
# Determinants of Own Source Revenue Collection in Sub Cities in Addis Ababa

By

Mitku Sege Senta

**A Thesis is submitted to Department of Accounting and Finance of St. Mary's University School of Business for the Partial Fulfillments of the Requirements of Master of Business Administration in Accounting and Finance**

**Advisor:-** Simon Abay (PHD)

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## DECLARATION

I the undersigned, declare that this thesis is my original work, prepared under the guidance of Simon Abay (PHD). All source of materials used for thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or full to any higher learning institution for the purpose of earning any degree.

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| Name | Signature |

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# List of Acronyms and Abbreviations

| | |
|---|---|
| REP | Revenue Enhancement Plan |
| GDP | Growth Domestic Product |
| PCSE | Panel Corrected Standard |
| A.A | Addis Ababa |
| CA | City Administration |
| HO | Null Hypothesis |
| HA | Alternative Hypothesis |
| GIZ | Deutsche Gesellschaf für Internatonale Zusammenarbeit |
| UN | United Nation |
| UNH | United Nation Habitat |
| OECD | Organization for Economic Co-operation and Development |
| IMF | International Monetary Fund |
| LG | Local Government |
| VAT | Value Added Tax |
| FOB | Free on Board |
| IMP | Import |
| EXP | Export |
| BOFED | Bureau of Finance and Economic Development |
| IT | Information Technology |

## *Abstract*

*In the absence of intergovernmental transfer and limited financial resources, each sub cities of A.A are expected to mobilize adequate own source revenue collection to supply the necessary investments in public infrastructure, services and improve living standards of the citizens. Research conducted to answer the three basic research questions: What are the sources and performance of key own source revenue of sub cities in Addis Ababa? What are factors affecting own source revenue mobilization of sub cities in Addis Ababa? And what are the prospects for improved own source revenue mobilization strategies? In this study, the researcher has selected independent variables (land area, population, tax base/number of tax payers, inflation, GDP, import and export) that can affect the own source revenue. Census study was used study to select all sub cities in A.A with twelve years available data which were collected from secondary data. Data analysis was made by using descriptive statistics analysis method, the result showed that bole sub city collected larger amount of revenue and it has the second largest land area. The regression result showed that only four independent variables which are LA, numbers of tax payers, inflation and GDP are found to be predictors of the dependent variable. Government investment income is one of the top ten key sources of revenue for the city of A.A. Hence, the government of A.A should implement land property tax in the tax base can increases the revenue collection.*

# CHAPTER ONE

## 1. Introduction

### 1.1. Background of the Study

Strengthening revenue mobilization in developing countries has long been a central concern of the Fund, and its advice has been highly influential. In its program, surveillance and technical assistance (TA) work, the Fund has for many years supported developing countries‘ efforts to build more effective and fairer tax systems (Houghton, 2005).Interest in enhancing revenue mobilization in developing countries is increasing. Most developing countries are emerging from the crisis with their fiscal prospects broadly intact (IMF, 2010), but with many still facing a fundamental need to raise more revenue from their own tax bases (Westman, 2004).

In many developing cities, municipal revenues are insufficient to finance the necessary investments in public infrastructure, services and well-targeted policies that can deliver long term growth and rising living standards for a city. As a result of this, Ethiopia has been designed REP (Revenue Enhancement Plan), guide to provide City Administrations (CA) with a hands-on guide to develop a municipal or city Revenue Enhancement Plan (REP). Besides the planning, it also aims to serve as a useful instrument for analyzing the cause of low revenues and outlining strategies for increasing revenues. It provides practical advice on planning, maximizing, carrying out and evaluating city administrations’ short and long-term revenue performance. Although this guide focuses on municipal revenue items, the approaches and instruments for increasing revenue presented are equally applicable to enhancing state revenue (REP, 2009).

Own source revenues mobilized in most urban local authorities in Africa are generally not sufficient to develop and supply adequate services for the fast-growing urban population. Hence, local own revenues are a necessary but not a sufficient condition for fiscal decentralization (LGPRA, 2005/2006). The amount of funding available to local governments is an important determinant of the quantity and quality of services that they will be able to provide. Where locally raised revenues are limited, urban government expenditures suffer (Bahl and Linn et al., 1992). Over the last twenty years, a number of countries have increased the powers and

responsibilities of local governments but they have not matched those responsibilities with revenues at the local level: "few countries permit local governments to levy taxes capable of yielding sufficient revenue to meet expanding local needs" (Bird et al., 2000: 114).

If a country wants large expenditures to be carried out responsibly by sub-national governments, then those governments need access to some significant revenues for which they are politically responsible (Bird, 2010). The viability, strength and autonomy of local governments depends on the quantum of own resources they can generate and the size of untied grants they obtain (Oommen, 2009). In many countries, intergovernmental transfers are not reliable. As a result of this, cities in most countries will try to enhance their sources of revenue. In most countries, municipal own-source revenues are generally based on property taxes and user fees and not the more lucrative taxes such as income, sales, and fuel taxes (UNH-Habitat, 2009).

The Ethiopian municipal source of revenue includes: Tax revenues from municipal services, municipal rent revenues and investment incomes, municipal service charges, revenues of sales of goods and services and other capital receipts. Because of cities in Ethiopia struggling to keep up basic infrastructure facilities with improved own source revenues as a result of rapid increase urbanization economic activities in the cities; the Ethiopian government has developed REP. Therefore, it is necessary to study the factors that affect own source revenue mobilization of sub cities in Addis Ababa.

## 1.2. Statement of the Problem

In the absence of intergovernmental transfer and limited financial resources, it is unable to establish the necessary infrastructure in the city of Addis Ababa. Therefore, each sub cities are expected to mobilize adequate own source revenue collection to fulfill the interest of the citizens. However, there are factors affecting own source revenue collection. For instance, the case study of Newala District Council in Mtwara Region-Tanzania, the findings revealed that general factors that affect own source revenue collection in Local Government Authority are corruption, tax evasion, intermediaries, concealment of own source revenue and poor revenue supervision. Other factors that affect own source revenues are poverty and unemployment, poor infrastructure and too much dependency on central government transfers. Another the study by Stephen

Kahdondi (2013) sought to assess the determinants of own source revenue mobilization by counties in Kenya, 2014/2015 financial year.

The study looked at the effects of urbanization, intergovernmental grants, poverty levels and land area and how they contributed to own revenue generation by the 47 counties in Kenya in 2014/15 financial year. And this study revealed that except land all the independent variables significantly affect own source revenue mobilization. Further the study by Stephen (2013) recommended that since four independent were considered as determinants, another determinants be considered as well as different time period. Moreover, as per the researcher knowledge, there is no significant study conducted concerning determinants of own source revenue collection in Ethiopia even if the government tried to prepare revenue enhancement plan guide for all cities in Ethiopia in collaboration with GIZ(Deutsche Gesellschaftfür International Zusammenarbeit).

Moreover, with more than 80% of GDP generated in cities, urbanization can contribute to sustainable growth if managed well by increasing productivity, allowing innovation and new ideas to emerge. And the researcher believe that increasing own source revenue can contribute for sustainable growth (World Bank, Urban Development). As a result of this, we need to study the determinants of owns source revenue collection of a city. Hence, based on the above research gaps, the researcher is motivated to conduct a research on determinants of own source revenue collection in sub cities in Addis Ababa so as to answer the following research questions:

1. What are the sources and performance of key own source revenue of sub cities in Addis Ababa?

2. What are factors affecting own source revenue mobilization of sub cities in Addis Ababa?

3. What are the prospects for improved own source revenue mobilization strategies?

## 1.3. Objectives of the Study

### 1.3.1. General Objective of the Study

Several regions have turned their attention on 2000 onward to stimulating municipal administrations that would assume major responsibilities for raising own-source revenues to

provide and maintain basic services for the objective of municipal to mobilize additional own-source revenue and capacity to address the needs of cities and towns.

As a result of this, Federal Democratic Republic of Ethiopia-Ministry of Urban Development, Housing and Construction as well as cities in Ethiopia including Addis Ababa have developed strategies to enhance own municipal revenues collection. However, unable to clearly identify the factors that affect own source collection. Therefore, the general objective is to study the determinants of own source revenue collection in sub cities in Addis Ababa.

### 1.3.2. Specific Objectives of the Study

The specific objectives of the study are:

I. To determine the sources and performance of key own source revenue of sub cities in Addis Ababa.

II. To examine the impact of population on own source revenue mobilization of sub cities in Addis Ababa

III. To study the impact of Number of tax payers in each sub cities on own source revenue mobilization in Addis Ababa

IV. To study the impact of land area on own source revenue mobilization of sub cities in Addis Ababa

V. To study the impact of Import and export on own source revenue mobilization of sub cities in Addis Ababa

VI. To study the impact of inflation on own source revenue mobilization of sub cities in Addis Ababa

VII. To study the impact of standard of living on own source revenue mobilization of sub cities in Addis Ababa

## 1.4. Limitation of the study

Because of capacity of the researcher and unavailability of primary data, the study is limited to use independent variables which the data can be available from the secondary data and ignore potential independent variable such tax evasion, corruption, availability of potential human power… etc., which can be collected from primary and secondary data, because primary data may not be reliable for this study and some secondary data's are difficult to get. In addition, cost to collect the primary data is difficult for the researcher.

