Addis Ababa University
College of Business and Economics
Accounting and Finance Department

Determinants of Audit fee in Ethiopian Manufacturing Share Companies of Large Tax Payers

A Thesis Submitted to Addis Ababa University College of Business and Economics Department of Accounting and Finance in Partial Fulfilment of the Requirements for the Degree of Master of Science in Accounting and Finance

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Determinants of Audit fee
In Ethiopian Manufacturing Share Companies of Large Tax Payers

Statement of Declaration

I, Getahun Shiferaw Gedlu, hereby declare that the thesis on the topic entitled "*Determinants of Audit fee in Ethiopian Manufacturing Share Companies Categorized Under Large Tax Payers"* submitted by me for the award of the degree of Master of Science in Accounting and Finance from Addis Ababa University is original work and it has never been presented in any university. All sources and materials used for this thesis have been appropriately acknowledged.

Declared by:	Confirmed by Advisor:
Name: Getahun Shiferaw	Name: Dr. P, Laxmikantham
Signature: _____	Signiture: _____
Date: _____	Date: _____

Statement of Approval

This is to certify that this thesis entitled, "Determents of Audit fee in Ethiopian Manufacturing Share Companies Categorized Under Large Tax Payers" was carried out by Getahun Shiferaw under the supervision of Dr. P. Laxmikantham, submitted in partial fulfilment of the requirements for the degree of Master of Science in Accounting and Finance complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Approved by:

Advisor: Dr. P, Laxmikantham Signature _____ Date _____

Internal Examiner: _____(PHD)Signature _____ Date _____

External Examiner :_____(PHD) Signature_____Date _____

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Acronyms

AABE	Accounting and Auditing Board of Ethiopia
AICP	American Institute of Certified Public Accountants
ARCH	Autoregressive Conditional Heteroscedasticity
AUFE	Audit Fee
CL	Classical Linear Regression Model
COMP	Complexity
CSA	Central Statistics Agency
DR	Debt Ratio
DV	Dependent Variable
EBIT	Earnings before Interest and Taxes
GLS	Generalised List Square
IV	Independent Variable
LTD	Long Term Debt
LTO	Large Tax Office
MR	Ministry of Revenue
MSCs	Manufacturing Share Companies
OLS	Ordinary Least Square
ROA	Return on Asset
ROE	Return on Equity
ROI	Return on investment

Key Words: Audit Fee, Total asset, Return on Asset, Complexity, Debt Ratio

Abstract

This was informed by the fact that most research on audit fee models has been done on developed countries while little published research is available on developing countries like Ethiopia. Even more scarce is studies on audit fees determinants in Ethiopian manufacturing share companies. As such, this paper is to address this imbalance by having a closer look on audit fee determination of MSCs categorized under large tax payers. So, the purpose of this thesis is to provide evidence on the determinants of audit fee in Ethiopian manufacturing share companies categorized under large tax payers. The study applied explanatory research design and panel data regression analysis. In order to test the research hypotheses, secondary data was collected from a sample of fifteen large tax payers manufacturing share companies covering seven years period (2011-2017) with the total of 105 observations.. The period chosen was sufficient to obtain meaningful trend patterns on audit fees for large tax payers manufacturing share companies. In the present study, the researcher was able to examine the determinants of audit fee in manufacturing share companies of large tax payers. In this study audit fee is the dependent variable where as auditee total asset, auditee complexity, auditee risk and auditee profitability are included as independent variables. An E-Views version 9 software package was used to make regression analysis. The results of the study show that auditee's size is important factor in determining audit fees for manufacturing share companies of large tax payers in Ethiopia due to positive relationship between this variable and audit fee. This was consistent with both the author's expectations and the results of previous studies. A statistically significant negative relationship was found between auditee's risk and audit fees. The results, however, did not support any relationship between auditee's complexity and auditee's profitability. Finally, the researcher recommends: practitioners such as audit firms, manufacturing share companies, and regulatory bodies in gauging whether audit standard benchmarks have been adhered to by audit firms. .

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CHAPTER ONE

Introduction

This part provides a research overview which consists of five sections. Firstly, the research background is discussed to introduce the research topic. Next, the statement of the problem is presented to highlight the issue occurred. Then, it is followed by the research hypotheses to guide the research arguments and the research objectives which address the purpose of this study. Lastly, the significance of the study as well as the scope of the study and limitations of this study is included.

1.1. Background of the Study

The auditing profession was initiated early in the world history. Evidences for the existence of auditing activity in ancient China, Egypt has been found. "Auditors" at this time was supervisors of the accounts of Chinese Emperor and Egyptian Pharaoh. Auditing activity also appeared early in Greece and Rome. The terminology "auditor" in Latin means a "hearer" or "listener". This implies that auditors in Rome "heard" taxpayers (for example farmers) report their business results and tax duty (Hayes et al., 2005).

Like any other industry, the development of modern auditing profession is also stimulated by the development of economy and related industries. Specifically, the Industrial revolution in the 18th century with the appearance of the separation between ownership and management made more demand for the practice of modern auditing (Hayes et al, 2005). In running a business a trust relationship is established between the owners of the corporation and the management in the hope that management would act in the owners' best interests, which is to increase their wealth and preserving the continuity of the business. This phenomenon is usually referred to as agency theory and is defined as: "a contract under which one party (the principal) engages another party (the agent) to perform some service on the principal's behalf" (Godfrey, Hodgson, Holmes, & Kam, 2010).

Nevertheless, this owner-agent trust relationship might be broken as management might act in its own best interests instead of the owners (Madura, 2003). This is formally known as the agency problem (Godfrey et al., 2010). This agency problem gives rise to various agency costs (Ibid) but the researcher is only interested in one which is the monitoring costs. These

monitoring costs refer to costs associated with monitoring the agent's behaviour (Godfrey et al., 2010).

One important part of the monitoring cost is the audit fee, "since auditors have a duty to ensure that the managers are behaving according to the owners' interest while they also have a duty to inspect the company's accounts" (Nikkinen & Sahlström, 2004). Therefore, the auditor can be seen as the guardian of the organization who is monitoring its behaviour with the organizations formal goals as guidance (Mitnick, 2006).

The pricing of audit services has been an interesting topic for audit researchers, and plenty of audit studies were conducted to investigate factors believed to have an influence on audit fees in industrial companies. This line of research has been intensified following the fall of high profile giant companies at the down of the century in the west (Enron, WorldCom.). The incident raised significant criticism on the auditing profession as a whole, for the fact that auditors were implicated in many of the cases. It was revealed that auditors drive higher non-audit fees and abnormally higher audit fees, which motivate them to lose their independence (Dart, 2009; Ghosh, et al., 2006).

Emergent economies are not exceptional from large corporate failures; for instance the corporate failures in the Nigerian financial sector in the early 1990s brought auditors into sharp focus and caused the public to question the role of accountants and auditor (Akinpelu et al., 2013 cited in Tamirat, 2015).

The amount of fees paid to external auditors is of great importance to a number of stakeholders that is why disclosure practices requires that such information be disclosed in the financial statements of companies (Kikhia, 2015; Hentati & Jilani, 2013). While the determinants of audit fees are not new in literature, the significance of the determinants in pricing audit fees within a developing country context is limited. This study reviewed factors pertaining to determinants of audit fees and an insight into the determinants of audit fees within a developing country context by focusing on manufacturing share companies (MSCs) in Ethiopia. While the external audit fee is no different from other costs borne by the clients, the service received is hardly visible, with the only tangible "product" a relatively brief and standardized – audit report (Ask &Holm, 2013).

Audit fees can be defined as the amounts of fees (wages) charged by the auditor for an audit process performed for the accounts of an enterprise (auditee), the determination of the audit

fees is based on the contract between the auditor and the auditee in accordance with time spent on the audit process, the service required, and the number of staff needed for the audit process (El-Gammal, 2012).

The level of audit fees and how they are determined are significant matters to indicate the basis on which audit fees should be determined, the costs which should be covered by an audit fee, and the factors which should be taken into account when determining the audit fee. In addition, these statements were also designed to restrict auditors from charging their fees on a basis which might be incompatible with the ethical values associated with the audit profession. Consequently, they seek to protect the auditors from losing their objectivity and effectiveness as independent auditors (Hassan, 2014). In general, this study focused on the investigation of the determinants of audit fees among manufacturing share companies of large tax payers in Addis Ababa, Ethiopia.

1.2. Statement of the Problem

Audit pricing services have been an important issue that concern many researchers to have carried out researches by examining the types of determinants that affecting the audit fees (Al-Harshani, 2008). One of the main issues of audit fees is to find out how auditors determine the amount of fees required from their clients (El-Gammal, 2012). Many studies have identified the variables such as profitability, status of audit firm, and corporate size that influencing audit fees were conducted (Mohammad Hassan and Naser, 2013). Based on the number of researches that have been carried out in the past, there have been substantially proving that the types of determinants affecting the audit fees are still an issue that concerns many researches.

The audit fee charged is influenced by auditor dependent factors: Reputation of the audit office is the perception that some audit firms can provide higher quality auditing than others, which is one of the most important factors affecting the audit service pricing, years of professional experience of the audit firm would increase the audit fees charged by the audit firm, and an increase in the number of Audit firms (competition) lead to a significant decrease in real audit fees (Hentati & Jilani, 2013); & company factors such as company size, complexity of operations of the company, auditee risk, and the profitability of the auditee's company (Joshi & Al-Bastaki, 2000).

External audit fees paid by companies have an important and significant association with auditee size, auditee risk and auditor size (Gonthier-Besacier and Schatt, 2007). Larger clients require more audit services than smaller clients, therefore more audit time is needed; hence we would expect that these large clients pay higher fees relative to smaller clients in the industry. Meanwhile, Joshi & Bastaki (2000) conclude that audit fees paid by companies rely on size of the reporting entity, profitability, company risk, company complexity and providing non-audit services. Furthermore, Bedard & and Johnstone (2010) pointed out that audit tenure is positively associated with the level of external audit fee. Moreover, they suggest that the closer association between external auditors and their clients can generate a financial dependence of auditors on their clients which threatens audit independence. In the study of Ahmed & Goyal (2005) showed that auditor size and auditee size are the most important determinants of audit fees, but the results indicated that audit fees and auditee complexity are not associated.

To sum up the above, audit fee structure has been displayed as complex by the empirical research of audit fees determinants in different countries. Nearly all research has shown connections between auditee size, auditee risk, and auditor size and audit fees. Bedard and Johnstone (2010) indicate that, in specific situations, investors may even trust companies that pay high audit fees. Furthermore, these results also show that the concern about audit independence impairment derived from high external audit fees is reasonable. Consequently, it is important to regulate audit rotation. Furthermore, this finding can be an indication for other countries that audit tenure may cause audit independence impairment.

The aforementioned arguments indicate that it is essential to empirically research pricing of audit service. Moreover, many research projects have been focused on the market for audit profession and services in developed countries in general, but few research projects have been conducted on the developing world in particular (Hassan, 2014). Thus, the current study is extended previous studies by presenting new evidence about the audit market in Ethiopia, where unlike other countries; the Ethiopian audit market is characteristically different in nature. Among others the major difference lies in its market structure; stiff competition; absence of international Big auditors; weak professional body and consistent rules applicable in discharging professional responsibilities (World Bank 2007). These features of the audit market are likely to raise many concerns on the external audit practice in the country.

It is indicated that the thin audit market and the stiff competition (partly triggered by the bidding system) among audit firms lowered the audit fees in the country (World Bank 2007

and Mihret 2011). Apart from these unique features, World Bank (2007) reported that Ethiopia does not have a quality assurance and professional indemnity insurance program for auditors and the country has not yet experienced litigation on financial reporting. This may indicate that the quality concern given to the audit service is relatively weak and may serve as a loophole for auditors to reduce audit fees in their engagement while being competitive in the thin audit market (Bethitina, 2015). Given such intense competition along with lower concern and as audit fee is one of most important determinant factors identified for audit quality (Kilgore et al., 2013), it would be reasonable to expect such threats to arise in Ethiopian context.

However, it is unfortunate that the researcher is unable to find single study conducted in external audit fees in the giant Ethiopian manufacturing industry. Let alone Ethiopia, which had problematic accounting and auditing practice, countries with advanced practices couldn't stop their high profile companies from falling (Tamirat,2015). Therefore, given such a unique audit environment characterized by regulatory laxities in the accounting profession, and lower audit quality concern afforded in the country, it is imperative to investigate the factors that determine audit fees and its implication in the Ethiopian manufacturing share companies' context

To date, there has been little work done on developing countries in general and in Ethiopia in particular, especially issues on audit fee determinants and audit fee. Even more scarce is studies on audit fees determinants in Ethiopian manufacturing share companies. As such, this paper is to address this imbalance by having a closer look on audit fee determination of MSCs categorized under large tax payers.

1.3. Objectives of the Study

The following are the general and specific objectives of the study.

1.3.1. General Objective

The main objective of the study is to investigate the determinants of audit fees among manufacturing share companies in Addis Ababa, Ethiopia.

1.3.2. Specific Objectives

1. To identify the relationship between auditee size and audit fees among manufacturing share companies of large tax payers in Addis Ababa, Ethiopia.

2. To investigate the relationship between auditee complexity and audit fees among manufacturing share companies of large tax payers in Addis Ababa, Ethiopia.
3. To study the relationship between auditee risk and audit fees among manufacturing share companies of large tax payers in Addis Ababa, Ethiopia.
4. To examine the relationship between auditee profitability and audit fees among manufacturing share companies of large tax payers in Addis Ababa, Ethiopia.

1.4. Hypotheses of the Study

Based on the survey of theoretical literature and previous empirical studies conducted on the determinants of audit fees, the following research hypotheses are constructed:

H1: There is a significant Positive relationship between corporate size and audit fees among manufacturing share companies of large tax payers in Addis Ababa, Ethiopia.

H2: There is a significant positive relationship between complexity and audit fees among manufacturing share companies of large tax payers in Addis Ababa, Ethiopia.

H3: There is a significant positive relationship between audit client risk and audit fees among manufacturing share companies of large tax payers in Addis Ababa, Ethiopia.

H4: There is a significant Positive relationship between profitability and audit fees among manufacturing share companies of large tax payers in Addis Ababa, Ethiopia.

1.5. Significance of the Study

The study is useful to acquire knowledge about the determinants of audit fees for both audit firms and manufacturing share companies in Addis Ababa, Ethiopia. The determinants of audit fees related to the attributes of companies and audit firms can provide knowledge to auditors and companies on the basis for audit pricing.

By understanding the determinants of audit fees, companies can estimate the amount of audit fees that they are required to bear for the audit services in future so that managerial arrangements can be carried out to reduce the costs of audit. The knowledge of audit fees determinants can assist auditors in making audit pricing decisions and help auditors for pricing the audit services appropriately. Finally, this study enhance users or readers to obtain better understanding on the factors influencing audit fees among manufacturing share companies in Ethiopia currently. The research may also serve as a springboard for further research.

1.6. Scope of the study

The scope of the study is determined by the objective of the research which were stated earlier and it emphasizes on identifying and examining the determinants of audit fees. This research only analyzed determinants of audit fees in the external audit side. This research focused on the determinants of audit fees among manufacturing share companies categorized under large tax payers in Addis Ababa, Ethiopia. Other sectors were excluded from this research. Seventeen manufacturing share companies were included in the sample. Two excluded manufacturing share companies were either newly established (or not operational before 2011) or their data were not retrievable.

List of manufacturing share companies which were considered for study are provided with code numbers in the appendix. Secondary annual balanced panel data of manufacturing share companies for 7 years (2011-2017) were used in this study. The reason is that, most manufacturing share companies are newly established. The independent variables used in this study are auditee size, auditee complexity, and auditee risk and auditee profitability.

1.7. Limitations of the Study

Though the researcher has tried to do the research with a great effort, the researcher study still has many limitations. The study encountered the following limitations:

The choice of the listed companies created some bias in the study since it is dominated by local audit firms.

The effect of the MSCs middle tax payers and other industries were not analyzed in the model adopted for the study. In addition, choosing listed MSCs make it hard to test the relation between audit fees and the determinant factors since the financial statements of the listed companies were not disclosed to the external information users.

