THE DETERMINATS OF DEBT MANAGEMENT PRACTICES: EVIDENCE FROM FOOD COMPLEX COMPANIES IN ADAMA CITY

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ADAMA, ETHIOPIA

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A Thesis

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Master of Science in Accounting and Finance

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STATEMENT OF DECLARATION

I declare that the thesis work entitled, "***The Determinants of Debt Management Practices: Evidence from Food Complex Companies in Adama City***", is the result of my own study and that all sources of materials used for the study are duly acknowledged. I have done it independently with the guidance and suggestions of my research advisor. This study submitted by me for the award of the degree of masters of Science (MSc) in Accounting and Finance of Harambee University, is original work and it was not been presented for the award of any other degree or diploma in any other university or institution.

By: **SULTAN EBRAHIM**

Signature: _____

Date: _____

CERTIFICATION

This is to certify that the thesis "***The Determinants of Debt Management Practices: Evidence from Food Complex Companies in Adama City***", submitted to Harambee University for the award of the Degree of master of Science (MSc) in Accounting and Finance is a research work carried out by Mr. Sultan Ebrahim under my guidance and supervision. Therefore, I hereby declare that no part of this thesis has been submitted to any other university or institutions for the award of any degree or diploma.

Advisor's Name: Mama Sulti (PhD Candidate)

Signature_____

Date _____

STATEMENT OF APPROVAL

The Thesis entitled "*The determinants of Debt management Practices: Evidences from Food Complex Companies in Adama City"* bySultan Ebrahim is approved for the degree of Master of Science in Accounting and Finance.

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ABBREVIATIONS AND ACRONYMS

DMP	Debt management Practices
E.C	Ethiopian Calendar
FC	Food Complex
FF	Flour Factories
MM	Modigliani and Miller
MS:	Manufacturing sectors
OLS	Ordinary Least Square
SMEs	Small and Medium Enterprises
SSEs	Small scale Enterprises

ABSTRACT

Effective debt management practice is essential for business survival. This study investigated the factors that influence the debt management practices of manufacturing sector, especially food complex in Adama city. Explanatory research design and quantitative research approach were employed. The investigation is performed using panel data procedures for a sample of 10 food complex share company during 2017-2021. Purposive sampling technique was used as availability of financial statement of six years consecutively. The hypotheses of the study are tested by using the random effect Generalized Least Square. Data were analyzed in descriptive and statistical analysis. Descriptive statistics such as tables and percentages analysis were used for presentation of data. Also, a multiple regression model was employed to analyze quantitative data developed and tested to explain the relationship between proxy of debt management practices and factors affecting debt management. The results suggest that firm characteristics such as profitability, size, liquidity and age are found to be the most important determinants of food complex companies' debt management. No significant relationship of growth opportunity and tangibility, with debt equity ratio. Profitability, size and liquidity are negatively affecting the debt equity ratio. Companies' age is positive impact on debt management. The researcher recommends that companies that have high profitable should manage and use the accumulated funds or generated profit to finance new investment and better to manage their debt according to availability of current assets that help to pay to their debt.

Key Words: Debt Management, Debt Management Practices, food complex factories, Manufacturing Companies

CHAPTER ONE

INTRODUCTION

1.1. Background of the study

The issue of debt management has challenged corporate finance professionals for a long time. They are concerned about implementing the appropriate mix of debt and equity that will ensure the firm's survival and growth. Decisions in management of debt practically are vital for the business survival (Sheikh and Wang, 2011). Besides, it is important because it affects the financial performance of the firm.

Access to finance is vital to business development. Investment and innovation are not possible without adequate financing. A difficulty in getting finance is one of the main obstructions to the growth of many businesses, particularly manufacturing enterprises. Therefore, reducing this financing gap in low-income countries should raise the incentive to create different enterprises and consequently improve economic growth and increase job creation. In addition, improving enterprises access to finance is significantly important in promoting performance and firm productivity (World Bank, 2015).

However, after getting debt finance with so many difficulties, it must be managed properly otherwise debt finance can be a cause for the failure of factories. As explained in study of Ganbold (2008), the failure of factories leads to loss of jobs and consequently increased insecurity, low liquidity in the economy, and decline in economic growth.

According to Wallistsch (2007), debt management is any approach that is adopted to guide an individual or business organization to manage its debt. Besides this, contends that, debt management is an act of trying to get one's debt under control and become responsible for repaying associated obligations (Root, 2009).