## 1.5. Scope of the study

Because of unavailability of long year secondary data for other main cities of Ethiopia and conceptual constrain, the study include only all sub-cities of Addis Ababa as it is difficult to include other cities of Ethiopia at the researcher's level.

## 1.6. Significance of the Study

Since Addis Ababa city government does not receiver transfer from the federal government, therefore, increasing own source revenue is important to expand budgetary and service delivery as well as infrastructural development of the city. Hence, it is significant to study factors affecting own source of revenue mobilization of sub cities in Addis Ababa so as to establish strategy to maintain sustainable source of revenue for helping sustainable development of the city of Addis Ababa. Further, it may alert other researcher to study the same for other cities as well as at country level.

## 1.7. Statement of Hypothesis

The research based on the following null hypothesis. $H_o$ to mean null hypothesis and $H_a$ to means alternative hypothesis.

1. $H_o$: Number of tax payers doesn't affect own source revenue mobilization

   $H_a$: Number of tax payers affects sown source revenue mobilization

2. $H_o$: land area doesn't affect own source revenue mobilization

$H_a$: land area affects own source revenue mobilization

3. $H_o$: Import and export doesn't affect own source revenue mobilization

   $H_a$: Import and export affects own source revenue mobilization

4. $H_o$: Inflation doesn't affect own source revenue mobilization

   $H_a$: Inflation affects own source revenue mobilization

**5.** $H_o$: Standard of living (GDP doesn't affect own source revenue mobilization

   $H_a$: Standard of living (GDP) affects own source revenue mobilization

## 1.8. Organization of the Study

This paper was organized in five chapters. Chapter one discussed about introduction, statement of the problem, objectives of the study, limitation of the study, scope of the study, significance of the study and organization of the study. Chapter two was discussed about review of related literature, some empirical studies and conceptual framework, chapter three was discuss methodology of the research which includes research design, research approach, sampling techniques, chapter four dealt with data presentation and analysis techniques, and finally Summary, conclusion and recommendation for the research were discussed in chapter five.

# CHAPTER TWO

## 2. Review of Related Literatures

### 2.1. Source Revenue mobilization Legal Framework

According to Addis Ababa City Government Executive and Municipal Service organs Reestablishment Proclamation No. 35/2012, revenue authority is one of executive organs of the Government which is accountable to the Mayor and re-established having a legal personality:

The City Government may delegate the powers and functions of the Authority fully or partially to the appropriate Federal Government body; and the Authority, being accountable to the Mayor, shall have the following powers and functions:-

- Set up systems for efficient and effective determination of revenue and keeping of revenue books of account, follow up implementation of same.
- undertake studies and recommend new sources of revenue and follow up the implementation of same upon approval;
- implement mechanisms for identification and registration of tax payers; assess the revenues collected in the City; notify to the tax payers the assessment of taxes in writing and collect same;
- ensure the duly deposition of revenues collected by the City, Sub-Cities and Wereda's in the treasury of the City Government administered by the Finance and Economic Development Bureau;
- propagate with a view to creating awareness among the tax payers in order that they may fulfill their obligation; ensure that they have fulfilled their obligation of paying taxes in accordance with the law;
- Where a need arises thereof, submit to the Cabinet for cancellation of debt of income tax.

### 2.2. Strategy for enhancing Own Source Revenue

#### 2.2.1. Revenue enhancement plan guide for Ethiopian city Administration working Manual

In the manual which was supported by GIZ (Deutsche Gesellschaf fürInternatonale Zusammenarbeit), experts identified that insufficient revenue generation is most commonly the result of combination of the following factors.

1. **Tax Base:** some informal businesses are not included or artificially small such as property tax not included in the tax base.
2. **Tax Coverage:** determined taxes and fees are partly out of date, with no relation to the current income and cost. However, many cities administrations and municipalities still collect their revenue on the basis of rate and tariffs which was established in 1971 E.C. since 2004, some municipalities has started to revise certain tax rates and tariff but rarely reviewed and rationalized.
3. **Tax Assessment:** it is mentioned as the most problematic area due to most business in lower income group do not maintain book of account.
4. **Collection Efficiency:** collection rate is still very minimal compared to the tax base. As a result increased default rate and cumulative arrears. The problem arises mostly in case of land lease, trade and service taxes.
5. **Payment procedure:** the tax payment system is very slow and inconvenient for the tax payers.
6. **Enforcement Procedure:** Almost nonexistence of enforcement mechanism and the procedural legal basis to support the enforcement mechanism is deficient. This is therefore further encouragement for defaults and de motivates to settle arrears.
7. **Human resource**: incompetent staff in revenue authority and poor incentives means for the above mentioned problems.

## 2.3. Own Sources of Revenue Category

### 2.3.1. Tax Revenue

From various sources found tax revenues include both direct taxes and indirect ones. Direct taxes include taxes such as corporate profit tax or personal income tax, property tax, social, and turn over tax and indirect taxes include taxes such as excise, VAT, customs duties, etc.

### 2.3.2. Non Tax Revenue

Non-tax own-source revenues are often raised from charges, fees, fines, and other special assessments related to a variety of government services and assets. For example, rent collected from government-owned property, charges for goods and services, business license fees, and marriage license fees, to name only a few.

The various types of non-tax own-source revenues have their respective pros and cons. However, they can form an important part of the municipal revenue base and enhance the provision and quality of public goods and services. They can also provide an important diversification of the revenue base, contributing to improved municipal fiscal health and creating a foundation for fiscal autonomy (Lourdes German and Elizabeth Glass, 2017).

### 2.3.3. Municipal Revenue

The sources of revenue for municipal governments vary across countries but generally include taxes, user fees, and intergovernmental transfers. Other revenues may include investment income, property sales, and licenses and permits, for example. In terms of taxes, the property tax is levied by local governments in many countries. Other local taxes can include income taxes, general sales taxes, and selective sales taxes (for example, taxes on fuel, liquor, tobacco, hotel occupancy, vehicle registration), and land transfer taxes (or stamp duties). To meet capital expenditure requirements, some municipalities charge developers for growth-related capital costs. In some countries, particularly in South America, a land value capture tax is sometimes levied to pay for infrastructure (UN Habitat, 2009).

## 2.4. Factors Affecting Own Source Revenue

### 2.4.1. Population

This paper tried to saw how population of the city of Addis Ababa regardless of ageing and gender affect own source revenue by each sub cities. A study by Boukbech, Rachid and Bousselhamia, Ahmed and Ezzahid, Elhadj (2018) showed that the population growth has a negative and insignificant effect on tax revenue for some selected lower income countries.

### 2.4.2. Land Area

Recent years in Ethiopian cities especially in Addis Ababa there is increase in number of immovable properties because of commercial buildings and residential houses are hugely constructed in each sub cites. The ten sub cities have different land area and the researcher tried to study how the size of land area affect the revenue of each sub cities in Addis Ababa because land and property tax are the main source of revenues for many countries. For example, land and property tax accounts 0.4% of GDP and about 2% of total tax revenue in 1990s down slightly from earlier decades, although the equivalent share for the OECD countries remained at a bit

more than 1% of GDP and about 4% of all tax revenues throughout the period (Richard M. Bird and Enid Slack, March 2002).

Largely dependent on their adopted policy objectives, countries differ substantially with regard to their use of the different property tax sources. Some countries place emphasis on providing a stable and substantial source of revenue for sub-national governments through immovable property taxes, while others prioritize general revenue raising (by using mainly capital transfer taxes) (John Norregaard, 2013),

Property tax on immovable properties for some selected EOCD countries in 2011, the available data shown as it is the major source of revenues for New Zealand (95.5%), Poland (100%), United States (96.8%), and Germany (55.60%). While Greece (10%) and Luxemburg (3.8%), shows the lowest source of revenue (Bahl and Martinez-Vasquez (2008)).

### 2.4.3. Tax Base/Number of tax payers/

Number of tax payers varies across each sub cities. It is also varies based on the amount revenue they earn. So the researcher has tried to study how much the number tax payers affect revenue of each sub cities in Addis Ababa.

### 2.4.4. Standard of living

Standard of living (per capital income) shown by GDP per population. Study by Zartashia Chani, 2011,PCSE estimates show that log of per capital GDP has strong impact on tax revenue as one percent change in log of per capita GDP may change tax revenue by 4.27 percent. This finding lends support from the conclusions of the previous studies that ability to collect and pay taxes increases with the level of development (Chelliah, 1971; Gupta 2007).In this research, it is tried to observe by how much standard of living by each sub cities contributed for the revenue collection.

### 2.4.5. Inflation

It is important to note that the incentive of the government to improve the collection of tax revenue could be nonetheless diminished by a significant decrease of inflation rate. Indeed, empirical literature has provided evidence that tax revenue is negatively affected by inflation, the so-called Olivera-Tanzi effect (Tanzi, 1992). Another study by Ali, Amjad and Audi, Marc

(2018) which examines the impact of macroeconomics situation on tax revenue (the dependent variable), inflation has negative and significant relation with tax revenues in the case of Pakistan. The researcher has tried to study how much inflation contributes for the increase or decrease of revenue in the given period of time for each sub cities.

