.1.3 Evolution of Fiscal Federalism

The issue of decentralization in Ethiopian history goes back to the Axumite kingdom. The Axumites were identified by the vast area of control over the trade routes and port of Adulis. The system of control of such a vast area was considered as centralization but the historical evidences like the „inscription of king Ezana", the then king, shows that the Axumites established a decentralized system having small states conquered under central authorities. There was a relation that existed between the conquered states and central authority in terms of the payment of tributes and military service.

Accordingly, the states were empowered to collect tributes from the subjects and to transfer some amount of it (in which method of determination and the kinds of the tribute was not clear and fixed) to the central authority, whereas the protection of the empire via a military force was the duty of the central authority. Such pattern of central power and autonomous regions or kingdoms was continued during the Zagwe and Solomonic dynasties until the 19th and 20th centuries up to the era of strong centralization e by emperors Minilik and Haile Selassie I and followed by the Dergue régime. In Medieval period history of Ethiopia, the relationship between the center and the regions, widely known as the provinces and kingdoms of the south and southeastern part of the country, were some of the instants. At this time, the title Negus meaning king or Ras meaning head who had loyalty allegiance to the center were given to provincial leader and. „Neguse Negest' meaning king of kings given to the center were other implication of decentralization of the time. The influential provinces were Gonder, Tigre, Gojjam, Showa and Wollo, sometimes claiming the throne for themselves. The autonomous Kingdoms were Kaffa, Wolayta, Harar and Afar. Having cognizant of the existence of provincial autonomy and the kingdoms one of the writers concluded: Ethiopia, the oldest continually existing polity in Africa, has almost always been relatively decentralized at many stage in its long history. The lesson we fetch from the above decentralization in relation to fiscal federalism is the system of devolution of financial power and the condition to keep it viable. The regional lords submitted themselves by paying taxes and tributes to the center and laying no claim to the throne provided that the center recognized and did not obstruct the regional autonomy and kept its power strength to defend external aggressions and internal conflicts in the empire. This was the transitional division of power between the center and region in Ethiopia.

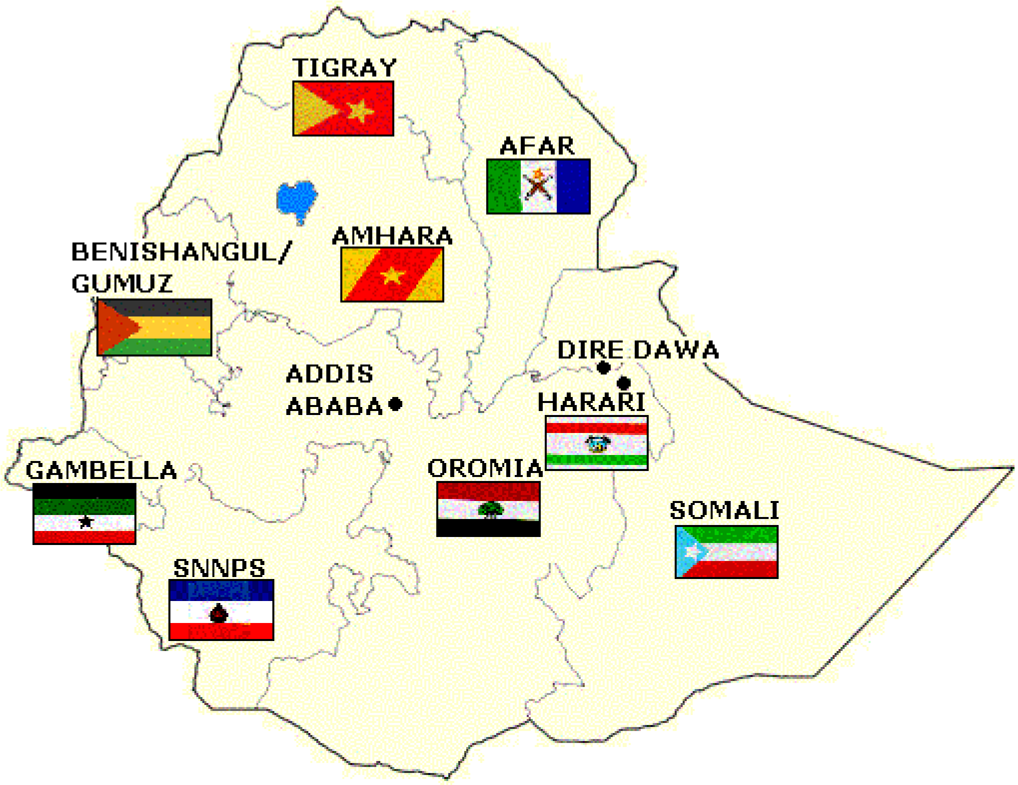
The above description demonstrates the existence of decentralization in unitary states through powers attributed to the emperor and by recognizing provincial/regional autonomy, i.e., a dual power structure. This implies that the monarchy had not absolute power but was limited by the provincial Negus. The other historical venture is the 1952 federation of Ethiopia and Eritrea. The northern costal part of Ethiopia, Eritrea after several intrusions of foreign powers was finally colonized by Italy from 1896-1941. Italian colonization of the region was begun after its intention to control the whole Ethiopia had aborted in 1896 at the battle of Adwa. Italy was expelled from both Ethiopia and Eritrea in 1941 after the second defeat of its second attempt from 1935 -1941. Ethiopia claimed Eritrea to rejoin with the motherland. Because of a long diplomatic battle in the UN, Eritrea rejoined Ethiopia in a federal arrangement. On September 11, 1952 the federation of Eritrea with Ethiopia became effected under Imperial Proclamation No.124/1952. According to the articles of the proclamation and the UN resolution, the federal government retained jurisdiction over defense, foreign affairs, monetary and fiscal policy, communications, commerce, and the ports. The regional government of Eritrea, on the other hand, retained control in all matters not assigned to the federal government, which were basically taxation, budgeting and policing within territory.

The 1952 federation only governed the relation between Eritrea and the rest of Ethiopia to compromise the questions of the Eritrea’s independence and unconditional union with Motherland. However, the Ethiopian–Eritrean federation was short lasted; it was dissolved in1962. And Eritrea after then was made integral part of Ethiopia like other parts of the country until 1993 where the independence of Eritrea was effected. Therefore, the then federation has little importance to our date of federalism in general and to fiscal federalism in particular.

After the demise of the military government of the Dergue in May 28, 1991 the triumphant groups formed the Transitional Government of Ethiopia (TGE). Among other issues, the decentralization of power among different nations and nationalities and peoples was inspired as a novel solution for the long lasting ethnic based problems in the country. Having due consideration to this issue, the Charter, adopted as the provisional constitutional instrument, came up with three-tiered administrative system which underline the decentralization of administrative and fiscal authorities. Accordingly, it decentralized the country to fourteen regions with powers of central, regional, and local (wereda) levels of administration. The principle of fiscal decentralization had got prominent place in Transitional Government of Ethiopia as enunciated by the Charter and further elaborated under proclamation No. 7/1992 and 33/199 which provided for the division of expenditure and revenue-raising responsibilities between the center and the regions. And the later also provided the principles that govern all forms of inter-governmental financial relations. The TGE with its federal-like structure lasted for four years from July 1991 to August 1995.

The 1995 Constitution officially declared the, Federal Democratic Republic of Ethiopia (FDRE)‟. According to the Constitution, the FDRE comprises of nine states and federal capital. It deals with a federal structure which comprises of the federal government and the member states where each has equal powers and rights as set forth in the Constitution. The following figure shows the nine states and two administrative cities created by the constitution.

Figure 4 Ethiopia Regions



Each of the regions has a directly elected Council, a President appointed by the Council and an Executive Committee appointed by the President comprising elected and civil service members. The zones may have either an elected council or a council appointed by the Regional Council (in Amhara and Oromiya). Zonal Councils appoint Zonal Administrators and executive committees comprising elected representatives, civil servants and security officials. Woredas have directly elected councils and executive committees comprising mostly of administrative heads of bureaus. Kebeles have directly elected councils and appointed executive committees comprising elected officials, development agents, school director, and representatives from women and youth associations. .

The fiscal aspects in turn followed the decentralization of the executive, legislative and judiciary in the federation as one and main element of power. Hence, the FDER Constitution in its provisions from Arts.94 to 100 provided the decentralization of financial power between the federal and states governments and the detail deliberation of these provisions will be the subject of the next chapters. Before discussing the fiscal order of the post derge Ethiopia, Institutional and legal framework of fiscal decentralization will be in order.

4.1.4 Institutional and legal Framework of Fiscal federalism of post Derge Ethiopia

Proclamation No. 33/1992 has defined the legal framework for revenue sharing between the Central Government and the National/Regional Self-Governments and arrangements for subsidies to the regions and borrowing by regions. The objectives of the proclamation are; to enable the Central Government and Regional Governments efficiently carry out their respective duties and responsibilities; assist the Regional Self-Governments develop their regions on their own initiatives; narrow the existing gap in development and economic growth between regions; and encourage activities that have common interest to regions. Furthermore, this proclamation categorized revenues into three i.e., revenues for the Central Government, revenues for the Regions, and joint revenues of the Central Government and Regional Governments (Proc. No. 33/1992:25).

The revenue sharing proclamation has also defined the possibilities for grants (subsidies) from the Central Government to the regions in order to promote social services and economic development of the regions; to accelerate the development of the hitherto neglected and forgotten areas; narrow down the gap in per capita income between regions; support projects that will help control negative economic externalities that may be reflected from region to region; and encourage foreign currency earning projects (proc. 33/1992:27). And, article 7- sub-articles 5, of this proclamation, put a precondition stating, as the amount of subsidy to be granted shall be proportional to the contribution made from revenue collected by the regions. However, the inherently weak economic base of some regions may be a challenge to a proportionate contribution of own revenue collections.

4.2 The Pillars of Fiscal Federalism

Fiscal federalism derives its nature and characteristics from constitutional provisions as well as the state of economic development, the pattern of income and resource distribution, and the institutional capacity of the system. The constitutional provisions define the framework within which decision-making would be exercised and establishes the vertical and horizontal structures that find meaning within the prevailing socio-economic environment of the system. The vertical structure defines the assignment of fiscal decision-making power between the federal and lower tiers of government. The horizontal structure outlines the nature of interaction across cross-sections of government levels. This aspect addresses how regional governments interact to each other especially when there are externalities and spillovers.

The main economic rationale behind fiscal decentralization is improving efficiency of public resource utilization, creating enabling environment for private sector development and the growth of the national economy. The theory of fiscal federalism addresses three issues related to fiscal decision-making: assignment of responsibilities and functions between the federal government and the regional governments, the assignment of taxation power and the design of inter-governmental transfer (subsidy) of fiscal resources coupled with provisions about the borrowing windows to sub-national governments. These factors give rise to a third issue of the relative size of the public sector in the national economy. It is therefore the dynamics of these processes and public policy choices that ultimately shapes the performance of the fiscal sector and its impact on the national economy.

4.2.1 Assignment of Expenditure responsibilities between different levels of government

The key principles of expenditure assignment in fiscal federalism include efficiency in public service provision ,horizontal equity, the redistributive role of the public sector, the provision of quasi-private goods ,preservation of the internal common market and economic stabilization(Shah 2007a, pp.9 -21):

Articles 51 and 52 of the Ethiopian Constitution Act 1995 define the federal and state expenditure and regulatory powers and state constitutions define responsibilities of Woredas and Kebeles. Moreover, the constitution assigns a number of expenditure responsibilities, sector- specific function and general functions to the federal and regional government respectively. Table 4.1 attempts to capture the broad guidance available through these statutes. The table shows that the constitutions assign legislative authority for most major functions to the Federal parliament and policy development and standards to the Federal Governments. States and regions are seen primarily as implementing agencies for federal mandates and have autonomy for a limited number of functions such as local government, regional development, state police and state civil service and for any function not specifically assigned to the federal government (residual functions).

The House of Federation of the Federal Democratic Republic of Ethiopia opted for the representative expenditure system (RES) to estimate expenditure needs of the regional states for the construction of grant formula for its general-purpose grant. Variants of this approach are used by many countries both developed and developing with Australia being the point of reference for many.

Table 4.1 Constitutional Vertical Divisions of Powers

Federal Level – Article 51 mandates	Regional Level – Article 52 mandates
Foreign affairs, defense, federal police, public security	Ensuring self-government
Overall economic and social policies and food security	Ensuring democratic order based on rule of law
Fiscal, monetary and foreign investment policies, commerce	Socioeconomic development policies at the state level
Natural resource management	Levy and collect state taxes
Air, rail and water transport	State police and public security
Regulation and inter-state trade	Civil service at the state level
National standards and basic criteria for public health, education, science and technology	All Residual functions

Source: Ethiopia (1995), Zimmermann-Steinhart (2012)

This view is further reaffirmed by examining division of responsibility for individual functions in detail as shown in Table 4.2. The table shows that even for some state functions such as state civil service, compliance with federal standards is mandatory. Overall expenditure assignment model adopted by Ethiopia borrows some of the principles of cooperative hierarchical federalism in Germany and represent a contrasting approach to the dual and competitive federalism adopted by Canada and USA. Local governments in Ethiopia just as in most federal countries are creatures of the state governments but are granted highly constrained autonomy – much more constrained than most federal countries with the exception of Australia and India.

Table 4.2 Division of Expenditure and Regulatory Functions in Ethiopia

Function	Federal	State	Woredas	Kebeles
International and Inter-regional conflict resolution	X			
Defense	X			
Foreign Affairs	X			
Monetary Policy, central banking, currency and Banking	X			
International Trade	X			
Immigration	X			
Nationality issues	X			
Postal and Telecommunications	X			
Foreign direct investment	X			
Environment	X			
Natural disaster and emergencies	X			
Interstate Commerce	X			

Transfer Payments				
Criminal and civil law	X			
Industrial policy	X, Also State borrowing			
Patents and copyrights	X			
Standards of measurement and calendars	X			
Regulation	X (including firearms)			
Fiscal Policy	X			
Land conservation and Natural Resources	X	X (to comply with federal law)		
Water bodies covering more than one state	X			
Air, water and sea transportation	X			
Education	National standards	Implementation of federal policies and standards		
Health	National standards	Implementation of federal policies and standards		
Science and Technology	National standards	Implementation of federal policies and standards		

Social Welfare and Protection	National standards	Implementation of federal policies and standards		
Roads and Highways	Interstate	State roads	Woredas roads	
Parks and Recreation	National Parks	State Parks	Local parks and Rec	Local parks and rec
Police	Federal police	State police		
Water, Sewer			X	
Refuse			X	
Fire protection			X	
Government oversight	State	Woredasa and Kebeles		
Planning and development	X	X	Local planning	
Civil service administration	Federal	State in compliance with federal standards	Local hiring	
Cultural Heritage	X			
Federally funded institutions covering more than one state	X			
Residual		X		

Source: Ethiopia (1995)

4.3 Expenditure decentralization and regional responsibilities

The central issue in decentralization is the extent of power division between levels of a government, i.e., how much power to retain at the center and how much to give to the regions. There is no universally accepted formula in allocating functions between various levels of government.

The practice varies across countries. However, there seems to be a wide degree of consensus on the proper jurisdiction of certain functions (Eshetu, 1994:171).

The Constitution divides responsibilities under the jurisdictions of the federal government and the regional governments. Responsibilities for the federal government include defense, public security and order, international relations, citizenship and immigration, international and inter-state trade, fiscal and monetary policies, currency, banking and domestic borrowing by states (Proc. No.1/1995).

As can be seen from the table 4.1 and 4.2 above, the constitution provides the states with extensive expenditure powers as well. The most notable ones are: enactment of state constitution and laws; formulation and execution of economic, social and development policies, strategies and plans; administration of land and other natural resources in the territory; levy and collection of taxes assigned to the regional states; designing standards for state level civil services and payment; and maintenance of state level security forces. The Constitution reserves all powers not provided to the federal government to the regional governments.

It also specifies that" the Federal Government and the states shall respectively bear all financial expenditures necessary to carry out all responsibilities and functions assigned to them by law"(proclamation1/1995, article94 (1)).

The implication is that Regions are assigned for the management of the bulk of local infrastructures and social service provisions. As a result, they are responsible for the bulk of spending on economic development (agriculture and natural resource management) and social development (health and education). The regional states thus play a key role in Ethiopia's public service delivery system. Because, they are responsible to aggregate community's preferences, create specific development plans with in the national strategies, and in most cases allocate budgets between sectors as well as between capital and recurrent expenditures.

However, this does not guarantee the realization of the benefits of decentralization unless careful attention is given to policy design in decentralization process. In terms of expenditure responsibilities, the constitution of FDRE (Proc. 1/1995:136) states as: the Federal Government and the States shall respectively bear all financial expenditures necessary to carry out all responsibilities and functions assigned to them by law.

However, the effective transfers of expenditure responsibilities and subsequent efficiency gains from this depend on many factors. In particular, the arrangements for revenue sharing and transfers should address the issue of how to effectively carry out the proposed transfers of expenditure assignments to regions (Girma, 1994:128). This implies that regions should have sufficient revenues under their control and be free from undue Central Government control, with flexibility in allocation of resources. Fortunately, the Federal Government constitution provides the arrangements by which the Federal Government may grant to the States emergency, rehabilitation and development assistance and loans, due care being taken that such assistance and loans do not hinder the proportionate development of the states (Proc. No. 1/1995: 137).

4.4 Assessment of the Degree of expenditure decentralization

The share of Regional Governments in total government expenditure or revenue gives an idea about the relative importance of the Regional Governments in total public sector and its change overtime. However, neither of them is a perfect measure of fiscal decentralization. Comparing the degree of fiscal decentralization across countries is thus a complex and multifaceted task that requires identification of sub national autonomy and discretion on expenditure and revenue affairs (Yilmaz, 2001:4).

Expenditure decentralization is one of the approaches of measuring degree of fiscal decentralization. But, the approach has some limitations (Gebrehiwet, 2002:41). First, greater expenditure ratio of Regional Governments to national government does not necessarily indicate Regional Governments' autonomy. Because, spending function may not always be consistent with tax assignments (i.e., major expenditure could be financed by transfers). The second problem relates to cross country comparison. That is, two countries with different degree of autonomy in their fiscal actions can have the same share of sub national expenditure. Similarly, even under a decentralized one, it does not indicate whether the fiscal decentralization is limited to a regional level or down stepped to lower level local governments. The third limitation is associated with the inclusion of defense expenditures in the denominator, which may artificially understate the degree of expenditure decentralization (Bahl and Lin, in Gebrehiwet, 2002: 43-44).

Although the expenditure share of sub national governments in total government spending is not perfect measure of fiscal decentralization, in the absence of an appropriate indicator, it is being used as a representative of fiscal decentralization (Yilmaz, 2001:4 and Mello, 2000:8). Sub national governments in Federal Countries are seen executing higher portion of total government spending than their counter parts in unitary countries. For example, in 1998, the average sub national share of expenditures is 38 percent for Federal Countries and 22 percent for unitary countries of the world (Yilmaz, 2001:6). As Federal country, the expenditure share of Regional Governments of Ethiopia in total government spending during 2016\17 was 44 percent, which is above the average of Federal Countries (Table 4.3). This is unfortunately due to the defense expenditure, which raised the share of the Federal Government to 54 percent.

Table 4.3 Federal and regional governments share in the degree of expenditure decentralization in Ethiopia.

Expenditure sectors	Type of expenditure	2001 2008\09	2002 2009\10	2003 2010\11	2004 2011\12	2005 2012\13	2006 2013\14	2007 2014\15	2008 2015\16	2009 2016\17	Average
Economic sector	Recurrent expenditure	2699.3	3272.1	4519.2	5592.4	7000.5	8692.5	11758	14313.3	12303.4	7794.52
Regional	Capital expenditure	5510.4	5490.8	7202.4	14338.6	25423.8	31488.5	33420.9	31793.1	27467.3	20237.31
	Total	8209.7	8762.9	11721.6	19931	32424.3	40181	45178.9	46106.4	39770.7	28031.83
National/country level	Recurrent expenditure	3393.5	4133.3	5642.7	7731.3	9473.8	11174.4	14970.9	19874.6	16847.1	10360.18
	Capital expenditure	24941.9	30845.5	35615	50604.2	66743.5	77959	75238.2	78841.2	81086.3	57986.09
	Total	28335.4	34978.8	41257.7	58335.5	76217.3	89133.4	90209.1	98715.8	97933.4	68346.27
Federal economic expenditure	Total	20125.7	26215.9	29536.1	38404.5	43793	48952.4	45030.2	52609.4	58162.7	40314.43
Economic allocation ratio	Federal	0.55	0.52	0.49	0.50	0.51	0.50	0.42	0.35	0.36	0.47
	Regional	0.33	0.30	0.30	0.35	0.41	0.42	0.37	0.34	0.32	0.35
Economic Decentralization Ratio	Federal	0.71	0.75	0.71	0.66	0.57	0.55	0.50	0.53	0.59	0.62
	Regional	0.29	0.25	0.29	0.34	0.43	0.45	0.50	0.47	0.41	0.38
Social sectors	Recurrent expenditure	8082.8	9640.5	12766.9	16788.9	20587.2	23939.6	35985.6	41566.9	39882.5	23248.99

Regional level	Capital expenditure	1533.8	2295.1	2606.2	5554.4	6760.9	7114.8	9030	10083.1	8758.9	5970.8
	Total	9616.6	11935.6	15373.1	22343.3	27348.1	31054.4	45015.6	51650	48641.4	29219.79
National/country level	Recurrent expenditure	10357.1	12490.9	16713.4	22269.9	27477.5	32626.7	48938.8	63403.7	69344.1	33735.76
	Capital expenditure	6890.7	11478.1	14548.7	20725.7	23459.4	25912.3	31824.7	37359.1	38621.3	23424.44
	Total	17247	23969	31262.1	42995.6	50936.9	58539	80763.5	100762.8	107965.4	57160.20
Federal social expenditure	Total	7630.4	12033.4	15889	20652.3	23588.8	27484.6	35747.9	49112.8	59324	27940.41
Social allocation ratio	Federal	0.21	0.24	0.27	0.27	0.27	0.28	0.33	0.33	0.37	0.29
	Regional	0.38	0.40	0.40	0.39	0.35	0.33	0.37	0.38	0.39	0.38
Social Decentralization Ratio	Federal	0.44	0.50	0.51	0.48	0.46	0.47	0.42	0.49	0.55	0.48
	Regional	0.56	0.50	0.49	0.52	0.54	0.53	0.58	0.51	0.45	0.52
Total expenditure	Recurrent expenditure	16675.1	19973.4	26653.4	33869.8	41967.2	50976.7	71989.1	85540.1	78856.3	47389.01
Regional level	Capital expenditure	8630.8	9673.4	12242.1	24056.3	36890.3	44631.7	50005.3	51618.1	46480.8	31580.98
	Total	25305.9	29646.8	38895.5	57926.1	78857.5	95608.4	121994.4	137158.2	125337.1	78969.99
National/country level	Recurrent expenditure	27152.8	32922.5	43484.4	56820.9	67985.9	80092.4	112053.9	154357.3	148054.9	80325
	Capital expenditure	35118.5	47236.7	55818.6	78406.4	97723.8	113812.4	118859.2	132288.9	138992.9	90917.49
	Total	62271.3	80159.2	99303	135227.3	165709.7	193904.8	230913.1	286646.2	287047.8	171242.49
Federal total expenditure	Total	36965.4	50512.4	60407.5	77301.2	86852.2	98296.4	108918.7	149488	161710.7	92272.50
Expenditure Decentralization		0.41	0.37	0.39	0.43	0.48	0.49	0.53	0.48	0.44	0.45
Defense		3772.7	3954.6	4618.6	6336.8	6528.6	7041.6	8767.3	9182.5	11318.5	6835.69
Public debt		2143.2	2665.7	4504.9	3604.3	5335.9	5610.5	7864	10802.7	11920.9	6050.23
External assistance		102.7	46.4	149.8	277.9	447.7	23	126.7	13419.7	3466.1	2006.67
Total		6018.6	6666.7	9273.3	10219	12312.2	12675.1	16758	33404.9	26705.5	14892.59
Total expenditure without defense;	Recurrent expenditure	56252.7	73492.5	90029.7	125008.3	153397.5	181229.7	214155.1	253241.3	260342.3	156349.9

public debt; external assistance											
Expenditure Decentralization(Modified)		0.45	0.40	0.43	0.46	0.52	0.53	0.57	0.54	0.48	0.49

Sourc**e:-** Own computation Based on MoF Data.

Note: (a) Refers to the ratio of total all regions' Expenditure to national expenditure.

(b) Modified expenditure ratio deducts expenditures that cannot be decentralized. Therefore, it is a ratio of all regions' total expenditure to total national expenditure less defense expenditure, debt service and external assistance.

(c & d) Economic allocation ratio refers to Economic sector expenditure as a percentage of total government expenditure at each level (Federal and Regional).

(e) Regional Economic decentralization ratio is a percentage of economic expenditure spent by all regions to total national economic expenditure.

(f & g) Social allocation ratio is a ratio of social expenditure as a percentage of total government expenditure at each level (Federal and Regional).

(h) Regional social decentralization ratio is a percentage of social expenditure spent by all regions to total national social expenditure.

Figure 4.1 Federal and regional governments share in the degree of expenditure decentralization in economic sector

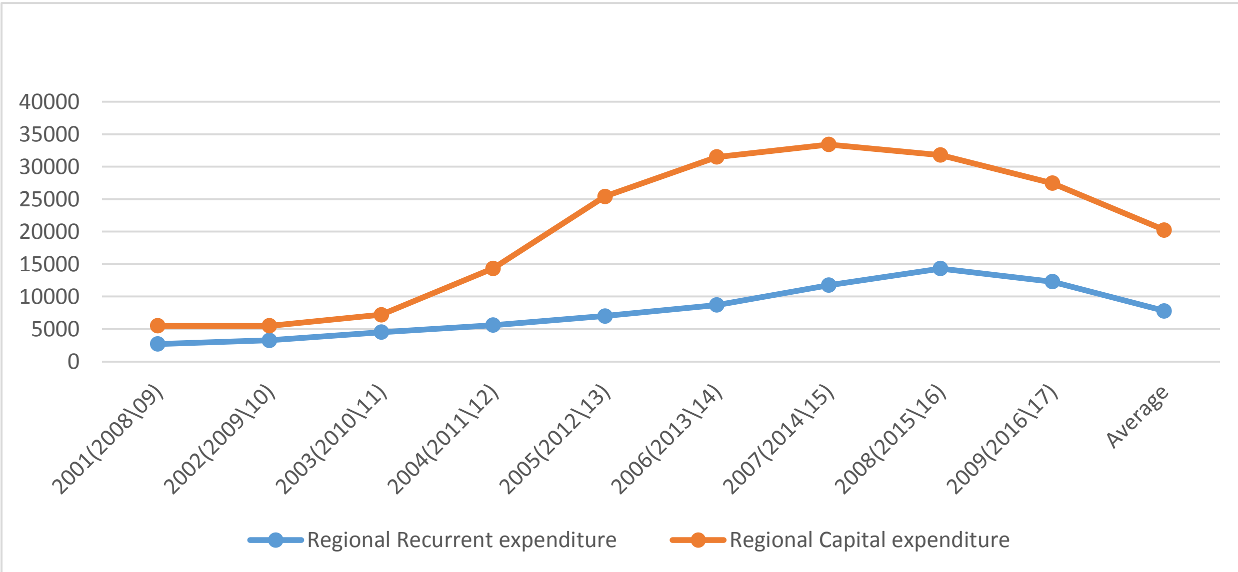


Figure 4.2 Federal and regional governments share in the degree of expenditure decentralization in economic sector

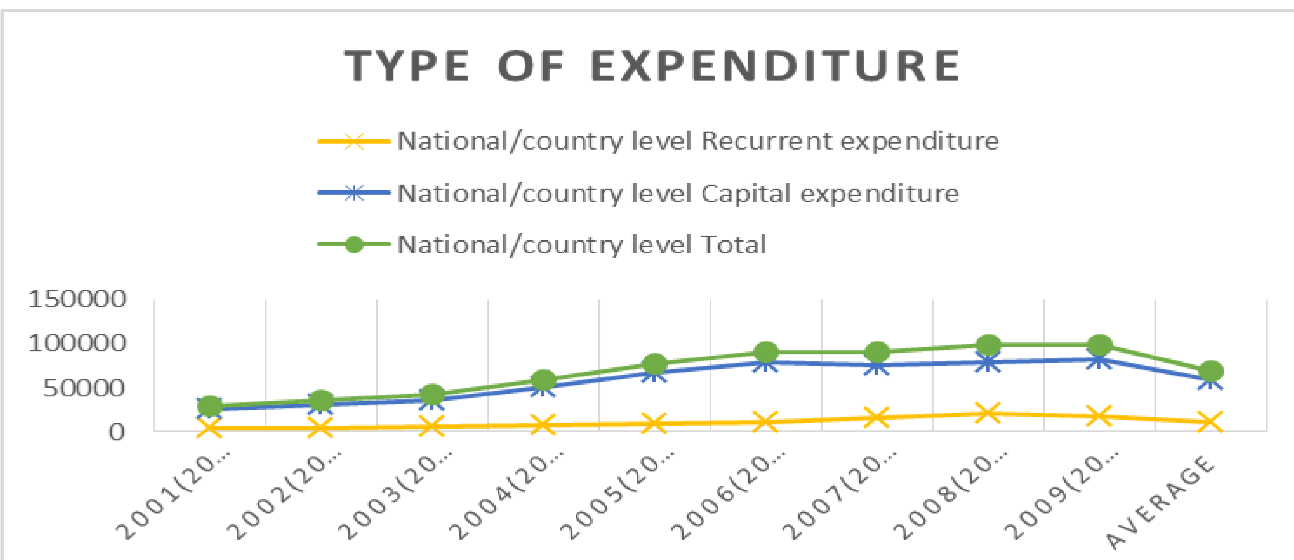


Figure 4.3 Federal and regional governments share in the degree of expenditure decentralization in economic sector (In Million Birr)

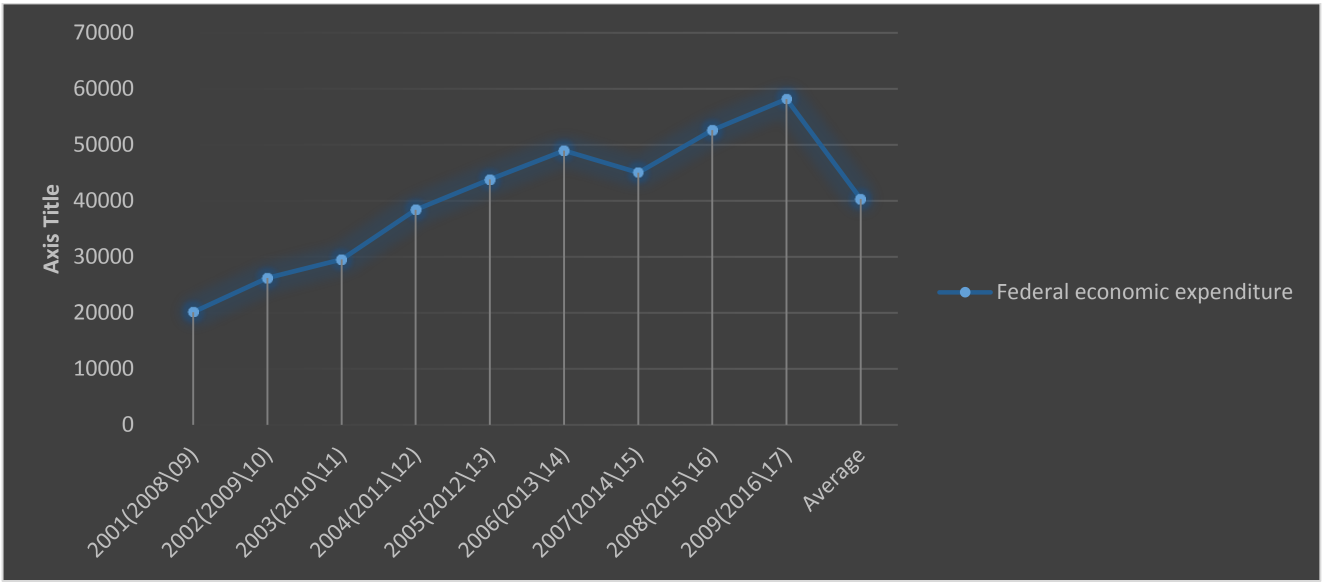


Figure 4.4 Federal and regional governments share in the degree of expenditure decentralization in economic sector (In Million Birr)

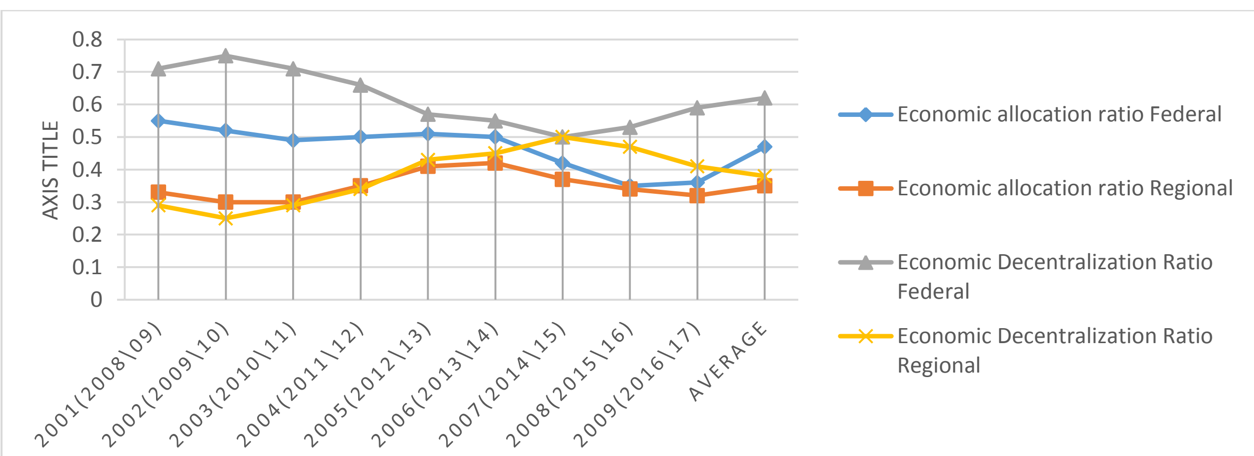


Figure 4.5 Federal and regional governments share in the degree of expenditure decentralization in economic sector

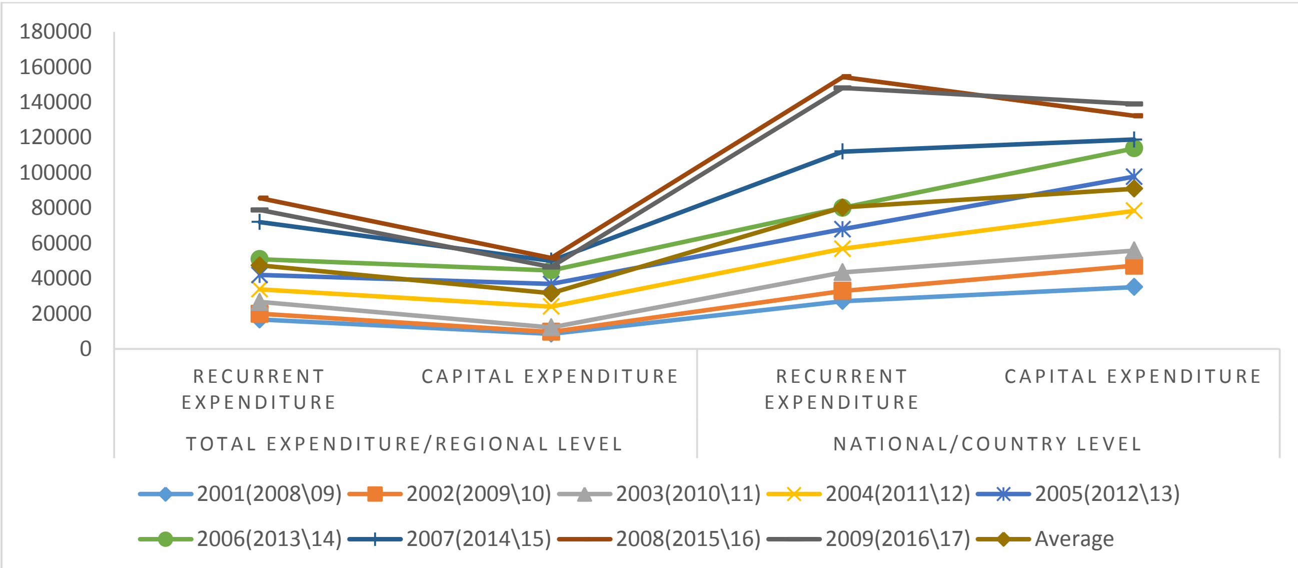


Figure 4.6 Federal expenditure total

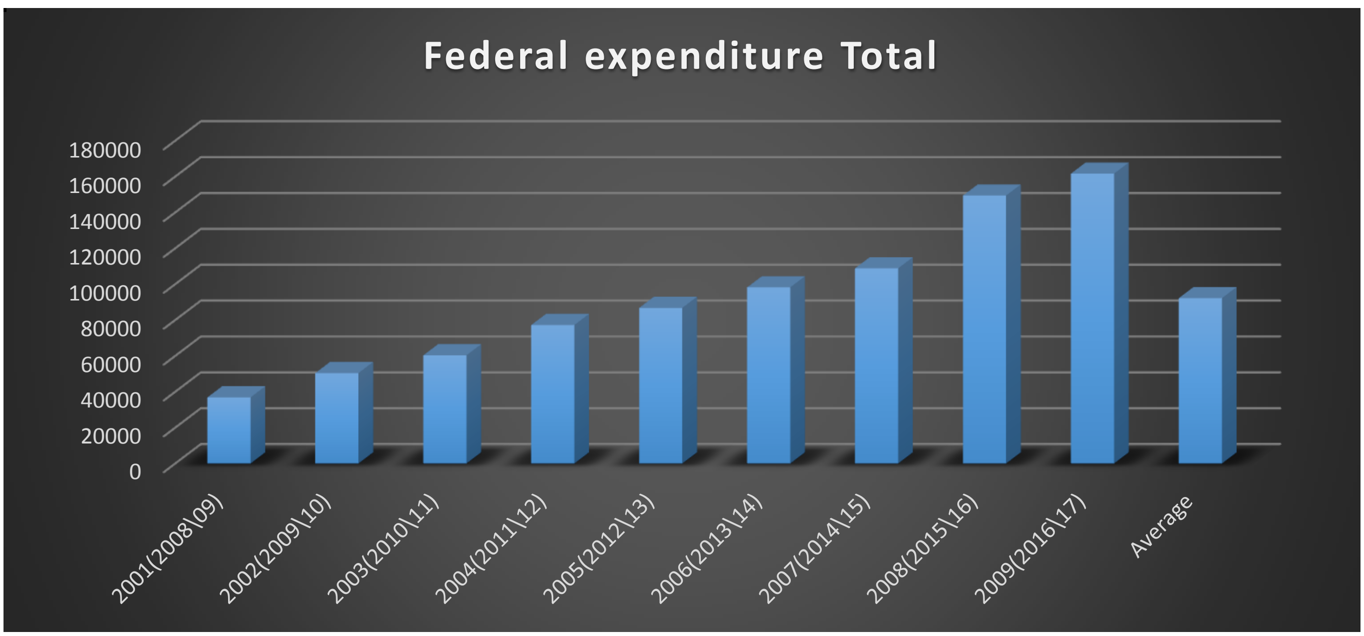


Figure 4.7 Expenditure Decentralization

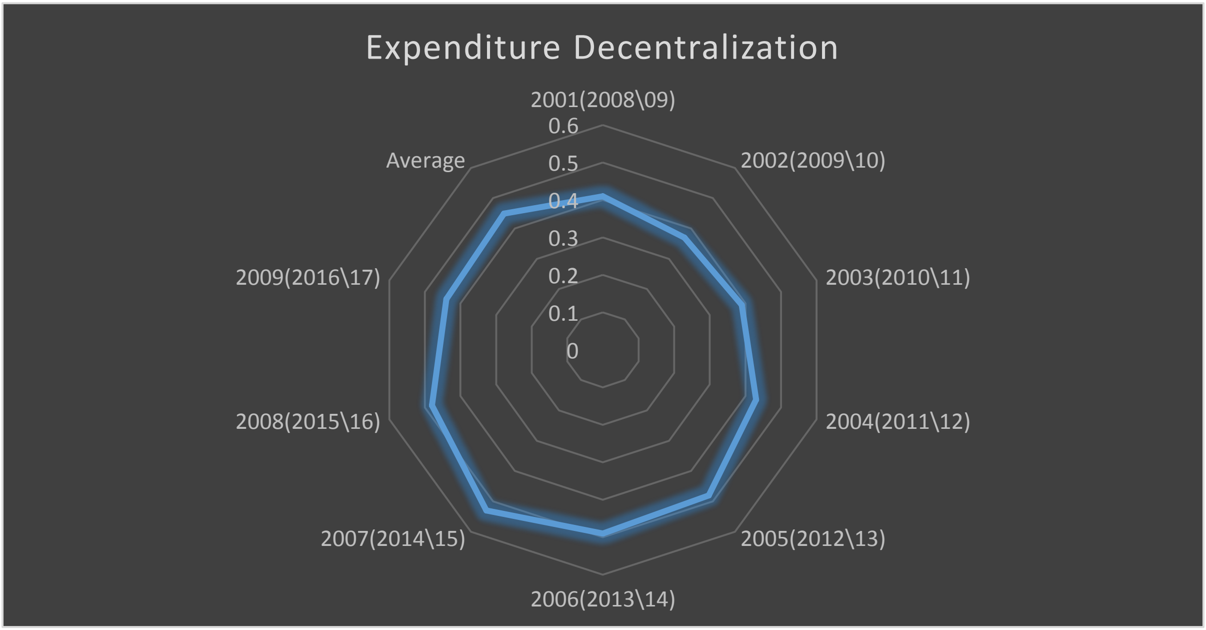


Figure 4.8 Federal and regional governments share in the degree of expenditure decentralization in economic sector (In Million Birr)

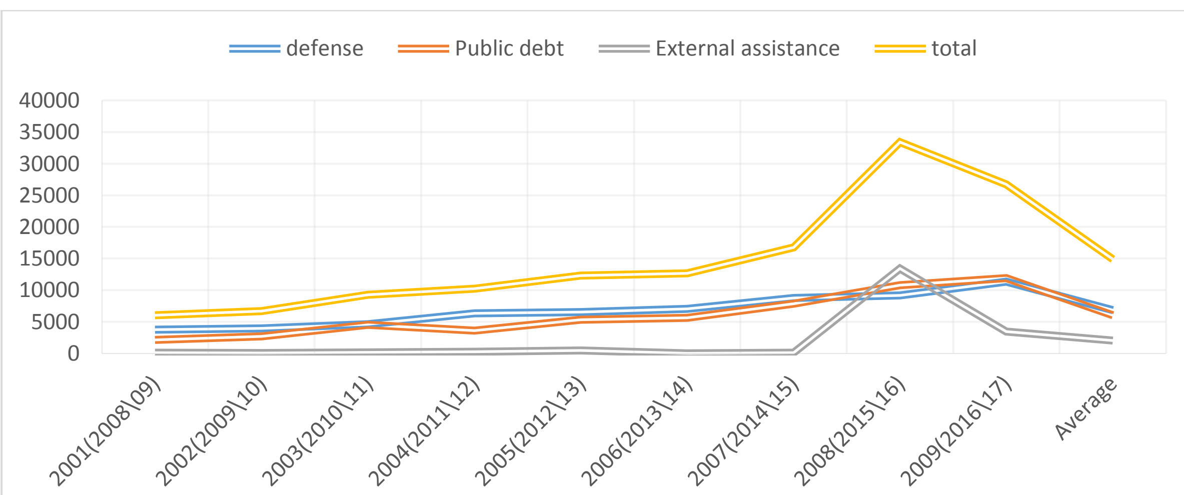


Figure 4.9 Federal and regional governments share in the degree of expenditure decentralization in economic sector

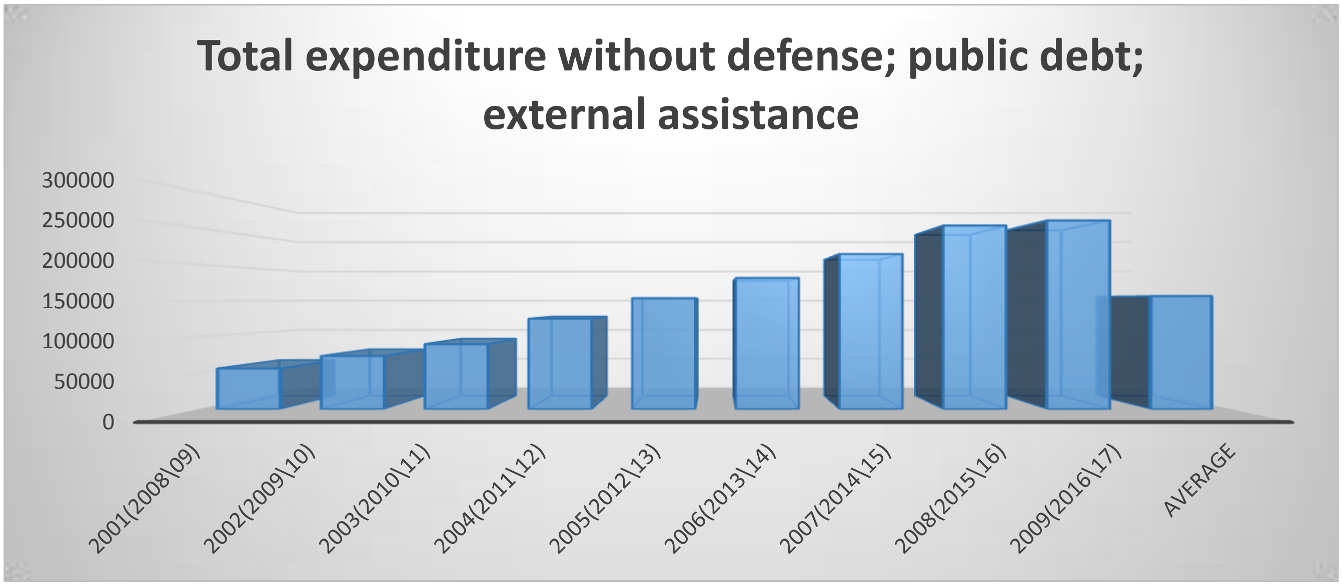
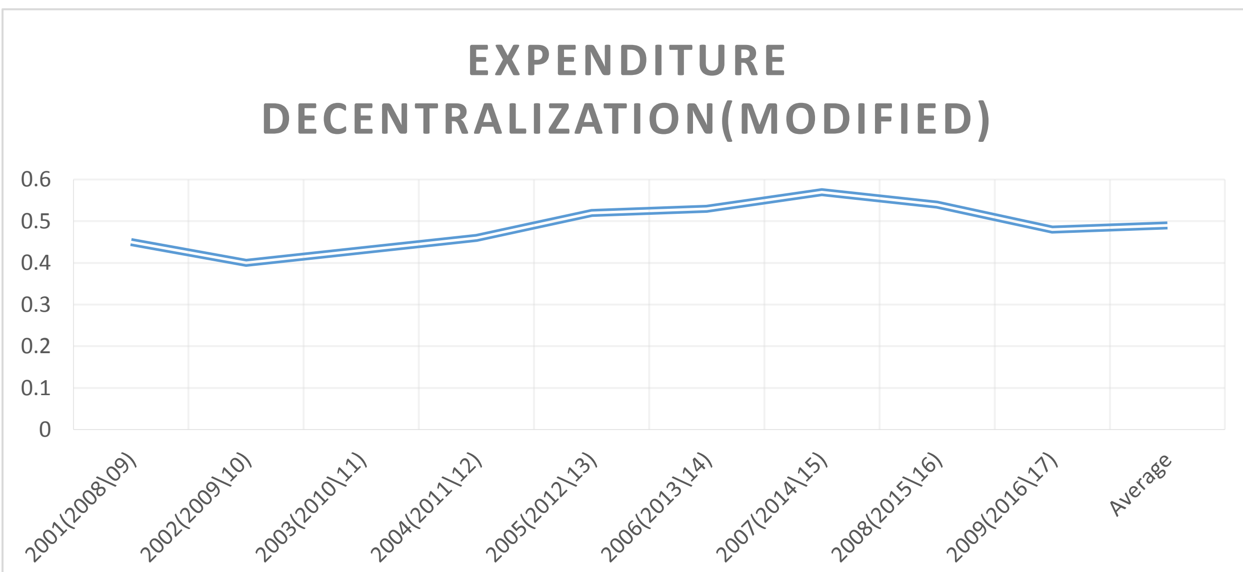


Figure 4.10 Expenditure Decentralization



As can be seen from Table 4.3 and from the above figures, on average, the Federal Government spends 55 percent of national expenditure while all regions spend 45 percent of the national expenditure for the period (2008/9 – 2016/17). The Table further shows a declining trend in the expenditure share of the regions from 53 percent in 2014\15 to 44 percent in 2016\17.The adjusted expenditure decentralization ratio in Ethiopia, which excludes the defense expenditure, has raised to 49 percent.

The share of regions in social and economic sectors have also indicate the extent of service provisions by the regions in the sectors. Being the key providers of services to the communities, the amount of expenditure allocated to the sectors at each level has thus a meaningful policy implication. Accordingly, regions have allocated 38 percent of their total expenditure on social sectors, while the Federal Government has spent only 29 percent of its total expenditure on the social sector. The demarcation of responsibilities between the Federal and regional bodies that emerges from national policies has been explained as the cause for the highest share in the regions. The importance of regional expenditures in this sector is strongly driven by national policy which priorities the expansion of the primary services which the regions provide. Similarly, regions have allocated on average 37 percent of their total expenditure on economic sector while the Federal Government has allocated 47 percent of its total expenditure on economic sectors. Generally, the share of regions in total national social sector expenditure is on average 52 percent while the share in total national economic sector expenditure is 38 percent implying the relative importance of the regions in the social sector.

The Federal Government spends the remaining 48 percent and 62 percent of national social and economic sector expenditure. Whatever the constitution assigns bulk of functions and services to be provided by regions, the provision by the Federal Government has taken the lion’s share of expenditure particularly in the economic sectors.

As can be seen from Table 4.4, the share of expenditure has changed substantially during 2008\09– 2017\18. The share of recurrent expenditure in total expenditure increased from 43 percent to 60 percent during 2008\09– 2017\18. On the other hand, when we exclude defense expenditure, the share of recurrent expenditure spent by general government ,increased from 39 percent to 58 percent during 2008\09– 2017\18 (Tables 4.3 and 4.4).

Table 4:4 General Government Expenditures (2008/9 – 2017/18)

Share of total expenditure	2001 2008\09	2002 2009\10	2003 2010\11	2004 2011\12	2005 2012\13	2006 2013\14	2007 2014\15	2007 2015\16	2009 2016\17	2010 2017\18	Average
Total expenditure	61262.8	78767.2	96967.7	133586.6	163012.0	191523.2	227563.6	282151.2	329415.4	354205.3	191845.5
Total recurrent	26144.3	31530.5	41149.1	55180.2	65288.2	77710.8	108704.4	149862.2	178048.3	210470.2	94408.82
Defense	3772.7	3954.6	4618.6	6336.8	6528.6	7041.6	8767.3	9182.5	11318.5	12813.6	7433.48
Total exp. Less defense	57490.1	74812.6	92349.1	127249.8	156483.4	184481.6	218796.3	272968.7	318096.9	341391.7	184412.02
Total capital expenditure	35118.5	47236.7	55818.6	78406.4	97723.8	113812.4	118859.2	132288.9	151367.0	143735.1	97436.68

Figure 4.11: General government expenditure

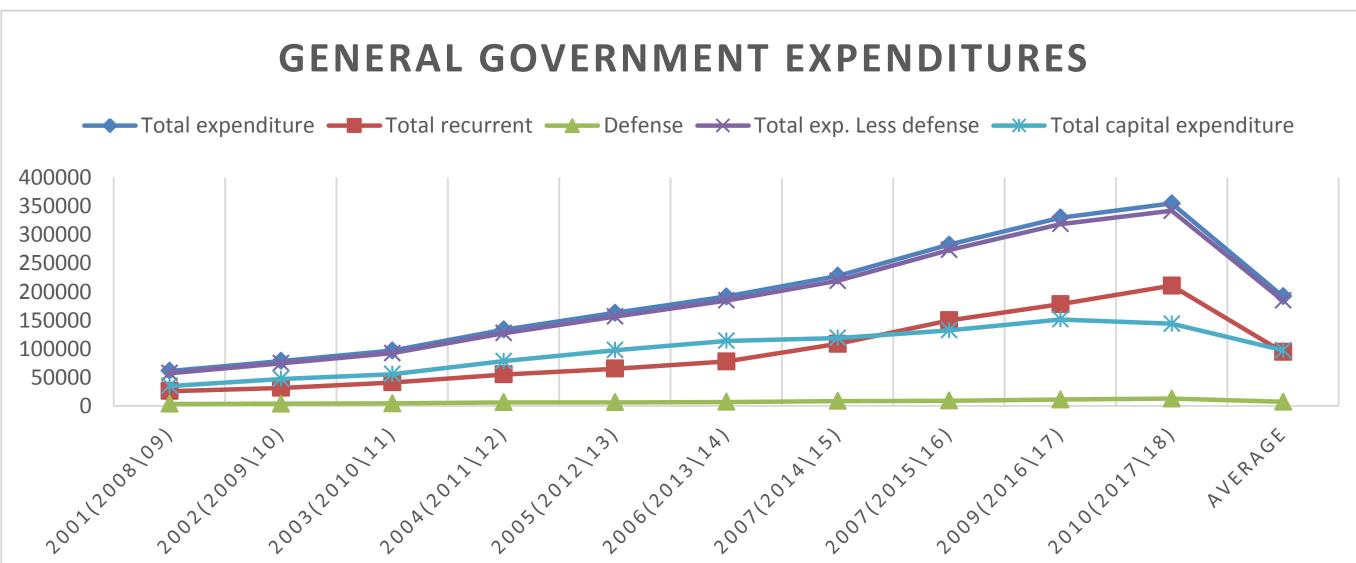
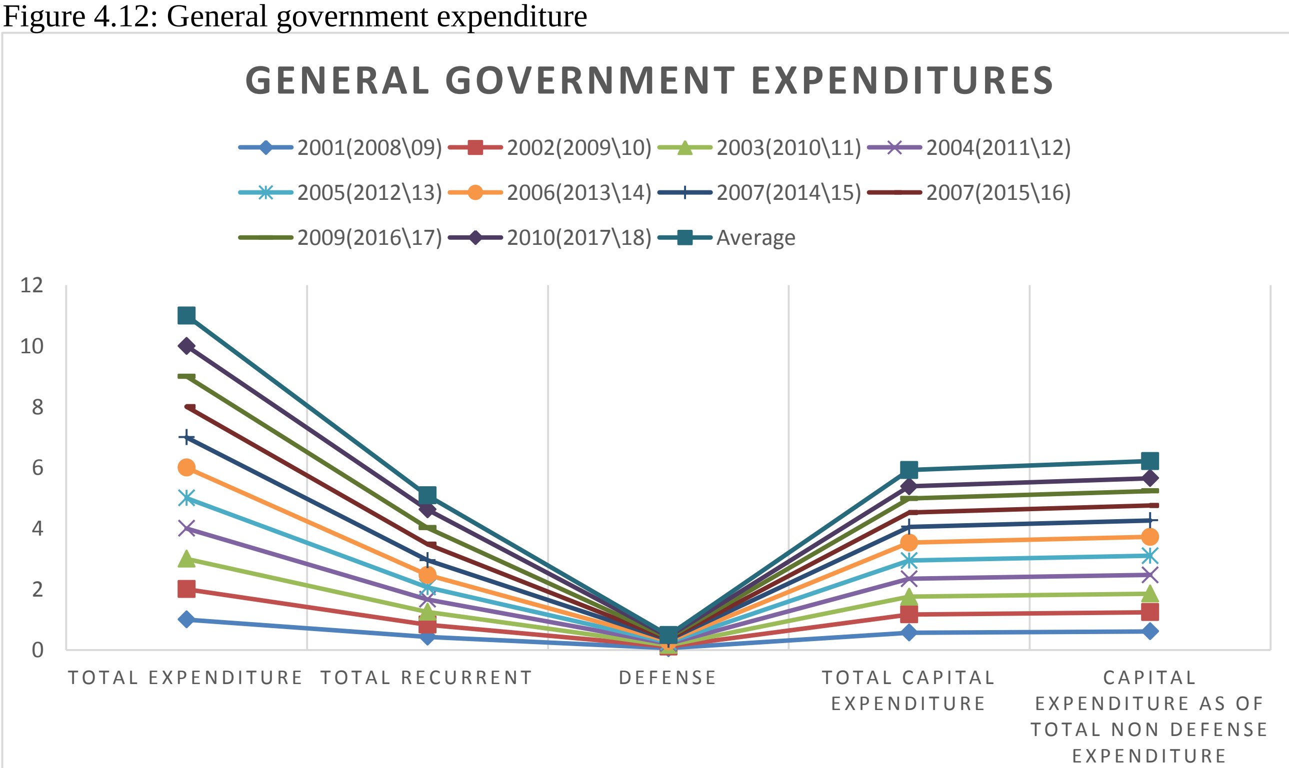


Table 4:5 Share of General Government Expenditures (2008/9 – 2017/18)

Share of total expenditure	2001 2008\09	2002 2009\10	2003 2010\11	2004 2011\12	2005 2012\13	2006 2013\14	2007 2014\15	2008 2015\16	2009 2016\17	2010 2017\18	Average
Total expenditure	100	100	100	100	100	100	100	100	100	100	100
Total recurrent	0.43	0.40	0.42	0.41	0.40	0.41	0.48	0.53	0.54	0.60	0.46
Defense	0.06	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.04	0.04	0.044
Total capital expenditure	0.57	0.60	0.58	0.59	0.60	0.59	0.52	0.47	0.46	0.40	0.54
Capital expenditure as of total non defense expenditure	0.61	0.63	0.61	0.62	0.63	0.62	0.54	0.49	0.48	0.42	0.565

Sourc**e:-** Own computation Based on MoF Data.

Figure 4.12: General government expenditure



The shifts in defense expenditures have also changed the composition of public expenditure during the period 2008\09– 2017\18. And the fluctuations in the share of defense related federal expenditures are greater with respect to recurrent expenditures.

The earlier discussions have shown that regions are assigned extensive responsibilities and function necessitating the responsibilities for bulk of spending on some priority sectors. Therefore, the highest share of regions' expenditure in some selected priority sectors (Agriculture and Natural Resource, Education and Health) is in line with the constitutional mandates of the regions.

When it comes to the perceptions of the respondents, regarding the question of appropriateness of the fiscal arrangement to the Ethiopian situation, almost 80 percent of the respondents replied that it is not appropriate. They stated the following major weakness: The constitution is not explicit on expenditures assignment of regional states and local governments below the regional level. The constitution only says regions have the power and responsibilities of designing and implementing their own socio-economic plans without mentioning the specific expenditure responsibilities of regions. In addition, the revenue assignments are not in line with the normative theory of federalism, which means the revenue assignment does not follow from the expenditure assignment. Moreover, the constitution is not explicit about the entitlement of intergovernmental fiscal transfer by regions as well as local governments below the regions.

4.5 Assignment of Revenue between different levels of government

Once the assignment of expenditure responsibility has been determined, the second key question is the assignment of revenue sources to shoulder the responsibilities, i.e., who gets what resources. Thus, the assignment of expenditure responsibility is an important determinant of the assignment of revenue sources. This issue is summarized as, "money should follow functions" (Oates, 2001:8). Since inadequate funding sources may lead to failures in decentralization programs, genuine decentralization programs should try to clarify the fiscal relationship between the central and local government unit. That is, adequate resources should be available to decentralized units if they are to function effectively.

Tax assignments are critical to government accountability and autonomy. The Ethiopian Constitution vests authority for tax policy, tax base and tax rate determination with the federal government. It considers tax collection for most taxes other than international trade and personal income taxes as shared responsibilities (see Table 4. 6 below). Shared taxes are typically collected by state tax administration and then shared in a constitutionally mandated manner. Table 4.6 below specifies the sharing arrangements for shared tax revenues. Regional/State taxing powers are limited to income and sales taxes on regionally owned enterprises, unincorporated activities, and rental incomes, within region sale of chat, land use taxes (mining and urban property), license fees and services. Woredas and Kebeles have no legal taxing powers but states may authorize them to collect some fees and charges. Urban woredas may also be authorized to collect land use or property related charges on behalf of state or city administrations.

Table 4. 6 Division of taxing powers

Tax Instrument	Tax Base	Rate	Col.	Federal (Article 96)	Concurrent Federal and State (Article 98)	State (Article 97)
Taxes on International Trade	F	F	F	Import tariffs Sales tax on imports Excise tax on imports Export taxes on coffee and chat		
Personal Income Tax:	F	F	F	Employees of Federal Government, Federal enterprises, Rental income	Taxation of dividend distributions (50/50)	Agricultural income, cooperative societies, non-farm employment income, employment income of state and private enterprises, private farmers
Corporate Income Tax	F	F,S	F,S	Federal enterprises , air, rail and sea transport services,	Mining, Oil and Gas, Joint Federal-State enterprises,	State and cooperative farms and enterprises, individual traders,

				monopolies,	private corporations(50/50)	water transport, mining
Royalties and Excise taxes	F	F,S	F,S	Federal enterprises	Mining, oil and Gas and joint enterprises , private corporations(70/30)	Forestry, State owned enterprises and unincorporated activities
Sales Taxes on Goods	F	F	F,S	Federal enterprise and private corporations	Joint Federal-State enterprises, private corporation (70/30	State enterprises and domestic sale of chat, individual traders
Sales taxes on services	F	F	F,S	Federal enterprise, private corporations	Joint federal state enterprises	State enterprises, unincorporated activities
Capital gains	F	F	F,S	Federal enterprise, individuals, private corporations		State enterprises
Rental income	F	F	F,S	Federal properties		State land use, private houses and other properties
Non-tax revenues	F,S	F,S	F,S	Lotteries, gaming, Stamp duties Federal Licenses		State license fees

Source: Ethiopia (1995).

Moreover, the Transitional Government's proclamation No. 33/1992 and the 1995 constitution of the Federal Democratic Republic of Ethiopia had laid a foundation for revenue decentralization /sharing between the Federal Government and State Governments. Article 95 of the 1995 constitution states that, the Federal Government and the states shall share revenue taking the federal arrangement into account (Proc. No.1/1995:137). These legal documents categorized revenue sharing power into three. These are Federal power of taxation, State power of taxation, and concurrent power of taxation (Proc. No. 1/1995: 137-139).

Accordingly, the states enjoy relatively greater powers in determining revenue policies and collecting taxes. Article 95 of the constitution states that the sharing of revenue has to take the federal arrangement into account (Proclamation 1/1995, Article 94(1)). Accordingly, the federal government collects revenue from levies on imports and exports; personal income tax on employees of the federal government and international organizations; income, profit, sale and excise taxes on enterprises owned by the federal government; taxes on national lotteries; taxes on the income of air, rail and sea transport services; the rental income taxes for houses and properties owned by the federal government; fees and service charges on services provided by the federal government; taxes on monopolies; and federal stamp duties(Ibid,.Article 95.).

On the other hand, the state revenue instruments include: income taxes on employees of the state and of private enterprises; fees for land usufructuary rights; the agricultural income taxes; the profit and sales taxes on individual traders; taxes on income from transport services rendered on waters within their territory; rental income tax from private houses and other properties, and also collect rent on houses and other properties they own; the profit, sales, excise and personal income taxes from enterprises owned by the states; taxes on income, royalties and land rentals of mining operations, which are applicable in conjunction with Article 98 (3); charges and fees for licenses and services rendered by state organs; and royalty for use of forest resources(Ibid,.Article 96.).

The joint taxation powers apply to the profit, sales, excise, and personal income taxes from jointly established enterprises, the taxes on the profits of companies and on dividends due to shareholders, on incomes derived from large-scale mining and all petroleum and gases operations, and royalties on such operations (Ibid,.Article 97.).

Later, Article 98 was amended because of the difficulty it caused in implementation. According to the constitution, the House of peoples' Representatives and the Councils are the only authorities with the powers of levying taxes in their respective domains. Hence, levying jointly means that the two levels of legislatures have to meet to decide on such matters, which is difficult to implement. In order to avoid such complications, it was decided that the federal government would levy and collect the taxes and royalties and the sharing of the revenue between the federal and state governments would be decided by the House of the federation in accordance with Article 62 (7) of the constitution. the joint session of the House of the federation and the House of peoples' Representatives decides on the ownership of unallocated taxes by a two-thirds majority(Ibid,.Article 98).