The success of debt management practice depends on knowledge of the main factors which affect debt management. As such, this study assesses factors that affect debt management

practice of food complex factories in Adama City. The business entities which categorized under manufacturing sector in Ethiopia is taken as an instrument in bringing about economic transition by effectively using the skill and talent of the people particularly women and youth with and without demanding high-level training, much capital and sophisticated technology. Companies can choose among many alternative capital structures, such as, issuing a large amount of debt or very little debt, arranging lease financing, use warrants, issue convertible bonds, sign forward contracts or trade bond swaps . However, the main areas after structure of capital determined the questions are raised related to managing the debt in practice is the main areas that need attention in financial management. It therefore examines how debt management is practiced in food complex companies of manufacturing enterprises and ascertains the factors affecting the debt management as debt finance is an approach for accelerating the growth and improvement of profitability of the enterprises. Hence, it may have both negative and positive impact on firm's debt management performance, which in turn, has negative and positive impact on the shareholders' wealth and the same is also true on the researcher's result of hypothesis. Therefore, the main purpose of this study is to analyze and evaluate how the affects firm's debt management performance of selected flour factories in Adama by evaluating the relationship between different variables.

The determinants of debt management practices in Ethiopia still under-explored areas in the literature. The main aim of this study is to investigate the factors that affect debt management practices of manufacturing enterprises, food complex sectors. The study used debt ratio to measure debt management using panel data of 10 food Complex companies for the period 2017 to 2021. Six explanatory variables are used. A random- effect regression is used to test the hypotheses. The findings of the study contribute to fill the gap in literature by examining the impact that profitability, size, growth opportunity, liquidity, tangibility, and age have on debt management practices. The study has limitations in that low sample size and non-random sampling approach, which somewhat limits generalization of the findings.

1.2. Statement of the Problem

Debt is the cash borrowed from a lender at a fixed rate of interest and with a predetermined maturity date. The principal must be paid back in full by the maturity date, but periodic

repayments of principal may be part of the loan arrangement (Beck, Demirgüç & Martinez, 2010).

According to Akosua (2016) on the nexus between debt management and performance of enterprises, debt management plays an important role in any business particularly small scale enterprises Ross *et al.* (1996) further assert that an enterprise can also increase its net debt flow by slowing down disbursements. The importance of keeping debt balances by enterprises cannot be taken for granted. Moyer *et al.* (2005) argue that effective debt management is particularly important for manufacturing enterprises on the aspect of ensuring better quality of life, particularly because effective management of debt means less stress for the entrepreneurs and enterprises can utilize to reduce financial obligations.

Wallitsch (2007) argues that debt management is any approach that is adopted to guide an individual or business organization to manage its debt. This definition includes debt settlement, bankruptcy, debt consolidation, personal loans as well as other techniques that assist businesses to service outstanding debts. Root (2009) contends that, debt management is an act of trying to get one's debt under control and become responsible for repaying associated obligations. It can therefore be inferred that debt management is a conscious measure taken by a debtor or agents hired on their behalf to reduce the debt burden or strategize to eliminate the debt through acceptable payment terms. Cecchetti *et al.* (2011) observe that a reasonable debt level improves welfare and enhances growth but high level debts can lead to a decline in growth of a firm. Reinhart *et al.* (2009) reinforces this assertion by arguing that debt impacts positively to the growth of a firm only when it is within certain levels. He showed that a firm becomes vulnerable to financial crisis when the ratio goes beyond certain levels. High level of debt increases the probability of a firm facing financial distress. Therefore Cecchetti *et al.* (2011) contends that over borrowing by a firm can cause bankruptcy and financial ruin. Accumulating high levels of debt by a manufacturing enterprise will constrain its ability to undertake project that are likely to be profitable. This is because it would not be able to attract new debt from financial institutions.

Generally; more studies are done on this area was about source and access of finance for flour factories and problems on financial performance of the flour factories. However, the previous researchers gap on examining factors that are affecting debt management practice of manufacturing enterprises. Besides this, as per the researcher knowledge there is no study

conducted regarding factors affecting debt management practices in manufacturing sectors, especially on food complex companies in Adama city.

Therefore, this research was focused on factors that are affecting debt management practice of Food Complex companies in Adama City.

1.3. Objective of the Study

1.3.1. General Objective

The main aim of this study was to investigate determinants of debt management practices of food complex companies for period of 2017 - 2021.

1.3.2. Specific Objective

The specific objectives of the study are:

- To determine the relationship between debt management practices and the profitability of the food complex companies;
- To identify the influence of size of food complex companies on debt management practices;
- To determine the effect of growth opportunity and tangibility of assets on debt management practices of companies;
- To assess the influence of food complex companies' age on its debt management practices;
- To assess the influence of liquidity on debt management practices of companies;

1.4. Hypotheses

Under this section the researcher tries to develop testable hypotheses that related to the determinants of debt management of Food Complex companies in Adama city. The hypothesized factors are identified based on the review of the factors identified in previous studies. The firm specific variables considered in this study are profitability, size, growth, liquidity, tangibility and age.