### 2.4.6. Import

Liberalization may generate a gradual or one-off depreciation that under normal circumstances (a price elasticity of net imports below unity) increases the value of imports in local currency and so by itself strengthens revenues from import tariffs and (ad valorem) domestic consumption taxes (IMF, 2015). As a result of this the researcher included import as predicting variable so that to see how much the increase of import contributes for the increase or decrease of revenue in the given period of time for each sub cities.

### 2.4.7. Export

As per Leuhold (1991) and Stotsky and WoldeMariam (1997) analysis the relationship between tax collection and agriculture income, mining income and exports in the case of African countries, the estimates reveal that agricultural income has an inverse relationship with tax collection, but exports and mining have a positive relationship with tax collections. The researcher has tried to study how much the increase or decrease of export contributes for the increase or decrease of revenue in the given period of time for each sub cities.

## 2.5. International Practice of Mobilizing Own Source Revenues for Some Selected Countries

Mobilizing own source revenue varies from country to country and local government to another local government depending on the government political, economic and social structure. As a result, LG's will focus on specific source of finances. Sources of finance can have different degrees of stability and predictability. Financing for Germany's cities is largely derived from tax income tied to business profits, which can fall during times of crisis. For example, since Berlin is liable for high interest payments on past borrowing, it has requested debt relief from the federal Government. In contrast, city budgets in France and Italy rely more on real estate taxes, partly because the revenues are more stable and easier to predict (World Economic and Social Survey, 2013).

China decided to introduce residential property taxation starting in 2011, in part aimed at reining-in speculation and strong price appreciation in the property sector, and in part to address the country's widening wealth gap and provide local governments with a significant revenue source. Pilot projects are conducted in two cities, Shanghai and Chongqing, to be followed in due course by other cities (International Monetary Fund).

Property taxes are the single most important source of own-source revenue for local governments, accounting in 2006 for 45.2 percent of own-source revenue and 71.7 percent of tax revenue. But the importance of the property tax has declined; in 1970 property taxes were 55.3 percent of own-source revenue and 84.5 percent of taxes. However, total taxes as a share of local own source revenue were virtually unchanged from 1970, suggesting that nontax revenue has not increased in relative importance (Municipal Revenues and Land Policy, Lincoln Institute of Land Policy-Gregory K. Ingram and Yu-Hung Hong, 2010).

Property tax reform can offer a source of revenue, perhaps modest in transition countries, and a source of autonomy and accountability across the region. Rationalizing land taxation in Vietnam and moving toward a modern property tax with some local discretion over rates and introducing modest property taxes in Cambodia would be first steps in those countries. Devolving authority over rates in China, Indonesia, the Philippines, and Thailand is also a reform option. In Thailand, sub national governments levy user charges on garbage collection, public utilities, mass transportation, and medical and childcare. The Philippines has more than 33 different types of user fees and charges, ranging from animal and civil registration to garbage collection fees. Total collections from each major source are relatively small, reflecting the dispersion of revenue sources (Robert R. Taliercio, )

Recent IMF estimates of value added tax (VAT) compliance gaps in selected sub Saharan African countries show that these are quite large, in several cases over 40 percent of potential revenue (Uganda: Revenue Administration Gap Analysis Program—The Value Added Tax Gap, IMF, (2014), atwww.finance.go.ug.)

## 2.6. Empirical Literature review

Study by Dietrich Bonaventure (2015) using quantitative research factors affecting revenue collection in local governments authoritative; the case of four out of four recognized local governments are low revenue collection rates, ineffective implementation of bylaws, effect of

weather condition, and revenue outsourcing and the result showed that effect of weather condition and ineffective implementation of bylaws affect revenue collection positively. Whereas low collection rate and revenue outsourcing affect the revenue collection negatively in the four local government authoritative. Similar study done by Ndyamuhaki (2013) carried out the study on "Factors affecting revenue collections in local government, case study: Isingiro district local government" Makerere University, Uganda. This study identified crucial factors that were; administrative inefficiencies, lack of general sensitization, political interference and corruption.

Daniel Regassa(2017) studied the factors influencing tax revenue in Ethiopia by using descriptive and inferential research methods from the data collected on targeted dependent variable(Tax Revenue) and independent variables and the independent variables (GDP per capita income, industry value added share of GDP, agricultural value added share of GDP, trade openness, inflation rate, exchange rate and urbanization) that cover from 1981 to 2016. The result of regression analysis found that real GDP per capita income, inflation (CPI) and exchange rate) have significant effect on tax revenue percentage of GDP in the long run. Whereas, industrial value-added share of GDP, agricultural value-added share of GDP, trade openness percentage of GDP and urbanization rate are not significant determinants of tax revenue in the long run.

PatricN.Ngicuru, MonicahMuiru, M IrueRiungu and Adam Shisia (2017), empirical review on factors affecting revenue collection in Nairobi Country, Kenya, and the purpose of this study was to establish the factors affecting revenue collection in Nairobi City County Government. The specific objectives of the study were to: establish effect of revenue diversification on revenue collection, establish the effects of administration on revenue collection, assess the effects of tax structure on revenue collection and find out how different forms of revenues affects revenue collection. By using descriptive research design, the study found that revenue diversification strategies increase the amount of revenue collected, with a good tax administration practices like competent staff and adoption of latest technology, the amount of revenue collected will increase.

The study recommends the use of latest technology, and competent staff, and more innovations for diversified sources of revenues in Nairobi City County. The researcher recommends for another study on factors affecting revenue collection using a different methodology to find out

the other factors affecting revenue collection since that factors involved in the study could only explain 77.2% on the factors affecting revenue collection in Nairobi City County. Given the inevitability of human error, the study may be repeated to revise any errors.

## 2.7. Conceptual Framework

Unlike other researchers, the researcher will try to study different factors that affect own source revenue collection and also using different methodology. Factors included in the study are land area, population, tax base, inflation, GDP, import and export which can affect revenue collection or the total revenue that are collected by each ten sub cities.

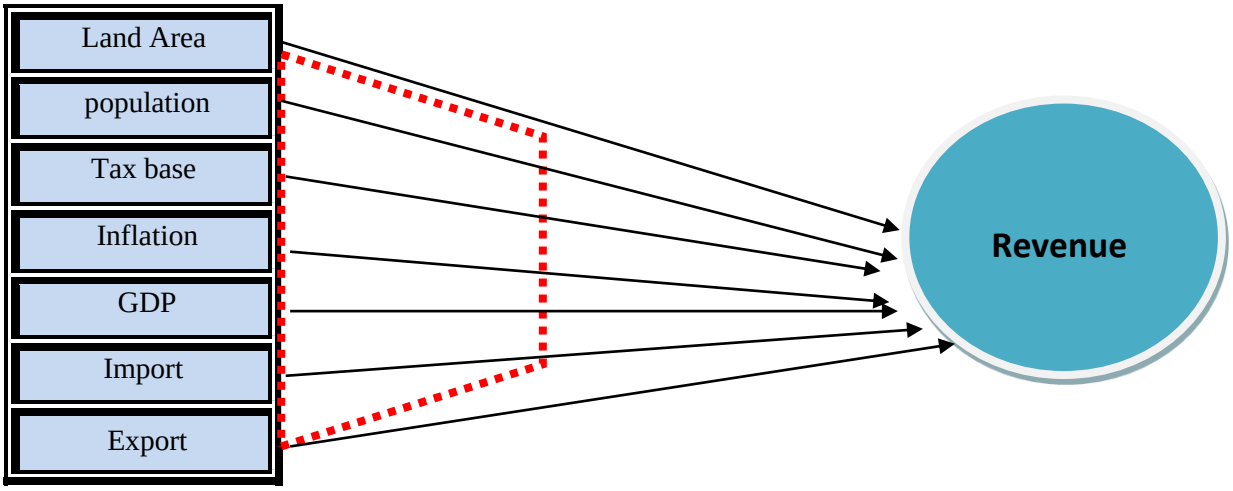



**Figure 2-1 Conceptual Framework (own Interpretation)**

# CHAPTER THREE

## 3. Methodology of the research

### 3.1. Research Design

The research design tries to make sure that the results got will help us to answer the questions in an effective way. Identifying the type of proof required to find the answer to the research question is important. Research is required to answer research question and the methodology of finding the answer is very important Research design is all about handling a problem logically (Yin, 1989).

From the perspective of objective research can be descriptive, co relational, explanatory or exploratory. As the researcher has used explanatory variables (independent variables) such as land area, population, tax base (number of tax payers), inflation, GDP, import and export to measure own source revenue thereby he has used explanatory research. Explanatory research attempts to clarify why and how there is a relationship between two aspects of a situation or phenomenon (Ranjit Kumar, 2011).

### 3.2. Research Approach

This study was used quantitative method. Because, in quantitative research measurement and classification requirements of the information that is gathered demand that study designs are more structured, rigid, fixed and predetermined in their use to ensure accuracy in measurement and classification (Ranjit Kumar, 2011).

In the research, the researcher was relied on numerical data. The researcher tried to isolate dependent variable (Own source revenue) and independent variables (land area, population, tax base, inflation, GDP, import and export) and causally relates them to determine the magnitude and frequency of relationships between them. In addition, he has tried to determine which variables to investigate and chooses instruments, which would yield highly reliable and valid scores.

## 3.3. Categories of variables

The dependent and independent variables that can be considered in this study were selected based on available similar studies and theories on the subject.