The quality concern given to the audit service is relatively weak and may serve as a loophole for auditors to reduce audit fees in their engagement while being competitive in the thin audit market (Bethitina, 2015). Accordingly this has created illogical low pricing of audit fee and this in turn created an abnormal data which was very problematic for data analysis and distortion of the findings of this study.

Besides, due to the limitation of data, the researcher cannot test some variables which have been strongly proven to be significant to audit fees, such as audit opinions as a proxy for auditee risk, number of subsidiaries as a proxy for auditee complexity.

1.8. Structure of the Paper

This thesis is organized into five chapters; chapter one is the introductory part of the thesis, chapter two presents' theories and empirical literature on determinants of audit fees, chapter three focused on the methodology, chapter four discusses empirical results of the study and chapter five is summary of finding, conclusion and recommendations for the companies' management and for future researchers.

CHAPTER TWO

2. Review of the Literature

This part of the study begins with an analysis of theoretical framework that is used to support the research. Besides, in depth review of prior empirical studies on each variable is carried out. Furthermore, conceptual framework is identified. Lastly, this chapter ends with the hypotheses established for this study.

2.1. Theoretical Framework

2.1.1 Agency theory

Agency theory has been extensively used in auditing areas (Ittonen, 2010). According to Jensen and Meckling (1976), an agency relationship can be defined as a contract in which one or more persons (principals) engage with another person (agent) to carry out the duty on their behalf by delegating some decision making authority to them. Agency problems are generally solved by agency costs when agents do not make decision in the best interest of principal with the goal of pursing their own interest. Agency theory was created by Stephen Ross and Barry Mitnick in the early 1970s (Mitnick, 2006).

According to Eisenhardt (1989), agency theory is normally applied when resolving two issues that can be arisen in agency relationship. The first issue is when the goal of agent is not aligned with the goal of principal which results in conflicts of goals achievement and principal was unable to examine the appropriateness of agent's conduct. Another type of issue which arisen is the problem of risk issue. This can occur when principal and agent acted differently toward risk preference.

This difference purpose of their goals which between ownership and management will ultimately create information asymmetry and thus the agency costs (Farrer & Ramsay, 1998). This can also happen between auditors and shareholders. According to Institute of Charted Accountants of English and Wales (as cited in Soyemi & Olowookere, 2013), information asymmetries and vary of intentions can cause principals (shareholders) lack of trust on their agents (auditors) and thus it is important to make clear about the development of audit, its usefulness and objectives.

According to Mustapha & Ahmad (2011), it is found that significant managerial ownership by merging the managerial and ownership can reduce the needs for extensive auditing which refer to the reduction of monitoring motivation for audit. It is indicated by O'Sullivan that auditor does not need to undertake additional testing due to the ownership of managers itself in the company and thus unlikely to involved in misleading. All of these would contribute to a reducing in audit fees.

According to Nikkinen & Sahlstrom (2004), audit fees are one of the portions of monitoring cost. Auditors who act as an agent are responsible to assure that managers behave in line with owners' interest by carried out audit of the company's accounts. If agency problem become complex, auditors need more time regarding inspection of accounts and managers' activities.

According to Wang & Yang (2011), agency problems tend to occur in the firms with lower growth rate and higher level of free cash flows because they are more likely to involve in unethical activities. Therefore, as audit risk increases, auditors have to perform more audit service. Empirical evidences have proven that there is a positive association between audit fees and management entrenchment.

According to Hope, Langli, and Thomas (2012), manipulation of earnings, fraud committing tends to occur when there is lacking of monitoring on manager's behaviour which results in higher agency cost. Thus, shareholder monitoring is needed to minimize agency cost as shareholders increase the willingness to incur essential monitoring costs. The opposite is low monitoring cost incur when the ownership dispersed. This leads to the ideas that agency cost is low when ownership concentration increases. Higher ownership concentration with a higher protection of shareholders has a downward effect on the audit fee due to lower perceived audit risks. Therefore, there is less effort supplied by auditors and less demand for Big firm auditor in which leads to lower audit fees when agency cost is lower.

2.1.2. Definition of Dependent variables

Table 2.1: Definition of Dependent and Independent Variables

Dependent Variable	Definition
Audit Fees	• The level of fees (wages) charged in the audit service by the auditor based on service conducted, time spent, and the number of employee involved in the audit procedures (El-Gammal, 2012). • According to the International Standards on Auditing, audit fees defined as the amount that compensates the financial auditor's activities and qualifications of financial statements (Robu, Chersan, Carp, & Mironiuc, 2012).

Independent variable	**Definition**
Auditee's Size	• A structural property with the degree of formalization or a contextual variable in respect of the number of people, resources and the amount of activity involved in the organization (Javed & Khan, 2011). • As defined by Turley and Willekens (2005), corporate size is based total turnover and quantity of commonly owned assets of the firm (Susenso, 2013).
Auditee's Complexity	• Generally, complexity is defined as a system which consists of many entities that have a high level of non-linear interactivity (Holmdahi, 2005). • The complexity of balance composition can be reflected through the complexity of assets. Generally, companies with higher ratio of liquid assets (inventory, receivables) to total assets are more complex than others (Besacier and Schatt, 2007).

Auditee's Risk	• Business risk is defined as those unforeseen changes to the legal circumstances to which insurers are subject to changes in the social and economic environment, as well as changes in business profile and business cycle (Buckham, Wahl, & Rose, 2010). • Entity's business risk also defined as the risk of the entity which would not continue to be profitable and survival (Ethridge, Marsh, & Revelt, 2007). • Business risk is defined as those unforeseen changes to the legal circumstances to which insurers are subject to changes in the social and economic environment, as well as changes in business profile and business cycle (Buckham, Wahl, & Rose, 2010). • Entity's business risk also defined as the risk of the entity which would not continue to be profitable and survival (Ethridge, Marsh, & Revelt, 2007). • As defined by Lennox and Pittman (2010); Stanley (2011), business risk is measured by using the Return on Asset (ROA) as it represents business survival (Tahir & Paino, 2013).
Auditee's Profitability	• As cited in Brigham and Ehrhardt (2002), percentage ratios related to profit to other financial parameters such as revenue and total assets (Cui, 2005). • Profitability is used to evaluate the performance of the company (Moradi, Valipour, & Pahlavan, 2012). • Profitability acts as a benchmark in management performance and resource allocation (El-Gammal, 2012).

Source: Developed for the research

2.1.3 Audit Fees

Findings of previous studies showed that audit fee was charged based on two perspectives. Auditor perspective which established a relationship between audit fees and auditor attributes like: the audit firm size, reputation of the audit firm, competition among audit firms, specialization of the auditor, cumulative experience of the auditor, and auditor status. Client perspective which also established relationship between audit fees and client factors like:

complexity of operations, company size, riskiness of operations, and profitability of the audited firm (Joshi & Al- Bastaki, 2000; Hay, Knechel, & Wong, 2006).

The level of fees (wages) charged in the audit service by the auditor based on service conducted, time spent, and the number of employee involved in the audit procedures (El-Gammal, 2012). According to the International Standards on Auditing, audit fees defined as the amount that compensates the financial auditor's activities and qualifications of financial statements (Robu Chersan, Carp, & Mironiuc, 2012).

2.1.4. Auditee Size

Previous studies show that company size affects audit plans (Castro et al, 2015; Kikhia, 2014). Large companies require more attention than smaller companies therefore more time would be spent on audit work and as a result high audit fees would be charged on bigger companies as opposed to smaller ones (Xu, 2011; Simon & Taylor, 2002). Large size companies would be involved in more activities than small ones. They are usually more publicly visible and they tend to disclose more information than small companies.

Prior research conducted by Al-Shammari et al., (2008), and Xu (2011) provided conclusive evidence that "the size of the client is the most important variable in determining audit fees. Causholli et al., (2011), in their study regarding overview of empirical research related to audit fee found out that auditee size of business is the most significant determinant of audit fee among all other determinants. The reason for positive and significant relationship of audit fees with size of client's business was that labour usage and effort of auditor gets high as the size of company's business gets high. Consequently, more audit services and time are needed to audit large size companies than small ones. They also have enough financial resources to recruit big international audit firms. Hence, large size companies would pay higher fees than small ones (Carson et al., 2004; Vermeer et al., 2009). A positive relationship has been found between the audited company size and the fee charged by auditors (Simunic, 1980; Low, Tan, & Koh, 1990).

Most common measures of company size include: the number of personnel, total revenues of the firm, and the total assets. A study by Fleischer (2012) in a developed economy provided evidence of German market regarding the relation between client's size and audit fee by using a different proxy than actually used for client's size of business. His study used number of employees as proxy for client's size of business. Results of his study showed that client's size of business has highest explanatory power and showed a significant positive relationship

with audit fee. Previous empirical research showed size to be the main factor that influences external auditor's fees (Naser & Nuseibeh, 2008; Ellis & Booker, 2011).

A structural property with the degree of formalization or a contextual variable in respect of the number of people, resources and the amount of activity involved in the organization (Javed & Khan, 2011). As defined by Turley and Willekens (2005), auditee size is based on the total turnover and quantity of commonly owned assets of the firm (Susenso, 2013).

2.1.5. Auditee Complexity

The common indicator of audited firm complexity is number of subsidiaries and branches (both local and foreign) of the client company, proportion of foreign subsidiaries, the number of industries in which the company participates, the number of different company locations and variables relating to asset composition, receivables to total assets, inventories to total assets, both of them to total assets and number of industries in which the client operates and so on (Simunic. 1980). Highly diversified firms and companies with many subsidiaries have complex operations requiring comprehensive auditing by the auditor. Consequently, high audit fees will be charged by auditors for complex clients. This was confirmed by a study by (Sandra & Patrick, 1996) which found that firms with complex operations pay 0high fees for audits.

Foreign subsidiaries have to adhere to several laws and disclosure requirements, which requires more manpower and time by the auditors to conduct their audit. There is a positive relationship between audited firm complexity and audit fees charged by the auditors (Carson, Fargher, Simon, & Taylor, 2004).

In addition, complexity is defined as a system which consists of many entities that have a high level of non-linear interactivity (Holmdahi, 2005).Complexity increase with the IFRS adoption (Kim, Liu, & Zheng, 2012). Auditors have to put more efforts and time in performing their audit after the adoption of International Financial Reporting Standards (IFRS) (Yaacob & Che-Ahmad, 2012). \

2.1.6. Auditee Risk

Business risk is defined as those unforeseen changes to the legal circumstances to which insurers are subject to changes in the social and economic environment, as well as changes in business profile and business cycle (Buckham, Wahl, & Rose, 2010). Entity's business risk also defined as the risk of the entity which would not continue to be profitable and survival

(Ethridge, Marsh, & Revelt, 2007). As defined by Lennox and Pittman (2010); and Stanley (2011), business risk is measured by using the Return on Asset (ROA) as it represents business survival (Tahir & Paino, 2013).

Client risk has been found to be a significant factor considered in charging audit fees. It gives odds of issuing an unqualified report on otherwise significantly misstated accounts by an auditor (AICPA, 1983). Sandra and Patrick (1996) used debt ratios as measures of client risk. Additionally, client risk can also be measured by the following ratios: current assets to total assets; long-term debt to total assets; income before taxes to total assets (Simon, and Taylor, 2004; Joshi and Al- Bastaki, 2000). The best measure of client risk is the debt ratio (long-term debt/total assets); it shows how able a company can repay its long- term debt. A high debt ratio indicates the long-term capital structure of the company may be affected, since the company may have difficulties in the debt repayments which may lower the credit rating of the company.

Risky companies tend to be loss making and faced with legal suits both on the auditor and the company due to bankruptcy proceedings that may be instituted against the company. Auditors of risky companies have to undertake further tests in their audit work therefore more time on the work and as a result high audit fees will be charged (Francis & Simon, 1987; Craswell and Francis, 1999). Client's risk is an important determinant of audit fee and in almost all the studies conducted regarding audit fee, risk of client has significant positive relationship with the audit fee (Hay, 2010).

Client risk is basically the risk that the auditors may face in their process of auditing a business's financial statements. Meanwhile audit risk can also be due to loss of fee revenue and reputation damage (Elliot, 2008). Hence audit risk is basically the risk that the auditors would be held liable for failure of auditor of a business to identify misstatements in financial statements. Auditors assess th0e risk in conducting the audit of a business and on the basis of risk perceived by them, they charge an extra fee which is called as risk premium.

Risk premium is based on different factors. For example, the business condition, that is, whether the business is in losses or in profits, legal regime of that country, the degree to which external users rely on financial statements etc. Auditors charge extra fee (risk premium) from clients whose risk is high (Lin et al., 2008). Charles et al., (2010) point out that usually auditors assess the risk of client before conducting its audit. This show that auditors charge high fee for the firms where they perceive risk to be high and hence put extra

effort in conducting the audit of such companies. The auditors seek insurance cover for risk and tailoring the audit fee according to client's risk is rational behaviour of auditor from economic point of view.

2.1.7. Auditee Profitability

Auditee profits are used to appraise the performance of the management in making efficient use of the resources allocated to them. Profits can be determined by looking at the reported figures in the financial statements (Naser at al., 2013). Companies reported high levels of profit would disclose more information to highlight their achievements and reduce agency costs (Watts & Zimmerman, 1986). Disclosing more information will be used by management of a profitable company to signal information about their performance to strengthen their position and justify their compensation (Hassan &Naser, 2013). These companies will be subjected to rigorous audit testing to verify and confirm their revenues and matching expenses (Joshi & Al-Bastaki, 2000). Hence, profitable companies would pay high audit fees. Profitability has been commonly measured by: Return on Equity (ROE); Return on Assets (ROA); Return on Investment (ROI); and Return on Capital Employed (ROCE). Client profitability levels influences the audit fees charged by auditors (Sandra & Patrick, 1996).

As cited in (Brigham and Ehrhardt, 2002), percentage ratios related to profit to other financial parameters such as revenue and total assets (Cui, 2005). Profitability is used to evaluate the performance of the company (Moradi, Valipour, & Pahlavan, 2012). Profitability acts as a benchmark in management performance and resource allocation (El-Gammal, 2012).

2.2. Empirical Literature Review

There are several empirical studies conducted on the relationship between variables and financial external audit fees. Some of them have got a result of positive relation, others found negative relation on the other side, and there is also weak to no significant relation.

2.2.1. Auditee Size

Alhassan Musah (2017) examined the relationship between firm profitability and audit fees charged in different firms. Data were collected through 24 firms listed on the Ghana stock exchange throughout the period of 2010 to 2014 and their respective auditors. Panel regression model is used in this research analysis. The results showed that client size as

reported in previous audit fee studies remains the highest significant variable in determination of audit fee.

A study conducted by Hassan Yahia (2014) investigated auditee's size as the determinant of 0audit fees during initial engagement in Jordan by using the Sample which contains 117 non-financial Jordanian companies which listed on Amman Stock Exchange, meet the selection standards and have the applicable and appropriate financial data from 2010 until 2012 (351 observation). The ordinary least squares (OLS) regression model is used as the method of data analysis. It has been chosen because of its advantages. Based on this study, it is found that audit fees in Jordan are positively related to the auditee size measured by natural log of total assets of listed companies.

A study of Wahab and Zain (2013) investigated firm size as the determinant of audit fees during initial engagement in Malaysia. Data were obtained from annual reports of 3,003 listed firms in Bursa Malaysia for the period from year 1996 to 2006. Panel regression analysis was employed in this study. The results showed that firm size and audit fees are significantly and positively related.

Another study conducted by Yaacob (2013) used corporate size as a control variable of determinant of audit fees to investigate the association between the adoption of FRS 139 and audit fees in Malaysia. Data extracted from the annual reports of 1,050 samples of non-financial companies listed on Bursa Malaysia in year 2006 to 2008. Generalized Least Squares (GLS) regression was conducted in the study. The results concluded that size is significantly and positively associated with audit fees.

Naser, Al-Mutairi, and Nuseibeh (2013) identified the association between audit fees and internal corporate governance effectiveness whereby firm size is used as a control variable of the study. Data were obtained from annual reports of 32 listed nonfinancial companies in Abu Dhabi Securities Exchange for the year 2012. Regression analysis was conducted in the study and the result showed that there is a significant and positive association between audit fees and corporate size.