Hypothesis 1: There is no statistically significant relationship between the profitability and debt management practices of food complex Companies.

Hypothesis 2: There is no statistically significant relationship between size of the Food Complex Companies and debt management practices.

Hypothesis 3: There is no statistically significant relationship between growth opportunities and debt management practices Food Complex Companies.

Hypothesis 4: There is no statistically significant relationship between the Tangibility and debt management practices of Food Complex Companies.

Hypothesis 5: There is no statistically significant relationship between liquidity of the food complex and debt management if the Food Complex Companies.

Hypothesis 6: There is no statistically significant relationship between the age and debt management practices of Food Complex Companies.

1.5. Significance of the Study

The significance of this study originates in the fact that no studies in Adama city have investigated the determinants of debt management practices on manufacturing sector, especially food complex companies.

For empirical practice: Practically, this study, as a whole, provides to a perceived need of most manufacturing owners/managers for better debt management practice. The findings of this research will provide owners/managers of manufacturing with more useful understanding about debt management i.e. how to apply the debt management system; how to adjust debt practice within organizations; whether it is useful to apply participation in the organization. The results will simultaneously contribute to business consultants to better understand financial planning implementation in manufacturing firms. The findings will be helpful especially Food Complex Companies in planning and decision making concerning borrowing for the future. To company, especially manufacturing; the results of this study will help managers to evaluate the current debt management practices in their companies. The researcher believe that this study fill an important gap of debt management practices for manufacturing industry in Ethiopia.

To researchers: The study will provide useful information for researchers regarding how the firm characteristics have impact in debt management of manufacturing companies. Besides, the study can help researcher a basis for further study.

To academicians: The study will also be significant to academicians. It will give detailed information to them on how far the debt management theories taught in class differ from that practiced in the real world. By having this information, academicians will be able to make some adjustments in trying to accommodate his taught in class with real life practices.

1.6. Scope of the study

As the main aim of this study is to examine factors that affect capital debt management, the study is limited to determinants of debt management. The study focused only on ten food Complex i.e , which have sufficient data required for the model. The period of the study limited to five years i.e. from 2017 to 2021 and one year (2016 data) additional for the computation of growth opportunities. The methodology or the method of collecting the data is also limited to the secondary data.

1.7. Limitation of the study

So far, to the best knowledge of researcher there is no research work done related to determinants of debt management practices on Food Complex Companies. It may be difficult to support the work with empirical studies. Experience has shown that apart from carrying out academic research in manufacturing companies, it is also difficult to gain access to the documents. This is because that company has certain secrets which they will not like to share with any other persons. This was considered impediment to this research. Unlimited study on selected areas for interest would have been conducted thoroughly if there were enough time for that. Time constrain was the most inhibiting factor in this area. There was a limitation and access to get the secondary data from the related companies. The study was limited to some specific manufacturing sector in Adama city.

The research was based on secondary. Since the data collected from food complex Companies, the data collected were only consolidated balance sheet and income statement, the variables such as, non-debt tax shields, share performances, market to book value are excluded from the study. In addition, Credit risk and earning volatility also ignored because of the effect of the assumption

during result test. Besides, because of the primary data (such as questionnaires and interview) were ignored, variables such as competence of management and experience of managements are excluded.

1.8. Organization of the paper

This thesis organized into five Chapters. The structure and organization of the research study takes in the following forms. The first chapter focuses on introduction such as the background, statement of the study, objectives of the study, significance of the study, scope and limitation of the study. The second chapter review of literature which includes concept of debt management, theoretical, empirical and sources of finance and at last the research gap and conceptual frame work. The third chapter is related research design and methodology. Fourth chapter presents data analysis and discussion and the last chapter, chapter five provides conclusion and recommendations based on the findings of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This chapter reviewed the literature on factors affecting debt management practice of Small scale enterprises in manufacturing sector.

In finance, study of determination of debt management practices has been an important area of research. There are theories that have been developed, which try to explain how a firm's debt management practices improves over time. This research fits into the feature of literature focusing on policy coordination and potential conflicts among fiscal, monetary, and debt management policies, a topic that has been studied in various frameworks.

The first section of this chapter introduces theoretical that has been written on the matter. The second section of this chapter describes factors that related to firm level characteristics in the matter of debt management practices determination. Third section focused on debt management of manufacturing sectors and the last section research gap and conceptual framework.

2.2 Theoretical Review

A debt management design provides written guidance about the amount and type of debt that can be incurred, the process for incurring debt and the management of the debt in line with the service provider's resources.

2.2.1. Debt financing

Debt Financingis the practice of borrowing funds from outside an organization from such institutions as commercial banks, money lenders, micro finance institutions and SACCOs. It includes long-term debt (loans repayable in more than a year) and short-term loans (loans repayable within a year) (Frasch, 2013).