### 3.3.1. Dependent Variable

The dependent variable was own source revenue by sub city' in Addis Ababa which includes tax revenues, non-tax revenues and municipal revenues.

## 3.4. Independent Variables

The independent variable is the factor that is manipulated or controlled by the researcher (Margzyk et al., 2005). In this study, the researcher has selected independent variables (land area, population, tax base, inflation, GDP, import and export) presented in table below that can affect the own source revenue.

| S.N | Independent variable | Measurement | Source |
|---|---|---|---|
| 1 | Land Area | Land area of each sub cities are measured by Kilo meter | Self-Developed |
| 2 | population | Population of sub cities | Self-Developed |
| 3 | Tax base | Number of:<br>• Schedule A<br>• Schedule B, and<br>• Schedule C tax payers | Self-Developed |
| 4 | Inflation | Consumer price index | World Bank |
| 5 | Per capital GDP(mean standard of leaving) | The ratio of GDP to the total population of the sub city | Wikipedia |
| 6 | Import | FOB value in ETB | Self-Developed |
| 7 | Export | FOB value in ETB | Self-Developed |

## 3.5. Sampling Techniques

All the items under consideration in any field of inquiry constitute a 'universe' or 'population'. A complete enumeration of all the items in the 'population' is known as a census

inquiry and this lead no element of chance is left and highest accuracy is obtained (Kothari, 2007). In the study, it was possible to incorporate all sub cities of Addis Ababa; therefore, the researcher was used census study to select all sub cities in Addis Ababa.

All the ten sub cities of Addis Ababa were included in the study. The available date was found from BOFED (Bureau of Finance and Economic Development) are all years available revenue data and as a result of this all the twelve year data were used in the study. Therefore, the study was used 140 (14x10) samples from the population of the ten targeted population.

## 3.6. Data Collection Methods

It is necessary in some historical research studies to begin with secondary data and to work well when primary source of data is not available (Kumar, 2006). The researcher was used secondary data collection methods. The secondary data were collected from public records and statistics, historical documents, and other sources of published information.

## 3.7. Data analysis techniques

Before the statistical analysis of the quantitative survey results, the screenings of the data have been conducted on the univariate and multivariate levels (Kline, 1998; Tabachnick & Fidell, 2000). Data screening was to help identify potential multi-co linearity in the data, because multivariate tests are sensitive to extremely high correlations among predictor variables. The researcher was uses quantitative data analysis techniques such as descriptive and explanatory.

The data's have been analyzed by using simple descriptive statistical tools such as mean and percentage to identify the major source of revenue with the help of SPSS software as well as excel. Frequency distribution usually is the first strategy used to organize data (Burns & Grove 1993:473). Graphic presentations can also be used to facilitate understanding of data. They are especially useful in comparison analysis (Ferguson in De Vos 1998:209). Further, data's have been analyzed by using regression analysis to assess the major determinants of own source revenue as presented below.

TR=f (land area, population, tax base, inflation, GDP, import, export)

From the above function the following regression analysis model can be developed as follows:

$TR=\varepsilon+\beta_1 LA+ \beta_2 P+ \beta_3 TB+ \beta_4 I+ \beta_5 GDP+ \beta_6 IMP+ \beta_7 EXP$

Where,

ε= Error terms

TR=Log of Total revenue of each sub city at a time t

LA =Log of Land Area of each sub city at a time t

P= Log of Population of each sub city at a time t

TB=Log of Tax Base of each sub city at a time t

I= Log of Inflation rate at a time t

GDP=Log of GDP at a time t

IMP=Log of Quantity of Import at time t

EXP=Log of Quantity of Export at time t

$\beta_1$, $\beta_2$, $\beta_3$, β4, $\beta_5$, $\beta_6$, and $\beta_7$ are coefficients of the independent variables that determine either positive or negative relationship exists between dependent and the independent variables.

# CHAPTER FOUR

# 4. Data Presentation and Analysis

## 4.1. Introduction

This chapter presents the data available, result, and analysis of the study. The study scrutinizes factors affecting own source revenue mobilization and evaluate the key performance of own source of revenue.

## 4.2. Data Presentation

### 4.2.1. Data Presentation by using Mean/Average and Percentage

Average revenue collection in the year 1998 E.C to 2011 E.C from ten sub-cities are presented below in the graph 4.1. Bole s-city constitutes the highest revenue collection among the ten sub-cities. While Gulele sub-city collected the minimum amount of revenue.

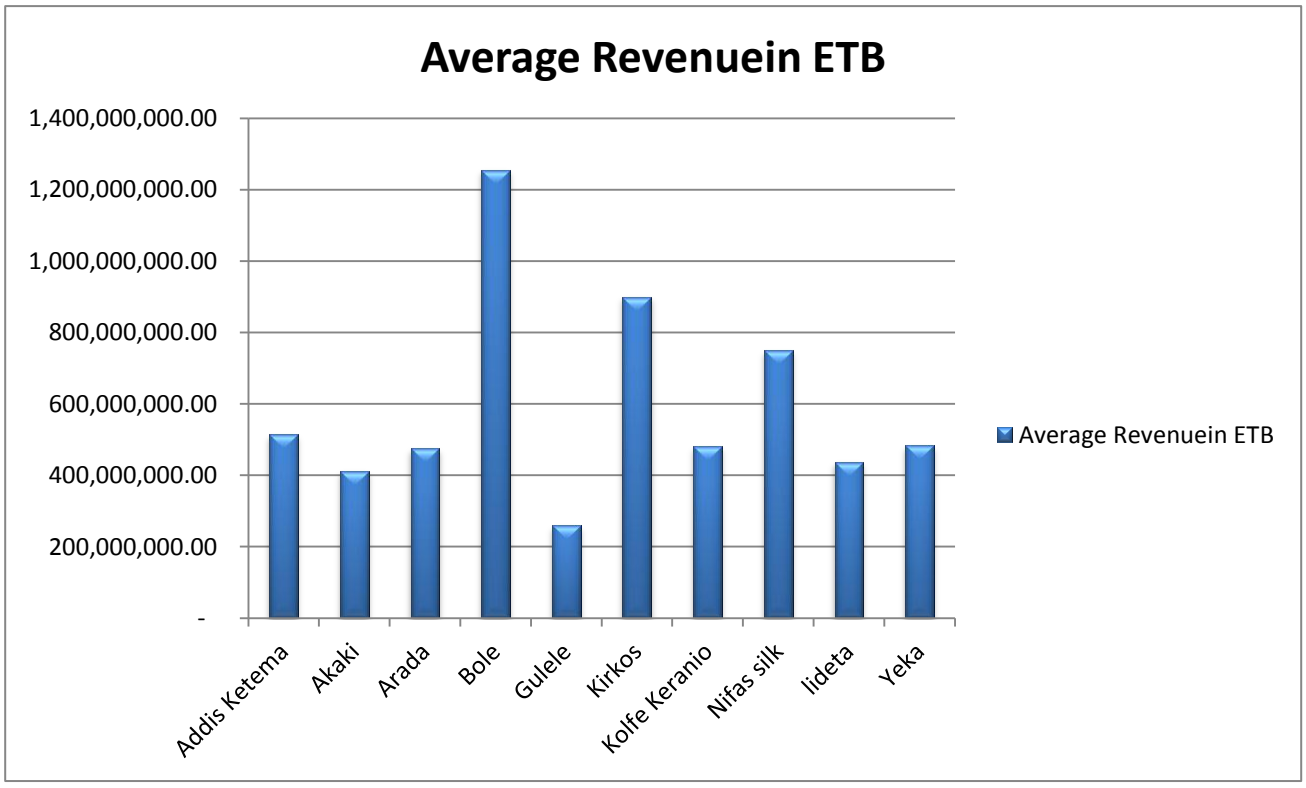



**Figure 4-1 Average Revenue Collections between 1998 E.C to 2011 E.C**

One of the factors affecting revenue collection in this research is population. In the same period of time kolfe keranio Sub-city recorded the highest number of populations however revenue collection per population is only better than Gulele Sub-city as shown in the graph 4.2 below.