As shown in table 4.6., the states' exclusive domain of taxes bases is small. The federal government, in 1997/98, collected 82 percent of the aggregate tax revenue and 83 percent of the aggregate non-tax revenue. The main reason for the larger federal share in revenue collection is mainly due to heavy tilt in tax bases in favor of the Federal Government. The Federal Government is assigned the largest tax bases, which contribute the largest revenue. Indirect tax revenues, which constitute the largest share of domestic revenue, are concentrated under the control of the Federal Government. For example, the federal government collects the export and import taxes, which accounted 41 percent of the country's aggregate tax revenue in the same year. It also collects aggregate tax revenue in the same year. It also collects 85 percent of the indirect domestic taxes, which are 24 percent of the total of total revenues(Minutes of th second Joint Session of the House of Peoples' Representatives and the House of the Federation. 2nd Year, April 10, 1997·). The privatization of federal public enterprises and the gradual improvement of the regional tax administrations would narrow the wide disparity. However, such developments are likely to take place gradually and might not radically change the overall standing of both levels of government in terms of their resource capabilities in the near future. The states will continue to be mainly dependent on the resource transfers from the centre. Harmonized and standardized tax bases are envisaged at the federal and regional levels (proclamation 1/1995, article 99.).

The council of Ministers Regulations No.17/1997 indicates that consultations between federal and state governments should take place on all new or changed taxes at both levels of government to ensure that the tax base are harmonized and standardized .Hence, the Ministry of Finance is expected to provide the required research and administrative support to the effect (The World Bank, Ethiopia: regionalization study, June 15, 2000:17).

The revenues collected by the states only cover a small part of their expenditures. As shown in Table 4.7, the share of the states in the collected revenues was between 23 to 29 percent during 2013/14 – 2017/18 .On the other hand, the expenditure powers of the states have fallen from 63.65 percent of the total public recurrent expenditures in 2013/14 to 53.26 percent in 2017/18(Proclamation No. 57/1996 December 19, 1996, Article 58. .). Although the percentage has decreased since then, the further devolution would be limited since the federal government is responsible for defense, interstate commerce, the administration and regulation of all forms of transformation, postal services, and telecommunications. However, the expenditure responsibility assigned to the regional government is considered to be ‘’ close to what is found in highly decentralized system”(Council of Ministers Regulations No. 17/1997 Article 76.) Moreover, the areas developed by the federal government are regarded to be extensive in relation to other developing countries and any further development has to be done gradually, while giving more attention to enhance efficiency in the already devolved areas (See Table 4.7).

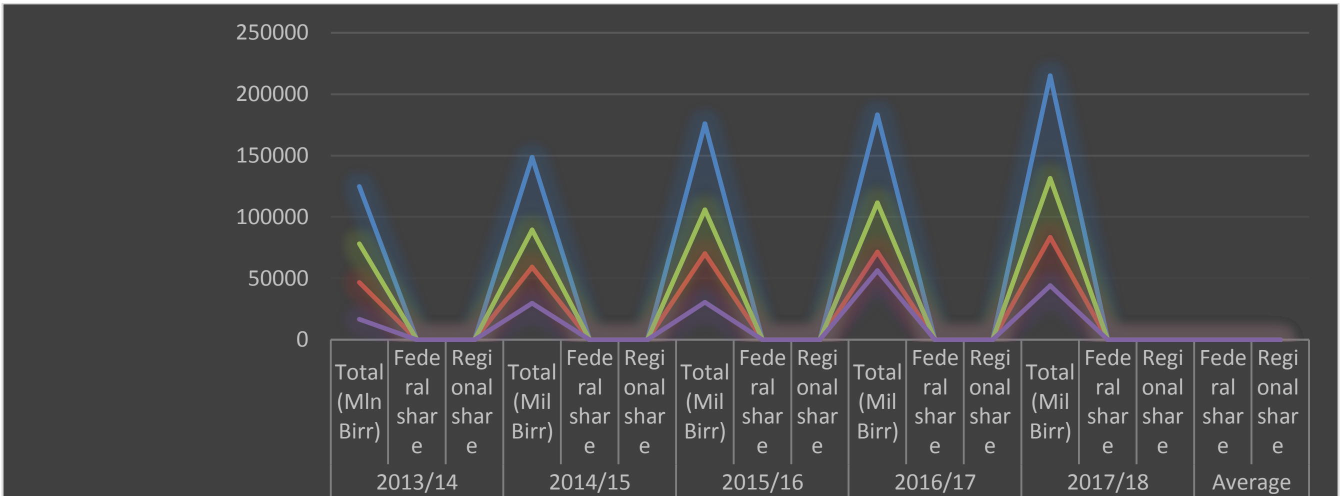
Table 4.7 share of federal and Regional Governments in Revenues in Ethiopia: 2013/14 – 2017/18

Category	2013/14			2014/15			2015/16			2016/17			2017/18			Average	
	Total (Mln Birr)	Federal share	Regional share	Total (Mil Birr)	Federal share	Regional share	Total (Mil Birr)	Federal share	Regional share	Total (Mil Birr)	Federal share	Regional share	Total (Mil Birr)	Federal share	Regional share	Federal share	Regional share
Total Tax Revenue	124782.5	74.82	25.18	148552.5	72.91	27.09	175911.3	72.03	27.97	183096.7	76.08	23.92	214895.9	76.93	23.07	74.55	25.45
Direct Tax	46618.1	54.63	45.37	59206.5	52.36	47.64	70115.8	50.88	49.12	71505.1	57.92	42.08	83391.8	58.01	41.99	54.76	45.24
Indirect Tax	78164.4	86.87	13.13	89346.1	86.52	13.48	105795.5	86.05	13.95	111591.7	87.72	12.28	131504.0	88.93	11.07	87.22	12.78
Non-Tax Revenue	16771.0	60.52	39.48	29722.8	72.17	27.83	30563.1	68.67	31.33	56475.3	81.84	18.16	44194.0	73.80	26.2	71.4	28.6

Category	2013/14			2014/15			2015/16			2016/17			2017/18			Average	
	Total (Mln Birr)	Federal share	Regional share	Total (Mil Birr)	Federal share	Regional share	Total (Mil Birr)	Federal share	Regional share	Total (Mil Birr)	Federal share	Regional share	Total (Mil Birr)	Federal share	Regional share	Federal share	Regional share
Total Tax Revenue	124782.5	74.82	25.18	148552.5	72.91	27.09	175911.3	72.03	27.97	183096.7	76.08	23.92	214895.9	76.93	23.07	74.55	25.45
Direct Tax	46618.1	54.63	45.37	59206.5	52.36	47.64	70115.8	50.88	49.12	71505.1	57.92	42.08	83391.8	58.01	41.99	54.76	45.24
Indirect Tax	78164.4	86.87	13.13	89346.1	86.52	13.48	105795.5	86.05	13.95	111591.7	87.72	12.28	131504.0	88.93	11.07	87.22	12.78
Non-Tax Revenue	16771.0	60.52	39.48	29722.8	72.17	27.83	30563.1	68.67	31.33	56475.3	81.84	18.16	44194.0	73.80	26.2	71.4	28.6

Source**e:-** Own computation Based on MoF Data

Figure 4.13: share of federal and Regional Governments in Revenues in Ethiopia



	2013/14			2014/15			2015/16			2016/17			2017/18			Average	
	Total (Mln Birr)	Federal share	Regional share	Total (Mil Birr)	Federal share	Regional share	Total (Mil Birr)	Federal share	Regional share	Total (Mil Birr)	Federal share	Regional share	Total (Mil Birr)	Federal share	Regional share	Federal share	Regional share
Total Tax Revenue	1E+05	74.82	25.18	1E+05	72.91	27.09	2E+05	72.03	27.97	2E+05	76.08	23.92	2E+05	76.93	23.07	74.55	25.45
Direct Tax	46618	54.63	45.37	59207	52.36	47.64	70116	50.88	49.12	71505	57.92	42.08	83392	58.01	41.99	54.76	45.24
Indirect Tax	78164	86.87	13.13	89346	86.52	13.48	1E+05	86.05	13.95	1E+05	87.72	12.28	1E+05	88.93	11.07	87.22	12.78
Non-Tax Revenue	16771	60.52	39.48	29723	72.17	27.83	30563	68.67	31.33	56475	81.84	18.16	44194	73.8	26.2	71.4	28.6

The Federal Government is assigned the largest tax bases, which contribute the largest revenue. Indirect tax revenues, which constitute the largest share of domestic revenue, are concentrated under the control of the Federal Government. For example, the Federal Government collects 100 percent of foreign trade taxes and 83.25 percent of domestic indirect taxes, which together constitute 65 percent of tax revenues. The domestic indirect taxes and foreign trade taxes took a share of 45.12 percent in total domestic national revenue, out of which the Federal Government collects 42.42 percent while only 2.7 percent is collected by all Regional Governments (Table 4.7 above). The own revenues of the regions are largely from direct taxes with average share of 45.24 percent during 2013/14 – 2017/18.

Table 4.8 share of federal and Regional Governments in public expenditure in Ethiopia: 2013/14 – 2017/18

Category	2013/14			2014/15			2015/16			2016/17		
	Total (Mil Birr)	Federal share	Region al share	Total (Mil Birr)	Federal share	Region al share	Total (Mil Birr)	Federal share	Region al share	Total (Mil Birr)	Federal share	Region al share
Administrative & General Services	29990.1	44.17	55.83	39115.4	44.12	55.88	45096.8	40.31	59.69	45238.6	48.66	51.34
Defense	7041.6	100	0	8767.3	100	0	9182.5	100	0	11318.5	100	0
Economic services	11174.4	22.21	77.79	14970.9	21.46	78.54	19874.6	27.98	72.02	16847.1	26.97	73.03
o/w Rods	555.0	35.91	64.09	727.4	24.79	75.21	1048.0	26.00	74	797.1	32.59	67.41
Agriculture	5603.3	16.47	83.53	7617.6	16.36	83.64	10562.1	30.35	69.65	7621.5	21.36	78.64
Water	1082.4	5.90	94.1	1423.8	4.86	95.14	1950.7	19.26	80.74	1549.2	4.16	95.84
Social Services	32626.7	26.63	73.37	48938.8	26.47	73.53	63403.7	34.44	65.56	69344.1	42.49	57.51
o/w Education	24206.9	32.94	67.06	36181.2	33.08	66.92	41922.7	35.86	64.14	46247.0	41.88	58.12
Health	6616.0	5.39	94.61	10276.7	5.40	94.6	12908.1	7.02	92.98	12105.7	10.94	89.06
Total Recurrent Expenditure	80092.4	36.35	63.65	112053.9	35.75	64.25	154357.3	44.58	55.42	148054.9	46.74	53.26

In general, on average the Federal Government has collected 74.55percent of tax revenues and 71.4 percent of non- tax revenue. And the average share of regions' revenue remained only at 18 percent of total national domestic revenue (table4.8 above). Sub national tax autonomy, measured as a ratio of tax revenue to total revenue of sub national governments, (tax, non-tax, federal transfers and capital gain revenues net of grants) is also another revenue based decentralization indicator (Mello, 2000:23). From table 4.7 above, sub national tax autonomy in Ethiopia is 81.07 percent while the non-tax autonomy is 19.93 percent in 2017/18. This implies that regions have covered on average 24.71 percent of their budgetary revenue from their tax revenue and 9.8 percent of their budgetary revenue from non-tax revenues during 2013/14 – 2017/18.

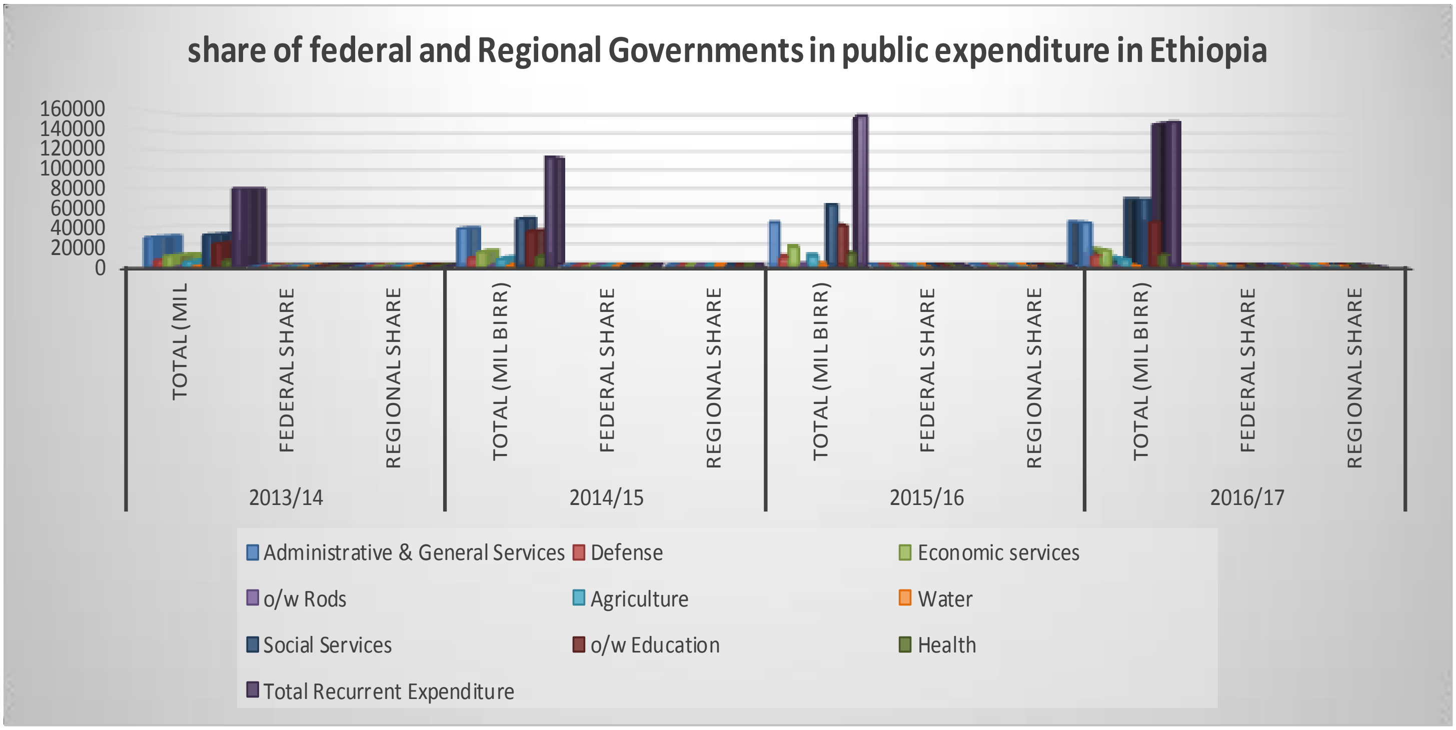
Table 4.9 Federal and Regional shares in public Expenditure in Ethiopia

Category	2013/14			2014/15			2015/16			2016/17		
	Total (Min Birr)	Federal share	Regional share	Total (Min Birr)	Federal share	Regional share	Total (Min Birr)	Federal share	Regional share	Total (Min Birr)	Federal share	Regional share
Administrative & General Services	29990.1	13247.5	16742.6	39115.4	17258.4	21857	45096.8	18180.7	26916.1	45238.6	22012.1	23226.5
Defense	7041.6	7041.6	0	8767.3	8767.3	0	9182.5	9182.5	0	11318.5	11318.5	0
Economic services	11174.4	2481.9	8692.5	14970.9	3212.9	11758	19874.6	5561.3	14313.3	16847.1	4543.7	12303.4
o/w Rods	555.0	199.3	355.7	727.4	180.3	547.1	1048.0	272.5	775.5	797.1	259.8	537.3
Agriculture	5603.3	923.1	4680.2	7617.6	1246.5	6371.0	10562.1	3205.8	7356.3	7621.5	1628.2	5993.3
Water	1082.4	63.9	1018.5	1423.8	69.2	1354.6	1950.7	375.7	1575	1549.2	64.4	1484.8
Social Services	32626.7	8687.2	23939.5	48938.8	12953.2	35985.6	63403.7	21836.8	41566.9	69344.1	29461.6	39882.5
o/w Education	24206.9	7973.3	16233.6	36181.2	11967.0	24214.2	41922.7	15034.6	26888.1	46247.0	19370.3	26876.7

Health	6616.0	356.5	6259.5	10276.7	555.0	9721.7	12908.1	906.1	12002	12105.7	1324.3	10781.4
Total Recurrent Expenditure	80092.4	29115.7	50976.7	112053.9	40064.8	71989.1	154357.3	68817.2	85540.1	148054.9	69198.6	78856.3

Sourc**e:-** Own computation Based on MoFED Data.

Figure 4.14: Federal and Regional shares in public expenditure in Ethiopia (In Million Birr)



Sourc**e:-** Own computation Based on MoFED Data.

Table 4.10 National Regional States Revenue and Gross Expenditure

Region	In millions of Birr														
	2013/14					2014/15					2015/16				
	Revenue	Gross expenditure	Revenue as% of total Expenditure	Per capital Revenue	Per capital Expenditure	Revenue	Gross expenditure	Revenue as% of total Expenditure	Per capital Revenue	Per capital Expenditure	Revenue	Gross expenditure	Revenue as% of total Expenditure	Per capital Revenue	Per capital Expenditure
Tigray	2733.6	6549.5	41.74	551.13	1320.46	3281.7	7244.5	45.30	649.20	1433.14	4088.2	9597.4	42.60	793.67	1863.21
Afar	425.8	2874.2	14.82	253.6	1711.85	498.9	3776.1	13.21	289.55	2191.58	646.3	3821.8	16.91	365.55	2161.65
Amhara	4189.9	17475.2	23.98	209.30	872.94	6389.4	22797.1	28.03	313.22	1117.56	7743.8	25912.1	29.88	372.84	1247.57
Oromiya	7448.8	25458.1	29.26	226.99	775.78	9921.1	32623.2	30.41	294.46	970.09	11275.1	38736.5	29.11	326.11	1120.36
Somail	1188.8	6032.7	19.71	224.01	1136.74	1363.3	7705.4	17.69	250.06	1413.32	1844.6	8537.8	21.61	329.45	1524.88

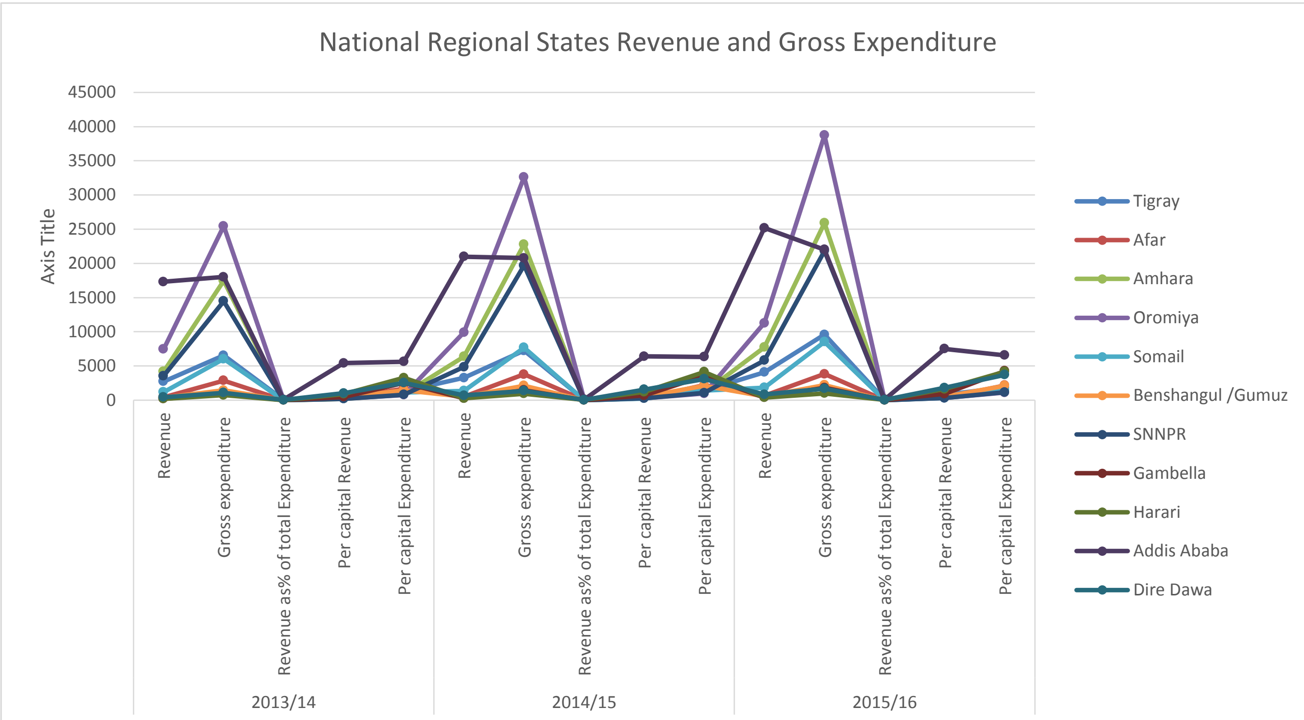
Benshangul /Gumuz	366.8	1436	25.54	375.82	1471.31	520.0	2112.5	24.62	517.41	2101.99	560.5	2206.4	25.40	541.55	2131.79
SNNPR	3540.1	14492.4	24.43	198.48	812.54	4854.1	19701.3	24.64	265.60	1077.99	5811.6	21831.6	26.62	310.45	1166.22
Gambella	196.8	1008.5	19.51	496.97	2546.72	280.4	1458.5	19.23	685.57	3566.02	391.9	1808.5	21.67	928.67	4285.55
Harari	203.2	738.4	27.52	899.12	3267.26	278.6	960.2	29.02	1200.86	4138.79	388.6	997.9	38.94	1632.77	4192.86
Addis Ababa	17309.6	18013.3	96.09	5414.33	5634.44	20990.6	20774.9	101.03	6409.34	6343.48	25186.8	22013	114.42	7507.24	6561.25
Dire Dawa	432.7	1086.8	39.81	1013.35	2545.20	685.9	1367.5	50.16	1558.86	3107.95	831.2	1695.2	49.03	1818.82	3709.41
Total Regional	38036.2	95608.4	39.78	432.18	1086.32	48519.1	121994.4	39.77	538.26	1353.39	58768.6	137158.2	42.85	636.87	1486.38

Sourc**e:-** Own computation Based on MoF Data.

Note**:-** Fiscal Capacity measured by per capita own revenue (ratio of own revenue to total population)

Per capita expenditure measured as a ratio of total regional expenditure to its population.

Figure 4.15: National Regional state Revenues and expenditure



In accordance with proclamation No. 41/1993, regions started preparing their budgets, for the first time, for the 1993/94 budget-year (Gupta, Sanjeevet. al., January 1996, p. 11). Each region had to prepare and implement its own capital and current budget proposals and was included in the overall consolidated budget of the central government. Since the constitution entered into force in 1995, the states have to prepare and implement their own budgets (Ibid., p.19.) and the federal government's powers are limited to the preparation and implementation of its own budget(Proclamation No. 41/1993, January 20, 1993, Artcles 20 and 52) . Nevertheless, the federal government is expected to advise the state governments of their budget subsidy ceilings in time for them to prepare their regional budgets, based on their subsidy request and the availability of the resources. Article 77of the council of Minsters Regulations No. 17/1997 states as follows:

1. The federal Government shall advise the state Governments of their budget subsidy ceilings in time for them to prepare their regional budgets.
2. Before the approval of the budget, state Governments shall submit to the Ministers of Finance and Economic Development and cooperation their subsidy requests.
3. State Governments shall submit their foreign currency requirements to the Ministry of Finance (Proclamation 1/1995, Article 52 (1) (e).).

Some of the emerging regions have had some difficulties in preparing their budgets and had to be assisted by the center. Substantial improvements have been achieved in the last several years. However, the emerging states still face enormous difficulties because of the shortage of skilled manpower (Ismael Ali sero, President of the Afar State, interview, December 16, 1997.). But we confirmed from the interview that today all regions were able to prepare their own budget and submit to their subsequent parliament for approval through regional finance offices and most challenges were solved.

Regarding revenue assignment, 80 percent of the federal respondents replied that the revenue assignment to the federal and regional governments based on the identity of tax payers is very unusual. Had it been assigned based on the normative theory of fiscal federalism, that is taking in to consideration the role of government in allocation, stabilization and distribution functions, it would have helped to improve the fiscal imbalance among level of governments both vertically and horizontally. In addition, the concurrent tax base and its administration as determined in the constitution is very odd which may lead to fiscal conflict in the future among the federal and regional governments. The perceptions go further to argue the gap of the revenue assignment among tiers of government as the revenue and tax assignment would be effective and efficient if it was assigned in line with the explicit assignment of expenditure. In this regard since the constitution itself does not assign expenditure explicitly, it should be considered in complement with the expenditure. Moreover, the assignment of revenue is basis on the identity of tax payers which could lead to fiscal conflict and fragmented tax administration which is vulnerable to tax evasion and maladministration of taxation.

What can be concluded from the above perceptions is that given the unusual, non-explicit and random assignment of expenditure and revenue to the federal and regional governments, as the economy becomes more sophisticated these assignments will not ensure or promote equitable development. Further, in the future local governments below the regions are expected to play a major role in service provision and given the limitation of the expenditure and revenue assignment to local governments, equitable development will not be promoted.

4.6 Fiscal system and national (inter-personal) Equity

4.6.1 The Tax system

This part of the fiscal equity assessment focuses on the tax side of the fiscal system. Understanding the tax side is vital as taxes generate revenue which is then used to finance block transfers and federal capital and recurrent spending, and taxes in themselves can be redistributive. For the analysis, the researcher also considered transfers and subsidies as these can be seen a "negative taxes". The design of the tax system impacts on equity if the system is progressive (taxing the rich relatively more than the poor) or regressive (the proportional tax burden is greater on the poor relative to the rich). The administration of the tax system determines how much taxes are collected, which can then be used to finance social services that equalize incomes or reduce poverty.

This assessment draws on published research, while supplementing the discussion with more recent data where appropriate. One of the most relevant studies was done by (Hill et al. 2017) in their paper "A Fiscal Incidence Analysis for Ethiopia" and will be heavily referenced in this analysis. It is particularly useful for my current study as each fiscal instrument is assessed, namely, direct and indirect taxes and transfers to check whether the system is equitable or not.

4.6.2 The Design of the Tax System

Mascagni (2016a) reviews the history of fiscal policy in Ethiopia between 1960 to 2010 and concludes that the current manifestation of the tax system (and fiscal policy more broadly) has been driven by the political and economic dynamics in Ethiopia, for example the move towards federalism in the 1990s, and the strong commitment of the Ethiopian government to economic development and shared prosperity in the 2000s. The tax system has thus been influenced by a desire for development and in turn shapes development, and by extension, equity. Taxes in Ethiopia comprise direct and indirect taxes. Direct taxes include various types of income taxes, land use fees and corporate profit tax. Indirect taxes include value added tax (VAT), import duties and excise taxes.

Table 4: 11 summarizes the major tax rates and Appendices 1 to 3 give the current rates of employment tax, rental and business income tax, and excise duties. Income taxes in Ethiopia are progressive and designed to impose a higher burden on the wealthy. The most recent Proclamation of Income Tax (No.976/2016) defines three main types of income tax: (i) Employment Income Tax (EIT), Rental Income Tax (RIT) and Business Income Tax (BIT). Each of these taxes is progressive by design as the tax rate increases with higher income brackets.

The tax system is responsive to recommendation which improve equity. Following the recent study by Hill et al. (2017), prior to publication of the study, the authors recommended a change in the 2002 income tax brackets as a means of improving the progressiveness and equity of the tax system. As noted by Hill et al. (2017, p.8) “inflation has caused rises in nominal wages, which have moved income earners upward within the different income brackets.” By reclassifying income brackets in in the 2016 Proclamation, the Government addressed this issue, leading to an improvement in the system. Under the 2002 Income Tax Proclamation, incomes above Birr 150 per month were taxable. This has been increased to income above Birr 600 per month in the 2016 Income Tax Proclamation.

In addition to the three taxes on income above (EIT, RIT and BIT), Proclamation 976/2016 also stipulates taxes on royalties (5 percent), dividends (10 percent) and interest (5 percent or 10 percent depending if the interest flows to a financial institution resident in Ethiopia). These taxes are targeted at the wealthiest in society and owners of capital; and are thus beneficial to redistribution.

The other form of direct tax is agricultural income tax. The tax base for agricultural income tax is land holding. Agricultural income tax rate varies with the land size and may differ also across regions. Since income tax from agriculture is allocated to Regional States in accordance with the provisions of the new constitution of 1995, each Regional State uses different tax rate depending on the holding size category. Another form of direct taxes is the land tax. The tax base for land use tax is land holding in the same way as agricultural income tax. Hence, the treatment of land use tax is the same as that of agricultural income tax. Land holding tax rate varies with the land size and may differ also across regions. Since land use fee is allocated to Regional States in accordance with the provisions of the new constitution of 1995, each Regional State uses different tax rate depending on the holding size category. According to Hill et al. (2017) one percent of all taxes are collected from fees levied for the use of land. Importantly, these fees vary by region and type of use which implies that design, distributional effects are expected. The tax rates are regionally set, but as noted in Hill et al. (2017, p.13) the average tax rate per hectare does not appear to vary significantly.

VAT is the largest indirect tax in Ethiopia and is charged at a rate of 15 percent on purchases made by consumers. The tax base for value added tax is the total valued added from VAT payers .Proclamation No. 285/2002 sets out the contents of the VAT regulation. VAT (like other sales taxes) is often regressive (Kaplow, 2006). Even though the rate is fixed at 15 percent regardless of income level, since poorer households spend relatively more of their income on consumption, they bear a higher incidence or burden of the tax. To overcome this, the Government via the VAT proclamation (section two, p.1840-1841) exempts basic food items, electricity, kerosene and water, medicines, transport, child care and educational services. Some of the VAT exempt items such as wheat, electricity and kerosene are also subsidized by the government (Hill et. al, 2017). Although the exemption of certain goods and services is intended to make the system more progressive, if poorer households are more likely to purchase from informal traders who are not registered, the system may in effect be less progressive (Harris et al., 2018).

Excise taxes are levied on a series of goods identified in Schedule of Proclamation No. 307/2002. The tax rates range from 10 percent on textiles and television broadcast receivers to 100 percent on ostentatious goods like luxury cars. In principle, the tax is intended for luxury items, and goods that have a negative effect on health but inelastic demand (e.g., salt, sugar, alcohol, cigarettes).

Table 4.11 Major Taxes in Ethiopia by type and rates

	Types of Tax	Maximum Rate (%)	Comments
1	Corporate profit income tax	30	25% on income profits of natural resources companies and 30% for the others
2	Unincorporated Business Profit income tax	0-35	The exempted threshold is Birr 7,200 while the maximum rate applied on annual profit income >= Birr 130,800.
3	Employment monthly income tax	0-35	The exempted threshold is Birr 600, while the maximum rate is applied on monthly profit income>=Birr 10,900
4	Value Added Tax	15	Only two rate (0 and 15 percent). Moreover, there are certain exempted items.
5	Turnover taxes - On goods - On services	 2 10	Tax rates are different on goods and services. ToT is calculated on the overall annual sales.
6	Excise tax on list of items	10-100	Excise taxes are levied on selected list of locally produced and imported goods.
7	Taxes on interest income on deposits	5	Tax on income derived from interest on deposits. The payer shall withhold the tax and account to the Tax Authority

8	Import Duty	0-35	The customs tariff applies to all imports. Items are classified according to a schedule of 97 chapters, based on the Harmonized System of Tariffs Classification Code.
9	Royalties	5	Tax collected from Royalty
10	Rental income tax	30 for incorporated business and 0-35 percent for individuals	Tax on income derived from the rent of houses or office buildings, manufacturing plants, materials and goods, etc. The tax is computed on the basis of annual rent income after deducting allowable expenses.
11	Dividend tax	10	Tax on income derived from dividends from a share company or withdrawals of profits from a private limited company

Source: MoF (2018, p.4-5)

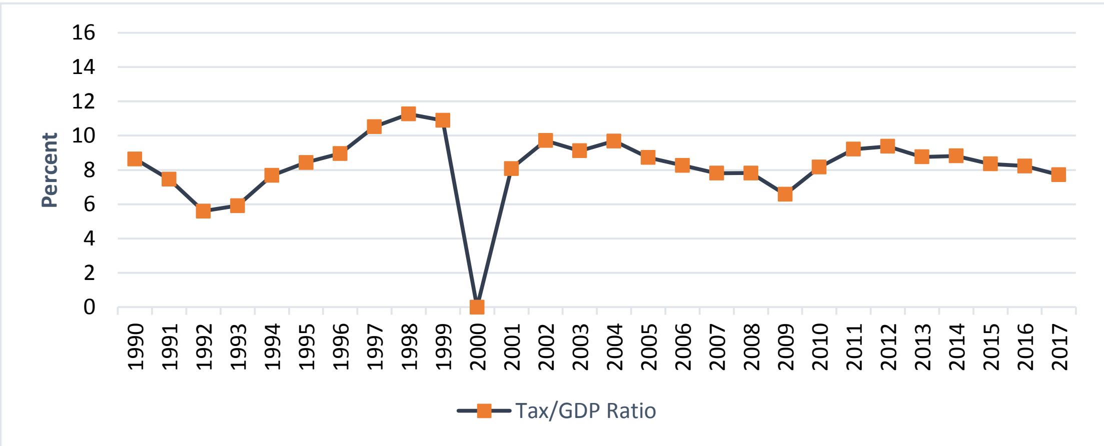
With respect to subsidies and transfers, these are guided by the respective Growth and Transformation Plan for the period. Hill et al. (2017, p.9-10) noted that the share of social spending and transfers in Ethiopia relative to GDP (around 8 percent), is comparable to Armenia and higher than the ratio in Guatemala and Peru; all of which have significantly higher GDP per capita incomes in comparison to Ethiopia. Pro-poor social spending includes spending on agriculture, food security, education, health, roads and water. Subsidized goods include electricity, kerosene, and wheat.

In sum, the design of the tax system is progressive with respect to the main direct and indirect taxes, and social spending and subsidies are targeted to the poor. This finding is confirmed in Hill et al. (2017, p.5): "The tax and social spending system is equalizing overall. Taxes make up a larger percent of income for wealthier households, and direct transfers are targeted primarily to poorer households."

4.6.3 Tax Administration and Tax Collection

The ratio of tax to GDP gives an indication of a country's ability to convert economic activities into tax revenue. This is influenced by average tax rates as well as the capacity to administer and collect taxes. In 2017, the tax to GDP ratio for central government was 7 percent (Figure 4.16) declining from about 9 percent in 2011. According to equity study this is about half the Sub-Saharan African average of 15.6 percent (excluding high income Sub-Saharan Africa countries). The implication is that although Ethiopia has benefited from above average GDP growth in comparison to its Sub- Saharan Africa counterparts, tax collection has not grown at the same rate as GDP growth. It follows that although the design of the tax system is progressive, the effects on redistribution may be limited if a large amount of tax is not collected.

Figure 4.16: Tax revenue to GDP ratio 1990 to 2017

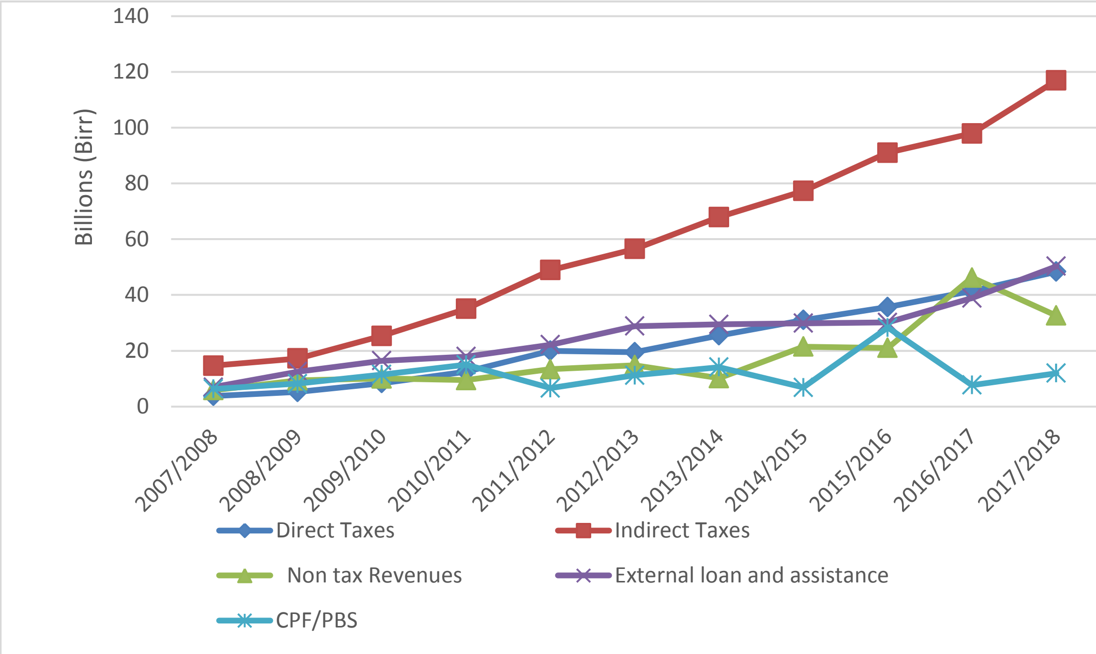


Source: World Bank Data, 2019

Despite the low tax revenue to GDP ratio, tax revenue is the main source of financing for the federal budget, and has been increasing over time.

As Figure 4.17 below shows, indirect taxes are the main source of funds for financing federal expenditure. Direct taxes and external loans and assistance were the second largest source of financing, followed by non-tax revenue and grants (CPF/PBS). Notably, there has been a steady increase in both direct and indirect tax collection.

Figure 4.17: Tax revenue, external loans and grants 2007/2008 to 2017/2018



Source: MoF Data, 2019

The tax to GDP ratio has remained low because despite the efforts to mobilize additional tax revenue, the rate at which tax revenue has increased has been slower than the GDP growth rate. One potential reason for this is the historically low levels of tax collection in the agriculture sector, which is similar across other African countries (Mascagni 2016a). Based on the 2018 IMF Article IV Consultation Report, more effort is needed with respect to tax collection in order to boost revenue generation.

Yesegat et al. (2017) propose that simplifying the tax regime and reforming the frequency, threshold and sector-specific registration of VAT filings can increase tax compliance, especially among smaller businesses.

Overall the upward trend in revenue is a positive result as the aid effectiveness literature often fears moral hazard effects which limit tax efforts in high aid recipient countries (Radelet, 2006). As shown in Mascagni (2016b) despite having an aid to GDP ratio above the Sub-Saharan Africa average since the mid-1980s, aid has not crowded out tax revenue, but instead, tax revenue has been increasing with aid. The implication from Figure 4.17 and Mascagni's (2016b) study is that there have been increasing amounts of resources available for development spending in Ethiopia.

The regional states are also responsible for tax collection and mobilizing resources for regional social spending. Regional revenue mobilization is discussed in the following federal block grant section. Federal block transfers as the block grant is in part determined by the revenue potential of the regions.

4.6.4 Equity of the Tax System

Hill et al. (2017) is unique as it is the first comprehensive study of the impact of fiscal policy on poverty and inequality in the Federal Democratic Republic of Ethiopia. The study uses data from the 2010/2011 Household Consumption Expenditure Survey (HCSE) data, the Welfare Monitoring Survey (WMS) from the Central Statistical Agency (CSA), Annual Work Plan and Household Asset Building Program (HABP) data, and macro-economic data from the MOF (Hill et al., 2017 p.12-13).

It is particularly useful for the current study as each fiscal instrument is assessed, and the effect of both direct and indirect taxes are evaluated. The study analyzes 83 percent of tax revenue but only 33 percent of government spending. With respect to spending, spending on direct transfers and consumption subsidies are analyzed, but not capital spending. This section draws on Hill et al.'s (2017) findings on tax equity, supplementing this with findings from other relevant studies. Before proceeding, it is worth mentioning some key assumptions of Hill et al. (2017) that the readers should be mindful of when interpreting the findings. Several assumptions are made, but we discuss two here which relate to taxes, as well as some methodological assumptions which may affect the results of the study.

Firstly, Hill et al. (2017) assume that consumption equals disposable income. This is driven by data availability as consumption data is available from the HCSE. The assumption that consumption is equal to disposal income may limit the results if savings are not equal to zero in reality. For example, a household with a relatively small level of consumption may belong to a higher income bracket if the household is a net saver. Conversely, households that borrow (or dis-save) may have consumption levels that are larger than their disposable income. Secondly, Hill et. al. (2017) also assumes that direct taxes are entirely borne by the income earner and indirect taxes by the customer. The first of these assumptions is not contested. The second relies on the ability of firms to pass the entire tax burden to the customer, which is often influenced by the relative responsiveness of demand for the product. This is a strong assumption given that the authors have no knowledge of the functional form of the demand function for various goods and services.

Methodologically, although corporate tax is a direct tax, it is not analyzed in Hill et al. (2017, p.7) "given the difficulty of attributing burden to specific households". Furthermore, the study uses 2010/2011 Household Consumption Expenditure Survey (HCSE) data and the tax brackets from the previous 2002 regulation. This imposes two constraints (i) HCSE provides household data, thus the effects on individuals were simulated by the authors (Hill et al. 2017, p.13) and (ii) the data is not the most "recent" as households may look different in 2019 to those in 2010/2011 and the income tax regulation was changed in 2016 based on feedback to the Government from Hill et al. Despite the lag in the data and tax brackets used in Hill et al. (2017), the results are still important for shedding light on tax equity in Ethiopia.

And finally, the Hill et al. (2016) study is not a general equilibrium analysis and only sheds light on the effect of taxes and transfers at a specific point in time. In other words, behavioural responses to taxes and spending, and economic developments that affect growth, employment and incomes over time are not considered, nor is the role of capital accumulation and how this contributes to inequality.

Table 4.12 below summarizes the impact of direct, indirect taxes and subsidies on fiscal equalization and poverty, based on Hill et al. (2017). Each row of Table 4.12 below should be read as the effect of that type of tax/transfer only, holding the other two constant. Similar results to those in Table 4.12 were found by Mengistu (2014) using computable general equilibrium (CGE) models and micro simulations based on the 2005/2006 social accounting matrix (SAM) and the 2004/05 Household Income, Consumption and Expenditure (HICE). The results are thus consistent across time (the two household surveys) and methods (analysis of raw data versus simulations).

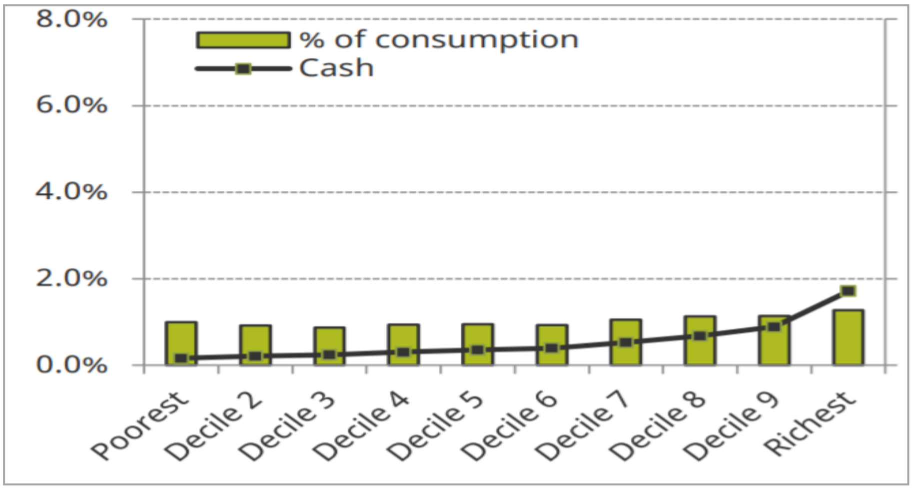
Table 4.12 Impact of taxes and transfers on equity

Type of Tax/Transfer	Progressive	Equalising	Poverty reducing
Direct Taxes (e.g PIT)	Yes	Yes	No
Indirect Taxes	Yes	Yes	No
Transfers/subsidies	Yes	Yes	Yes

Source: Findings from Hill et al. (2017)

As shown in Table 4.12 above, direct taxes, indirect taxes and direct subsidies are progressive and equalizing. This is a positive result as the majority of government finances come from direct and indirect taxes, which is then used to finance social spending. However, direct and indirect taxes make the poor poorer as taxes are paid on very low levels of incomes. Hill et al. (2017, p.6) reported that 1 in 4 households were made poorer after paying taxes. Furthermore, Harris et al. (2018) show that VAT exemptions are largely regressive. Subsidies have been shown to be poverty reducing, as well as progressive and equalising. According to Hill et al. (2017, p.24), transfers and subsidies reduced the poverty rate by two percent (33 to 31 percent), reduced the poverty gap by 1.4 percent (15.7 to 14.3 percent) and reduced poverty severity by 0.9 percent (22.4 to 21.5 percent). Although social spending and subsidies are pro-poor, the combined effect of the fiscal system leads to an increase in poverty incidence as measured by both the international (US$1.25 a day in 2005 PPP) and national poverty line. The poverty head count rate increases from 31.9 percent to 33.2 percent (using US$1.25 a day in 2005 PPP) and from 31.2 percent to 32.4 percent (using the national poverty line) (Hill et al. 2017, p.17). The Federal government recognised this as an issue and to correct it, the income brackets were revised in 2016. By increasing the tax brackets, the poorest are exempt from personal income tax.

Figure 4.18: Tax expenditure on VAT exemptions/reduced rates across the consumption distribution

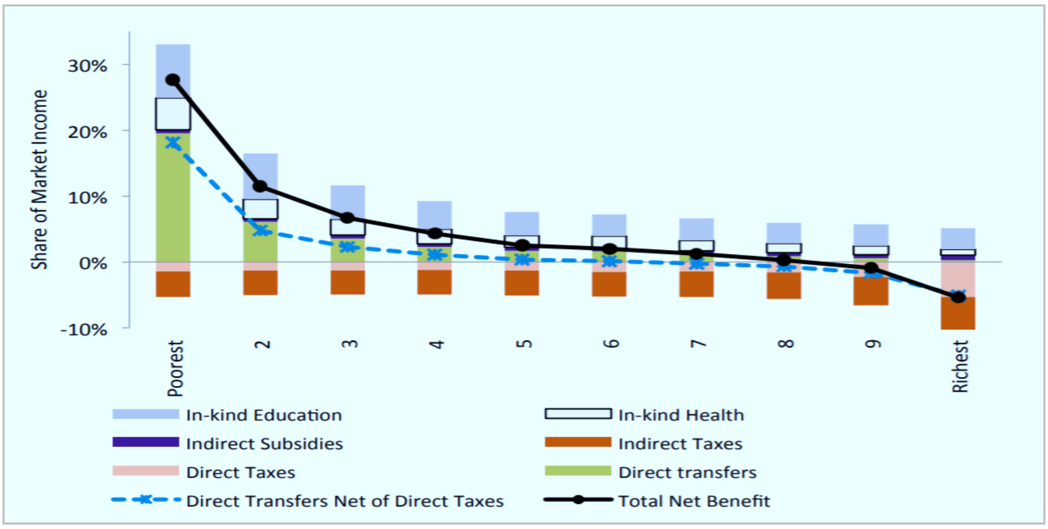


Source: Reproduced from Harris et al. (2018, p.7)

Overall, the fiscal system (with respect to both taxes and subsidies/transfers) is progressive and equalising, and the poor are net beneficiaries (Hill et al. 2017). Figure 4.19 shows that direct transfers, indirect subsidies and in-kind health and education spending exceed direct and indirect tax payments for all groups except those in the top 20 percent. The redistributive nature of the fiscal system is also evident as net benefits are declining by income docile.

It should be noted that although the system is progressive and equalising in the aggregate, not all types of taxes and transfers are progressive and equalising by them. For example, among direct taxes, land use fees and the chat tax are regressive, non-equalising and poverty increasing (Hill et al., 2017). This is because poorer households are more likely to engage in agricultural activities which are subject to these taxes. That said, agricultural households are more likely to benefit from pro-poor social spending. Moreover, Hill et al. (2017, p.25) shows that poorer households are less likely to benefit from electricity, kerosene and wheat subsidies and richer households consume more of these goods. These types of subsidies are therefore not pro-poor in effect, though they are progressive as they make up a larger share of poorer households' spending. According to Hill et al. (2017, p.26), the richest 30 percent of households received 65 percent of electricity subsidies, while the poorest 30 percent received only 10 percent. Direct transfers (such as food aid and the Productive Safety Net Programme (PSNP)) and primary education spending are examples of pro-poor social spending.

Figure 4.19: Incidence of taxes and transfers and net fiscal benefit, by market income decile



Source: Reproduced from Hill et al. (2017, p.17).

4.6.5 The tax system and regional equity

There are two possible ways of exploring the question of regional equity regarding taxes: (i) the incidence of taxes and transfers across regions and (ii) the incidence of taxes and transfers within regions.

According to MoF (2018, p.9), "Tax policy is also used to ensure balanced regional development. To encourage investors to set up industries in areas with infrastructure deficit and in far flung areas of the country, the Government provides special tax incentives. Such enterprises are given extended tax holidays during the initial stages of their operation. Investments in areas with slow economic activities get over 15 years of tax holidays, including import duty exemption on import of capital goods." Tax holidays for corporation was not reviewed above, however, it is worth nothing that such tax holidays can contribute to regional development, and if targeted at disadvantaged regions, can reduce regional inequity by extension.

Another issue raised in interviews with stakeholders relate to the amount of taxes collected by the federal government versus regional states. These issues have been raised with respect to certain types of taxes, for example mining revenue and VAT. Furthermore, a geographical argument in terms of which region a company is based in versus which region it is taxed in has arisen. These concerns are highly relevant to fiscal equity.

The issues of tax collection versus tax retention are important to the discussion on regional tax and spending equity. According to the constitution, regional states have the authority to levy and collect taxes and execute spending. In practice, both the federal government and regional states collect regional and federal taxes. This often occurs as a means by which logistical and administrative benefits can be maximised. For example, in some remote areas, regional authorities may be better placed to collect some types of federal taxes on behalf of the federal government, and then transfer the collection to the federal government. There is also joint-revenue sharing for some types of taxes. At present, VAT is divided 30 percent to region and 70 percent to federal government, while income tax is spilt 50:50.

The manners in which these taxes are split have implications for inter-regional equity. For example, the existing 30:70 split in VAT allows the federal government to pool 70 percent of VAT revenue, which is then used to either redistribute across revenues in the form of block transfers, or through social spending. As shown in (Figure 4.19) indirect taxes are the largest source of federal resources, and of all indirect taxes, VAT represents the largest share. If the ratio were reversed with 70 percent being retained by regions, the federal government would have less resource to engage in redistribution, and regions with lower levels of VAT collection and higher development needs would be worse off.

If follows that under the assumption of redistributive block transfers and pro-poor spending across all regions, the existing 70:30 ratio of sharing VAT revenue is in principal good for inter-regional equity. Similar argument can be made for other types of taxes that are shared between the federal government and regional states. This is especially the case when some tax generating activities are spread across several regions. For example, a company may have their headquarters in Addis Ababa but operate in several regions across the country. If taxes are paid in Addis Ababa only, unless the federal government retains and redistributes a share of the taxes collected, the other regions that are involved in the economic activity of the business lose out.

4.7 Fiscal system and regional (inter-regional) equity

4.7.1 Introduction

The case for fiscal equalization was first developed by Buchanan (1950) in his paper "Federalism and Fiscal Equity" in response to disparities across states in the US federal system. Buchanan (1950) reasoned that if fiscal capacities varied across states and this had an impact on individuals, then the federal government should support interstate fiscal equalization. The objective should be to ensure that the net fiscal benefit or burden is the same for similar individuals, regardless of residence.

The discussion on fiscal equity has since advanced and remains ever-relevant as fiscal decentralization has become a feature of many developed and developing countries. Many countries opt for a decentralized system as it assigns greater responsibilities to subnational levels of government and thus has the potential to increase responsiveness to local needs and participation in decision making. An equal system, or one which achieves fiscal equity, is thus of primary importance. This section reviews how the Ethiopian tax system and Federal transfers equalize the vertical and horizontal imbalances and brings regional equity.

4.7.2 Vertical fiscal imbalance

In a federal system, vertical equity requires transfers from richer regions or states with high income per capita, to poorer ones with lower income per capita (Mieszkowski and Musgrave 1999). As Shah (2006, p.15) notes, "Allocated funds should vary directly with fiscal need factors and inversely with the tax capacity of each jurisdiction". The implication is that richer regions may face a higher fiscal burden. The progressivity of the tax system determines the tax burden across income levels and is of fundamental importance in promoting redistribution and vertical equity. A tax is progressive (or regressive) if the proportion of income paid in taxes increases (or decreases) as income rises. Conversely, transfers are progressive if the proportion received decreases as income increases.

According to Charbit and Blöchliger (2008), fiscal equalization is first and above all evaluated on how it reduces fiscal disparities. Fiscal disparities may arise from varying revenue raising abilities as well as differences in cost structures across regions. Vertical equalization is an objective of many OECD countries with federal systems (Charbit and Blöchliger 2008; Mieszkowski and Musgrave 1999).

A tax system may be de jure progressive by design, but the operation of the system may be less progressive de facto if households within regions are able to evade taxes or claim more benefits than they are entitled to (Lustig and Higgins 2013). It follows that the incidence of the tax and resulting equity of the tax system is determined not only by the design of the system, but also by the efficiency of the tax administration system and its capacity to effectively collect taxes and distribute individual transfers.

The typical characteristic of all federations is the disparity between revenue sources and expenditure needs. The aggregate revenue raising capacity of the regions fails to match their expenditure responsibilities, while the Central Government is able to raise more revenue than is needed to finance its own expenditures. This disparity between revenue sources and expenditure needs at various levels of government is referred to as vertical fiscal imbalance (World Bank, 2000:23). The reasons for the emergence of vertical imbalance are first, centralization of revenue sources by Federal Government due to capacity limitations of regions with respect to tax administration. Secondly, when inter regional equity is an important consideration, the Federal Government needs to hold some resources over and above those required for its own expenditures to distribute them among the sub national governments in a way that promote equity leading to vertical fiscal imbalance (World Bank, 2001:80).

When the researcher sees vertical fiscal imbalance in Ethiopia (Table 4.13), as measured by the difference between regions' own revenue and their expenditure needs, the decentralized expenditure ratio exceeded the revenue share of sub national governments by 21.6 percent during 2008\09 to 2016/17. That means, their revenue raising capacity failed to match their expenditure needs. In addition, the other measure of vertical imbalance is the coefficient of vertical fiscal imbalance. The implication is that, a coefficient of zero, i.e., low vertical imbalance, indicates that regions are pretty much autonomous in their fiscal decision- making. This happens when the revenue and expenditure share of the regions becomes the same. On the other hand, a coefficient close to one indicates absolute federal control over the regions. This happens when the regions' revenue share in the aggregate is extremely small in comparison to their expenditure share. The following table depicted this reality in Ethiopia.

Table 4.13 Vertical Fiscal Imbalances in Ethiopia.

Indicator	2001 2008\09	2002 2009\10	2003 2010\11	2004 2011\12	2005 2012\13	2006 2013\14	2007 2014\15	2008 2015\16	2009 2016\17	Mean
R4	0.21	0.19	0.21	0.21	0.24	0.27	0.27	0.28	0.23	0.234
E5	0.41	0.37	0.39	0.43	0.48	0.49	0.53	0.48	0.44	0.45
F6=R/E	0.51	0.51	0.54	0.49	0.50	0.55	0.51	0.58	0.52	0.523
V=1-F	0.49	0.49	0.44	0.51	0.50	0.45	0.49	0.42	0.48	0.474
Regional revenue	8305.5	10430.5	14718.4	21116.6	29099.8	38036.2	48519.1	58768.6	54058.4	31450.34
National revenue	40080.4	54118.7	71745.4	103396.4	119833.5	141553.5	178275.3	206474.4	239572.1	128338.86
Regional expenditure	25305.9	29646.8	38895.5	57926.1	78857.5	95608.4	121994.4	137158.2	125337.1	78969.99
National expenditure	62271.3	80159.2	99303	135227.3	165709.7	193904.8	230913.1	286646.2	287047.8	171242.49

Sourc**e:-** Own computation Based on MoF Data.

V = *Coefficient of vertical imbalance computed using a formula [1 – {(Rs/R) / (Es/E)}]*

Where Rs = State (Regional) revenues; R = aggregate revenues (federal plus states);

Es = State (Regional) Expenditures; and E = Total expenditures (federal plus states).

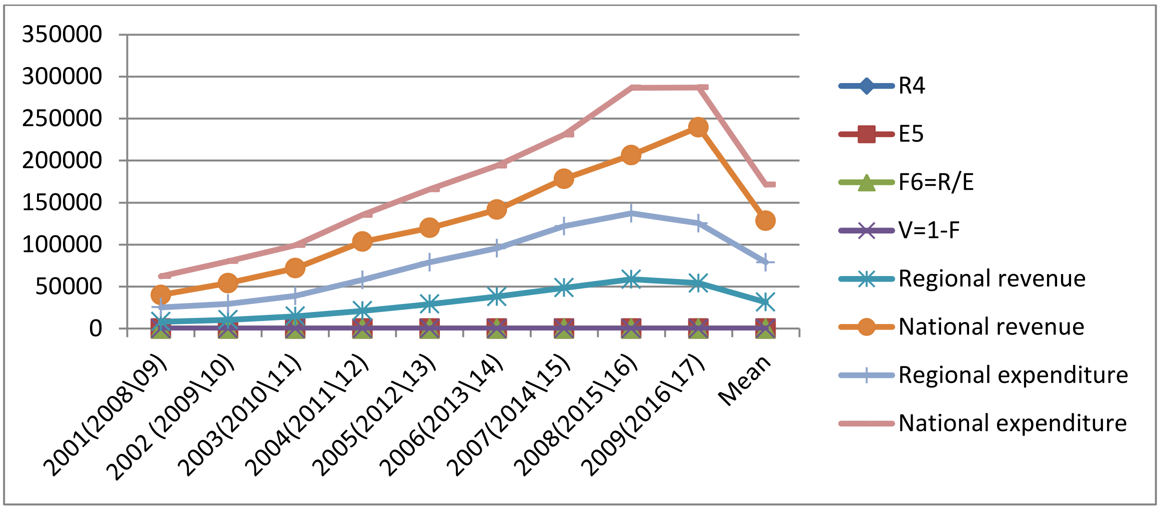
4 Revenue Decentralization Ratio

5Expenditure Decentralization Ratio

6Vertical Imbalance

7Coefficient of Vertical Fiscal Imbalance

Figure 4.20: Vertical Fiscal Imbalances in Ethiopia.



From Table 4.13 above, the coefficient of vertical imbalance is on average 0.475, which is fairly high (2008\09 to 2016/17). But for each year the coefficient shows changing figures. The most striking issue here is that the coefficient sharply declined during the year's 2011/12 – 2016/17.

But the share of regions' revenue remained almost constant. Then what had caused the coefficient to fall seems the decrease in the expenditure share of the regions due to the corresponding increase in the share of federal expenditure during the same period.

4.7.3 Horizontal Fiscal imbalance

In the purest sense, equity in a federal tax system implies that an individual with a given level of income is taxed the same irrespective of the region in which taxes are levied (Shah, 2006). This limits tax competition among regions as hypothesized by Teibout (1956). Tax equity in this sense closely follows from the concept of horizontal equity as stated by Musgrave (1959). According to Musgrave (1959, cited in Kaplow, 2006), horizontal equity is the principle that equals be treated equally in the tax system. The literature has established that horizontal equity should hold for both taxes and transfers, including the provision of publicly subsidized services (Buchanan 1950; Shah 2006).

One criticism of focusing only on horizontal equity in the tax system is that this neglects fiscal disparities that can arise from differences in the cost of producing the same public good or service across regions or local authorities (Brennan and Pincus 2010). In such cases, stronger distributional norms may be required to promote redistribution across regions in response to differences in cost structures.

It is usual that, regions in Federal Countries differ in their development level and resource endowment. Some may be industrial areas that could collect adequate revenues while others may be dominantly rural areas with high backlogs in the provision of physical and social infrastructures. Thus, this backlogs call for higher fiscal needs. The component states of a federal country also differ in their ability to raise revenue and expenditure need. The same is true in Ethiopia. Regions in Ethiopia are vastly different in terms of population, area and level of economic and infrastructure development As a result, those which have sufficient administrative and institutional capacity, including adequate trained man power, relatively developed infrastructure and sufficient local resource base, enjoy a relatively better degree of autonomy and independence than those with serious shortages of trained man power and finance. For example, Amhara, Oromya, SNNP and Tigray are not subject to the same degree of interference by the Central Government as the manpower deficit regions such as Gambella, Afar, Benishangul-Gumuz and Somale (Meheret, 2000:139). The inconsistency between the ability to raise revenue and the fiscal needs at the same levels of a government is what we call as horizontal fiscal imbalance. In other way, the horizontal fiscal imbalance is the ratio of own revenue to their expenditures across the same levels of a government. The Table 4.14 below shows the extent of horizontal fiscal imbalance in Ethiopia. There is wide discrepancy among the regions ranging on average from 13.1 percent for Afar region to 102 percent for Addis Ababa City Administration during 2008/9 to 2016/17. In between are Dire Dawa, Oromya, Tigrai, Amhara and SNNP regions covering on average 42, 25.9, 29, 38.2, 25.1 and 22.8 percent respectively. The four emerging regions (Afar, Benishangul-Gumuz, Gambella and Somali) have covered on average 13.1 , 21.1, 18.6 and 15.6 , percent of their expenditure from their own revenues .