Debt financing involves the procurement of interest bearing instruments such as loans, overdrafts, letters of credit and accounts receivable etc. They are secured by asset-based collateral and have term structures, that is either short or long term. The equity component of external finance gives the financier the right of ownership in the business and as such may not

require collateral since the equity participant will be part of the management of the business (Berger and Udell, 2002).

2.2.1. Debt Utilization

Debt provide by Banks is mainly for purchase of fixed assets such as machinery and working capital. Whereas bank loans are a major source of external capital for a majority of manufacturing companies, effective utilization of these loans has been a major challenge and cause of failure for a large number of organization (Amara *et al.,* 2015). Karadag (2015) asserts that inefficient use of financial resources and insufficient working capital management in terms of cash inventory and receivables management are reported as key financial challenges for SSEs in Turkey. Karadag (2015) also reports that a research done by Çetin, Akyüz and Genç (2008) on SSEs in Usak city of Turkey found that most of the SSEs did not have a finance department, and majority of them faced difficulties at collecting their receivables and utilizing bank loans.

2.2.3. Theories of Debt management practices

This section covers a review of theories pertinent to debt management in respect to the present study. The theories reviewed included stakeholder theory, contingency theory, and debt management theory.

2.2.3.1. Stakeholder Theory

Freeman (1984) presents the stakeholder theory. According to Freeman, the theory provides an appropriate viewpoint for considering a more complex perspective of the value that stakeholders seek in addition to new ways of measuring it. Certainly, stakeholder theory has penetrated public policy (Freeman, Harrison, Wicks, Parma & de Colle, 2010). Freeman (1984) opines that stakeholder theory exists in tension with shareholder theory. In addition, (Phillips, 2003) stated that stakeholder theory illustrates institutional framework and provides an avenue for linking ethics to strategy.

Accordingly, (Harrison & Wick, 2009) stated that in cycle with stakeholder theory, institutions that diligently purpose to serve the interests of a broad group of stakeholders are bound to create more value over time. However, critics of the stakeholder theory (Scherer & Pater, 2011) argue that there are so many different interpretations of basic stakeholder ideas that theory

development has been difficult. In the context of county governments, the stakeholder theory can be relevant in that there diverse stakeholders with various interest; the most important being the public. As such, the institutional framework guiding the running and functionaries of county governments should be alive to the interests of all stakeholders.

2.2.3.2 Contingency Theory

Fiedler (1964) projected contingency theory related to debt management. This theory embraces that there is no best way to organize an institution or entity or to make decisions. However, the optimal course of action is contingent upon the internal and external situations. According to Woods (2007) contingency theory provides an important framework for the study of public sector risk management control systems. Woods observed that there has been great emphasis by governments on the need for better risk management within the public sector and as such government have come up with documents that contain guidelines on how to set up a risk management system.

2.2.3.3. Theory of Debt Management

Theory of debt management was proposed by Faraglia, Marcet and Scott (2008). The theory holds that the composition of government debt ought to be chosen in order to ensure that fluctuations in the market value of debt offset changes in anticipated future deficits. It is, in the same, light observed that in reference to this theory, governments should issue long-term debt and invest in short-term assets (Faraglia et al., 2008). This theory further states that in line with debt management, fiscal policy and debt structure should be jointly determined. This stems from the reasoning that one of the major determinants of fiscal policy is the government's ability to offset unexpected fluctuations in government expenditure or revenue by management the size, composition and value of debt (Faraglia et al., 2008).

Indeed, Turner (2011) and Blommestein and Turner (2012) observed that the separation of debt management from monetary policy worked well and remain unchallenged till the global financial meltdown, where a new era of fiscal dominance took over. As such, these authors underscore the rationale of addressing the themes of monetary policy and debt management in consonance. It is further averred that indeed debt management plays a role in reducing fiscal vulnerability by

providing insurance against macroeconomic shocks which affect the government budget. In tandem with the foregoing, Borenzstein and Mauro (2004) opine that in order to reduce fiscal vulnerability which may oblige cutting of spending programs, the government ought to issue debt instruments whose returns that effectively address government consumption. The theory of debt management can be employed to explain how County Governments can determine the composition of their debts and debt structure in conformance with their respective fiscal policies.

The policy should be thorough and conservative (Lance, M. 2017). According to Togo, E. (2007) generally, a conflict between monetary policy and debt management may arise due to a shortage of independent policy instruments. Among more recent studies, Canzoneri, Cumby, and Diba (2016) highlight the need for the debt manager to satisfy liquidity demand and accommodate a smooth tax rate. However, they add that if government bonds provide liquidity, conflicts may arise. Bianchi and Melosi (2019) claims that monetary and fiscal policies are not completely independent and there is a need for their coordination. Some public debt management choices and large fiscal deficits endanger inflation management and the interest rate policy, and even the independence of the central bank. The monetary policy setting may therefore influence the cost of deficit financing and even the size of the public debt. Moore and Skeete (2010) find that negative monetary policy shocks could significantly raise the debt service costs and the future setting of economic policy needs to be coordinated.