Vermeer, Raghunandan, and Forgione (2009) proposed to provide empirical evidence about how firm size is associated with audit fees. 125 samples were selected from large non-profit organizations in United States. Data was obtained from each company's chief financial officer through questionnaire regarding audit and non-audit fees information as well as audit

committees and internal auditing information in year 2001 and 2002. Regression analysis was conducted and the results showed that firm size is associated with audit fees.

Sori and Mohamad (2008) attempted to determine whether larger companies are expected to pay more external audit price than smaller companies. Data were collected through the annual reports of 100 companies listed on Bursa Malaysia from the stock market's directory in year 2007. Ordinary least square regression (OLS) was used in this study. The findings revealed that there is a positive a0nd signifi0cant relationship between audit fees and corporate size.

2.2.2. Auditee Complexity

Prior researchers (El-Gammal (2012); Thinggaard and Kiertzner (2008); Naser et al (.2007); Gonthier-Besacier and Schatt (2007); Ahmad et al., (2006) documented empirical results indicating that audit fees are significantly influenced by the level of the audit client complexity while (Al-Harshani 2008) didn't find such a significant relationship. Client business complexities usually considered in audit fee research on the ground that companies having complexity in their operation (e.g. multinational companies, subsidiaries in different locations, nature of their assets, nature of transactions etc.) require more audit effort/time and the audit fee for such companies is also expected to increase accordingly.

Generally, as the auditee becomes more complex, more time and effort is needed to perform the external audit work. This is true because a more complex audit client means a more diverse organizational structure, and harder to review transactions. This increased audit effort is expected to lead to an increase in the level of audit fees.

Prior studies used various proxies for companies complexity such as (Simunic, 1980; Francis and Simon, 1987) number of subsidiaries; Caneghem (2010) used the number of industries in which the company is active; Caramanis and Spathis (2006) ratios receivables to sales; Naser et al., (2007); Gonthier-Besacier and Schatt (2007) the ratio of inventories and receivables to sales and the growth levels; Al-Harshani (2008) number of audit locations visited by external auditors.

The common indicator of audited firm complexity is number of subsidiaries and branches (both local and foreign) of the client company. Highly diversified firms and companies with many subsidiaries have complex operations requiring comprehensive auditing by the auditor consequently, high audit fees will be charged by auditors for complex clients. This was confirmed by a study by (Sandra & Patrick, 1996) which found that firms with complex operations pay high fees for audits. Foreign subsidiaries have to adhere to several laws and

disclosure requirements, which requires more manpower and time by the auditors to conduct their audit. There is a positive relationship between audited firm complexity and audit fees charged by the auditors (Carson, Fargher, Simon, & Taylor, 2004).

2.2.3. Auditee Risk

Alhassan Musaha (2017) examined the relationship between firm profitability and audit fees charged in different firms. Data were collected through 24 firms listed on the Ghana stock exchange throughout the period of 2010 to 2014 and their respective auditors. Panel regression model is used in this research analysis. The results show that the client risk factor is an unusual.

A study conducted by Koh and Tong (2012) investigated the impacts of clients' involvement in controversial corporate activities with audit pricing in United States. The data used in this research were represented by 20,687 firms which had been observed from year 2000 to 2010 as obtained from Audit Analytical database. The result concluded that the clients involved in controversial activities will be charged higher audit fees.

A study of Calderon, Wang, and Klenotic (2012) examined the association between incremental effect of internal control weaknesses and audit fees in United States. There were a total of 3,539 firm-year obtained in this research which focused on material weaknesses disclosed in the reports from Audit Analytics between year 2004 to year 2009. This study used the multivariate analysis and the result revealed that the relationship is positive related.

However, Stanley (2011) research showed that there is a significant negative relationship between audit fees and firms' business risk. The data were collected from New Generation Research Incorporation which identified 362 bankruptcy filings in year 2000 to year 2007. The multiple regression analysis was conducted in this study.

Tahir and Paino (2013) investigated the relationship between business client risks, fraud and audit fees in Malaysia. Data were obtained through annual report of 100 companies, comprised 10 fraudulent companies and 90 non-fraudulent companies which listed on Bursa Malaysia in 2012. Stepwise logistic regression analysis and fraud prediction model were used in this study. The result showed that firms which not involve in fraud and have low business risk are charged with high audit fees and vice versa.

Hogan and Wilkins (2008) identified reaction of auditors to the firms with high levels of control risk. Samples were collected from 6,735 observations which made up of 5,155

companies audited by Big Four firms while 1,580 companies audited by non-Big Four firms from year 2002 to year 2004. Multivariate model were used in this study. The results indicated that the audit fees are positively related with internal control deficiency throughout the firms.

2.2.4. Auditee Profitability

Alhassan Musah (2017) examined the relationship between firm profitability and audit the Ghana stock exchange throughout the period of 2010 to 2014 and their respective auditors. Panel regression model is used in this research analysis. The results showed that profitability has got significant relationship with audit fee.

Mohammad Hassan and Naser (2013) investigated whether audit fees charged by nonfinancial companies would be influenced by company profitability. Data were collected through annual reports and governance reports from 30 Emirati nonfinancial companies which listed on Abu Dhabi Securities Exchange (ADX) during year 2011. Pearson correlation coefficient matrix was conducted in this study. The results showed that there is a positive insignificant association between the audit fees and the profitability.

El-Gammal (2012) determined the most vital factor that affected the level of audit fees as perceived by the different groups of respondents in Lebanon. Researcher distributed150 questionnaires to leading banks, employees of three of the Big 4, and middle-sized CPA firms but only 80 of them were answered. Mann-Whitney U Test was used in this research and the importance of each factor in the determinant of audit fee had rated by using likert scale from 1-5. The results showed that profitability is insignificant to the determination of audit fees.

Moradi et al. (2012) examined the relationship between firm profitability and audit fees charged in different firms. Data were collected through the financial statement from 57 companies which listed on Tehran Stock Exchange from year 2003 to year 2009. Multi-0variable regression analysis and one-way ANOVA analysis were conducted in this research. The results showed that profitability and audit fees are positively associated. Al-Harshani (2008) investigated the determinants of audit fees in Kuwait. Data were obtained from six audit firms through survey in Kuwait which comprised of 49 audit engagements. Regression model has been used in this research. The results indicated that audit fees are positively related to firm's profitability.

In prior studies profitability is usually used as a measure of client risk. Client profitability reflects the extent to which an auditor may be exposed to a loss in the event a client is not financially viable and eventually fails (Simunic, 1980). Poor profitability and high level of variability in profits may lead to greater risk and greater amount of audit work. Companies that report losses in the recent period‘s financial statement may influence the auditor‘s judgment of risk. Such companies are likely to engage in questionable activities (earning manipulations) and this may result increased risk exposure to the auditor (Ananthanarayanan 2011). The poorer the performance of the firm, the higher the risk for the auditor and the higher the audit fee would be.

Profitability is measured by both rate of return, and existence of a loss in recent periods (ROI, ROE, ROA and loss in recent periods). Prior studies show mixed results on the relationship between client profitability and audit fee. For e.g. (Simunic 1980; Caneghem 2010; Ireland and Lennox (2002) profitability proxies by recent period loss, (Ebrahm 2010) using ROA, reported profitability significantly influence audit fee. In the contrary, (Simunic 1980) using (ROA), (Chen and Elder 2001) using (ROI), (Naser et al., 2007) using (ROE) revealed insignificant result. Here, it is important to note virtually all the empirical studies found significant result when profitability is proxied by recent period loss other than the return measures. To this connection (Simunic 1980) result suggested that audit fee do not vary continuously with the profitability of auditees rather, the auditor's expected share of residual liability losses seems to increase only with evidence of significant deterioration in the auditee's operations or prospects.

2.2.5. Local studies

A recent study by Hassan (2017) used data from 9 insurance companies and for which their financial reports were available through 2006 to 2015, the study investigated the research hypotheses. The linear regression model was used to analyze data. The report supported that there is direct and significant relationship between Auditee size and audit fees among insurance companies in Ethiopia. The result also shows that there is direct and significant relationship between profitability and audit fees among insurance companies in Ethiopia.

Tamirat (2015) study is focus on investigation of determinants of audit fee among eight banks as a sample from the year 2004 to 2012. In this study the researcher stated eight independent variables that affect audit fee. Finally, with regard to the determinants of audit fees bank size,

profitability, auditor size among others are found to be the major factors influencing the variation in audit fees in the Ethiopian commercial banks.

2.2.6. Summary of Prior Literatures and knowledge Gap

Though plenty of studies investigated the determinants of audit fee in different countries especially in developed countries; there is a lack of empirical evidence from the developing countries context like Ethiopia. Based on the existing knowledge, only limited studies had been conducted in the area from developing countries like Ghana, Nigeria, Kenya, South Africa, Lebanon, Jordan. Again, prior researches have documented inconsistent results on the evidence of the linkage between audit fee and its proxy.

Having all this facts, the current study has something to minimize the vacuum or the knowledge gap available in determinants of audit fee in Ethiopia. Specifically, this study tried to investigate the determinants of audit fees among manufacturing share companies of (LTO) and this would add some value to the recent need of having this study. It is evident that there were no prior studies on the determinants of audit fee among manufacturing share companies in Addis Ababa, Ethiopia.

2.2.7. The Summary of Variable Used by Different Researchers.

Table 2.2: Summary of determinants of audit fee in previous studies.

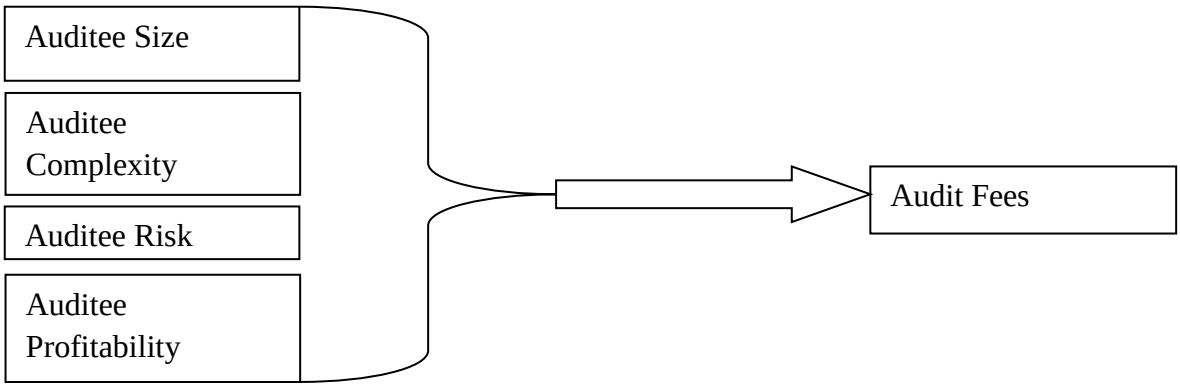
Authors	External audit fees Measures
Hassan,(2017); Tamirat,(2015)	Total asset, return on asset
Alhassan (2017);Hassan Yahia (2014; Wahab and Zain (2013); Yaacob (2013); Naser, Al-Mutairi, and Nuseibeh (2013); Vermeer, Raghunandan, and Forgione (2009); Sori and Mohamad (2008);	Total asset
(El-Gammal (2012); Thinggaard and Kiertzner(2008); Naser et al(.2007); Gonthier-Besacier and Schatt (2007); Ahmad et al., (2006);	Multinational companies, subsidiaries in different locations, nature of their assets, nature of transactions
(Simunic 1980; Francis and Simon 1987) Number of subsidiaries, (Caneghem 2010	Number of subsidiaries
(Caramanis and Spathis (2006); Gonthier-	Ratios receivables to sales

Besacier and Schatt 2007);	
Al-Harshani,(2008)	Audit location
Alhassan Musaha (2017)	Retun on asset
Calderon, Wang, and Klenotic (2012); Hogan and Wilkins (2008)	Internal control
Tahir and Paino (2013)	Fraud
Mohammad Hassan and Naser (2013); El-Gammal (2012); Moradi et al., (2012); (Ebrahm 2010);	Return on asset
Simunic, (1980); Caneghem (2010); Ireland and Lennox (2002).	Loss
Chen and Elder (2001);	Return on investment
Naser et al., (2007);	Return on equity

2.3. Conceptual Framework

The conceptual framework links the independents variables which as factors affecting dependent variable (audit fees). The relationship between the four factors and audit fees can be illustrated using Figure 2.1.

Figure 2.1: **conceptual framework of the Factors affecting Audit fee**



Source: adopted from Mohammad Hassan and Naser (2013).

2.4. Hypotheses Development

2.4.1. Auditee Size

Studies have revealed that, the size of client's business is considered to be the most important determinant of audit fee (Hay, 2010). The expected relationship for this variable is positive, thus, a positive relationship has been found between client size of business and the fee charged by auditors (Simunic, 1980; Bedard & Johnstone, 2010). It is represented with SIZE and measured by taking natural log of client's business assets.

H1: An Audit fee is positively associated with the size of the audit fee.

2.4.2. Auditee Complexity

The common indicator of audited firm complexity is number of subsidiaries and branches (both local and foreign) of the client company, proportion of foreign subsidiaries, the number of industries in which the company participates, the number of different company locations and variables relating to asset composition, receivables to total assets, inventories to total assets, both of them to total assets and number of industries in which the client operates and so on (Simunic. 1980; Chan et a1 1993). Highly diversified firms and companies with many subsidiaries have complex operations requiring comprehensive auditing by the auditor. Consequently, high audit fees will be charged by auditors for complex clients. This was confirmed by a study by Sandra & Patrick (1996) which found that firms with complex operations pay high fees for audits. There is a positive relationship between audited firm complexity and audit fees charged by the auditors (Carson, Fargher, Simon, & Taylor, 2004).

H3: There is a Positive relationship between auditee complexity and audit fees

2.4.3. Auditee Risk

Client risk is the risk associated in conducting the audit of client's business. It is referred to in some studies as audit risk. Auditors charge fees in commensurate with the riskiness of client's business (Calderon et al., 2012; Graham & Messier, 2006). The current study will measure audit risk by 1) debt ratio, and 2) a dummy variable loss. Debt ratio is a measure of firm's leverage and is found by dividing total liabilities by total assets. Therefore, we can say audit risk is lower because the higher these ratios, the lower the level of risk in business. The third variable of audit risk is dummy variable LOSS which is equal to 1 if the firm experiences a loss in the current year and 0 otherwise. Audit risk can also be due to loss of fee revenue and reputation damage (Bedard & Johnstone, 2010). Relationship of this variable

is expected to be positive with the audit fee because in almost all the studies conducted regarding audit fee, risk of client has significant positive relationship with the audit fee (Hay et al. 2006).

H2: Audit fee is positively associated with the auditees' risk

2.4.4. Auditee profitability

The profitability of the auditiee has been found to be associated with audit fees (Sandra & Patrick, 1996; Chung & Lindsay, 1988; Hentati & Jilani, 2013). Several proxies such as Return on Assets, Return on equity, Return on capital employed etc have been used to measure firm profitability. Companies that reports high levels of profit would disclose more information to highlight their achievements and reduce agency costs (Watts & Zimmerman, 1986). These companies will be subjected to rigorous audit testing to verify and confirm their revenues and matching expenses (Joshi & Al-Bastaki, 2000). Hence, profitable companies would pay high audit fees.

H4: Audit fee is positively associated with Client's profitability

CHAPTER THREE

3. Methodology and Method of the Study

The objective of this study is to examine the effect of determinant factors of audit fees on the manufacturing share companies (MSCs) of large tax payers in Ethiopia for the period covered 2011 - 2017. The purpose of this chapter is to present the research methodology used in the study. The chapter includes the research design, target population and research instruments. The chapter also presents how the validity and reliability of the model developed were ensured. The data analysis techniques used to explain the variables and measurement are incorporated in this chapter.

In this part of the study, the research design, data collection method and sampling techniques and selection is discussed. Besides, secondary data collection method is illustrated in this research. Secondary data has been chosen as a data collection method in this study. Next, data analysis techniques were used to explain the variables and measurement in this research.

3.1. Research Design and Approach

Research design is a master plan specifying the methods and procedures for collecting and analyzing the required information. In addition, it must ensure that the information collected is appropriate for solving a problem (Adams et al., 2007).