Table 4.14 Horizontal Fiscal Imbalances in Ethiopia

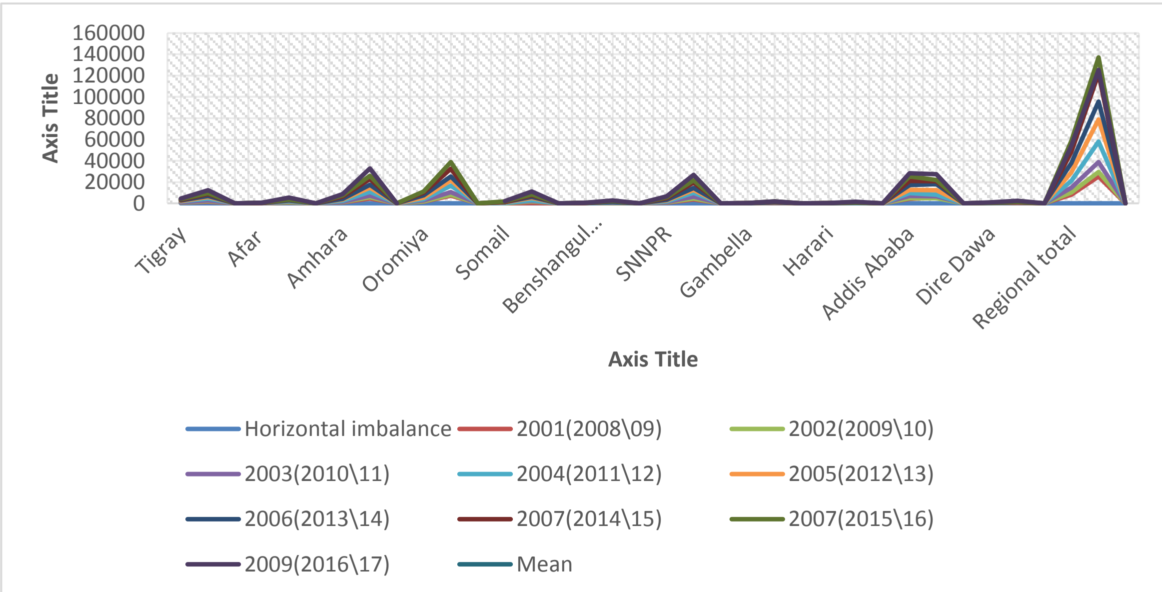
Regions	Horizontal imbalance	2001 2008\09	2002 2009\10	2003 2010\11	2004 2011\12	2005 2012\13	2006 2013\14	2007 2014\15	2008 2015\16	2009 2016\17	Mean
Tigray	Revenue	598.6	745.9	1099.3	1744.4	2260.5	2733.6	3281.7	4088.2	4698.7	
	Expenditure	1726.3	2058.8	2721.3	4618.6	6136.4	6992.9	8717.6	9597.4	12479.1	
	Ratio	0.35	0.36	0.40	0.38	0.37	0.39	0.38	0.43	0.38	.382
Afar	revenue	92.0	121.1	156.5	246.2	335.9	425.8	498.9	646.3	675.0	
	Expenditure	838.7	1016.9	1477.9	1780.2	2530.3	2874.2	3776.1	3821.8	5515.5	
	Ratio	0.11	0.12	0.11	0.14	0.13	0.15	0.13	0.17	0.12	0.13
Amhara	revenue	971.7	1303.7	1734.5	2575.8	3668.2	4189.9	6389.4	7743.8	8947.3	
	Expenditure	4740.9	5777.3	7391.5	11007.2	14837.8	17475.2	22797.1	25912.1	32915.4	
	Ratio	0.21	0.23	0.24	0.24	0.25	0.24	0.28	0.30	0.27	.251
Oromiya	revenue	1467.8	1813.1	2764.0	3937.1	5375.1	7448.8	9921.1	11275.1		
	Expenditure	7170.4	8346.7	10540.9	16602.6	21700.9	25458.1	32623.2	38736.5		
	Ratio	0.21	0.22	0.26	0.24	0.25	0.29	0.31	0.29		.259
Somail	revenue	39.7	226.8	267.4	392.5	857.4	1188.8	1363.3	1844.6	2267.1	
	Expenditure	521.7	1857.8	2360.6	3224.6	5168.2	6032.7	7705.4	8537.8	11124.2	
	Ratio	0.08	0.12	0.11	0.12	0.17	0.20	0.18	0.22	0.20	.156
Benshangul /Gumuz	revenue	50.7	72.1	117.9	201.2	269.5	366.8	520.0	560.5	592.4	
	Expenditure	334.8	420.9	628.4	993.7	1253.9	1436	2112.5	2206.4	2939.5	
	Ratio	0.15	0.17	0.19	0.20	0.22	0.26	0.25	0.26	0.20	0.21
SNNPR	revenue	658.5	878.8	1355.6	1977.3	2888.8	3540.1	4854.1	5811.6	6830.6	
	Expenditure	3674.5	4538.8	6296.7	9950.3	12761.7	14492.4	19701.2	21831.6	26861	
	Ratio	0.18	0.19	0.22	0.20	0.23	0.25	0.25	0.27	0.26	.228
Gambella	revenue	39.0	54.3	85.5	121.8	157.4	196.8	280.4	391.9	370.1	

	Expenditure	241.9	315.7	468.7	707.6	819.6	1008.5	1458.5	1808.5	1997	
	Ratio	0.16	0.17	0.18	0.17	0.19	0.20	0.19	0.22	0.19	.186
Harari	Revenue	38.5	35.6	53.8	86.2	178.2	203.2	278.6	388.6	491.4	
	Expenditure	160.9	221.6	248.7	403.2	629.4	738.4	960.2	997.9	1724.8	
	Ratio	0.24	0.16	0.22	0.21	0.28	0.28	0.29	0.39	0.29	..262
Addis Ababa	Revenue	4264.7	5038.1	6928.2	9614.3	12777.5	17309.6	20990.6	25186.8	28280.2	
	Expenditure	5626.9	4786.6	6774.9	8323.8	12493.8	18013.3	20774.9	22013	27428.1	
	Ratio	0.76	1.05	1.02	1.16	1.02	0.96	1.01	1.15	1.03	1.02
Dire Dawa	Revenue	84.1	140.7	155.7	219.7	331.2	432.7	685.9	831.2	905.7	
	Expenditure	283.7	305.6	358.6	613.2	825.3	1086.8	1367.5	1695.2	2352.4	
	Ratio	0.30	0.46	0.44	0.36	0.40	0.40	0.50	0.49	0.39	.42
Regional total	Revenue	8305.5	10430.5	14718.4	21116.6	29099.8	38036.2	48519.1	58768.6	54058.4	
	Expenditure	25305.9	29646.8	38895.5	57926.1	78857.5	95608.4	121994.4	137158.2	125337.1	
	Ratio	0.33	0.35	0.38	0.37	0.37	0.40	0.40	0.43	0.43	.385

Sourc**e: -** Own computation Based on MoF Data.

Note**:-** Fiscal Capacity measured by per capita own revenue (ratio of own revenue to total population) Fiscal Imbalance measured as a ratio of Regions own revenue to its expenditure. Per capita expenditure measured as a ratio of total regional expenditure to its population.

Figure 4.21: Horizontal Fiscal Imbalances in Ethiopia



The three emerging regions Afar(13.1), Gambela (18.6) and Somali(15.6)) have covered on average less than 19 percent of their expenditures from their own revenues. Generally the overall conclusion is that, the larger regions are characterized by lower fiscal imbalance than the emerging regions.

The high horizontal fiscal imbalance across the regions reflects the level of economic activity in the regions. Higher levels of economic activity lead to a bigger revenue bases. Then as long as revenue effort is not markedly different among the regions in Ethiopia, the bigger base resulting from higher levels of economic activity is likely to result in a greater degree of self-financed expenditure (World Bank, 2000:26). The tax bases that could provide relatively better revenue to regions are not evenly found in all regions depending on their economic activities.

The four emerging regions in Ethiopia (Gambella, Somali, Benishangul, and Afar) are predominantly rural and pastoral areas with inadequate tax bases. According to the (World Bank, 2000:26), "regional fiscal imbalances in Ethiopia are in large part a reflection of the fact that these four least developed regions of a country are in many ways given a special treatment by the Federal Government". This statement clarifies that poor revenue bases calling for Federal Government's attention characterize these four regions.

There are also some other fiscal parameters used to compare disparities among the regions. For example, fiscal capacity of the regions, estimated as a ratio of own revenues to regional populations varies across regions. This is due to the relative difference in economic activity of the regions and their administrative capacity differences among the regions.

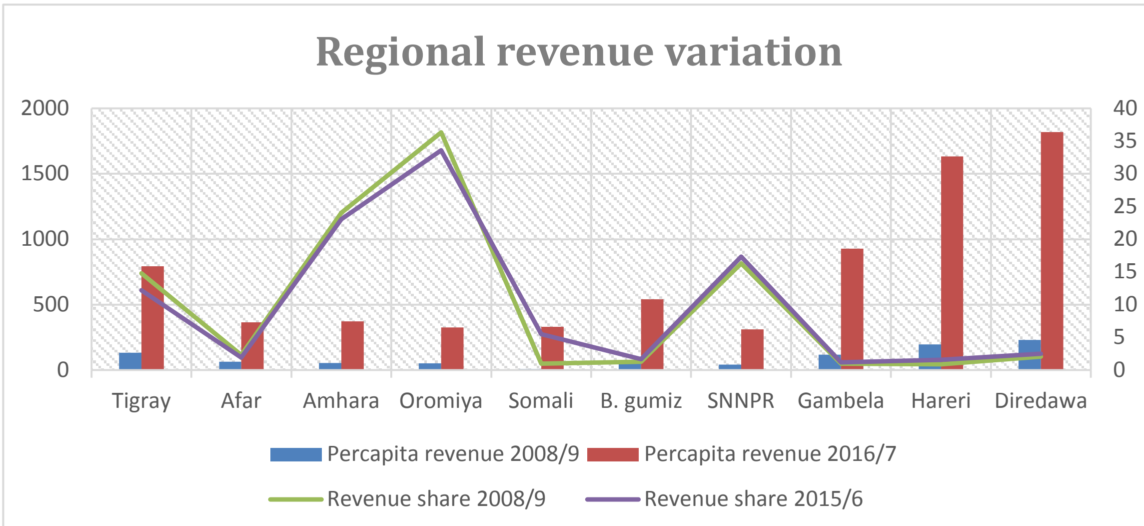
There are problems in using the actual amount of revenue collections in regions as a measure of their fiscal capacity. The actual revenue collected by a region and the potential ability of a region to raise revenue may not be the same (Bahl, et al, 2001: 16-19). Among the problems causing the gap is the variation in enforcement of the regions and their administrative capacity to collect the revenue. However, in the absence of information on fiscal capacity of the regions as measured by their potential revenues that can be obtained from the tax bases assigned to them, the actual revenue collected per capita is used as a proxy to their fiscal capacity for comparison (World Bank, 2001:80).

Table 4.15 Regional revenue variation

	Year	Tigray	Afar	Amhara	Oromiya	Somali	B. gumiz	SNNPR	Gambela	Hareri	Diredawa
Percapita revenue	2008/9	132.99	62.93	53.96	51.29	8.57	60.50	41.83	117.12	196.43	229.78
	2016/7	793.67	365.55	372.84	326.11	329.45	541.55	310.45	928.67	1632.77	1818.82
Revenue share	2008/9	14.81	2.28	24.05	36.32	0.98	1.26	16.30	0.97	0.90	2.08
	2015/6	12.17	1.92	23.06	33.58	5.49	1.67	17.31	1.17	1.56	2.48

Source: Own computation Based on MoF Data

Figure 4.22: Regional revenue variation.



The other most noteworthy feature that can be inferred from Table 4.15 is the skewed distribution of revenue across the regions. As the Table 4.15 shows, over 91.18 and 86.12 percent of the revenues are concentrated in the largest four regions in 2008/9 and 2015/16 respectively while the emerging four regions account 5.49 and 10.25 percent of the total own revenues of the regions in 2008/9 and 2015/16 respectively. There is also wide dispersion in per capita revenues as well with high of Birr 1818.82 in Dire Dawa to a low of Birr 310.45 in the SNNPR Region during 2000/01.

Regarding the nature and trend of fiscal disparities among regional states, more than 80 percent of respondents believed that almost all regions are dependent on the federal transfer but some regions are better in terms of financing their expenditure from their own revenue sources. The fiscal disparities among regions seems widened given the relative better performance of some regions in mobilizing revenue from their own sources and some regions inappropriate usage of public resources for unintended purposes which is transferred through the block grant transfer mechanism. The main reason respondents mentioned for that was lack of effective revenue mobilization at local level, the lack of clear revenue assignment and lack of incentive on revenue mobilization and the inadequate revenue sources at regional and local level due to the low soci-economic development of regions and the lack of vibrant private sector in many regions. In addition, the lack of clear accountability and transparency mechanism in revenue mobilization from subnational sources can be taken as one of the key factors.

They also suggested some solutions to overcome the disparities like redefining expenditure and revenue assignments of the federal, regional and local governments, improving the revenue mobilization effort of the government, creating an enabling environment for the expansion of competitive private sector which could generate more revenue to local governments and rationalizing the service delivery among local governments in a way that reflects the nature of the public good in terms of its benefits and beneficiaries and the optimal location of public service infrastructure.

4.7.4 Block transfers and special purpose grants allocated to regions

The block grant transfers are fundamental to fiscal equalisation in Ethiopia as in many federal systems globally. In principle, block transfers and special purpose grants are allocated to regions to minimise fiscal disparities and reduce vertical equity, whilst also promoting specific national objectives.

The constitution of the FDRE stipulates that both federal and regional governments can mobilise revenue through taxes. However, there are significant differences in revenue collection capacity and the tax base across regions. Regions are also entrusted with a wide-ranging portfolio for service delivery, for example health and education. Some regions find it difficult to provide services given their current revenue from regional taxes. Hence, intergovernmental transfers from the federal government to regional governments have been helping to bridge the financial gap between expenditure responsibilities of regions and their own revenue (DEGE, 2013). The intergovernmental transfer, therefore, helps to promote equal access to comparable goods and services across regions, as stipulated in the constitution.

The intergovernmental transfer to regions constitutes two types of grants namely special purpose grants (SPGs) and unconditional block grants, known as General Purpose Grants (GPGs) or simply block grants. The unconditional block grants, on average, account for about 95 percent of the transfers leaving about 5 percent for SPGs. Hence, the block grants are by far the larger of the intergovernmental fiscal transfers in Ethiopia.

The SPGs are mostly financed from external resources to fund specific programs such as the MDGs and now, SDGs. Moreover, SPGs funds policies and strategies mandated by the federal government that cannot be sufficiently financed by lower tiers of government due to capacity limitations. Examples of programmes financed under the SPG include: Public Sector Capacity Building Program (PSCAP), the Food Security Program (FSP), the Urban Local Government Development Project (ULGDP), the MDG Performance Fund, and Road Fund (DEGE, 2013).

The Federal Ministry of Finance disburses the SPGs to regions based on guidelines prepared in 2011. The guidelines stipulate that funds from SPG transfers should be used to finance capital spending on pro-poor sectors such as health, agriculture, water and sanitation, education, and rural roads.

There are three categories of regions according to the SPG guidelines. Category 1 regions include Tigray, Amhara, Oromia, and SNNP. Category 2 regions are Benishangul Gumuz and Gameblla. Category 3 regions are Afar and Somali. These categories guide the types of spending that can be financed using SPG funds and the level of federal involvement. Category 1 regions executive SPG funding themselves with federal sector bodies providing monitoring and support. Categories 2 and 3 regions receive support from sector bodies, MoF, and a federal board dedicated to supporting emerging regions. Categories 1 and 2 regions plan their SPG spending based on MDG/SPG and the national development plans on pro-poor expenditures as previously outlined. Category 3 regions are guided to dedicate all SPG funds to water and sanitation.

Actual disbursements of the SPGs have followed the block grant formula that is discussed below. Moreover, despite the existence of SPG spending guidelines, various discussions with stakeholders during my interview time indicated that regions were likely to spend SPG funds on recurrent expenditures. Moreover, despite the SPG guidelines' stipulating that the SPG funding should not be mixed with regional budget, there has not been separate reporting by regions on SPG spending.

In the rest of this assessment, the researcher focuses more on block grants. The Federal Block Grant (general purpose grant) is the single most important source of financing regional expenditures in Ethiopia. It is a formula based grant. Both the operating and capital expenditure needs are assessed by a formula adopted by the House of the Federation. Block grants are the more important of the two transfers as a consequence of their sheer size (95 percent of transfers), as well their intended purpose of equalizing fiscal capacity across regions. Block grants are aimed at enhancing: (i) vertical fiscal balances regionally - by increasing the resource envelope available to regions to fund the provision of a minimum reasonable level of public services; and (ii) horizontal fiscal balance – by working to equalize fiscal capacities across regions (DEGE, 2013). Therefore, the block grant enables regions to provide comparable levels and types of public services, taking into account differences in regional expenditure needs and revenue potential.

The block grant is unconditional and Regions therefore have autonomy in spending and can decide how to split the grant into capital and recurrent expenditures, as well as which sectors to finance.

4.7.5. The Constitutional and Legal Guidance on Federal Grants

Regarding, Constitutional guidance, article 62.7 of the 1995 Constitution provides a mandate for the HoF to design federal transfers to sates as follows:" It shall determine the division of revenues derived from joint Federal and State tax sources and the subsidies that the Federal Government may provide to the States". (Federal Negarit Gazeta, 1995, p.190). The constitution further empowers the Federal Government to provide financial assistance to states and audit their accounts. Article 94.2 states:

"The Federal Government may grant to States emergency, rehabilitation and development assistance and loans, due care being taken that such assistance and loans do not hinder the proportionate development of states. The Federal Government shall have the power to audit and inspect the proper utilization of subsidies it grants to states." (Federal Negarit Gazeta, 1995, p. 220). The Constitution also mandates the Federal Government to provide special assistance as follows:

"Government shall provide special assistance to Nations, Nationalities and Peoples least advantaged in economic and social development". (Article 89.4, Federal Negarit Gazeta, 1995, p.214)

The constitution also enshrines right of equal access to social services as follows.

"Every Ethiopian national has the right to equal access to publicly funded social services". (Article 41.3, Federal Negarit Gazeta, 1995, p.164)

The above provisions suggest that while the Ethiopian Constitution mandates the Federal Government to provide assistance to states, it does not lay down any principles or specific guidance on their design to follow in such assistance. It simply expresses a note of caution that such development assistance "does not hinder the proportionate development of states". It further implicitly encourages national standards for access of social services. This provides the Federal Government and the HoF complete freedom and flexibility in designing such transfers. The Constitutions of Brazil, Canada, Germany and Switzerland, on the other hand, specify principles for equalization payments.

With regard to Legal Provisions, Proclamation 251/2001 on “Consolidation of the House of Federation and the Definition of its Powers and Responsibilities”, Article 35 states the following:

“Determining subsidies and Division of revenues from joint Federal and State tax sources

1) The House shall set a reliable and an on-going improvement formula of subsidies which the federal government may provide to the states, based on the information it secures from relevant executive organs.

2) The relevant government institutions shall have the obligation to timely provide sufficient information to execute its duties specified in Article (1) of this Article.

3) The House shall devise systems and mechanisms for the division of revenues derived from joint tax sources between the Federal Government and the sharing state.

4) The House shall follow up on the division of subsidies and joint revenues effected in accordance with the systems and mechanisms devised.

5) The House shall undertake a series of studies on the impact of subsidies and division of revenues on States to achieve balanced development among states and eventually enable them be independent from subsidies. It shall therefore take or cause any corrective measures be taken to rectify defects.”

Proclamation 556/2008on “the Establishment of the Secretariat of the House of the Federation” mandates the Secretariat to “ prepare progressive formula for the division of revenues derived from joint Federal and State tax sources and the subsidies that the Federal Government may provide to the states based on the direction given from the Standing Committee of the House and submit the same to the Committee”(article 4(7)).

The legal guidance discussed above simply emphasizes that the grant formula (e) be reliable, progressive and be subject to on-going improvements. It further emphasizes that such a formula should create enabling environment for balanced regional development and weaning of states from federal subsidies.

4.7.6 The design of the block grants formula and institutional processes

While there are no legislative or regulatory guidelines for the determination of total pool, the Government of Ethiopia has made a commitment to external donors to respect an additionally test (World Bank, 2013) for determination of the pool for Federal General Purpose Grant (FGPG – erroneously termed as Federal Block Grant –FBG as block grants represent sectoral unconditional grans) as follows:

A1. A non-declining trend in FBG to the regions as a share of total federal spending;

A2. A non-declining in FBG in real terms;

A3. A positive trend in the medium term forecast for FBG grants;

A4. The share of domestic financing shows a non-declining trend over the medium term; and

A5. Regions and Woredas maintain a non-declining share of spending on basic services in their total spending/budget.

The Council of Ministers every December upon the recommendation of MoFED decides upon the total pool for FGPG. This is presented to the House of the People's Representatives as part of the budget package. A study conducted by Tegenge Gebre-Egziabher and Tassew Woldehanna (2013) shows that while FGPG total pool in nominal terms shows an increasing trend over the period 1996/97- 2011/12, it shows an unstable trend over the same period when measured as a share of federal spending. FGPG (excluding MDG transfers) as a share of federal spending reached a high of 31% in 2002/3 and has shown a declining trend since then with 2011/12 share at 26% (p.8).

The total amount of block grants to be distributed each year is determined by the annual federal budget proclamation, which is aligned with the Macro-Economic Fiscal Framework (MEFF) and national development plans. The distribution of the block grant to regions is then determined by an equalising allocation formula developed by the secretariat of the House of Federation (HoF) in collaboration with various stakeholders. The stakeholders involved are regions; MoF; HoF; consultants and Prime Minister Office.

The process of setting/revising the grant allocation formula involves the HoF (the secretariat and standing committee along), consultants hired by the HoF, regional representatives and presidents, the MoF, and the Office of the Prime Minister (PMO).

The first step in the process is to conduct research to assess the current formula. This is done by consultants, usually from universities, who are commissioned by the Secretariat of the House of Federation. Stakeholders such as regional representatives, the office of the Prime Minster, Ministry of Finance, and other relevant line ministries then discuss the assessment. The House of the Federation also travels to regions and engages then in the consultation process. During the process international partners such as the World Bank provide advice. Up to seven workshops are held during the consultation process. However, there is no documented calendar for the consultation process. The output from consultation is then presented to the Budget Grant and Revenue Sharing Affairs Standing Committee for approval. The data used in the formula comes from the Central Statistical Agency (CSA), MoF, and the regions.

Prior to the HoF being responsible for the block grant formula, the Ministry of Finance (MoF) developed the block grant formula until 2009. Hence, the first five rounds of the formula (1997-2009) were set by the Ministry of Finance and approved by the House of the Federation. The main criteria for the determination of the block grant were poverty, actual revenue (from the previous year), expenditure levels (from previous year), and population size. Subjective weights were attached to these criteria. On average smaller and emerging regions received high per capita allocation compared to big regions. This has created a big debate among the big regions and finally led to design a new grant formula

After 2009, a unit based within the HoF (in collaboration with local consultants) have been charged with developing the block grant formula under the auspices of the Budget and Revenue Sharing Standing Committee. The existing grant formula was adopted by the HoF in 2012 for a five year period. It uses a gap filling approach to federal grant allocations to the states. It first calculates fiscal capacity of each region using a representative tax system approach for seven revenue sources. This is complemented by determination of expenditure needs for 9 service categories by using a representative expenditure system. It uses a gap filling approach to federal general purpose grant allocations to the regions where fiscal gap (FG) is evaluated as follows:

FG = Fiscal capacity + revenue sharing transfers (excluding specific purpose and MDG transfers) – expenditure needs.

Fiscal gap calculations are simply used to determine relative share of the regions to distribute available pool of resources for the federal block grant. The following paragraphs provide details of these calculations.

The Representative Tax System Calculations (RTS)

The RTS is carried out for seven revenue sources, as follows, accounting for 85-90% of regional own source revenues.

Total payroll tax: This tax is levied on wages and benefits of public and private employees. The method used by FGPG employs the actual revenues for public employees but calculates potential revenues from private employees based upon estimated wages by multiplying private employment data by average annual regional wages. This procedure is unlikely to yield good approximation of total private sector wages as average annual regional wages based upon survey data may not have any correspondence with average annual wages if total wages data were" available.

Agricultural income tax: This tax is imposed on land holdings but there are separate schedules for rain-fed, irrigated and livestock framing. The FGPG simply uses data on land size holdings for rain-fed agriculture only. This procedure therefore only partially captures the tax base for agricultural income.

Land Use fees: According to Government proclamation 77 of 1976, rural land use fees are based upon land holdings but have different rates for privately held land (Birr 10 per farmer), land held by members of agricultural communes (Birr 5 per famer) and land held by government agricultural organizations (Birr 2 per hectare). The FGPG uses holdings by size class and average land use fee by size class to estimate potential yields. This procedure is defensible but may not be fully accurate as it does not capture differential fees by ownership.

Livestock tax: This tax is levied only by one region (SNNP) and the FGPG uses its tax rates and subjective weighting methods for various animals to develop potential revenues for other regions. This approach is not consistent with a representative tax system approach as it uses an outlier as the standard.

Profits tax. The tax base is profits and instead sales data is used as a proxy for profits (10% of sales). If the FGPG were to conduct a firm by firm or even sector by sector analysis of relationship of sales with profits, one would discover that such a relationship is weak and gross margins vary by product and location. One expects that FGPG calculations on potential revenues would be in serious error.

Turnover tax: This tax is imposed on sales at various points of distribution. The FGPG does not have sales data for services and small scale industries that together constitute about 40% of total sales. Therefore, FGPG calculations will be in error for regions with significant services and small scale industry sectors.

Value added tax. This tax is administered by the Federal Government on behalf of the regions. Vaillancourt (2013) has argued against its inclusion in the RTS but it is a local tax simply administered by the Federal Government. Therefore, FGPG is right in including this tax as regional own source revenues.) This tax is intended to fall on final consumption except medicine, foods, certain educational and health and transportation expenditures and other exempt or zero rated goods The FGPG rightly uses the consumption data but assumes consumption by the poor through proxies and treats such consumption as VAT free – which would result in some degree of error. This reduces the confidence in potential revenue estimates.

Overall, given the above concerns, FGPG calculations on potential revenues of regions may have large errors and one would have reasonable degree of doubt in the reported results.

Expenditure Need Assessment

Expenditure need assessment by its nature represents a challenging task and therefore would be subjective and controversial. In view of this, to keep equalization transfers more objective and to avoid acrimonies debates, it is best to achieve expenditure need equalization through output based sectoral grants that use service population as allocation basis. Such grants achieve expenditure equalization objectives by preserving local autonomy but at the same time creating an incentive framework for accountability for results. The FGPG on the other has opted to go for a complex system of expenditure need equalization – a system far more complex than the Australian so-called black box system of expenditure need equalization. In the following paragraphs the review of the FGPG approach to expenditure need equalization is in order.

The FGPG currently calculates expenditure needs for 9 service categories. This represents 3 new expenditure categories introduced in the current round. These services are discussed below.

General Services and Administration: The FGPG first determines average expenditure share based upon average of regional expenditures. It then uses regression analysis to arrive at the determinants of GSA expenditures. The significant factors from this regression are only non-pastoral and pastoral population. Incidentally both should be highly collinear as together they constitute total population. Non-significant factors are mean slope of a region and constant. Curiously they interpret constant to represent very large regions. By making this assumption, they further assume that regions of various sizes would have constant as a fraction of the average – from 35% to 75% percent. The FGPG then simply add other factors which were not part of the regression – expenditure need for hardship allowance and extreme weather conditions, and special needs of special zones and regional level nation and nationalities councils. Hardship allowances are calculated based upon average hardship allowance rate multiplied by the wages in the hardship woredas. Extreme weather allowances are based upon estimated ventilation cost, air-conditioning costs and refrigeration costs. It is not clear how these are arrived at. Finally, for Border states additional security expenditures are estimated. As no data are available on such expenditures, justice and security expenditure data is used to estimate cross- border conflict expenditure needs. The bases of such estimates are not clear. Total expenditure needs for general administration then represents a summation of needs for (a) basic administration; (b) border conflict; (c) hardship allowances; support for nationalities and regional councils; and extreme weather. Note that some factors that may have a bearing on general administration are not evaluated – e.g. area, population density, terrain etc. Overall the methodology used here is subjective and controversial and partly self-defeating. For example, the FGPG first argues that 84% of expenditures are explained by simply three factors. It then goes on to attribute about one fourth of expenditure needs to additional factor for Primary and Secondary Education and TVET. The FGPG considers three types of education expenditure needs: (1) textbook development; (b) recurrent expenditure needs and (3) raising enrollment rates. For textbook development, the FGPG considers number of languages, number of textbooks required to estimate expenditure needs for textbooks. Recurrent budge needs are estimated using regression analysis containing number of students and population density. For raising enrollment rates, capital cost per student is estimated by unspecified accounting method. Then for regions with small gap, national average gap level is used and for regions with larger gap, actual gap is used in calculating expenditure needs. For two regions, spillover of benefits is assumed at 10% and the two regions receive additional compensation. Estimation methods used leave much to be desired (e.g.

teacher salaries are major cost of schooling and not considered here) and rewarding gap would provide disincentives for regions to overcome the gaps.

Rural Roads: FGPG estimates km of rural roads required based upon data on Km of road per person and rural access index, rural gap and rural population without road access. To estimate rural road budget, it considers rural population, rural population within 2km of access, rural access index, rural network in km, mean slope, unit cost premium, rural population within 2km access and share of population within 2 km access. Km of rural roads required simply cannot be estimated based on the indicators used as it requires geographical mapping of roads and communities.

Provision of drinking water: This is estimated based on existing access as well as additional access required. Unit cost data from the Ministry of Water and Energy is used to obtain expenditure needs for operation and maintenance as well as capital costs. This procedure seems reasonable. However, fixed costs are determined by applying arbitrary adjustment factors to average fixed cost.

Public Health: Estimates are made for both curative and preventive health services. For curative actual unit cost and use data are used. For preventive, Health Extension Services Program data are used. Fixed costs are assumed to be 2% of total budget (What are these?) and allocated across regions using arbitrary adjustment factors. In addition, Harare and Dire Dawa are given additional compensation equivalent to 10% as spill-outs of benefits. Former procedures are fine while the latter (fixed cost) requires justification.

Agriculture and Rural Development: A Cobb-Douglas expenditure function with number of rural households, cultivated land area, livestock units, and population density as explanatory variables is estimated. The fitted regression has little predictive power (10%) but is used anyway.

Environmental Protection: Number of productive safety net beneficiaries are used to estimate expenditure need for environmental protection. In addition, area of protected forest and value of large and medium scale enterprises are used to estimate costs of forest protection. These indicators do not give any handle on combating air and water pollution and congestion.

Micro and small scale enterprise development: Cost per employee is applied to estimated number of unemployed to arrive at variable costs. Fixed cost is assumed to be 2-5% of total budget and adjusted using arbitrary factors (1 for large, 0.75 for large and 50% for medium and 35% for small regions.

Urban Works and Development: Average per capital expenditure on urban works and development is used. Five percent of total regional budget is used as fixed costs. Average fixed cost is adjusted by arbitrary factors.

Spatial Price Index adjustment; Total expenditure needs are adjusted by spatial price index.

Federal General Purpose Grant = (Own Revenue means minus expenditure needs) x SPI x 0.50.

The above calculations are used to create regional relativities which are then used to distribute available pool of resources.

The Existing design of the Federal General Purpose Grant (FGPG) Formula has much strength compared to the previous designed formulas in Ethiopia. Accordingly, in the interest of tax harmonization, limiting differentials in sub-national fiscal capacities and lowering tax administration costs, Ethiopia has adopted a highly centralized tax system with the Central Government raising 88% of total revenues but accountable for only 74% of total expenditures. This creates a large vertical fiscal gap (14%) that is filled by tax sharing and transfers. Tax sharing by origin while reducing vertical fiscal gap accentuates horizontal fiscal inequalities. The FGPG is the foremost program to fill fiscal gap (financed 84% of subnational expenditures in 2010/11) and to bridge horizontal inequities. It is a formula based transfer program that takes into consideration both the revenue raising capacity of the regions as well as their expenditure needs for both operating and capital expenditures. It uses fairly rigorous approaches to determining these needs. It also enlists collaboration with leading academic experts in carrying out these calculations. In addition, it also provides compensation for spill-outs of benefits as well as for additional security and defense related expenditures incurred by border regions affected by external conflicts. In general, the existing formula and associated calculations are well regarded by local and external academic experts (see Vaillencourt, 2013). The program also has a stability period of five years which ensures predictability of these transfers within the defined period. The program has a broader political support as the House of the Federation seeks broader participation and consensus building in its design. Overall, the program represents a serious and ambitious attempt to distribute federal transfers among regions in an objective and fair manner.

Though existing grant allocation formula tried to conform to sound principles in fiscal decentralization and attempted to take into account best international practices, nevertheless has a number of important limitations as noted below:

- The Representative Tax System (RTS) approach is not applicable in the Ethiopian case. The RTS approach is useful when regional governments have varying tax bases and rates. This is not true in Ethiopia as tax bases and rates are uniform. The only exception is the livestock tax collected only by one region but even in this case de jure tax bases and rates are uniform. In the presence of uniform tax bases and rates, potential revenues would equal actual revenues. This is the reason why Germany uses actual revenues in its fiscal equalization program. In the Ethiopian case, variance in effective tax rate is explained by the differential tax administration capacities and the nature of local geography and economy. But differential tax administration capacities are best handled outside the grant system by e Federal Government either providing technical assistance for upgrading capacity or collecting taxes on behalf of a region.
- Some RTS calculations may not be valid. This is because it uses proxies for tax bases that do not reflect legal nature of the tax base. For example, sales data is used for taxes on profits. In some instances, the data are simply not available e.g. sales by service and small scale industries.
- Representative Expenditure System (RES) calculations use econometric procedures with questionable validity. For example, a Cob-Douglas function with only 10% explanatory power is used to estimate expenditure needs for agriculture. Most expenditure functions used have omitted valuable bias; suffer from collinearity bias and in some cases use of irrelevant indictors. For example, need for environmental protection is based upon productive safety net beneficiaries which no identified relationship with the incidence of pollution or congestion.
- Capital expenditure needs are evaluated without any regard to infrastructure deficiencies. The FOB approximates needs using macro indicators of lack of access but translating these into expenditures need for facilities requires a planning view and geographical mapping of facilities in relation to national minimum standard. The latter view is absent in the FGPG calculations.
- Regional differentiation of needs is based upon assumptions that have no empirical basis. For example, the FGPG makes lump-sum allocation to each region for each expenditure category based upon the intercept of equation that is arbitrarily assumed to represent large regions rather than an average region and then giving declining weights to other regions of 70%, 50% and 30% respectively.
- The FPGP calculations on fiscal gap are in error as they ignore other federal transfers and assistance especially specific purpose transfers and MDG transfers.

- The FGPG represent a complex and opaque approach to regional allocations. Given the complexity of procedure used and the arbitrary assumptions made, transparency of the formula is compromised and there can be little hope of reaching broader consensus or a federal compact on the usefulness of the formula. Super complexity of FGPG does not, however, lead to greater equity as discussed below.
- The FGPG pool is unstable, determined arbitrarily by the MoFED and is unrelated to the calculations conducted by the HoF.
- The FGPG enhances autonomy but weakens regional and local government accountability for service delivery performance to local residents as financing for regional expenditures does not entail any monitoring reporting provisions.
- The FGPG provides implicit incentives for public sector managers to act as "public employment creation" agencies rather than service providers. This could also contribute to patronage politics as wage bill is picked up by the Federal Government.
- The FGPG delinks planning with budgeting as capital financing is not embedded into a planning perspective but a formula based perspective.
- The FGPG delinks capital financing from national minimum standards.
- The FGPG provides incentives for higher operational spending and provides disincentives for overcoming infrastructure deficiencies. This is because capital and operating grants are lumped together and given as a lump-sum grant and higher operating spending leads to higher expenditure needs in future whereas higher capital spending by regions would directly reduce their future expenditure needs entitlements.
- The FGPG may contribute to building permanent dependency of states on federal financing. This is contrary to the legal provision that intergovernmental finance must be structured in such a way as to ensure that in the long run states have lower reliance on federal funds to finance own expenditures.

Summing up, while the FGPG represents a rigorous attempt at quantifying the potential revenue capacity and expenditure needs of the Ethiopian regions, due to a lack of appropriate data and by aggregating multiple grant programs into one, it has resulted into a complex and opaque program that distributes grant funds inequitably while creating perverse incentives for accountable governance. This outcome violates the constitutional-legal guidance the formula be “reliable”, “progressive” and should contribute to balanced regional development and reliance on self-finance by the states.

Due to the above limitations, the House of the Federation decided that a new formula was to be designed again for the ninth time updating by the dictates of (a) ever changing realities of the country such as: changing population size, changes in economic and social development needs, requirements and targets of Growth and Transformation Plan II (GTP II), changes in revenue raising effort of regions, changes in tax laws etc… , (b) availability of recent datasets; and (c)the need to adopt better framework to make the formula more simple and transparent. The literature also suggests that the grant distribution formula should be frequently revised and adjusted: to improve fair distribution of resources, and to encourage effort of regional governments to mobilize local resources (see Martinez-Vazquez et al, 2010). Accordingly, a revision has been done on both revenue raising capacity and expenditure needs of regions.

Accordingly, the recent formulas were based on expenditure needs and revenue potential of regions, rather than actuals as was the case in the past. The period that the formula intends to cover was decided in advance. However, depending on demands from regions and other new developments during its implementation, the formula can be changed before the scheduled end date. Since the first block grant was implemented there have been nine revisions. The current formula is expected to serve from 2017/2018 to 2019/2020.

The constitution of the FDRE stipulates that every citizen has the right to access comparable level of goods and services across all regions. Hence, this concept of equity is the primary reason behind the block grant allocation formula. The HoF aims for equitable distribution of grant based on needs and comparable level of fiscal capacity to provide comparable level of services. An effort is also made to learn from countries such as India, South Africa, Australia and Canada which all have federal systems.

The current (2017/8 – 2019/20) formula is:

$$Block\ Grant_{region\ i} = Expenditure\ Needs_{region\ i} - Revenue\ Potential_{region\ i}$$

The expenditure needs of regions are adjusted for regional price differences. For the 2017/2018-2019/2020 allocation, expenditure needs were assessed based on several expenditure classifications including: (i) general administration (organ of the state, justice and security, and general service), (ii) primary and secondary education (including TVET), (iii) public health, (iv) agriculture and rural development, (v) drinking water development, (vi) rural road construction and maintenance, (vii) urban development, and (viii) micro and small scale enterprise (MSE) development.

To generate the fiscal gap of each of the grant-receiving regional states, the total annual potential revenue of each region is then deducted from the respective total annual expenditure needs. The fiscal gap of each of the regional states is divided by the sum total of the fiscal gap of all regions to obtain the relative fiscal gaps of each region.

Similarly, for the 2018/2019 – 2019/2020 formula, the selected tax revenue sources (or representative tax system) include (out of 19 taxes) items such as: agricultural income tax, land use fee, payroll tax, business income tax, turnover tax (TOT), and value added tax (VAT). A tax base weight is then applied to each. Hence the regional tax revenue potential is the sum of the representative revenues collectable from payroll tax, agricultural income and land use tax, profit tax, value added tax and turnover tax in each region. The total revenue potential of regions comprises the sum of their computed potential revenue raising capacity and the shared revenues with the federal government.

The HoF faces a number of challenges in the process of setting and implementing the block grant formula. First, there are delays in data acquisition for key variables in the formula from the MoF as the HoF does not have access to the IBEX database. This causes delays in executing the formula and transferring funds. Moreover, Garcia and Rajkumar (2008) also note issues in the quality of data used as inputs into the grant formula.

Second, that Special Purpose Grants are significant, but do not pass through the HoF currently making it difficult to account for them when allocating the block grant. Currently, the allocation of the SPG varies as some ministries use the block grant formula inappropriately and others use a different set of criteria.

A shortcoming of the current formula is that it does not incentivise efficient use of resources by regions. The block grant is unconditional, so regions can spend on recurrent and capital spending as they desire. Hence regions may have more incentive to allocate the block grant to recurrent spending instead of capital spending. Spending more on capital spending likely boost revenue potential and may imply a lower share in grants in future. Hence the regions that underperform in tax collection may be benefit more from the grant, which can discourage enhanced revenue performance. This is a case of moral hazard.

Currently, the HoF does not have systems in place to monitor and evaluate the use of block grant funds transferred to regions. It remains that the autonomy of the regions should be preserved, however, a system by which the HoF can assess how funds are used and the impact on development should be developed. The HoF is planning to conduct an assessment of the effectiveness of grant allocation; and will begin by answering simple questions like how much capital versus current expenditure is financed using the block grants across regions. The HoF also intends to introduce conditional grants that are based on the performance. This type of upward accountability mechanisms has been endorsed by the World Bank (2004) and according to their Draft Institutional Governance Review (IGR) Concept Note, upward accountability should include well-established monitoring of sectoral performance from regional governments to higher level authorities.

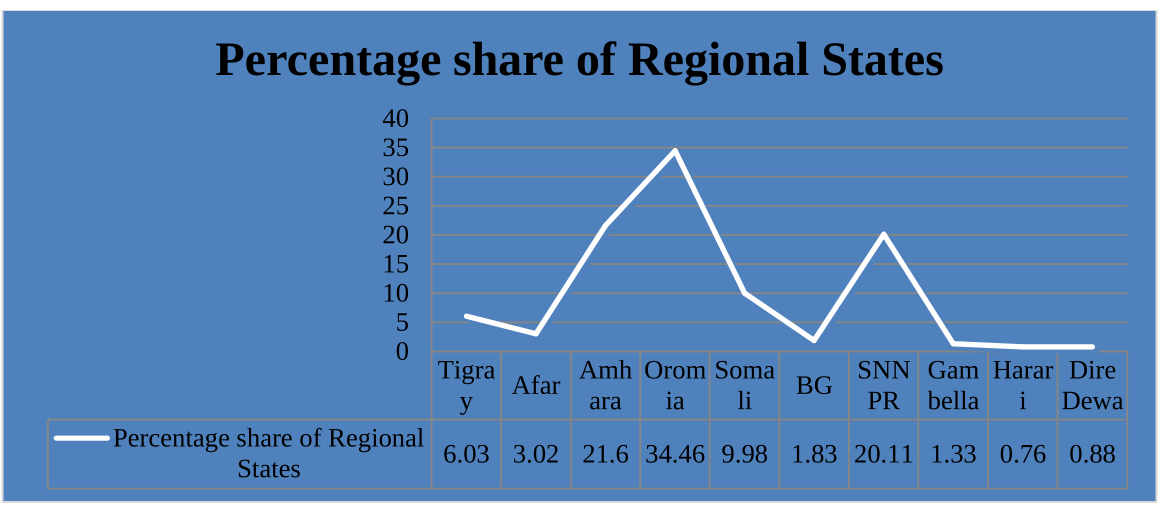
Another weakness of the current system relates to the institutional arrangements of the block grant process. Discussions with representatives from the HoF indicate a lack of a proper legal documentation guiding the grant formulation process, thus resulting in inefficiencies. The HoF follows a customary procedure to revise the block grant formula. However, this procedure is not formally documented. Currently a standing committee at the HoF oversees the design and implementation of the block grant. However, the standing committee has other responsibilities and there is the risk that revising the allocation process thus becomes a secondary responsibility. A more efficient way would be to establish an independent commission entrusted with the responsibility of designing the formula and implementing the transfer and regularly assessing impact. The HoF intends to formalize the guidelines and procedure of revising the block grant formula via a proclamation. The proclamation would stipulate of the role of various institutions in the process, a defined timeline, rules on how and how frequently the formula is to be updated, and most importantly establish an independent commission entrusted with setting or revising of the grant formula.

Table 4.16 The New Federal General-Purpose Grant Formula for 2017/18-2019/20

Region	Percentage share of Regional States
Tigray	6.03
Afar	3.02
Amhara	21.6
Oromia	34.46
Somali	9.98
BG	1.83
SNNPR	20.11
Gambella	1.33
Harari	0.76
Dire Dewa	0.88
Total	**100**

Source: HOF (2017/18- 2019/20)

Figure 4.23: Percentage share of regional states



4.7.7 Trends in allocation of block grants and SPGs

Table 4.17 provides the shares of each region have received since 2009/2010, when the development of the formula became the responsibility of the HoF. Over recent years the shares of Oromia, Somali, and SNNPR increased slightly while that of the rest of the regions slightly declined. The emerging regions of Afar, Benishangul, and Gambella all secured higher shares of the block grant compared to the share of their population in the country pointing to the equalising nature of the grant. The special purpose grants which fund SDG program follow the block grant formula.

Figure 4.24 and figure 4.25 below report trends in the amount of block grant and SPG (MDG/SDG) over time. As shown the total block grant has been growing over time since 2007 and accelerated almost exponentially since 2015 onwards. The increase was common to all regions except a slight dip in 2018 for Tigray, Beninshangul, Harari, and Dire Dawa.

Even for those regions which saw a slight decline in share of the block grant, most of the regions have had increasing block grants in absolute terms. This is a reflection of the growth in the total amount of federal finances allocated to block grants. Total block grants to all regions has grown, on average, by about 15 percent annually over the period 1997-2019 with a decline in 2001, and steady increase since. There were noticeable increases in 2008, 2016 and 2017. The average growth of the block grant was even higher at about 19 percent over the period 2011 and 2019; this is higher than average growth in prices of 15 percent over the period, indicating a real increase in block grants transfers.

Table 4.17 Grant allocation trends (percent)

Region	2009/10 – 2012/13	2012/13-2016/7	2017/8-2019/20	Population share (2017)
Afar	3.34	3.15	3.02	1.9
Amhara	23.33	23.17	21.6	22.4
Benishangul Gumuz	1.96	2.1	1.83	1.1
Dire Dewa	1.01	1.16	0.88	0.3
Gambella	1.57	1.5	1.33	0.5
Harari	0.89	1	0.76	0.5
Oromia	32.53	32.5	34.46	37.6
SNNPR	19.9	20.1	20.11	20.3
Somali	8.43	8.14	9.98	6.1
Tigray	7.04	7.18	6.03	5.6
Total	100	100	100	96.3 (excluding Addis Ababa

Source: HoF (2009), HoF (2014), and HOF (2017)

Figure 4.24: Grant allocation trends

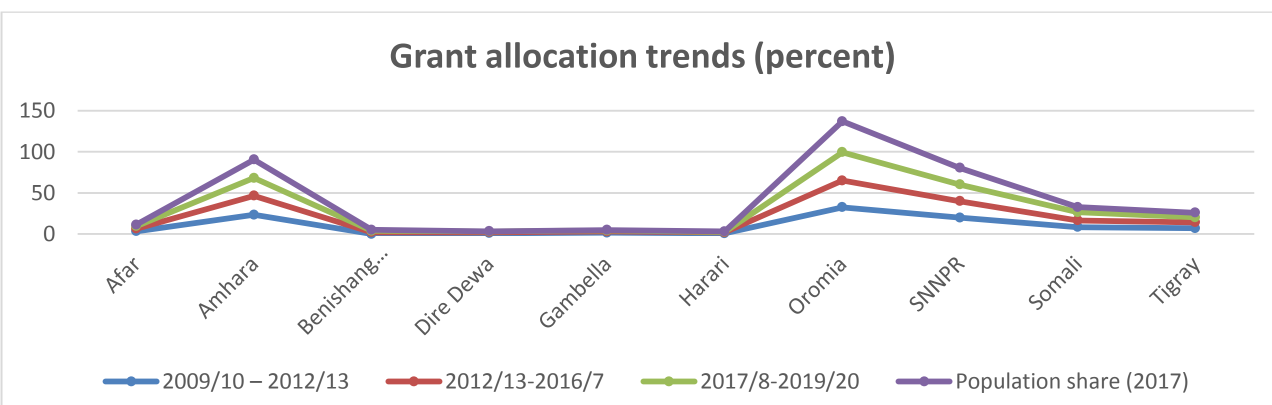
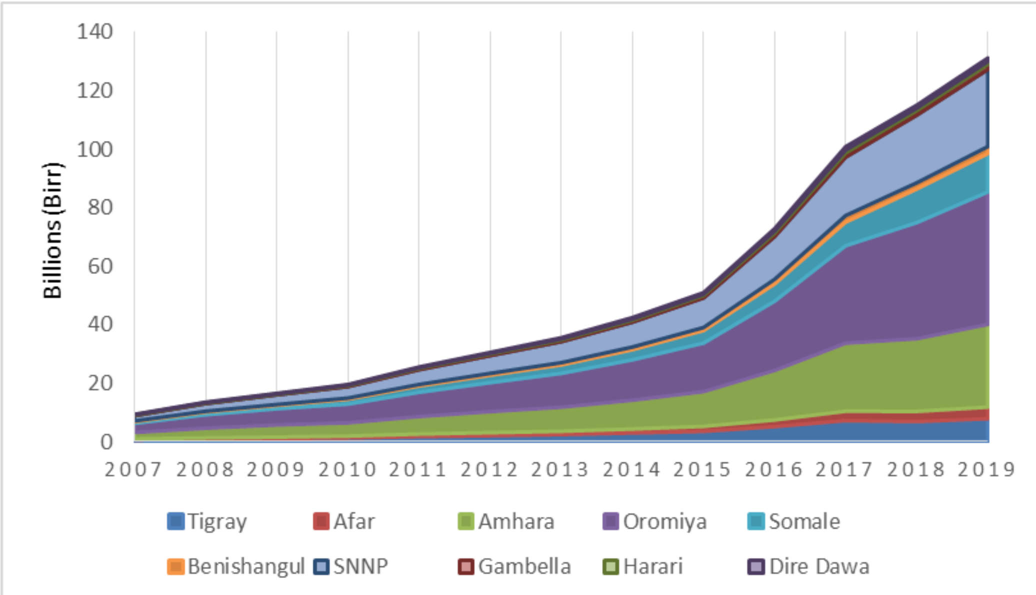


Table 4.18 Federal General-purpose Grant transfers from federal government to Regional states (2000EFY – 2010EFY)

Regional state	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Tigray	873.8	1109.0	1326.1	1797.4	3103.5	3705.9	4066.6	5611.2	6034.5	7684.2	7267.4
Afar	450.1	499.6	639.9	859.3	1425.7	1666.8	1812.1	2332.3	2644.6	3508.5	3678.0
Amhara	3327.0	4189.3	4,591.5	6,053.2	10,282.9	12,247.6	13,309.0	18,614.5	19,720.0	24894.5	26056.6
Oromia	4600.6	5656.4	6484.3	8450.5	14488.0	17220.1	18562.6	24948.1	27450.6	0.0	0.0
Somali	930.6	1153.0	1665.8	2164.1	3288.1	4348.3	4678.4	5968.5	6901.1	8818.5	12203.7
B/gumuz	290.3	271.5	383.8	508.4	880.4	1091.0	1173.5	1617.7	1770.1	2358.1	0.0
SNNPR	2633.0	3301.2	3929.6	5082.6	6115.0	7187.9	11403.0	15116.7	17067.6	21166.5	24290.7
Gambella	174.6	229.8	261.5	405.4	654.4	695.7	806.2	1204.0	1115.1	1620.0	0.0
Harari	126.0	135.5	174.3	228.7	401.9	539.5	578.8	720.8	849.3	1064.4	0.0
Diredawa	177.3	200.9	201.9	260.2	432.1	615.9	644.6	805.4	947.7	1225.9	0.0

Source: own computation from MoF data

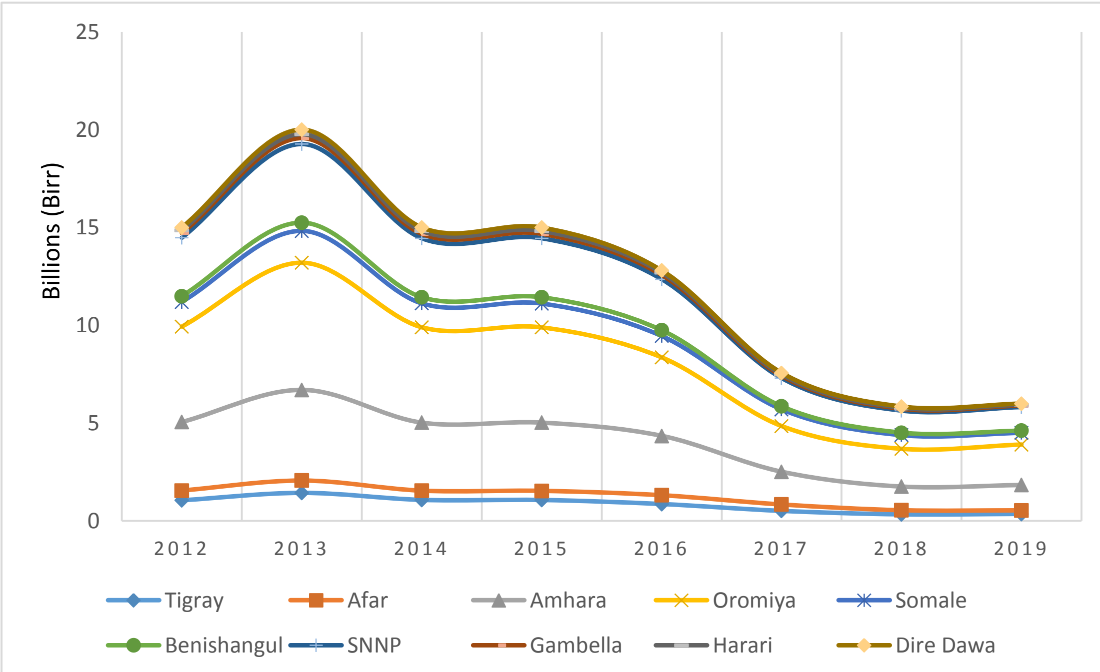
Figure 4.25: Trends in block grant distribution (Billions of Birr)



Source: MoF Data (2019)

The MDG/SDG grants transferred to and managed by regions have become relatively less important over time for all regions particularly after 2015. This does not mean that less is being spent on MDG/SDG goals, but the implication is that more of this type of spending is federally managed (through some of the universal access programmes for example) and less MDG/SGD spending is regionally managed in comparison to previous years.

Figure 4.26: Trends in SPG (MDG/SDG) allocated to and managed by regions (Millions of Birr)



Source: MoF Data (2019)

Given the declining trend and the absence of an effective monitoring and evaluation system for SPGs managed by the Regions, it is currently difficult to discern the developmental impact of the SPGs and to assess whether the directives under the SPG guidelines are fully respected. It is therefore recommended that a comprehensive review of the SPG system should be undertaken. This review should aim to assess what has been the impact of the SPGs and to consider what would be the most appropriate institutional and funding mechanism to achieve the stated objectives of the SPGs.

As to the gap in the intergovernmental transfer (between the federal and the regional governments) about 85 percent of the respondents from federal and regional states replied that first the constitution has mentioned subsidy to regional governments but it is not framed in a way that considers the expenditure and revenue assignment and the imminent fiscal imbalance of governments both vertically and horizontally. In addition, it does not specifically identify the objective, the purpose and the type of IGFT. Hence in some cases the IGFT seems only determined by the federal government unilaterally. The other weakness is that it does not specify the source of the resource pool for IGFT. This means it is not linked with the expenditure and revenue assignment.

Summary

In this chapter four, the foundations of fiscal system and equity in Ethiopia is laid down. First, the evolutiona and structure of Ethiopia's fiscal federalism is presented. Second, the pillars of fiscal federalism including assignments of expenditure responsibilities are sketched. Then, expenditure decentralization and regional responsibilities, assessment of the degree of expenditure decentralization and assignment of revenue between different levels of government are discussed. Very importantly, Ethiopia's fiscal system against national (inter-personal) equity and regional (inter-regional) equity are assessed in detail from constitutional design to other legal provisions one after the other. Though the constitution aims at bringing equitable development on the one hand, it also gave lucrative taxing powers to the federal government which led to regional financial dependences upon the former to execute its assigned responsibilities.

Chapter Five

5. Social sector development: performance and regional equity

The ability of the Ethiopian federal arrangements to improve delivery of local public goods and services and spread the benefits of economic development in a more equitably across the regions is a widely debated issue in Ethiopia. Some assert that a federal system, by its nature, lacks the capacity to bring about balanced development among its constituent units, whereas the federal government is not able to mobilize resources from the relatively wealthy regional states and divert these for the benefit of the poorer ones. Others argue that Ethiopian ethnic-based federalism has created a glaringly uneven distribution of economic benefits leading to the exploitation of natural resources across the regions. This makes some regions potentially rich in physical and human resources, fiscal capacity, and infrastructure development, while others became economically non-viable thereby widening disparities in socio-economic development between regions [Alemante, 2003:92; Abu, 2003:14].

Since it is true that the federal arrangement has created asymmetry in the constituent units in terms of population size and geographic area, this cannot be unique to Ethiopia. As a result there are marked asymmetries in fiscal capacity, development infrastructure, and income levels between regions. However, this does not mean that developing regions like Afar, Benshangul-Gumuz, Gambella, and Somali are less endowed in natural resources, or they are destined to remain undeveloped forever.

More importantly, the Federal arrangement in Ethiopia has an inbuilt intergovernmental fiscal transfer system. This fiscal transfer system is in the form of federal grants to regional states. The Federal Democratic Republic of Ethiopia has been allocating federal grants to regional states since 1986 Ethiopian fiscal budget year. These federal block grants to the regions have been very important in the structure of public finances in Ethiopia, representing 80-85 per cent of regional states' expenditures. This grant is unconditional general-purpose grant and gives considerable autonomy to regions on how to allocate the expenditure among different socio-economic expenditure categories. The developmental outcome and outputs and the resulting regional distribution of development in different sectors are therefore predominantly affected by the block grant allocation of the federal government.

This chapter therefore, examines the significance of the federal fiscal and resource allocation system in promoting spatially and socially inclusive development, in social sector (Education and Health). It also reviews the overall impact of public spending on the performance of social sector in general mainly by drawing on primary and secondary sources.

Section 5.1 discusses the education sector while section 5.2 discusses the health sector. Under the education sector, the policy and management structure and trends in federal spending on education are first discussed. This is followed by examination of the sectoral performance to understand the overall impact of public spending on education. This followed by the examining regional equity in the education sector. In section 5.2, the performance of the health sector is discussed and is followed by an examination of regional equity and effects of public spending on health outcome.

5.1 Education

5.1.1. Education policies, strategies, and Programs

The Ethiopian military regime was overthrown in May 1991 by a coalition of armed groups led by the Ethiopian people's Revolutionary Democratic Front (EPRDF). From the very beginning, the EPRDF government identified enhancement of education as one of its priorities(Woldegiyorgis,2015).The EPRDF-led government issued a comprehensive education and training policy (ETP) in 1994 with a view to improving the state of education at all levels and ensuring that education makes the required contribution to the country's development(Woldegiyorgis,2015 :2) . The policy identified access, quality, equity, and relevance as the main challenges of the education system of the country. In practice, however, expanding access and equity have been given priority over quality and relevance to meet the high demand for education. Consequently, there has been a rapid quantitative expansion of education, partly motivated by the need to meet the globally agreed target of universal primary Education by 2015(MoE ,2006:6).

ETP has been operationalized and implemented through a series of five-year Education Sector Development Programmes (ESDPs) the first of which was introduced during the 1997/8fiscal year; and ESDP V (2015/16-2019/20) currently under implementation. Each of the ESDPs derives its goals and strategies from the ETP and identifies specific time-bound objectives for each level of education along with the resource and organizational requirements (MoE 2006:5). ESDP I had the long –term goal of achieving primary education by the year 2015 (MoFED 2002:89).ESDP II spanned three years from 2002/3 to 2004/5 and focused on ‘ensuring access to elementary education for all citizens along with improving quality and relevance to socioeconomic development’(MoFED 2002: 44). Similarly, ESDP III, which was part of the plan for accelerated and Sustainable Development to End Poverty (PASDEP) (2005/6-2009/10), was focused on achieving the Millennium Development Goals (MDGs) and supplying qualified trained work force with the necessary quantity and quality at all levels (MoFED 2006:109)

Until 2010 when the government introduced Growth and Transformation Plan I (GTP-I), the goals, objectives and strategies of the policies and plans of the government were not aimed at structural transformation and industrialization (MoFED,2010). For instance, both the interim and full PRSP as well as PASDEP documents issued in 2000,2002,and 2006,respectively,emphasize poverty reduction as the core agenda of the country’s development (MoFED 2002:I ,2002:8,2006:1). Consequently, there was deliberate focus on changing the productive structure of the economy and transforming traditional, smallholder agriculture (MoFED 2002:1).

Following the adoption of the GTP I, priority attention shifted from traditional small-holder agricultural engagement to rolling out industrialization and structural transformation as the major drive. Following this, the objective and targets of the education sector focused on producing the human resources in order to achieve industrialization and structural transformation. For instance, ESDP IV, which was included in GTP-I, underlined the need to produce ‘efficient and effective, knowledge based, and inspired and innovative citizens who contribute to the realization of the long-term vision of making Ethiopia a middle –Income Economy’ (MoFED 2010:49). This trend was more pronounced in GTP-II(2015/16-2019/20) stating that :’sustainable economic growth and transformation demands a healthy work force equipped with the knowledge and skills to be highly productive and generate innovations in technologies ,process, products, and services…’ The development of human resource capabilities is thus interlinked with efforts to promote proper technological development and utilization. Thus ,ensuring quality and accessible education and health services and augmenting innovative skills through encouraging Research and Development (R&D) activities in the public and private sectors is vital for boosting human resource capabilities’(MoFEC, 2016:88)

5.1.2 Organization and management of the Education system

The educational system in Ethiopia follows a decentralized administrative structure at all levels of government compromising nine national regional states and two city administrations (MoE, 2006: 5). Each regional state/city administration has its own bureau of education, woreda [district] education offices and kebeles with their education and training boards responsible for administering and managing the education system. In some of the larger regions, the zonal educational departments administratively bridges all educational activities between woredas and regional bureaus except tertiary educational institutions that are preserves of the federal government. Each regional state education bureau is both administratively and financially responsible for general education, technical and vocational education and training (TVET) as well as teacher training and other diploma- level institutions.

With respect to structure, the present educational system comprises primary, secondary, TVET, and tertiary level education. Primary education is conducted from grades 1 to 8, and is implemented in two cycles: primary first cycle (Grades 1-4) and primary second cycle (Grade 5-8). Secondary education too has two cycle's namely grade 9-10 and grades 11-12. At the end of the first cycle of secondary education students take a national exam that is used to select students that qualify for the next higher level of education known as the preparatory level. The preparatory level (grades 11 and 12) aims at preparing students for university education. Those who do not fulfill the criteria for the preparatory level can be enrolled in teacher education. Those who do not qualify for preparatory level can be enrolled in teacher education colleges and TVETs. The achievements and performance during the post-1991 period are highlighted in the subsequent section using selected indicators for each level of education.

Table 5.1 Responsibilities of the Ministry of Education, Regional Education Bureaus and Woreda Education Offices

Ministry Of Education	**Regional Education Burea**	**Woreda Education Office**
Formulates the country's education policy.	Prepares plans and programmes based on the national policy.	Implements plans and programmes at school level.
Determines and supervises the country's educational standards.	Supervises and maintains the educational standards.	Supervises schools and works with teachers to maintain the educational standards.
Determines the curriculum of secondary and higher institutions and •Assists regions in curriculum preparation	Prepares and implements primary school curriculum.	Inspects the implementation of curriculaa at school level.
Determines qualifications of teachers •Trains teachers at secondary and tertiary levels and educational personnel. •Assists training programmes of regions.	Recruits qualified teachers for secondary schools, TVET, TTIs and TTCs •Identifies training needs. •Trains primary teachers and education personnel.	Recruits primary teachers •Recruits teachers and other professionals for in-service training and professional development.
Makes available adequate quality and quantity of materials.	Ensures the provision of textbooks and educational materials.	Distributes textbooks and educational materials to schools on time.
Prepares national examinations.	Supervises the execution of national exams •Ascertains adequacy of exams and certificates	Checks the preparation of Students for the exams. •Administers the exams.
Facilitates the expansion of country's education	Plans for the provision of education to schools	Supervises the implementation of plans at community and

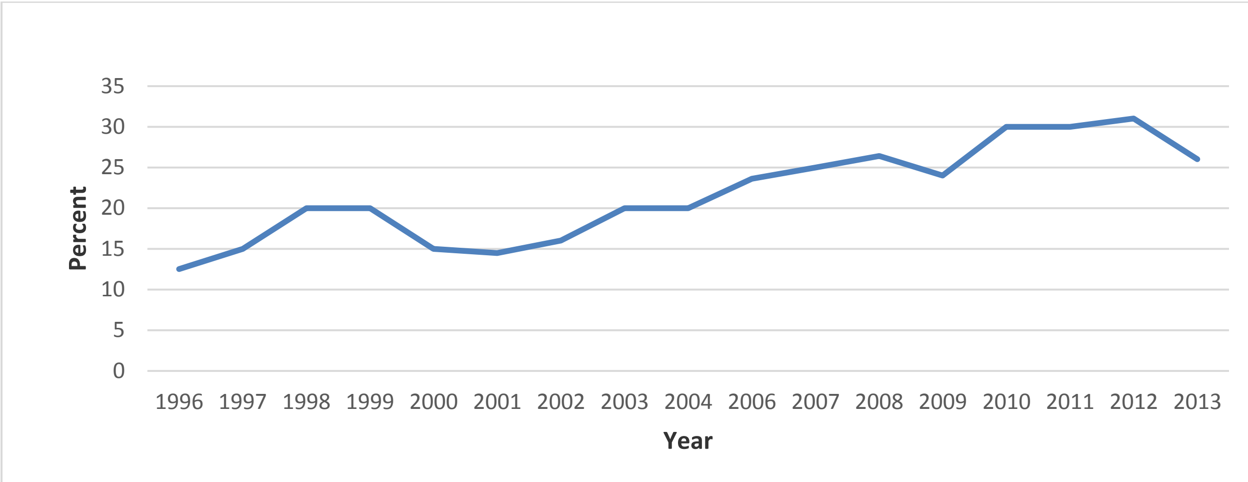
	•Provides adult education.	school level.
Establishes higher education institutions. •Licenses private higher education institutions.	Administers elementary and secondary schools. •Establishes junior colleges.	Administers and supervises established schools.
Assists regions to establish educational mass media.	Ensures that the education programme is supported by mass Media.	Provides facilities and programmes for mass media education.
Collects, complies and disseminates information on education	Collects, complies and disseminates statistical data on education	Collects information and data on education and complies and Submits it to the zonal office.