According to Lance M. (2017), the key debt management principles include: Projected existing revenues are sufficient to pay for the proposed debt service together with existing debt service covered by such existing revenues, or Additional revenues have been identified as a source of repayment in an amount sufficient to pay for the proposed debt.

Generally, a conflict between monetary policy and debt management may arise due to a shortage of independent policy instruments (Togo, 2007). Therefore, we examine the effects of monetary and fiscal policy on variables relevant to the debt manager.

2.2.3.4. Trade-off Theory

The trade-off theory of capital structure refers to the idea that a company chooses how much debt finance and how much equity finance to use by balancing the costs and benefits. An important

purpose of the theory is to explain the fact that corporations usually are financed partly with debt and partly with equity. It states that there is an advantage to financing with debt, the tax benefits of debt and there is a cost of financing with debt, the costs of financial distress including bankruptcy costs of debt and non-bankruptcy. This theory deals with financial distress and the tax advantage of debt financing. Financial distress indicates a condition when promises to creditors are broken or honored with difficulty and it can lead to bankruptcy Brealey, Myers and Allen (2008).

Myers and Majluf (1984) suggest that the optimal leverage ratio of the firm is determined by the trade-off between tax shields with debt financing against higher bankruptcy cost. The marginal benefit of further increases in debt declines as debt increases, while the marginal costs increases, so that a firm that is optimizing its overall value will focus on this trade-off when choosing how much debt and equity to use for financing. This theory also states that optimal capital structure is obtained by balancing the tax advantage of debt financing and leverage related costs such as financial distress and bankruptcy, holding firm's assets and investment constant Myers (1984).They made the conclusion of an increase in the costs of financial distress; non-debt tax shields; and the marginal bondholder tax rate reduces the optimal debt level, while an increase in the personal tax rate on equity increases the optimal debt level. The effect of risk is ambiguous, even if uncertainty is assumed to normally distribute and the relationship between debt and volatility is negative.

According to Myers (1984), firms attempt to achieve an optimal capital structure that maximizes the value of the firm by balancing the tax benefits, with the bankruptcy costs, associated with increasing levels of debt (Myers, 1984). Firms adopting this theory could be regarded as setting the target debt ratio and gradually moving towards achieving it. The static trade-off theory also suggests that higher profitable firms have higher target debt ratio (this contradicts with the pecking order hypothesis which suggests higher profitability firms have lesser debt). Miller (1977) suggests that taxes are large and they are sure, while bankruptcy is rare and it has low costs. He also suggested that if the trade-off theory were true, then firms ought to have much higher debt levels than we observe in reality.

2.2.3.5. Pecking order theory

In the theory of firm's capital structure and financing decisions, the pecking order theory was first suggested by Donaldson in 1961 and it was modified by Myers and Majluf in 1984. They develop a model in which the capital structure choice is designed to limit inefficiencies caused by informational asymmetries. Asymmetric information states that firm managers or insider does possess private information about the firm's operations and its investment opportunities which are not known by outsider investors. This theory states that firms first used internal funds, then debt that is issued, and again when debt is not enough, used equity issued.

Pecking order theory starts with asymmetric information as managers know more about their company's prospects, risks and value than outside investors. Asymmetric information affects the choice between internal and external financing and between the issue of debt or equity. There therefore exists a pecking order for the financing of new projects.

Asymmetric information favours the issue of debt over equity as the issue of debt signals the board's confidence that an investment is profitable and that the current stock price is undervalued (were stock price over-valued, the issue of equity would be favored). The issue of equity would signal a lack of confidence in the board and that they feel the share price is over-valued. This does not however apply to high-tech industries where the issue of equity is preferable due to the high cost of debt issue as assets are intangible Brealey et al. (2008).

Tests of the pecking order theory have not been able to show that it is of first-order importance in determining a firm's capital structure. However, several authors have found that there are instances where it is a good approximation of reality. On the one hand, Fama and French (2002) also find that some features of the data are better explained by the pecking order than by the trade-off theory. Goyal and Frank (2003) shows that pecking order theory fails where it should hold, namely for small firms where information asymmetry is presumably an important problem.