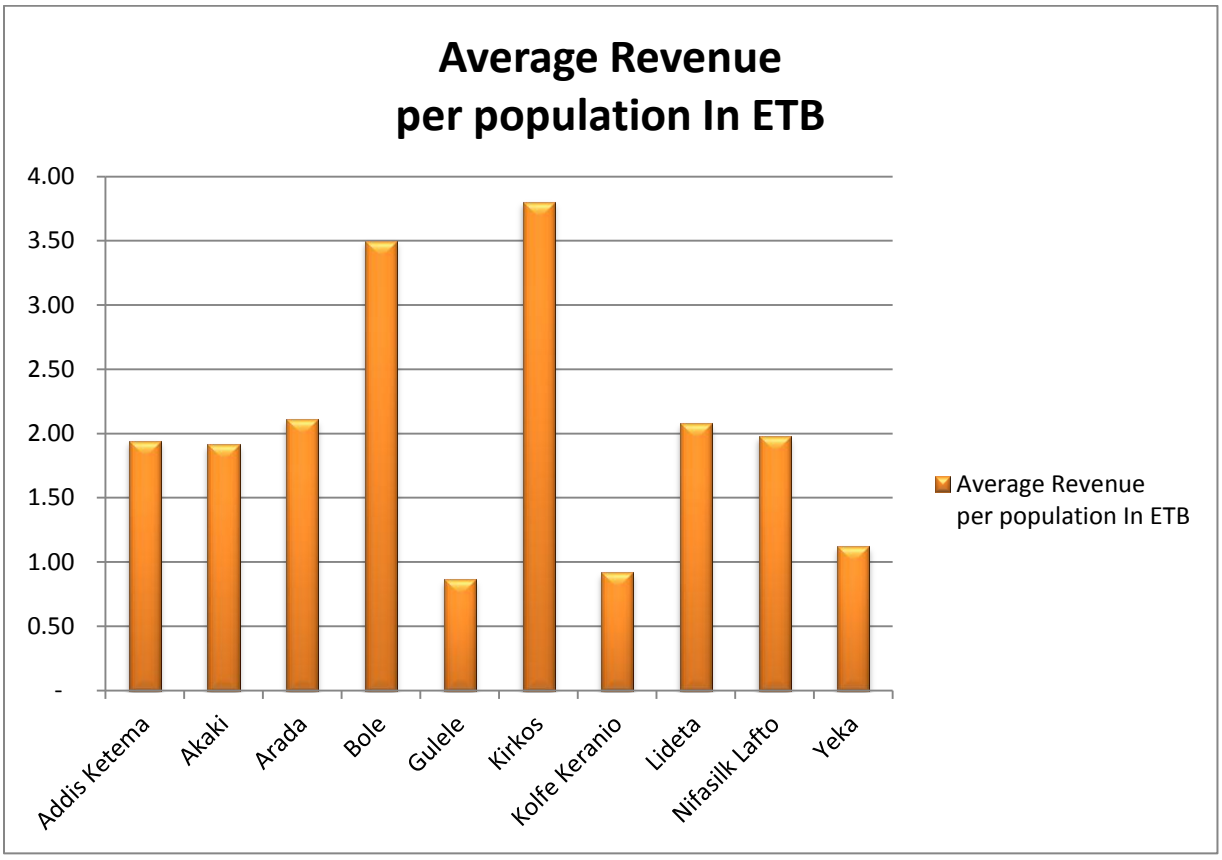



**Figure 4-2Average Revenue Performance per Population from 1998 E.C to 2011 E.C**

Another factor affecting revenue collection would be number of tax payers in each sub city. Again, in the same period the highest average number of Tax payers is found to be Addis Ketema Sub-city. However, it is lowest revenue per number of tax payers as shown in the figure 4.3 below and the highest average revenue per average number of tax payers recorded by Kirkos Sub-city.

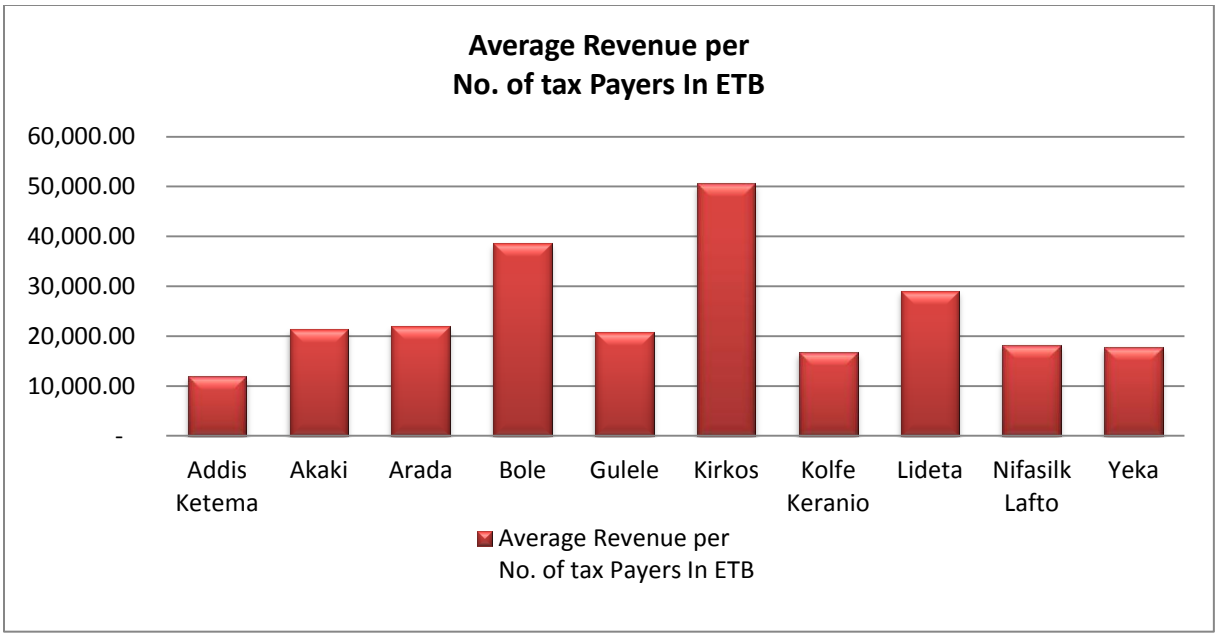



**Figure 4-3Average Revenue Performance per Number of Tax Payers from 1998 E.C to 2011 E.C**

The least but not the last factor affection revenue is going to be land area. AkakiKality has the biggest land area in the city of Addis which has an area of 124,038,187 square km and Bole the second largest sub-city which has an area of 118,483,351 square km. However, Akaki Sub-city constitutes the smallest Average revenue collection per its land area as shown in the figure4.4.below