Source: UNESCO, 2010

5.1.3 Trends in national education expenditure

As can be observed from figure 5.1, the government's consistent commitment to the education sector has been demonstrated through resource allocation. National budgetary allocation to the social sector has been one of the highest throughout the last twenty five years. If one considers total government expenditure, the share of education for the years 2006-2013 was 26 percent on the average. This share almost doubled from 15 per cent in 2000 to 27 per cent in 2013 whereas the Sub-Saharan region average stood at 15.26 percent in 1998 and rose to only 16.62 per cent in 2013(World Development Indicators of World Bank). Do to this; Ethiopia has been consistently placed in the rank of top countries in Africa with respect to the share of the education sector in government expenditure for more than a decade. In addition, education sector policies, strategies, and programs have largely been aligned and closely linked with the overarching development priorities of the government. However, these priorities were not aimed at achieving structural transformation but emphasized poverty reduction and meeting international targets such as the Universal Primary Education. As to be indicated later, this has had significant bearing on the quality of education and its external competitiveness.

Figure 5.1 Total education sector expenditure as per cent of total government expenditure 1996-2013



5.1.4 Federal Capital and Recurrent Spending on regional Education Sector and higher education

As discussed above, the policy drive of the federal Government associated with the education sector is to improve the quality and coverage of education services at primary, secondary, TVET and higher education levels.

The Federal government allocates capital and recurrent budget for regional education sector and for higher education sector run by the Federal government. The expenditure needs of regional states for education is computed by disaggregating the total expenditure into capital and recurrent expenditure needs. The budget allocated to meet the regional capital expenditure need has the potential to reduce the regional disparity in access to and quality of education and to fulfill citizen's constitutional right for equal access to government services. Recurrent expenditure, on the other hand, is used to maintain those that are already enrolled in the education system. Since consumers of education services are predominantly specific age groups like, school age population (instead of total population) as the units of measurement is used in estimating the regional education expenditure needs.

Tables 1 and 2 in the annex, give capital and recurrent expenditure on education. According to table 1 capital expenditure on education in all regional states increased from 602.7 million birr in 2008/09 to 2895.5 million birr in 2017/18. This shows that there was an improvement in the amount of capital allocated to regions that helps them to execute their constitutional mandate as stipulated.

Regarding recurrent expenditure, table 2 in the annex indicated that regional recurrent expenditure on education increased from 6003.5 million birr in 2008/09 to 26876.6 million birr in 2016/17. This again shows a significant increase in the amount of recurrent expenditure. As can be seen from two tables annexed, the education sector is the highest recipient of public expenditure by regional governments in Ethiopia. According to the 2017/18 data, out of the total public expenditure by regional governments, about 31.03% and 16.24% is allocated for recurrent and capital expenditure for the education sector respectively including primary, secondary and TVET . On average, education budget of regional governments increased annually of which Amhara, Oromiya, SNNPR and Hareri Regions received significant amount. According to the interview with higher officials of the Ministry of Education and the data indicated in the annexed table shows that the growth in the budgetary allocation for education disbursed to emerging regions in recent years was higher than the early years since in the early years of budget decentralization, the capacity of these regions to utilize funds was limited. This has, however, changed as time passes and their budget utilization capacity has improved considerably.

The foregoing reveals that an increase in public expenditure on education implies expansion in primary education and secondary education in all regions.

Regarding higher education budget, according to the Ethiopia Fiscal equity Independent study final report (unpublished) and interview with higher officials from Ministry of science and Higher Education (MOSHE) shows that federal capital spending allocated to universities has been increasing annually. According to the same sources, some regions have seen no change in placement numbers over the period, they have still benefitted from higher spending, like all other regions. This shows that the Federal government is concerned with both expansion and quality. In terms of percapita spending, the study noted the small differences in per university capital and recurrent spending across regions. Per university recurrent spending is lower in Gambella, which may be explained by the fact that the only university in the region is relatively new and was opened in 2014. Somali has a lower average for both capital and recurrent spending. Again, Addis Ababa benefits from the largest per university capital and recurrent spending. Moreover, the study showed that nationally, the Federal government spends 400 million Birr and 350 million Birr in capital and recurrent spending respectively per university. Most regions are close to this average (Afar, Amhara, Dire Dawa, Oromia, SNNPR and Tigray).

Table 5.2 shows that Federal capital and recurrent spending align well with student placement shares, with some minor differences over the period. The main discrepancy is for Addis Ababa where the student placement share was 5.8 percent, but the shares of capital and recurrent spending were 9.1 and 12.8 percent respectively. Moreover, in both capital and recurrent spending, differences in spending per student placement and per university are minimal across regions. Spill-over effects such as employment and enterprise are considered at the allocation stage and expected to vary with the number of universities (Fiscal study, citation). The larger regions have more universities overall, but less universities per 100,000 people of their population.

Table 5.2 Regional distribution of students, federal capital and recurrent spending on universities and 2011/2012 to 2016/2017

Regions	Regional distribution of students 2011/2012 to 2016/2017	Regional distribution of federal capital spending on universities	Regional distribution of recurrent spending on universities
Tigray	12.4	10.1	10.1
Afar	1.9	1.9	2.1
Amhara	24.3	22.1	20.6
Oromia	24.2	27.3	27.9
Somali	2.9	2.1	2.4
BG	1.8	1.7	1.3
SNNPR	23.3	22.8	20.5
Gambela	0.5	0.8	0.3
Harari	--	--	--

Dire Dawa	2.9	2.0	2.0
Addis Ababa	5.8	9.2	12.8
Total	100	100	

Source: MOSHE 2017/1

5.1.5 Output and Outcome of Education Sector Development

Expenditure on education is an input, and it is used to hire teachers, construct schools, buy books in order to enroll and teach children in primary and secondary education and in TVET schools.

The following section uses data from Ministry of Education on primary education, secondary education and TVET to assess aspects of regional equity in educational development

5.1.5.1 Primary Education

The general orientation of Ethiopian primary education has been pro-poor and pro-rural. This has been particularly true after the second wave of decentralization popularly known as the district/woreda level decentralization program (DLDP). The decentralization process and the increased amount of federal subsidy to disadvantages regions have been the main reasons for the increased pro-poor nature of education spending.

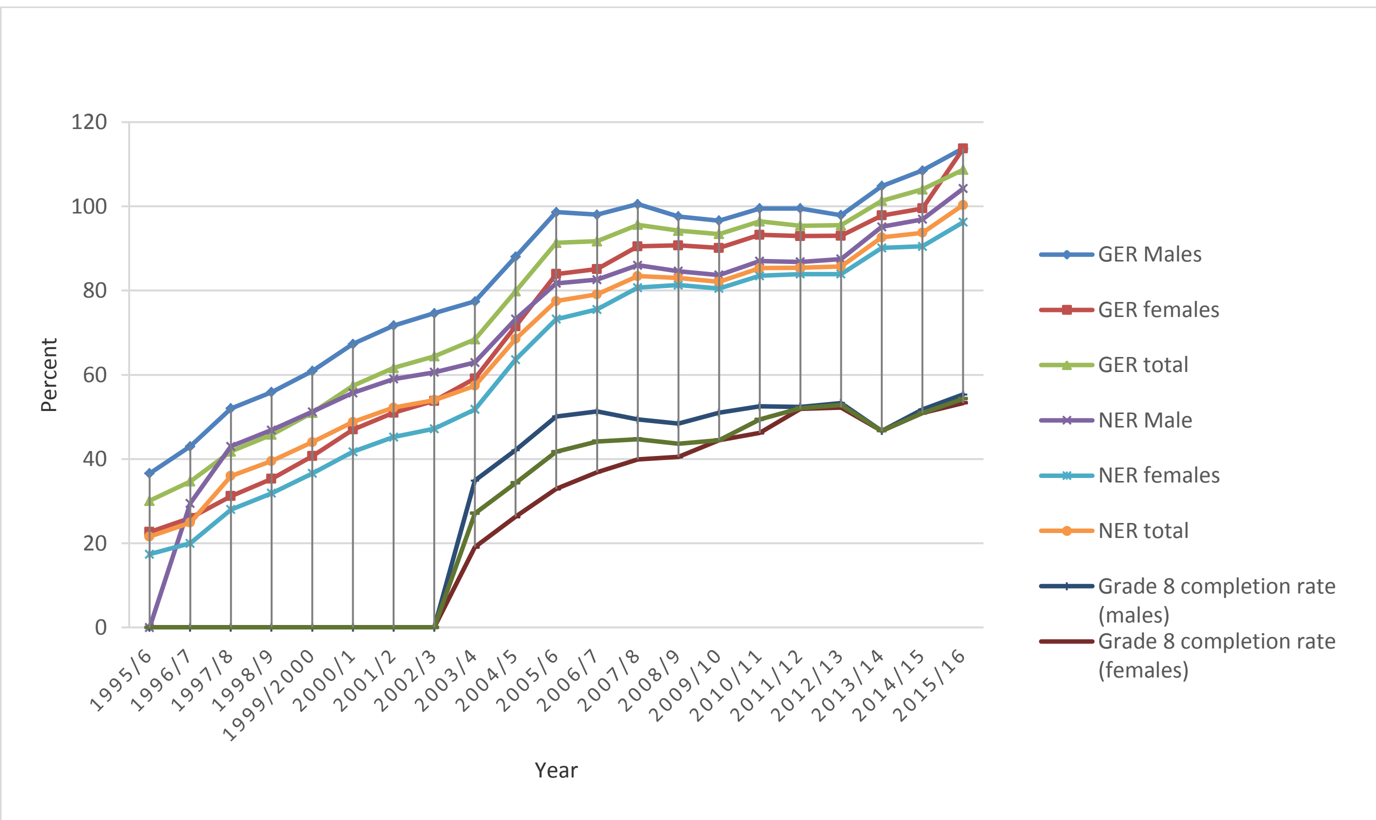
As noted earlier, the driving force behind the government's investment on primary education include equity of access; and attainment of quantitative targets that are deemed important in enabling the country to meet international commitments as regards universal primary education by 2015). To this end, , the number of primary schools increased from 11,000 to 32,048, between 1996 and 2014 allowing full intake of grade 1students who are seven years old (MOE, 2015: 13). By 2015/16, the net intake rate (NIR) of those who are (the proportion of 7-seven year-old seeking to enroll in Grade 1 at the national level) was 115.8 per cent (though there are significant regional variations) (MOE, 2017:24).

According to table 6 and table 7 in annex, primary enrolment rose from 15,553,142 in 2008/09 to 20,046,357 in 2018/19 amounting to average gross enrolment ratio of 33.3 percent. Moreover, there is an improved trend in the quality of education in achieving better teachers to pupils ratio and access to educational materials. Similarly, as can be seen from table 3 and 4 in annex and figures 5.2 and 5.3

below, the gross enrolment rate (GER) for grades 1-8 was **104.64** per cent in 2018/19, with substantial regional variation. This is a significant improvement compared to state of affairs in 1995/96 academic year when the national level GER was 30.1 per cent. Net enrolment rate (NER), which covers only those between 7-and 14-year-oldes enrolled in primary education, stood at just 21.6 per cent. Moreover, according to figure 5.4 below and table 5 in annex, NER in 1995/6, increased to 94.7 per cent in 2018/19 quadrupling over a twenty-year period. The data from educational abstracts of various years reveals that the Ethiopian primary education system enrolled and served 18.43 million school age children, employing 424,560 teachers in 34,867 primary schools across the country (MOE 2017).

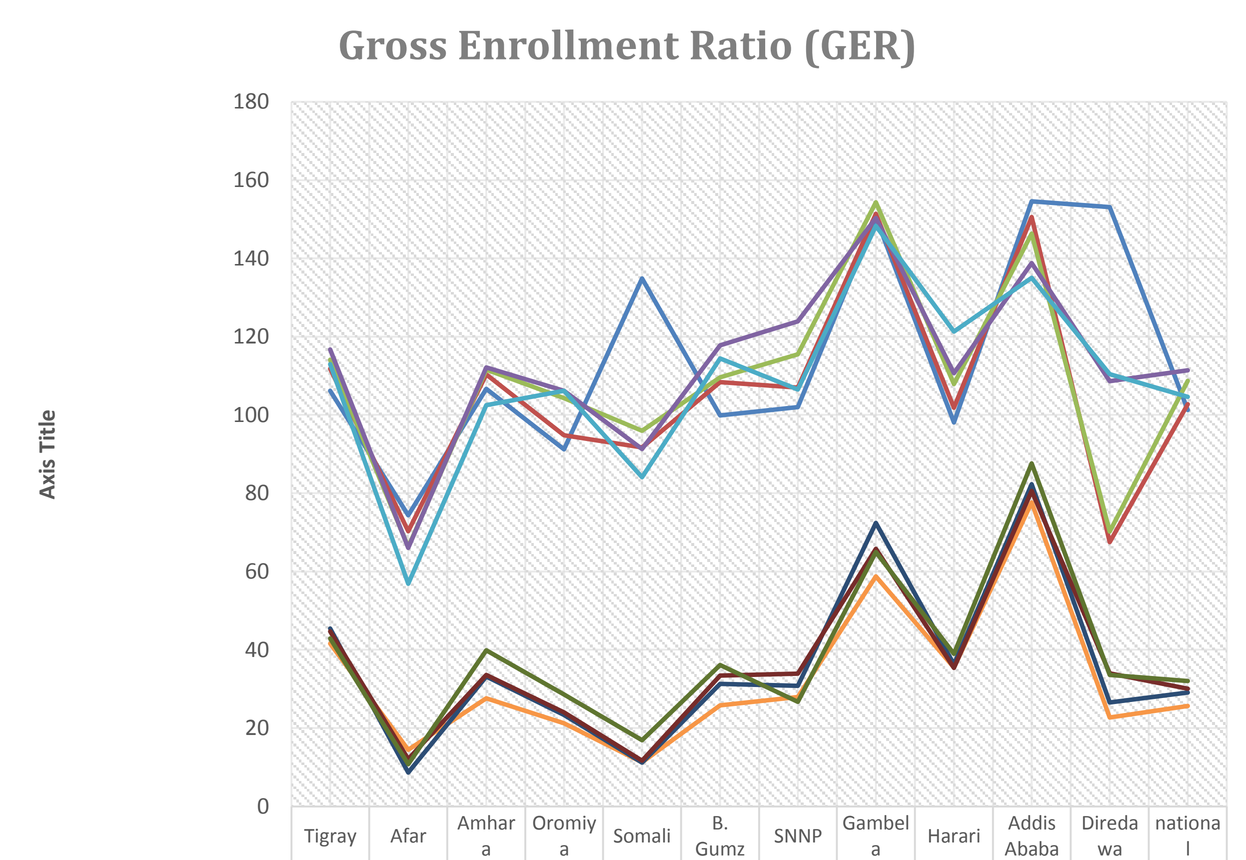
According to the above information and interviews with higher officials and professionals in MOE and regional educational officers' both gender and regional equity consistently improved over the years but still there are variations among regions.

Figure 5.2:- key performance indicators and trends for primary (Grade 1-8), 1995/6-2015/16



Source: compiled from MOE, 'Educational Statistics Annual Abstract' (various Years)

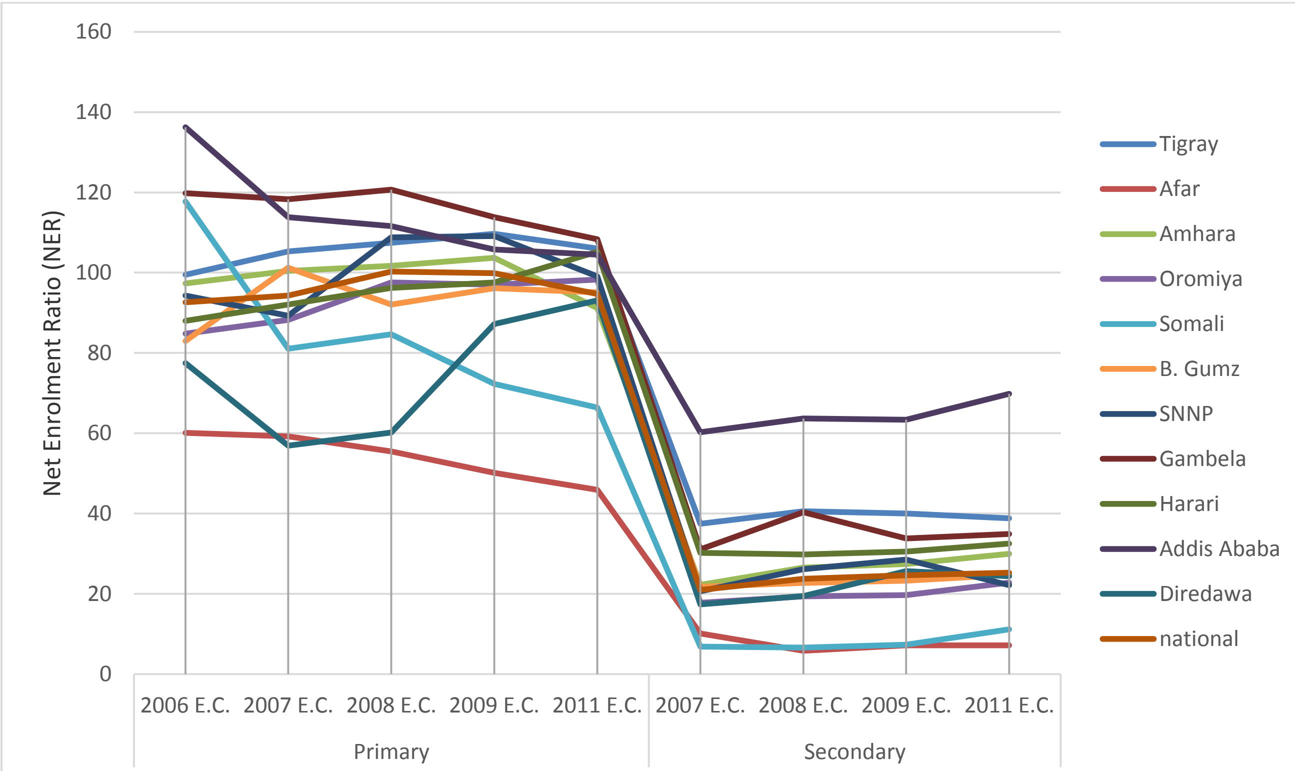
Figure 5.3:- Gross Enrolment Ration for Primary and Secondary School between 2006 EFY and 2011EFY



	Tigray	Afar	Amhara	Oromiya	Somali	B. Gumz	SNNP	Gambela	Harari	Addis Ababa	Diredawa	national
Primary 2006 E.C.	106.2	74.4	106.7	91.2	134.9	99.9	102	150.5	98.1	154.6	153.1	101.3
Primary 2007 E.C.	111.8	70.3	110.3	94.8	91.7	108.4	107	151.4	101.8	150.6	67.5	102.7
Primary 2008 E.C.	114.06	66.24	111.57	104.26	95.92	109.57	115.52	154.36	107.87	146.3	70.19	108.67
Primary 2009 E.C.	116.7	66	112.1	106.2	91.3	117.8	123.9	150.3	110.7	138.8	108.6	111.4
Primary 2011 E.C.	112.94	56.9	102.46	106.21	84.13	114.4	106.5	148.27	121.3	135.02	110.43	104.64
Secondary 2007 EC	41.62	14.46	27.61	21.26	11.27	25.82	27.93	58.77	35.42	77.64	22.67	25.61
Secondary 2008 E.C.	45.45	8.62	33.13	23.32	11.19	31.29	30.8	72.43	36.3	82.27	26.55	29.04
Secondary 2009 E.C.	44.7	12.1	33.6	24	11.7	33.4	33.9	65.8	35.4	80.6	34	30.1
Secondary 2011 E.C.	42.9	10.8	39.9	28.6	16.9	36.1	26.7	65	39	87.6	33.6	32

Source: compiled from MOE, 'Educational Statistics Annual Abstract' (various Years)

Figure 5.4:-**Net Enrolment Ratio (NER)** for Primary and Secondary School from 2006 EFY to 2011EFY

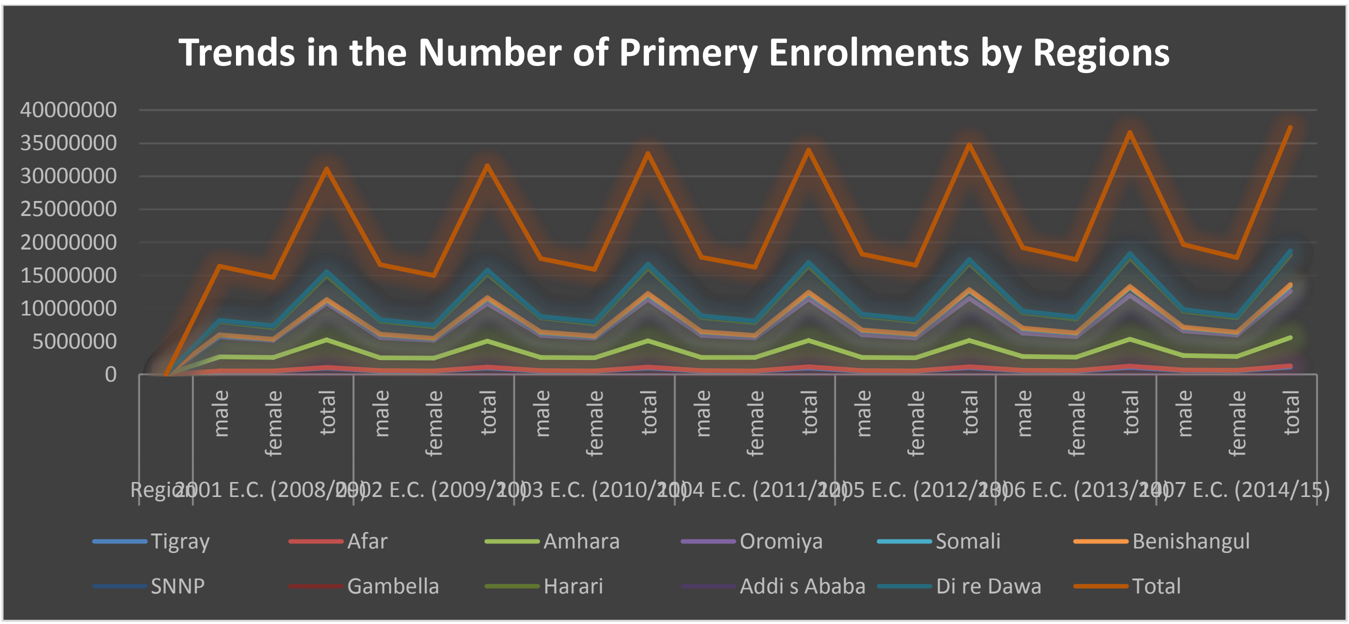


Source: compiled from MOE, 'Educational Statistics Annual Abstract' (various Years)

According to table 4 in annex and figure 5.2 above, the gross enrolment ratio for primary education was below 20 percent in 1992/93 and 94.4 percent in 2008/9, has reached 104.64 percent in 2018/19. Between 2008/9 and 2018/19, enrolment in primary education increased at an average of 15.77 percent per annum. From the above figures and the respondents' perception, it could be observed that there is a significant increase in access to primary education within a short period of time.

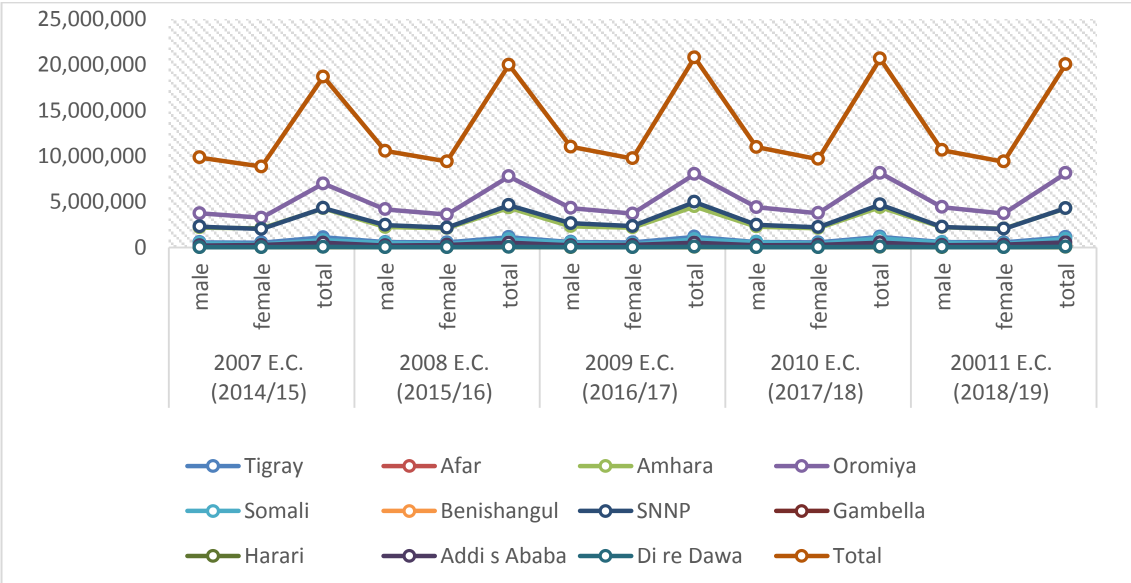
The disparity in regional performance in the sector also remains an area of concern. Based on secondary data and the respondents' perception, it could be gathered that the gross enrolment ratios for some of the sparsely populated regions is extremely low when compared to other regions. Tables 4 and 5 in the annex, in 2018/19 primary education gross enrolment ratio for Afar and Somali stood at **56.9** and 84.13 percent respectively, which are far below the national average of **104.64** percent. Among the four larger regions Tigray performed relatively better with 112.94 percent and the emerging regions and urban centers such as Harari, Addis Ababa, Gambela and Benshangul Gumuz registered 121.30, 135.02, **148.27**, and 114.40 percent respectively. These figures exceed the 100 percent threshold because they include enrolment numbers outside the eligible age group. With Regard to trends in the number of primary enrolments, figure 5.5 and 5.6 below shows an increasing trend among regions.

Figure 5.5: Trends in the Number of Primary Enrolments by Region from 2008/09 to 2014/15



Source: Compiled from MOE, 'Educational Statistics Annual Abstract' (Various Years)

Figure 5.6:-Trends in the Number of Primary Enrolments by Region from 2014/15 to 2018/19



Source: Ministry of Education, educational statistics, annual abstract, various reports

5.1.5.2 **Secondary education**

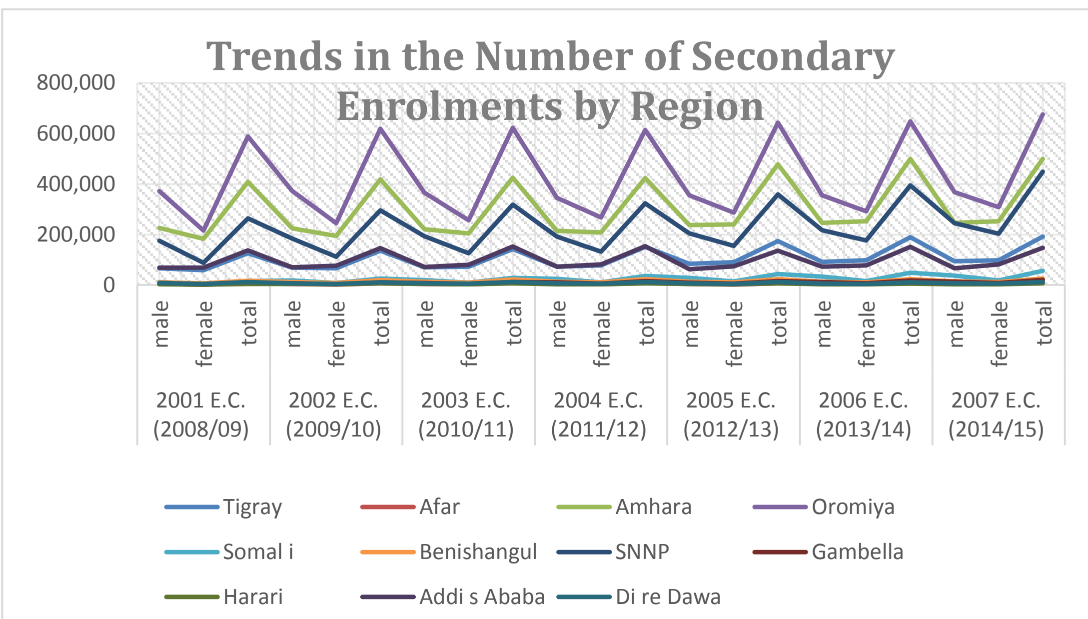
Since 1992/93, secondary education gross enrolment ratio has been growing. According to educational abstract for various years and the interviews with regional bureau of education heads, the gross enrolment ratio for secondary education increased from 6.6 percent in 1994/95 to 38.1 percent in 2008/9 and 48.5 percent in 2018/19. Between 2008/9 and 2018/19, secondary education enrolment grew at an annual average of 7.55 percent. Moreover, in 1999/2000, 571,719 students were enrolled in 310 Ethiopian secondary schools, and the national GER for secondary education (9-12) was 10.3 per cent (MOE 2000). In contrast, in 2015/16, there were 3,156 secondary schools that enrolled 1,982,185 students depicting the GER for Grades 9-12 as 29.04 per cent (MOE 2017).

Moreover, when secondary education is split in to first (Grades 9-10) and second (Grades 11-12) cycles, the GER drops significantly between the two cycles accordingly, national GER for the first cycle stood at 44.83 percent and 12.56 per cent for the second cycle in 2015/16 (MOE 2017:53).

The data from Ministry of Education shows that there is a wide regional variation in secondary school GER evidenced by Addis Ababa registered 82.27 per cent whereas Afar and Somali had 8.62 per cent and 11.2 per cent respectively (MOE, 2017: 52).

The disaggregation of the data into the two secondary school cycles also shows high enrolment in Addis Ababa with GER of over 100 per cent (112.91) and as low as in Afar (12.63 per cent) and Somali (13.94 percent) for Grades 9-10 (ibid.). The national NER for the first cycle for the academic year 2015/16 was still a 23.78 per cent (ibid, 56). However, this is at least three times what it was in 1999/2000 academic year (MOE, 2000:23). Moreover, according to table 3 and 4 in annex and figure 5.7 below indicated that school enrolment for secondary education showed similar trends for primary education except Afar and Somali, which registered lower percentages when compared with other regions

Figure 5.7:-Trends in the Number of Secondary Enrolments by Region from 2008/09 to 2014/15

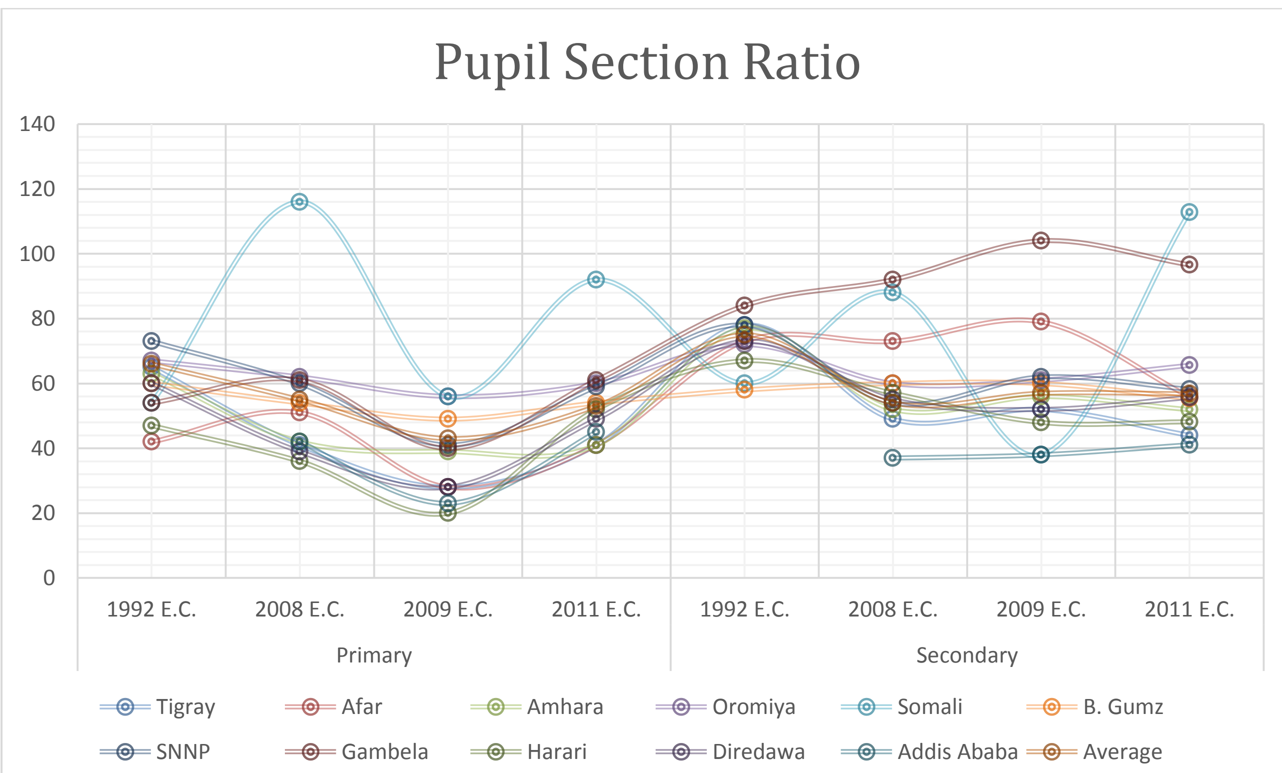


Source: Ministry of Education, educational statistics, annual abstract, various reports

5.1.5.3 Quality of General Education (Primary and Secondary School)

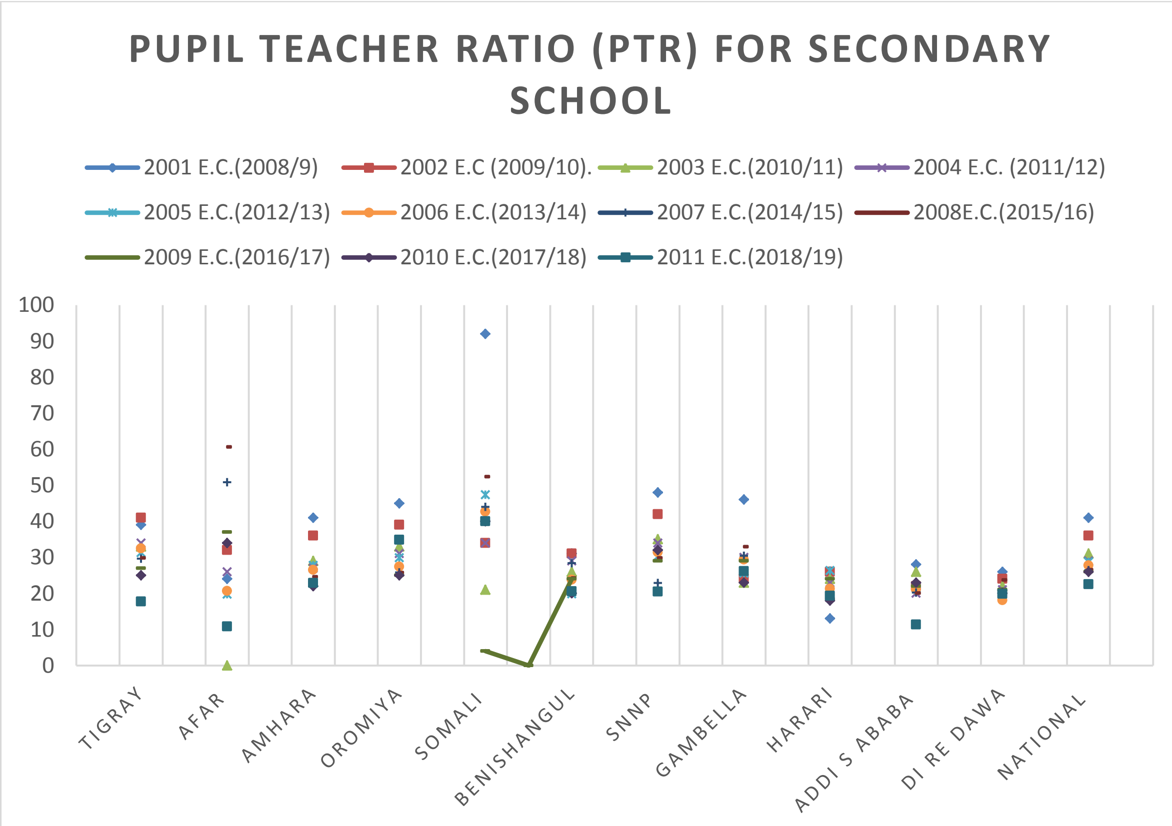
According to figures 5.8, 5.9, 5.10, 5.11 and table 5.3 below and respondents' perception, the researcher observed that although there have been significant improvements in terms of access to education , the quality of services provided did not reach the desired standard. That means the standard number of students in a class is 50 for primary school and 40 for secondary schools. The pupil-teacher ratio is too high to provide quality education to students. The primary pupil-teacher ratio has significantly increased from 42 in 1996/97 and 50 in 2009/10 to 39 in 2018/19, which is 11 less than the national standard, and the secondary pupil-teacher ratio reached 22.5 in 2018/19, 17.5 less than the designated standard. Therefore, the qualities of education provided in the primary and secondary schools have improved in 2018/19 to produce better equipped citizens. Moreover, the number as well as the quality of teachers has also been improved in order to enhance the standard of the school systems.

Figure 5.8: -Pupil Section Ratio



Source: Ministry of Education, educational statistics, annual abstract, various report

Figure 5.9: -Table Trend in national Pupil Teacher Ratio **(**PTR) for secondary schools (grades 9-12)



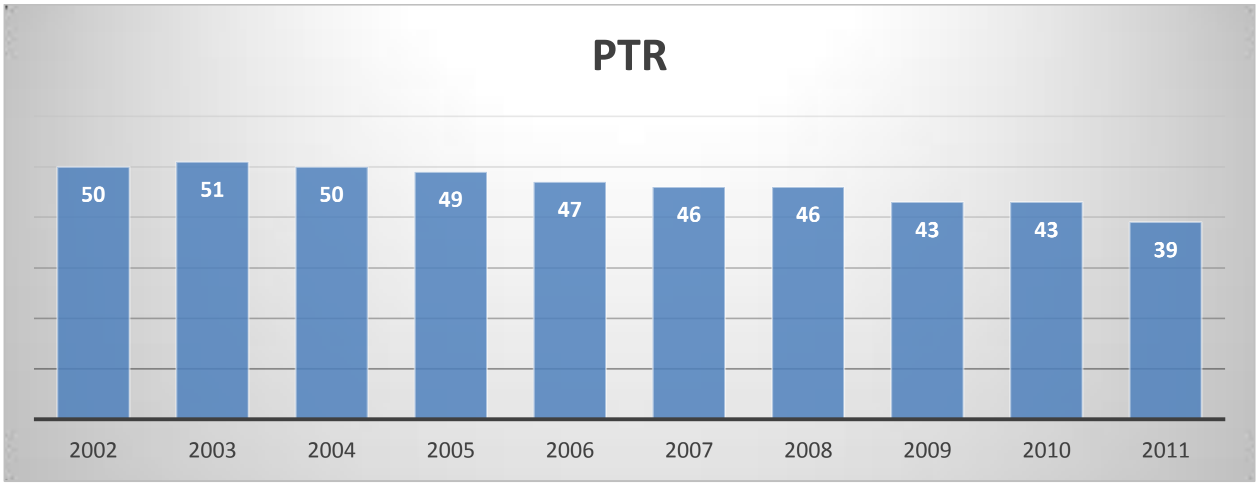
Source: Ministry of Education, educational statistics, annual abstract, various report

Table 5.3: Trends in Primary Pupil Teacher Ratio (PTR), 2002 E.C.-2011 E.C.

year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
PTR	50	51	50	49	47	46	46	43	43	39

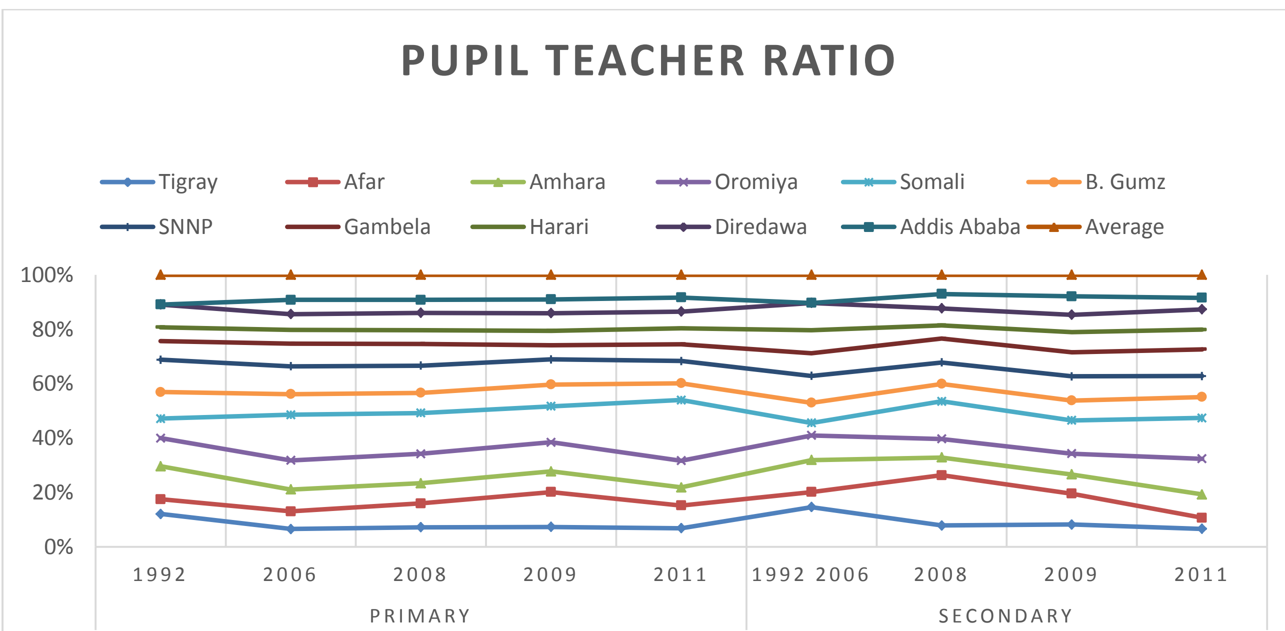
Source: Ministry of Education, educational statistics, annual abstract, various reports

Figure 5.10: -Trends in Primary Pupil Teacher Ratio (PTR), 2002 E.C.-2011 E.C.



Source: Ministry of Education, educational statistics, annual abstract, various report

Figure: 5.11: Pupil Teacher Ratio

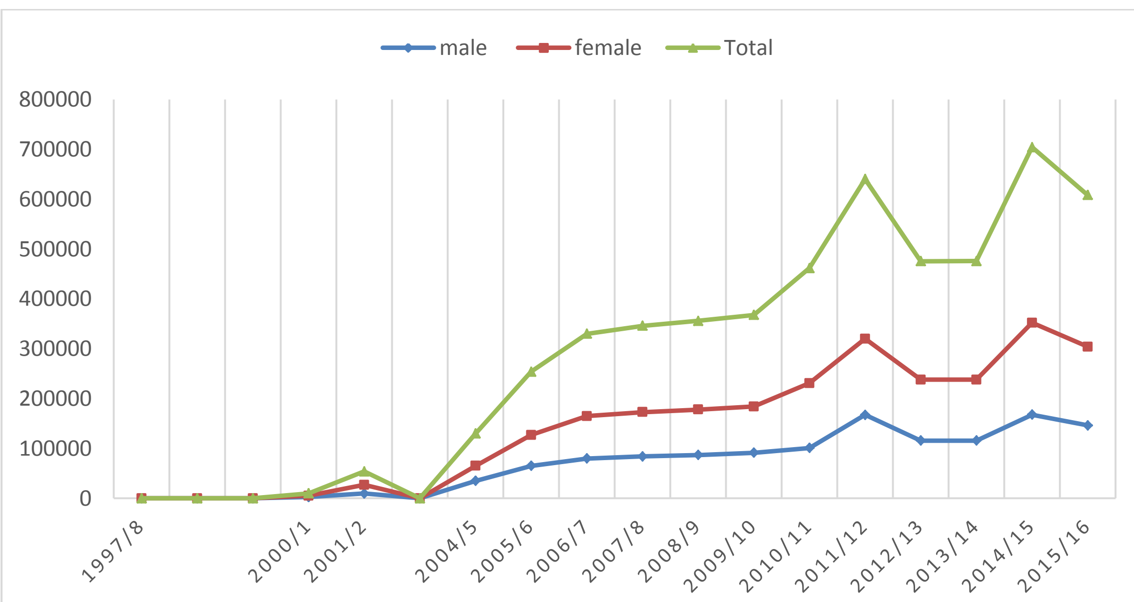


Source: Ministry of Education, educational statistics, annual abstract, various report

5.1.5.4 Technical and Vocational Education and Training (TVET)

In Ethiopia, TVET is institutionally distinct from schemes in the Ethiopian educational system and follows a parallel track. Students entering the TVET stream after completing Grade 10 have three options, depending on scores they received in the national exam: 1 year of training (10+1); 2 years' training (10+2), or 3 years' training (10+3). Those who complete three years of TVET training are considered as having completed first year college-level education and as a result can join higher education institutions in order to complete their undergraduate studies after attaining level 4 in the TVET scheme . TVET Graduates have the option to go through official assessment of their skills for key competencies. It should be noted that the government plans to establish TVET institutes in all woredas of the country by 2020 (MOE 2015: 10).

Figure 5.12: Enrolment trends in TVET by gender, 1997/8-2015/16



Source: compiled from MOE, 'educational statistics annual abstract' (various years)

As indicated in figure 5.12 and the perception of a federal TVET official, there has been substantial increase in enrolment in TVET between 1997/8 and 2015/16. According to data elicited from educational abstracts of various years, there were 123 government and eighteen non-government

TVET schools in the country enrolling a total of 38,176 students during the academic year 2001/2 (MOE 2000: 8). In addition, there were twenty-eight TVET centers under the ministry of agriculture that enrolled 12,494 trainees during the same year. In contrast, there were 582 TVET institutions across the country that enrolled 304,139 students in 2015/16 (MOE, 2017).

5.1.5.5 Higher Education

When EPRDF assumed power in 1991, there were only two universities (Addis Ababa and Haromaya), and the gross enrolment rate in higher education was 0.7 per cent in 1995 (Woldegiyorgis 2015: 2). However, by the turn of the century, the government launched five new universities-by upgrading junior-level institutions marking the beginning of an aggressive higher education expansion programme (woldegiyorgis 2015: 2). Given the massive public investment in higher education ever since, the country had thirty-eight accredited universities (thirty-six of which are government owned) in 2016.

The majority of universities in Ethiopia were built in the past 15 years. The universities established in 2005 or later are what the Government refers to as second, third and fourth generation universities. Prior to 2005, there were nine universities - 1 each in Addis Ababa and Tigray, 2 each in Amhara and Oromia, and 3 in SNNP. Now, there is at least one university in every region except for Harari, although Haramaya University (located in Oromia region) is just 20km away from the capital Harar.

Due to this, total undergraduate level enrolment grew from 56,072 in 2003/4 to 778, 766 in 2015/16 (MOE, 2017: 123) showing an annual growth rate of 25.5 per cent that was close to fourteen-fold increment. Enrolment in graduate programmes also rapidly increased during recent years with rise in gross enrolment from 2,560 in 2003/4 to 51,521 in 2015/16 (MOE 2017: 127),which depicts -a twenty-fold increment in time span of thirteen years.

During the GTP-I program cycle (2010-2015), significant amounts of public resources was allocated to expand access to higher education.. As a result, overall undergraduate enrolment in all programs increased from 420,387 to 755, 244 (GTP-II, p.43)(Excluding evening, distance and summer course, the increased was from 207,179 (public 190.043, private 17,136) in 2009/10 to 418,738 (public 375, 416; private 43,323) by 2014/15.). Enrolment in postgraduate program (both public and private institutions) increased from 14,272 in 2009/10 to 33,915 by 2014/15. Relative to the university aged population the enrolment rate has increased almost seven-fold, from 1.2 percent in 2000 to 8.1 percent in 2014 (World Bank, 2019). The 2014 rate is below enrolment in Kenya (11.7 percent) but comparable to the Sub-Saharan African and low-income country (LIC) average rates of 8.9 percent for the same period. Although there have been improvements in enrolment, issues surrounding completion rates still persists (MoE, 2018). The focus of GTP-II continues to be expansion of higher education including improvements in the quality of courses, teachers and university facilities like laboratories and research equipment, and equity in access with respect to gender.

The data from educational abstract for various years regarding graduates of the higher education system, growth rates were high in recent years. For instance, 127,275 students obtained their first degrees in 2015/16 whereas this was 75,348 in 2010/11. Since the introduction of ESDP IV in 2010, which for the first time admitted emphasized the need for economic transformation that requires 'conscious application of science, technology and innovation as the major instruments to create wealth' (woldegiyorgis 2015: 24) There has been a deliberate shift in undergraduate enrolment away from social sciences towards natural sciences signified by 30:70 ratio respectively. It was learnt that, the ratio was 62:38 representing enrolment in natural and social sciences in corresponding order as of 2015/16 (MOE 2017:127).

5.1.5.6 Number of universities per 100,000 people and Gross enrolment rate at secondary level (percent)

It is difficult to assess access to universities by examining student placement since students are assigned by the National Educational Assessment and Examination Agency (NEAEA). A proxy to assess students' access to university will be to look at the gross enrolment ratio of secondary school in different regions. Table 5.4 reveals that Afar and Somali have very low GER both for grades 9-10 and grades 11-12. This indicates that these regions have limited access to university education. In contrast AA, Gambella, DD, Amhara, Tigray have relatively better GER in grades 11-12 and hence have a higher access to University education.

In addition to placement, table 5.4 also shows the number of universities per 100,000 people regionally. It gives a proxy of the potential spill-over benefits each region is currently afforded. Although regions like Amhara, Oromia and SNNP have a large number of universities; the potential spill-over benefits of these universities are spread across larger populations. Moreover, per 100,000 people rate for these regions (0.05, 0.03 and 0.005 respectively) are therefore smaller than other regions. The population of Harari is included in the Oromia rate as some of the spill-over from universities in Oromia are likely to benefit the Harari population (in particular Haramaya University). The smaller areas of Benishangul

Gumuz, Dire Dawa and Gambella have the largest potential spill-over benefits from universities given the relatively small populations.

Table 5.4: Number of Universities, Number of universities per 100,000 people and Gross enrolment rate at secondary level (percent).

Regions	Number of Universities	Number of universities per 100,000 people	Gross enrolment rate at secondary level (percent)	
			Grades 9-10	Grades 11-12
Tigray	4	0.08	76.4	15.1
Afar	1	0.06	15.8	6.5
Amhara	10	0.05	55.1	16.5
Oromia(hareri)	12	0.03	39.8	9.8
Somali	2	0.03	20.7	10
BG	1	0.09	58.4	12.7
SNNPR	10	0.05	47.5	12
Gambela	1	0.23	93.2	23.8
Dire Dawa	1	0.41	51.6	15.2
Addis Ababa	2	0.06	122	52
Country-wide		0.05	47.6	13.1

Source: Education Statistic Abstract (2018)

According to the above data, there are differences across regions that are not directly attributable to federal policy since primary and secondary educations are under the purview of regional responsibilities. Therefore, the implication is that equity in tertiary education is not only the concerns of the Ministry of science and Higher Education (MoSHE) but is also responsible for implementing higher education policy and spending at the regional level.

5.1. 6. Regional Equity in Educational Sector

Human capital development is pivotal towards sustainable economic development both in terms of local and national contexts. In order to achieve equitable human capital development among the regions, there should be fair distribution of the national budget for the education sector taking into account specific contexts of the regions. Table 5.5 below depicts the average amount of expenditures allotted for the 9 Ethiopian regions and the two autonomous city administrations (Addis Ababa and Dire Dawa) per students enrolled in primary and secondary schools over the 2009-2019 periods. As can be seen from the table, Addis Ababa, Harari, and Dire Dawa had the highest average outlays per student enrolled in primary education in their respective orders. On the other hand, Somali, Oromia, and SNNP had the lowest average per pupil primary school expenditures. In case of expenditures in secondary school, Dire Dawa had the highest per student outlay (Birr 4610) followed by Somali (Birr 3555) and Afar (Birr 3452) regions. Regions with the lowest average per pupil secondary school expenditures, respectively are Oromia (Birr 1638), SNNP (Birr 1790) and Amhara (Birr 1954) regions.

Table 5.5. Average cost per student and number of students enrolled per million Birr in primary and secondary Schools (2009-2019)

Region	Primary		Secondary	
	Birr per students enrolled	Number of students per million birr	Birr per students enrolled	Number of students per million birr
Tigray	853	3482	3271	348
Afar	1146	1030	3452	331
Amhara	761	1858	1954	831
Oromia	543	2320	1627	901
Somali	469	2998	3555	352
Benshangul	805	1765	2330	810
SNNP	556	2422	1790	1638
Gambella	1008	1277	2434	442

Harari	1489	934	2803	497
Addis Ababa	1967	949	2107	807
Dire Dawa	1399	897	4610	387

Source: Computed based on statistical abstracts of Ministry of education and MoFEC

In terms of the number of students per million birr of budget in primary schools, Tigray region had the largest number with 3482 students followed by Somali (2998), and SNNP (2422) regions. In case of secondary education, however, SNNP had the largest number of students (1638) while Afar had the least number of students (331) who had to rely on an expenditure of 1 million Birr (Table 5.5 above). The above average figures suggest some degrees of inequality among regions in terms of budgets allocated to the education sector. Given the fact that the average figures give inconclusive results about the potential inequalities, it is better to use appropriate measures of inequality.

On this ground, we computed Gini coefficients and presented in table 5.6 below in order to give better measure of inequalities in the federal government's budget allocation to regions over 2009-2019 period. The Gini coefficients presented in table 5.6 below were computed by separating regional education expenditures into recurrent-capital and primary-secondary categories. Recurrent and capital expenditures include all expenditures made for primary, secondary, TVET and other tertiary-level institutions administered under regional states and Cities under the two respective titles. Expenditures for primary and secondary schools refer to the sum total of recurrent and capital expenditures made under the corresponding school levels (Primary and secondary).

Table 5.6: Gini Coefficients for public expenses allocated for regional education bureaus by year

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Recurrent expenditure	0.15	0.14	0.13	0.13	0.15	0.15	0.16	0.21	0.19	0.17	0.15
Capital expenditure	0.21	0.25	0.23	0.21	0.21	0.22	0.22	0.24	0.45	0.25	0.29
Expenditures for Primary School	0.11	0.12	0.09	0.18	0.20	0.16	0.14	0.19	0.15	0.19	0.07
Expenditures for Secondary School	0.30	0.44	0.33	0.31	0.33	0.18	0.12	0.21	0.25	0.13	0.19

Source: Own computation based on various years statistical abstracts of Ministry of education and data from MoFEC and CSA

As depicted in table 5.6 above, the values of Gini coefficients corresponding to recurrent expenditures range between 0.13 and 0.21 suggesting low level of inequalities among Ethiopia's regional states in terms of recurrent budget. The Gini coefficients corresponding to capital budgets allocated to the regional states' education sector ranged between 0.21 and 0.45 indicating a relatively higher inequality in case of capital expenditures as compared to that of recurrent expenditures. The highest inequality in case of capital expenditures (Gini = 0.45) was observed in 2017 in relation to the larger average per capita expenses in Addis Ababa city (Birr 438) on the one hand and the smaller average per capita expense in Amhara region (Birr 33.6) on the other, which is far below the national average per capita expense of Birr 82 in the same year. The fact that inequalities turned higher in case of capital expenditures may be associated with the differences in the initial conditions of infrastructures among regions.

In terms of the primary and secondary school expenditures divide, inequalities appeared to be very low in case of the former while it was relatively higher in the later. The least inequality in primary expenditures was registered in 2019 (0.07) while it was in 2015 in case of secondary school expenditures (0.12), regional inequalities in secondary education's expenditures were higher over the first five years (2009-2013). The highest inequality in case of secondary school expenses (Gini = 0.44) was observed in 2010 due to the high per capita expenses in Tigray region (birr 93.6) on the one hand and the lower per capita expense in the SNNPR (1.92) region on the other. The average per capita expenses for all regions was about 15.4 in the same year which was far higher than that of SNNP while it was six times lower than that of Tigray.

5.1.6.1 Effects of educational expenditures on education outputs

Apart from variations in budget allocation, there could be differences among regions in terms of the efficiencies with which education budgets are utilized as it was observed in terms of differences in the number of students educated per million Birr (table 5.7 below). The effect can be better estimated using inferential techniques. This was done through ordinary linear regression (OLS) using data on selected education outputs and budgets over 2009-2019 periods. Results presented in table 5.7 below show the effect of recurrent and capital expenditures made in primary and secondary educations on the number of students enrolled at the two respective levels of education. The first two columns of table 5.7 below depicts regression coefficients and the corresponding robust standard errors (RSE) up on estimating the effects of total primary education expenditures (in logarithmic terms) on the number of students enrolled in primary education (measured in logarithmic term). The first column constitutes estimate without region dummies. Similarly, the second two columns of the table show coefficients and RSEs linked to estimations made to determine the number of students enrolled in secondary education with the first depicting estimates without region dummies. In addition to the expenditure variables, dummies for years and regions were included to account for regional fixed effects and effects of changes in policy that would confound the results. Estimates linked to region dummies are reported while those of year dummies are not for the sake of brevity. The region coefficients show differences in the performances of the output variables as compared to the based region category, which happened to be Addis Ababa city in all our estimations. All estimations were done using pooled cross-section linear regression with robust standard errors (RSE) to take the potential impact of heteroscedsticity. Results reported at the bottom of the regression outputs show number of observations, F statistics and R-squares measuring model fitness. The same approaches were pursued and the explanations apply in all the subsequent regression results.

Table 5.7. The effect of recurrent and capital expenditures on total number of enrollments in primary (1-8) and Secondary (9-12) schools.

Dep. Variables	Number of prim. enrollment (log)		Number of Sec. enrollment (log)	
	Coef. (RSE)	Coef. (RSE)	Coef. (RSE)	Coef. (RSE)
Expenditures on Prim. educ. (log)	1.116*** (0.038)	0.016 (0.066)		
Expenditure on Sec. educ. (log)			1.064*** (0.054)	0.007 (0.023)
Afar		-1.142*** (0.123)		-2.682*** (0.085)
Amhara		2.077*** (0.094)		1.221*** (0.079)
Benshangul		-0.876*** (0.115)		-1.754*** (0.064)
Dire Dawa		-1.983***		-2.471***

		(0.154)		(0.080)
		-1.558***		-2.193***
Gambella		(0.146)		(0.108)
		-2.507***		-3.002***
Harari		(0.182)		(0.094)
		2.546***		1.563***
Oromia		(0.106)		(0.087)
		2.065***		1.005***
SNNP		(0.072)		(0.077)
		0.460***		-1.231***
Somali		(0.077)		(0.079)
		0.733***		0.161***
Tigray		(0.050)		(0.073)
	-7.920***	12.636***	-7.861***	11.480***
_cons	(0.760)	(1.329)	(0.952)	(0.426)
Year dummies included				
No. of Obs.	108	108	107	107
F – stat.	137.2	4959.8	94.6	1322.3
R-squared	0.905	0.996	0.884	0.993

Note: ***, **, * indicate significance at 1%, 5% and 10% levels, respectively

The estimation results in table 5.7 above show the effects of education expenditures on primary and secondary enrollments. When regional effects are excluded from the estimating equation, a 1% extra outlays on primary education is associated with a 1.12 % increment in the number of students enrolled in primary schools. Alternatively, a 100 birr additional expenses on primary schools by regions lead to the enrollment of 112 extra students in the primary schools. However, this effect disappears and turns to be insignificant when dummies for regional states are included to account for regional differences, despite the sign remains to be positive. Differences among the regional states can be seen from the coefficients associated with the region dummies. Expenditures had no any significant effect on the number of students enrolled in primary and secondary educations. The negative and statistically significant coefficients corresponding to Afar, Benishangul Gumuz, Dire Dawa, Gambela, and Harari regions indicate the fact that they had significantly lower primary enrollment than Addis Ababa city which is a base category to compare against. On the other hand, Amhara, Oromia, SNNP, Somali and Tigray regions had significantly higher rate of enrollment than Addis Ababa in terms of enrollment in primary education.

Similarly, higher expenditures in secondary schools by regions lead to significantly higher rates of enrollment in secondary educations when regional effects are disregarded. Up on including regional dummies, changes in secondary school expenditures had no any significant effect on the number of students in secondary schools. This suggests the importance of other social and economic factors in determining students' enrollment in both primary and secondary levels of education. The coefficients associated with regional dummies remained to convey the same interpretation with that of the primary school enrollment with the exception of Somali region which appeared to have significantly lower secondary enrollment rate than Addis Ababa. The regional differences mainly follow variations in their population and level of rural-urban contexts. For this reason, it may be more appropriate to use alternative output measures and expenditures per population for all the regions. On this account, the effects of per capita total education expenditures made in primary and secondary education on the gross enrollment ratios (GER) have been estimated and results have been reported in table 5.8 below.

Table 5.8. The effect of per capita total education expenditure on Gross enrollment ratios (GER) of primary (1-8) and Secondary (9-12) education

Dependent Variable	GER- Primary		GER – Secondary	
	Coef. (RSE)	Coef. (RSE)	Coef. (RSE)	Coef. (RSE)
Percapita exp. on prim. educ.	0.028** (0.012	0.008** (0.004)		
Percapita exp. on sec. educ.			0.088*** (0.024)	0.010 (0.006)
Afar		-69.31*** (7.219)		-60.96*** (5.344)
Amhara		-13.85* (7.117)		-41.14*** (5.022)

		-9.34		-39.91***
Benshangul		(7.947)		(5.331)
		-27.05***		-39.91***
Dire Dawa		(9.470)		(5.440)
		15.89**		-15.47**
Gambella		(6.692)		(6.131)
		-23.33***		-35.42***
Harari		(6.949)		(5.012)
		-26.16***		-46.22***
Oromia		(7.155)		(5.321)
		-15.64**		-43.78***
SNNP		(7.032)		(5.171)
		-37.66***		-60.02***
Somali		(10.548)		(5.192)
		-14.89**		-30.18***
Tigray		(6.862)		(4.783)
	90.273***	111.647***	24.016***	64.96***
_cons	(9.225)	(7.648)	(4.087)	(5.653)
Year Dummies included				
Number of	102	102	70	70
F- statistics for model fitness	1.182	49.74	2.30	196.16
R-squared	0.19	0.80	0.31	0.93

Note: ***, **, * indicate significance at 1%, 5% and 10% levels, respectively

Per capita expenditures in primary and secondary schools have positive effect on their respective gross enrolment ratios (GER). In the absence of region dummies, the effects are statistically significant at 5% and 1% levels on primary and secondary levels GER respectively. For one thousand birr increase in per capita expenses on primary education, the GER of primary schooling increases by 28% whereas similar change in secondary education's expenditure appeared to have more effect (88%) on the corresponding GER. The positive effect remained to be valid in case where regional effects are controlled for albeit the statistical insignificance in case of secondary education perhaps due to smaller number of observations. Specifically, for 1000 Birr increase in per capita expenditure on primary education there is 8 % increase in GER of primary schools and 10% increase in the GER of secondary education. In terms of regional variations of primary education's GER, all regions appeared to have significantly lower performance than Addis Ababa city (base category) with the exception of the Gambella region. The conditional mean GER of Gambella turned to be about 16% higher than that of Addis Ababa. In case of the GER of secondary education, however, all regions have significantly lower performance than Addis Ababa city.