2.2.3.6. Agency Cost Theory

An agency cost theory is related to an economic concept that relates to the cost incurred by an entity (such as organizations) associated with problems such as divergent management-shareholder objectives and information asymmetry. Jensen and Meckling (1976) are the most

prominent figures in the domain of research on agency costs. Their model was developed initially with the identification of two types of interest conflict: conflict between managers and shareholders, and conflict between debt holders and shareholders. The conflict between debt holder and shareholder may arise when issuance of debt gives greater incentives to the shareholder. More explicitly, debt investment is inclined towards shareholders; if investment yields a high return well above the face value of debt, shareholders capture the gains.

According to Grossman and Hart (1982), the use of debt reduces the conflict between managers and shareholders. Their model shows that managers prefer to invest in lucrative projects and consume perks that are of benefit to them alone. Excessive perks used by managers can lead the firm to bankruptcy. Bankruptcy is costly to managers because they lose benefits, so debt can create an enticement for managers to make better investment decisions and consume fewer perks. Harris and Raviv (1999) agree that managers like to continue with the current operation of the firm even when investors prefer liquidation. The agency cost literature recognizes that, in addition to reducing the level of debt, the firm can mitigate the costs of asset substitution and underinvestment by shortening the maturity of debt (Myers, 1977).

2.3. Sources of finance formanufacturing industries

Source of finance for businesses in the start-up and expansion phase of their existence is important, since these firms generate employment, drive innovation, and boost competition in markets (Ellis and Ben, 2017). Accordingly, there are some sources of finance available in Ethiopia.

2.3.1 Owner of the business, Family and Friends

This is potentially a very good source of finance because these investors may be willing to accept a lower return than many other investors as their motivation to invest is not purely financial. The key limitation is that, for most of us, the finance that we can raise personally, and from friends and family, is somewhat limited (William, 2016). This source of finance is the cheapest and comes at no cost to the entrepreneur (Frimpong & Antwi, 2014).

2.3.2 Trade Credit

Manufacturing sectors, like any company, can take credit from their suppliers. However, this is only short-term and, indeed, if their suppliers are larger companies who have identified them as a potentially risky the sectors the ability to stretch the credit period may be limited (Ayalneh 2018).

2.3.3 Bank Finance

Banks may be willing to lend in the long term where that lending can be secured on major assets such as land and buildings as a collateral instrument. However, raising medium-term finance to fund operations is often more difficult for Small Scale Enterprises (Ayalneh 2018).

2.3.4. Informal Financial Source

Informal finance is a broad concept that encompasses the wide range of financial activities and services that take place beyond the scope of a country's formalized financial institutions and lie outside financial sector regulations.

The popular view of informal finance is of powerful moneylenders who exploit the poor through usurious interest and unfair seizure of collateral. In fact, informal finance is both extensive and diverse. The informal sector accounts for most of the financial services provided to the non-corporate sector. In addition to family and friends, who provide a large percentage of the loans, informal finance consists of professional money lenders, pawnbrokers, trades people, and associations of acquaintances. (Meghana et al, 2008).

2.4. Empirical Review

Bianchi and Melosi (2019) claims that monetary and fiscal policies are not completely independent and there is a need for their coordination. Some public debt management choices and large fiscal deficits endanger inflation management and the interest rate policy, and even the independence of the central bank. The monetary policy setting may therefore influence the cost of deficit financing and even the size of the public debt.

Cavalcanti, Vereda, de Doctors, and Lima (2018) call for higher policy coordination and find high correlation between the monetary policy rate and the interest rate on public debt in Brazil.

Canzoneri, Cumby, and Diba (2016) highlight the need for the debt manager to satisfy liquidity demand and accommodate a smooth tax rate. However, they add that if government bonds provide liquidity, conflicts may arise.

Muyambo (2016) researched Investigated Debt Management Practices on the Performance of Premier Service Pharmaceuticals (PSP) in Gweru Zimbabwe. The study used descriptive research design where there was both use of questionnaires and interviews because of its cost effectiveness. Sources of data, research instruments, populations and samples were given in the research. Primary data was presented using diagrams, pie charts and tables, to illustrate research findings and responses gathered. Research findings showed that, debt factoring, payment plans, follow up and rotation of debt collection customers were found to enhance debt collection in the organization. As a result, the research recommended that the organization should establish the best practice highlighted in the research. However, this study has gaps because it focused on researched Investigated Debt Management Practices on the Performance of Premier Service Pharmaceuticals. It did not specifically assess the challenges of debt management practices. This has created an information gap that this study sought to bridge.

Dottori and Manna (2016) study strategy and tactics in debt management and argue in favor of a broader perspective of coordination that also includes financial stability.

Wamunyima (2016) conducted a study to examine the planning, implementation and monitoring of the Prepayment Metering Project in Lusaka Province. This was done in order to establish whether the management of project management processes hindered or helped in ensuring that the Starting with the classic studies.

Williams, Okonkwo and Abolore (2014) also added in their report that this leads to the continuous borrowing to finance public utilities which created a situation of unsustainable debts among most developing countries such as Ghana and Nigerian.