A choice of research design is based on the objective of the research; the major objective of this study is to assess the audit fees determinants among listed Ethiopian MSCs of large tax payers which are found to be significantly influence audit fees in prior studies. So, the researcher used a type of explanatory research, because the research tends to be explanatory and non-experimental which sought to explain the causal relationship among variables.

Based on the objective of the research, the researcher used a quantitative research. According to Creswell (2003) if the research problem wants to identify factors that influence an outcome, or understanding the best predictors of outcomes, then a quantitative research is the best choice. Therefore, quantitative research design is appealing for this study to achieve the objectives of the study and to test the hypothesis. In addition, quantitative research approach is used because it allows summarize large amount of data quickly and consistently and thus results in greater accuracy (Fabozzi, Focardi & Ma, 2005).

Moreover, Jonker and Pennink (2010) contended that the essence of quantitative research is to use a 'theory' to frame and thus understand the problem at hand. Quantitative purists believe time and context free generalizations are desirable and possible, and real causes of social scientific outcomes can be determined reliably and validly (Johnson and Onwuegbuzie, 2004). So, using quantitative research in this study was the best suit. A deductive approach was also adopted in this study by using annual reports of 15 listed manufacturing share companies in Addis Ababa, Ethiopia which are specified as high tax payers share companies from year 2011 to year 2017.

According to Creswell (2003) the knowledge that develops through a careful observation and measurement of the objective reality by developing numeric measures of observations, and need to be tested or verified and refined. Thus, in the scientific method, the accepted approach to research begins with a theory collects data that either supports or refutes the theory, and then makes necessary revisions before additional tests are conducted. In this study also the researcher developed numerical measurement that represent the actual figures for determinants of audit fees and audit fees for the listed companies and then tested different theories developed before.

Different researchers also argued on different theories of determinants of audit fees with in different countries and one of the objectives of this research is to verify previous theories by using quantitative approach based on results from numerical measurement that represent the actual figures in the Ethiopian context.

3.2. Data Sources and Collection Methods

In order to identify and examine determinants of audit fees with reference to listed MSCs of Addis Ababa, Ethiopia, secondary data collection method was used in this research. According to Tharmila & Arulvel (2013) secondary data is a type of data that have been previously collected for some other project rather than the one at hand but found useful by the researcher. As mentioned in the research of Muller & Hart (2011) which secondary data is useful to investigate the relationships of various variables in different research such as psychological versus sociological view points. Lastly, it benefits researchers in terms of high quality of data source (Smith, 2011).

Data is collected through secondary sources from the audited financial statements submitted to Ministry of Revenue of large tax office in Addis Ababa city for tax purpose. This is done in an attempt to avoid the risk of distortion in the quality of data that could be obtained

directly from the respective companies' archives and also to minimize the time and resource constraints of accessing data due to the operational location differences in the companies under investigation. The criterion for inclusion in the study unit holds 7 consecutive years (2011-2017) is the quality and availability of data for a time period.

The researcher collected audited financial statements particularly balance sheet and income statement for a period covered seven years (2011-2017). The reason behind the researcher considers only seven years data was a difficulty to collect many years' data because of time and company specific constraints and the reason behind using only secondary data is because of the information for this topic is accessible from secondary data sources and also, secondary data is easier to use and tends to be more comprehensive and also useful for the researcher to concentrate on the data analysis, interpretation and also collecting primary data is expensive, time consuming and difficult.

However, the main problem of using secondary data would be lack of willingness to get relevant source of information directly from listed share companies and its reliability. By considering this in order to avoid the risk of distortion in the quality of the data, the required data was collected from the audited financial statements submitted to the Ethiopian Ministry of Revenue of Large Tax Payer by the companies for annual tax declaration purpose.

3.3. Sample Design

Sampling is the process or technique of selecting a suitable sample for the purpose of determining parameters or characteristics of the whole population (Adams et al., 2007). The population of the study is the MSCs in Ethiopian Ministry of Revenue registered as large tax payers throughout the period of 2011 to 2017.

The target population for this research is the listed manufacturing share companies in Ethiopia. The study on listed manufacturing share companies captured the researcher's attention as they have significant contributions to the economic growth of the country. The industrial sector accounts for 14.3% of GDP, 9.5 % of total employment, and 21.2 % of export earnings. Ethiopian manufacturing sector contribute for export and national output. The sector accounts for 70% of the industrial sector (CSA, 2015). This revealed that manufacturing sector plays an important role for the country's economic growth.

The population of the study is seventeen manufacturing share companies. And their schedule is categorized under Large Tax payers; fifteen are selected based on their accessibility of

their data for tax officers of LTO. Census was used in this research. According to Abbott (2007), census is a study of every unit, everyone or everything in a population. Census able to provides a true measure of the population where maximize response rates and minimize non-response rates in a specific population. Besides that, detailed information about small sub-groups within the population will be available and improve user confidence with the result obtained.

The manufacturing share companies of large tax payers were chosen as the sampling frame in this research. The rationale for selecting listed manufacturing share companies of large tax payers is because they are large tax payers. According to income tax regulation number 78/2002, large tax payers must prepare and submit audited financial statements to the Tax Authority at the 0end of the tax year.

Glick (2011) states that the more positive the correlation, the smaller the sample size is needed for the research; the more negative the correlation, the larger the sample size is needed for the research. This research only target on manufacturing share companies listed in Ethiopian Ministry of Revenue registered as large tax payers. The sample size of this research was 17 companies, which is 100% of manufacturing share companies listed as large tax payers listed in Addis Ababa, Ethiopia which are specified as manufacturing share companies of large tax payers from year 2011 to 2017.

Based on the records held by ministry of revenue of large tax payers, there are audited financial statements within specified period of time. To be included in the researcher analysis, the firms had to have available audited balance sheets and income statement for seven consecutive years (2011 to 2017), to allow the researcher to obtain sufficient data for calculating the representative data from each firm. However, there are only remaining 15 listed manufacturing share companies in this study after excluding 2 companies with insufficient data within the periods of 7 years. According to Croushore (2011), latest data can increase the reliability of data collection. Hence, this study was based on the latest data from Ministry of Revenue registered as large tax payers.

3.4. Variables Description

3.4.1. Dependent Variable - audit fees

Basing on the objective of this research and learning from previous researches Thinggaard and Kiertzner, 2008; Callaghan et al, 2008; (Mellett et al., 2007; Gonthier-Besacier and

Schatt, 2007; Ahmed and Goyal, 2005), the dependent variable is natural log of audit fees paid for auditing annual accounts of companies. Therefore, the dependent variable, audit fees is measured by natural log of audit fees.

3.4.2. Independent Variables

a) **Auditee Size**

Proxies of auditee size have been discussed in previous studies. Most common measures of company size include: the number of personnel, total revenue of the firm, and the total assets at the year-end (Choi, et al., 2010; Gonthier-Besacier and Schatt, 2007; Ahmed and Goyal, 2005; Joshi and Bastaki, 2000). Since audit process is a process of inspecting clients' financial figures in the balance sheet and loss and profit accounts, financial measures are chosen by most of authors. In this study the researcher used natural log of total assets as the proxy for auditee size (e.g. Al-Harshani, 2008; Gonthier-Besacier and Schatt, 2007; Carson et al, 2004; Joshi and Bastaki, 2000). Previous empirical research showed size to be the main factor that influences the external audit's fees (Ellis & Booker, 2011; Naser and Nuseibeh, 2008).

Size= natural logarithm (Total assets)

b) **Auditee Complexity**

Another variable used in previous research to explain audit fees is auditee complexity. A significant proportion of previous studies observed positive relationship between auditee complexity and external audit fees (Ellis& Booker, 2011; Vermeer et al2009; Thinggaard & Kiertzener, 2008; Joshi and Bastaki, 2000). Moreover, auditee complexity exposes external auditors to more professional liability claims than non-complex companies (Clatworthy & Peel, 2006). In the literature, auditee complexity is measured by either the complexity of operations (e.g., Joshi & Al, B., 2000) or the complexity of assets reported in the balance sheet (e.g. Gonthier, B., & Schatt, 2007; Clatworthy & Peel, 2001). Complexity is also measured by the ratio of auditee's receivables and/or inventories, both of them to the auditee's total assets (Simon & Taylor, 2002). In this study the researcher uses complexity of Total Receivables /Total Assets as the proxy for auditee complexity.

Comp= Total Receivables/Total Assets

c) **Auditee Risk**

Auditee risk is considered an important factor in determining the audit fees. Auditee risk measures the odds of an auditor issuing an unqualified judgment on materially misstated

financial statements (AICPA, 1983). The auditee risk can be calculated by the following factors or ratios: current assets / total assets, long-term debt / total assets, income before tax / total assets (Carson et al., 2004; Joshi and Al-Bastaki, 2000).

According to Kimeli Elkana (2013), the most preferred risk measure is the Debt ratio. It is defined as the percentage of long-term debt to total assets. It measures the company's ability to pay off its incurred debt. If Debt Ratio is relatively high, the long-term financial structure of the client's firm will be unstable, and the firm may not be able to pay off its debt in a proper behaviour which may lead to a lower credit rating. In general, risk (debt ratio) is higher for companies that have endured financial losses, leading to higher possibility of bankruptcy or decline in stock price, and therefore larger probability of legal actions against both the client and auditor. Auditors need to do more work to reduce any potential litigation against them. The more the work and time needed to finish the auditing process the greater the audit fee is.

Besides, proxies for auditee risk also used by another prior studies (Bell et al, 2000; Gonthier-Besacier and Schatt, 2007; Joshi and Bastaki, 2000) include audit opinion, debt ratio, profitability and loss. Of which, profitability (ROE) and loss at least 1 time in the last 3 years are usually used and found to be significant to audit fees. Loss at least 1 year in the last 3 years is a dummy variable. In this study the researcher used debt ratio as the proxy for auditee risk.

The ratio is computed as:
Debt ratio= Total long term debt/total asset

d) Auditee Profitability

Profitability ratios can be used as a measure of auditee profitability includes: return on assets (ROA), return on equity (ROE), return on capital employed (ROCE), return on investment (ROI). Companies reporting high levels of profits will be subject to precise audit testing of their revenues and expenses and this will result in higher audit fees (Joshi and Al-Bastaki, 2000). Profitability is also measured by the ratio of net profits to sales (Mohammad Hassan, & Naser, 2013). Most of the prior research done indicate that the amount of audit fees is significantly influenced by the profitability level of the client firm (Sandra and Patrick, 1996). Therefore, based on the prior literatures and this study research topic the researcher used measures (ROA) as a measure of firm's profitability.

ROA = Net Income / Total Asset

Table 3.1: Summary of independent variables used in this Study

Variables	Formulas	Expected Sign
Size	Log of Total Asset	+
Complexity	Total receivable/Total asset	+
Risk	Long term debt/Total asset	+
Profitability	Net income/Total asset	+

Source: developed for the research

3.5. Methods of Data Analysis

In chapter two, the review of relevant literature helped this study to understand the problem and design an appropriate research approach to deal with. The previous parts of this chapter also discussed the research design employed to achieve the objectives of the study and to test the research hypothesis there on. In this part, the study methods of analysis for the collected data using various statistical tools are described. Accordingly this part includes methods of descriptive statistics, correlation analysis, the regression analysis and diagnostic tests.

3.5.1. Data Analysis

This part of the study provide a research finding analysis based on data that is collected from Ethiopian Ministry of Revenue –large tax payers and the researcher rearranged and coded the data. First, Descriptive statistics were used to describe and summarized the basic features of data in the study and used to present quantitative descriptions in a manageable form. According to O'Leary (2004) the main function of descriptive statistics is to provide measures of central tendency, dispersion, and distribution shape. Therefore, the researcher used descriptive analysis to analyze the data by showing in the form of simple ratio, tables and graph. Second, correlation analysis is also conducted to see the relationship among the dependent and independent variables. This helped to get an initial picture as to the nature of the relationship among the variables before proceeding to regression analysis.

The researcher used multiple regressions to make analysis for the effect of determinants of audit fees on audit fee of listed manufacturing share companies by utilizing time series and cross sectional data analysis technique. Since, Kothari (2004) describe that multiple regression is adopted when the researcher has one dependent variable which is assumed to be a function of two or more independent variables. The objective of this analysis is to make a

prediction about the dependent variable (audit fees) based on its covariance with all the concerned independent variables (determinants of audit fee variables). Statistical packages, Eviews software version 9 was used to analyze the collected data.

According to Gujarati (2004) regression analysis is a study concerning on the relationship of dependent variable with one or more independent variables in estimating or predicting the population means or average of dependent variable from the fixed values of independent variables. In this study, the regression model is exercised in the form of linear regression. Regression type in which this study employed is a panel data analysis by implementing Ordinary Least Square (OLS) method. OLS regression analysis constitutes an approach in predicting or forecasting the dependent variable based on one or more independent variable in such a manner that the error term or residual between predicted variable and real variable is minimized as small as possible.

The reason for using OLS offers the most reliable way in predicting the relationship between dependent variable and independent variable which is the main objective of this study.

Finally, although, according to Dabor and Adeyemi (2009), data collected from the published annual reports are credible, believable, and reliable, the researcher conducted the reliability test using Cornbach's alpha test.

3.5.2. Model Specification

The association between audit fees paid by Ethiopian MSCs listed on MR as (LTO) and the companies attributes discussed in the previous section is expressed in the following regression model.

AUFEEs = *f (SIZE, RISK, COMP, PROF.)*

Where:

AUFEEs = Audit fees

(+) SIZE = Client size measured by the natural logarithm of the company's total assets.

(+) RISK = Risk measured by total long term liability/ total assets.

(+) COMP = Client complexity measured by (total receivables + total inventory)/total assets.

(+) PROF = Profitability measured by net income/total assets

Model

$$LN(AUFEEs) = \beta 0 + \beta 1((LN(ASSET)) + \beta 2(COMP) + \beta 3(DR) + \beta 4(ROA) + \varepsilon$$

Where:

B0- represents the constant for audit fees regression equation (Fixed audit costs component)

B1- β4 represent the respective correlation coefficients of the independent variables.

ε – Represents the error term of the model

AUFEEs = audit fees; ASSET = total assets (size); COMP=Complexity; DR = debt ratio risk); ROA= return on asset (profitability)

Dependent Variable	Symbol	Measurement
Audit fees	LN(AUFEEs)	Natural log of the total audit fees
Independent Variables		
Variables	Symbol	Measurement
Asset	LNASSET	Natural log of the total Asset
Risk	DR	Total long term liability/ total assets.
Complexity	COMP.	Total receivables + total inventory/total assets.
Profitability	ROA	Net Income/total Asset

3.5.3. Diagnostic Analysis

Finally, Hausman test is used to decide appropriate model for this study between random and fixed effect model. Diagnostic tests were also used in order to check the validity of the model based on the assumption of the CLRM. Diagnostic checking was used to test whether the sample is consistent with these assumptions: There is no relationship between independent variables (No multicollinearity). There is no relationship among the error term at the period t and the error term at period before t (No autocorrelation problem). The error term is constant across the number of observations (Homoscedasticity). The error term is normally distributed. If all the above assumptions are not violated accordingly the regression conducted and as the researcher is sure of its accuracy and reliability of the estimates. To ensure that the data suits the basic assumptions of classical linear regression model, tests for the assumption are managed in this study were: Multicollinearity, Heteroscedasticity test, Autocorrelation test, and test for Normality.

3.5.3.1. Multicollinearity

According to Chris (2008), Multicollinearity will occur when some or all of the independent variables are highly correlated with one another. If the multicollinearity occurs, the regression model is unable to tell which independent variables are influencing the dependent variable.

The consequences of Multicollinearity are OLS estimators still Best, Linear and Unbiased, large variances and covariance of OLS estimators, wider confidence interval, and insignificant ratio. In this case, this study chose to use high pair-wise correlation coefficients method because it can see the correlation of independent variables between each other one by one. If the correlation coefficient will be higher than 0.80, the model is considered as it consists of serious Multicollinearity problem.

3.5.3.2. Autocorrelation

According to Chris (2008), when the error term for any observation is related to the error term of other observation, it indicates that autocorrelation problem exist in the model. In the case of autocorrelation problem, the estimated parameters can still remain unbiased and consistent, but it is inefficient. The result of T-test, F-test or the confidence interval will become invalid due to the variances of estimators tend to be underestimated or overestimated. Due to the invalid hypothesis testing, it may lead to misleading results on the significance of parameters in the model. Breusch-Pagan Goldfrey Test is used to detect Autocorrelation problem.