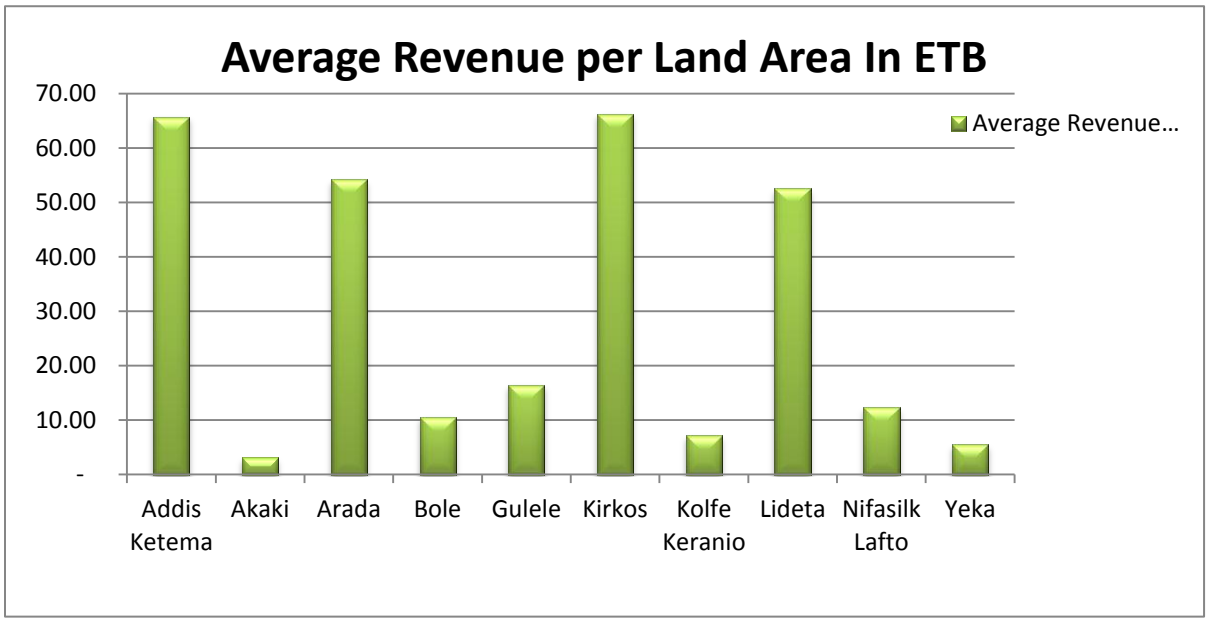



**Figure 4-4Average Revenue per Land Area from 1998 E.C to 2011 E.C**

## Comparison of Land Area Number of Tax Payers and Revenue

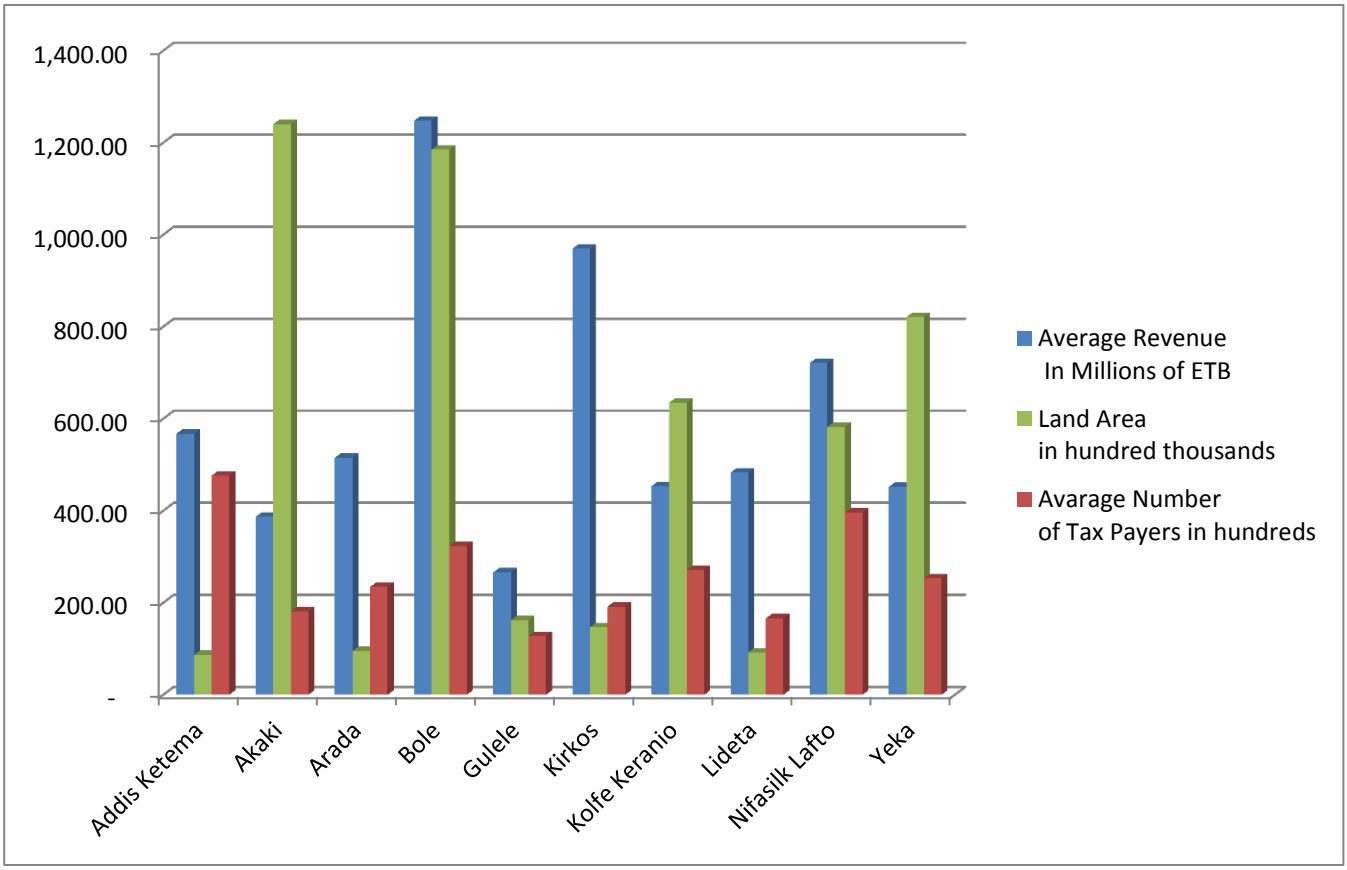



**Figure 4-5Comparison of Average Land Area Number of Tax Payers and Revenue from 1998 E.C to 2011 E.C**

From Figure 4.5 above we can observe that Bole Sub-city has largest land area next to Akaki Kality Sub-city and collected the highest average revenue among the ten sub-cities in twelve years. On the other hand, Akaki Sub-city average revenue collection performance is 9$^{th}$ from the ten sub-cites in the same years even if it has the largest land area. Addis Ketema Sub-city has large number of tax payers but ranked fourth in revenue collection among the ten Sub-cities in twelve years. Bole Sub-city ranked third in average number of tax payers but highest in revenue collections in twelve years. While Gulele Sub-city has minimum number of tax payers among the ten sub cities as well as small amount of revenue collection in twelve years period. Similarly if we observe look the others Sub-cities, those which have large number of tax payers collected large amount of revenue and those which have small number of tax payers collected small amount of revenue in the twelve years period.

As shown in the table 4.1 bellow, the minimum inflation rate is 7.26% and 7.40% in 2008 E.C and 2006 E.C. In 2005 E.C inflation decrease by 66.51% while revenue increase by 18.15 %. But in 2009 E.C when inflation increased by 35.67% the revenue collection increased by 7.6%. Similarly revenue increase by 15% in 2004 E.C while GDP decrease by 11.60 %. Generally whether increase or decrease of inflation and GDP between the periods of 1998 E.C to 2011 E.C, the revenue collection increase all the time except in 2011 E.C.

| *Year in E.C* | *Inflation in %* | *GDP in %* | *Revenue* |
|---|---|---|---|
| **1998** | 12.30 | 13.57 | 1,499,677,228.52 |
| **1999** | 17.24 | 11.82 | 1,501,339,261.86 |
| **2000** | 44.36 | 11.46 | 2,168,346,555.55 |
| **2011** | 8.48 | 10.79 | 3,596,279,886.96 |
| **2002** | 8.15 | 8.80 | 4,146,403,129.18 |
| **2003** | 33.25 | 12.55 | 5,558,258,991.61 |
| **2004** | 24.12 | 11.18 | 6,379,722,410.50 |
| **2005** | 8.08 | 8.65 | 7,537,846,980.59 |
| **2006** | 7.40 | 10.58 | 8,595,792,652.49 |
| **2007** | 10.11 | 10.26 | 9,441,480,086.34 |
| **2008** | 7.26 | 10.39 | 10,745,871,718.18 |
| **2009** | 9.85 | 9.43 | 11,570,888,559.13 |
| **2010** | 10.00 | 9.50 | 4,986,423,201.06 |
| **2011** | 11.00 | 6.81 | 1,499,677,228.52 |

Finally as we can observe from the table 4.2 below, still the revenue collection increase due to the increase of import and export from the period of 1998 E.C to 2011E.C.

| *Revenue in ETB* | *Import in ETB* | *Export in ETB* |
|---|---|---|
| **1,499,677,228.52** | 39,712,927,512.02 | 8,779,319,003.82 |
| **1,501,339,261.86** | 48,194,643,396.47 | 10,705,859,153.53 |
| **2,168,346,555.55** | 79,456,590,043.47 | 14,946,000,304.95 |
| **3,596,279,886.96** | 90,505,385,243.00 | 17,733,787,812.22 |
| **4,146,403,129.18** | 121,283,435,356.82 | 31,274,560,650.76 |

| | | |
|---|---|---|
| **5,558,258,991.61** | 149,459,349,625.75 | 43,383,663,538.37 |
| **6,379,722,410.50** | 208,299,631,286.44 | 48,974,927,756.85 |
| **7,537,846,980.59** | 205,962,342,379.34 | 48,711,846,985.77 |
| **8,595,792,652.49** | 296,479,065,939.90 | 59,985,950,185.36 |
| **9,441,480,086.34** | 338,386,120,076.42 | 56,050,715,254.11 |
| **10,745,871,718.18** | 369,323,858,225.61 | 57,401,890,890.92 |
| **11,570,888,559.13** | 363,724,357,023.17 | 69,323,132,939.22 |
| **4,986,423,201.06** | 368,233,568,214.51 | 71,432,521,818.65 |

**What are source and performance of key own source revenue of Sub cities in Addis Ababa?**

Here the top ten key own source of revenue for the city of Addis Ababa from twelve year data (from 1999 to 2008 E.C) are presented in the table 4.3 below as follows:

| | Items of Revenue | Amount In ETB |
|---|---|---|
| **1** | Tax on income, profit and capital gain | 45,538,266,816.27 |
| **2** | Value Added Tax on Domestic Manufactured Goods & Services | 17,266,772,220.44 |
| **3** | Non-Tax Revenue | 11,371,201,441.55 |
| **4** | Municipality Revenue | 10,628,653,854.23 |
| **5** | Government Investment Income | 7,557,191,275.02 |
| **6** | Capital Revenues | 5,656,396,648.62 |
| **7** | Sale of Goods and City Services | 5,445,982,159.62 |
| **8** | External Loan | 2,918,810,321.74 |
| **9** | Value Added Tax /VAT/ | 2,823,433,052.08 |
| **10** | Miscellaneous Revenue | 2,169,948,267.63 |

### 4.2.2. Multiple Regression Result by Using SPSS Software

**Assumptions**

The multiple regression analysis has been done by the following four important assumptions

1. **Linearity**-strait line relationship between the dependent and independent variables. The graph of the SPSS analysis result shows straight line relationship between the dependent and the independent variables. Hence this assumption is satisfied

2. **Non-Constant variance**: The normal plot of the residuals shows the points close to a diagonal line; thus, nun constant variance assumption is satisfied.

3. **Multi-co linearity:** It can create inaccurate estimates of the regression coefficients, inflate the standard errors of the regression coefficients, deflate the partial *t*-tests for the regression coefficients, give false non-significant ρ-values, and degrade the predictability of the model. Checking small eigen-values of the correlation matrix of the independent variables, and from our data analysis eigen-values are of zero or close to zero which indicates that an exact linear dependence exists.

4. **Predictability:** It measures by how much the value of dependent variable explained by the value of independent variables. The SPSS analysis result showed that coefficient of multiple determinations is 0.652.Therefore; about 65.20% of the variation in the Revenue is explained by Land Area, Population, and the number of tax payers, Inflation rate, GDP rate, Import, and Export. The regression equation appears to be very useful for making predictions since the value of $R^2$ is close to 1.