Moore and Skeete (2010) find that negative monetary policy shocks could significantly raise the debt service costs and the future setting of economic policy needs to be coordinated.

According to Das, Papapioannou, Pedras, Ahmed, and Surti (2010), debt management influences financial stability through five channels – stock of debt, debt profile, investor base, debt market

structure, and institutional aspects. We contribute to this strand of literature by studying the policy interactions in a data-rich environment while taking into consideration alternative debt manager goals.

Barro (1995) finds that debt management could be helpful in tax smoothing.

Calvo and Guidotti (1990) point out the role of debt management as a commitment device in ensuring a time-consistent monetary policy.

Togo (2007) demonstrates the importance of policy separation and coordination to achieve a consistent policy mix. According to his study, separation does not preclude the need for policy coordination because of frequent policy interactions in the real world. Poor fiscal policy may produce high deficits that need to be financed by new debt.

Togo argues that separation of debt management policy may reduce trade-offs among these three policy objectives and enhance the credibility and effectiveness of policy implementation. The presented ALM framework suggests that the debt manager should act counter-cyclically to help minimize the risk of tax increases, expenditure cuts, or debt defaults. Based on policy games under fiscal and monetary dominance, Togo concludes that weak debt management without a separate policy goal could produce an inconsistent policy mix.

Sight (2015), states that the coordination of fiscal, monetary, and debt management policies is even more important in developing countries.

In addition, Ambrisko et al. (2012), Bulir (2004), European Commision (2012), IMF (2013), Komarkova, Dingova, and Komarek (2013), or Dybczak and Melecky (2014) also conducted on debt management. Yet there is a shortage of studies focusing directly on government debt management. Pavelek (2005) contributes to the debate on advances in risk management of government debt with the Czech experience and suggests a more proactive approach.

Tim & Brinkerhoff (2008) states that human capacity has become a critical index of competition in the world of business to the extent that the development of such capacities through training has become top priority in designing the strategic plan of business organizations (Management is therefore necessary to enable group or business goals to be accomplished through the functions

of planning, staffing, directing, controlling activities, coordination and directing. Personal characteristics of the owner/manager were interpreted as lack of experience among small business managers who happen to be the owners leading to poor performance and consequently to business failure.

Uwonda *et al*., (2013)identified the main reasons many owner-managers get into difficulty are the poor financial control systems and management practices in their firms due to owner-managers having insufficient skills and knowledge of financial accounting controls to know what to do.

Accordingly, Abanis *et al*., (2013) research typically results in the SMEs experiencing cash flow and liquidity problems with high levels of bad and doubtful debts.Tokuda, (2005) examined that the resource-based theory and existing empirical literature show clearly that it is the resources or competencies of a firm which make it different from others that are important for its market success.

Ogolla (2011), stated in the study, survival and success of any firm solely rely on its ability to integrate the right personnel at the right time and at the right place. Human resource management has been recognized by professionals as an important factor responsible for the competitiveness of firms and it assists firms to determine the key human resources management functional areas that are responsible for elevating the status of organizations. Acceptance and practices of human resources management in an organization result in a number of role changes and provide new challenges to the professionals in this discipline. That is, the more established the strategic roles for Human Resources (HR) functions, the more the expectation to partner with top management to achieve business success.

Bamback and Lawyer (1997) identified that improper management is the root cause of many unsuccessful enterprises. Nzioka (2005) in the role of education in business performance notes that one of the things that hold back the development of small business is the need for better management. Good management means need for proper planning, control, organizing skills and proper staffing with qualified and competent employees.

In another study, Buluma and Obande (2015) embarked on the corporate governance and financial management in the context of devolved system of government in Kenya. The study aimed at investigating the relationship between corporate governance and financial management practices in local authorities before devolution. It was established that local authorities held large debt burden, operated huge bank overdraft and practiced poor financial management practices. It was further noted that poor financial management practices was as a result of poor governance issues.

An empirical analysis of the impact of debt on the Nigerian economy was carried out (Ijah, 2013). The study purposed to assess the impact of debt on selected macroeconomic indicators in Nigerian economy. External debt stock, external debt service payment and exchange rate were used as proxies for debt and their effect on gross domestic product and gross capital formation assessed for the period 1980 to 2010. The study concluded that there was a dire need for proper management and accountability for debt, channel borrowed funds to the purpose in which they were borrowed or in order to bring sustainable development (Akosua, 2016)

According to **Cant and Lightelm (2003)** in a survey of small business failure maintain that entrepreneurs often have good ideas and are competent but they do not have a clue on how to run a business and have no underlying appreciation of business fundamentals. Professionalism is one of the areas that have failed the SMEs firms. Most of these firms only have unskilled labour and a small percentage of skilled labour and this majorly affects aspects of entrepreneurial firms. Lumpkin and Marvel, (2007) in their study explained that experience takes many guises and breadth of experience is shown to be an important factor driving the performance of firms, with the number of previous jobs positively related to new firm performance ().