H0: There is no autocorrelation problem in the model.

H1: There is autocorrelation problem in the model.

Decision Rule: Reject H0 if p-value less than significance level. Otherwise, do not reject H0.

3.5.3.3. Heteroscedasticity

According to Chris (2008), Heteroscedasticity means that error terms do not have a constant variance. If Heteroscedasticity occur, the estimators of the ordinary least square method are inefficient and hypothesis testing is no longer reliable or valid as it will under estimate the variances and standard errors. There are several tests to detect the Heteroscedasticity problem, which are Park Test, Glesjer Test, Breusch-Pagan Goldfrey Test, White's Test and Autoregressive Conditional Heteroscedasticity (ARCH) test. In this case, this study chose to use Breusch-Pagan Goldfrey Test to detect Heteroscedasticity. H0: There is no Heteroscedasticity problem in the model. H1: There is Heteroscedasticity problem in the model. Decision Rule: Reject H0 if p-value greater than significance level. Otherwise, do not reject H0.

3.5.3.4. Normality

Normality tests are used to determine if a data set is well-modelled by a normal distribution. With the normality assumption, ordinary least square estimation can be easily derived and would be much more valid and straight forward. This study used Jarque-Bera Test (JB test) to find out whether the error term is normally distributed or not.

H0: Error term is normally distributed

H1: Error term is not normally distributed

Decision Rule: Reject H0 if p-value of JB tests greater than significance level. Otherwise, do not reject H0.

CHAPTER FOUR

4. DATA ANALYSIS, RESULTS AND DISCUSSION

The previous chapter discussed the research design employed to achieve the objectives of the study and to test the research hypothesis there on. This chapter details the research findings presented by descriptive statistics, tables and charts. The regression model and correlation statistics and discussions are also presented in this chapter. The data was analyzed to test the research hypothesis which was to find out the factors determining audit fees in manufacturing share companies of large tax payers in Ethiopia.

4.1. Reliability of data

Internal consistency describes the extent to which all the items in a test measure the same concept or construct and hence it is connected to the inter-relatedness of the items within the test. Internal consistency should be determined before a test can be employed for research or examination purposes to ensure validity. Under the rule, Cornbach's alpha below 0.6 is considered have a poor association whilst Cornbach's alpha higher than 0.7 indicates a good reliability (Cronbach, 1951).

Table 4.1. Result of Reliability Analysis

Cornbach's Alpha	Strength of Association	Number of Items
.83	Very Good	16

Source: SPSS 21 Output

The overall Cronbach alpha was shown 0.83 based on the results of the test, this result is Very Good because Cornbach's alpha coefficient for the overall assessment is greater than 0.70

4.2. Model Specification Test

There are broadly two classes of panel estimator approaches that can be employed in finance research: fixed effects model and random effects model. In order to select the appropriate model which provide consistent estimates for this study, Hausman test was employed. Hausman test used to test whether a random effects approach or a fixed effects model is valid for panel regression of this study. Fixed effect model is the most commonly type of model used for panel data that employs dummies to account for variables that affect the dependent

variable cross-sectionally but it is time invariant (do not vary over time). Generally it explores the relationships between explanatory variables and explained variable in separate entities, assuming that companies have their own characteristics that influence the relationships between variables. On the contrary, random effects model is a type of panel data model specification where the intercepts vary cross-sectionally as a result of each cross-sectional entity having a different error term but have a common mean. Means it imply a random variation across companies, uncorrelated to explanatory variables (Brooks, 2008).

Hypothesis for this test are:

HO: Random effect model is appropriate

H1: Fixed effect model is appropriate

Table 4.2: Correlated Random Effects - Hausman Test for (AUFFs)

Correlated Random Effects - Hausman Test

Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.649202	4	0.2269

Source: Eviews 9 output

Based on the above table, Hausman specification test shows, the P-value for the model is 0.2269. In the model P-value is greater than 5%. Therefore, based on the above Hausman test results random effect model is more appropriate than fixed effect model for the model.

4.3. Test Results for the Classical Linear Regression Model Assumptions

As it is mentioned in the preceding chapter, tests of diagnostic were carried out to prove that the data fits the basic assumptions of classical linear regression model. Accordingly, this section presents the test for the assumptions of classical linear regression model (CLRM): the error have zero mean, normality, autocorrelation, Heteroscedasticity, and multicollinearity. Hence, the results for model misspecification tests are presented as follows:

4.3.1. The Errors have Zero Mean (E (ut) = 0)

If a constant term is included in the regression equation, this assumption will never be violated. Therefore, because the regression model used in this study included a constant term, this assumption was not violated.

4.3.2. Test for Normality of Data

According to Brooks (2008) in order to conduct hypothesis test for the model parameters, the normality assumption must be fulfilled. The normality assumption is about the mean of the residuals is zero. Gujarati (2004) also noted that before running regression analysis, it should fulfil classic assumptions in undertaking the regression analysis and one of them is normality of data. Therefore, normality test is a major test before conducting analysis on the collected data.

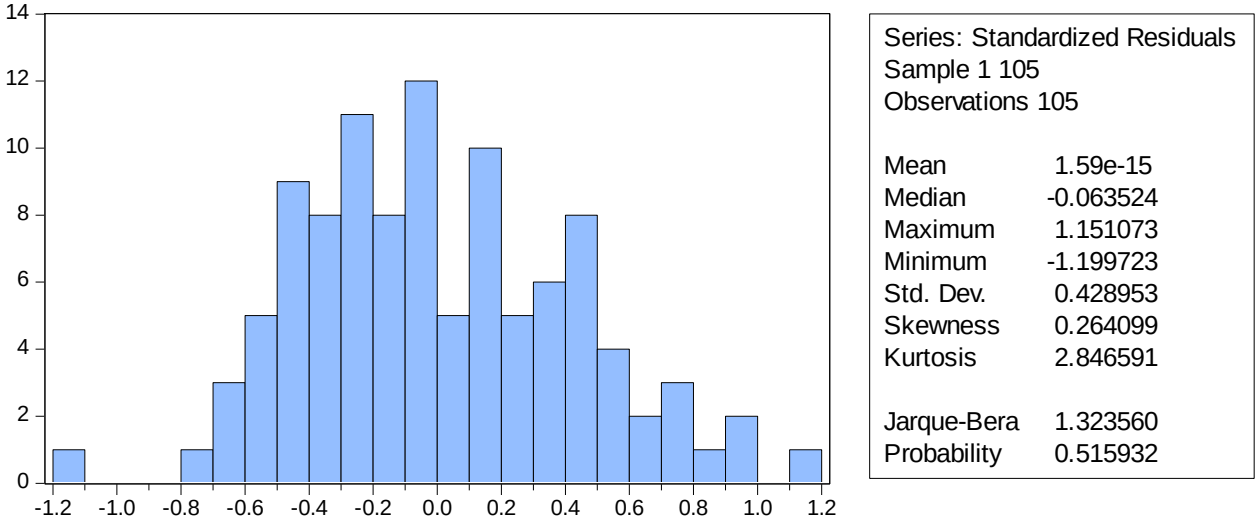
For testing of normality, the researcher is based on the following hypothesis.

$H_{O:}$ Normal distribution

HO: Not normal

Therefore, the researcher used graphical methods of testing the normality of data as shown below:

Figure 4.1: Histogram-Normality test for the Model (AUFEEs)



Source: Eview 9 output

Brooks (2008) stated that if the residuals are normally distributed, the histogram should be bell-shaped and the Bera-Jarque statistic would not be significant. That is, the p-value given

at the normality test should be greater than 0.05 not to reject the null hypothesis normality. Therefore based on the above figures, p-value of Bera-Jarque test for the model is 1.323560 for the model. P-value for the model is greater than 0.05 it passed the test so the researcher failed to reject the null hypothesis for the model.

4.3.3. Test for Heteroscedasticity

Another important assumption of classical linear regression model is that the disturbance terms are Homoscedasticity that means the variance of the errors to be constant. If the errors do not have a constant variance, it said that the assumption of Homoscedasticity has been violated. This violation is termed as Heteroscedasticity. (Brooks, 2008)

For testing of the presence of Heteroscedasticity, the researcher is based on the following hypothesis.

H0: There is no Heteroscedasticity in the models

H1: There is Heteroscedasticity in the model

To test for the presence of Heteroscedasticity the researcher use Breusch-Godfrey Serial Correlation LM Test and the results obtained are as follows:

Table 4.3 Heteroscedasticity Test: Breusch-Godfrey Serial Correlation LM Test (AUFEE)

Heteroscedasticity Test: Breusch-Pagan-Godfrey

F-statistic	2.018253	Prob. F(5,98)	0.0826
Obs*R-squared	9.709310	Prob. Chi-Square(5)	0.0839
Scaled explained SS	13.39639	Prob. Chi-Square(5)	0.1099

Source: Eview 9 output

In the model as shown in table, the F-statistic and Chi-Square versions of the test statistic show the same conclusion that there is no evidence for the presence of Heteroscedasticity, since the p-value was in excess of 0.05. The third version of the test statistic, scaled explained which is based on the explained sum of squares from the auxiliary regression, based on Brooks (2008) there is no evidence for the presence of Heteroscedasticity problem in the model, since the p-value was considerably in excess of 0.05.

4.3.4. Test for Autocorrelation

This also an important assumption from classical linear regression assumptions, that errors are uncorrelated with one another. If the errors are correlated with one another, it would be stated that they are auto correlated. Brooks (2008) noted that the test for the existence of

autocorrelation can be made by using the Durbin-Watson (DW) test and Breusch–Godfrey test. In this study the researcher used Breusch–Godfrey test to check the presence of autocorrelations. Because DW use only a one-period lag and also there will be many forms of residual autocorrelation that DW cannot detect.

Hypotheses of this test are:

H0 = There is no autocorrelations

H1 = There is autocorrelations

Breusch-Godfrey test is applied. This test is more general test for autocorrelation up to the rth order (Brooks, 2008).

Table 4.4.**Autocorrelation test**

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	2.110166	Prob. F(2,96)	0.1268
Obs*R-squared	4.379497	Prob. Chi-Square(2)	0.1119

Source: Eviews 9 output

As can be presented in the above autocorrelation test, E-views offer F test result for the model. P value of F-statistic 0.1268 and which is more than 5% of significance level. The conclusion from the model based on Breusch-Godfrey serial correlation LM test that, the null hypothesis of no autocorrelation is failed to reject at 5 percent level of significant. This implies that there is no significant evidence for the presence of autocorrelation in this research model. The Chi-Square P-value for the model also supports the absence of autocorrelation. The Chi-Square P-value for the model also supports the absence of autocorrelation.

Therefore, based on the test (Breusch-Godfrey test) the researcher concludes that there is no serial autocorrelation in the models.

4.3.5. Test for Multicollinearity

Multicollinearity test is used to detect whether collinearity exist among the independent0 variables in the model or not, because if correlation exists between independent variables, there is in the state of multicollinearity problem. In this case, the regression will end up with an inaccurate result and led to invalid conclusion.

Brooks (2008) also noted that, if it is stated that y and x are correlated, it means that y and x are being treated in completely symmetrical way. Correlation coefficient between two variables ranges from perfect positive correlation to perfect negative correlation (-1 to +1). It also defined as dependence of one variable upon another. There are two types of multicollinearity: perfect multicollinearity and near multicollinearity. Near multicollinearity is arise when there is non-negligible, but not perfect, relationship between two or more of the explanatory variables. On the other side, perfect multicollinearity occurs when there is an exact relationship between two or more variables. In this case, it is not possible to estimate all of the coefficients in the model. Therefore, the table below presents the correlations among the independent and dependent variables in the model.

Table 4.5: Correlation Matrix for the Model (AUFEE)

	LNASSET	COMP	DR	ROA
LNASSET	1			
COMP	-0.120776	1		
DR	0.056820	-0.120776	1	
ROA	0.024890	0.118625	-0.184948	1

Source: Eviews 9 output

Table 4.4 illustrates the correlation between the independent variables, auditee size (ASSET), auditee complexity (COMP),auditee risk measured by debt ratio (DR) and auditee profitability measured by return on asset (ROA).

On the above tables Pearson correlation used to test the existence of multicollinearity by checking the existence of series correlation between the independent variables. The correlations between the independent variables are shown in table 4.5 above. All correlation results are below 0.80, which indicates that multicollinearity is not a problem for this study. As a rule of thumb, if correlation coefficient between two explanatory variables is high, it in excess of 0.80, then there is a problem of perfect multicollinearity (Saunders et al., 2012).

4.3.6. Descriptive Statistics

In order to achieve the study objective, the researcher adopted various statistical tools to analyze the collected data. This section presents descriptive statistics which focuses on the distribution of the data; the mean, standard deviation, maximum and minimum values for dependent and independent variables for the selected sample of Ethiopian manufacturing

share companies of large tax payers for the year 2011-2017. AUFEE is natural log of audit fee paid to auditor, ASST is natural log of assets, COMP is Complexity and measured by receivables to total asset ratio, DR is debt ratio measured by long term debt to total asset ratio, ROA is return on asset. The cross-section data is based on fifteen MSCs of large tax payers for seven years covered 105 observations for four independent variables incorporated in the analysis of AUFEE. The results show positive means for all variables.

As it is shown table below, Audit Fee of manufacturing share companies (LTO) in Ethiopia measured in terms of Natural Logarithm of Audit Fee (LNAUFEE) for the total 105 observations showed up averagely value of Br 4.784145 and with standard deviation of Br. 0.530639 during the study period (2011-2017), with a maximum value of Br 863,773 and a minimum of Br 10,000. This variation is a reflection of the size and complexity of the audited share companies. There is a big difference among share companies with respect to asset owned by them. The amount of audit fee paid in Ethiopian share companies is very low compared to other countries level of audit fee. This may affect the quality of audit badly.

Table 4.6: Summary of Descriptive Statistics

Variables	Mean	Median	Maximum	Minimum	Std. Dev.
AUFEE	4.784145	4.623249	5.978590	3.079181	0.530639
ASSET	8.380063	8.364598	9.603585	7.415256	0.504331
COMP	0.484770	0.517773	1.601919	0.003246	0.280616
DR	0.614023	0.520913	3.787475	0.059733	0.464467
ROA	0.053448	0.050496	0.742008	-0.397994	0.148870

Source: Eviews 9 Output

As it is presented in table 4.6, the mean value of audit fee was measured by natural log of assets. However, for this discussion the researcher used the real Birr value of total assets and to clearly understand the figures. There is also a big difference among firms in auditee size reflected through total assets. Based on the information, MSCs of (LTO) have an average size of Birr 4.75E+08 (8.380063) with a maximum of Birr 4.01E+09 (9.603585) and a minimum of Birr 26016944 (0.003246) which shows a greater variation between companies reaching to Birr 4.75E+08 and a standard deviation of 0.50 also indicates this variations. The maximum asset size is from manufacturing company on 2017 and the minimum one is from

manufacturing company on 2013. The maximum and the minimum value from these result from the model indicates that there is a variation in term of size between sampled firms.

Complexity has the minimum value of 0.003246 (this means that is 0.3% of assets are receivables) and maximum value of 1.601919 (this means that is 160% of assets are receivables). These are measured in receivable ratio and on average each company in sample has a sum of equals to 0.484770 (this means that 48% of assets are receivables). The deviation of each MSC Company's complexity i.e. standard deviation is equal to 0.28. This implies that receivables are significant portion of total asset.

Debt ratio (DR) shows the proportion of a company's assets that are financed by debt. A ratio of 0.614023 implies that MSCs financed their total assets through long term debt. It has a maximum debt ratio of 3.787475 and minimum value 0.059733 with standard deviation of 1.923592. The standard deviation of the leverage ratio together with the minimum and maximum amounts pointed to major variations in the level of leverage in the sampled companies.