5.1.6.2 Gender parity Index on Education Indicators

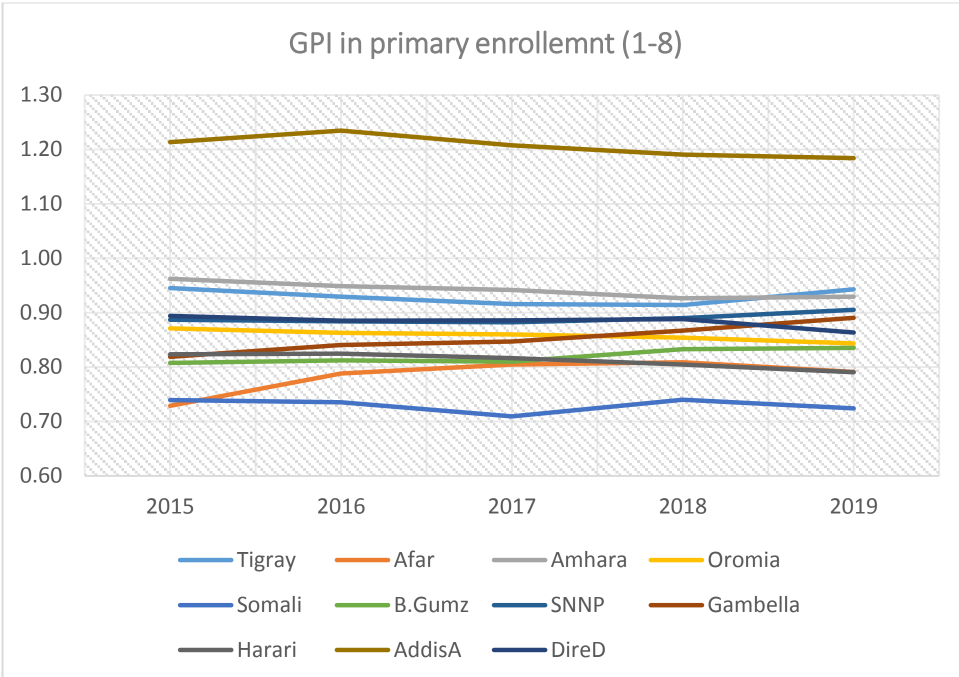
Table 5.9: Gender parity Index (GPI) in Primary (1-8) enrollment

	2015	2016	2017	2018	2019
Tigray	0.95	0.93	0.92	0.91	0.94
Afar	0.73	0.79	0.80	0.81	0.79
Amhara	0.96	0.95	0.94	0.93	0.93
Oromia	0.87	0.86	0.86	0.85	0.84
Somali	0.74	0.73	0.71	0.74	0.72
B.Gumz	0.81	0.81	0.81	0.83	0.83
SNNP	0.89	0.88	0.88	0.89	0.91
Gambella	0.82	0.84	0.85	0.87	0.89
Harari	0.82	0.82	0.82	0.80	0.79
AddisA	1.21	1.23	1.21	1.19	1.18
DireD	0.89	0.89	0.89	0.89	0.86

Source: Computed based on MoE's 2018/19 Statistical abstract

Figure 5.13 and table 5.9 depict large variations in regional gender disparity in primary school enrolment over the 2015-2019 period. Addis Ababa city administration had registered the highest GPI over this period with the values exceeding 1. This indicates that more number of female students have been registered in primary school. On the other hand, Somali region had remained to have the least GPI in primary school enrolment. Afar region had also a relatively lower GPI as compared to other regions but with improvement over the recent years. Most of the regions' GPI were concentrated around 0.80. Amhara and Tigray region had relatively higher GPI with their values exceeding 0.90.

Figure 5.13: GPI in primary school enrolment (Grade 1-8)



Source: Computed based on MoE's 2018/19 Statistical abstract

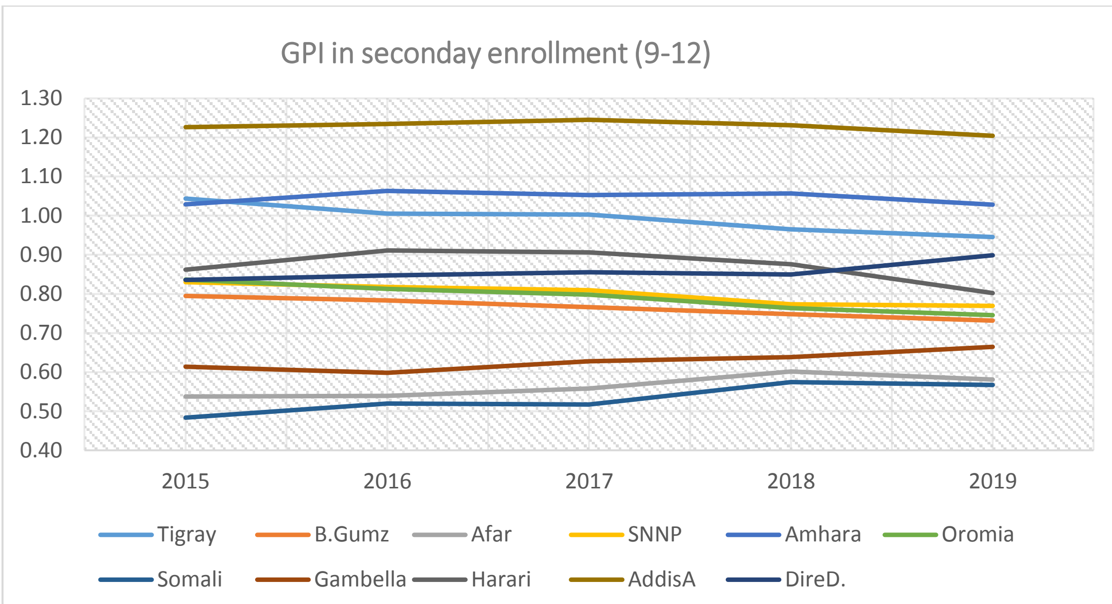
Table 5.10: Gender parity Index (GPI) in Secondary school (9-12) enrollment

	2015	2016	2017	2018	2019
Tigray	1.04	1.01	1.00	0.96	0.95
B.Gumz	0.79	0.78	0.77	0.75	0.73
Afar	0.54	0.54	0.56	0.60	0.58
SNNP	0.83	0.82	0.81	0.77	0.77
Amhara	1.03	1.06	1.05	1.06	1.03
Oromia	0.84	0.81	0.80	0.76	0.75
Somali	0.48	0.52	0.52	0.57	0.57
Gambella	0.61	0.60	0.63	0.64	0.66
Harari	0.86	0.91	0.91	0.88	0.80
AddisA	1.23	1.23	1.25	1.23	1.20
DireD.	0.84	0.85	0.86	0.85	0.90

Source: Computed based on MoE's 2018/19 Statistical abstract

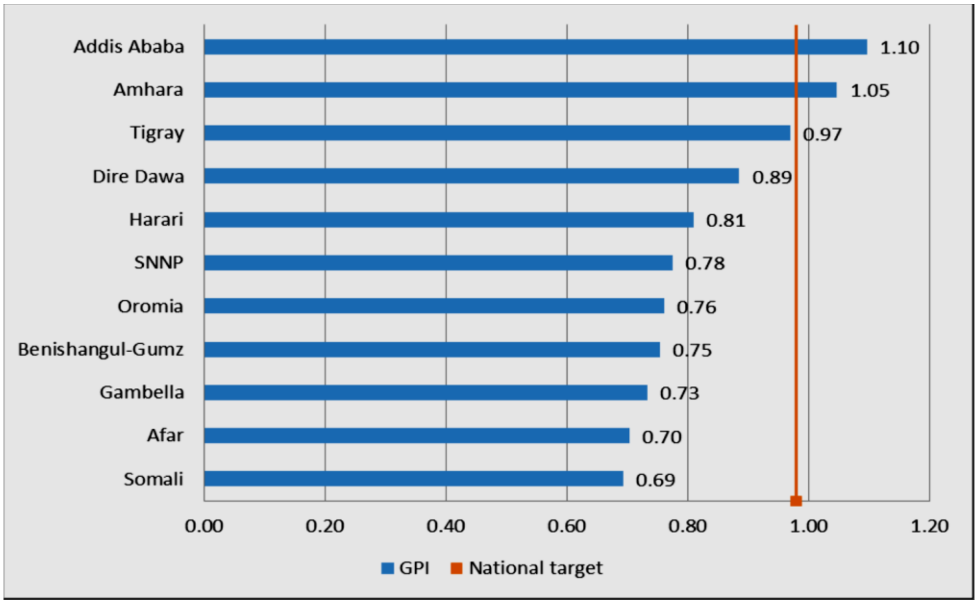
In terms of the overall secondary school (9-12 grades), there were differences (Figure 5.14 and table 5.10) in regional gender disparity indexes (GPI) over the 2015-2019 period. Similar to the earlier case, Addis Ababa city administration had registered the highest GPI in secondary school enrolment with the values exceeding 1 over the entire period. This indicates that more number of female students have been registered in secondary school than their male counterparts. On the other hand, Gambella, Afar and Somali regions had relatively lower GPI in secondary school enrolment. Somali region had the least GPI as compared to other regions but with improvement over the recent years. Amhara and Tigray region had the second and third highest GPI next to Addis Ababa.

Figure 5.14: GPI in secondary school enrolment (Grade 9-12)



Source: Computed based on MoE’s 2018/19 Statistical abstract

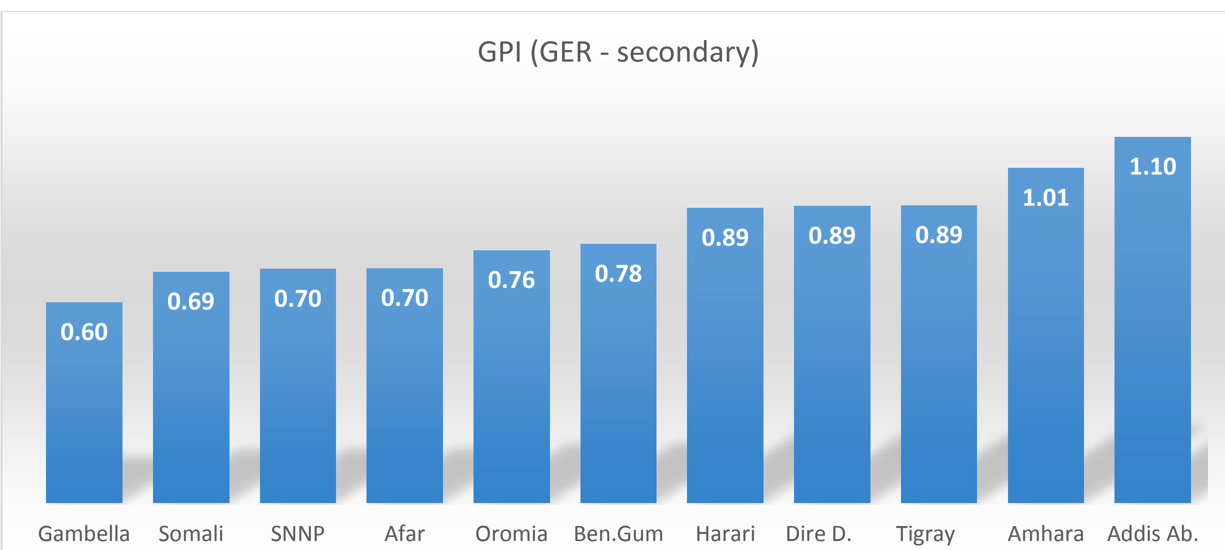
Figure 5.15: GPI for gross enrolment rate (GER) in primary (1-8) by Region, 2019



Source: MoE, 2018/19 Statistical abstract

As can be seen in figure 5.15, in terms of GER based GPI, Addis Ababa and Amhara region exceeded the national target of 1 in 2017. The GPI of SNNP, Oromia, Benishagul Gumuz, Gambella, Afar and Somali was below 0.80 in the same year. Among this Somali had the least GPI with a value of 0.69. Thus, these regions need more effort to ensure gender equality in the GER of primary education.

Figure: - 5.16: Gender parity index (GPI) in secondary gross enrolment rate (GER)



Source: computed based on 2018/19 Statistical abstract on Education

Figure 5.16 depicts GPI of secondary GER with the same patter like that of primary GPI. Amhara and Addis Ababa had reached the national target suggesting equality between male and female students. Benishangul gumuz, oromia, Afar, SNNP, Somali and Gambella had GPI of below 0.80 with the least value of 0.60 registered in Gambella. Thus, these regions need more effort to ensure gender equality in secondary education.

In general, the analysis showed that there is clearly a growing trend in all aspects of socio-economic development as exemplified in the above education sectoral development for last ten years. It is however important to realize that the progresses in each of the level of the education sectoral development are not equitable and regions show significant variation in their emphasis on their achievements and their development outcomes.

To conclude, the performance of Ethiopia's education sector has been quite satisfactory. Needless to say, enrollment has increased substantially. The number of teachers hired was substantial although it failed to match the rapidly increasing enrollment. As a result, the pupil-teacher ratio has improved over time. Public expenditure on education has been very effective in expanding primary education and secondary education. Education spending has the highest share in regional level spending.

Despite the achievements observed at the primary level, the analysis shows that the ESDP has been less successful at improving equity and filling the gap of the access at secondary level. Despite substantial increases in the enrolment of children in secondary schools, absolute enrolment levels are still very low and wealth, geographic and gender disparities remain considerable. Therefore the researcher recommends that there is a significant need for policies to modify current allocations of the current and capital budget between primary, secondary and tertiary education and for strategies to comprehensively shape education demand and supply side factors. Moreover, as can be observed in the above discussion, almost all regions in the country are performing well in the education sector except Afar and Somali Regions. Given a very low baseline of educational enrolment in areas such as Somali and Afar, more concerted action is needed to further reduce the inter-regional educational gap without compromising efficiency to fulfill each individual's right of equal access to government provided services stipulated in the Ethiopian Constitution.

The perceptions of the respondents regarding equitable development were different from region to region on some issues. About 85% of the respondents from Oromia, SNNP and Amhara regions replied on the equitability of educational development are that there is an increasing trend of the budget allocation from the federal government for the sector in the stated years. However, they believed that the distribution among the regions is not equitable. The reason they mentioned was that regions were given huge expenditure assignment on one hand but the resource of which regions expected to mobilize stipulated in the constitution does not reflect their reality on the other hand. They complained on the federal government that lucrative revenue sources are assigned for the federal government neglecting the regional reality. They further complained on the block grant preparation saying it lacks fairness and less weight was given to the population size on which all services are expected to address; as a result, they couldn’t provide education to their citizen equitably. They mobilized their population to construct additional schools to have more access to education services. They proposed that federal government should compensate them by introducing specific grant.

On the other hand respondents from emerging regions (Gambela, Benshangul, Afar, Harari and Somali) perceived that lion share of the budget goes to the big regions. The have a big complaint on the federal government that the promise of the constitution was not kept. They said it is a promise on the paper. They further stated that their budget is not covering their recurrent budget and they were not able to build more schools to access education service. They proposed that specific grant should be introduced to support emerging regions.

Respondents from Addis Ababa stated that construction cost in the city gets rising from time to time and leads high cost on the education service. Therefore, they claimed that Addis Ababa should get its share from the federal grant transfer. They further claimed that there should have a room for Addis Ababa to have their own representative in the House of the Federation who would bring their case to the Hose of the federation. Likewise, respondents from Dire Dawa administration complained that the budget allocation from the federal government is not covering their need and further complained that they don’t have their representative in the House of the federation who would engage in the budget debate of the Hose of the Federation.

Whereas respondents of the Tigray regional state complained that the calculation of the federal block grant lacks to include the potential revenue capacity of the regional state. Due to that fact the region is penalized to get more transfer compare to other regions.

About 85% of the respondents from federal institutions stated that there is a big mismatch of the development among regions. They further explained that Ethiopia has made significant stride to ensure equitable development in terms of interpersonal and interregional equity, the policy framework and the actual allocation of resource are more or less designed to ensure equitable development and in most instances they believed that it has positively contributed in the achievement registered so far in terms of ensuring equitable development through providing equitable resources to subnational units at least to regions. However, they mentioned that still there is a visible mismatch of an equitable development among regions that needs to be corrected. One could conclude that respondents from different regions and cities have varying, even contradictory opinions, which to some extent holds water due to lack of transparency in the allocation of grants in education and other sectors.

5.2. The health sector development

The health service system in Ethiopia is federally decentralized along the nine regions and two city administrations. These are further subdivided into 62 zones and 523 districts or woredas. In 1993 the government published the country's first health policy in 50 years setting the vision for the healthcare sector development for the next two decades. The policy tried to reorganize the health services delivery system with the objective of contributing positively to the overall socio-economic development effort of the country. Three major aspects of this policy focus on fiscal and political decentralization, expanding the primary health care system, and encouraging partnerships and the participation of nongovernmental actors.

To implement the policy, the Health Sector Development Program (HSDP) and a health care and financing strategy were developed in 1997/98, in 1998 respectively. The program under HSDP-I covered the first five years (1997/98–2001/02) and prioritized disease prevention and decentralizing health services delivery. The targets set in HSDP-I was not met and a new strategy, HSDP-II (2002/03–2004/05), was developed with an added aim of including NGOs in the implementation of a basic health package. Pursuant to the health policy goals of improving the health status of the Ethiopian population using the cycle of the five year term health strategy framework, HSDP-III was developed in 2005 to last until 2009/10. This latest strategy stresses the need to increase national health spending; the strategic role of NGOs as partners in achieving universal primary healthcare coverage not only in planning but also in implementing healthcare delivery particularly at the woreda level and also emphasizes the need to strengthen government-NGOs collaboration. Complementing these frameworks, Ethiopia's social-development program, the 2002 medium-term poverty reduction strategy paper (PRSP) termed Sustainable Development and Poverty Reduction Program (SDPRP), recognizes the need to further development through improving governance and human rights. This framework is repeated in the second PRSP known as Plan for Accelerated and Sustained Development to End Poverty (PASDEP) (2005/06– 2009/10) as countries, development blueprint.

The Government's commitment has significantly improved the health status of women, neonates, children, adolescent, and young people. In response to the need to provide guidance for implementing initiatives stipulated in the HSTP pertaining to reproductive health, a National Reproductive Health Strategy for the years 2016- 2020 was developed and endorsed.

5.2.1 Health Policies, Strategies, and Programs

As with the other social infrastructure, the health service in the country has also been a neglected sector, and has always been inadequate in coping with the population's massive needs, which is exposed to many infectious and communicable diseases. It was stated that about 75 percent of the endemic diseases in Ethiopia are communicable and potentially preventable. However, the abject poverty and poor sanitation have made it difficult to tackle the problem. Every health indicator shows to what extent the Ethiopian people are exposed to life-shortening crises.

According to the United Nations World Population Prospects 2019, birth rate for Ethiopia in 2019 was 32.109 births per 1000 people, a 1.42% decline from 2018.The infant mortality rate for Ethiopia in 2019 was 35.505 deaths per 1000 live births, a 4.04% decline from 2018. Similarly, the life expectancy for Ethiopia in 2019 was 66.34 years, a 0.56% increase from 2018.

According to UNDP Human Development Report 2019, three-quarters of the population lack access to clean water, and four persons out of five live without proper sanitation.All these figures indicate that Ethiopia is almost at the bottom of the human development index ranking of countries, according to UNDP human Development report 2019.

The health service has been under-funded, and in the last years of military rule, the situation further deteriorated as the per capita share of public health expenditure declined because of the high population growth and the reallocation of resources to the war effort. Even so, the unsatisfactory budget allocated to health institutions has not been used in accordance with the priorities of the health sector. In the health sector, like in the education sector, the government has designed the Health Sector Development Programme (HSDP) – a 20 year health strategy- to be implemented under the broad framework of decentralization. Decentralization emphasizes the importance of achieving access to a basic package of quality primary health care services by all segments of the population, using the decentralized state of governance. By its very nature decentralization provides an excellent framework for local communities, NGOs, and private health practitioners to legitimately participate in local governance and, planning and service delivery of the health sector (G.waimi, 1993).

The health sector strategy identifies the following deficiencies in existing services: very highly uneven and urban-biased coverage of both facilities and staff; top-down management; shortage of senior and middle level professionals; the decline of health share in the government budget; excessive share of wages and salaries; excessive share of curative care; inefficient cost recovery system; and poor implementation of capital spending. It is indicated that the average implementation of the allocated budget was just over 50 per cent for most of the 1980s.

Recognizing the imperative to reverse the dismal situation of the health institutions, the strategy indicates that the objective of providing a health service system that is "comprehensive and integrated primary health care in health institutions at the community level. The strategy emphasizes the preventive and promotional tasks of the service without neglecting the essential curative aspects. It targets the main communicable diseases, common nutritional problems, and environmental health and hygiene, and indicates that human and material resources would be allocated in accordance with the objectives and priorities stated.

As mentioned above, the health sector strategy aims at improving the health care system, which has been neglected and affected with under-funding, inefficient utilization, and also inequitable distribution among the various regions of the country. The drugs supply system became increasingly ineffective, with basic drugs becoming inaccessible and unaffordable to ordinary people. The shortage of rural health institutions and personnel has disadvantaged the vast majority of people and exposed them to many infectious and communicable diseases. Making substantial changes to entire health system will not be an easy task and it takes discipline, courage, consistency, and of course, and time to see a real change take place. Therefore, in the following section the budget allocation from the federal and its impact on the outcomes has been discussed in detail

5.2.2 Capital and Recurrent Expenditure on the Health Sector

The capital expenditure components are estimated based on the principle of reducing the access gap and inequality in health services and to fulfill each individual's right of equal access to government provided services. The unit of measurement in the estimation of the capital and recurrent expenditure is the size of population without access to health services at reasonable distance (depending on the national standard). Unlike education services, health services are essential regardless of the age of the population. Like the other services, the demand for health services increases with large and growing population. Population size is the deriving factor of expenditure on health.

According to table 8 and 9 in annex, there is a huge variation among regions in the rate of increase in health spending, which is correlated with the incidence of diseases and malaria. The highest increase over time was registered for Dire Dawa followed by Somale and Afar regions where the incidence of diseases and malaria is larger. The next higher increase in spending was recorded for SNNP, and Harari, while the increment for Tigray, Amhara and Oromiya regions has been very close to the national average. The lowest was recorded for Gambella region, not because of less incidence for disease and malaria, but because the health sector did not receive enough attention by the regional government.

Moreover, in the above indicated tables the health sector is the fourth most important sector in Ethiopia's public expenditure landscape. Accordingly, taking 2016/17 data the recurrent and capital expenditure by sector indicates that the health sector received 13.67% and 3.51% of the total public expenditure by regional governments respectively. Taking all regions together, the health sector received about 228.8 and 55.6 million Birr in 1993/94 recurrent and capital expenditure and in 2017/18, the recurrent and capital expenditure budget increased to 10781.4 and 1634.4 million birr respectively (see table 8 and 9 in annex).

5.2.3 Outputs of the Health Sector

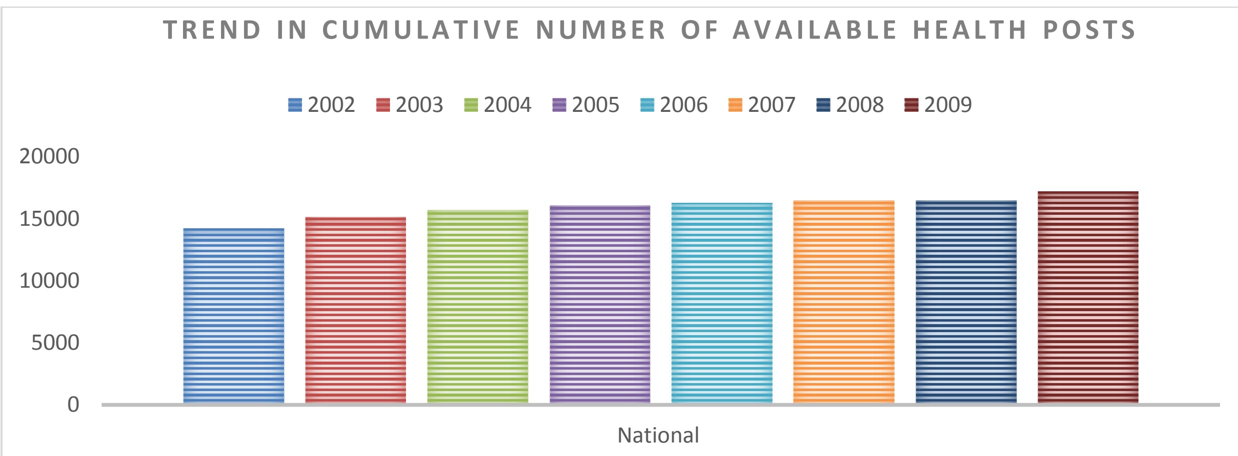
The indicator for output of the health sector are health facilities such as heath posts/center/Hospital, number of professionals trained, number of health extension workers hired and health service coverage, Child and Maternal Health Services including number of children and people vaccinated and contraceptive coverage.

Health Facilities:

There was a steady increase in the number of health posts constructed and health extension agents deployed over a period of eight years. The number of health posts increased from 14,191 in 2009/10 to 17,187 in 2016/17 (see figure 5.17 and 5.18).

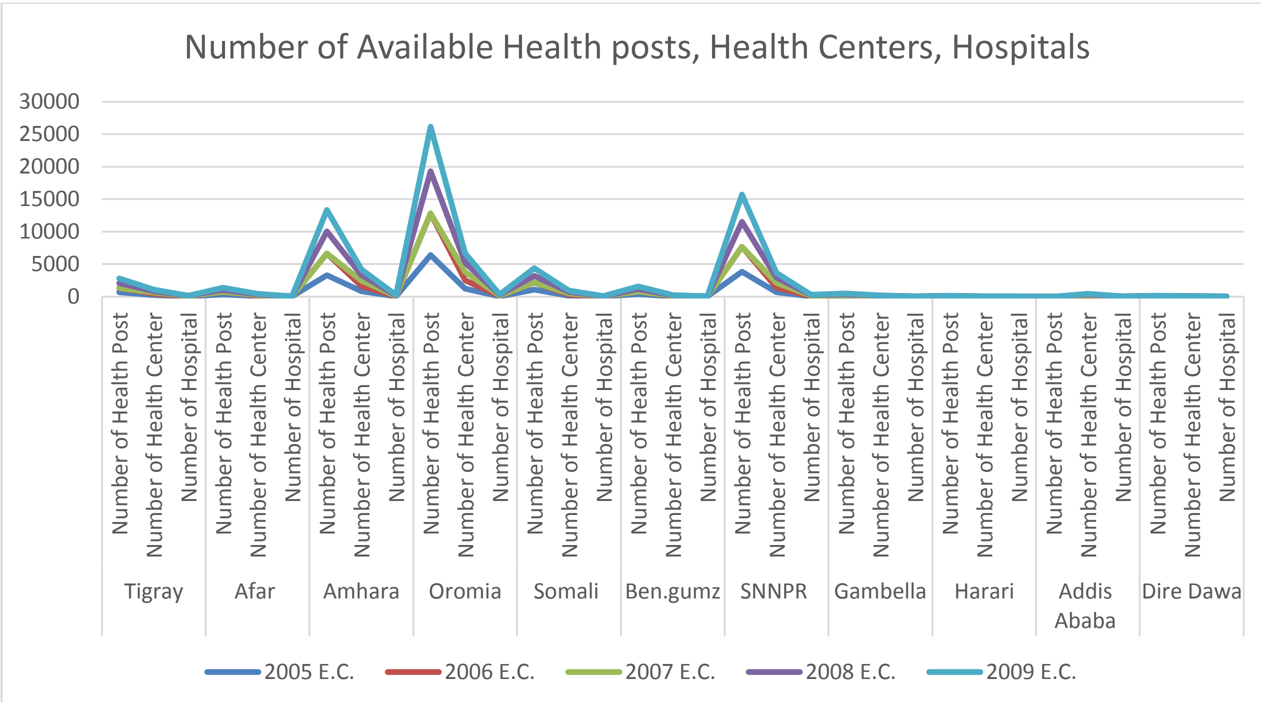
As can be seen from the figure 5.17 and 5.18 below , the number of health posts constructed increased in terms of change between 2009/10 and 2016/17 . Regions with the highest percentage increase in the number of health posts constructed were found to be Oromiya and SNNP, followed by Amhara, BenshangulGumuz and Tigray regions.

Figure 5.17: - Trend in Cumulative Number of Available Health Posts ((2009/10 – 2016/17)



Source: Health indicators (various years) published by the MoH

Figure 5.18:- Number of Available Health post, Health center and Hospital



Source: MoH,Health indicators (various years)

According to table 5.9 and figure 5.19, there were 80 hospitals in 2001 and this rose to 126 in 2004 and reached 302 in 2016/17. The highest numbers of hospitals are found in Oromiya, SNNP and Amhara regions, where more than 50% of the Ethiopian population lives. Since 2001, the number of hospitals in all regions except Afar and Harari Regions increased substantially in percentage terms, but was found to be quite modest in number terms. In Afar, there are only two state hospitals since 2001, while in Harari Region, there were 3 hospitals in 2001, and in 2016/17, this grew to six in Afar (see table 10 in annex). According to table 8 and 9 in annex, the highest increase in the number of hospitals is observed in SNNP region (550%), followed by Amehara (325%); Tigray (200 %); Afar (200%); Oromia(178%)Dire Dawa (10%), Somale (100%). Based on the above data and the respondents' perception, one can observe that the increase in population and the demand for health care services, the increase in the number of hospitals leaves much to be desired. Although the increase in the number of hospitals was below satisfactory, the increase in the number of health centers is better than that of hospitals (see table 8 and 9 in annex). Moreover, there were 371 health centers in 2001, but this number increase to 3727 in 2016/17, that indicating an increase by 875 per cent in sixteen years. The increment in the number of health centers in sixteen years is the highest in Somali (1940%) and Afar regions (1780%), followed by Oromia (1164%); Amhara (992%), Diredawa (650%); Tigray (634%) and SNNP (593%)((see table 8 and 9 in annex).).

Moreover, as a result of the increase in the numbers of hospitals and health centers, the number of beds in hospitals and health centers is increased. However, despite the modest increase in the number of beds, it seems there was no increment in the capacity of hospitals and health centers. According to table 8 and 9 in annex , while the number of hospitals and health centers in the country increased by 274 and 875 per cent in sixteen-year' time respectively, the number of beds increased by 174.48 per cent over the same period (sixteen years). The highest increase in the number of beds in the sixteen-year time was found in SNNP (504%); Oromia (373.29) and Somale (343%) regions. The second modest increase in the number of beds was found in Amehara; Gambella and Tigray, which was about 238.87; 196.6 and 181.4 per cent respectively. In Addis Ababa, Diredawa; Afar; Harer and B/Gumz, the sixteen-year increases in the number of hospital and health center beds were between (14.36) and 93 per cent ((see table 8 and 9 in annex).).

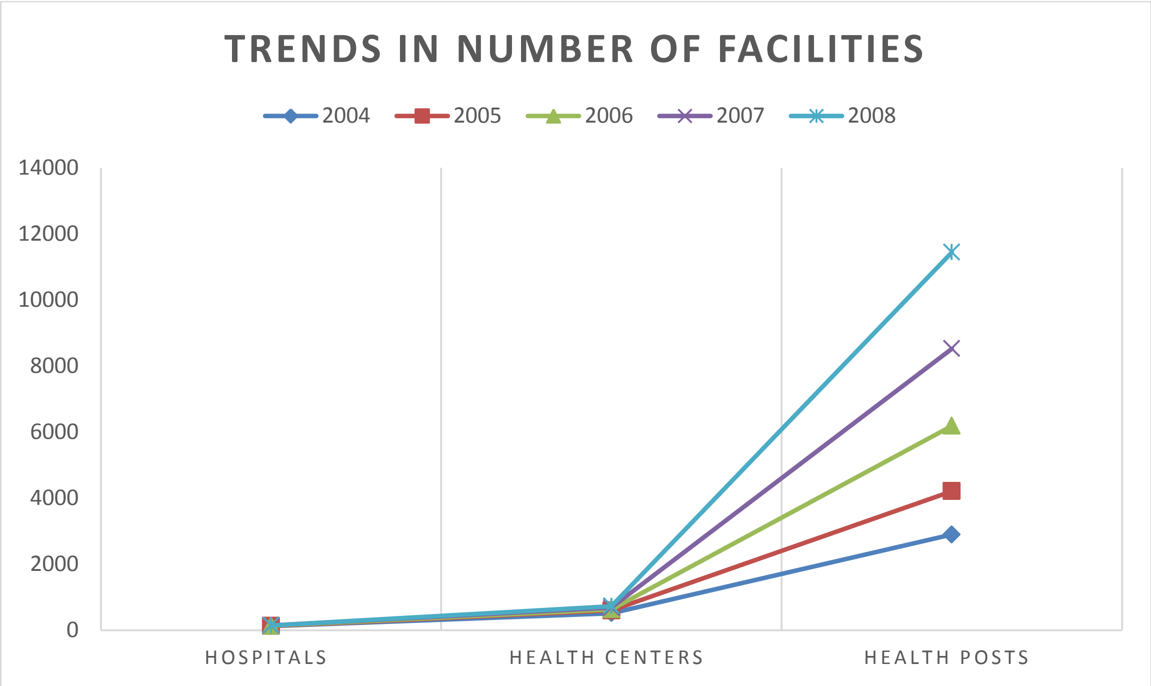
Table 5.11: Trends in Number of facilities

Indicators	**2012/13**	**2013/14**	**2014/15**	**2015/16**	**2016/17**
Number of facilities					
Hospitals	127	***156***	NA	394	302
Health centers	3245	3335	3,586	3727	3724
Health posts	16,048	16251	NA	16,480	17187

Source: Health and Health Related indicators, Ministry of Health (2016/17).

As illustrated in the table 5.11, the cumulative number of functional health posts; health centers and hospitals increased from 16048; 3245 and 127 in 2012/13 to 17,187; 3724 and 302 in 2016/17. This shows that there was an increasing trend between 2012/13 and 2016/17.

Figure 5.19 Trends in Number of facilities



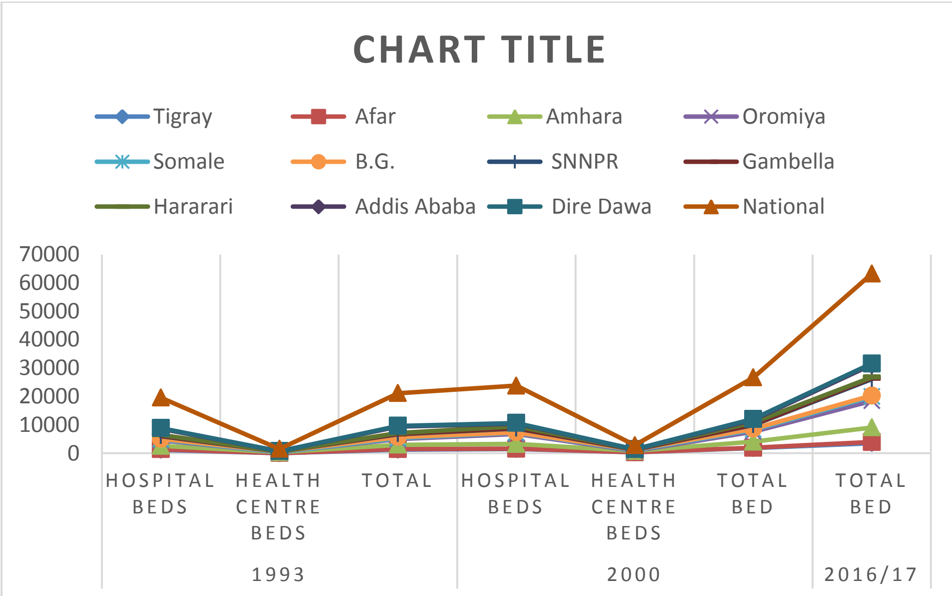
Source: Health indicators (various years) published by the MoH

Table 5.12: Percentage change in health facility

Health facility	Year		% change	Remark
	2004	2016/17		
Hospital	126	302	139.68	
Health center	519	3724	617.55	
Health Post	2899	17187	492.86	

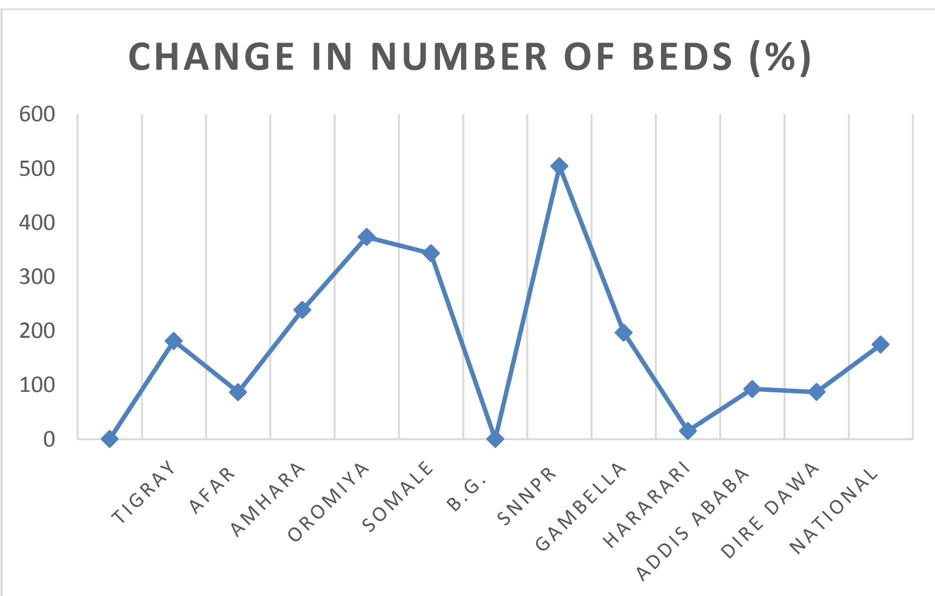
Source: Health indicators (various years) published by the MoH

Figure 5.20: Number of beds in hospital and health centers by region



Source: Health indicators (various years) published by the MoH

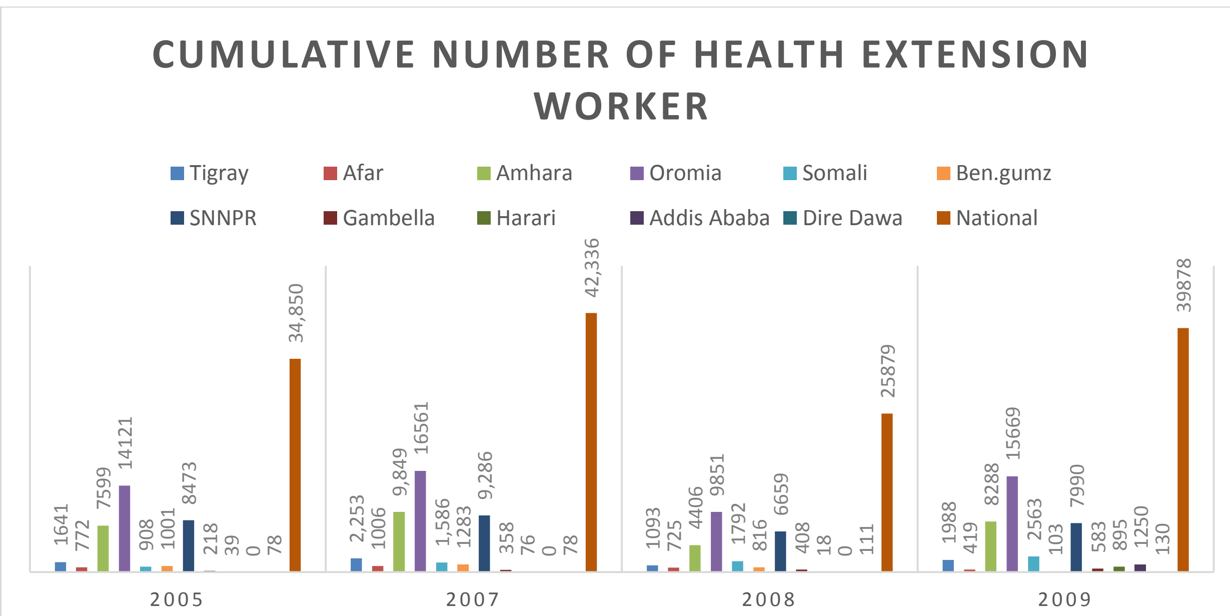
Figure 5.21: Number of beds in hospital and health centers by region



Source: MoH,Health indicators (various years)

Another output indicator of health sector development is health extension system. One of the innovativeness of the health sector development program is the establishment of health extension system, which commenced in 2005 in seven regional states covering the rural areas only. In 2005, there were about 2737 extension workers and in 2007, the extension health system covered all rural areas. According to Figure 5.22 below, the number of deployed health extension workers (HEW) increased from **34,850** in 2012/13 to 39,878 in 2016/17 indicating a performance increase by 14.43 per cent over the four-year period. The regional distribution of population HEWs is provided in Figure 5.22 below. According to data in this Figure and interview with a higher official of the Ministry of Health, the lowest ratio is observed in Gambella region in the 2016/17 data because of lower population size of the whole region, while Harari and Dire Dawa had the highest ratio due to their higher population density and urbanized population.

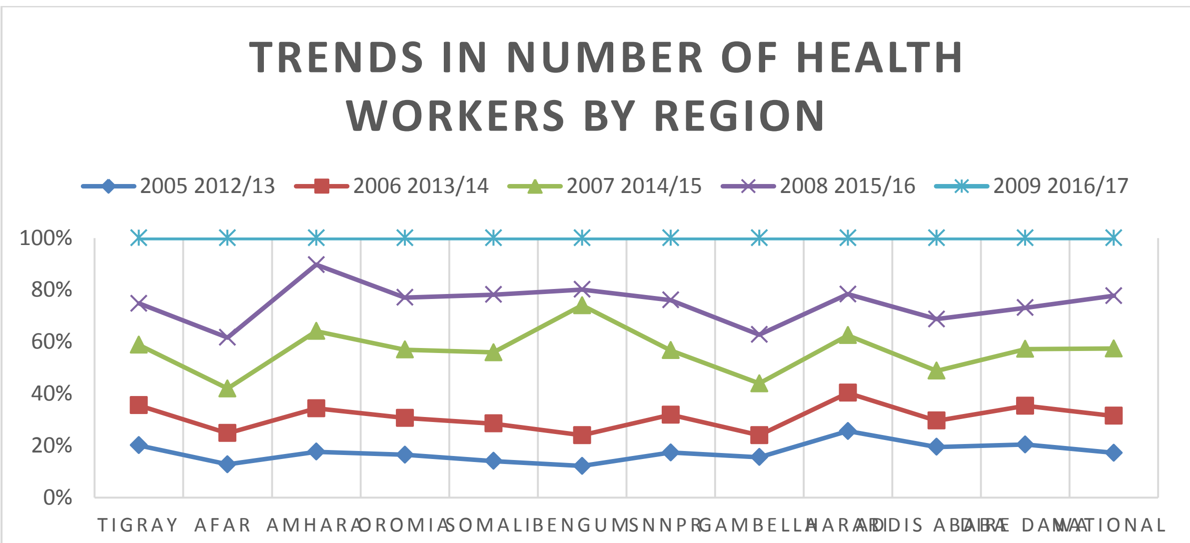
Figure 5.22: - Cumulative number of health extension worker



Source: MoH, Health indicators (various years)

The other output indicator examined is the number of health professional’s ratio to population. According to World Health Organization (WHO), one nurse and one doctor (Health officers) are assigned for 5000 and 10000 population respectively. Having adequate numbers and mix of motivated and skilled human resources was essential at all levels of the health system. As illustrated in tables 11 and 12 in annex, health officer; midwife and nurses ratio were 1.53;1.48 and 0.19 to 0.97;0.8 and 8.4 per 10,000 population between 2012/13 and 2016/17 respectively indicating improvement in supply and availability of health workers. According to the interview with the higher officials and professionals in the ministry of health at the federal and regional levels, the marked improvement in deployment of health workers is due to massive scaling up of training and education in the last two decades. Moreover, Respondents explained that health center expansion enabled the sector to enhance access to program services. While access to services improved reaching almost 100% as of 2014/15, health facilities still continue to deliver some of the priority services, in a manner that attracts mothers and other patients.

Figure 5.23: Trends in number of health workers by region from



Source:MoH, Health indicators (various year)

Regarding health professionals, respondents further elaborated that one of the expenditure items in the health budget of regional governments is mainly for recurrent costs in the form of salary for human resource (physicians, health officers, nurses, health assistants, environment health workers and health extension workers). At the national level, there were 2679 physicians in 2004. This declined since 2005 and continued to further decrease in until 2007 reaching 1806. According to the respondents and the secondary data, the main reason appears to be migration to other countries in Africa, middle East, Europe and North America. In 2008, the number of physicians again started to rise again and reached

2085, which was equivalent to the number of physicians six years ago (that is, 2002). The government took measures to reduce the number of health professionals going abroad. These measures include salary increment, and provision of fringe benefits.

5.2.4 Child Health Services

Ethiopia registered tremendous success in meeting MDG 4 (reducing child mortality) three years earlier than scheduled in 2015. The successive Ethiopian demographic health surveys state that Ethiopia has sustained the huge gains in terms of reducing under-five mortality since 2000. According to the secondary data for different years, health and health related available documents, and interview with health professionals in the federal Ministry of Health and regional health bureaus, under-five child mortality rate declined from 166 in 2000 to 67 per 1000 live births in 2016(see table 5.13 below). The decrease in neonatal mortality has not been as much as that of post-neonatal and child mortality remained relatively stagnant for over a decade. Moreover, neonatal mortality declined by 41% from 49% in 2000 to 29% in 2016 whereas under-five mortality declined by 60% during the same period. Subsequently, the share of neonatal mortality among total under-five mortality has increased from 29% in 2000 to 43% in 2016. According to the data and respondents perception, it can be observed that more than two thirds of neonatal deaths are caused by few easily preventable conditions; mainly infections, neonatal conditions and malnutrition.

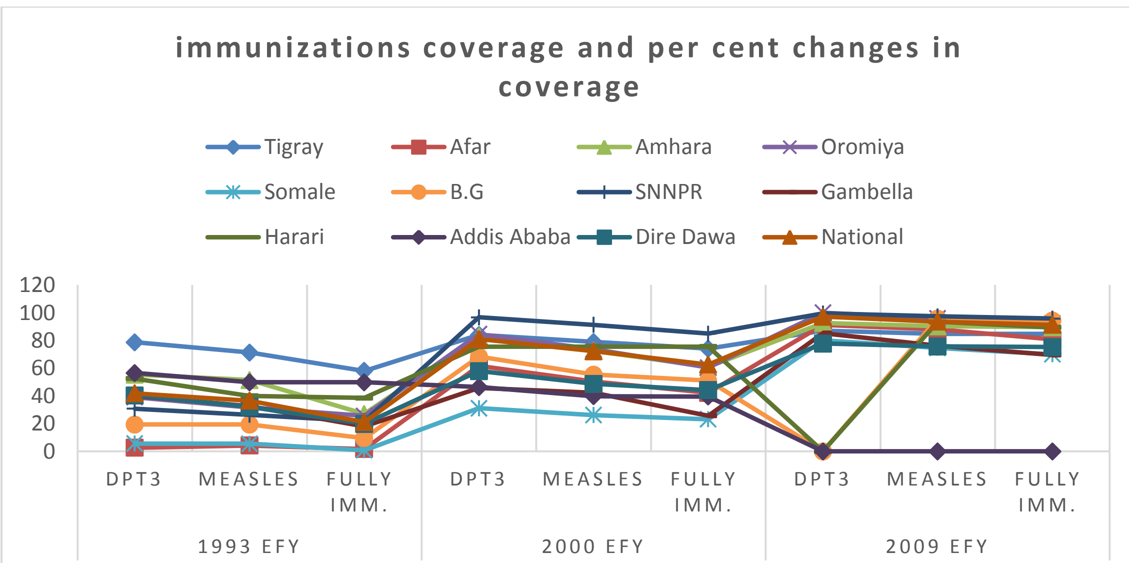
Table 5.13: Under five, Infant and Neonatal Mortality (2000-2016 EDHS)

Year	2000	2005	2011	2016	2019/20(target)
Under Five Mortality	166	123	88	67	30
Infant Mortality	97	77	59	48	20
Neonatal Mortality	49	39	37	29	10

Source: MoH, Health indicators (various years)

According to the secondary data from health and health related at various years and the respondents perceptions' in the ministry of health indicated that there has been a substantial increase in vaccination, health service coverage as well as deployment of human resource in health services and the number of health personnel that graduated from universities. Trends in vaccination coverage can be seen by comparing similarly collected data in the 2000 Ethiopian Development Health Service(EDHS) with the data from the 2016/17 EDHS. The data showed that vaccination coverage in Ethiopia significantly improved over the past fifteen years. Moreover, health and health indicators abstracts published annually by the Ministry of Health also indicated that 1.1 million children received vaccination for DPT3 in 2001 and reached 2.86 million after fifteen years (in 2016/17) indicating an increase by 160 per cent(see figure 5.24, figure 5.25 and table 5.14 below). The number of children receiving vaccination for measles and those fully immunized were 948 and 549 thousands, respectively in 2001. These figures rose to 2.75 and 2.68 million respectively in 2016/17 indicating 190 and 388 per cent increase in the fifteen-year time, respectively.

Figure 5.24: Immunizations coverage and per cent changes in coverage



Source: MoH, Health indicators (various years)

Table 5.14 Immunizations coverage and per cent changes in coverage

Region	(2000/1)1993 EFY			(2007/8)2000 EFY			(2016/17)2009 EFY		
	DPT3	Measles	Fully imm.	DPT3	Measles	Fully imm.	DPT3	Measles	Fully imm.
Tigray	78.7	71.3	58	84	78.9	74	87.0	84.7	84.7
Afar	2.6	4.2	1.7	61.7	50.4	42.2	91.2	87.9	80.8
Amhara	55.4	51.4	26.9	82.9	72.5	60.9	92.6	90.2	89.5
Oromiya	39.1	31.6	25.6	84.6	73.6	60.4	100	96.0	92.3
Somale	5.6	5.5	0.78	31.1	26.2	23.2	80.2	74.6	70.0
B.G	19.3	19.3	9.5	68.3	55.4	51	>100	95.8	94.2
SNNPR	30.8	26.4	21.71	96.7	91.3	84.9	99.4	97.4	95.8
Gambella	39.9	32.5	17.91	45.8	42.3	25.7	85.2	76.1	69.6
Harari	52.5	40	38.5	75.5	75.5	75.5	>100	93.5	89.4
Addis Ababa	56.5	49.8	49.8	46.4	39.8	39.5	>100	>100	>100
Dire Dawa	40.4	32.1	19.78	57.9	48.7	44.2	77.8	75.7	75.2
National	41.9	36.5	21.1	81	72.2	62.6	97.1	93.6	91.2

Source:MoH,Health indicators (various years)

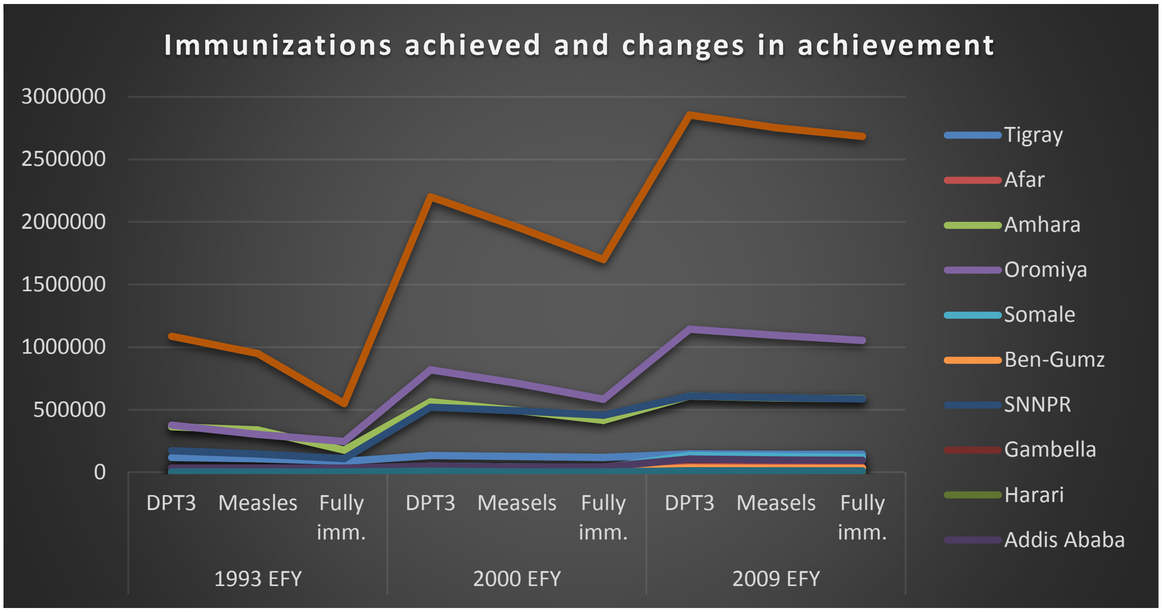
As can be seen from the above figure 5.24 and table 5.14, the regional distributions of the number of children vaccinated and vaccination coverage for DPT3, measles and full immunisation shows variation. In 2016/17, the highest coverage in full vaccination (more than 91.2 per cent national average) was observed in Addis Ababa (100%); B/Gumz(94.2%);SNNPR(95.8%), and Oromia (92.3%) regions, followed by Amhara(89.5%); Harer(89.4%) and Tigray(84.7%) regions, averaging more than 84 per cent. The lowest coverage was in Somali (70%), Gambella (69.6%), Afar (80.5%), and Dire Dawa (75.2%) (See figure 5.24 and table 5.14). However, in terms of growth in immunisation coverage, Somali and Afar regions outperformed the other regions as they started from a lower coverage base.

Table 5.15. Immunizations achieved and changes in achievement

Region	(2000/01)1993 EFY			(2007/8)2000 EFY			(2016/17)2009 EFY		
	DPT3	Measles	Fully imm.	DPT3	Measels	Fully imm.	DPT3	Measels	Fully imm.
Tigray	118554	107416	87357	133,423	125,487	117,517	146,897	143,150	143,094
Afar	1081	1731	722	31,298	25,560	21,387	44,409	42,789	39,309
Amhara	363989	338305	176907	564,163	493,094	414,569	609,439	593,747	588,848
Oromiya	375944	303562	245886	818,236	711,813	584,320	1,142,312	1,094,806	1,053,372
Somale	7047	6946	990	49,901	42,015	37,289	135,281	125,942	118,129
Ben-Gumz	4082	4069	2011	15,331	12,426	11,439	33,774	31,314	30,778
SNNPR	172518	147521	108,998	519,418	490,636	456,368	607,954	595,779	585,564
Gambella	3034	2471	1,214	4,015	3,709	2,254	10,300	9,196	8,414
Harari	3334	2541	2447	5,261	5,261	5,261	7,421	6,650	6,358
Addis Ababa	38001	33511	33469	49,799	42,719	42,365	106,250	97,867	96,947
Dire Dawa	5421	4310	2,239	8,279	6,962	6,312	10,976	10,671	10,610
National	1087584	948073	548799	2,199,124	1,959,682	1,699,081	2,855,013	2,751,911	2,681,423

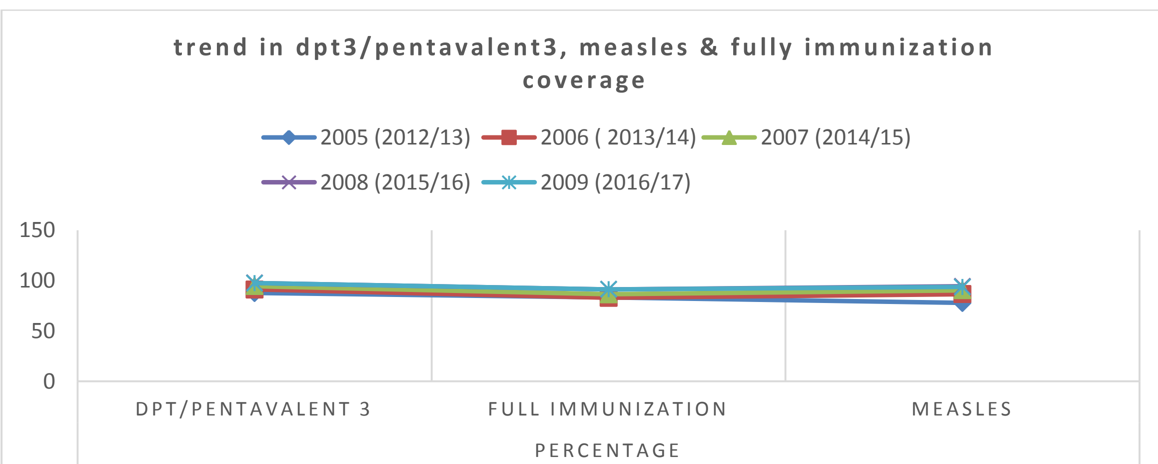
Source:MoH, Health indicators (various years)

Figure 5.25: Immunizations achieved and changes in achievement



Source: MoH,Health indicators (various years)

Figure 5.26: Trend in DPT3/Pentavalent3, Measles & fully immunization coverage (EFY 2005-2009)



Source: Health indicators (various years) published by the MoH

Table 5.16: Trend in DPT3/Pentavalent3, Measles & fully immunization coverage (2012/13-2016/17)

Year		2005 2012/13	2006 2013/14	2007 2014/15	2008 2015/16	2009 2016/17
Percentage	DPT/Pentavalent 3	87.6	91.1	94.4	97.6	97.4
	Full Immunization	83.2	82.9	86.4	91.3	91.2
	Measles	77.7	86.5	90.3	94.3	93.6

Source: Health indicators (various years) published by the MoH

5.2.5. Maternal Health Services indicators

5.2.5.1 Maternal Mortality

Table 5.17 shows that maternal mortality ratio has reduced by 39% from 676 in 2011 to 412 per 100,000 live births in 2016. This remarkable decline in maternal mortality should be maintained and accelerated to reach the HSTP target of 199/100,000 live births MMR in 2020.

Table 5.17: Trends in Maternal Mortality Ratio, 2009 EFY

Year	2000	2005	2011	2016	2019/20(target)
Maternal mortality	871	673	676	412	199

Source: MoH, Health indicators (various years)

5.2.5.2.Contraceptive Prevalence and Total Fertility Rate

Table 5.18 below shows that the contraceptive prevalence rate (CPR) among married women in Ethiopia has sharply increased from 8% in 2000 to 36% in 2016. In order to achieve the HSTP target (i.e.55%) within the remaining three years, the CPR has to be raised by an average of five percent per annum. Parallel to the increase in CPR, the fertility rate (TFR) in three years prior to surveys has been reduced from 5.5 in 2000 to 4.6 children per woman in 2016.

Table 5.18: Trend in married Contraceptive Prevalence Rate, 2000-2016, Ethiopia

Year	2000	2005	2011	2016	2019/20(target)
CPR	8	15	28	36	55
TFR	5.5	5.4	4.8	4.6	3

Source: MoH, Health indicators (various years)

5.2.5.3. Contraceptive Acceptance Rate

According to table 5.19, taking 2016/17 data, 13,430,829 (71%) women in reproductive age received family planning service. Three regions, Amhara (93%), Oromia (76%), and SNNP (75%) have performed above national average whereas, Afar (40%), Addis Ababa (36%), Gambella (26%) and Somali (13%) has performed below the national average and their baseline (table 5.18). The lower performance of Addis Ababa is mainly due to lack of reporting by private health facilities. The report further indicates that there is wide disparity in CAR performance among regions, with a range of 80% among the high performing (Amhara) and low performing (Somali) regions.

Table 5.19: Reproductive & Maternal Health Impact Indicators , 2016/17

Region	Contraceptive Acceptance Rate	Antenatal Care Coverage 4+(ANC4)	Proportion of deliveries attended by skilled health personnel
Tigray	61	69	65
Afar	40	61	37
Amhara	93	76	68
Oromia	76	74	74
Somali	13	61	31
Bengum	51	55	53
SNNPR	75	87	78
Gambella	26	13	31
Harari	57	55	100
Addis Ababa	36	100	100
Dire Dawa	48	46	71
National	71	77	71

Source: Health indicators published by the MoH

5.2.6. Antenatal Care Coverage (ANC 4+ PERFORMANCE)

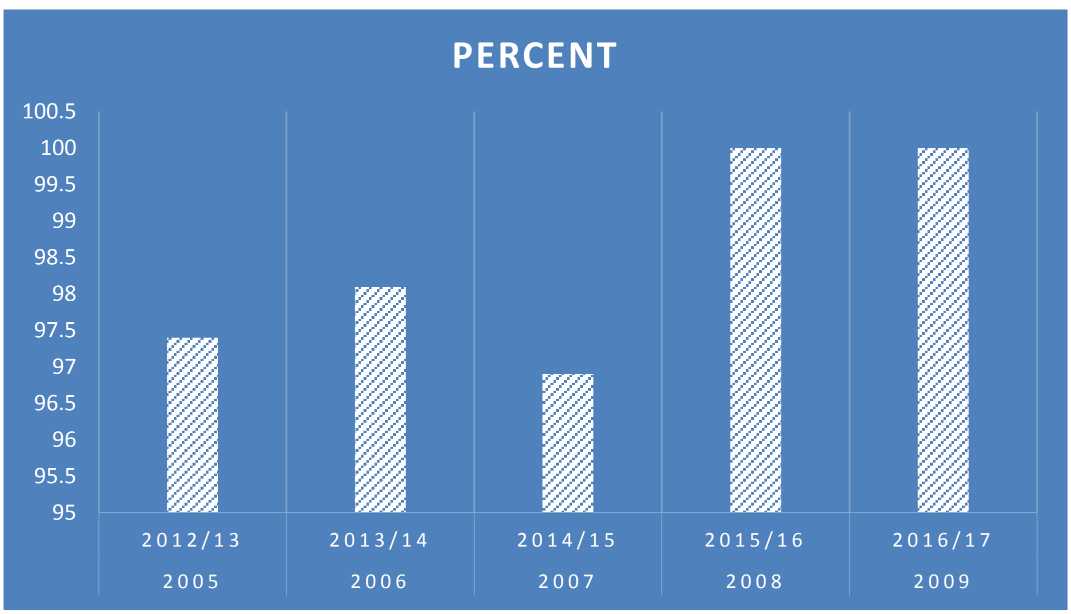
The above table 5.19 shows that pregnant mothers should have at least four antenatal visits in their pregnancy to identify and manage pregnancy related complications. Taking 2016/17 data, from a total of 3,172,455 pregnant mothers who were expected to receive antenatal care service, 2,429,905 (77%) received ANC-4 service.

Table 5.20: Antenatal care coverage2005-2009EFY

Year	2005 2012/13	2006 2013/14	2007 2014/15	2008 2015/16	2009 2016/17
Percent	97.4	98.1	96.9	100	100

Source: MoH, Health indicators (various years)

Figure 5.27: Antenatal care coverage2005-2009EFY



Source: MoH, Health Indicators (various years)

Table 5.20 shows that the ANC-4 performance ranges from 13% in Gambella region to (100%) in Addis Ababa. In comparison, Amhara, SNNPR, and Oromia regions performed above the national average. Early pregnant mother's identification using the health development army has been a major strategy employed to increase the percentage of mothers receiving ANC- 4+. Pregnant mothers are expected to have syphilis screening during their ANC visit. However, only 45% of pregnant mothers were screened for syphilis from those who accessed any ANC visits at health facility in 2016/17.

5.2.7. Skilled Delivery Attendance

Based on the above table 5.20 in the 2016/17, 2,253,541 (71%) of pregnant women were reported to have delivered at health facility assisted by skilled health personnel.

Looking regional performance, percentages of women who delivered at health facilities with skilled attendance in Addis Ababa, Harar, SNNPR and Oromia regions were above the national average. In Afar, Somali and Gambella the lowest coverage was recorded. The skilled delivery assistance ranged from 31% in Gambella and Somali regions to 100% in Harar administration and Addis Ababa city. The progress made so far in improving skilled delivery attendance was impressive and the engagement of Health Development Army (HDA) has been the engine for the said achievement. In order to improve the quality of obstetric service, Basic Emergency Obstetric and Neonatal Care (BEmONC) training was provided for health workers.

Based on the above data and the interview with higher officials at the ministry of health, the researcher observed that Ethiopia has registered remarkable progress in past two decades in improving the health service coverage and health status of the population. The country showed notable progress in reduction of maternal Mortality, Child mortality Infant mortality and Neonatal mortality. There was also a sharp increment in Life expectancy and decline on Total fertility rate. Moreover, respondents further explained that potential health service coverage, contraceptive acceptance rate, and antenatal coverage increased because of increase in health infrastructure (hospitals, health centers, and health posts) and health professionals (physicians/health officers, and other health workers such as nurses, health assistants, and environmental health workers) as discussed above. However, inequitable access for health service among regions is still persistent.

5.3 Regional Equity in Health Sector Development

Ethiopia is believed to have done remarkable efforts to improve people's access to basic health service. It has been investing to develop its capabilities in terms of human capital and infrastructures. The number of health centers, hospitals and health posts has increased in all regional state over the last two decades as has been discussed above. However, the issue of equitable distribution of resources among the regional states has remained to be open for some critics. To see whether such critics hold some water, it is good to have a look at expenditures that have been allocated to regional states over 2008-2019 periods. One can have an initial insight by having a quick look at the average expenditures over this period as presented in table 5.21 below.