### 4.2.3. Important Regression output data from SPSS Software

**A. Variables Entered/Removed[a]**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | Export, Land Area, GDP Rate, Population, Inflation Rate, Number of tax Payers, Import[b] | . | Enter |

a. Dependent variable: Revenue

b. All requested variable entered

**B. Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0.808 | 0.652 | 0.634 | .22163 |

a. Predictors: Constants, Export, Land Area, GDP, Population, Inflation rate, Number of tax payers, Import and export

b. Dependent Variable: Revenue

**C. ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 12.174 | 7 | 1.739 | 35.406 | .000[b] |
| | Residual | 6.484 | 132 | .049 | | |
| | Total | 18.658 | 139 | | | |

a. Predictors: Constants, Export, Land Area, GDP, Population, Inflation rate, Number of tax payers, Import and export

b. Dependent Variable: Revenue

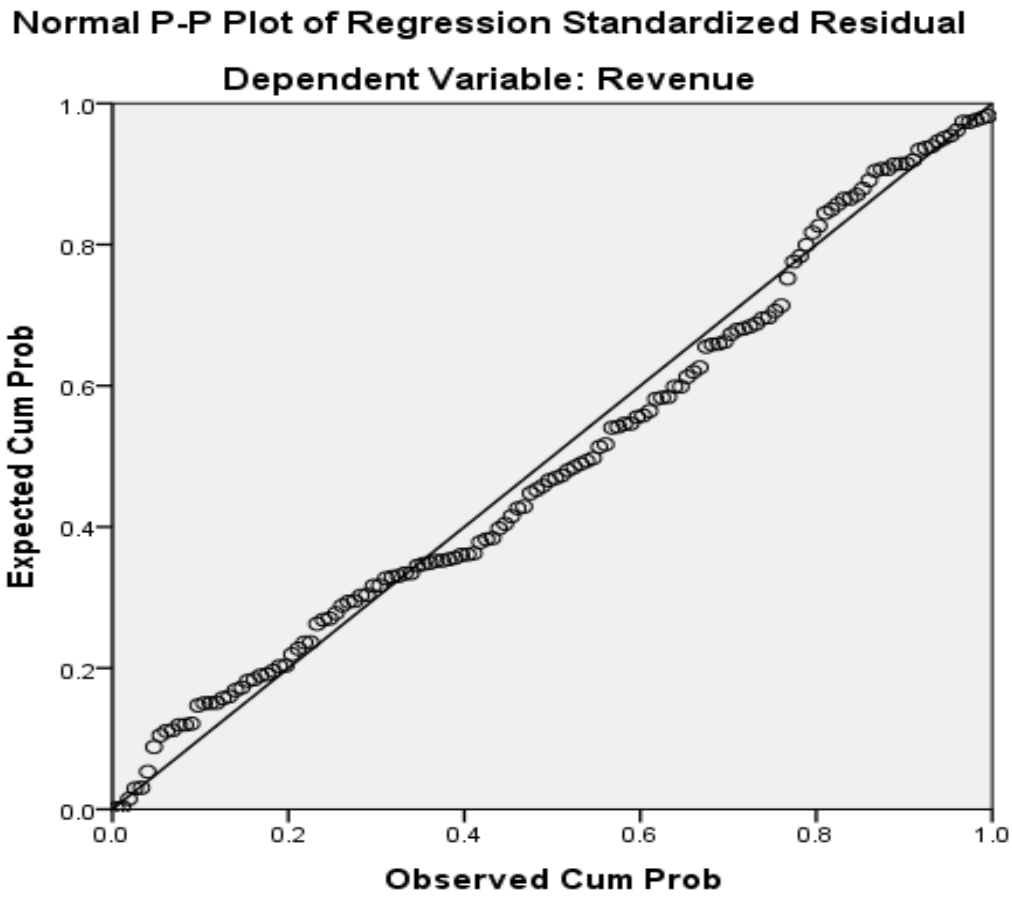
**D.** Coefficients

| Model | Un standardized Coefficients | | Standardized Coefficients | t | Sig. | 85.0% Confidence Interval for B | | Co-linearity Statistics | |
|---|---|---|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | | | Lower Bound | Upper Bound | Tolerance | VIF |
| (Constant) | -.001 | 1.490 | | -.001 | 1.000 | -2.158 | 2.156 | | |
| Land Area | .171 | .045 | .213 | 3.761 | .000 | .105 | .237 | .820 | 1.219 |
| Population | -.205 | .187 | -.066 | -1.097 | .275 | -.477 | .066 | .728 | 1.373 |
| Number of tax Payers | .507 | .099 | .492 | 5.145 | .000 | .364 | .650 | .288 | 3.472 |
| Inflation Rate | -.243 | .092 | -.161 | -2.630 | .010 | -.376 | -.109 | .700 | 1.429 |
| GDP Rate | 1.288 | .348 | .259 | 3.706 | .000 | .785 | 1.792 | .538 | 1.857 |
| Import | .110 | .277 | .099 | .397 | .692 | -.291 | .510 | .042 | 23.745 |
| Export | .380 | .294 | .321 | 1.292 | .198 | -.046 | .806 | .043 | 23.498 |

**E.** Co-linearity Diagnostics

| Model | Dim | Eigen value | Condition Index | Variance Proportions | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (Constant) | Land Area | Population | Number of tax Payers | Inflation Rate | GDP Rate | Import | Export |
| Dimension | 1 | 7.943 | 1.000 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 |
| | 2 | .045 | 13.305 | .00 | .00 | .00 | .00 | .59 | .00 | .00 | .00 |
| | 3 | .007 | 33.508 | .00 | .02 | .00 | .10 | .29 | .18 | .00 | .00 |
| | 4 | .003 | 49.037 | .00 | .66 | .00 | .02 | .03 | .18 | .00 | .00 |
| | 5 | .001 | 77.298 | .02 | .13 | .02 | .50 | .01 | .41 | .00 | .00 |
| | 6 | .000 | 141.574 | .00 | .16 | .53 | .07 | .00 | .06 | .01 | .01 |
| | 7 | .000 | 267.092 | .98 | .02 | .45 | .31 | .00 | .16 | .02 | .02 |
| | 8 | 1.890E-005 | 648.207 | .00 | .00 | .00 | .00 | .07 | .01 | .96 | .96 |

**Charts**



## 4.3. Data Analysis and Interpretation

From the regression analysis result the coefficient of the independent variables are: $\beta_{1=}0.171$, $\beta_{2=}$ -0.205, $\beta_3=0.507$, $\beta_4=$ -0.243, $\beta_5=1.288$, $\beta_6=0.110$, $\beta_7=0.380$ and $\beta_0=-0.001$ as shown in table D above. Hence, the regression equation will be

$TR= \beta_0+\beta_1LA+ \beta_2P+ \beta_3TB+ \beta_4I+ \beta_5GDP+ \beta_6IMP+ \beta_7EXP+\varepsilon$

Implies TR= -0.001+0.171LA-0.205P+0.507+1.288GDP+0.110IMP+0.380EXP

Since the coefficient of the independent variables different from zero, plus the coefficient of multiple determinations is 0.652 in table B above; therefore, about 65.20% of the variation in the Revenue is explained by Land Area, Population, and Number of tax payers, Inflation rate, GDP rate, Import, and Export. The regression equation appears to be very useful for making predictions since the value of *R* 2 is close to 1.

**Are there any multi co-linearity problem?**

Since neither of the predictor variables has a variance inflation factor (VIF) greater than ten (except import and export), there is apparent multi co-linearity problems; in other words, there is variable in the model that is measuring the same relationship/quantity as is measured by another variable or group of variables.

At 85% confidence interval or 15% significant level is the model useful for predicting the response? From ANOVA table C above, since $\rho$-value$<0.001\leq0.15$, we shall to reject the null hypothesis as a result at $\alpha = 0.15$ level of significance, there exists enough evidence to conclude that at least one of the predictors is useful for revenue; therefore the model us useful. The normal plot of the residuals in the above chart shows the points close to a diagonal line; thus, Assumption 1 is satisfied.

**At the 15% significance level, does it appear that any of the predictor variables can be removed from the full model as unnecessary?**

### a. Land Area(LA)

**Step 1: Hypotheses**

$H_0$: $\beta_1 = 0$ (Land Area is not useful for predicting Revenue)

$H_a$: $\beta_1 \neq 0$ (Land Area is useful for predicting Revenue). Assuming that all the independent variables are included in the model

**Step 2: Significance Level**

$\alpha = 0.15$

**Step 3: Rejection Region**

Reject the null hypothesis if $p$-value $\leq 0.15$.

**Step 4: Test Statistic and *p*-value**

(See above) F= 3.761, $p$ -value = 0.00

**Step 5: Conclusion**

Since $p$-value = 0.00 $\leq$ 0.15, we shall reject the null hypothesis.

At $\alpha = 0.15$ level of significance, it doesn't exists enough evidence to conclude that theslope of the land area is zero and, hence, that land area isuseful as a predictor of revenuewhich is contrasting result a study by Stephen (2013) the result he found was land doesn't affect own source revenue mobilization.

### b. Population

**Step 1: Hypotheses**

$H_0$: $\beta_2 = 0$ (Population is not useful for predicting Revenue)

$H_a$: $\beta_2 \neq 0$ (Population is useful for predicting Revenue). Assuming that all the independent variables are included in the model

**Step 2: Significance Level**

$\alpha = 0.15$

**Step 3: Rejection Region**

Reject the null hypothesis if $p$-value $\leq 0.15$.