As it is presented in table 4.5, the mean value of external audit fees was measured by return on asset which is measured by dividing EBIT to total asset of the companies. ROA indicates that how the manager utilize the available assets to generate profits by utilizing the available assets of the firm (Naser at al. 2013). The descriptive statistics in this study shows a mean value of 0.053448 and median of 0.050496. This result indicates that on average, for every one birr of an asset of manufacturing share companies there was approximately 0.05 cents return and also shows that the sample MSCs on average earned a net profit of 0,05 of total asset. ROA also has a maximum of 0.742008 and the minimum of -0.397994. This indicates the most profitable manufacturing share companies (MSCs) earns on average 0.742008 cents income and the least profitable MSCs earns on average -0.397994 cents income (loss) for a single birr for every one Birr in the firm's asset.

Table 4.7: Average audit fee and profit over time

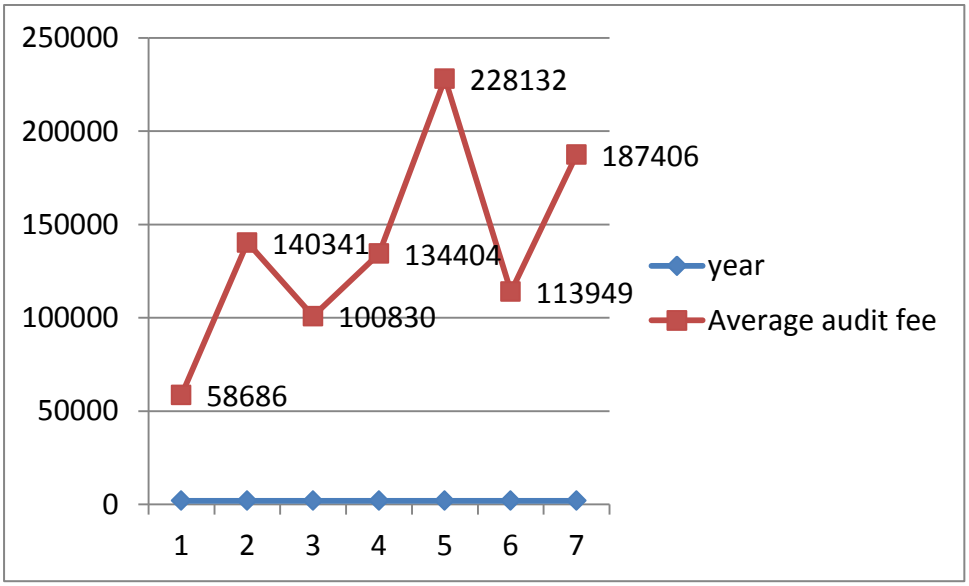
Year	Average audit fee	Average profit
2011	58686	58229970
2012	140341	44136909
2013	100830	42584148
2014	134404	5757599
2015	228132	10977591
2016	113949	19072322
2017	187406	70952284

Source: Developed for the research.

Though the literature indicate the existence of positive relationship between audit fees and profitability (Ebrahm, 2010) in this study as shown on the above table there is no consistent relationship between profitability and audit fees variables. For instance the lowest average profit registered in 2012 amount Br 10,977,591 and in contrast to this the highest amount of audit fees was registered in this year which is Br 228,132.

FEEs of sampled MSCs of large tax payers over years (2011-2017)

Figure 4.2: Average audit fee trends



Source: own computation from sampled MSCs through Eviews 9.

As indicated in the above figure 4.2 the minimum audit fees was reported on 2011 which was Br 58,686.On the other hand the maximum audit fee was charged on 2015 amounting Birr 228,132.There was a steep increase in audit fee in 2015 relative to 2014 by Birr 93,728 (by 69%).As indicated in prior parts the literature shows an increasing pattern of audit fees following the rise in profitability and asset size (growth) of firms(Alhassan, 2017; Hassan Yahia, 2014; Wahab and Zain, 2013; Yaacob (2013); Naser, Al-Mutairi, and Nuseibeh (2013)**,** but this studies result did not reveal such consistent pattern.

4.4. Results of the Regression Analysis

This section presents the regression result of Cross-section random an effect that was made to examine the determinants of Audit Fees in manufacturing share Companies in Ethiopia. Accordingly, the regression result was made and coefficients of the variables were estimated via E-views 9 software package. As stated above, Cross-section random effects is an appropriate model used in this study. Thus, the model used to examine the determinants of Audit Fee in MSCs in Ethiopia was:

$$LN(ADFEE) = \beta 0 + \beta 1(LNASSET)) + \beta 2(COMP) + \beta 3(DR + \beta 4(ROA) + \varepsilon$$

Hypothesis Testing and Discussion of Results

Table 4.8**: Relationship between expected sign and actual sign of**

H	Statement of Hypothesis	Independent Variables Expected Sign	Independent Variables Actual Sign
1	Relation between auditee size and audit fees	+ Significant	+ Significant
2	Relation between complexity and audit fees	+ Significant	- Insignificant
3	Relation between auditee risk and audit fees	+ Significant	- Significant
4	Relation between auditee profitability and audit fees	+ Significant	- Insignificant

Source: Developed for the research

Figure4.3: below shows that the result of multiple regression analysis based on random effect model that R-squared is 34.7% and adjusted R-squared value of 32.0% for the model. The value of adjusted R-squared shows that there is a relationship between AUFEE and the listed independent variables, because all independent variables can explain return on asset about 32% in the t model. While the remaining 68% explained by other factors which are not included in the regression. Although the R^2 (35%) seems to be relatively small; a large R^2 does not necessarily mean high predictability, nor does allow R^2 necessarily mean a poor predictability

Table 4.9: Relationship between audit fee and determinants of audit fee

Dependent Variable: F0EE
Method: Panel Lea000st Squares
Date: 05/27/19 Time: 13:58
Sample: 1 105
Periods included: 7
Cross-sections included: 15
Total panel (balanced) observations: 105

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.112528	0.733874	0.153335	0.8784
ASSET	0.581701	0.086177	6.750072	0.0000
COMP	-0.127923	0.163287	-0.783424	0.4352
DR	-0.196299	0.095893	-2.047054	0.0433
ROA	-0.384143	0.308601	-1.244787	0.2161
R-squared	0.346537	Mean dependent var		4.784145
Adjusted R-squared	0.320398	S.D. dependent var		0.530639
S.E. of regression	0.437448	Akaike info criterion		1.230730
Sum squared resid	19.13607	Schwarz criterion		1.357109
Log likelihood	-59.61333	Hannan-Quinn criter.		1.281941
F-statistic	13.25771	Durbin-Watson stat		1.719618
Prob (F-statistic)	0.000000			

Source: Eviews 9 Output

In the figure 4.3 the researcher tries to show the relationship between different determinant factors variables and audit fee.

To do all classical regression assumptions are meet and to improve the fitness of the model audit fee and asset are transformed to log. The regression result in the model by using random effect regression model shows coefficient intercept / C / is approximately 0.112528. This

means, when all explanatory variables took a value of zero, the average value of AUFEE would be taking a value of 0.112528 and statistically significant at 5% level of significance.

Based on the regression result, the R^2value is 0.346537 (34.7 %) which implies that approximately 35% of fitness can be observed in the sample regression line. This can be further explained as, 35% of the total variation in Audit Fees is explained by the independent variables (auditee's size, auditee's complexity, auditee's risk and auditee's profitability) jointly. The remaining 65% of change will be explained by other variables those are not included in this model but still it indicates that there is a relationship between independent variables and the dependent variable which makes further interpretations and hypothesis tests valid on the model. Although the R^2 (35%) seems to be relatively small; a large R^2 does not necessarily mean high predictability, nor does allow small R^2 necessarily mean a poor predictability.

The F statistic is 13.257, and Prob (F-statistic) value is 0.000 statistically significant at 0.05 level of significant which indicates strong statistical significance, which enhanced the reliability and validity of the model. Each variable is described in detail under the following sections.

A. **Auditee Size**

According to the finding from data analysis, auditee size was proved to have significant relationship with audit fees. Null hypothesis (H0) of this variable is rejected due to Multiple Linear Regression analysis generated the results of p-value with 0.0000 which is less than 0.05.

These findings of the study are consistent with the results of previous studies conducted by (Yaacob, 2013; Naser et al., 2013; and Causholli et al., 2011; Gonthier-Besacier and Schatt, 2007; Ahmed and Goyal, 2005; and Joshi and Bastaki, 2000) which revealed that auditee size and audit fees were significantly associated. Wahab and Zain (2013) stated that larger auditee size demand more time to design audit procedures and to conduct more test of detail due to the scope and complexity of an audit which consequently result in a higher audit fees charged by the auditors. The results are in line with the hypotheses developed where client size is significant to the level of audit fees charged.

The significance size coefficient can be interpreted as a 1% change in the total asset accompanied by 58% increase in audit fee. Results of the study show that size of auditee's

business has significant positive relationship with audit fees. The fact that labour usages and efforts of auditor increase with auditee's size of business holds true in manufacturing share companies of Ethiopia and results are in accordance with the meta-analysis of (Hay, 2010). Generally, the positive and significant relationship between size and audit fees in the result leads to fail to reject the first hypothesis.

B. Auditee Complexity

The second variable appeared to be insignificant predictor of audit fees of the MSCs of (LTO) in Ethiopia is auditee's complexity as measured by Receivable ratio. The coefficient of Complexity (COMP) is negative (-0.127) and statistically insignificant at 5% level of significance (P-value of 0.435). This finding is not in line with some prior studies (De Deorge et al., (2012); Yaacob and Che-Ahmad, 2012; Kim et al., 2012; Gonthier-Besacier and Schatt, 2007 and Joshi & Al-Bastaki, 2000). The strong association observed between audit fees and auditee's complexity is justified on grounds that a more complex company (measured by the ratio of receivable to total asset) requires more audit work to examine individual company financial statements and consolidated financial statements. Moreover, the auditor needs to perform more complicated audit procedures when the company has foreign subsidiaries for making sure of the client's compliance with the rules and regulations imposed by home country and, therefore, the company will be subject to higher audit fees.

Based on the finding from data analysis, COMP was not found to have a strong impact on dependent variable, audit fees. Null hypothesis (H0) of this variable is not rejected due to Multiple Linear Regression analysis generated the results of p-value with 0.435 which is more than 0.05. It means when defining audit fees, auditors do not pay attention to the ratio of receivables to the total assets. Beside nature of assets, number of subsidiaries was used as a proxy of auditee complexity by earlier authors and proven to have explanation power for audit fee changes (e.g Joshi and Bastaki, 2000; Thinggaard and Kiertzner, 2008). However, the researcher could not collect data of number subsidiaries to test this relationship. Therefore, according of the results of this study, it is difficult to develop a new theory or to support the existing theory.

On the other hand, the findings of the present study is identified to be supported by previous research conducted by Alhassan (2017) which concluded that auditee risk with the proxy of debt ratio has significantly relationship with audit fees, but the relationship of DR with audit fee is opposite to what was expected.

C.**Auditee Risk**

The multiple regression test results show that a measure of audit risk with a proxy of debt ratio has a negative relation with audit fees (P=0.043 and correlation coefficient = -0.196). From the model, long term debt ratio has a negative significant effect on the audit fee of MSCs. This means as long term debt ratio increase, the audit fee of MSCs would decrease.

As it is observed from the finding of the data analysis, auditee risk was proved to have a strong negative impact on dependent variable, audit fees. A null hypothesis (H0) of this variable is not rejected due to Multiple Linear Regression analysis generated the results of p - value with 0.043 which is less than 0.05. This result was not consistent with past studies of (Koh and Tong, 2012; Calderon et al. 2012; and Stanley, 2011) which provided that auditee risk has positive relationship with audit fees. Hence, the auditee risk results in auditor decreasing audit fees. The result is not in line with the hypotheses developed where audit fees increases with the auditee risk. So it implies that, most MSCs were those maintaining a high proportion of long term debt. This may because of due to the possibility of getting high long term debt for MSCs in Ethiopia. Although, the increase in the level of long term debt also increases the riskiness of companies, auditors may not care for risk factors rather they charge for by looking mainly at an asset of their auditee as evidenced by (Alhassan, 2017).

On the other hand, the findings of the present study is identified to be supported by previous research conducted by Alhassan (2017) which concluded that auditee risk with the proxy of debt ratio has significantly relationship with audit fees, but the relationship of DR with audit fee is opposite to what was expected.

Debt ratio is a measure of firm's leverage and is found by dividing total long term liabilities by total assets. Return on asset measures a firm's profitability and is found by dividing net income by total assets. Both variables are found to be negatively related with audit fees which means that auditors charge fewer fees for a companies which are highly leverage and highly profitable. Therefore, the researcher may say audit fee is lower because the higher these ratios, the lower the level of risk in business.

On the other hand, the findings of the present study is identified to be supported by previous research conducted by Dinh (2012) which concluded that auditee complexity has no significant relationship with audit fees and the relationship also opposite to what was expected.

D. Auditee Profitability

In this study, Profitability is measured in terms of Return on Asset (ROA). The analysis result shows that, the coefficient of ROA is (-0.3843) and a p- value of 0.216 indicates a negative sign and no significant relation between audit fees and auditee profitability. Previous research pointed to possible association between audit fees and client profitability (Joshi & Al-Bastaki, 2000).

According to the finding from data analysis, profitability was proved to have no significant relationship with audit fees. Null hypotheses (H0) of this variable is not rejected due to Multiple Linear Regression analysis generated the results of p value with 0.216 which is more than 0.05. The finding from this study appears to be contradictory to the results of previous study carried out by Al-Harshani (2008) which reported that audit fees are positively and significantly associated with the profitability of the firm. Moradi et al. (2012) suggested that highly profitable audit client will be charged higher audit fees by audit firm as auditor is expected to collect more evidence to test an unusual high earnings as well as expenses of the company. Accordingly, companies will be subject to rigorous audit testing to their revenues and expenses (Joshi & Al-Bastaki, 2000). The inconsistency of the findings with prior studies can be explained by the fact that most of the previous researches did not adopt samples only from manufacturing share companies and the audit services market in Ethiopia may be not at standard as compared to those developed countries stock market.

On the other hand, the findings of the present study is identified to be supported by previous research conducted by Mohammad Hassan and Naser (2013) which concluded that profitability has no significantly relationship with audit fees. Swanson (2008) further claimed that the possibility of inappropriate in audit pricing decision could make if auditors are pricing the audit services related to the net profit of the company. The results are contradicted with the hypotheses developed where profitability is insignificant to the level of audit fees charged. Hence, profitable companies would pay high audit fees. Different variables were employed by previous researchers to represent profitability. The negative and insignificant relationship between ROA and audit fees in the result leads to fail not reject the 4th hypothesis.

CHAPTERFIVE

5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter is final chapter for this thesis and it provides summary of findings, conclusions and recommendations of the study. In this study, the researcher use audit feesas a dependent variable. Auditee size, auditee complexity, auditee risk and auditee profitability used as an independent variables. The quantitative data were collected from the annual financial statement of fifteen Ethiopian manufacturing share companies categorized under (LTO) for the period covered 2011-2017. The collected data were analyzed by employing panel least square regression analysis model using statistical package Eviews 9.

5.1 Summary of Findings

The study sought to find out the determinants of audit fees for MSCs of large tax payers in Ethiopia.

The study employed deductive approach where a study began with developing theory and hypotheses. After that the researcher chooses data and tests the hypotheses. Data was collected on 15 listed manufacturing share companies of large tax payers annual reports covering the period from 2011 to 2017.

The annual reports were obtained from the Ministry of revenue branch of (LTO) of Ethiopia. Multiple linear regression and correlation analysis were used to analyze the data. It was found that the average audit fee was Br 4.784145 in the period of the study. The multiple linear regression model (R^2) is 0.346 and the adjusted (R^2) is 0.320 implying that the variation in audit fees can be explained 35% by the variables in the study, while 65% of the audit fee variance is explained by the error term and other factors. The model is statistically significant as indicated by the F value of 63.354 and significance p- value of 0.000.

The regression results indicate existence of a positive relationship between audit fees and the variable auditee size. Also, a negative relationship was found between audit fee and auditee risk. The results did not support any relationship between audit fees and auditee profitability and auditee complexity.