Table 5.21: Average per capita Health Expenditure over 2008-2019 by region

Region	Mean Per capita Capital health expenditures	Mean Per capita recurrent health expenditures	Mean Per capita total health expenditures
Addis Ababa	78.99	556.22	635.21
Afar	27.63	113.80	141.43
Amhara	20.32	94.36	114.68
Benshangul	41.16	165.06	206.22
Dire Dawa	56.88	211.13	268.00
Gambela	38.71	229.60	268.31
Harari	50.22	220.96	271.18
Oromia	24.02	68.28	92.30
SNNP	19.83	88.66	108.49
Somali	42.32	65.66	107.99
Tigray	9.59	123.67	133.26

Source: Computed based on data from MoFEC and CSA

The average expenditures showed in table 5.21 above show some differences in all the expenditure categories. Addis Ababa city administration appeared to have the highest per capita expenditures in terms of both recurrent and capital components. In terms of recurrent expenditure Dire Dawa follows Addis Ababa while Gamela region had the second largest per capita capital expenditure. The minimum per capita recurrent expenditure was observed in Tigray region while the least average per capita capital expenditure was that of Somali region. When it comes to the total average per capita health expenditure, Oromia region had the least per capita outlay than all the regions.

Table 5.22: Gini Coefficients for health expenditures

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Recurrent Expenditures for health	0.17	0.14	0.15	0.14	0.15	0.16	0.16	0.19	0.22	0.19	0.17
Capital expenditures for Health	0.23	0.30	0.34	0.25	0.20	0.20	0.24	0.23	0.19	0.25	0.28
Total expenditures for Health	0.14	0.16	0.16	0.15	0.14	0.14	0.15	0.18	0.19	0.16	0.14

Source: Computed based on data from MoFEC and CSA

The Gini coefficients presented in table 5.22 above for health expenditures shows that there is low inequality among regions in terms of recurrent expenditure. The highest Gini coefficient indicating a relatively higher inequality (0.22) was in 2017. Inequality was also relatively higher in case of capital expenditures as there could be differences in the required budget following variations in pre-exiting infrastructure among regional states. More urbanized areas tend to require more sophisticated and larger investment. In terms of total expenditure, there seems to be fair distribution of expenditures among regions as indicated by the Gini coefficients of below 0.20. However, differences in the extent to which regions utilize resources and mobilize public participation in infrastructure development may vary from region to region with implications in health outputs such as the proportion of people with access to health services.

To see the effect of expenditures in this regard, Primary health care coverage (PHC) (sometimes called potential health service or PHS in short) was used as the outcome of interest and regressed on expenditures. According to Ethiopia's Ministry of Health (MoH), PHC is a proxy indicator of equity in health service access and defined as the proportion of population living within 2 hours walking distance. Some of the data on PHC were taken from the statistical report of MoH where the indicator was readily available. In case where it is not readily available, it was computed based on MoH's definition. Accordingly, PHC was computed by taking the ration of available number of health posts (HP) to the expected number of HP as 1 HP is expected to serve 5000 people. Estimated values of PHC are described in percent where the percentage would exceed 100 in some cases. Specifically, the values in supposedly disadvantaged regions appeared to be higher than other regions and mostly exceeded 100.

Table 5.23: The effect of health expenditures on Primary health coverage (PHC)

Dep. Var.: Primary Health Coverage (PHC)	Coef.	(RSE)	Coef.	(RSE)
Recurrent health expenditure (log)	58.04***	(11.44)		
Capital health expenditure (log)	-7.49**	(3.64)		
Total health expenditure (log)			9.32	(18.73)
Region dummies				
Afar	152.48***	(26.23)	94.96***	(31.80)
Amhara	21.34	(23.28)	51.85**	(24.40)
Benshangul Gumz	239.16***	(23.49)	180.51***	(32.55)
Dire Dawa	115.38***	(27.08)	38.07	(38.41)
Gambella	239.21***	(31.16)	160.69***	(43.32)
Harari	161.32***	(34.30)	68.27	(52.45)
Oromia	15.31	(26.69)	56.22*	(32.29)
SNNP	44.73*	(22.89)	73.84***	(24.00)
Somali	109.55***	(19.45)	62.14***	(22.94)
Tigray	47.41**	(21.42)	49.73**	(22.06)
_cons	-920.84***	(222.38)	-138.26	(354.14)
Year dummies included				
Number of	93		93	
F(19, 73)	27.09		27.09	
R-squared	0.80		0.80	

Note: ***, **, * indicate significance at 1%, 5% and 10% levels, respectively

Table 5.23 above depicts results of the regression of PHC on health expenditures. According to the estimation result, recurrent has strongly significant positive effect on PHC. The coefficient 58.04 can be interpreted as a one logarithm increase in recurrent expenditures leads to a 58 percent increase in PHC. However, this interpretation may not make sense to ordinary readers. Instead, it is better to make interpretation on a transformed coefficient. A 10 % increase in recurrent expenditure will increase PHC by 5.5% (58.04 × ln1.10). The effect of capital expenditure, however, turned to be negative and significant at 5% level. The coefficient tells that a 10% increase in capital expenditure is associated with a decrease in PHC by 0.71 percent (-7.49×ln1.10). This result seems to be counter intuitive as it is expected to increase PHC. However, this relates to the fact that regions and cities with higher capital outlays and hence more sophisticated health facilities have lower number of HP’s and hence low PHC values. In terms of total health expenditure, a 10% increase in total health expenditure will increase PHC by 0.89 % (9.32×1n1.10) despite statistically insignificant. Coefficients of all the regional dummies appeared to be positive suggesting all the regions have higher PHC than Addis Ababa. This does not mean that people in Addis Ababa have less access to health services. In fact, they have better access to more advances health services despite differences among households in terms of their income that determines which health facilities they used: be it public or private. Not only does Addis Ababa but all urban centers also have better access to health services as there are more number of health centers, hospitals and private clinics than less urbanized regions and areas.

5.3.1 Inequality in access to health services between regions

In addition to differences in the amount of health related budgets allocated for region, inequalities may prevail in terms of skilled man power or health professionals and health facilities. The following table (table 5:24 and table 5:25) depicts Gini coefficients showing differences in the population distribution of basic health professionals and health infrastructures.

Table 5:24 Gini coefficients for inequalities in health professionals among Ethiopian regions by year

Health professionals	2009	2017
Number of Health Officers (Gini coefficients)	0.28	0.16
Number of Midwives (Gini coefficients)	0.38	0.46
Number of Nurses (Diploma & Bachelor Degree) (Gini coefficients)	0.30	0.31
Health Extension Workers (HEWs) (Gini coefficients)	0.11	0.08

Source: Own computation based on statistical abstracts of Ethiopian Ministry of health

As can be seen from the table 5:24, a regional inequality in terms of number of health officers was higher in 2009 with a Gini index of 28 percent. In 2017, however, the inequality declined to about 16 percent. As compared to the four categories of health professionals, regional inequalities were greater in case of midwifery in both 2009 and 2017 years with the respective Gini coefficients of 0.38 and

0.46. Inequality appeared to have increased between the two years instead of improvement. The next largest inequality was in terms of number of nurses among regions for the purposes of providing health services. It showed a slight increment between the two periods form a Gini coefficient of 0.30 to 0.31. An inequality in health extension workers (HEWs) was the least in both 2009 and 2017. The decrease in the Gini coefficient of 0.11 to 0.08 shows successes in Ethiopian government's efforts to ensure access to primary health extension services.

Table 5:25: Gini coefficients Health infrastructure inequalities among Ethiopian regions by year

Health Facility	2011	2013	2017
Number of Health Centers (Gini coefficients)	0.10	0.06	0.03
Number of Health posts (Gini coefficients)	0.09	0.08	0.08

Source: Own computation based on statistical abstracts of Ethiopian Ministry of health

In contrast to the case of health professionals, there was low inequality between regions in terms of infrastructure. Inequality in access to health centers showed consistent decline over 2011-2017 periods. The Gini coefficient decreased from 0.10 in 2011 to 0.03 in 2017. Inequality was also small in terms of number of health posts with only slight decline in the Gini coefficient. The decline in the Gini coefficients of health extension workers (Table 5:24) and number of health posts indicate progresses being made towards improving access to health extension services and primary health care to low income members of the societies in the rural and urban centers.

To conclude, as has been observed from the above discussion, the expenditure in the health sector increased in terms of both absolute amount and per capita basis. As a result of substantial increment in government expenditure, the number of health extension workers, health posts, hospitals, health professionals and vaccination coverage has increased substantially. Consequently, output and outcome of health services have also increased substantially. Therefore, the impact of public spending is noticeable. Infant, child and under five mortality rates showed a declining trend. The adult and maternal mortality have also declined over the years. Therefore, one can say no doubt that public spending in the health sector has contributed much to these achievements in the health sector. However, the analysis shows that equity and inclusiveness among regions are still not addressed and needs more concerted action to further reduce the inter-regional health access gap without compromising efficiency to fulfill each individual's right of equal access to government provided services stipulated in the Ethiopian Constitution.

Nevertheless, it is not always easy to quantify the contribution of health spending for such improvements in outcome and impacts. Moreover, the achievements in the health sector in Ethiopia are not as impressive as those in the education sector where there is consensus among the public and academician/researchers regarding the successes Ethiopia has achieved in that sector. Therefore, efforts similar to that of the education sector have to be exerted to make the health sector more successful and satisfy the need of the society.

Similar view is given by respondents to this sector just like Education. But respondents from Gambela, Benshangul Gumuz, Somali and Harir are further replied that there are many capacity constraints which hinders them to achieve equitable development through fiscal federalism. First the capacity to formulate policies in line with the resource endowment and the needs of their resident is the major constraint which hinders equitable development. The other issues are more or less related to the lack of adequate infrastructure which is a necessity to provide basic public services and to promote local economic development and also the lack of adequate private sector involvement in development activities which significantly constrained them to raise revenue even using the revenue assigned to them by the constitution. Moreover, they mentioned that some of them are disadvantageous due to historical, political, demographic and social factors and these conditions are one of the factors which constrain equitable development in their region.

Summary

Chapter five presents empirical data and findings on two social sector development (education and health) to measure inter-regional performances and inequalities. It shows that there is ever increasing trends in national education expenditures. When measured regional equity in education sector, there is degree of inequality among regions in terms of budgets allocated to the education sector. The fact that inequalities turned higher in case of capital expenditures than recurrent ones may be associated with the differences in the initial conditions of infrastructures among regions. In terms of the primary and secondary school expenditures divide, inequalities appeared to be very low in case of the former while it was relatively higher in the later. In health sector, there is a huge variation among regions in the rate of increase in health spending, which is correlated with the incidence of diseases. The finding shows that Addis Ababa city administration appeared to have the highest per capita expenditures in terms of both recurrent and capital components. When it comes to the total average per capita health expenditure, Oromia region had the least per capita outlay than all the regions.

Chapter six

6. Analysis on fiscal federalism & equitable development in economic infrastructure/sector of Ethiopia

Ethiopia's fiscal policy promotes the design and implementation of a medium-term expenditure and fiscal framework (MEFF) that links policy, planning and budgeting in order to provide for and efficient and effective resource-allocation system. The policy guidance includes the design and implementation of annual budget based on the MEFF and aimed at attaining rapid, sustainable and inclusive growth, as stipulated in medium-term development strategies such as the SDPRP, PASDEP, GTP 1 and GTP2.

Therefore, the fiscal policy has the critical role of streamlining the allocation and distribution of public resources to achieve the development and stabilization objectives of the country. The federal government uses the general government budget as an instrument of fiscal policy to achieve the objectives of economic growth and macroeconomic stability. In this regard, the annual budget is the principal instrument for resource allocation both at federal and regional levels. This chapter examines how the federal capital and recurrent budget allocation has promoted equitable or inclusive development among regions on the outcomes of the economic sector (Water and Road).

6.1. water sector development

According to the Ethiopia fiscal equity independent study final report (unpublished) by FISCUS Public Finance Consultants, July 2019, Ethiopia has one of the lowest coverage of safely managed drinking water facilities globally. The study also found out that Ethiopia's coverage of safely managed water supply remains less than 11 percent compared to 19.4 percent in Nigeria, 27 percent in Ghana, and close to 46 percent in Cote D'Ivoire. As such, water and sanitation is one of the main focus areas of government expenditure along with roads, education, health, and agriculture and food security. Collectively, nearly two thirds of the federal budgets are allocated to pro-poor sectors including water (MoF, 2018).

In 2013, Ethiopia has begun to implement One WASH National Program (OWNP), leading to enhanced water supply coverage especially in rural and deprived areas. According to the interview with higher officials and professionals from the Ministry of Water, Irrigation and Electricity (MoWIE), water supply access at the national level has been increasing in both rural and urban areas as part of the Universal Access Program (UAP).

According to the data from the Ministry of Water, Irrigation and Electricity (MoWIE), during the first GTP period, potable water supply coverage increased nationally from 48.6 percent to 82 percent between 2011 and 2015. In urban areas, the rate of access increased from 74.6 percent in 2011 to 91 percent in 2015. Similarly, in rural areas access to water supply increased from 55.5 percent to 82 percent in 2015 over the same period. The respondents further explained that the minimum requirement standard used for assessing access to potable water has increased from GTP-I to GTP-II. The standard of access to potable water during the first GTP was 15 liters per capital per day within 1.5 km radius in rural areas, and 20 liters per capita per day within 0.5 km radius in urban areas. During the second GTP (2015-2020), the potable water supply coverage standard has been modified to be 25 liters per capita per day with in 1km radius in rural areas. For urban areas, the standard varies based on demand categories - 100 liters, 80 liters, 60 liters, 50 liters and 40 liters per capita per day within 250m from the biggest to the smallest cities· According to the data and respondents, the researcher observed that potable water supply coverage in the country has improved significantly in recent years in all regions.

6.1.1 federal capital and recurrent spending on water sectors

The Unit of measurement to estimate the regions' expenditure needs for provision of drinking water is total population. The rationale for this choice is straightforward as larger population implies larger expenditure to avail water. In this regard, federal, regional, municipality, and Woreda administrations, and development partners are involved in the provision of water and sanitation services in Ethiopia.

Table 6.1 Regional Recurrent Expenditure on Water Supply Actual (in million birr)

Region/year	2001 2008\09	2002 2009\10	2003 2010\11	2004 2011\12	2005 2012\13	2006 2013\14	2007 2014\15	2007 2015\16	2009 2016\17	2010 2017\18
Tigray	20.2	23.2	30.2	45.9	69.9	34.1	93.3	99.7	114.6	73.6
Afar	12.3	15.3	20.3	24.1	27.1	37.9	48.0	55.6	67.1	NA

Amhara	31.6	31.0	45.6	68.0	81.5	98.7	133.0	148.4	173.0	227.6
Oromia	56.5	60.0	95.5	242.3	195.1	266.5	313.2	561.8	NA	NA
Somali	2.4	6.6	6.0	8.0	7.4	6.8	8.3	66.6	81.5	99.8
B. Gumiz	4.4	6.9	10.1	13.2	17.0	20.9	22.6	26.1	38.1	NA
SNNP	2.7	43.7	53.6	66.6			127.0	174.3	242.4	301.5
Gambella	4.4	5.7	7.3	10.5	12.9	12.9	20.5	26.8	34.2	NA
Hareri	NA	NA	0.48	0.7	0.6	1.0	1.3	1.2	12.7	NA
Diredawa	2.7	3.4	2.2	3.7	4.3	7.8	8.2	10.0	12.0	NA
AddisAbaba		NA	202.0	280.7	NA	531.9	579.1	404.5	709.1	845.3
Total Regional States	137.1	195.8	473.3	763.8	415.8	1018.5	1354.6	1575.0	1484.8	NA
Federal Government	22.7	16.4	28.6	37.6	45.2	63.9	69.2	375.7	64.4	74.3
Country Wide	159.8	212.1	501.9	801.3	461.1	1082.4	1423.8	1950.7	1549.2	NA

Source: own computation and MoFED

NA means not available Data -+

Table 6.2: Regional Capital Expenditure on Water Supply

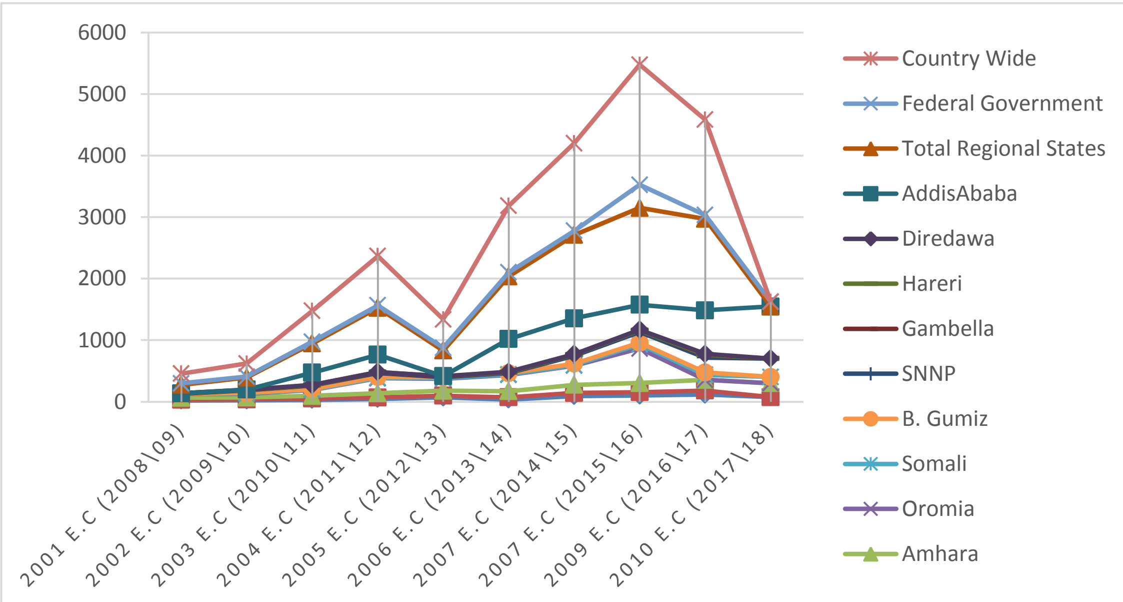
Region/year	2001 2008\09	2002 2009\10	2003 2010\11	2004 2011\12	2005 2012\13	2006 2013\14	2007 2014\15	2007 2015\16	2009 2016\17	2010 2017\18	2011 2018/2019
Tigray	23.1	107.7	126.9	130.7	654.4	732.8	842.6	862.0	751.1	484.2	530.07
Afar	29.7	54.0	60.1	86.7	104.6	94.8	137.9	139.9	215.2	NA	154.23
Amhara	61.8	162.0	238.6	464.9	565.9	1913.2	1503.3	1190.4	1398.8	1455.1	1995.57
Oromia	160.6	483.3	413.7	474.8	868.6	1208.2	1449.6	1351.0	NA	NA	1993.51
Somali	53.3	293.1	162.8	162.0	172.1	270.7	411.6	651.1	922.5	1581.7	1335.10
B. Gumiz	1.8	3.5	23.8	68.1	92.2	23.0	61.2	49.8	69.8		88.88
SNNP	26.8	126.4	86.0	385.9	397.5	622.2	718.9	435.3	488.9	529.9	906.92
Gambella	0.4	4.2	11.9	42.7	33.5	50.5	18.0	37.8	69.3	NA	1.44
Hareri	3.2	11.8	18.4	14.2	19.3	82.0	53.8	104.6	142.3	NA	11.33

Diredawa	3.1	8.2	5.7	54.2	31.1	11.8	13.0	12.9	30.3	NA	29.40
Addis Ababa	335.7	289.8	401.2	561.3	1005.6	2207.4	1587.1	2125.6	3873.9	2005.6	2942.99
Regional States	310.6	1417.6	1147.9	2445.6	3944.8	7216.7	6797.1	6960.4	7789.6	6056.4	9988.01
Federal Government	216.3	289.2	721.5	1869.2	2559.4	2116.4	1647.4	1942.8	2267.5	1947.1	NA
Country Wide	526.9	1706.8	1869.4	4314.8	6504.2	9333.1	8444.5	8903.2	10057.1	8003.5	NA

Source: own computation and MoFED

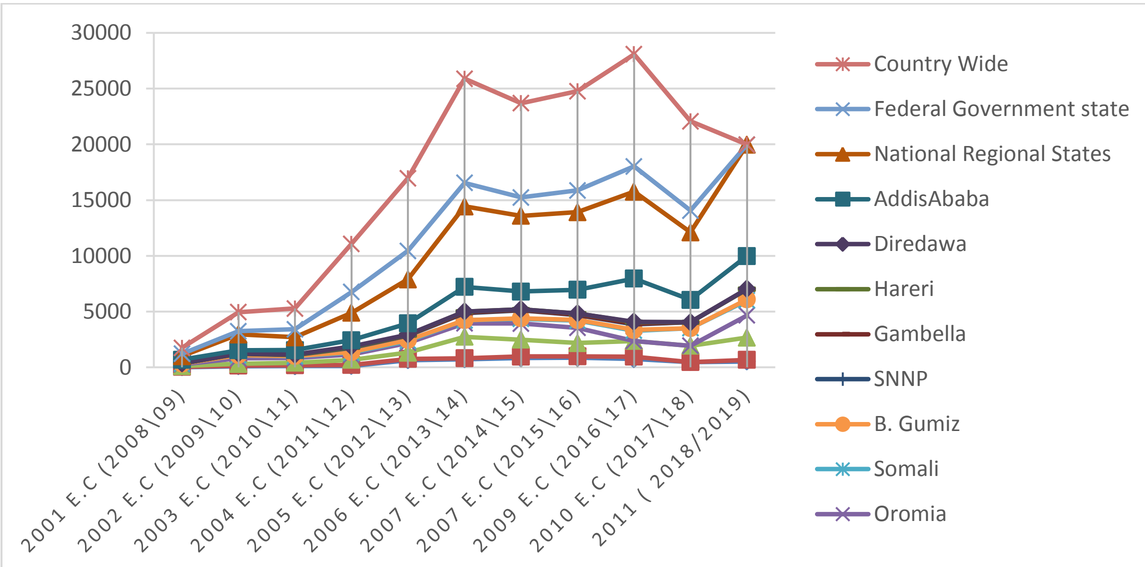
NA means not available Data

Figure 6.1: Regional Recurrent Expenditure on Water Supply Actual (in million birr)



Source: own computation and MoFEC

Figure 6.2: Regional Capital Expenditure on Water Supply (in million birr)



Source: own computation and MoFEC

Tables 6.1 and 6.2, and figures 6.1 and 6.2, above show that the recurrent and capital expenditure across region has increased during the last ten years. This by itself can show how the public expenditure among regions is used for service provision.

The budget expended for water sector development and the numbers of physical structures built have an ultimate impact of improving access to safe drinking water. This could be represented by water coverage regions reached in different years. In this regard, the data shows that potable water supply coverage increased in all regions during GTP-I (with GTP-I standard for water supply) and during GTP-II (with GTP-II standard for water supply). According to the report on One Wash National Program Phase-1 review by the National Wash Coordination Office (NWCO), beneficiaries of the program increased from 57,467,526 in 2013 to 76,191,083 in 2015. Out of which, about 80 percent of beneficiaries are in rural areas. However, reliability of services due to frequent breakage and power outage remains a challenge (NWCO, 2018).

Potable water supply is the duties and responsibilities of regions. Clean water includes private and common pipeline water supply; and developed, maintained, and protected natural springs. Table 6.3

shows changes in water supply coverage. In the last 12 years (2004 – 2016), there is significant changes and progress. In 2004, the national clean water supply access was 29.73 %. In 2016, the coverage grew to 62.69 %. In 2004, only Amhara region had below the national average coverage. In 2016, Somali (48.01%), Afar (59.15%), Oromia (60.63%), and SNNP (61.83%) had registered below the national average. Whereas, Tigrai (79.39%), Amhara (63.33), Benishangul Gumuz (81.51 %), Gambella (82.99 %), Harari (81.89 %), and Dire Dawa (84.34 %) had registered above the national average coverage.

Table 6.3. Regions Potable Water Supply in Percent

Region	Coverage (%)		2004 - 2016 Growth in Percent
	1996/2004	2008/2016	
Tigrai	54.00	79.39	31.98
Afar	48.57	59.15	17.89
Amhara	28.00	63.33	55.79
Oromia	31.99	60.63	47.24
Somali	38.98	48.01	18.81
Benishangul Gumuz	51.54	81.51	36.77
SNNPR	34.27	61.83	44.57
Gambella		82.99	100.00
Harari	73.28	81.89	10.51
Dire Dawa	90.76	84.34	(7.61)
National Average	29.73	62.69	52.58

Source: Central Statistical agency

According to the above data and the respondents' reflection regions clean water supply coverage in the last 12 years showed growth except Dire Dawa City Administration. During this period, Amhara (55.79%), Oromia (47.24%), SNNPR (44.57%), Benishnagul Gumuz (36.77%), Tigrai (31.98%) had registered good performance respectively. Nevertheless, as demonstrated in other sectors, there is no balanced and fair growth among regions. . The above table demonstrated this situation. In fact, the 2016 situation is better than previous years and the imbalance among regions decreased in this year.

Moreover, as shown in table 6.4 and table 6.5 below, by the end of GTP-I, only three areas had access levels below 80 percent – Afar (60 percent), SNNP (71.1 percent) and Somali (70 percent). In recent years with GTP-II, almost all regional access rates are now lower due to the higher standards. The emerging regions have caught up with the big regions in terms of potable water access and some regions now have higher access levels. Based on the below table and the respondents perception, Amhara region has improved significantly during GTP-II and now has the highest performance with 82 percent access in 2018. Tigray, SNNP, and Afar regions have the lowest coverage in the same year. However, it should be noted that Afar has shown significant improvement during the second GTP.

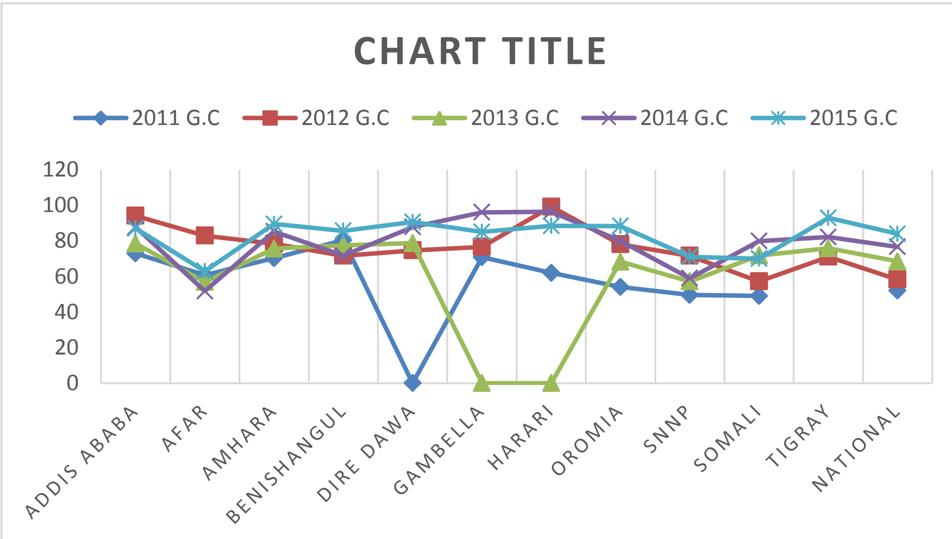
Table 6.4: Trends in access to water across regions during GTP – I (GTP-I Standard)

Region	2011	2012	2013	2014	2015
Addis Ababa	73	94.1	78.6	87.7	87
Afar	60.7	83	56.9	51.7	63
Amhara	70.3	78.4	75.7	85.3	89.5
Benishangul	80.4	71.6	77.6	71.7	85.7
Dire Dawa	NA	74.7	78.7	87.8	90.6
Gambella	70.8	76.7	NA	96.1	85
Harari	62	99.3	NA	96.5	88.5
Oromia	54.1	78.1	68.3	80	88.4
SNNP	49.6	71.6	57.2	59	71.1
Somali	49	57.2	71.8	79.9	70
Tigray		71.1	75.9	82.2	93
National	52.1	58.3	68.5	76.7	84

Source: Ministry of Water, Irrigation and Electricity based on data supplied by the Regions

NA means not available data

Figure 6.3: Trends in access to water across regions during GTP – I (GTP-I Standard)



Source: Ministry of Water, Irrigation and Electricity based on data supplied by the Regions

Table 6.5: Trends in access to water across regions during GTP – II (GTP-II Standard)

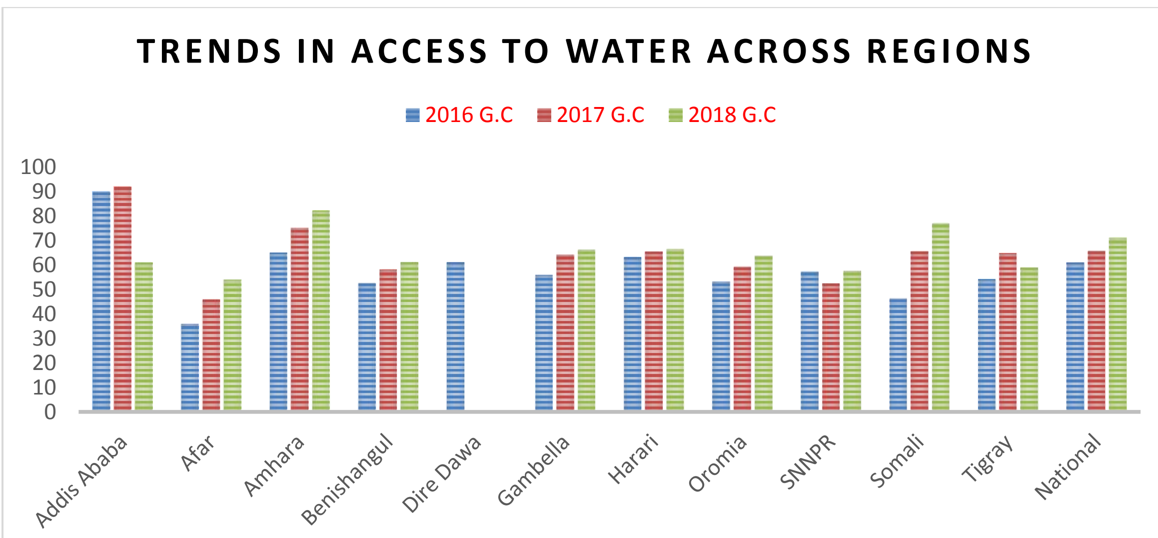
Region	2016	2017	2018
Addis Ababa	90	92	61
Afar	36	46	54.0
Amhara	65.02	75.07	82.2
Benishangul	52.6	58.2	61.2
Dire Dawa	61.1	NA	NA
Gambella	55.9	64.2	66.3
Harari	63.3	65.5	66.5

Oromia	53.26	59.28	63.8
SNNPR	57.3	52.5	57.6
Somali	46.4	65.6	77
Tigray	54.16	64.78	58.9
National	61	65.7	71.1

Source: Ministry of Water, Irrigation and Electricity based on data supplied by the Regions

NA means not available data

Figure 6.4: Trends in access to water across regions during GTP – II (GTP-II Standard)



Source: Ministry of Water, Irrigation and Electricity based on data supplied by the Regions

Table 6.5 and figure 6.4 as well as the respondents' reflection show a sharp decline in access to water in Addis Ababa in 2018. This is a result of a change in the way access is measured. Respondents explained that prior to 2018; access in Addis Ababa was estimated by taking the total water supply divided by the population, without deducting water that goes to industries. Given that Addis Ababa has the largest concentration of industries in the country, this skewed access measures. Hence, by excluding water supply to industries, the measures of access to households declined in 2018 as shown in table 6.5. Respondents added that a potential weakness of coverage measures is that some facilities may not be working and maintenance not conducted in time. Hence, the figures may exaggerate the actual utilization.

Table 6.6 below and the interview with higher officials and professionals' from the federal ministry and regional bureaus shows that , while potable water supply has increased in both rural and urban areas over time, there is a significant gaps in service quality between rural and urban. The table shows that in rural areas the coverage of safely managed water is less than 5 percent while in urban areas it stands at 38 percent during 2015. Hence, while access has significantly improved regionally and in rural areas, the standard of water supply remains low. Taking service quality into account, more urban regions have higher coverage of potable water service as shown in table 6.6 below. Addis Ababa, Harari, Dire-Dawa, and Gambella have the highest drinking water coverage while regions with the highest rural population proportions such as SNNP, Oromia, and Afar lag behind.

Table 6.6 Potable water service quality between rural and urban areas in Ethiopia

Ethiopia	Drinking water			Sanitation		
	National	Rural	Urban	National*	Rural	Urban*
	2015	2015	2015	2015	2015	2015
Safely managed	11	4	38	-	4	-
Basic service	29	26	39	7	1	18
Limited service	25	26	18	7	1	30
Unimproved	25	30	3	59	62	44
No service	12	14	2	27	32	7

Source: WHO/UNICEF JMP (2017)

6.1.2 Regional Equity in potable water Sector Development

Improving water access to all Ethiopians is among the key tasks of the federal and regional governments. It is found out that water expenditure is lower than education and road expenditure. The capital expenditure is much higher than that of recurrent expenditure. This is because water development, like road development, requires lots of physical construction. In this regard, if we look at the average per capita expenditures of regions over 2009-2019 (Table 6.7 below), there are apparent differences among the regions. The average per capita expenditures of Addis Ababa city administration are many times higher than the expenditures of other regional states.

Table 6.7: Average per capita expenditures on water sector by region over 2009-2019 period in Birr

Region	Per capita recurrent expenditure on water	Per capita capita expenditure on water	Per capita total expenditure on water
Addis Ababa	262	840	1031
Afar	23	63	86
Amhara	6	48	54
Benshangul	21	48	69
Dire Dawa	13	44	57
Gambella	42	67	109
Harari	15	197	209
Oromia	10	28	38
SNNP	8	23	30
Somali	7	97	103
Tigray	14	94	107
No. of obs.	107	114	114

Source: Computed based on data from MoFEC and CSA

As can be seen from Table 6.7 above, Addis Ababa had the highest per capita capital expenditure (Birr 840) followed by Harari region (Birr 197). The least average per capita Capital expenditures were registered in SNNP and Oromia Regional states. Addis Ababa's per capita capital outlay was about thirty folds higher than these regions expenditures. The average recurrent expenditure of Addis Ababa (Birr 262) was over 40 times higher than that of Amhara Region (Birr 6), which appeared to have the least per capita expenditure. Per capita recurrent expenditure of Gambela, which was the next largest, was only about one-sixth of that of Addis Ababa.

These inequalities in recurrent and capital expenditures had given rise to inequalities in total expenditures of the regional states. To better capture the regional inequalities, Gini coefficients were computed by years and presented in table 6.8 below.

Table 6.8: Gini Coefficient for recurrent, capital and total water expenditures by year

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Recurrent expenditure	0.39	0.25	0.51	0.49	0.28	0.59	0.52	0.43	0.55	0.53	0.37
Capital expenditure for water	0.60	0.41	0.42	0.35	0.40	0.46	0.36	0.54	0.60	0.52	0.43
Total Expenditure for Water	0.53	0.37	0.43	0.34	0.39	0.47	0.38	0.49	0.58	0.51	0.37

Source: Computed based on data from MoFEC and CSA

As can be seen from the above table ,the trends in regional inequality shows that inequality is rising up in recurrent expenditure while both in capital and total expenditure though the pattern is irregular there is an increasing trend except for the last two years of 2018 and 2019 when the trend seems to decline. The trends of inequality in total regional water expenditures also varies for each year with the highest inequality observed in 2017 (Gini = 0.58) followed by 2009 (Gini = 0.53) and 2018 (Gini = 0.51).

Figure6.5: Trends in recurrent expenditure Gini coefficient

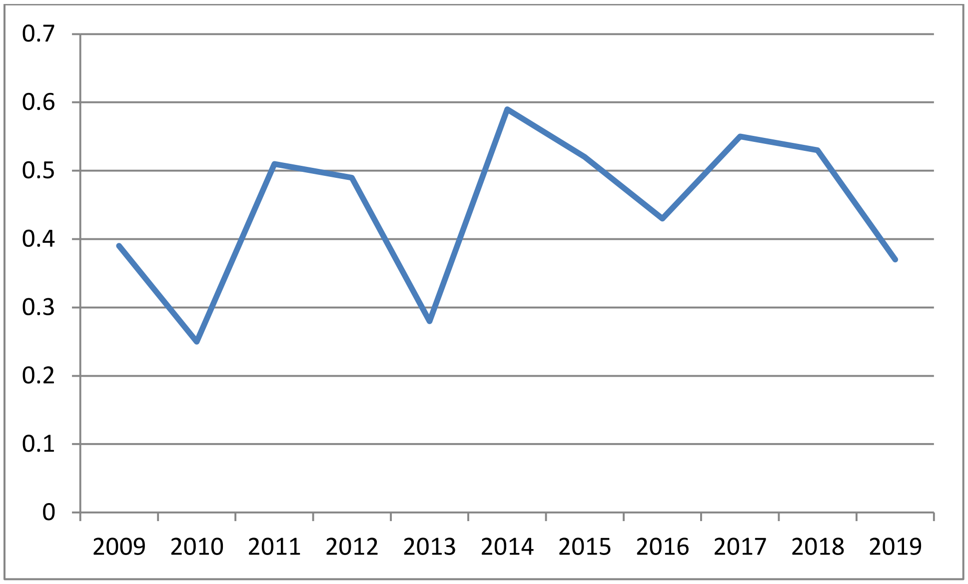


Figure6.6. Trends in capital expenditure Gini coefficient

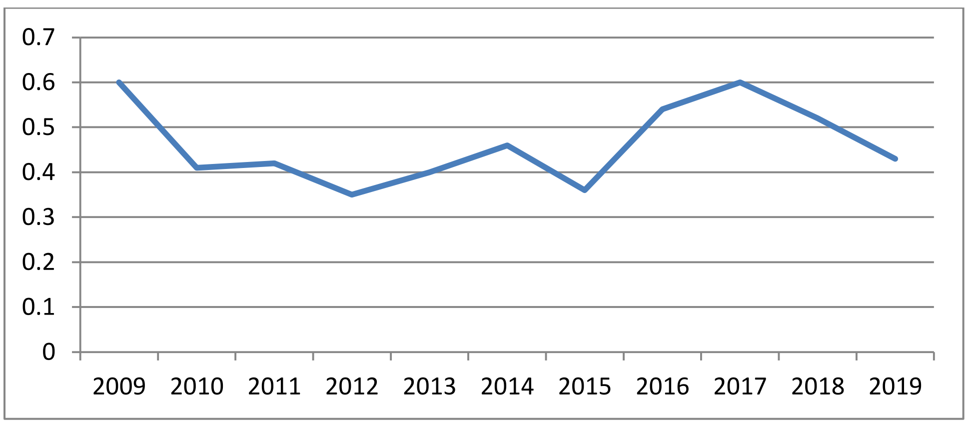
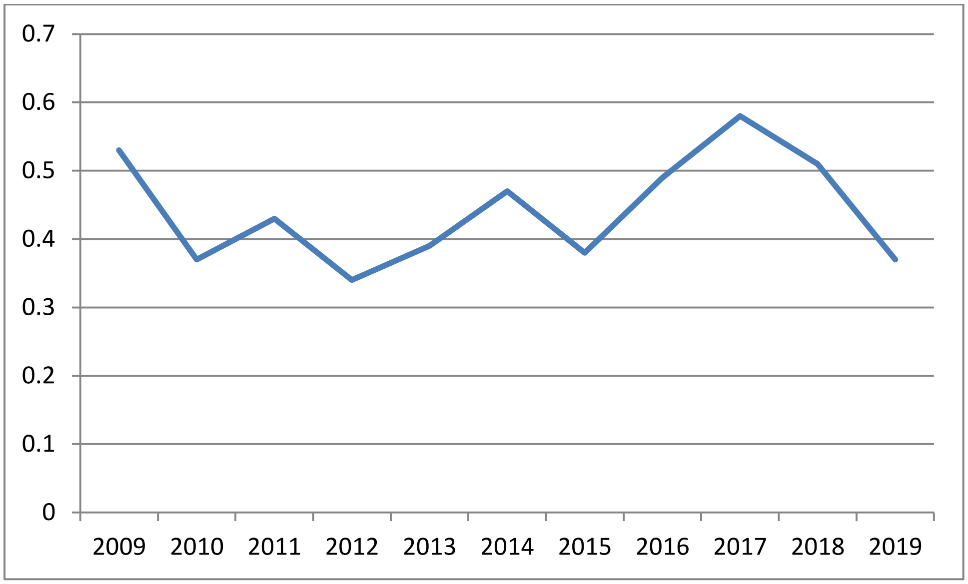


Figure 6.7.Trends in total expenditure Gini coefficient



The average Gini coefficient over the 2009-2019 periods was about 0.44. The recurrent and capital components of total expenditures exhibited similar patterns. Inequality appeared to be the highest in 2014 in case of recurrent expenditure while it was in both 2009 and 2017 in case of capital. The average Gini coefficients for recurrent and capital expenditures over 2009-2019 period were relatively equal with their respective values of 0.45 and 0.46. The highest inequality observed in 2017 was driven by a relatively higher inequalities in terms of both recurrent (Gini = 0.55) and capital expenditures (Gini = 0.60) in the same year. In general, there appeared to be higher inequality among regional states in terms of expenditures aimed at improving access to water service. Addis Ababa city had the highest outlays in terms of both recurrent and capital expenditures.

Table 6.9. The effect of per capita expenditures on access to water services

Dep. Var.: Water access (%)	Coef.	(RSE)	Coef.	(RSE)	Coef.	(RSE)
Per capita recurrent expenditure	0.028***	(0.007)				
Per capita capital expenditure			0.007***	(0.001)		
Per capita total expenditure					0.005***	(0.001)
Region						
Afar	-20.80***	(6.365)	-20.18***	(5.355)	-20.14***	(5.380)
Amhara	1.93	(5.349)	1.986	(4.238)	2.118	(4.280)

Benshangul	-7.99	(5.771)	-7.333	(4.800)	-7.304	(4.819)
Dire Dawa	-2.27	(5.167)	-1.591	(4.316)	-1.531	(4.305)
Gambela	-4.25	(5.067)	-3.173	(4.350)	-3.247	(4.365)
Harari	0.456	(5.906)	-0.556	(4.949)	-0.245	(4.998)
Oromia	-8.81*	(4.959)	-8.30**	(3.956)	-8.23**	(3.972)
SNNP	-15.06***	(5.465)	-17.33***	(4.405)	-17.25***	(4.426)
Somali	-12.56*	(6.382)	-12.67**	(5.377)	-12.51**	(5.420)
Tigray	-7.28	(5.398)	-7.33*	(4.314)	-7.174	(4.354)
_cons	70.39***	(5.062)	70.55***	(4.280)	70.44***	(4.301)
Year Dummies included						
No. of ob.	81		84		84	
F(19, 61)	14.53		17.13		18.76	
R-squared	0.72		0.73		0.73	

Note: ***, **, * indicate significance at 1%, 5% and 10% levels, respectively

In order to see how variations in water expenditures affect access to water, data on water access by region and expenditures were used to run a regression of separate expenditure components on access as a dependent variable. Results reported in table 6.9 above depict the estimation outputs. As can be seen from the table, a 0.028 coefficient with strong positive significance corresponding to recurrent expenditure suggests that for Birr 1000 increment in per capita recurrent expenditure of a given region, the region's access to water will increase by 28%. Similarly, for birr 1000 additional per capita capital expenditure of a region, access to water will improve by about 7% while the similar increase in total per capita water expenditure is associated with a 5% increment in access. However, this result should be interpreted with a due care so as not to implicate the need for increasing recurrent expenditures towards better access to water. The high economic effect of recurrent expenditure may be linked to areas where there are already better water infrastructure which in turn entails the possibility of increased recurrent expenditures for managing and providing the water service to the public. Increasing the amount of capital expenditure needed to invest in water projects is fundament in order to increase access to water. In fact, there are variations across regions in the amount of capital required to extract water available depending on different geographic and social factors. A quick look at the coefficients of region dummy indicate that, with the exception of Amhara region, all regional states have lower water access than Addis Ababa (the base category). However, the differences are statistically significant only in the cases of Afar, Oromia, SNNP and Somali regions. Similar differences prevailed when different expenditure components are taken as explanatory variable.

Table 6.10: Per capita water expenditures by year and region (in Birr)

	Per capita Water expenditure			
Region	2009	2012	2015	2019
Tigray	9.6	37.0	185.1	126.6
Afar	28.7	69.7	107.9	125.9
Amhara	5.2	27.7	80.2	106.4
Oromia	7.6	23.1	52.3	88.6
Somali	12.0	33.8	77.0	241.9
B.Gumuz	7.4	88.6	83.4	126.2
SNNP	1.9	26.7	46.3	63.9
Gambella	14.4	143.8	94.1	81.7
Harari	16.3	69.6	237.5	88.2
Dire Dawa	15.8	144.0	48.2	81.7
Addis Ababa	117.7	276.4	662.0	1070.9

Source: Own computation based CSA and MoFEC

Table 6.10 shows that the per capita expenditures of water in selected years with reference to Ethiopia's GTP-I and GTP-II periods. Just before the beginning of GTP I (2009), the per capita expenditure on water was below birr 20 for all regions except Addis Ababa and Afar. The highest expenditure per person was that of Addis Ababa (117.7 Birr) followed by Afar (Birr 28.7) while the least was that of SNNP region (Birr 1.9). In the first (2012) and final years of GTP-I, Per capita expenditures on water were made to increase by many folds in all the regions. At the end of GTP-I (2015) too, Addis Ababa remained to have the highest expenditure (Birr 662) followed by Harari and Tigray. The increment in water expenditure also continued over GTP-II period with the exception of few regions. In 2019, Somali region had the next largest per capita water expenditure (241.9 birr) next to Addis Ababa (1070.9 birr). The reasons for the observed change in water expenditures in 2019 has to do with the political and policy maneuver by the ruling party that emerged out of EPRDF through the leadership of the so called “reform leaders” who assumed power in 2018 through youth movement.

The view of the respondents’ in all regions to this sector is alike to education and health. But respondents from Amhara region complained on water sector data difference of the federal central statistics with the region. They further complained that the population census of the 2017, which they believed reduced the number of Amharas’ population that penalized the region not to get enough budget from the federal government as it was expected and they proposed that the region should be compensated by any means to give equal water access to their citizens like other regions.

To conclude, from the above discussions and the respondent’s reflection, the researcher observed that the water supply coverage has increased in both urban and rural areas, though some rural areas are lagging behind. Despite the achievements observed in the sector, the analysis shows that water resource coverage is unevenly distributed in Ethiopia and more concerted action is needed to further reduce the inter-regional water coverage gap without compromising efficiency to fulfill each individual’s right of equal access to government provided services stipulated in the Ethiopian Constitution.

6.2. Road sector development

The road sector is one of the priority areas of the government of Ethiopia along with agriculture, education, heath, and water. It is one of the top sectors with respect to budget allocation. The expansion and improvement of the road network is directly linked to the level of development of a country.

Ethiopia had 8450 km of total road network in 1970 and increased to 12,208 and 18,946km in 1980 and 1990 respectively. The figure came down to 18,081 km in 1992 as Eritrea’s share of the road network was deducted. Of more concern than the size of the road network was its deteriorating condition, which made it almost unserviceable as a result of years of neglect. Apparently, the regime of the day was busy with wars and infrastructure building was not a priority.

After 1991, the government indicated that without an expanded road network the country’s market could not be integrated and developed, and special attention should be accorded to the sector. Major rehabilitation of the main roads was undertaken under the economic recovery and reconstruction program (ERRP), and other road works that fell within the budget capability of the government were also carried out. The most important initiative has been the formulation of the Road Sector Development Program (RSDP), which has been implemented since 1997. The main purpose of this program is to upgrade the main roads of the country, linking Addis Ababa to major towns and to seaports of neighbouring countries, and also significantly expanding the rural road network.

Road construction in Ethiopia is undertaken at the federal, regional, woreda, and municipality levels. The Ethiopian Roads Authority is mainly mandated with the construction of roads linking Addis Ababa with neighbouring countries, ports, regional capitals, other large cities and specific destinations with special economic interest (for example an investment in another sector that is federally endorses). Regional roads mainly connect zones and woredas. Woreda roads through the Universal Rural Roads Access program (URRAP) connect Kebelles. URRAP also aims to develop local capacity by supporting small and medium contractors and consultants.

The RSDP guide federal road construction in the country. Since 1997 there have been five RSDPs, namely, RSDP-I (1997-2002), RSDP-II (2002-2007), RSDP-III (2007-2010), RSDP-IV (2010-2015) and RSDP-V (2015-2020). The first three road sector development programs (RSDP-I – RSDP-III) focused on rehabilitation of trunk roads and upgrading of trunk roads (to asphalt level). As such the selection and prioritisation was not difficult.

In addition to upgrading trunk roads, RSDP-IV and RSDP-V included other priority areas such as upgrading link roads, constructing new link roads, and constructing main access roads. Hence, selection and prioritisation of road projects has become complicated with many of the roads involving not only regions but also lower administrative tiers such as Zones, Woredas, municipalities, and Kebelles. As of 2010 with the first and second GTPs, regions have been increasingly involved in the selection and prioritisation of federal road projects along with ERA. Issues of equity began to surface with the start of the first Growth and Transformation Plan (GTP-1) as ERA started to invest in connecting Woredas within regions.

Hence, during the first and second GTPs, most of the federal financed roads were selected with consultations with regions. During the development of the recent RSDPs, all regions are involved to avoid potential regional inequality. Moreover, at the project level, all stakeholders such as the Ministry of Finance, the Parliament and regions are notified.

According to the interview with officials and professional from ERA, at the planning stage of projects each year, ERA sends letters to regions who are asked to list projects they want to be constructed at federal level. Guidelines (criteria) on how to prioritise their desired projects are enclosed with the letter. Discussions with representatives from ERA indicated also that there have been variations in applying the guidelines (criteria) sent by ERA. For the construction of new link roads and main access roads, first stage selection and prioritisation are based on several factors. Areas with the following characteristics are given priority: (i) high population size in secluded areas, (ii) availability of natural resources, (iii) surplus food and cash crop producing areas, (iv) areas with missing links, and (v) developing regions. Hence, regional equity concerns are partially addressed in this category of roads. During the internal assessment stage of projects by ERA, attempts are made to take existing road networks into account and try to prioritise disadvantaged regions.

According to the respondents and various sources from ERA, the final selection for upgrading of existing projects and the construction of new projects is done through a feasibility study, which considers cost-benefit analysis. Any potential project with economic return less than 10.23 percent is not constructed. More importantly, the feasibility study informs about the standard of road to be constructed. The standard of roads constructed at federal level can be either Double Bituminous Surface Treatment (DBST) or Asphalt Concrete (AC). The discussion with the respondents revealed that the chosen standard is based on a feasibility study conducted by consultants, with the main criteria being the envisaged type and intensity of traffic flow. For construction of link roads, three standards are considered, namely, gravel, AC, and DBST. Hence, the choice road standard is solely based on project-specific feasibility study and is not regional quota-based. Moreover, route selection of any federal roads projects is based on a feasibility study that takes into account engineering (length, terrain, earth works, etc.); social (community access, development, public transport etc.); environmental (erosion, land-slide etc.); economical (viability and user benefits); and administrative (sustainability and strategic impact) factors. Routes with the best scores are selected.

During the GTP I period, the federal and regional road network has increased from 48,800 km in 2010 to 63,604 km (with a net increase of 14,804 km) in 2015. In addition to this, 46,810 km all-weather *woreda* roads have been constructed. As a result, the total road network of the country has more than doubled during the GTP I period reaching 110,414 km by the end of the plan period.

In a nut shell, the total size of the national road network has showed a remarkable increase since 1995. The total road network increased from 23,442 km in 1995 to 29,571 km in 2000.The figures for the year 2000 include 3,824 km of paved roads, 12,267 km of gravel roads and 13,480 km of rural roads. This increase has also had an impact on the road density in the country. The road density has increased from 0.43 km per one-thousand population in 1997 to 0.45 in 2000, and 21 km of road per one-thousand squares km to 27 km during the mentioned period.

However, discussion with representatives from ERA observed that ERA was involved in the construction of roads linking Woreda within regions since 2010 to enhance road network in the country, in order to successfully implement the first GTP. Therefore, ERA has been involved in the road construction sector in the country above and beyond its mandate. ERA’s involvement in intra-regional road construction emanated from discussions by high-level government bodies was during the development of the first GTP. Since ERA reports to the Ministry of Transport (MoT), ERA received the instruction to be involved in the construction of intra-regional roads through the MoT. It was observed that the main motive to involve ERA in intra-regional road construction was to ensure equity as regions have different capacities in road construction.

In summary, the federal road construction systematically is designed to involve regions, use the RSDPs, and hence address regional equity issues in additional to economic factors. However, from the above discussion with the respondents and from the analysis it was observed that the practice is not formally consolidated in a single document and communicated to stakeholders - such as regional representatives and the Parliamentarians, which has caused perceived equity concerns.

6.2.1 Recurrent and Capital expenditure on road sectors

Road transport is the dominant mode of transport in Ethiopia. It accounts for 90 to 95% motorized freight and passenger transport (RSDP). As a result, provision of road infrastructure is one of the major strategies to reduce poverty and bring about socio-economic development. Road provision is the responsibility of both the federal and the regional governments. Federal governments construct the main road while the regional governments construct rural roads or regional roads. Expenditure for rural or regional roads is therefore one of the major expenditure items at regional levels.

According to the Ethiopia fiscal equity independent study final report (unpublished) by FISCUS Public Finance Consultants, July 2019, the bulk of road construction financing comes from the government. For example, the estimated cost of roads projects at national level during the RSDP-V

(2015-2020) was Birr 334.5 billion of which close to 80 percent (Birr 264.7 billion) was federally funded roads while the remaining Birr 69.8 billion was regional and Woreda roads. Close to 76.5 percent of the total RSDP-V cost will be financed by local sources (73.8 percent from government and 2.7 percent from the matching fund and the road fund); and the remaining 23.5 percent will be covered from foreign sources notably China, the World Bank, and the African. In the period 1997-2018, Birr 231 billion worth of federal road projects were implemented. Regarding the budget, in the 2018/19-budget year, Birr 45 billion was allocated to ERA. This is close to 40 percent of the total federal capital budget for 2018/19, which stood at Birr 114.7 billion. This clearly indicates a high level of government commitment to road infrastructure development, which has been a priority for many years.

Table 6.11. Regional capital expenditure on Road Construction Actual (in Million Birr)

Region/year	2001 2008\09	2002 2009\10	2003 2010\11	2004 2011\12	2005 2012\13	2006 2013\14	2007 2014\15	2007 2015\16	2009 2016\17	2010 2017\18
Tigray	11.8	3.1	28.0	329.4	30.2	611.5	639.7	578.2	333.0	496.3
Afar	18.6	7.4	42.5	43.3	34.9	62.2	78.9	60.4	33.6	NA
Amhara	123.5	404.0	445.5	1639.7	2233.0	1791.2	2375.9	898.8	752.2	756.1
Oromia	238.8	382.1	622.6	3754.2	5444.4	4785.3	5108.7	4389.0	NA	NA
Somali	12.1	54.8	49.8	92.1	124.8	343.1	261.2	160.0	197.5	723.6
B. Gumiz	15.6	1.6	13.7	117.4	139.8	117.0	103.6	95.4	119.7	NA
SNNP	73.5	69.9	NA	1.1	NA	NA	467.0	1376.8	1391.2	1183.0
Gambella	NA	NA	NA	16.3	24.2	79.1	37.0	23.0	53.9	NA
Hareri	14.5	24.6	20.3	73.8	115.9	100.7	185.9	67.8	268.9	NA
Diredawa	28.7	26.4	19.0	32.7	56.1	83.0	73.5	87.2	NA	NA

AddisAbaba	1383.0	1424.6	1860.9	1428.1	3767.5	5618.6	5687.8	4678.5	3968.9	4094.2
National Regional States	1920.0	2398.6	3102.5	7528.1	11970.9	13591.7	15019.2	12415.2	7118.9	7253.2
Federal Government	8263.4	12579.4	17374.0	21043.7	22747.8	27251.9	24360.9	23607.2	24308.3	22720.0
Country Wide	10183.4	14978.0	20476.5	28571.8	34718.7	40843.7	39380.1	36022.4	31427.2	29973.3

Source: own computation and MoFEC

NA means not available data

Table 6.12. Regional recurrent expenditure on Road Actual (in Million Birr)

Region/year	2001 2008\09	2002 2009\10	2003 2010\11	2004 2011\12	2005 2012\13	2006 2013\14	2007 2014\15	2007 2015\16	2009 2016\17	2010 2017\18
Tigray	30.8	30.0	39.3	50.0	101.8	72.3	89.1	100.0	130.4	148.5
Afar	6.9	8.5	9.9	13.7	17.1	19.5	25.7	27.7	32.6	
Amhara	31.9	29.8	39.0	68.7	83.8	120.2	199.2	321.2	302.9	196.3
Oromia	44.8	57.6	168.6	131.2	190.8	260.3	454.4	622.8	NA	NA

Somali	1.0	4.6	7.4	8.0	8.2	13.1	12.7	15.7	18.1	28.0
B. Gumiz	8.4	10.7	12.8	9.7	10.6	17.5	23.5	25.6	36.5	NA
SNNP	25.2	37.4	29.7	46.2	52.7	59.4	76.6	134.1	393.0	540.8
Gambella	3.3	3.3	12.4	6.4	6.9	9.5	12.9	31.4	27.7	NA
Hareri	4.3	4.0	5.4	7.8	7.9	9.9	12.6	13.2	17.7	NA
Diredawa	10.7	8.3	11.9	12.6	16.6	24.1	29.8	37.0	11.2	NA
AddisAbaba	47.5	65.4	89.8	108.6	167.3	187.2	250.0	312.2	485.5	600.6
National Regional States	214.8	259.7	426.1	462.9	663.7	793.0	1186.5	1640.8	1455.6	NA
Federal Government	87.7	162.9	177.6	241.5	271.5	391.7	401.5	481.2	695.3	629.0
Country Wide	302.5	422.6	603.7	704.3	935.2	1184.7	1588.0	2122.0	2151.0	NA

Source: own computation and MoFEC

NA means not available data

Table 6.13: Per capita road expenditures by year and region (in Birr)

	Per capita Road expenditure			
Region	2009	2012	2015	2019
Tigray	17.77	110.37	208.09	84.59
Afar	45.69	55.16	115.84	78.36
Amhara	9.86	90.44	132.55	65.34
Oromia	15.43	129.14	179.47	45.74
Somali	8.20	25.18	117.37	116.71
B.Gumuz	39.98	138.45	236.22	34.47
SNNP	9.42	24.59	29.84	45.79
Gambella	12.61	61.35	149.63	-
HarAri	106.12	407.01	886.21	41.13
Dire dawa	113.66	116.92	275.23	-
Addis Ababa	1040.20	669.04	2128.39	1469.77

Source: Own computation based CSA and MoFEC

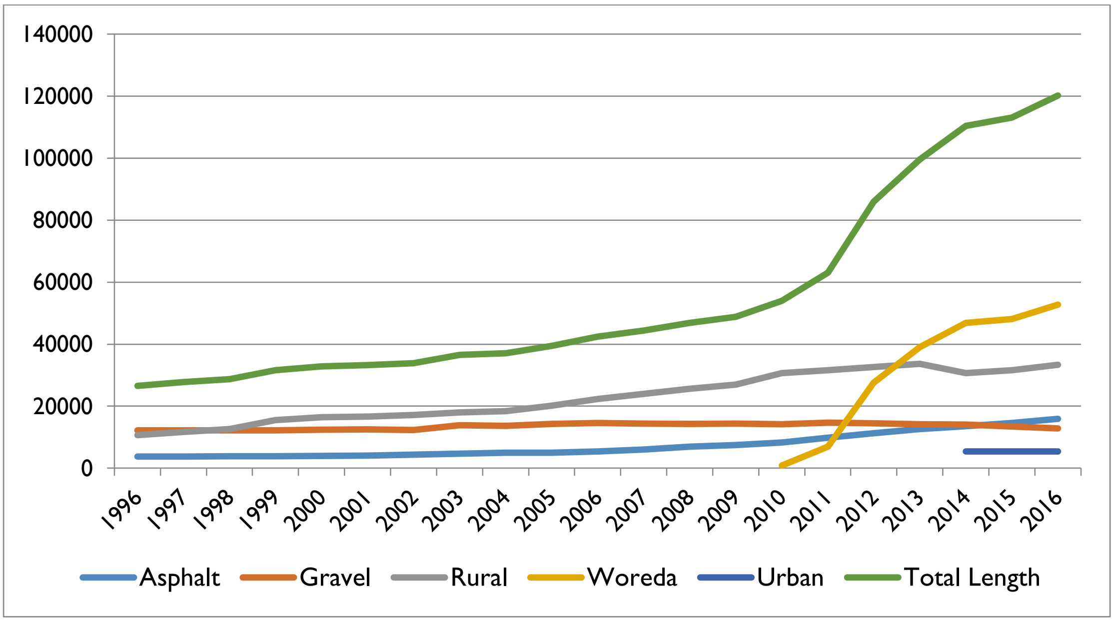
Table 6.13 shows that the per capita expenditures of road in selected years with reference to Ethiopia's GTP-I and GTP-II periods. In 2009, the per capita expenditure on road was below birr 20 with the exception of Addis Ababa, Dire Dawa, Harari and Afar similar to that of water. The highest expenditure per person was that of Addis Ababa (1040 Birr) followed by Dire Dawa (Birr 113.66) and Harari (106 Birr) while the least was that of Somali region (Birr 8.20). In the first (2012) and final years of GTP-I, Per capita expenditures on road were made to increase by many folds in all the regions. At the end of GTP-I (2015) too, Addis Ababa remained to have the highest expenditure (Birr 2128.39) followed by Harari (birr 886.20) and Dire Dawa (birr 275.23). Unlike that of water, in 2019, per capita road expenditures were found to be lower than that of the year before the inception of GTP-II (2015) in all the regions. Like the case of water, Somali region had the next largest per capita road expenditure (birr 116.71) next to Addis Ababa (birr 1469.77). The reasons for the observed change in road expenditures in 2019 has to do with the political and policy maneuver by the ruling party that emerged out of EPRDF through the leadership of the so called "reform leaders" who assumed power in 2018 through youth movement.

Based on the above tables 6.12 and 6.13, recurrent road expenditure is higher at regional levels compared with the federal government. On the other hand, capital expenditure is higher at federal level than the regional level. As can be seen from the above table, the major component of road expenditure is capital expenditure. Though the big regions have the highest outlay, the per capita expenditure is higher for smaller regions such as Gambella, Benishangul, Afar, Dire Dawa. This could indicate the effort of these regions to catch up with infrastructural development but also it may reflect the high cost of construction in these regions due to their remote locations etc.

6.2.2 Out put and outcome of the road sector

The indicator of output and outcome of the road sector can be expressed by road networks density and road length in terms of kilometre. According to the respondents and official documents from ERA, in 2016/2017 the total roads network of the country reached 120,171km of which 28,418km (24 percent) are federal roads, 33,367km (28 percent) are regional rural roads, 52,748km (44 percent) are Woreda roads, and 5,357km (4 percent) are urban roads (see figure 6.8 below). In 1996/1997 the total road length in the country was 26,550 km. Hence, in about 20 years the road network has increased by about five folds. This is equivalent to approximately 18 percent annual growth in the road network in the last 20 years nationally. Moreover, the proportion of gravel roads in 1996/1997 was 46 percent. The proportion of gravel roads from total road network decreased to less than 11 percent in 2016/2017, indicating a significant improvement in road quality. Woreda roads grew from 854km in 2010 to 52,748 km in 2016/2017. Rural roads expansion, especially Woreda roads, has thus been one of the notable achievements of the road sector with direct implication for equity.

Figure 6.8: Road Network Growth (1996/1997 – 2016/2017)



Source: ERA (2018)

Note: Universal Rural Roads Access Program (URRAP) began in 2010 (Woreda Roads). Urban roads started to be consolidated in 2014.

Moreover, the growth in road networks in the country was made possible through five road sector development programs (RSDP) since 1997. The RSDP are five year rolling road development programs that guide development in the sector. Similar sector-based program exists found in other sectors such as education, health and water. The sector-based development programs are aligned with the five-year national development plan of the country. As a result of the significant investment in road networks in the country, distance to nearest all-weather roads has declined from 21km in 1997 to 5.5km in 2015. Similarly, road density per 1000 square km quadrupled from 24.1km in 1997 to 100.4km in 2015. The last two decades also witnessed significant improvements in road quality as the proportion of the road network in good condition increased from 22 percent in 1997 to 70 percent in 2015 (ERA, 2015).