**Step 4: Test Statistic and *p*-value**

(See above) T = -1.097, $p$ -value = 0.275

**Step 5: Conclusion**

Since $p$-value = 0.275 $\leq$ 0.15 is false, we shall accept the null hypothesis.

At $\alpha = 0.15$ level of significance, it doesn't exists enough evidence to conclude that the slope of the population variable is not zero and, However, like study by Boukbech, Rachid and

Bousselhamia, Ahmed and Ezzahid, Elhadj (2018) which showed that the population growth has a negative and insignificant effect on tax revenue for some selected lower income countries here, population is not useful (other than the other variables) as a predictor of revenue.

### c. TB(tax base-number of tax payers)

**Step 1: Hypotheses**

$H_0$: $\beta_3 = 0$ (tax base is not useful for predicting Revenue)

$H_a$: $\beta_3 \neq 0$ (tax base is useful for predicting Revenue). Assuming that all the independent variables are included in the model

**Step 2: Significance Level**

$\alpha = 0.15$

**Step 3: Rejection Region**

Reject the null hypothesis if *p*-value $\leq 0.15$.

**Step 4: Test Statistic and *p*-value**

(See above) T = 5.145, p-value = 0.000

**Step 5: Conclusion**

Since *p*-value = 0.000 $\leq 0.15$, we shall reject the null hypothesis.

At $\alpha = 0.15$ level of significance, there exists enough evidence to conclude that theslope of the tax base (number of tax payers) is not zero and, hence, that tax base (number of tax payers) is useful (with other variables) as a predictor of revenue.

### d. Inflation

**Step 1: Hypotheses**

$H_0$: $\beta_4 = 0$ (Inflation is not useful for predicting Revenue)

$H_a$: $\beta_4 \neq 0$ (Inflation is useful for predicting Revenue). Assuming that all the independent variables are included in the model

**Step 2: Significance Level**

$\alpha = 0.15$

**Step 3: Rejection Region**

Reject the null hypothesis if *p*-value $\leq 0.15$.

**Step 4: Test Statistic and *p*-value**

(See above) T = -2.630, p-value = 0.10

**Step 5: Conclusion**

Since *p*-value = 0.10 ≤ 0.15 is true, we reject the null hypothesis.

At α = 0.15 level of significance, it doesn't exists enough evidence to conclude that the slope of the inflation variable is not zero but affects the revenue negatively and, hence, inflation is useful (other than the other variables) as a predictor of revenue which is similar a study by Ali, Amjad and Audi, Marc (2018)which examines the impact of macroeconomics situation on tax revenue (the dependent variable), inflation has negative and significant relation with tax revenues in the case of Pakistan.

### **e.** GDP

**Step 1: Hypotheses**

$H_0$: $\beta_5 = 0$ (GDP is not useful for predicting Revenue)

$H_a$: $\beta_5 \neq 0$ (GDP is useful for predicting Revenue). Assuming that all the independent variables are included in the model

**Step 2: Significance Level**

α= 0.15

**Step 3: Rejection Region**

Reject the null hypothesis if *p*-value ≤ 0.15.

**Step 4: Test Statistic and *p*-value**

(See above) T = 3.706, p-value = 0.00

**Step 5: Conclusion**

Since *p*-value = 0.00 ≤ 0.15 is true, we shall reject the null hypothesis.

At α = 0.15 level of significance, it doesn't exists enough evidence to conclude that the slope of the GDP variable is not zero and, hence, GDP is useful (other than the other variables) as a predictor of revenue which is the same result study by Richard M. Bird and Enid Slack (March 2002) the result showed that the increase of GDP leads to the increase of tax revenue.

### **f. Import**

**Step 1: Hypotheses**

$H_0$: $\beta_6 = 0$ (Import is not useful for predicting Revenue)

$H_a$: β6≠ 0 (Import is useful for predicting Revenue). Assuming that all the independent variables are included in the model

**Step 2: Significance Level**

α= 0.15

**Step 3: Rejection Region**

Reject the null hypothesis if *p*-value ≤ 0.15.

**Step 4: Test Statistic and *p*-value**

(See above) T = 0.397, *p* -value = 0.692

**Step 5: Conclusion**

Since *p*-value = 0.692 ≤ 0.15 is false, we shall accept the null hypothesis.

At α = 0.15 level of significance, there exists enough evidence to conclude that the slope of the Import is not zero and, hence, that Import is not useful (other than with other variables) as a predictor of revenue which is the same saying that increases the value of imports in local currency and so by itself strengthens revenues from import tariffs and (ad valorem) domestic consumption taxes (IMF, 2015).

### g. Export

**Step 1: Hypotheses**

$H_0$: $\beta_5$= 0 (Export is not useful for predicting Revenue)

$H_a$:$\beta_5$≠ 0 (Export is useful for predicting Revenue). Assuming that all the independent variables are included in the model

**Step 2: Significance Level**

α= 0.15

**Step 3: Rejection Region**

Reject the null hypothesis if *p*-value ≤ 0.15.

**Step 4: Test Statistic and *p*-value**

(See above) T = 1.292, p-value = 0.198

**Step 5: Conclusion**

Since *p*-value = 0.198 ≤ 0.15 is false, we shall accept the null hypothesis.

At α = 0.15 level of significance, there exists enough evidence to conclude that the slope of the Export variable is not zero and, hence, Export is useful (other than the other variables) as a

predictor of revenue. However, the result is the same with the study by Leuhold (1991) and Stotsky and WoldeMariam (1997) exports and mining have a positive relationship with tax collections. Therefore from the above result we would get that only three variables (land area, tax base and import) are useful predictors of revenue.

# CHAPTER FIVE

## 5. Summary, Conclusion and Recommendation

### 5.1. Summary and Conclusion

The study was aiming to study factors affecting own source revenue collection in the city of Addis Ababa. The ten sub cities; Addis Ketema, AkakiKality, Arada, Bole, Gulele, Kirkos, KolfeKeranio, Lideta, Nifas-silk Lafto and Yeka Sub-cities were included in the study. Land Area, Population, Number of tax payers (tax base), inflation, GDP, Import, and Export were the study factors which can affect the total revenue collection. Only secondary data were used from different sources like BOFED, Ministry of Revenue IT center and from Internet.

Revenue data found from twelve years (from 1999 to 2010E.C), the top ten key source revenue for the sub cities in Addis Ababa are:

1. Tax on income, profit and capital gain
2. Value Added Tax on Domestic Manufactured Goods & Services
3. Non-Tax Revenue
4. Municipality Revenue
5. Government Investment Income
6. Capital Revenues
7. Sale of Goods and City Services
8. External Loan
9. Value Added Tax /VAT/
10. Miscellaneous Revenue

As we observe from the multiple regression analysis result all the coefficient of the independent variables are different from zero, and hence all the independent variables from the regression equations are found to be predictors of the dependent variable (revenue). Furthermore, the coefficient of multiple determinations is 0.652; therefore, about 65.20 % of the variation in the Revenue is explained by Land Area, Population, and Number of tax payers, Inflation rate, GDP rate, Import, and Export. The regression equation appears to be very useful for making predictions since the value of $R$ 2 is close to 1. However, at 15% significant level,

only four independent variables which are land, number of tax payers, inflation and GDP are found to be predictors of the dependent variable.

In relation to the four independent variable and from the data presented in table 4.3 Government investment income is one of the top ten key sources of revenue for the city of Addis Ababa which mainly constituents land lease income which is affected by land area. Once again Tax on Income, Profit and Capital Gain top ten key source of revenue for the city of Addis Ababa which is directly affected by number of tax payers. Finally, VAT is another top ten key sources of revenue for the city of Addis Ababa which is also affected by number of tax payers amount of Import.

## 5.2.Recommendation

Revenue collection is important function of the sub-cities of Addis Ababa to satisfy the needs of the public and to improve the living standard of the residents by providing adequate infrastructural facilities like water, sanitation, road and transport, etc. Therefore, as per the result of this study the researcher has recommended the following:

- The four determinants of revenue collection should be given emphasized to increase own source revenue collection,
- Even if import can increase own source revenue collection for the city but it is can creating balance of payment problem for the country. Therefore, the city government must exploit export instead of import by establishing high production manufacturing technologies so that it can create better tax collection strategies since tax on the sales of goods and service is one of the top ten key source of revenue for the city,
- In the manual which was supported by GIZ (Deutsche Gesellschaf fürInternatonale Zusammenarbeit), property tax not included in the tax base. Therefore inclusion of land property tax in the tax base can increases the revenue collection for sub cities like Akaki Kility and Bole Sub-cities,
- To increase the revenue collection the city of Addis Ababa government, further study must be conducted by using different methodology and with additional independent variables included. Hence, referring revenue enhancement plan guide for Ethiopian city Administration working Manual experts identified that insufficient revenue generation is most commonly as a result of the combination of factors such as exclusion of property tax, tax coverage

(various types of non-tax own-source old rate and fees structure), tax assessment strategy, collection efficiency, payment procedure, and enforcement procedure. Therefore, the study can be conducted by including the above variable using primary data's.

- Furthermore, observing top ten revenue items of the city of Addis Ababa, the city government of Addis Ababa should give more emphasis to find reliable strategy on these revenue items to enhance the capability of own source revenue collection.

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