Table 5.1: Summary Result of Hypotheses Testing

Alternative Hypotheses	Hypotheses	P-value	Statistics Result
H1	There is no significant relationship between auditee size (ASSET) and audit fees among listed manufacturing share companies categorized under large tax payers in Ethiopia	0.0000	Do not reject
H2	There is significant relationship between auditee complexity and audit fees among listed manufacturing share companies categorized under large tax payers in Ethiopia.	0.4352	Rejected
H3	There is significant relationship between auditee risk (DR) and audit fees among listed manufacturing share companies categorized under large tax payers in Ethiopia.	0.0433	Do not reject
H4	There is significant relationship between auditee profitability (ROA) and audit fees among listed manufacturing share companies categorized under large tax payers in Ethiopia.	0.2161	Rejected

5.2. Conclusion

The study sought to define audit fees determinants of MSCs categorized under large tax payers during the period 2011-2017 in Addis Ababa, Ethiopia. The research uses the deductive approach and has been conducted based on a sample of 15, annual reports of 7 years. Four factors proxies by four variables are chosen to be tested.

Based on the results of the findings the researcher has drawn the following conclusion:

1. The multiple linear regression test results show that for MSCs categorized under large tax payer, there are two factors having explanatory power on audit fees, namely auditee size (measured by the log of total assets - positive) and auditee risk (measured by total long term liabilities/Total asset - negative). It can be concluded that auditors in Ethiopia ignore the risk factor while negotiating audit fee. Ignoring of risk factor is a matter of concern for the auditors as they could be held liable for a failure of flop of business which may defame the auditor's reputation.

2. According to the multiple linear regression result, auditee complexity and auditee profitability were not evident to have associations with audit fees in the multiple linear regression.

3. From the study it is evident that the audit market for MSCs in Ethiopia is dominated by the local audit firms.

4. Auditee size and auditee risk are the important determinant factors of audit fees for Ethiopian manufacturing share companies categorized under large tax payers. The results can be interpreted that auditors for Ethiopian MSCs might concentrate on only total asset of the auditee to define audit fees.

5. The researcher should note that there are results which are different from results of previous studies. Beside the difference in environment context and the difficulty of data collection in statistical analysis can be reasons. For example, while most of previous researches (Joshi and Bastaki, 2000; Ahmed and Goyal, 2005; Mellett et al., 2007; Gonthier-Besacier and Schatt, 2007; Thinggaard and Kiertzner, 2008) find out a relation between audit fees and auditee complexity, this research result did not indicate such relation.

5. In these research, besides nature of assets, auditee risk also is used and found to be in relation with audit fees and this is consistent with previous studies like (Joshi and Bastaki, 2000; Thinggaard and Kiertzner, 2008). However, due to the difficulty of availability and data collection, the researcher did not test more than four variables including number of subsidiaries as a proxy of auditee complexity

5.3. Recommendations

Based on the above results the researcher suggests the following recommendation:

1. This research examines the effects of auditee size, auditee complexity, auditee risk and auditee profitability which affects the amount of audit fees among manufacturing share companies in Ethiopia. The findings presented in the study indicated that the independent variables (size and risk) have a significant relationship to the dependent variable (audit fees). Based on the results of the study, practitioners such as manufacturing share companies, audit firms as well as regulatory bodies are able to obtain several implications.
2. Manufacturing share companies of large tax payers can be advised to focus on the determinant factors that are deemed to have significant association with audit fees. By understanding how these independent variables affect audit fees among manufacturing share companies, and companies can gain more insights on what they are paying for and whether the audit fees are priced at an acceptable level.
3. The auditee risk factor shows an unusual result. This shows that the risk factor is almost ignored in Ethiopia by auditors. It can be recommended that auditors in Ethiopia do not ignore the risk factor while negotiating audit fee. Ignoring of risk factor is a matter of concern for the auditors as they could be held liable for a failure of flop of business which may defame the auditor's reputation.
4. In addition, a company's decision to reduce the agency cost and increase the quality of audit may choose to appoint Big 4 auditors. This in turn, results in a higher audit fees charged by auditors as a reflection of brand name reputation and higher audit quality provided by the audit firms.
5. On the other hand, the findings of this research may provide a basis for audit firms to regulate or establish policies relating to audit pricing in Ethiopia. This paper contributes to audit firms by helping auditors to make audit pricing decision and provide an in-depth analysis of audit fees determinants in Ethiopian manufacturing share companies.

6. From the regulatory bodies' perspectives, Office of Federal Auditor General (OFAG) and Accounting and Auditing Board of Ethiopia (AABE) can use this research to oversee the practice of charging a reasonable level of auditor remuneration, commensurate with the provision of professional assurance services of acceptable and recognized audit standards in Ethiopia. Thereby, it encourages professional auditors in public practice to comply with the audit standards in the performance of and charging for their respective duties.
7. As shown from the regression result, it proves that increase in long term debt negatively affects the audit fee of Ethiopian MSCs. Financial managers of manufacturing share companies also should consider effect of significant variables of debt ratio and size before deciding amount of audit fees.

5.4. Suggestions for Further Research

Arising from the study, the following areas are recommended for future studies.

1. This research can be seen as a start up for the future studies that would be taken place in the area under investigation, and provides further implications for researchers by introducing the exceptional and inconsistency relations between auditfees and its determinant factors in Ethiopian manufacturing share companies of large tax payers..
2. The effect of the various industries or sectors in the determination of audit fees should be studied as there various regulations and requirements governing various industries.
3. A study should be done to evaluate the strategies used by the local audit firms so as to command a very high stake in the local audit market. This study also serves as the basis for future researches with a better understanding of audit market in Ethiopia.
4. Based on the knowledge of the researcher, no study in Ethiopia conducted on the effect of determinants of audit fee on external audit fee of manufacturing share companies of (LTO). So, the researcher recommend for future researchers to work on this sector more by considering additional explanatory and dependent variables that are client perspective as well as auditor perspective variables such as auditor status, experience auditor rotation, reputation, number of subsidiaries, audit time, return on equity, which might provide a strong relationship and help to discover new and better finding in the effect of audit fees.

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Appendices

Appendix 1: Descriptive Statistics for the Model

	FEE	ASSET	COMP	DR	ROA
Mean	4.784145	8.380063	0.484770	0.614023	0.053448
Median	4.623249	8.364598	0.517773	0.520913	0.050496
Maximum	5.978590	9.603585	1.601919	3.787475	0.742008
Minimum	3.079181	7.415256	0.003246	0.059733	-0.397994
Std. Dev.	0.530639	0.504331	0.280616	0.464467	0.148870
Skewness	0.218828	0.262172	0.599610	3.441568	0.331595
Kurtosis	2.873434	2.344762	4.290975	22.59087	7.759372
Jarque-Bera	0.908085	3.081195	13.58326	1886.412	101.0251
Probability	0.635056	0.214253	0.001123	0.000000	0.000000
Sum	502.3352	879.9066	50.90084	64.47247	5.612011
Sum Sq. Dev.	29.28410	26.45233	8.189538	22.43589	2.304885
Observations	105	105	105	105	105

Appendix 2: Pearson correlation Matrix for the Model

	FEE	ASSET	COMP	DR	ROA
FEE	1.000000				
ASSET	0.548586	1.000000			
COMP	-0.184271	-0.120776	1.000000		
DR	-0.128500	0.056820	0.118625	1.000000	
ROA	-0.080730	0.024890	0.273426	-0.184948	1.000000

Appendix 3: Summary of Past Empirical Studies

Study	Country	Measurement and Data Collection	Major Findings
Mohammad Hassan and Naser (2013	Abu Dhabi	-Pearson correlation coefficient matrix -Audit fees were measured by logarithms whereas profitability was measured by using net income to sales -Annual reports and governance reports from 30 Emirati nonfinancial companies which listed on Abu Dhabi Securities Exchange (ADX) during year 2011	The results showed that there is a positive insignificant association between the audit fees and the profitability.
El-Gammal (2012	Lebanon	-Mann-Whitney U Test -The importance of each factor in the determinant of audit fees is rated by using likert scale from 1 to 5 -150 questionnaires to leading banks, employees of three of the Big 4, and middle-sized CPA firms but only 80 of them were answered .	The results showed that profitability is insignificant to the determination of audit fees
Moradi, Valipour0 and Pahlavan (2012)	Tehran	Multi-variable regression analysis and one-way ANOVA analysis -Audit fees were measured by logarithm whereas profitability was measured by return on assets -Financial statement from 57 companies which listed on Tehran Stock Exchange from year 2003 to year 2009	The results showed that there is a positive relationship between company profitability and audit fees.
Al-Harshani (2008)	Kuwait	-Regression model -Audit fees were measured by logarithm whereas	The results showed that audit

		profitability was measured by return on investment which ratio of the client's net income to total stockholders' equity. -Survey through 49 audit engagements with 2005 fiscalyear ends that were performed by both "Big" and "non-Big" audit firms	fees are positively related to the profitability of the audit client.
Ebrahim (2010)	United States	-Audit fee change model regression -Audit fees were measured by logarithm whereas profitability was measured by return on assets where income before tax divided by total assets -Compustat annual files were collected through Audit Analytics and Compustat databases from the year 2000 to year 2006	The results showed that audit fees are significantly and negatively related to client's profitability
Wahab and Zain (2013)	Malaysia	-Panel regression analysis -Audit fees is measured by natural log of audit fees whereas firm size is measured by the natural log of total assets -Annual reports of 3,003 firms	The study found that there is a significant and positive relationship between firm size and audit fees.
Yaacob (2013)	Malaysia	-Generalized Least Squares (GLS) regression -Audit fees is measured by natural log of the external audit fee, and corporate size is measured by natural log of total assets - Annual reports of 1,050 samples of non-financial companies listed on	The results concluded that size and audit fees are significantly and positively associated.

		Bursa Malaysia in year 2006 to year 2008	
Naser,Kandari, AlMutairi,and Nuseibe0h (2013) United0	United Arab Emirates	-Regression analysis -Audit fee is measured by natural logarithm of audit fees whereas corporate size is measured by natural logarithm of total assets -Annual reports of 32 nonfinancial companies listed on Abu Dhabi Securities Exchange (ADX) in year 2012	The result showed that there is a significant and positive association between audit fees and corporate size.
Vermeer, Raghunandan, and Forgione (2009)	United States	Regression analysis -Audit fee is measured by natural log of external audit fees and corporate size is measured by natural log of total assets -125 company's chief financial officer through questionnaire in year 2001 and year 200	The results concluded that firm size is associated with audit fees
Sori and Mohamad (2008	Malaysia	-Ordinary least square regression (OLS) -Audit fee is measured by natural log of external audit fees and corporate size is measured by market capitalization. -Annual reports of 100 companies listed on Bursa Malaysia from the stock market's directory in year 2007	there is a positive and significant relationship between audit fees and corporate size.

De D0eorge, Ferguson and Spear (2012)	Australia	-Cross-sectional Variation Analysis Model -Audit fees are measured by natural log of audit fees paid to external auditors and the complexity is measured by a dummy variable which is set 1 in the year of IFRS adoption, and assigned a value of otherwise. -Annual reports from 907 companies published on Australian Stock Exchange (ASX) in the year 2002 to year 2006	The findings showed that the amount of audit fees will be increased particularly for those firms with IFRS implementation during the year of adoption.
Yaacob and Che-Ahmad (2012	Malaysia	-Fixed Effect Regression Model -Audit fee is measured by the natural log of audit fee whereas the complexity is measured by Post-IFRS adoption period (code 1 for data after IFRS adoption, 0 before IFRS adoption). -Annual reports from 3,050 companies in Bursa Malaysia from year 2004 to year 2008	The result concluded that adoption of IFRS increase the audit fees.
Hallak and Silvar (2012)	Brazi	-Correlation matrix for the regression models -Log of audit fees has been used to measure audit fees, and a dummy variable where one represents a Big-Four affiliate is	The result indicated that audit fees are positively related with the Big Four of auditor.

		used to measure Big-Four affiliate - 122 companies listed on Dhaka Stock Exchange in year 2005 The result revealed BigFour affiliate firms are not positively related with audit fees. Hallak and Silvar (2012) -Systemic Generalized Method of Moments (GMM) Regressions Model -Fees are measured by logarithm of total expenditure on auditing and consulting services whereby Big4 status is measured by using a dummy variable in which one represents the Big Four auditor. -219 companies publicly traded in year 2009 and data collected from Economatica, BM&FBovespa stock exchange, Securities and Exchange Commission of Brazil	
Li and Zhu (2011)	China	-Correlation matrix for the regression models -Audit fees is measured by natural log of audit fees whereby Big 4 auditors measured by using dummy variable in which one stand for firm with Big 4 auditors -1426 listed companies' financial information from China Stock Market Accounting Research (CSMAR) during the year 2009	The results showed the prestige of auditing firm is found to be significant associated with the audit fees.
El-Gammal (2012)	Lebanon	-Mann-Whitney U Test -Audit fees	This research has

		and status of audit fees are rated by respondents using a likert scale from 1 to 5 -150 questionnaires were designed to collect data from a sample of 80 respondents	revealed that the status of audit firm employed by the company is significant to the determinants of audit fees.
Van Caneghem,(2010)	Belgium	-Ordinary least squares (OLS) model -Natural log of audit fees has been used to measure audit fees, and a dummy variable where one represents a Big4 auditor is used to measure Big4 auditor -Data of 4,403 companies were extracted from Bureau van Dijk's Belfirst database which consists of Belgian and Luxemburg firms financial data	The result demonstrated that Big4 have a very strong positive association with audit fees
Koh and Tong (2012	United States	-Correlation Matrix for Regression Model -The audit fee is measured by natural log of audit fee and risk is measured by return on asset -20,687 firms observations in year 2000 to year 2010 from Audit Analytical database	The result concluded that the clients involved in controversial activities will be charged higher audit fees.
Calderon, Wang and Klenotic (2012)	United States	-Multivariate Analysis Model -The audit fees is measured by natural log of audit fees and the risk is measured by return on asset. -3,539 firms which focus on public disclosures of material weaknesses in the reports compiled by Audit Analytics from year 2004 to year 2009	The study indicated that the relationship is positively related

Stanley (2011	Malaysia	-Multiple Regression Analysis Model -The audit fee is measured by natural log while the business risk is measured by return on asset. -362 bankruptcy filings in year 2000 to year 2007 from New Generation Research Incorporation companies listed on Bursa Malaysia in year 2012	The result was significant negative relationship between audit fees and the client firms' business risk.
Hogan and Wilkins (2008)	United States	-Multivariate model -The audit fees is measured by calculating a percentage of total client assets whereby internal control is measured by using dummy variable in which 1equal to if the internal control problem disclosure indicates a material weakness and 0 otherwise -6,735 observations which made up of 5,155 companies audited by Big Four firms and 1,580 companies audited by non Big Four firms from year 2002 to year 2004	The results indicated that the audit fees are positively related with internal control deficiency throughout the firms.