Furthermore, looking at the federal road network constructed thus far in Ethiopia, its distribution across regions has been significantly improved. One can observe from table 6.14 below that regional states with larger populations have a proportionately larger share of the network. Nearly 44.9 percent of the federal road network is in Oromia state, while close to 20.0 percent of it is found in Amhara state. The SNNPR has 16.6 percent of the federal road network. The three states thus account for 81.5 percent of the total network, indicating that the federal fiscal policy has generally supported a dense distribution of road networks in the states with higher population sizes. Somali and Tigray account for five percent each. The remaining five states, along with Diredawa, account for the balance of about 7.8 percent.

Table 6.14. Distribution of road infrastructure by region and road type (2016/2017)

Region state	Federal roads(paved & unpaved)		Regional roads(rural & woreda)		Total federal & regional roads	
	In Km	Share in %	In Km	Share in %	In Km	Share in %
Tigray	2,588.0	9.0	3,905.0	4.5	6,493.0	5.7
Afar	1,916.2	6.7	1,178.0	1.4	3,094	2.7
Amhara	6,502.4	22.7	16,430.0	19.1	22,932	20.0
Oromia	9,081.0	31.6	42,491.0	49.3	51,572	44.9
Somali	2,586.0	9.0	3,235.0	3.8	5,821	5.1
SNNPR	4,591.6	16.0	14,521.0	16.9	19,113	16.6
B/Gumuz	734.9	2.6	1,407.0	1.6	2,142	1.9
Gambela	602.0	2.1	1,941.0	2.3	2,543	2.2
Dire Dawa	45.0	0.2	627	0.7	672	0.6
Hareri	52.0	0.2	379.0	0.4	431	0.4
Total	28,699	100	86,115	100	114,814	100

Source: Ethiopian road Authority

When we see the coverage of road length in regions in table 6.15 below, in 1995, the total regional road coverage was 9,599.2 km. In 2017, this figure grew to 33,367 kilometers. This shows that the regions road coverage is increased by 247.6 %. Compared to the situation of 1995, roads in all regions had shown growth: Gambela (10,500 %), Somali (3,576.1 %), Benishangul Gumuz (2,500 %), and Afar (1,208.89 %, Dire Dawa (592.8 %), Harari (319.6 %), and SNNPR (265.95 %).The above regions showed the highest growth rate (above the national growth rate) over the years respectively. Other regions: Tigray (164.8 %), Oromia (150.73 %), and Amhara (134.76 %) had relatively low and below average growth. In fact, at the beginning, these three regions (including SNNPR) had relatively better road coverage compared to other regions. On the other hand, in 1995 the situation of road coverage of developing regions was very low that led to significant percentage increase.

Table 6.15: Road Length in Regions

Regions	Road Length in KM				
	1995	1996	1997	1998	2017*
Tigrai	571	724	792	854	1,512
Afar	90	192	359	394	1,178
Amhara	2,316	2,637	2,980	3,339	5,437
Oromia	4,136	4,304	4,609	4,969	10,370
Somali	88	201	616	380	3,235
Benishnagul Gumuz	36	73	80	88	936
SNNPR	2,232	24	2,769	2,959	8,168
Gambella	18	38	60	60	1,908
Harari	56	57	56	57	235
Dire Dawa	56	56	56	56	388
National	9,599.2	8,305.4	12,376.2	13,155	33,367

Source - The Ethiopian House of Federation Budget Subsidy Allocation Formula and Ethiopian Roads Authority

Table 6.16 below shows that the 1995 all regions road density situation in 1000 people and 1000 KM Square, it is 0.19 and 8.47 respectively. In 2017 this figure has increased to 1.3 and 98. Regional comparisons also show wide variation. In the same year, Oromia (0.22), SNNPR (0.22), Harari (0.43), and Dire Dawa (0.22) had above average road density. On the other hand, Somalia (0.03), Afar (0.09), Benishnagul Gumuz (0.08), and Gambella (0.11) had below average road density. In 2017, all regions had showed better performance; Gambella the highest improvement of (5.9). Whereas, Oromia (1.0), Amhara (1.2), and Afar (1.1) had below the national average road density.

Table 6.16. Regional Road Density

Regions	Road Density/ 1000 People		Road Density / 1000 KM2	
	1987/1995	2009/2017	1987/1995	2009/2017
Tigrai	0.18	1.4	10.65	143.60
Afar	0.09	1.1	0.93	142.20
Amhara	0.17	1.2	14.31	204.80
Oromia	0.22	1.0	11.69	16.60
Somalia	0.03	1.3	0.32	82.60
Benishnagul Gumuz	0.08	1.7	0.79	42.90
SNNPR	0.22	2.0	19.66	42.80
Gambella	0.11	5.9	0.53	101.40
Harari	0.43	1.8	164.71	1,255.80
Dire Dawa	0.22	1.5	43.41	439.50
National	0.19	1.3	8.47	98.00

Source - The Ethiopian House of Federation Budget Subsidy allocation formula and Ethiopian Roads Authority

Both indicators show that road density difference among regions is very high. As indicated table 6.16 above, while the expectation is relatively equal, fair, and balanced growth among regions but there is significant road density difference among some regions. As can be seen in road density per 1000 sq. km the regions with smaller geographical areas such as Harari, Dire Dawa, and SNNPR have the highest road densities. Somali, Afar, Beninshangul, and Tigray have the smallest road density per 1000 sq. km. Amhara, Oromia, and Gambella are in the middle of the distribution with respect to road densities (see table 6.16 above).

As can be seen from above table, in terms of road density per 1000 people, Gambella has the highest road network per person followed by Benishangul, Harari, Afar, Dire Dawa, Oromia, Tigray, SNNPR, Amhara, and Somali regions respectively. Somali, Amhara, SNNPR, and Tigray have less road density per person than the national average.

Table 6.17 below reports various measures of regional road network in 2016/17, and provides an indicator of the regional distribution of roads. Oromia has the largest share of the federal financed road network accounting for 31.52 percent of the national road network followed by Amhara (21.97 percent), SNNPR (16.19 percent), Somali (9.3 percent), Tigray (9.1 percent), Afar (6.73 percent), Benishangul (2.6 percent), Gambella (2.16 percent), Harari (0.19 percent), and Dire Dawa (0.19 percent). Harari and Dire Dawa are mainly city-states and are very compact geographically; hence it is not surprising they have small shares from the national total road network. However, this does not mean that these areas have less coverage.

The last column of table 6.17 below reports Woreda connectivity by federal roads. Except for Somali region, which has the lowest share of its Woreda's connected by federal roads, the other regions have high proportions of their Woreda connected by federal roads. It is important to emphasise that Woreda connectively by federal roads can depend on a number of factors such as proximity to highways and hence Woreda can incidentally be connected to a federal road. Moreover, there has been restructuring of Woredas in the country and Woreda towns tend to be located where there is a trunk or main road. In other words, the data does not say if Woredas existed first and then federal roads connected to them, or if Woredas formed around existing federal roads. The data is also unable to discern if a federal road was intentionally built to service a set of Woredas, or if the road is a by-product of another objective, for example connecting Ethiopia to a neighbouring country.

Table 6.17: Road network in regions in 2016/2017

Region	Population share (2017) %	Areas share (%)	Regional share from federal roads	Road Density per 1000 sq. km	Road density per 1000 people	Share of Woredas connected by Federal Roads
Afar	1.9	5.9	6.73%	42.9	1.7	71%
Amhara	22.4	14	21.97%	142.2	1.1	82%
Benishangul	1.1	4.1	2.64%	42.8	2	80%
Dire Dawa	0.3	0.0	0.19%	439.5	1.5	-
Gambella	0.5	2.1	2.16%	101.4	5.9	84.6%
Harari	0.5	0.1	0.19%	1255.8	1.8	-
Oromia	37.6	29.1	31.52%	143.6	1.4	73.6%
SNNPR	20.3	9.1	16.19%	204.8	1.2	81%
Somali	6.1	28.8	9.31%	16.6	1	53.7%
Tigray	5.6	6.6	9.11%	82.6	1.3	95.7%
Total	**96.3 (excluding Addis Ababa)**		100.00%	98	1.3	

Source: ERA (2018)

Note: This excludes roads inside urban areas

Table 6.17 above shows various indicators of access to the road network across regions. Although there are differences across regions in each of the indicators, no region does best in all indicators. For example, Afar Region has a high share of Federal roads relative to its population share -reflecting the region's proximity to Djibouti, but a low density per 1000 sq. km, given the geographical size of the region. The indicators should be considered collectively in assessing equity of access and we conclude that the different indicators of road access reveal no systematic biases.

The distribution of major road projects implemented by ERA is reported in table 6.18. On average, during the period 1996/1997 – 2016/2017, of 350 projects 27.4 percent are in Oromia followed by 19.4 percent in Amhara, 18.6 percent in SNNPR, 11.1 percent in Afar, 10 percent in Tigray, six percent in Somali, 3.7 percent in Beninshangul, 2.6 percent in Gambella, 0.6 pecrent in Addis Ababa, 0.3 percent in Harari, and 0.3 percent in Dire Dawa. Similarly, the shares of the lengths of roads constructed by ERA as well as project cost shares are reported in table 6.18.

Table 6.18 Share of Road Projects by ERA by region 1996/1997 – 2016/2017

Region	**Share of Number (%)**	**Share of length (%)**	**share of contract Amount**
Afar	11.1	10.6	9.4
Amhara	19.4	21.7	21.9
Benishangul	3.7	3.6	2.5
Dire Dawa	0.3	0.03	0.2
Gambella	2.6	3.2	3.2
Harari	0.3	0.1	0.2
Oromia	27.4	26.6	28.3
SNNPR	18.6	16.2	17
Somali	6	6.5	3.9

Tigray	10	11.3	11.1
Addis Ababa	0.6	0.2	2.3

Source: Ethiopian road Authority

Table 6.19 below provides the regional distribution of federal roads by road standard classification. About 33.1 percent, 22.1 percent, and 15.9 percent of all asphalted federal roads can be found in Oromia, Amhara, and Tigray regions respectively. Afar and SNNPR account for 12.5 percent and 10.5 percent respectively of asphalted federal roads in the country. The remaining 5.9 percent of federal asphalted roads is shared among Somali, Gambella, Beninshagnul, Harari, and Dire Dawa. The shares of DBST, and Gravel are also reported in table 6.17 below. However, it should be noted that the standard of roads constructed at the federal level, whether they are Double Bituminous Surface Treatment (DBST) or Asphalt Concrete (AC), is based on feasibility studies conducted, where the main criteria is the type and intensity of traffic flow. Hence, the information in table 6.19 below is not an indicator of equity in the current context. The issue of fairness or equity in this case can only be investigated through examining whether the feasibility studies were conducted in a proper manner. Examining the conduct of feasibility studies is beyond the scope of the current study.

Table 6.19: Federal Roads Distribution by Road Standard in 2016/2017

Region	Asphalt Concrete		DBST		Gravel		Total	
	Length (km)	Share (%)	Length (km)	Share (%)	Length (km)	Share (%)	Length (km)	Share (%)
Afar	1,471.50	12.5	75	1.8	365.7	2.9	1,912.20	6.7
Amhara	2,601.70	22.1	1,037.10	24.7	2,604.40	21	6,243.20	22
Benishangul	124	1.1	140.4	3.3	486.5	3.9	750.9	2.6
Dire Dawa	35	0.3	-	-	18	0.1	53	0.2

Gambella	191	1.6	47.1	1.1	376	3	614.1	2.2
Harari	44	0.4	-	-	10	0.1	54	0.2
Oromia	3,908.40	33.1	567.7	13.5	4,479.60	36	8,955.70	31.5
SNNPR	1,238.20	10.5	1,354.10	32.3	2,007.70	16.2	4,600.00	16.2
Somali	301	2.6	667	15.9	1,678.20	13.5	2,646.20	9.3
Tigray	1,877.10	15.9	307.3	7.3	404	3.3	2,588.40	9.1
Total	**11,791.90**	**100**	**4,195.70**	**100**	**12,430.10**	**100**	**28,417.70**	**100**

Source: ERA (2018)

Table 6.20 below reports the share of on-going and planned projects for 2018/2019 and 2019/2020, thus giving an indication of recent trends. It can be seen that developing regions, particularly Benishangul, Gambella, and Somali have higher shares of planned and ongoing construction compared to their existing shares of the road network and relative to their size. SNNPR and Amhara also have higher shares of asphalt standard roads in on-going 2018/2019 and the upcoming 2019/0220 budget years. This indicates there are signs of addressing regional inequities in federal road distribution.

Table 6.20: The share of federal asphalts being built in 2018/9 and 2019/2020

Region	**Planned Asphalt roads for 2018/9 and 2019/20**	**Share of Planned Asphalt roads for 2018/9 and 2019/20**	**Region Areas as % of total country size**
Addis Ababa	-	-	0.05%
Afar	249	4%	7%
Amhara	1,583	25%	15%

Benishangul	763	12%	5%
Dire Dawa	-	-	0.15%
Gambella	270	4%	3%
Harari	-	-	0.03%
Oromia	1,756	28%	27%
SNNPR	789	13%	10%
Somali	584	9%	26%
Tigray	258	4%	8%
Total	**6,252**	**100%**	**100%**

Source: ERA (2018)

6.2.3 Regional Equity in Road sector Development

There exists a wide variation in availability of road networks among Ethiopia's regional states. Similar to the case of health facilities, more urbanized regions have better road networks than remote regions. The qualities and standards of the road infrastructure are also higher in the former than the latter. The expenditure outlays made by regions with a relatively more remote woredas may be aimed at connecting more number of rural kebeles than on higher quality infrastructures. The average per capita road expenditures over the 2009-2019 periods presented in table 6.21 below gives an overview of the regional differences.

Table 6.21: Average per capita Road expenditures over 2009-2019 period by region

Region	Per-capita recurrent expenditure	Per-capita capital expenditure	Per-capita total expenditure
Addis Ababa	126.52	2278.93	2405.45
Afar	10.40	87.54	97.94
Amhara	6.60	59.63	66.23
Benshangul	18.54	111.04	129.58
Dire Dawa	34.71	101.21	135.92
Gambella	31.44	91.33	122.77
Harari	38.57	396.91	435.48
Oromia	7.51	95.55	103.06
SNNP	8.97	35.50	44.48
Somali	2.12	107.51	109.63
Tigray	15.37	116.10	131.47

Source: Computed based on data from MoFEC and CSA

The average per capita road expenditures (including recurrent, capital and total) of Addis Ababa is far higher than those of its regional counterparts (table 6.21 above). The average per capita recurrent road expenditures of Dire Dawa, Gambela and Harari were nearly similar with Harar ranking a bit higher and next to that of Addis Ababa. Somali region had the least average per capital recurrent road expenditure (Birr 2.12). Oromia and Amhara had also low per capita recurrent expenditures. Again, Harari region had the next largest per capita capital expenditure (Birr 397) next to Addis Ababa yet with very large gap. Benshagul Gumz, Dire Dawa, Somali, and Tigray regions appeared to have closely equal average per capita capital expenditures. The lowest per capita capital expenditure was that of SNNP region. These differences gave rise to differences in total road expenditures of among regions as can be seen in the last column of table 6.21 above.

The high per capita expenditure in Gambella, Benshangul Gumuz, Afar and Dire Dawa could imply two points. First is, a higher investment per capita means better service than other regions. This however is not true since these regions lag behind others in their levels of road development. The second point is that higher per capita expenditure may reflect higher construction cost these regions face compared to other regions. This is plausible since these regions are found in remote areas and have a harsh climate which could raise the cost of construction.

If we look at the Gini coefficients on road expenditures in table 6.22 below, inequalities between the regions seem to be the highest compared to the case of water, education, and health expenditures. The Gini coefficients of recurrent expenditures for the road infrastructure ranged between 0.36 and 0.50 with the average value of 0.42. Regional inequalities in capital expenditures are far higher than that of recurrent expenditures. The minimum Gini Coefficient for capital expenditures is about 0.39 (in 2012) while the maximum is 0.78 which is in 2009. The average value of the Gini coefficient in capital expenditure over 2009-2019 is 0.56. The Gini coefficients corresponding to total road expenditure has also the highest value of 0.76, the minimum value of 0.38 and average value of 0.54. Different factors including those linked to geographical, social and economic conditions can explain these high inequalities in road expenditures among the regions.

Table 6.22: Gini Coefficients for Road Expenditures by year

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Recurrent expenditure for road	0.44	0.43	0.44	0.39	0.45	0.40	0.38	0.36	0.41	0.50	0.47
Capital expenditure for Road	0.78	0.60	0.51	0.39	0.47	0.54	0.49	0.52	0.59	0.64	0.62
Total Expenditure for Road	0.76	0.58	0.50	0.38	0.47	0.53	0.49	0.49	0.56	0.61	0.53

Source: Computed based on data from MoFEC and CSA

The following figures show trends in the Gini coefficients of recurrent, capial and total expenditure. Gini coefficient in recurrent expenditure has increased in time showing greater disparity among regions. The trends for both capital and total expenditure showed first a decline between 2009-2012 and then an increase between 2012 and 2019. The rise is an indication of increasing disparity among regions.

Figure: 6.9. Trends in Gini coefficient of recurrent expenditure

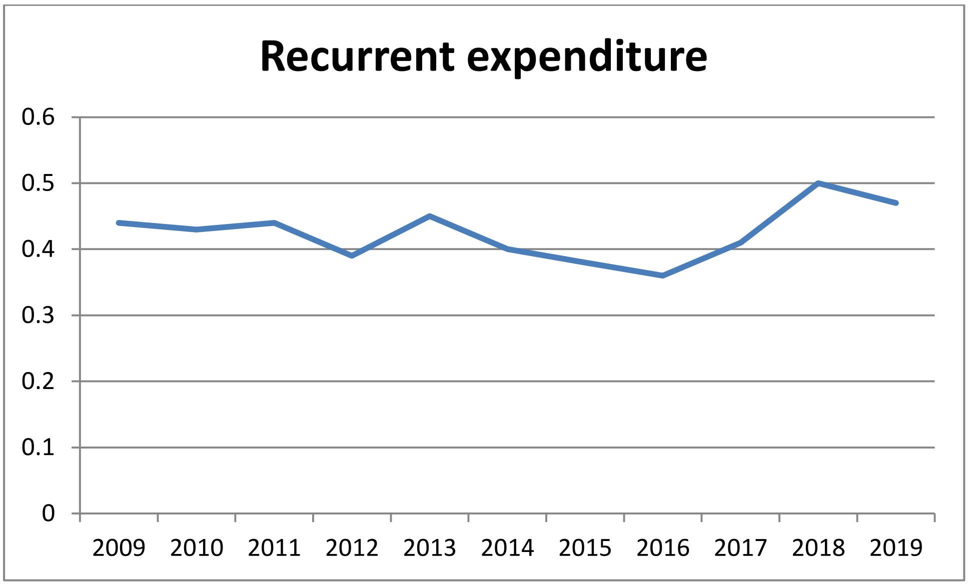


Figure:6.10. Trends in Gini coefficient of capital expenditure

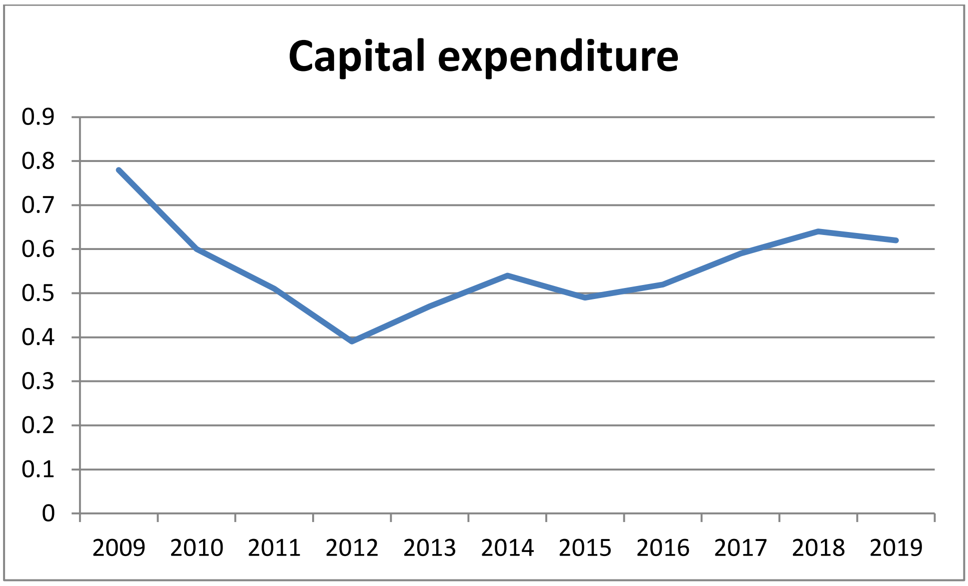
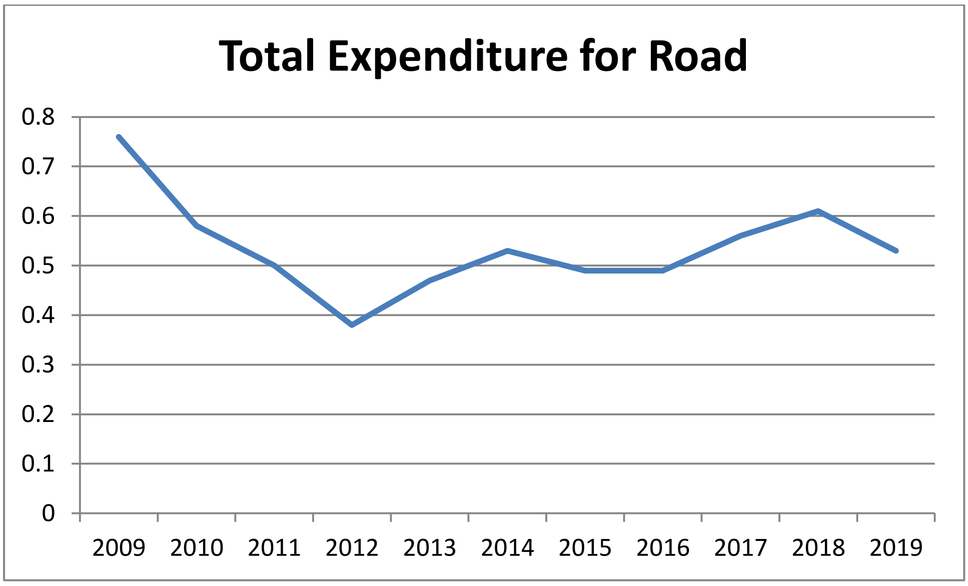


Figure:6.11 Trends in Gini coefficient of total expenditure



To examine the effect of expenditures on road infrastructure, road length (measured in KM) was taken as the performance indicator (output). Unlike the expenditure data obtained from MoFEC, no complete data were available on road output. Thus, the analysis was based only on regional road data obtained from Ethiopian Road Authority (ERA) in 1995, 1996, 1997, 1998, 2009, 2010, 2011, 2016 and 2017 years. Besides, there was no data on road output for Addis Ababa city administration. Related to this, it is important to note that, the region taken as a base category in case of the regression on road output is Afar region. Thus all the coefficients linked to the region dummies should be interpreted in reference to performances of the Afar region.

Table 6.23: Effect of Road capital expenditures on road infrastructure

Dep. Var.: Length of regional road in KM (logarithm)	Coef. (RSE)	Coef. (RSE)
Capital expenditure	0.703***	-0.139
on road (Logarithm)	(0.089)	(0.148)
Amhara		2.050***

		(0.353)
		-0.542*
Benshangul		(0.286)
		-1.552***
Dire Dawa		(0.234)
		-1.005**
Gambella		(0.479)
		-1.849***
Harari		(0.359)
		2.860***
Oromia		(0.392)
		1.883***
SNNP		(0.522)
		0.580**
Somali		(0.262)
		0.818***
Tigray		(0.265)
	-5.395***	7.134***
_cons	(1.423)	(2.338)
Year Dummies included		
Number of	83	83
F(18, 64)	24.67	39.6

R-squared	0.64	0.84

Note: ***, **, * indicate significance at 1%, 5% and 10% levels, respectively

Regression outputs in Table 6.23 above correspond to estimation of the effect of capital expenditure on the length of regional roads where result in the second column excluded region dummies while the third column include region dummies. Year dummies were included in both estimation results but not reported in the table. Since both the dependent variable (road length) and the independent variable (capital expenditure) were log transformed, the coefficients can be interpreted in terms of elasticity. Accordingly, the first result indicates that a 1% increase in capital expenditures leads to 0.70 % increase in road length. Alternatively, for 10% increase in capital expenditure, there will be 7% increase in the length of road constructed by a region. If region dummies (regional fixed effects) are controlled for, however, the effect of capital expenditure on road length disappears. That is, increasing the amount of capital expenditure has no any significant effect on road length. This is at odds with the theoretical expectation that high capital expenditure will make the construction of more roads in the regions. The observed result can happen in case where expenditures are misused and in cases where some regions manage to construct more road networks through mobilizing community resources while using government resources as seed funds.

Coefficients of the region dummies indicate that Amahar, Oromia, SNNP, Somali and Tigray regions have higher performances than Afar region in terms of road construction. On the other hand, Benishangul Gumz, Dire Dawa, Gambela and Harari region have significantly lower performances than Afar region. However, it is important to note the fact that these results may be affected by limitations in data used in terms of sample size, and the type of indicator used. Other researchers may use more comprehensive indicators such as road densities in terms of 1000 population and KM2 of areas over the larger number of observations and years.

To conclude, as can be seen from the above discussion, federal recurrent and capital spending on roads infrastructure has been increasing with an overall objective to improve connectivity across and within regions. Indeed, there are extensive capital budget investments, including ones in education and roads, which serve as equality-enhancing programs for empowering communities and regions to realize their development potential. The total road network of

Ethiopia grew from 26,550km in 1996/7 to 120,171km in 2016/2017, including roads in urban areas. This is equivalent to average annual growth of close 18% in the two decades. Though the big regions have the highest outlay, the per capita expenditure is higher for smaller regions such as Gambella, Benishangul, Afar, Dire Dawa. This could indicate the effort of these regions to catch up with infrastructural development but also it may reflect the high cost of construction in these regions due to their remote locations etc. A significant output of road expenditure is the length of constructed road. Oromiya and SNNP show an increasing trend in this regard. Road length is also found out to have close relationship with regional budget. Gambella, Benishangul and SNNPR stand high in terms of road outcome as measured in road densities.

Moreover, Road connectivity in all regions has significantly improved in the last 10 years, with a five-fold increase in road length between 1997 and 2017. The quality of roads has also improved as the share of gravel roads declined from 46 percent to 11 percent over the same period. Under the URRAP connectivity of rural areas has improved – for example the Woreda road network grew from 854 km in 2010 to 52,700 in 2017.

Despite the achievements observed in the sector above the analysis show the existence of wide variations in availability of road networks among Ethiopia's regional states and more concerted action is needed to further reduce the inter-regional Road coverage gap without compromising efficiency to fulfil each individual's right of equal access to government provided services stipulated in the Ethiopian Constitution.

Most of the respondents in the big regions perceived that Tigray regional state is favored and they perceived that all zones and woredas of the region were connected with asphalt road compared to their own regions. However, their argument is not well justified with evidence though to some extent their perceptions hold water compared to the findings of this research.

Summary

Chapter six is an extension of chapter five. It is an analysis on fiscal federalism and equitable development in economic infrastructures (water and road) in Ethiopia. Improving potable water access to all Ethiopians is among the key tasks of the federal and regional governments. It is found out that water expenditure is lower than education and road expenditure. The capital expenditure is much higher than that of recurrent expenditure. This is because water development, like road development, requires lots of physical construction. In this regard, if we look at the average per capita water expenditures of regions over 2009-2019, there are apparent differences among the regions. The average per capita expenditures of Addis Ababa city administration are many times higher than the expenditures of other regional states. The least average per capita Capital expenditures were registered in SNNP and Oromia Regional states. Addis Ababa’s per capita capital outlay was about thirty folds higher than these regions expenditures. The average per capita road expenditures (including recurrent, capital and total) of Addis Ababa is far higher than those of its regional counterparts. Somali region had the least average per capita recurrent road expenditure. Oromia and Amhara had also low per capita recurrent expenditures. The lowest per capita capital expenditure was that of SNNP region. These differences gave rise to differences in total road expenditures of among regions.

Chapter Seven

Summary, Conclusions and Recommendations

7.1 Summary of the Findings

The issue of fiscal federalism, which is the primary focus of this thesis, has for quite some time engaged the attention of scholars and policy makers in contemporary Ethiopia. There are several economic and political arguments for the practice of fiscal federalism in a country. While the political arguments are largely based on the heterogeneous characteristics of the different regions making up the country, the economic justification is usually based on the need to promote equity and efficiency in the use of national resources. In all countries, taxing powers and expenditure responsibilities are necessarily divided to some extent between the central and Regional governments. Allocation of taxing powers and expenditure responsibilities influences not only delivery of services but also their financing that in turn determines macroeconomic performance of the countries. There is hitherto no consensus in the literature on the effects of fiscal federalism on equitable development in developed, developing, and transition economies. This study sheds new light on this topical and contemporary issue in the field of Federalism by examining the economics of the nature and practice of the country's federal structure using the macroeconomic approach.

In this regard, this thesis is a time series country study and the data covers the period from 1990/1991 to 2017/18. The study examines three vital aspects of the research problem. These include the underlying causes and implications of low regional fiscal capacity and hence fiscal imbalances observed within the federation, critically examine the quality of the transfer system in meeting its objectives of narrowing down the fiscal imbalances and equalizing the fiscal capacities of the regional states to maintain stability, examine the role of fiscal federalism in promoting equitable/ balanced development in Ethiopian federation by scrutinizing government policies, strategies and constitutional principles and fiscal federalism in four selected public sectors in Ethiopia(Education, Health, Water and Road). The overall objective is to investigate the extent to which fiscal federalism has promoted equitable development in Ethiopian federation.

In view of the above objectives, the following summary could be made from each chapter.
In this regard, chapter two has attempted to show the theoretical nexus between fiscal federalism on the one hand, and equitable development on the other hand. To this end, six major points have been thoroughly discussed. First, federalism is basically seen as a combination of self-rule and shared-rule in a polity. Secondly, federalism is very much related to decentralization especially in its phase of devolution of power. Thirdly, fiscal federalism is identified as one aspect of federal arrangement. In this part of the chapter, it is argued that, governments are expected to design effective fiscal arrangements (expenditure and revenue assignments) so as to fill both vertical and horizontal imbalances thereby promote equitable socio-economic development in federations. Fourthly, the chapter has also shown that regional development inequalities effect of fiscal arrangement would obviously cause political tensions and instabilities in federations. Fifthly, the chapter attempted to show that decentralization whereby local governments are empowered to make all policy and program decisions on behalf of their resident-voters represents a complex system of political, administrative, and fiscal autonomy and associated accountability to voters. In theory, such a system is expected to have positive impacts on the efficiency and equity of public service provision and provide an enabling environment to foster economic growth. In practice, these out comes depend on the existing institutional arrangements (including power relations) and the coherence of decentralization policies to create the proper incentive environment for bottom-up accountability. The complexity of the system explains the myriad outcomes that we see in practice. Nevertheless, the empirical evidence presented here is broadly supportive of a positive influence of fiscal decentralization policies on service delivery and economic growth. Finally, the chapter also attempted to show the nexus between fiscal federalism and economic development and its debatable views among scholars on the effect of the interaction.

Chapter three attempted to show that the comparison of the fiscal federalism in different federal countries to draw lesson for Ethiopian context. To this end, federations may devise their own system to regulate the business of intergovernmental fiscal transfers. Both in the industrialized and in the developing world, nations are turning to devolution to improve the performance of their public sectors. For instance, in the United States the central government has turned back significant portions of federal authority to the states for a wide range of major programs, including welfare, medical, legal services, housing, and job training. The hope is that state and local governments, being closer to the people, will be more responsive to the particular preferences for their constituencies and will be able to find new and better ways to provide these services. While the theoretical justification for fiscal federalism is sound, its practicability differs in federal systems, based on historical antecedents and culture. Problems of fiscal centralization and decentralization by their nature tend to have important institutional and economic dimensions that vary from one country or region to another. Shifting the locus of fiscal responsibility among levels of government may occur relatively incrementally, as in stable federation like the US, or they may occur with dramatic speed, as in the disintegration of the Soviet Union or the unification of Germany.

In all cases, however, there are specific historical and institutional factors that channel the process of fiscal adjustment within the broader context of overall economic and political change from which Ethiopia can draw many lessons to strengthen its youngest federal system. Widely varying political and economic systems, levels of economic development, and legal, constitutional, and fiscal traditions form the milieu within which the responsibilities of different levels of government are determined. The institutions of fiscal federalism vary widely across the world has been indicated on the above discussion particularly in Germany, India and Nigeria.

In general, as discussed above, fiscal decentralization is a complex and difficult undertaking but imperative for building a federal system. Experiences indicate that achieving a satisfactory and smooth working mechanism needs time and learning on the job. In addition, it requires hard work and consensus building not only on revenue sharing and resource transfers but also in achieving a reasonable fiscal harmonization and discipline at all levels of government. On the other hand, lack of administrative experience, institutions, and competence should not be used as an excuse for not decentralizing responsibilities to subnational governments.

Regarding with the evolution and structure of fiscal federalism in Ethiopia. Accordingly, fiscal federalism in Ethiopian history goes back to the Axumite kingdom. During that time, the states were empowered to collect tributes from the subjects and to transfer some amount of it to the central authority. The long history of administration in Ethiopia was characterized by centralization. The attempts made by different government regimes were not realized to empower fully the lower level of governments. These attempts went through a serious of practices until the EPRDF (Ethiopian People's Revolutionary Democratic Front) assumed the power overthrowing the Derge regime in 1991.

But the real fiscal decentralization attempt began during the transitional period and continued after the establishment of the federal government in Ethiopia. The process of fiscal devolution began in 1992 after the promulgation of proclamation Proc. No. 33/1992. The 1995 Constitution delineates the powers and functions of the federal and state governments. The fiscal aspects in turn followed the decentralization of the executive, legislative and judiciary in the federation as one and main element of power. Hence, the FDER Constitution in its provisions from Arts.94 to 100 provided the decentralization of financial power between the federal and states governments.

Chapter four attempted to show the practices of the assignments of expenditure and revenue and its equitability, the constitution assigns a number of expenditure responsibilities, sector-specific function and general functions to the federal and regional government respectively in Ethiopia. On the expenditure side, the system is highly decentralized. The assignment responsibilities are guided by various factors: preferences, economies of scale, spillover effect, etc. Public functions of international and national interest are reserved for the federal government. The regional states have the power to make decisions on issues that affect the health of their constituencies. They allocate revenues among expenditure functions without any approval by the federal government. They also draft their economic development plan and approve their annual budget.

Regarding Tax revenue, there is clear separation of taxing powers between the federal government and the regional states. Tax assignment is based on the principles of efficiency in administration, macroeconomic stability, equity, benefit principle, and ownership of separate revenue sources. The regional states have the power to levy taxes (including the administration) on the income of their employees, of private farmers and farmers associated in cooperatives, on the profits of individual traders, on income derived from transport services, from rental private houses and of other properties and incomes from agricultural activities, profit on income of enterprises owned by the states and on individual traders, income derived from small-scale mining operations and royalties and land rentals on such operations, fees and charges related to licenses issued and services rendered by state organs ,and determination and collection of royalties for use of forest resources. The power to levy, collect, and administer taxes of various tax types enables the regional states to mobilize more resources for local development, to be more responsive to local demands and preferences, although regional states' own revenues cover, on average, less than 40 percent of their expenditure. The tax assignment is lopsided in favour of the federal government. This is justified by the existing marked horizontal fiscal imbalances between the regional states.

With regard to federal transfers and block grant, the constitution of the FDRE stipulates that every citizen has the right to access comparable level of goods and services across all regions. Hence, this concept of equity is the primary reason behind the block grant allocation formula. The HoF aims for equitable distribution of grant based on needs and comparable level of fiscal capacity to provide comparable level of services. On the one hand, regional governments are assigned large expenditure responsibilities, though their fiscal capacity does not match their expenditure needs. The fiscal gap problem is common to all regions but it is more acute in poorer ones. Federal transfers and the block grant play a vital role in filling the gap for regions and weredas. The federal transfers and wereda block grant are formula-based and are designed to ensure access to minimum standard of public services to all citizens with regard to place of residence-a core pillar of the federal constitution. The intergovernmental transfer system has played a pivotal role in bringing convergence in the provision of local services. More interestingly, regional states have a say in the distribution of federal subsidy because all ethnic groups are represented in the House of the Federation, which determines the allocation of the transfer. Most federal transfers are unconditional, giving relative liberty to the states to allocate the funds to their priority areas.

Federal general –purpose grants are allocated to regions based on a formula approved by the HoF. It can be observed that the transfer formula addresses both efficiency and equity in the allocation of resources to regions, and also considers policies, available resources and expenditure requirements at macro level. The major objectives of the transfer are to support regional governments in undertaking their assigned function and providing standardized services; narrow the vertical fiscal gap; ensure horizontal equalization; promote efficiency in the allocation of financial resources; and maintain fiscal stability (MoFED, 2004; HoF, 2012,2017).

Furthermore, in principle, the grant allocation formula issued by the HoF seeks to ensure fiscal equalization, equitable provision of public services and the promotion of the regions' revenue-generation capacity. All the federal general-purpose grant formulae developed thus far are aimed at correcting vertical and horizontal fiscal imbalances through an integrated system of grant equalization for enhancing the equalization of the fiscal capacities of regions so that each can provide a comparable level of public services to its peoples. The practice shows that equity, especially inter-regional equity promises are far from being materialized.

Importantly, grant distributions from the federal government to the regional governments are based of five provisions of the FDERE Constitution:

- Article 41(3): Every Ethiopian national has the right to equal access to publicly funded social services
- Article 89(2): Government has the duty to ensure that all Ethiopians get equal opportunity to improve their economic conditions and to promote equitable distribution of wealth among them
- Article 89 (4): Nations and Nationalities and peoples least advantaged in economic and social development shall receive special assistance.
- Article 94(1) The federal Government and the states shall respectively bear all the financial expenditure necessary to carry out all responsibilities and functions assigned to them by law. Unless otherwise agreed upon, the financial expenditures required for carrying out of any delegated function by the state shall be borne by delegating function by the state shall be borne by the delegating part.
- Article 94(2): The Federal Government may grant the state's emergency, rehabilitation, and development assistance and loans, due care being taken that such assistance and loans do not hinder the proportionate development of states

The own revenue of regional states still accounts only for about a quarter of their expenditures. The aggregate revenue raising capacity and the aggregate expenditure obligation between the federal government and regional governments do not matchup. The situation creates vertical imbalance between the two tiers of government. Moreover, due to several factors, regional states differ significantly in the extent of their revenue-mobilizing capacity and aggregate expenditure requirement, leading to horizontal imbalances. This regional variation in ability to finance spending could be due to differences both in tax base and tax-collection capabilities.

The federal government addresses these vertical and horizontal fiscal imbalances by means of the fiscal transfer it makes to regional states every year based on the grant formula developed by the HoF. The HoF developed nine formulas so far in order to achieve the objectives of equitable development to ensure the constitutional mandates in which citizens would benefit. This transfer is the most pertinent resource distribution mechanism in the federal system: the federal government, in seeking to reduce vertical and horizontal imbalance in finance resources though the transfer avails resources that will contribute to the narrowing of development disparities between regional governments.

In general, the tax system is progressive, though more can be done to ensure the poorest benefit from social spending. In addition, more effort is needed to mobilize tax revenue which can be used to finance redistributive and pro-poor policies. Finally, although transfers and subsidies are largely pro-poor some social spending benefit the rich relatively more than the poor which may require further investigation to inform future development policy.

Chapter five attempted to show that allocation of capital and recurrent budgets to pro-poor sectors such as Education and Health sector development. The total public expenditure of the Ethiopian Government was 4.85 (Recurrent 3.64 and capital 1.21) billion Birr in 1990/1991 and increased to 354.21 (Recurrent 210.47 and capital 143.74) billion Birr in 2017/2018.

The budget allocation process follows a participatory and transparent budgeting process in which budgetary proposals pass through the council of ministers before being endorsed by the house of peoples' representatives. Thus, federal social sectors development are guided by the national development strategies and sector development programmes, which the budgeting process hence also supports broad-based and inclusive development.

In this regard, the budget administration and implementation have reached satisfactory levels in some of the regions, particularly the Amhara, Tigray, Oromia and the Southern Nations, Nationalities and Peoples' states. Visible progress has been made in providing social services.

The performance of Ethiopia's education sector has been quite satisfactory. Except Somale and Afar regions, many of the regions are very close to attaining universal enrollment.

Needless to say, enrollment has increased substantially. The number of teachers hired was substantial although it failed to match the rapidly increasing enrollment. As a result, the pupil-teacher ratio has improved over time indicating a possible increase in the quality of education. Public expenditure on education has been very effective in expanding primary education and secondary education. The findings revealed that per capita expenditures in primary and secondary schools have positive effect on their respective gross enrolment ratios (GER). In the absence of region dummies, the effects are statistically significant at 5% and 1% levels on primary and secondary levels GER respectively. For one thousand birr increase in per capita expenses on primary education, the GER of primary schooling increases by 28% whereas similar change in secondary education's expenditure appeared to have more effect (88%) on the corresponding GER. The positive effect remained to be valid in case where regional effects are controlled for albeit the statistical insignificance in case of secondary education perhaps due to smaller number of observations. Specifically, for 1000 Birr increase in per capita expenditure on primary education there is 8 % increase in GER of primary schools and 10% increase in the GER of secondary education. In terms of regional variations of primary education's GER, all regions appeared to have significantly lower performance than Addis Ababa city (base category) with the exception of the Gambella region. The conditional mean GER of Gambella turned to be about 16% higher than that of Addis Ababa. In case of the GER of secondary education, however, all regions have significantly lower performance than Addis Ababa city.

The general orientation of Ethiopian primary education has been pro-poor and pro-rural. This has been particularly true after the second wave of decentralization popularly known as the district/woreda level decentralization program (DLDP). Decentralization at district level, the education spending has been more pro-poor. The finding shows that, the decentralization process and the increased amount of federal subsidy to disadvantages regions have been the main reasons for the increased pro-poor nature of education spending. Education spending favoured disadvantaged regions and contributed to reducing gender inequalities.

Despite the achievements at the primary level, however, the ESDP has been less successful at improving equity at secondary level. Despite substantial increases in the enrolment of children in secondary schools since 1990/91, absolute enrolment levels are still very low and wealth, geographic and gender disparities remain considerable. There is a significant need for policies to modify current allocations between primary, secondary and tertiary education and for strategies to comprehensively shape education demand and supply side factors. At the primary school level, the analysis in this study suggests that girls are increasingly benefiting from public expenditure on education except Somali and Afar and that there has been a significant narrowing of the gender gap.

The findings further depicts that there are large variations in regional gender disparity in primary school enrolment over the 2015-2019 period. Addis Ababa city administration had registered the highest GPI over this period with the values exceeding 1. This indicates that more number of female students have been registered in primary school. On the other hand, Somali region had remained to have the least GPI in primary school enrolment. Afar region had also a relatively lower GPI as compared to other regions but with improvement over the recent years. Most of the regions' GPI were concentrated around 0.80. Amhara and Tigray region had relatively higher GPI with their values exceeding 0.90.

The rapid rate of growth in girls' primary enrolment can in part be attributed to not only a low baseline, but also to concerted efforts by communities and local authorities to enforce the ban on early marriage, to have girl drop-outs re-instated and to initiate affirmative action programmes for girls. While these efforts are commendable, policy-makers need to take measures to ensure their sustainability.

Adopting a cross-sectoral approach to tackle broader social factors which constrain poorer households from investing in girls' education - such as safety to and from school and reduced domestic work burdens –will be important. On the same token, the picture in overall secondary school is similar to the earlier case; Addis Ababa city administration had registered the highest GPI in secondary school enrolment with the values exceeding 1 over the entire period. This indicates that more number of female students have been registered in secondary school than their male counterparts. On the other hand, Gambella, Afar and Somali regions had relatively lower GPI in secondary school enrolment. Somali region had the least GPI as compared to other regions but with improvement over the recent years. Amhara and Tigray region had the second and third highest GPI next to Addis Ababa.

Given a very low baseline of educational enrolment in areas such as Somali and Afar, more concerted action is needed to further reduce the inter-regional educational gap without compromising efficiency to fulfill each individual's right of equal access to government provided services stipulated in the Ethiopian Constitution.

Regarding Health sector, taking all regions together, the health sector received about 228.8 and 55.6 million Birr in 1993/94 recurrent and capital expenditure and in 2017/18, the recurrent and capital expenditure budget increased to 10781.4 and 1634.4 million birr respectively.

Therefore, the finding shows that expenditure in the health sector increased in terms of both absolute amount and per capita basis. Before the start of fiscal decentralization, the per-capita expenditure in the health sector was less than 10 %, but it increased to over 20 per cent under the current government.

When the SDPRP was put in place, it was around 11% but rose to above 20% during the PASDEP. The highest increase over time was for Dire Dawa followed by Somale and Afar regions where the incidence of diseases and malaria is larger. The next higher increase in spending was for SNNP and Harari, while the increment for Tigray, Amhara and Oromiya regions is very close to the national average. Despite high incidence of disease and malaria in the region, the lowest was recorded for the Gambella region because the regional government did not pay sufficient attention to the health sector.

As a result of the increase in government expenditure, the number of health extension workers, health posts, hospitals, health professionals, vaccination coverage has increased substantially. It is to be noted that the Ethiopian government has started an innovative health extension system in rural areas. Until now, the performance of the health extension system has been satisfactory in all the regions. Consequently, output and outcome of health services has increased substantially.

It is indicated in this analysis that the number of physicians was declining for some times until it began to grow again starting in 2008. The population-physician ratio is still extremely low but was nevertheless increasing. For some regions, for example, Gambella the ratio is high because of the remoteness and harsh weather conditions of the region. At a national level, the population health-workers ratio has been increasing over time but it is still extremely high. In addition, the health service provided by the sector in all regions of the country is below the international and African standard.

The health sector development program has registered significant successes in many areas. For example, stunting and severe stunting of children in the country has significantly declined. Infant, child and under five mortality rates have also showed a declining trend in all regions. The adult and maternal mortality have also show similar decline over the years.

There is no doubt that public spending in the health sector has contributed much to the aforementioned achievements in the health sector. Nevertheless, it is not always easy to quantify the contribution of health spending for such improvements in outcome and impacts.

Moreover, the achievements in the health sector in Ethiopia are not as impressive as those in the education sector where the there is consensus among the public and academician/researchers regarding the successes Ethiopia has achieved in that sector. Therefore, efforts similar to that of the education sector have to be exerted to make the health sector more successful and satisfy the need of the society.

According to the estimation result of the regression of PHC on health expenditures, recurrent expenditure has strongly significant positive effect on PHC A 10 % increase in recurrent expenditure will increase PHC by 5.5% ($58.04 \times \ln 1.10$). The effect of capital expenditure, however, turned to be negative and significant at 5% level. The coefficient tells that a 10% increase in capital expenditure is associated with a decrease in PHC by 0.71 percent ($-7.49 \times \ln 1.10$). This result seems to be counter intuitive as it is expected to increase PHC. However, this relates to the fact that regions and cities with higher capital outlays and hence more sophisticated health facilities have lower number of HP's and hence low PHC values. In terms of total health expenditure, a 10% increase in total health expenditure will increase PHC by 0.89 % ($9.32 \times 1n1.10$) despite statistically insignificant. Coefficients of all the regional dummies appeared to be positive suggesting all the regions have higher PHC than Addis Ababa. This does not mean that people in Addis Ababa have less access to health services. In fact, they have better access to more advances health services despite differences among households in terms of their income that determines which health facilities they used: be it public or private. Not only does Addis Ababa but all urban centers also have better access to health services as there are more number of health centers, hospitals and private clinics than less urbanized regions and areas.

In addition to differences in the amount of health related budgets allocated for region, inequalities may prevail in terms of skilled man power or health professionals and health facilities. Accordingly, a regional inequality in terms of number of health Officers was higher in 2009 with a Gini index of 28 percent. In 2017, however, the inequality declined to about

16 percent. In contrast to the case of health professionals, there was low inequality between regions in terms of infrastructure. Inequality in access to health centers showed consistent decline over 2011-2017 period. The Gini coefficient decreased from 0.10 in 2011 to 0.03 in 2017. Inequality was also small in terms of number of health posts with only slight decline in the Gini coefficient. The decline in the Gini coefficients of health extension workers (Table 6:22) and number of health posts indicate progresses being made towards improving access to health extension services and primary health care to low income members of the societies in the rural and urban centers.

To conclude, as has been observed from the above discussion, the expenditure in the health sector increased in terms of both absolute amount and per capita basis. However, the analysis shows that equity and inclusiveness among regions are still not addressed and needs more concerted action to further reduce the inter-regional health access gap without compromising efficiency to fulfill each individual's right of equal access to government provided services stipulated in the Ethiopian Constitution.

Chapter six attempted to show the federal capital and recurrent expenditure on water and road sector development. With regard to water, it is found out that water expenditure is lower than Education and road expenditure. The capital expenditure is much higher than that of recurrent expenditure. This is because water development, like road development, requires lots of physical construction. In this regard, if we look at the average per capita expenditures of regions over 2009-2019 , there are apparent differences among the regions. The average per capita expenditures of Addis Ababa city administration are many times higher than the expenditures of other regional states. Addis Ababa had the highest per capita capital expenditure (Birr 840) followed by Harari region (Birr 197). The least average per capita Capital expenditures were registered in SNNP and Oromia Regional states. Addis Ababa's per capita capital outlay was about thirty folds higher than these regions expenditures. The average recurrent expenditure of Addis Ababa (Birr 262) was over 40 times higher than that of Amhara Region (Birr 6), which appeared to have the least per capita expenditure. Per capita recurrent expenditure of Gambela, which was the next largest, was only about one-sixth of that of Addis Ababa.

These inequalities in recurrent and capital expenditures had given rise to inequalities in total expenditures of the regional states. The trends in regional inequality shows that inequality is rising up in recurrent expenditure while both in capital and total expenditure though the pattern is irregular there is an increasing trend except for the last two years of 2018 and 2019 when the trend seems to decline. The trends of inequality in total regional water expenditures also varies for each year with the highest inequality observed in 2017 (Gini = 0.58) followed by 2009 (Gini = 0.53) and 2018 (Gini = 0.51).

The finding also shows that variation in water expenditure affect access to water. Accordingly, the coefficients of region dummy indicate that, with the exception of Amhara region, all regional states have lower water access than Addis Ababa (the base category). However, the differences are statistically significant only in the cases of Afar, Oromia, SNNP and Somali regions. Similar differences prevailed when different expenditure components are taken as explanatory variable.

To conclude, the water supply coverage has increased in both urban and rural areas, though some rural areas are lagging behind. Despite the achievements observed in the sector, the analysis shows that water resource coverage is unevenly distributed in Ethiopia and more concerted action is needed to further reduce the inter-regional water coverage gap without compromising efficiency to fulfill each individual's right of equal access to government provided services stipulated in the Ethiopian Constitution.

With regard to road, expenditure is higher at regional levels. The finding revealed that that the per capita expenditures of road in selected years with reference to Ethiopia's GTP-I and GTP-II periods. In 2009, the per capita expenditure on road was below birr 20 with the exception of Addis Ababa, Dire Dawa, Harari and Afar similar to that of water. The highest expenditure per person was that of Addis Ababa (1040 Birr) followed by Dire Dawa (Birr 113.66) and Harari (106 Birr) while the least was that of Somali region (Birr 8.20). In the first (2012) and final years of GTP-I, Per capita expenditures on road were made to increase by many folds in all the regions. At the end of GTP-I (2015) too, Addis Ababa remained to have the highest expenditure (Birr 2128.39) followed by Harari (birr 886.20) and Dire Dawa (birr 275.23). Unlike that of water, in 2019, per capita road expenditures were found to be lower than that of the year before the inception of GTP-II (2015) in all the regions. Like the case of water, Somali region had the next largest per capita road expenditure (birr 116.71) next to Addis Ababa (birr 1469.77). The reasons for the observed change in road expenditures in 2019 has to do with the political and policy maneuver by the ruling party that emerged out of

EPRDF through the leadership of the so called “reform leaders” who assumed power in 2018 through youth movement.

The major component of road expenditure is capital expenditure. Though the big regions have the highest outlay, the per capita expenditure is higher for smaller regions such as Gambella, Benishangul, Afar, Dire Dawa. This could indicate the effort of these regions to catch up with infrastructural development but also it may reflect the high cost of construction in these regions due to their remote locations etc. A significant output of road expenditure is the length of constructed road. Oromiya and SNNP show an increasing trend in this regard. Road length is also found out to have close relationship with regional budget. Gambella, Benishangul and SNNPR stand high in terms of road outcome as measured in road densities.

There exists a wide variation in availability of road networks among Ethiopia’s regional states. Similar to the case of health facilities, more urbanized regions have better road networks than remote regions. The qualities and standards of the road infrastructure are also higher in the former than the latter. The expenditure outlays made by regions with a relatively more remote woredas may be aimed at connecting more number of rural kebeles than on higher quality infrastructures.

The average per capita road expenditures (including recurrent, capital and total) of Addis Ababa is far higher than those of its regional counterparts. The average per capita recurrent road expenditures of Dire Dawa, Gambela and Harari were nearly similar with Harar ranking a bit higher and next to that of Addis Ababa. Somali region had the least average per capital recurrent road expenditure (Birr 2.12). Oromia and Amhara had also low per capita recurrent expenditures. Again, Harari region had the next largest per capita capital expenditure (Birr 397) next to Addis Ababa yet with very large gap. Benshagul Gumz, Dire Dawa, Somali, and Tigray regions appeared to have closely equal average per capita capital expenditures. The lowest per capita capital expenditure was that of SNNP region. These differences gave rise to differences in total road expenditures of among regions. The high per capita expenditure in Gambella, Benshangul Gumuz, Afar and DD could imply two points. First is, a higher investment per capita means better service than other regions. This however is not true since these regions lag behind others in their levels of road development. The second point is that higher per capita expenditure may reflect higher construction cost these regions face compared to other regions. This is plausible since these regions are found in remote areas and have a harsh climate which could raise the cost of construction.

If we look at the Gini coefficients on road expenditures, inequalities between the regions seem to be the highest compared to the case of water, education, and health expenditures. The Gini coefficients of recurrent expenditures for the road infrastructure ranged between 0.36 and 0.50 with the average value of 0.42. Regional inequalities in capital expenditures are far higher than that of recurrent expenditures. The minimum Gini Coefficient for capital expenditures is about 0.39 (in 2012) while the maximum is 0.78 which is in 2009. The average value of the Gini coefficient in capital expenditure over 2009-2019 is 0.56. The Gini coefficients corresponding to total road expenditure has also the highest value of 0.76, the minimum value of 0.38 and average value of 0.54. Different factors including those linked to geographical, social and economic conditions can explain these high inequalities in road expenditures among the regions.

Regression outputs in to estimation of the effect of capital expenditure on the length of regional roads shows that Amahar, Oromia, SNNP, Somali and Tigray regions have higher performances than Afar region in terms of road construction. On the other hand, Benishangul Gumz, Dire Dawa, Gambela and Harari region have significantly lower performances than Afar region. However, it is important to note the fact that these results may be affected by limitations in data used in terms of sample size, and the type of indicator used. Other researchers may use more comprehensive indicators such as road densities in terms of 1000 population and KM2 of areas over the larger number of observations and years

To conclude, despite the achievements observed in the sector above the analysis shows the existence of wide variations in availability of road networks among Ethiopia's regional states and more concerted action is needed to further reduce the inter-regional Road coverage gap without compromising efficiency to fulfill each individual's right of equal access to government provided services stipulated in the Ethiopian Constitution.

7.2 Synthesis & Theoretical implications of the findings

The empirical findings are novel, and offer evidence that the central objective of this study has been empirically investigated. There is, indeed, a connection between fiscal federalism and equitable development in Ethiopia over the study period. This can be explained by the observations from the findings of the out comes on the four economic sectors. Accordingly, per capita expenditures in primary and secondary schools have positive effect on their respective gross enrolment ratios (GER). Specifically, for 1000 Birr increase in per capita expenditure on primary education there is 8 % increase in GER of primary schools and 10% increase in the GER of secondary education. Regarding in the health sector, as a result of substantial increment in government expenditure, the number of health extension workers, health posts, hospitals, health professionals and vaccination coverage has increased substantially. Moreover, for Birr 1000 increment in per capita recurrent expenditure of a given region, the region's access to water will increase by 28%. Similarly, for birr 1000 additional per capita capital expenditure of a region, access to water will improve by about 7% while the similar increase in total per capita water expenditure is associated with a 5% increment in access. Finally, 1% increase in capital expenditures leads to 0.70 % increase in road length. Alternatively, for 10% increase in capital expenditure, there will be 7% increase in the length of road constructed by a region.

This finding conforms to a strand of the literature that establishes links between fiscal decentralization, public sector efficiency, equitable socioeconomic development and macroeconomic stability (Tiebout, 1956; Hunter and Shah, 1998; Stigler, 1957; Oates and Schwah, 1999; Aighokhan, 1999).

Despite a growing trend in all aspects of socioeconomic development as exemplified in the four selected sectoral development (education, health, water and road) for last ten years, it is however, important to realize that the progresses in each of the level of the four sectoral developments are not equitable and regions show significant variation in their emphasis on their achievements and their development outcomes. For instance, despite the achievements observed at the primary level, the analysis shows that the ESDP has been less successful at improving equity and filling the gap of the access at secondary level. Moreover, despite substantial increases in the enrolment of children in secondary schools, absolute enrolment levels are still very low and wealth, geographic and gender disparities remain considerable. The expenditure in the health, water and road sector increased in terms of both absolute amount and per capita basis. Consequently, output and outcome of their services have also increased substantially. However, the analysis shows that equity and inclusiveness among regions are still not addressed and needs more concerted action to further reduce the inter-regional health, water and road access gap without compromising efficiency to fulfill each individual's right of equal access to government provided services stipulated in the Ethiopian Constitution.

Ethiopia progressed from a unitary government to a federal one accompanied by decentralization of governance, fiscal decentralization, and changes in fiscal arrangements. This finding suggests that though Ethiopia had been operating a federal constitution since 1995, it has not been operating a true federation since more financial responsibilities have been concentrated at the federal level.

On the one side, the Federal Constitution aims at creating strong states constitutionally vested with extensive decision-making power. However, on the other side, the finding shows that the federal government still centralizes the fiscal means of executing fiscal responsibilities indicate that there is a de facto centralization of fiscal decision-making. This is reflected by excessive dependence of regional governments on federal grants to finance even recurrent expenditures within their jurisdictions. The fiscal system is characterized by both vertical and horizontal imbalances that require further decentralization of revenue sources that commensurate the expenditure responsibilities of the regional governments. The vertical fiscal imbalance in Ethiopia is thus explained more by monopolization of the Central Government over the most lucrative tax bases and partly by high expenditure requirement of regional governments. Moreover, the principles and practice of fiscal federalism in Ethiopia has been inhibited by a number of factors which include the dominance of the federal government in the sharing of national financial resources from the Federal pool, the invisible imposition of the command structure of the EPRDF on the preparation of the Federal Grant, the pattern of assignment of responsibilities by the constitution among the federating units, and over dependence of the regions on the subsidy from the Federal government over the study period. This finding shows that the practice of fiscal federalism in Ethiopia and the Keynesian theory of fiscal federalism are of two different things. Meaning, the practice is not guided by the theory of fiscal federalism, and the theory of public goods especially in terms of ensuring equitable development.

Regarding tax policy in Ethiopia, it is also used to ensure balanced regional development. Notably, the finding shows that there has been a steady increase in both direct and indirect tax collection. However, the tax to GDP ratio has remained low because despite the efforts to mobilize additional tax revenue, the rate at which tax revenue has increased has been slower than the GDP growth rate. One potential reason for this is the historically low levels of tax collection in the agriculture sector, which is similar across other African countries. Overall, the tax system in Ethiopia is progressive that suggests the system makes the poor poorer as taxes are paid on very low levels of income.

The analysis further shows that the federal grant serve as glue that holds the Ethiopian federation together especially given the unique constitutional dispensation in Ethiopia giving the states the right to succeed from the union is not able to narrow the vertical and horizontal fiscal imbalance of the country as it was expected and that suggests, fiscal federalism in Ethiopia is failed to keep the promise of the constitutional mandate of the provision enshrined in article 41.3 of the constitution‘’Every Ethiopian national has the right to equal access to publicly funded social services”. Therefore, based on the above findings the research confirms that fiscal federalism in Ethiopia is not promoting equitable development yet even if it has made contribution to overall development. In fact, according to Giorgio Brosio (2010), regional disparities often have two distinct origins. The first one emanates from “differences in capacity and efficiency in spending. Different constituent units may have the same amount of resources to spend, but they have different levels of capacity and efficiency” (Brosio, 2010: p.4). In this regard, the role of the federal government is to intervene to improve capacity and efficiency. The second source of inequality is differences in revenue capacity. To support subnational governments to provide comparable levels of public service, federal government allocates equalization and other kinds of transfers, but in the case of Ethiopia, the formulae of equalization transfers found out to be not transparent.

No doubts, fiscal federalism is unarguably a potent economic strategy that can be used to maximize provision of public services as well promote macroeconomic stability. Central to the success of fiscal decentralization, is clarity in revenue and expenditure authority and responsibilities. The urgent reform that is required is the need for government to redress the prevailing fiscal mismatch at regional states level through appropriate policies to increase tax revenues to regional states as well as reforms of expenditure responsibilities to enhance their efficiency in the provision of public services.

It is imperative to synthesize the whole works here. Theoretically, fiscal federalism is supposed to promote equitable development in federations. To this end, first and second generations of the kynesian theory of fiscal federalism were adopted to explain the Ethiopian context of fiscal federalism. Consequently, data were collected from different sources including, but not limited to, government reports on the four socio-economic sectors (education, health, water and road), related literatures, and perceptions of respondents (from nine regional states, two federal city administrations and relevant federal government institutions) to investigate whether constitutional promises of equity and fairness has been achieved through the fiscal arrangement. As a result, it came out that there are no major differences across primary and secondary data sources (when triangulated) regarding equitable development, which means even though there is an increasing trend of development across sectors, every data sources showed that the development is not equitable among regions. This suggests that the practice of fiscal federalism in Ethiopia, on the one hand, and the theory of fiscal federalism and the promises of the FDRE constitution, on the other, diverged.

The study therefore, concludes that fiscal federalism is good for equitable development in Ethiopia if it applies true principles and practice of the fiscal federalism observed in other federal countries identified in this study.

7.3 Conclusions

Ethiopia opted for a cooperative federalism model of multi-order governance in 1995 where the Federal Government enjoys broad powers in taxing, spending and regulatory functions and regional and sub-regional governments have significant implementation powers in program design to suit local circumstances and service delivery responsibilities following the federal framework.

Ethiopia has introduced a unique form of fiscal federalism in the context of ethnic federalism. The process is still in progress that decentralization of fiscal decision making power has not yet effectively reached the basic unit of administration in the federal structure. The system hence effectively has a two-tier structure of fiscal federalism: the federal government and the regional states. The regional governments have been constitutionally vested with extensive decision-making power. However, the fact that the federal government still centralizes the fiscal means of executing fiscal responsibilities. This aspect of actual centralization in fiscal relations is accompanied by a parallel structure of political centralization that robes the very inspiration of the process of decentralization.

Moreover, centralization of fiscal decision-making is exercised not only at the federal level but also at regional government level as well. Therefore, while the taxing and regulatory powers, in the interest of creating a common internal market, are highly centralized, spending powers are significantly decentralized. This creates large vertical fiscal gaps at the regional levels. Highly constrained taxing powers given to the states limits the ability of state to raise significant revenues from their own sources to reduce the vertical fiscal gap and to deliver on their mandates for delivering public services and to strive for local economic development to advance social and economic outcomes for their residents. Constitutionally mandated general transfers are intended to fill vertical fiscal gaps as well as serve equalization objectives of limiting horizontal fiscal gaps. These transfers are the single most and dominant source of financing regional and local public services as well as ensuring that all Ethiopians have equal access to reasonably comparable levels of public services at reasonably comparable burdens of taxation. In addition, these transfers are also expected to serve to advance federal objectives of regional-local compliance in meeting national standards of merit public services such as education, health, welfare and infrastructure. These transfers are truly expected to serve as glue that holds the Ethiopian federation together especially given the unique constitutional dispensation in Ethiopia giving the states the right to succeed from the union.

In general, The FGPG is expected to have a stable growth over the five year stability period but in practice the pool is unstable, determined arbitrarily by the Ministry of Finance (MoF) and is unrelated to the calculations of needs carried out by the HoF.

The methods used to estimate potential revenue capacity are conceptually questionable. For example the RTS approach requires that regional governments have tax autonomy and impose taxes on varying bases at differential rates – this is not true in Ethiopia. Further calculations are themselves suspect as these in some cases are based on proxies with no relation to legal tax bases. The FGPG calculations on fiscal gap are in error as they appear to ignore other federal transfers and the MDG assistance made available to regions.

Expenditure needs calculations in some cases, for example for agriculture, use sophisticated econometric procedures with questionable validity (for example, a Cobb-Douglas Production function with only 10% explanatory power). In some other cases needs are assessed based on factors unrelated to the demand for public services. For example, need for environmental protection is based on "productive safety net beneficiaries" with no identified relationship with the incidence of pollution or congestion. It approximates needs using macro indicators of lack of access but translating these into expenditure need for facilities requires a planning view and geographical mapping of facilities in relation to national minimum standard. The latter view is absent in the FGPG calculations. Regional differentiation of needs is based upon assumptions that have no empirical basis. For example, the FGPG makes lump-sum allocation to each region for each expenditure category based upon the intercept of equation that is arbitrarily assumed to represent large regions rather than an average region and then giving declining weights to other regions of 70%, 50% and 30% respectively.

The FGPG represent a complex and opaque approach to regional allocations. Given the complexity of procedure used and the arbitrary assumptions made, transparency of the formula is compromised and there can be little hope of reaching broader consensus or a federal compact on the usefulness of the formula. Super complexity of FGPG does not, however, lead to greater equity as discussed in chapter four.

The existing design provides a number of unintended incentives with adverse consequences do accountable regional governance. It weakens regional government accountability to local resident for prudent fiscal management and cost effective delivery of quality public services. It provides implicit incentives for public sector managers to act as "public employment creation" agencies rather than service providers. This could also contribute to patronage politics as wage bill is picked up by the Federal Government. It delinks planning with budgeting as capital financing is not embedded into a planning perspective but a formula based perspective. It also delinks capital financing from national minimum standards. It provides incentives for higher operational spending and provides disincentives for overcoming infrastructure deficiencies. This is because capital and operating grants are lumped together and given as a lump-sum grant and higher operating spending leads to higher expenditure needs in future whereas higher capital spending by regions would directly reduce their future expenditure needs entitlements. It may contribute to building permanent dependency of states on federal financing. This is contrary to the legal provision that intergovernmental finance must be structured in such a way as to ensure that in the long run states have lower reliance on federal funds to finance own expenditures.

Summing up, while the FGPG represents a rigorous attempt at quantifying the potential revenue capacity and expenditure needs of the Ethiopian regions, due to a lack of appropriate data and by aggregating multiple grant programs into one, it has resulted into a complex and opaque program that distributes grant funds inequitably while creating perverse incentives for accountable governance. This outcome violates the constitutional-legal guidance that the formula be "reliable", "progressive" and should contribute to balanced regional development and reliance on self-finance by the states.

Moreover, given the prevailing vertical imbalance, the system has not internalized the cost of their expenditure decisions by regions. This in turn tends to give incentive to expansionary fiscal policy stance and bigger government that might not necessarily translate into strong and effective government. When such practices prevail, the cost of regional and federal fiscal decisions would be borne by economic agents and the economy. It is such a policy stance that erodes its sustainability, allows the breach of fiscal discipline, and in the process discourages the realization of whatever potentials available in the private sector, market forces, and the national economy. It is therefore important that the practice of fiscal federalism in Ethiopia be reoriented to achieve fiscal discipline, selective intervention to stimulate economic activities and diversify public outputs at the local levels to reflect local priorities and address core economic, social and political problems of the country.

Despite a growing trend in all aspects of socio-economic development as exemplified in the four selected sectoral development (education, health, water and road) for last ten years. It is however important to realize that the progresses in each of the level of the selected four sectoral development are not equitable and regions show significant variation in their emphasis on their achievements and their development outcomes.

7.4 Recommendations

Fiscal federalism has been an important subject in the policy equation of many developed, LDCs and transition countries. Over the years governments in developing and transition countries have introduced a number of policy measures to decentralize fiscal operations in order to maximize provision of public sector services as well as promote macroeconomic stability and equitable development. Given this understanding and on the basis of findings in this study, the following recommendations are proffered;

- The need to reverse the long fiscal dominance by the federal government in order to re-establish a true federal system is strongly recommended. To this end all the stakeholders in the Ethiopian project must work together to ensure that both federal and regional government is coordinate and independent in the delimited sphere of authority in line with the practice in true federations.
- The need for transparent, adequate stakeholders' participation, fairness, understandability/clarity, revenue predictability, efficiency in revenue generation and budget utilization, self-rule and accountability formula between the federal and regional of government is recommended. This formula should also satisfy the broad objectives of inter-regional equity and balanced national development. To this end the present grant allocation formula should be reviewed by the federal government to increase the percentage to lower governments in Ethiopia to strengthen their fiscal capacity and enable them to play strong role in nation building.

- Urgent reform in fiscal federalism in Ethiopia to address the constitutional issue of fiscal powers among the two tiers of government to redress the prevailing fiscal mismatch at federal and regional and levels of government is strongly recommended. This policy in line with the principles of fiscal federalism should as a matter of urgency increase tax assignment to lower tiers of governments to enhance their access to buoyant revenue sources, and this should be accompanied with matching expenditure responsibilities. The concurrent legislative list that has turned out to be a scheme for usurping local functions by the federal government should be scrapped as this is the basis used to justify federal control of the buoyant revenue sources, and frequent intergovernmental transfers.
- The need to diversify and strengthen the fiscal base of regional governments is recommended. To this end, regional tax administration should be improved, unproductive local taxes eliminated, and untapped tax potentials identified.
- The need to reduce the necessity for frequent intergovernmental transfers that causes disruption in the fiscal system is strongly recommended. This practice engenders a dependency of the lower tiers on the central government. If revenue at regional levels is boosted through increased tax assignment, and efficient local tax administration, the necessity for transfers would be reduced.

- The need to clearly define assignment of expenditure responsibilities is recommended. The literature on fiscal federalism has developed various principles for assigning expenditure responsibilities among the levels of government. The issue however is how best to assign responsibilities which must lead to the assignment of specific responsibilities to each level of government. This is because a high degree of overlapping of responsibilities between levels of government undermines the process of devolution of power. Further, if responsibilities are not clearly defined, one level of government (usually the national) assumes to much discretionary power to the detriment of sub national government autonomy. Moreover, lack of clarity undermines accountability, and distorts the distribution of resources. Therefore, to the extent possible the constitutional division of legislative and executive power guided by the principles of decentralization has to be defined. None the less, constitutions cannot address all issues as distribution of expenditure responsibilities in some aspects is an evolving process which requires collaboration between levels of government. Deciding on the question of 'who does what' often requires disaggregating the different components of a certain public function in terms of policy making, regulation, service delivery and financing. Thus, in order to find a balance in defining the responsibilities of each tier of government, the participation of constituent units at the federal/national policy making process has to be defined and implemented.

- The need to clearly define of assignment of tax power responsibilities is recommended. The assignment of taxation power is one of the controversial issues in designing a federal or decentralized system. Theoretically, tax assignment should come after a clear assignment of expenditure responsibilities. And there are various principles to define the tax jurisdiction of the national and sub national governments. But in almost all federations there is 'revenue centralization and expenditure decentralization' because of economic justifications which give broader taxing power to the federal government. The implication is that it is not always easy to reconcile the economic reasons embedded in fiscal federalism with that of the political values of federalism such as self-rule, conflict management and solidarity. There are several rules that guide the allocation of tax power. The most important ones deal with taxes with strong impact on economic efficiency and macroeconomic stability, taxes with strong redistributive effects, benefit taxes, the mobility or immobility of tax sources, the unevenly distribution of tax sources, and the need to allocate adequate revenues to sub national levels of governments. The issues of tax competition, tax harmonization, double taxation and tax administrative efficiency are also important. Considering these criteria, it is important to define the tax powers available to the federal government, to the states and local governments in the form of exclusive taxes, shared taxes and concurrent taxes. In cases where the available tax sources to sub national governments are limited, it is important to assign federally administered taxes jointly to the federal government and states where the latter are guaranteed for a minimum constitutionally defined share of the federal taxes. Local fiscal autonomy can be increased through a constitutionally guaranteed revenue sharing mechanism.

Efficient utilization of allocated grant is important in realizing the purposes that the grant is meant to serve. To this end, mechanisms to ensure proper utilization of the allocated budget have to be in place by HoF in a manner that would not jeopardize regional mandate.

As it could be difficult to address too many issues using a single general-purpose grant to fill the vertical and horizontal in balance in the country, it might be advisable to have some additional specific purpose grants for some issues like security, environmental pollution.

It also seems important that HoF strengthens the capacity of its experts in both exposing the theoretical foundations of fiscal federalism, different approaches (and their merits and demerits) of intergovernmental fiscal transfers, and the technical aspects of constructing/revising grant formulas. This will enable HoF to conduct assessments on grant formulas in a continuous basis that once in three or five years.

There exist huge variations among regions in terms of efficiency (unit cost), achievements and impacts in Education, Health, Water, and Road development. These may be partly caused by natural and geographical factors (e.g. hot weather, remoteness, terrain, etc.) forcing some regions to spend more on certain expenditure items than others. However, it is difficult to rule out management capacity as a factor influencing outcome and impact. While it is necessary to take cognizance of these factors, it is suggested that future grant allocation considerations be based on the equalization principle and the degree of efficiency related to output achieved in prior years.

It has also been observed that huge differences exist among regions in the amounts of budgets that go to cover general government and public administrative services, which partly explains the inefficiency (mismanagement) of public funds. As a result, it is strongly recommended that future grant allocations for general government and public administrative services be closely audited and monitored.

In recent years, macro-economic growth has been impressive and achieved a double-digit growth rate, which is commendable. The total public expenditure also increased more or less at the same rate as the GDP growth rate. However, the pool of the budget that goes to regional governments has not increased at the same rate as GDP and total public expenditure. Given that the inflation rate has been very high over the last few years, the amount of budget allocation to regional governments did not increase much in real terms. Therefore, the regional grant allocation should be increased after adjustment for the inflation rate.

The current allocation principle is based on equalization of fiscal gap (i.e. satisfying both fiscal capacity and fiscal need). It is strongly recommended this practice should be followed.

At present the secretariat of the House of Federation does not have the required professional and institutional capacity to design professional transfer system. This is mainly due to the shortage of trained human power. It is necessary, therefore, to draw up a plan to enhance the capacity of secretariat and train adequate human power for conducting research that will enable to periodically updating the transfer formula.

7.5 Contribution to Knowledge

The thesis is concerned with the issue of fiscal federalism and its effect on equitable development. Unlike studies that are based on one or two macroeconomic variables, the thesis is more comprehensive in its scope.

This study makes significant theoretical and empirical contributions in the area of fiscal federalism. It filled a gap in fiscal federalism, and unresolved non-correspondence issues which have inhibited the true practice of fiscal federalism in Ethiopia since the commencement of the federal constitution of Ethiopia 1995.

The study provides policy-makers a foundation for sequencing the reforms of government in developing countries to provide an effective way of reducing the overall size of government as well as promoting equitable development, if properly structured.

The formalized theory and the models generated in the study, provide policy makers with a meaningful specification for estimating the impact of fiscal federalism on equitable development.

The study has contributed to the empirical literature by providing empirical evidence that fiscal federalism is good for equitable development in Ethiopia, if it would be properly structured and implemented.

The findings established an empirical basis for government to re-energize the reform of the existing economic structure as a key strategy for Ethiopia to realize the vision 2025 EFY that the country envisaged to be one of the middle income countries.

Finally this study also provides useful information on how to address and resolve the problem of vertical imbalance and horizontal imbalance which suggest limited fiscal decentralization in Ethiopia.

7.6 Suggestions for Future Research

While it is encouraging that the results of this study match recent empirical findings showing a connection between fiscal federalism and equitable development in Ethiopia, additional theoretical work exploring other possible sources of such a link is clearly needed. The present results emerge from applying a certain statistical tools like Gini coefficient and Regression analysis based on very minimal assumptions, but exploration of richer models may also be fruitful. Such models could be used to examine, the impact of fiscal federalism on tax competition, on the innovation of firms in the different regional states and local governments needs to be analyzed to obtain more insights in the working of fiscal federalism in Ethiopia. Finally, other aspects of fiscal federalism such as the convergence and structural perspectives of long-run growth possibilities should be explored in future works.

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Annex

Table 1. Regional Capital Expenditure on education by Budget Year: 2001-2010 EFY in millions birr

region/year		2001 2008\09	2002 2009\10	2003 2010\11	2004 2011\12	2005 2012\13	2006 2013\14	2007 2014\15	2007 2015\16	2009 2016\17	2010 2017\18
Tigray	Primary and General Education	8.4	21.6	10.6	26.7	46.2	24.2	33.1	26.8	199.2	136.2
	Secondary Education	19.1	12.2	25.8	75.9	63.3	81.7	95.1	123.2	54.4	27.7
	Technical education	5.5	10.7	20.0	42.4	140.8	82.4	76.7	65.9	110.0	76.3
	Higher Education	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.9

	Civil Service Capacity Building	-	-	-	-	-	-	-	-	95.3	0.0
	Total	33	44.5	56.4	145	250.3	188.3	204.9	215.9	458.9	278.1
Afar	Primary and General Education	7.8	13.8	18.6	29.5	94.1	55.4	38.6	27.3	69.2	NA
	Secondary Education	5.9	10.3	5.9	5.9	2.8	12.6	38.4	41.0	14.1	NA
	Technical education	1.6	0.4	0.0	4.5	10.7	8.8	39.9	25.1	4.8	NA
	Higher Education	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	Civil Service Capacity Building	4.1	9.4	13.1	3.6	7.9	2.3	1.8	0.0	0.0	NA

	Total	19.4	33.9	37.6	43.5	115.5	79.1	118.7	93.4	88.1	NA
Amhara	Primary and General Education	8.3	8.0	67.7	380.6	599.8	341.8	428.1	15.7	29.7	14.6
	Secondary Education	25.2	21.3	21.3	12.8	146.1	276.6	8.6	740.4	305.8	400.6
	Technical education	44.3	27.7	59.9	177.7	191.1	261.1	404.7	293.5	341.7	278.4
	Higher Education	0.0	0.0	0.0	0.0	0.0	-	3.0	-	27.5	9.9
	Civil Service Capacity Building	23.4	14.2	28.8	27.3	17.8	2.8	4.3	1.2	5.6	8.5

	Total	101.2	71.2	177.7	598.4	954.8	882.3	848.7	1,050.8	710.3	712
Oromia	Primary and General Education	76.0	109.2	296.6	122.5	139.1	259.4	192.1	297.8	NA	NA
	Secondary Education	38.4	59.7	114.2	155.1	250.1	581.4	494.9	610.5	NA	NA
	Technical education	82.1	104.8	102.4	263.6	413.4	242.6	250.9	154.0	NA	NA
	Higher Education	0.0	22.9	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA
	Civil Service Capacity Building	0.0	7.6	3.2	24.0	19.5	20.9	130.8	85.8	NA	NA
	Total	196.5	304.2	516.4	565.2	822.1	1,104.3	1,068.7	1,148.1	NA	NA
Somalia	Primary and General Education	NA	41.8	125.5	96.9	42.1	52.5	36.1	57.7	192.2	157.3
	Secondary Education	NA	20.6	30.3	31.6	83.8	107.1	121.6	87.0	94.8	49.4
	Technical education	NA	8.0	36.1	5.1	25.3	59.1	151.6	208.0	408.9	186.6
	Higher Education	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7
	Civil Service	NA	19.9	17.5	7.3	11.6	9.0	16.0	110.4	139.8	36.8

	Capacity Building										
	Total	35.2	90.3	209.4	140.9	162.8	227.7	325.3	463.1	835.7	439.8
B.Gumuz	Primary and General Education	4.4	5.8	14.7	41.6	38.8	42.7	24.6	22.7	50.5	NA
	Secondary Education	4.6	7.0	11.8	4.1	4.0	2.9	28.5	29.8	153.2	NA
	Technical education	2.6	1.7	2.3	0.6	1.2	0.9	1.4	3.0	16.4	NA
	Higher Education	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	Civil Service Capacity Building	6.0	9.4	4.2	5.4	2.1	3.0	3.1	11.2	11.3	NA

	Total	11.66	23.9	33	51.7	46.1	49.5	57.6	66.7	231.4	NA
SNNP	Primary and General Education	3.4	87.0	83.0	144.3	137.2	118.7	214.8	304.4	269.8	208.4
	Secondary Education	15.7	1.1	56.9	128.1	119.5	31.4	493.7	581.2	195.7	165.8
	Technical education	20.9	78.3	77.7	257.5	343.9	145.1	281.5	290.1	333.2	402.4
	Higher Education	0.0	0.0	0.0	0.0	0.0	0.0	23.7	27.1	59.7	46.5
	Civil Service Capacity Building	-	-	-	-	-	-	-	-	-	24.8

	Total	40	166.4	217.6	529.9	600.6	295.2	1,013.7	1,202.8	858.4	847.9
Gambella	Primary and General Education	0.6	7.8	2.6	14.0	33.0	20.0	22.3	8.2	23.0	NA
	Secondary Education	0.2	4.4	5.7	12.1	11.6	4.0	7.0	3.1	5.0	NA
	Technical education	0.0	0.0	0.0	0.0	1.8	3.0	1.6	2.6	0.5	NA
	Higher Education	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	Civil Service Capacity Building	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA

	Total	0.8	12.2	8.3	26.1	46.4	27	30.9	13.9	28.5	NA
Hareri	Primary and General Education	1.5	0.6	0.2	8.8	32.0	11.7	10.4	24.5	29.0	NA
	Secondary Education	0.2	1.3	2.1	5.7	5.8	10.1	3.3	10.4	5.1	NA
	Technical education	0.2	0.5	0.0	0.1	3.8	4.5	1.4	0.0	0.0	NA
	Higher Education	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	Civil Service Capacity Building	0.0	0.9	0.2	0.0	0.2	0.0	0.5	0.4	0.0	NA

	Total	1.9	3.3	2.5	14.1	41.8	26.3	15.6	35.3	34.1	NA
Dire Dawa	Primary and General Education	19.1	5.3	7.8	33.5	24.5	25.9	8.8	41.8	35.5	NA
	Secondary Education	0.0	4.6	0.3	0.0	0.0	1.4	3.5	14.3	1.3	NA
	Technical education	0.0	0.0	2.3	12.8	7.5	9.8	13.7	29.9	39.1	NA
	Higher Education	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	Civil Service Capacity Building	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	-	NA

	Total	19.1	9.9	12.3	46.3	32	37.1	26	86	75.9	NA
Addis Ababa	Primary and General Education	NA	0.0	62.5	144.2	10.0	145.4	172.7	211.5	409.2	343.1
	Secondary Education	NA	0.0	0.0	18.1	58.3	6.2	5.9	0.2	2.1	2.1
	Technical education	NA	17.5	0.0	95.0	0.0	149.5	413.7	141.9	974.0	140.8
	Higher Education	NA	0.0	0.0	0.0	242.2	0.0	0.0	0.0	0.0	0.0
	Civil Service Capacity Building	NA	0.0	0.0	0.0	0.0	54.3	29.7	57.2	119.1	126.8
	Total	15.9	67.1	93.7	300.2	310.5	355.4	622	410.8	1,504.4	612.8

Total Regional States	total Education	602.7	1205.3	1398.9	2453.9	3484.3	3547.9	4520.9	5209.2	4914.1	2895.5
Federal Government	total Education	3429.7	5000.9	7946.2	10478.7	11838.4	11892.3	14193.3	19182.6	23022.7	22717.5
Country Wide	total Education	4032.4	6206.1	9345.1	12932.6	15322.8	15440.1	18714.2	24391.8	27936.7	25613.0

Source: own computation and MoFED

NA is not available of data

Table 2. Recurrent expenditure on education from 2001 – 2010 EFY In million birr

region/year		2001 2008\09	2002 2009\10	2003 2010\11	2004 2011\12	2005 2012\13	2006 2013\14	2007 2014\15	2007 2015\16	2009 2016\17	2010 2017\18
Tigray	Primary and General Education	194.1	86.7	86.5	244.6	143.2	746.7	1131.2	1240.8	1875.5	2098.1
	Secondary Education	192.9	417.6	567.4	590.0	859.3	223.3	445.9	484.4	500.7	684.3
	Technical education	39.0	56.0	79.1	128.0	157.2	187.7	253.2	283.3	387.1	392.4
	Higher Education	-	- -	-	-	-	-	-	-	-	107.3
	Civil Service Capacity Building	-	-	--	-	-	-	-	-	141.7	
	total	467.7	560.3	732.9	962.6	1159.7	1290.8	1892.5	2087.4	3100.9	3427.8
Afar	Primary and General	63.0	71.8	70.9	90.1	103.7	122.8	185.1	199.7	323.0	NA

	Education										
	Secondary Education	5.8	7.1	10.7	14.5	17.7	18.8	26.2	29.2	52.6	NA
	Technical education	1.5	1.8	6.6	5.8	6.8	29.3	43.8	49.4	66.7	NA
	Higher Education	-	-	-	-	-	-	-	-	-	NA
	Civil Service Capacity Building	14.1	14.7	15.8	13.6	17.4	14.7	16.8	15.6	19.6	NA
	total	84.5	95.5	138.8	169.8	205.7	237.8	340.8	366.0	554.3	NA
Amhara	Primary and General Education	1020.8	1087.6	1445.1	1806.0	2168.6	2385.8	3575.2	3903.6	5907.1	7224.9
	Secondary Education	173.3	210.8	348.9	465.9	692.2	656.1	1090.2	1143.6	1892.4	2250.8
	Technical education	70.3	96.6	132.8	189.5	287.2	328.9	678.4	745.2	1131.6	1492.2
	Higher Education	43.6	52.4	70.9	84.9		120.0	176.3	185.4	276.5	275.7
	Civil	90.3	118.1	136.3	127.4	138.3	149.9	231.4	238.5	358.5	375.0

	Service Capacity Building										
	total	1544.7	1737.5	2324.2	2947.5	3606.5	4075.8	6210.8	6935.8	10276.0	11479.9
Oromia	Primary and General Education	1244.6	1413.8	1956.7	2481.4	2875.9	3172.6	4686.3	5260.9	NA	NA
	Secondary Education	238.4	306.9	471.8	464.0	752.3	888.8	1315.6	1539.0	NA	NA
	Technical education	184.2	242.2	291.2	386.8	598.6	692.2	864.0	935.0	NA	NA
	Higher Education	81.4	92.9	101.2	138.6					NA	NA
	Civil Service Capacity Building	176.6	169.2	62.4	56.5	94.6	55.1	114.5	74.5	NA	NA
	total	2149.1	2441.7	3132.3	3987.4	4646.1	5224.7	7622.9	8524.5	NA	NA
Somalia	Primary and General Education	40.8	120.5	199.7	192.5	306.5	295.1	485.4	469.4	550.4	645.6

	Secondary Education	-	18.9	15.3	76.6	29.5	76.1	81.7	83.7	279.2	301.6
	Technical education	-	11.1	20.2	36.7	22.0	27.3	46.9	86.9	108.4	146.7
	Higher Education	-	-	-	-	-	-	-	-	41.2	57.5
	Civil Service Capacity Building	0.6	2.8	10.8	49.5	52.8	66.6	65.2	74.3	15.8	24.7
	total	41.8	163.2	246.0	355.3	410.8	465.1	679.2	714.2	994.9	1176.1
B.Gumuz	Primary and General Education	57.3	64.6	85.6	102.0	125.6	136.7	238.9	259.2	365.4	57.3
	Secondary Education	12.3	15.4	21.9	28.5	36.0	37.9	60.3	64.0	102.6	12.3
	Technical education	2.2	3.2	6.3	7.2	8.1	10.8	18.7	22.6	46.0	2.2
	Higher Education	-	-	-	-	-	-	-	-	-	-
	Civil Service Capacity	5.9	5.2	3.5	7.6	10.2	14.1	23.6	20.1	59.9	5.9

	Building										
	total	91.4	103.0	138.0	180.7	215.8	241.6	403.8	428.0	640.4	
SNNP	Primary and General Education	771.6	1044.7	1220.1	881.5	1379.9	1394.6	2326.3	3709.5	5763.2	4377.4
	Secondary Education	92.5	29.9	204.0	263.0	258.3	351.8	508.3	660.9	744.1	2764.2
	Technical education	27.5	47.6	88.8	100.9	140.1	157.8	259.4	332.7	473.6	565.2
	Higher Education	-	26.0	67.1	78.3	-	-	146.4	185.3	224.2	261.9
	Civil Service Capacity Building	-	-	-	-	-	-	210.3	9.4	13.4	15.3
	total	1048.1	1270.0	1685.4	2091.6	2521.4	2888.1	4450.7	4897.8	7218.6	7984.0
Gambella	Primary and General Education	27.8	34.8	49.1	76.1	68.7	80.4	123.9	140.2	199.4	NA
	Secondary Education	10.0	14.4	20.7	24.7	30.4	36.7	50.1	56.3	94.7	NA

	Technical education	6.8	3.9	5.8	7.4	12.0	11.1	14.1	17.0	29.8	NA
	Higher Education	-	-	-	-	-	-	-	-	-	NA
	Civil Service Capacity Building	0.9	3.3	1.6	2.2	4.2	2.4	3.0	3.7	5.6	NA
	total	74.4	89.5	106.1	130.4	157.4	157.6	240.4	281.5	402.7	NA
Hareri	Primary and General Education	18.5	21.0	26.2	33.9	40.9	44.2	68.8	74.3	102.1	NA
	Secondary Education	5.8	6.4	8.3	10.3	12.1	13.0	20.0	22.2	31.6	NA
	Technical education	2.7	3.4	4.3	6.2	8.2	8.3	10.3	12.6	17.1	NA
	Higher Education				6.0			8.2	8.3	12.4	NA
	Civil Service Capacity Building	1.3	1.4	1.6	7.3	1.7	0.9	1.2	1.8	2.3	NA

	total	37.8	41.6	52.5	63.6	78.6	85.8	123.7	136.7	192.4	NA
Dire Dawa	Primary and General Education	27.8	32.9	32.9	41.8	57.9	66.66	93.5	106.5	152.2	NA
	Secondary Education	9.4	10.4	25.2	34.5	43.8	53.97	67.3	75.9	106.3	NA
	Technical education	6.9	10.2	11.6	17.5	27.9	32.57	40.4	47.5	56.7	NA
	Higher Education	-	-	-	-	-	-	-	-	-	NA
	Civil Service Capacity Building	3.0	3.8	4.1	1.3	1.8	3.31	5.7	4.6	-	NA
	total	58.7	69.0	83.3	102.3	144.4	167.70	224.7	251.0	348.2	NA
Addis Ababa	Primary and General Education	145.9	-	254.1	449.8	952.6	657.2	941.1	1109.9	1548.9	1667.6
	Secondary Education	98.1	-	156.1	190.1	-	264.1	370.4	419.6	603.5	683.0
	Technical education	61.9	58.2	25.0	191.5	-	295.0	445.0	508.4	712.9	911.3

	Higher Education	19.0	-	-	43.8	-	-	-	-	-	-
	Civil Service Capacity Building						153.9	268.0	227.2	282.8	25.5
	total	405.1	532.1	683.6	875.1	1181.2	1398.6	2024.5	2265.2	3148.2	3287.4
National Regional States	total Education	6003.5	7103.3	9323.1	11866.4	14327.6	16233.6	24214.2	26888.1	26876.6	NA
Federal Government	total Education	2037.1	2113.2	3587.2	4990.6	6389.5	7973.3	11967.0	15034.6	19370.3	22803.7
Country Wide		8040.6	9216.4	12910.4	16857.0	20717.0	24206.9	36181.2	41922.7	46247.0	NA

Source: own computation and MoFED

NA means not available data

Table 3 key performance indicators and trends for primary education (Grades 1-8), 1995/6-2015/16

Table 5.1 key performance indicators and trends for primary (Grade 1-8), 1995/6-2015/16									
Year	GER Males	GER females	GER total	NER Male	NER females	NER total	Grade 8 completion rate (males)	Grade 8 completion rate (females)	Grade 8 completion rate (total)
1995/6	36.6	22.7	30.1	17.425.7	17.4	21.6	NA	NA	NA
57.41996/7	43	26	34.7	29.5	20	24.9	NA	NA	NA
1997/8	52	31.2	41.8	43	28	36	NA	NA	NA
1998/9	55.9	35.3	45.8	46.9	31.9	39.5	NA	NA	NA
1999/2000	60.9	40.7	51	51.2	36.6	44	NA	NA	NA
2000/1	67.3	47	57.4	55.7	41.7	48.8	NA	NA	NA
2001/2	71.7	51	61.6	59	45.2	52.2	NA	NA	NA
2002/3	74.6	53.8	64.4	60.6	47.2	54	NA	NA	NA
2003/4	77.4	59.1	68.4	62.9	51.8	57.4	34.9	19.1	27.1
2004/5	88	71.5	79.8	73.2	63.6	68.5	42.1	26.3	34.3

2005/6	98.6	83.9	91.3	81.7	73.2	77.5	50.1	32.9	41.7
2006/7	98	85.1	91.7	82.6	75.5	79.1	51.3	36.9	44.2
2007/8	100.5	90.5	95.6	86	80.7	83.4	49.4	39.9	44.7
2008/9	97.6	90.7	94.2	84.6	81.3	83	48.4	40.5	43.6
2009/10	96.6	90.1	93.4	83.7	80.5	82.1	51.0	44.5	44.5
2010/11	99.5	93.2	96.4	87	83.5	85.3	52.5	46.2	49.4
2011/12	99.5	92.9	95.4	86.8	83.9	85.4	52.4	51.9	52.1
2012/13	97.9	93	95.5	87.5	83.9	85.7	53.3	52.2	52.8
2013/14	104.8	97.8	101.3	95.1	90.1	92.6	46.7	46.7	46.7
2014/15	108.5	99.5	104	96.9	90.5	93.7	51.8	50.9	50.95
2015/16	113.71	113.7	108.67	104.2	96.2	100.3	55.3	53.3	54.3

Source: compiled from MOE, 'Educational Statistics Annual Abstract' (various Years).

NA means Not available data

Table 4. Gross Enrolment Ration for Primary and Secondary School from 2006 EFY to 2011EFY

Region	Gross Enrollment Ratio (GER)								
	Primary					**Secondary**			
	2006(2013 /14)	**2007(2014 /15)**	**2008 E.C.(20 15/16)**	**2009(20 16/17)**	**2011 E.C.(2018/ 19)**	**2007(201 4/15)**	**2008 E.C.(2 015/16)**	**2009(2 016/17)**	**2011 E.C.(201 8/19)**
Tigray	106.2	111.8	114.06	116.7	112.94	41.62	45.45	44.7	42.9
Afar	**74.4**	**70.3**	**66.24**	**66.0**	**56.9**	**14.46**	**8.62**	**12.1**	**10.8**
Amhara	106.7	110.3	111.57	112.1	102.46	27.61	33.13	33.6	39.9
Oromiya	91.2	94.8	104.26	106.2	106.21	21.26	23.32	24	28.6
Somali	134.9	**91.7**	**95.92**	**91.3**	84.13	**11.27**	**11.19**	**11.7**	16.9
B. Gumz	99.9	108.4	109.57	117.8	114.40	**25.82**	**31.29**	33.4	**36.1**
SNNP	102.0	107.0	115.52	123.9	106.50	27.93	30.80	33.9	26.7
Gambela	**150.5**	**151.4**	**154.36**	**150.3**	**148.27**	**58.77**	**72.43**	**65.8**	**65.0**
Harari	98.1	101.8	107.87	110.7	121.30	35.42	36.30	35.4	39.0

Addis Ababa	154.6	150.6	146.30	138.8	135.02	77.64	82.27	80.6	87.6
Diredawa	153.1	67.5	70.19	108.6	110.43	22.67	26.55	34.0	33.6
National	**101.3**	**102.7**	**108.67**	**111.4**	**104.64**	**25.61**	**29.04**	**30.1**	**32.0**

Table 5 **Net Enrolment Ratio (NER)**for Primary and Secondary School from 2006 EFY to 2011EFY

Regions	**Net Enrolment Ratio (NER)**								
	Primary					**Secondary**			
	2006(201	2007(20 14/15)	2008 E.C.(20 15/16)	2009(20 16/17)	2011 E.C.(20 18/19)	2007(201	2008 E.C	2009(20 16/17)	2011 E.C.(20 18/19)
Tigray	99.5	105.3	107.45	109.7	106	37.49	40.55	40	38.8
Afar	**60.1**	**59.2**	**55.49**	**50.1**	**45.9**	**10.09**	**5.86**	**7.2**	**7.2**
Amhara	97.3	100.4	101.72	103.7	91.2	22.22	26.57	27.4	30
Oromiya	84.8	88.2	97.58	97	98.3	17.8	19.38	19.7	22.8
Somali	117.7	**81.1**	**84.64**	**72.3**	66.4	**6.82**	**6.6**	**7.3**	11.2
B. Gumz	83	101.2	92.05	96.1	95.1	**21.77**	**22.76**	23.3	**24.7**
SNNP	94.3	89.3	108.82	109.1	99.1	20.67	26.12	28.5	22.2
Gambela	**119.8**	**118.3**	**120.64**	**113.8**	**108.3**	**31.11**	**40.34**	**33.8**	**34.9**
Harari	88	92.1	96.23	97.6	105.2	30.23	29.81	30.5	32.5
Addis Ababa	136.2	113.8	111.57	105.8	104.5	60.27	63.72	63.4	69.8
Diredawa	77.5	56.9	60.16	87.2	93.1	17.35	19.49	25.7	24.4
National	92.6	**94.3**	**100.25**	**99.9**	**94.7**	**21**	**23.78**	**24.6**	**25.3**

Source: own computation and educational annual abstract in various years

Table 6: Trends in the Number of Primary Enrolments by Region from 2008/09 to 2014/15

Region	2001 E.C. (2008/09)			2002 E.C. (2009/10)			2003 E.C. (2010/11)			2004 E.C. (2011/12)			2005 E.C. (2012/13)			2006 E.C. (2013/14)			2007 E.C. (2014/15)			(AAGR) Average Annual Growth Rate
	male	female	total	male	female	Total	male	female	total	male	female	total	male	female	total	male	female	total	male	female	total	
Tigray	503,260	497,366	**1,000,626**	496,360	491,856	**988,216**	503,792	497,811	1,001,603	504,632	502,341	1,006,973	515,263	504,812	1,020,075	536,575	520,534	1,057,109	572,982	541,663	1,114,645	2.2
Afar	61,589	38,840	**100,429**	76,973	52,070	**129,043**	78,959	55,741	134,700	83,960	65,935	149,895	75,933	57,990	133,923	117,427	92,703	210,130	117,253	85,431	202,684	8.5
Amhara	2,119,905	2,036,494	**4,156,399**	1,982,265	1,956,954	**3,939,219**	1,996,638	1,981,540	3,978,178	2,010,251	1,991,917	4,002,168	2,006,040	1,976,546	3,982,586	2,066,419	2,020,231	4,086,650	2,182,345	2,099,656	4,282,001	1.5
Oromiya	2,993,143	2,577,485	**5,570,628**	3,043,351	2,653,117	**5,696,468**	3,356,420	2,929,706	6,286,126	3,321,727	2,959,947	6,281,674	3,403,316	3,011,011	6,414,327	3,528,489	3,099,831	6,628,320	3,740,227	3,257,756	6,997,983	2.2

Somali	220,576	137,648	**358,224**	430,097	253,586	**683,682**	390,637	262,757	653,394	488,182	341,845	830,027	640,179	460,064	1,100,243	656,812	480,468	1,137,280	465,116	343,761	808,876	4.4
Beni shangul	97,916	73,254	**171,170**	102,201	78,040	**180,241**	110,171	83,706	193,877	108,143	85,416	193,559	107,286	85,347	192,633	113,289	90,928	204,217	121,928	98,434	220,362	2.6
SNNP	1,876,819	1,628,894	**3,505,713**	1,850,562	1,622,490	**3,473,052**	2,013,010	1,757,137	3,770,147	2,009,152	1,798,887	3,808,039	2,026,436	1,810,525	3,836,961	2,225,174	1,981,945	4,207,119	2,292,332	2,033,111	4,325,443	2.8
Gambella	44,078	32,997	**77,075**	49,790	39,407	**89,197**	54,373	43,675	98,048	59,388	47,780	107,168	56,193	45,996	102,189	60,998	51,394	112,392	62,496	51,151	113,647	3.0
Harari	22,036	17,896	**39,932**	19,872	16,270	**36,142**	19,414	16,210	35,624	19,471	16,755	36,226	20,359	16,846	37,205	21,091	18,267	39,358	22,668	18,668	41,336	3.0
Addi s Ababa	223,813	286,077	**509,890**	224,657	288,076	**512,733**	222,045	280,237	502,282	227,417	281,769	509,186	227,367	276,510	503,877	240,508	318,136	558,644	233,079	282,836	515,915	0.5

Di re Dawa	33,363	29,693	**63,056**	33,761	30,349	**64,110**	33,629	30,503	64,132	33,820	30,603	64,423	33,894	30,382	64,276	34,542	30,735	65,277	36,076	32,249	68,325	1.3
Total	**8,196,498**	**7,356,644**	**15,553,142**	**8,309,889**	**7,482,215**	**15,792,103**	8,779,088	7,939,023	16,718,111	8,865,491	8,124,293	16,989,784	9,112,266	8,276,029	17,388,295	9,601,324	8,705,172	18,306,496	9,846,502	8,844,716	18,691,217	2.3

Source: Ministry of Education, educational statistics, annual abstract, various reports

Table 7 : Trends in the Number of Primary Enrolments by Region from 2014/15 to 2018/19

Region	2008 E.C. (2015/16)			2009 E.C. (2016/17)			2010 E.C. (2017/18)			20011 E.C. (2018/19)			(AAGR) Average Annual Growth Rate		
	male	female	total	male	Female	total	male	female	total	male	female	total	M	F	T
Tigray	590,368	548,530	1,138,898	609,257	557,905	1,167,162	615,160	562,291	1,177,451	583,612	550,226	1,133,838	0.46	0.39	0.43
Afar	109,274	86,130	195,404	110,689	89,058	199,747	102,905	83,227	186,132	102,829	81,340	184,169	-3.23	-1.22	-2.37
Amhara	2,230,637	2,115,832	4,346,469	2,318,488	2,182,542	4,501,030	2,291,058	2,122,443	4,413,501	2,225,054	2,067,370	4,292,424	0.49	-0.39	0.06
Oromiya	4,183,219	3,609,667	7,792,886	4,316,391	3,710,780	8,027,171	4,401,506	3,759,320	8,160,826	4,416,565	3,724,268	8,140,833	4.24	3.40	3.85
Somali	512,650	376,793	889,443	522,542	370,509	893,051	572,957	423,883	996,840	541,588	391,971	933,559	3.88	3.34	3.65
Beni shangul	126,454	102,693	229,147	138,220	111,956	250,176	139,900	116,465	256,365	137,682	114,937	252,619	3.08	3.95	3.47
SNNP	2,458,662	2,173,362	4,632,024	2,651,032	2,338,466	4,989,498	2,488,032	2,213,336	4,701,368	2,253,810	2,039,902	4,293,712	-0.42	0.08	-0.18
Gambella	63,798	53,601	117,399	62,681	53,080	115,761	61,028	52,895	113,923	62,973	56,059	119,032	0.19	2.32	1.16
Harari	24,290	20,027	44,317	25,299	20,648	45,947	25,751	20,710	46,461	28,680	22,665	51,345	6.06	4.97	5.57
Addi s Ababa	232,626	287,244	519,870	233,670	282,115	515,785	242,899	289,102	532,001	258,563	306,159	564,722	2.63	2.00	2.29

Di re Dawa	37,973	33,611	71,584	41,237	36,513	77,750	40,337	35,816	76,153	42,995	37,109	80,104	4.48	3.57	4.06
Total	10,569,951	9,407,490	19,977,441	11,029,506	9,753,572	20,783,078	10,981,533	9,679,488	20,661,021	10,654,351	9,392,006	20,046,357	1.99	1.51	1.77

Source: Ministry of Education, educational statistics, annual abstract, various reports

Table 8. Regional capital expenditure on Health Actual (in Million Birr)

region/year		2001 2008\09	2002 2009\10	2003 2010\11	2004 2011\12	2005 2012\13	2006 2013\14	2007 2014\15	2007 2015\16	2009 2016\17	2010 2017\18
Tigray	o/w primary	25.2	39.9	5.7	19.7	39.1	34.5	20.4	61.7	41.8	40.0
	Hospitals	2.1	4.7	6.3	2.7	10.1	16.5	11.6	5.0	33.6	12.9
	Malaria Prevention	0.4	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
	HIV/AIDS Prevention & control	0.0	0.0	0.0	0.0	0.0	1.1	0.9	1.7	0.0	1.9
	Blood Bank Service	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Nurse Trainig	0.4	4.8	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	total	28.1	49.4	15.5	23.9	49.2	52.1	32	68.4	75.4	54.8
Afar	o/w primary	16.1	8.0	23.1	29.3	61.3	30.1	38.0	50.8	41.0	NA
	Hospitals	4.3	7.0	13.6	22.2	16.7	9.6	5.9	21.2	1.7	NA
	Malaria Prevention	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	HIV/AIDS Prevention & control	0.0	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.0	NA

	Blood Bank Service	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	Nurse Trainig	1.1	0.2	0.0	0.0	5.4	0.9	2.2	0.0	0.0	NA
	total	21.5	15.4	36.8	51.6	83.4	40.7	46.2	72	42.7	NA
Amhara	o/w primary	36.5	62.8	63.7	35.0	34.5	40.4	54.1	51.6	60.0	179.0
	Hospitals	15.7	50.7	42.6	103.5	413.9	618.6	717.7	557.5	456.5	198.8
	Malaria Prevention	1.0	0.1	0.0	0.0	0.0	0.0	5.9	3.8	0.1	0.1
	HIV/AIDS Prevention & control	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Blood Bank Service	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Nurse Trainig	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.1	1.4
	total	53.4	113.6	106.5	138.5	448.4	659	777.7	612.9	517.7	379.3
Oromia	o/w primary	207.9	226.2	239.1	505.1	415.6	215.9	220.9	369.4	NA	NA
	Hospitals	176.4	208.8	120.6	179.4	504.1	800.0	645.9	1015.3	NA	NA
	Malaria Prevention	0.0	0.0	0.0	4.7	2.2	0.0	0.2	6.6	NA	NA
	HIV/AIDS Prevention & control	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA

	Blood Bank Service	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	NA
	Nurse Trainig	0.0	6.0	4.2	0.0	0.0	0.0	0.0	0.0	NA	NA
	total	384.3	441	363.9	689.2	921.9	1,015.9	867	1,391.3	NA	NA
Somalia	o/w primary	NA	21.4	112.2	95.3	70.1	49.9	98.5	142.5	221.8	130.1
	Hospitals	NA	32.9	49.0	21.1	23.7	66.2	67.3	58.9	36.8	127.9
	Malaria Prevention	NA	0.0	0.0	1.0	0.0	0.4	0.0	0.0	10.0	34.0
	HIV/AIDS Prevention & control	NA	0.0	0.1	0.5	1.1	7.5	19.7	20.5	3.7	23.3
	Blood Bank Service	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Nurse Trainig	NA	0.0	4.7	6.1	6.2	4.1	14.9	6.5	2.3	4.3
	total	53.1	126.6	166	124	101.1	128.1	200.4	228.4	274.6	319.6
B.Gumuz	o/w primary	1.2	3.2	13.4	15.1	31.4	81.6	67.0	69.5	50.2	NA
	Hospitals	0.0	0.0	0.0	1.3	3.5	1.2	2.2	2.3	0.7	NA
	Malaria Prevention	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	HIV/AIDS Prevention & control	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	NA

	Blood Bank Service	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	NA
	Nurse Trainig	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	total	1.2	3.2	13.4	16.4	36.7	82.8	69.2	72.3	51.5	NA
SNNP	o/w primary	18.8	17.1	71.5	302.8	539.0	360.0	172.1	152.1	147.8	380.2
	Hospitals	153.4	76.7	29.0	84.6	15.9	25.2	110.7	90.7	255.2	76.8
	Malaria Prevention	0.0	0.0	3.0	1.5	0.0	0.0	1.2	0.2	1.2	1.2
	HIV/AIDS Prevention & control	0.0	1.4	1.5	0.0	0.0	0.5	3.7	1.7	0.5	0.0
	Blood Bank Service	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Nurse Trainig	0.0	0.0	0.0	0.0	0.0	0.0	29.7	21.7	18.5	15.5
	total	185.1	95.2	105	388.9	554.9	385.7	317.4	266.4	423.2	473.7
Gambella	o/w primary	2.3	3.6	2.7	38.9	10.7	10.2	10.5	12.9	7.5	NA
	Hospitals	0.2	0.1	0.0	0.4	17.7	5.8	6.3	9.7	8.4	NA
	Malaria Prevention	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	HIV/AIDS Prevention & control	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA

	Blood Bank Service	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	Nurse Trainig	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	total	2.5	3.7	2.7	39.3	28.4	16	16.8	22.6	15.9	NA
Hareri	o/w primary	1.5	0.4	0.4	0.3	0.0	0.0	0.0	0.4	0.9	NA
	Hospitals	0.0	0.0	0.0	7.2	28.6	0.4	2.0	2.4	0.0	NA
	Malaria Prevention	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	HIV/AIDS Prevention & control	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	Blood Bank Service	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	Nurse Trainig	1.8	0.0	0.0	0.0	0.0	0.0	0.3	10.6	2.7	NA
	total	3.3	0.4	0.4	7.5	28.6	0.4	2.3	13.2	3.6	NA
Dire Dawa	o/w primary	1.9	5.5	0.6	1.2	24.7	15.3	4.1	4.8	3.6	NA
	Hospitals	0.0	10.0	9.9	24.9	33.4	31.9	23.7	69.9	19.5	NA
	Malaria Prevention	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	HIV/AIDS Prevention & control	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.9	NA
	Blood Bank Service	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	Nurse Trainig	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
	total	1.9	15.5	10.5	26.1	58.1	47.5	27.8	74.7	23.4	NA

Addis Ababa	o/w primary	NA	0.0	90.2	0.0	106.1	89.9	75.9	54.9	65.1	71.2
	Hospitals	NA	22.8	11.5	127.8	148.7	179.3	181.4	62.1	116.1	90.3
	Malaria Prevention	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	HIV/AIDS Prevention & control	NA	0.0	1.9	5.1	2.6	28.5	7.5	21.9	14.2	3.4
	Blood Bank Service	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Nurse Trainig	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0
	total	40.1	94.5	103.6	132.9	257.4	297.7	264.8	138.9	196.8	164.9
National Regional States	total Health	864.6	993.4	921.2	1639.3	2587.5	2765.9	2802.3	2972.9	1634.4	1392.1
Federal Government	total Health	1853.9	3687.6	3893.0	4545.7	4566.7	6488.7	8058.4	7570.3	6342.6	11205.3
Country Wide	total Health	2718.5	4681.0	4814.1	6185.0	7154.2	9254.5	10860.7	10543.2	7977.0	12597.4

Source : Own computation and MoFED

NA means Not available data

Table 9. Regional recurrent expenditure on Health Actual (in Million Birr)

region/year		2001 2008\09	2002 2009\10	2003 2010\11	2004 2011\12	2005 2012\13	2006 2013\14	2007 2014\15	2007 2015\16	2009 2016\17	2010 2017\18
Tigray	o/w primary	86.9	109.6	147.2	181.6	232.1	285.5	411.5	437.9	446.5	536.0
	Hospitals	47.4	51.8	83.1	120.0	152.7	185.4	271.8	326.6	406.7	477.7
	Malaria Prevention	5.6	-	-	18.4	8.1	7.8	18.9	18.6	21.5	23.4
	HIV/AIDS Prevention & control	2.6	0.1	2.0	2.7	0.8	1.7	3.7	6.4	7.8	9.1
	Blood Bank Service	-	- -	- -	--	-	-	-	-	-	-
	Nurse Trainig	3.3	-	-	-	-	-	-	-	-	- -
	total	150.8	161.5	232.2	322.6	393.7	480.4	705.9	789.5	1088.2	1266.0

Afar	o/w primary	22.4	30.1	44.3	54.1	66.2	77.9	125.9	144.0	210.3	NA
	Hospitals	6.4	7.9	9.8	16.1	19.1	25.6	37.7	45.3	62.8	NA
	Malaria Prevention	0.3	0.2	0.1	0.3	0.7	1.0	1.1	1.3	1.0	NA
	HIV/AIDS Prevention & control	4.8	5.1	6.8	7.8	8.7	9.9	14.6	17.7	23.6	NA
	Blood Bank Service	-	- -	-	-	-	-	-	-	-	NA
	Nurse Trainig	2.9	2.4	2.6	3.1	3.2	3.3	4.2	5.2	6.8	NA
	total	49.4	58.2	80.3	102.2	123.0	148.7	234.3	276.6	379.3	NA
Amhara	o/w primary	180.9	198.6	287.2	562.7	671.6	784.1	1084.4	1246.5	1624.4	1950.8
	Hospitals	64.4	69.5	84.5	118.9	176.5	245.8	415.4	698.7	1146.8	1507.5
	Malaria Prevention	6.9	5.9	7.7	9.1	144.9	85.9	109.6	40.6	54.4	24.1
	HIV/AIDS Prevention	4.1	12.1	21.8	29.4	30.4	31.1	38.1	17.9	0.4	0.1

	& control										
	Blood Bank Service	-	-	-	-	-	-	-	-	-	46.3
	Nurse Trainig	17.3	17.1	18.1	23.2	21.7	22.2	36.7	43.1	64.8	74.6
	total	347.7	380.5	519.3	743.4	1045.1	1199.3	2081.0	2499.0	3429.6	4241.2
Oromia	o/w primary	260.0	358.1	513.3	707.4	902.4	1464.4	2244.5	2877.6	NA	NA
	Hospitals	115.2	144.1	200.2	309.5	370.3	422.2	655.5	919.3	NA	NA
	Malaria Prevention	14.8	28.9	30.4	37.2	50.6	57.8	89.6	115.6	NA	NA
	HIV/AIDS Prevention &control	8.6	1.4	0.7	0.6	0.3	0.3	0.3	0.4	NA	NA
	Blood Bank Service	-	-	-	-	-	5.7	16.3	22.8	NA	NA
	Nurse Trainig	26.0	-	-	-	-	-	-	-	NA	NA
	total	523.0	634.9	873.6	1227.2	1534.0	1950.4	3006.3	3935.6	NA	NA

Somalia	o/w primary	20.8	58.0	85.4	134.6	147.2	167.0	240.3	270.6	333.6	426.3
	Hospitals	8.8	27.1	32.3	50.7	62.6	85.0	131.3	157.5	183.0	211.9
	Malaria Prevention	-	-	-	-	-	-	-	-	-	-
	HIV/AIDS Prevention & control	0.2	0.7	1.3	1.4	1.4	1.8	3.0	2.5	3.0	3.8
	Blood Bank Service	-	-	-	-	-	-	-	-	-	-
	Nurse Trainig		13.9	16.9	20.6	22.7	25.1	37.5	41.7	58.1	72.1
	total	29.7	99.8	137.4	207.3	234.0	281.4	412.0	472.2	577.7	714.1
B.Gumuz	o/w primary	15.0	22.1	31.5	60.4	72.0	80.9	103.1	125.8	179.3	NA
	Hospitals	9.5	10.8	12.6	20.8	21.0	26.1	42.3	49.6	77.7	NA
	Malaria	0.7	1.4	1.6	1.7	2.6	1.9	2.7	2.7	3.4	NA

	Prevention										
	HIV/AIDS Prevention & control	1.5	1.9	2.5	2.7	4.2	4.9	6.2	5.1	4.2	NA
	Blood Bank Service	-	-	-	-	-	-	1.6	2.1	3.2	NA
	Nurse Trainig	1.8	2.8	3.0	3.4	4.2	5.4	6.5	7.4	11.0	NA
	total	37.1	49.4	63.9	89.5	109.7	134.4	199.5	233.3	335.0	NA
SNNP	o/w primary	182.6	135.8	182.0	540.0	-	601.9	1313.9	1480.8	1879.3	2490.4
	Hospitals	71.4	264.1	351.7	126.5	-	194.7	239.9	443.4	638.9	821.3
	Malaria Prevention	--	1.2	-	2.4	-	3.0	5.9	0.0	6.0	8.4
	HIV/AIDS Prevention & control	8.8	5.8	0.4	9.3	-	9.5	1.5	1.6	1.9	1.8

	Blood Bank Service	-	-	-	-	-	-	2.2	-	-	9.4
	Nurse Trainig	-	38.3	49.7	53.6	-	70.2	88.9	105.6	142.4	158.6
	total	335.4	407.0	583.8	731.8	957.8	1133.8	1652.3	2031.3	2668.5	3331.4
Gambella	o/w primary	2.5	5.2	7.3	11.2	13.2	18.7	26.1	29.3	44.1	NA
	Hospitals	5.6	6.5	9.3	18.0	22.1	26.8	30.0	36.3	42.6	NA
	Malaria Prevention	0.4	0.6	1.1	0.4	0.7	1.5	1.6	-	-	NA
	HIV/AIDS Prevention & control	0.6	0.6	1.0	3.0	4.6	6.7	8.9	8.8	13.4	NA
	Blood Bank Service	-	-	-	-	-	0.7	-	-	-	NA
	Nurse Trainig	-	-	-	-	-	-	-	-	-	NA

	total	19.1	26.5	39.3	55.6	69.9	86.0	118.4	130.8	177.0	NA
Hareri	o/w primary	2.6	4.4	6.4	10.1	14.4	16.5	22.5	25.2	38.2	NA
	Hospitals	14.1	14.9	8.5	10.2	12.3	13.8	18.3	25.2	31.4	NA
	Malaria Prevention	-	-	-	-	-	-	-	-	-	NA
	HIV/AIDS Prevention & control	-	0.2	0.3	0.4	0.5	0.5	0.8	1.1	1.2	NA
	Blood Bank Service	-	-	-	-	-	-	-	-	-	NA
	Nurse Trainig	2.8	3.6	5.0	6.5	7.1	7.6	10.1	9.8	15.7	NA
	total	22.4	26.3	24.5	31.3	39.4	44.4	60.4	71.3	100.0	NA
Dire Dawa	o/w primary	10.0	12.8	17.5	29.1	37.2	50.86	69.1	85.6	92.0	NA
	Hospitals	10.7	11.7	13.7	18.0	22.2	28.79	44.2	54.9	100.8	NA
	Malaria	-	0.7	0.3	0.6	1.1	1.86	2.1	2.4	5.6	NA

	Prevention										
	HIV/AIDS Prevention & control	0.3	0.3	0.3	0.4	0.7	0.9	0.8	1.8	3.3	NA
	Blood Bank Service	-	-	-	-	-	-	-	-	-	NA
	Nurse Trainig	-	-	-	-	-	-	-	-	-	NA
	total	22.9	26.9	34.4	53.3	70.0	91.14	128.7	159.1	215.8	NA
Addis Ababa	o/w primary	52.4		144.1	241.8		349.7	530.7	704.3	891.6	1086.2
	Hospitals	61.5	71.3	93.5	97.3		172.4	569.6	663.9	866.7	1112.4
	Malaria Prevention	-	-	-	-	-	-	-	-	-	-
	HIV/AIDS Prevention & control	1.4	1.6	2.6	3.0		7.5	14.4	19.9	19.5	20.2
	Blood Bank Service	-	-	-	-	-	-	-	-	-	-

	Nurse Trainig	-	-	-	4.5		59.7	8.4	15.1	32.4	39.5
	total	115.3	159.4	240.2	346.6	515.6	709.5	1123.1	1403.1	1810.3	2258.2
National Regional States	total Health	1652.8	2030.3	2828.9	3910.7	5092.2	6259.4	9721.7	12002.0	10781.4	NA
Federal Government	total Health	121.6	98.5	181.2	249.8	240.3	356.5	555.0	906.1	1324.3	1767.5
Country Wide	total Health	1774.4	2128.8	3010.1	4160.5	5332.5	6616.0	10276.7	12908.1	12105.7	NA

Source : Own computation and MoFED

NA means Not available data

Table 10: Number of Available Health posts, Health Centers, Hospitals by Region

Region		2005 2012/13	2006 2013/14	2007 2014/15	2008 2015/16	2009 2016/17
Tigray	Number of Health Post	650	672	-	712	737
	Number of Health Center	214	212	202	205	213
	Number of Hospital	15	31	15	47	39
Afar	Number of Health Post	314	378	-	325	325
	Number of Health Center	62	60	84	96	94
	Number of Hospital	5	5	6	7	6
Amhara	Number of Health Post	3,302	3,317	-	3392	3342
	Number of Health Center	805	806	834	857	841
	Number of Hospital	19	20	43	91	68
Oromia	Number of Health Post	6,368	6,428	-	6,519	6823

	Number of Health Center	1215	1253	1,320	1411	1441
	Number of Hospital	41	47	53	115	78
Somali	Number of Health Post	1,062	1,062	-	1,069	1,184
	Number of Health Center	140	145	204	203	204
	Number of Hospital	9	9	11	11	12
Bengum	Number of Health Post	361	384	-	391	402
	Number of Health Center	32	32	45	51	40
	Number of Hospital	2	2	6	6	4
SNNPR	Number of Health Post	3,829	3,835	-	3,849	4182
	Number of Health Center	663	700	752	748	742
	Number of Hospital	21	21	77	97	78
Gambella	Number of Health Post	105	111	-	133	126

	Number of Health Center	28	31	31	33	28
	Number of Hospital	1	3	3	4	2
Harari	Number of Health Post	26	33	-	30	32
	Number of Health Center	8	8	8	8	8
	Number of Hospital	2	2	7	2	2
Addis Ababa	Number of Health Post	-	-	-	-	-
	Number of Health Center	62	73	91	100	98
	Number of Hospital	11	14	2	11	11
Dire Dawa	Number of Health Post	31	31	-	33	34
	Number of Health Center	16	15	15	15	18
	Number of Hospital	1	2	11	3	2
National	Number of Health Post	16,048	16,251	-	16,480	17187
	Number of Health Center	3245	3335	3,586	3727	3724
	Number of Hospital	127	***156***		394	302

Source: Health indicators (various year) published by the MoH

Table 11: Health facility to population ratio by region (EFY 2009(2016/17))

Region	Population	Functional Health Centers		Functional Hospitals		Functional Health Posts		Health officer		Midwifery(BSC+Diploma)		All Nurses	
		Number	Ratio	Number	Ratio	Number	Ratio	Number	Density per 10,000	Number	Density per 10,000	Number	Density per 10,000
Tigray	5,247,005	211	24867	31	169258	712	7369	485	0.9	846	1.6	7808	14.9
Afar	1,812,002	94	19277	6	302000	725	5575	109	0.6	561	3.1	2899	16.0
Amhara	21,134,988	841	25131	68	310809	3342	6324	1776	0.8	647	0.3	5401	2.6
Oromia	35,467,815	1383	25646	68	521586	6797	5218	3053	0.9	886	0.3	26331	7.4
Somali	5,748,998	189	30418	10	574900	1026	5603	219	0.4	661	1.2	3189	5.5
Bengum	1,066,001	40	26650	2	533001	402	2652	210	1.98	222	2.1	1625	15.2
SNNPR	19,170,007	717	26736	78	245769	3874	4948	1757	0.9	2078	1.1	16442	8.1
Gambella	435,999	27	16148	3	145333	118	3695	109	2.5	52	1.2	1720	39.4
Harari	246,000	8	30750	2	123000	30	8200	26	1.1	90	3.7	666	27.1
Addis Ababa	3,433,999	97	35402	11	312182	----	NA	1200	3.5	1029	3.0	8809	25.7
Dire Dawa	466,000	15	31067	2	233000	34	13706	64	1.4	78	1.7	929	19.9
National	94,228,814	3622	26016	281	335334	16660	5656	9117	0.97	7275	0.8	78914	8.4

Source: Health indicators (various year) published by the MoH

Table 12: Health facility to population Ratio by Region (EFY 2005(2012/13))

Region	Population	Functional Hospital		Functional Health center		Functional Health Posts			Health officer		Midwifery(BSC+Diploma)		All Nurses	
		Number	Ratio	Number	Ratio	Number	Ratio	% change	Number	Density per 10,000	Number	Density per 10,000	Number	Density per 10,000
Tigray	4,866,000	15	1:324,400	214	1:22,738	650	1:7,486	66.8%	439	1.11	762	0.64	4562	0.11
Afar	1,634,000	5	1:326,800	62	1:26,355	314	1:5,204	96.1%	69	2.37	108	1.51	684	0,24
Amhara	19,626,000	19	1:1032,947	805	1:24,380	3,302	1:5,944	84.1%	963	2.04	587	3.34	7447	0.26
Oromia	31,948,000	41	1:779,220	1,215	1:26,295	6,368	1:5,017	99.7%	1647	1.94	1894	1.69	13873	0.23
Somali	5,165,000	9	1:573,889	140	1:36,893	1,062	1:4,863	102.8%	157	3.29	369	1.40	1691	0.31
Ben-Gum	947,000	2	1:473,500	32	1:29,594	361	1:2,623	190.6%	97	0.98	105	0.90	841	0.11
SNNPR	17,403,000	21	1:828,714	663	1:26,249	3,829	1:4,545	110.0%	1343	1.30	1284	1.36	9755	0.18
Gambella	383,000	1	1:383,000	28	1:13,679	105	1:3,648	137.1%	49	0.78	55	0.70	499	0.077
Harari	220,000	2	1:110,000	8	1:27,500	26	1:8,462	59.1%	58	0.38	72	0.31	557	0.04
Addis Ababa	3,122,000	11	1:283,818	62	1:50,355	-		79.4%	606	0.52	416	0.75	3980	0.078
Dire Dawa	415,000	1	1:415,000	16	1:25,938	31	1:13,387	37.3%	64	0.65	71	0.58	488	0.09
National	85,729,000	127	1:675,031	3,245	1:26,416	16,048	1:5,342	93.6%	**5,621**	1.53	**5,774**	1.48	**45,509**	0.19

Source: Health indicators (various year) published by the Mo

Table 13: Number of hospitals 2001 (1993 eth.c) and 2008 (2000 eth.c) and changes in the number of hospitals from 2001 to 2016/17

	2001 (1993 Eth.c)			2008 (2000 Eth.c)			2016/17(2009 Eth.c)	% change
Region	**MOH**	**Others**	**Total**	**MOH**	**Other**	**Total**	**Total**	
Tigray	12	1	13	12	3	15	39	200
Afar	2	0	2	2	0	2	6	200
Amhara	14	2	16	16	4	20	68	325
Oromiya	20	8	28	23	8	31	78	178
Somale	6	0	6	6	2	8	12	100
B.G	2	0	2	2	0	2	4	100
SNNPR	10	2	12	14	6	20	78	550
Gambella	1	0	1	1	0	1	2	100
Hararari	3	2	5	2	2	4	2	
Addis Ababa	5	13	18	5	28	33	11	
Dire Dawa	1	1	2	1	2	3	2	-
National	80	30	110	88	61	149	302	274

Note: Others include NGO and private as well as OGA

Source: compiled from MOH health indicator abstract 1993 (eth.c) and 2000 (eth.C)

Table 14: Number and changes in health centres between 2001 and 2008

	2001			2008			2016/17	Change (%)
Region	MOH	Other*	Total	**MOH**	**Other****	**Total**	Total	
Tigray	29	0	29	40	0	40	213	634
Afar	5	0	5	14	0	14	94	1780
Amhara	77	0	77	171	0	171	841	992
Oromiya	111	3	114	242	0	242	1441	1164
Somale	10	0	10	21	0	21	204	1940
B.G.	7	0	7	15	2	17	40	471
SNNPR	103	4	107	177	4	181	742	593
Gambella	5	0	5	8	1	9	28	460
Hararari	2	0	2	3	0	3	8	300
Addis Ababa	20	4	24	24	4	28	98	308
Dire Dawa	2	0	2	6	0	6	15	650
National	371	11	382	721	11	732	3727	875

Source:Health indicators (various year) published by the MoH

Note: Others include NGO and private as well as OGA