Appendix 4: Operation of the Model Variables

Variable	Item	Description	References	Measurement
Audit fees	DV1	Natural log of audit fees	Siddiqui, Zaman & Khan, 2013	Ratio scale
Auditee Size	IV1	Natural log of total asset	Al-Harshani, 2008	Ratio scale
Complexity	IV2	Ratios receivables to total assets	De Deorge, Ferguson & Spear, 2013	Ratio scale
Auditee Risk	IV3	Debt ratio	Stanley, 2011	Ratio scale
Profitability	IV4	Return on asset	Mohammad Hassan & Naser, 2013	Ratio scale

Appendix 5: Data fromEthiopian Manufacturing Share companies categorised under (LTO)

Company Code	Audit Years	Audit fees	Total Assets	Net Receivable	Inventories	TLD	Net Income /Loss	LNAU FEE	LNASSET	COMP	DR	ROA
1	2,011	45000	117,380,214	7,124,447	27,074,809	31,836,156	15,671,734	4.653213	8.069595	0.291355	0.271223	0.13351257
1	2,012	42000	251,034,686	149,672,110	0	85,843,179	14,163,464	4.623249	8.399734	0.596221	0.341957	0.056420347
1	2,013	42,000	389,233,353	23,229,117	18,899,862	103,226,904	27,706,498	4.623249	8.59021	0.108236	0.265206	0.07118223
1	2,014	56000	634,829,441	3,403,575	264,290,924	88,716,148	14,096,786	4.748188	8.802657	0.421679	0.139748	0.022205627
1	2,015	55,000	585,655,272	2,861,658	27,284,281	157,336,636	36,628,473	4.740363	8.767642	0.051474	0.268651	0.062542719
1	2,016	60000	604,170,415	14,847,498	82,366,155	149,892,542	24, 981,052	4.778151	8.781159	0.160904	0.248096	0.041347
1	2,017	65000	606,034,689	27,561,341	84,537,444	223,794,307	58,691,778	4.812913	8.782497	0.184971	0.369276	0.096845575
2	2,011	12000	85,548,890	21,255,353	21,786,063	35,588,830	6,386,816	4.079181	7.932214	0.503121	0.416006	0.074656913
2	2,012	12,000	90,502,291	8,324,286	21,460,510	47,281,663	6,942,476	4.079181	7.95666	0.329105	0.522436	0.0767105
2	2,013	12000	123,549,846	13,566,762	33,268,681	43,551,664	21,976,013	4.079181	8.091842	0.379081	0.352503	0.177871634
2	2,014	25500	113,092,961	21,541,631	20,159,973	67,706,974	24,446,315	4.40654	8.053436	0.368737	0.598684	0.216161243
2	2,015	32000	129,377,553	18,682,089	48,590,182	75,930,289	49,744,257	4.50515	8.111859	0.519969	0.586889	0.384489085
2	2,016	17000	127,064,723	14,066,812	39,461,839	79,210,838	32,120,096	4.230449	8.104025	0.421271	0.62339	0.252785315
2	2,017	22999	84,738,590	7,856,471	27,385,203	50,414,650	23,855,404	4.361709	7.928081	0.415887	0.594943	0.281517594
3	2,011	83,000	251,628,841	507,989	24,269,326	67,775,030	-17,704,334	4.919078	8.40076	0.098468	0.269345	-0.07035892
3	2,012	30000	288,192,678	1,084,571	77,847,818	89,906,329	13,059,070	4.477121	8.459683	0.273888	0.311966	0.045313677
3	2,013	36,000	340,632,689	23,312,500	119,637,024	158,434,432	-2,073,742	4.556303	8.532286	0.419659	0.465118	-0.006087912
3	2,014	189,000	363,952,817	24,893,813	165,666,926	177,159,502	4,273,751	5.276462	8.561045	0.523586	0.486765	0.011742596
3	2,015	466391	257,631,073	14,646,637	85,444,984	191,771,527	-102,535,664	5.66875	8.410998	0.388508	0.744365	-0.397994166
3	2,016	38000	188,282,265	1,126,536	34,978,163	195,463,077	-73,686,228	4.579784	8.274809	0.191758	1.038139	-0.391360429
3	2,017	140,399	281,720,061	10,928,674	84,640,707	146,751,650	-89,333,574	5.147364	8.449818	0.339235	0.520913	-0.317100506
4	2,011	20,000	39,081,260	6,588,157	19,768,970	18,603,808	-3,000,060	4.30103	7.591969	0.674419	0.476029	-0.076764672
4	2,012	21791	48,876,449	6,588,158	19,768,970	24,113,336	991,764	4.338277	7.6891	0.53926	0.493353	0.020291251
4	2,013	28,750	36,832,006	8,119,259	16,775,977	25,354,694	1,158,450	4.458638	7.566225	0.675913	0.688388	0.031452265
4	2,014	20000	44,314,545	12,517,607	17,650,016	33,114,447	2,804,402	4.30103	7.646546	0.680761	0.747259	0.063284013

4	2,015	23,000	404,422,182	5,012,259	22,703,822	30,684,913	3,235,944	4.361728	8.606835	0.068533	0.075873	0.008001401
4	2,016	24,000	36,537,653	437,800	24,650,420	22,487,503	3,234,528	4.380211	7.562741	0.68664	0.615461	0.088525883
4	2,017	25,000	63,701,936	647,087	29,425,164	32,264,644	2,743,936	4.39794	7.804153	0.472078	0.506494	0.043074609
5	2,011	16,000	47,753,745	19,963,573	11,635,345	38,363,988	519,153	4.20412	7.679007	0.661706	0.803371	0.010871468
5	2,012	16000	46,361,264	22,452,663	11,371,564	30,267,673	-97,290	4.20412	7.666155	0.729579	0.652866	-0.002098519
5	2,013	18000	191,689,531	11,841,907	15,657,525	15,931,357	1,877,602	4.255273	8.282598	0.143458	0.08311	0.009795016
5	2,014	18,000	93,841,037	74,636,773	12,872,438	43,480,683	4,781,642	4.255273	7.972393	0.932526	0.463344	0.050954701
5	2,015	33,000	126,694,875	89,748,394	11,800,481	79,024,526	9,959,539	4.518514	8.102759	0.801523	0.623739	0.078610433
5	2,016	111,606	161,790,650	-17,298,398	19,565,635	107,511,214	15,447,932	5.047688	8.208953	0.014013	0.664508	0.095480993
5	2,017	104,000	158,401,889	78,905,030	30,573,930	97,327,525	7,856,344	5.017033	8.19976	0.691147	0.614434	0.049597539
6	2,011	25,000	56,526,505	5,760,061	26,692,975	14,125,788	5,600,759	4.39794	7.752252	0.574121	0.249897	0.099081994
6	2,012	25,000	64,005,955	5,413,986	37,398,135	15,980,398	9,234,105	4.39794	7.80622	0.668877	0.24967	0.144269464
6	2,013	32,400	122,865,937	11,197,733	26,481,130	19,345,972	6,204,298	4.510545	8.089431	0.306666	0.157456	0.050496489
6	2,014	43,000	53,266,541	6,300,107	39,038,881	14,263,285	709,241	4.633468	7.726454	0.851172	0.267772	0.013314941
6	2,015	13,000	62,887,515	2,412,921	35,599,400	10,273,110	2,118,728	4.113943	7.798564	0.604449	0.163357	0.033690757
6	2,016	48000	49,808,172	3,547,411	34,574,417	6,532,089	1,504,560	4.681241	7.697301	0.765373	0.131145	0.030207091
6	2,017	13,000	43,876,121	2,013,735	23,155,088	3,093,313	-5,523,478	4.113943	7.642228	0.573634	0.070501	-0.125888021
7	2,011	117,373	71,162,160	6,280,087	33,393,810	35,574,079	12,668,317	5.069568	7.852249	0.557514	0.499902	0.17802041
7	2,012	415,139	79,541,697	8,396,779	36,188,654	34,936,030	17,242,504	5.618194	7.900595	0.560529	0.439217	0.216773144
7	2,013	133,450	88,398,636	5,938,906	23,778,708	33,544,899	14,403,476	5.125319	7.946446	0.336177	0.379473	0.162937758
7	2,014	142,066	163,945,573	7,947,737	27,448,707	46,083,775	15,333,434	5.152489	8.2147	0.215904	0.281092	0.093527585
7	2,015	225,658	207,550,155	46,083,775	49,746,593	78,901,207	15,783,512	5.353451	8.317123	0.461721	0.380155	0.076046737
7	2,016	206,737	253,427,443	7,259,095	53,248,562	111,000,506	10,158,429	5.315418	8.403854	0.238757	0.437997	0.040084171
7	2,017	206,737	252,260,325	10,195,327	65,174,060	105,120,465	7,524,198	5.315418	8.401849	0.298776	0.416714	0.029827116
8	2,011	92661	560,826,889	46,536,921	146,557,584	587,597,744	536,078	4.966897	8.748829	0.344303	1.047735	0.000955871
8	2,012	863,773	710,124,238	37,977,888	135,336,857	781,065,115	48,458,322	5.9364	8.851334	0.244063	1.099899	0.068239217
8	2,013	476692	972,356,428	55,095,954	157,778,310	394,130,373	59,681,838	5.678238	8.987825	0.218926	0.405335	0.061378561
8	2,014	644243	1,158,016,288	108,424,070	248,232,261	539,855,443	36,142,578	5.80905	9.063715	0.307989	0.46619	0.031210768
8	2,015	445005	1,039,006,638	96,124,550	161,471,168	609,826,079	135,210,302	5.648365	9.016618	0.247925	0.586932	0.130134204

8	2,016	85773	1,159,163,993	96,276,140	164,863,039	821,944,987	-18,853,913	4.933351	9.064145	0.225282	0.709084	-0.016265095
8	2,017	951896	1,029,827,830	60,351,753	221,827,701	1,022,274,786	-209,237,654	5.97859	9.012765	0.274006	0.992666	-0.203177316
9	2,011	89,061	320,830,338	64,783,496	65,033,148	99,554,729	5,953,520	4.949688	8.506275	0.404627	0.310303	0.018556599
9	2,012	105,171	446,763,806	83,414,583	220,480,467	148,475,351	56,277,185	5.021896	8.650078	0.680214	0.332335	0.125966302
9	2,013	121281	515,727,206	175,719,401	210,343,162	150,188,837	107,562,449	5.083793	8.71242	0.748579	0.291218	0.20856462
9	2,014	153,500	574,896,625	156,849,225	271,621,688	178,795,120	114,981,316	5.186108	8.75959	0.745301	0.311004	0.200003463
9	2,015	211,659	762,882,687	197,145,237	367,656,908	267,662,927	121,809,327	5.325637	8.882458	0.740353	0.350857	0.159669801
9	2,016	150,000	814,566,212	216,671,100	392,596,686	235,461,974	116,878,065	5.176091	8.910926	0.747966	0.289064	0.143485039
9	2,017	205,000	1,143,437,803	370,393,591	540,031,735	385,216,192	103,852,468	5.311754	9.058213	0.796218	0.336893	0.090824764
10	2,011	341,057	1,136,111,664	124,153,643	445,528,450	514,978,921	353,859,252	5.532827	9.055421	0.501431	0.453282	0.311465205
10	2,012	370244	2,826,666,249	1,765,509,831	470,544,462	2,065,103,640	261,929,590	5.568488	9.451275	0.791057	0.730579	0.092663784
10	2,013	311870	3,356,103,456	2,064,596,272	597,703,369	2,357,676,321	297,115,074	5.493974	9.525835	0.793271	0.702504	0.088529772
10	2,014	370244	4,014,072,725	2,370,182,389	665,642,603	2,732,650,129	261,132,557	5.568488	9.603585	0.756295	0.680767	0.065054267
10	2,015	565365	2,161,125,201	264,831,537	839,794,205	538,979,675	282,645,858	5.752329	9.33468	0.511135	0.249398	0.130786434
10	2,016	545367	2,318,468,770	248,091,725	986,276,656	845,001,818	406,584,863	5.736689	9.365201	0.532407	0.364465	0.175367841
10	2,017	614,055	2,598,531,859	378,289,289	1,035,484,772	894,996,915	465,220,061	5.788207	9.414728	0.544066	0.344424	0.179031887
11	2,011	12500	26,016,944	337,291	3,646,083	19,957,522	-1,940,579	4.09691	7.415256	0.153107	0.767097	-0.074589028
11	2,012	120000	607,997,769	112,606	9,988,374	36,317,453	-9,379,106	5.079181	8.783902	0.016614	0.059733	-0.015426218
11	2,013	158000	339,458,653	4,398,248	21,323,333	50,588,813	106,528	5.198657	8.530787	0.075772	0.149028	0.000313817
11	2,014	235000	70,919,536	8,683,889	32,658,291	64,860,172	955,116	5.371068	7.850766	0.582945	0.91456	0.013467601
11	2,015	120000	67,286,747	2,935,525	37,933,044	62,995,272	1,955,117	5.079181	7.82793	0.607379	0.936221	0.02905649
11	2,016	170000	67,385,747	2,935,525	37,933,044	62,995,272	-3,436,763	5.230449	7.828568	0.606487	0.934846	-0.05100133
11	2,017	160,000	66,827,937	12,763,860	25,899,987	74,196,506	-11,690,764	5.20412	7.824958	0.578558	1.110262	-0.174938275
12	2,011	30000	87,872,268	142,618	142,618	54,266,150	1,602,418	4.477121	7.943852	0.003246	0.617557	0.018235765
12	2,012	25000	112,214,548	15,443,208	45,620,902	75,569,197	1,286,635	4.39794	8.050049	0.544173	0.673435	0.011465848
12	2,013	70000	185,839,229	18,373,515	74,559,125	151,904,590	1,339,090	4.845098	8.269137	0.50007	0.817398	0.007205637
12	2,014	40000	173,067,684	36,167,663	69,104,170	140,564,947	1,071,896	4.60206	8.238216	0.60827	0.812196	0.006193507
12	2,015	133109	169,040,066	29,017,860	65,481,744	128,546,447	5,444,982	5.124207	8.22799	0.559037	0.76045	0.032211192
12	2,016	150000	185,188,615	51,189,949	60,398,733	71,559,014	16,337,576	5.176091	8.267614	0.602568	0.386412	0.088221277

12	2,017	185000	202,326,682	37,694,722	87,876,682	77,813,407	19,727,223	5.267172	8.306053	0.620637	0.384593	0.097501838
13	2,011	20000	53,775,346	28,141,802	24,188,103	13,775,346	1,923,323	4.30103	7.730583	0.973121	0.256165	0.035765888
13	2,012	25000	101,761,730	2,294,472	25,782,147	61,761,730	502449	4.39794	8.007584	0.275905	0.606925	0.004937504
13	2,013	25000	111,646,972	15,218,137	28,970,235	37,768,538	351714	4.39794	8.047847	0.395787	0.338285	0.003150233
13	2,014	25000	603,863,979	7,061,127	22,594,060	661,571,765	-11,030,793	4.39794	8.780939	0.049109	1.095564	-0.018267016
13	2,015	28750	590,996,424	4,879,182	35,346,410	496,732,292	-148,028,082	4.458638	8.771585	0.068064	0.8405	-0.250472044
13	2,016	38250	564,169,069	4,499,492	28,495,779	470,559,863	-126,972,480	4.582631	8.751409	0.058485	0.834076	-0.225061045
13	2,017	40000	586,343,157	5,476,933	31,921,094	483,646,077	-132,258,108	4.60206	8.768152	0.063782	0.824852	-0.225564341
14	2,011	16000	110,429,613	46,245,691	10,931,731	81,897,023	81,939,606	4.20412	8.043086	0.517773	0.741622	0.742007545
14	2,012	19000	231,524,963	102,298,112	28,584,600	158,483,024	64,175,669	4.278754	8.364598	0.565307	0.684518	0.277186823
14	2,013	25000	250,693,140	50,059,644	28,602,423	500,400,364	-27,683,912	4.39794	8.399142	0.313778	1.996067	-0.110429476
14	2,014	29000	383,569,507	182,936,017	28,602,423	500,400,364	113,247,620	4.462398	8.583844	0.5515	1.304588	0.295246671
14	2,015	32500	231,524,963	115,009,623	26,676,642	876,895,093	-36,981,131	4.511883	8.364598	0.61197	3.787475	-0.159728482
14	2,016	32500	569,055,014	110,429,613	86,664,544	961,255,784	47,622,429	4.511883	8.755154	0.346353	1.689214	0.083686863
14	2,017	35000	883,221,291	877,545	102,931,731	1,002,274,786	139,566,018	4.544068	8.94607	0.117535	1.134795	0.158019309
15	2,011	1200	150,521,487	17,603,740	223,519,486	201,787,301	47,986,649	3.079181	8.177599	1.601919	1.340588	0.31880265
15	2,012	15000	340,412,704	46,533,513	362,249,651	218,823,678	21,530,907	4.176091	8.532006	1.200846	0.642819	0.063249423
15	2,013	22000	511,005,543	26,833,257	265,166,093	388,366,724	36,662,557	4.342423	8.708426	0.571421	0.760005	0.071745908
15	2,014	25500	539,635,804	103,401,552	391,262,577	597,059,535	1,530,907	4.40654	8.732101	0.916663	1.106412	0.002836926
15	2,015	22999	586,880,265	56,998,669	583,962,190	637,239,387	30,347,273	4.361709	8.76855	1.092149	1.085808	0.051709479
15	2,016	32000	696,811,683	2,202,952	576,871,974	652,208,324	29,420,189	4.50515	8.843115	0.831035	0.935989	0.042221147
15	2,017	42998	793,833,538	5,757,624	622,734,467	809,138,690	51,388,094	4.633448	8.899729	0.791718	1.01928	0.064734092