Debt management of companies is determined by various factors. These factors may be internal factors or external factors. From external factors, which called macro variables of the economy of the country, tax policy of the government; inflation rate; and capital market condition are the major one. The firm level characteristics, which are known as micro variables also affect debt of every organization. For this study the researcher selected the following firm characteristics as determinants of debt management.

2.4.1.Profitability of business type and debt management practice

The profitability level of different types of business affects debt management in loan repayment. Debt can be paid from the firm's profit if the business is not profitable excess expenditure will occur than available fund this leads to discontinuity in the business because of their unpaid loan this comes from lack of advice on the business type and finances. Manufacturing companies' profitability level could affect their debt management.

The aim or goal of any firm is to make profits and later grow or expand its operation (Mashenene, 2014). The firm size is the result of firm growth over a period of time and it should be noted that firm growth is a process while firm size is a state. The growth of a firm can be determined by supply of capital, labour and appropriate management and opportunities for investments that are profitable (Fjose, 2010). Accessing finance has been identified as a key element for manufacturing companies to succeed in their drive to build productive capacity, to compete, to create jobs and to contribute to poverty alleviation in developing countries.

The effects of debt financing on the profitability of enterprises need to be understood in terms of business capital and stock growth (ADB, 2012). As such firms should invest debt finance in profitable business to pay off liability. Profitability has been identified as a potential determinant of debt from a number of theoretical foundations. There are two theories that showed the relationship between profitability and leverage. According to the trade-off theory predicts that high profitable companies will employ more debt since they are more likely to have a high tax burden and low bankruptcy risk. Profitable firms will therefore employ more debt in capital structure to benefit from interest tax shield. The tax trade-off models show that profitable firms will employ more debt since they are more likely to have a high tax burden and low bankruptcy risk (Frank and Goyal, 2003).

The pecking order theory predicts a negative relationship between profitability and debt as high profit firms do not need to depend so much on external funding. Firms prefer to use internally generated funds when available and choose debt over equity when external funding is required. High profit firm therefore uses internal financing that is accumulated from past profit, thus employing less debt. A negative relationship between profitability and leverage is observed in the majority of empirical studies, which support the pecking order theory (see for examples

Titman and Wessels (1988); Rajan and Zingales 1995; Caglayan and Sak (2010);Booth et al. (2001); Shah and Khan (2007)*;* De Jong et al. 2008; Al-Sakran (2001). Myers (1984) prescribes a negative relationship between debt and profitability on the basis that successful companies do not need to depend so much on external funding. According to Amidu (2007) profitable banks accumulate internals reserves and this enables them to depend less on external funds. Besides, he elaborated that even though profitable enterprises may have better access to external financing, the need for debt finance may possibly be lower, if new investments can be financed from accumulated reserves.

2.4.2. Size of the business and debt management Practices

Size is one of the most widely accepted determinants in research of debt management practices. Relationship between size and debt is mixed. Based on the trade-off theory, larger firms are expected to have a higher debt capacity and are able to be more highly geared and a positive relationship is then expected. Bhaduri (2002) supported this theory by arguing that large firms tend to be more diversified and less prone to bankruptcy thus having bigger capacity to consume higher leverage. Further Agathee *et al.* (2005)suggests that firm size would be related to the capital structure of the firm, because of larger firms are likely to have a higher credit rating than smaller firms and have easier access to debt financing due to lower information asymmetry. Several works show a positive relationship between firm size and leverage (see Rajan and Zingales (1995); Cespedes et al. (2010); Ahmed Sheikh and Wang (2011); Amidu (2007); Caglayan and Sak (2010); Barclay and Smith (1996); and Al-Sakran (2001), Hovakimian et al. (2004); Gropp-Heider (2008). According to empirical findings, size of bank affect the capital structure positively in developed and developing countries.

The pecking order theory is usually interpreted as predicting an inverse relation between leverage and firm size because of that large firms have been around longer and are better known (Frank and Goyal, 2008). Titman and Wessels (1988) find a negative relation between size and long-term debt and positive relation between size and short term debt by argued that cost of issuing debt and equity securities is also related to firm size. Kila and Mahmood (2008) and Ramlall (2009), suggested that a relationship between size and leverage of the firm shows negative result and they support the pecking order theory.

2.4.3. Growth Opportunities of the business and Debt management practices

Growth opportunities are one of the most important variables that affect the leverage of firms and the relationship between leverage and growth opportunities was mixed. According to trade-off theory and agency theory there is a negative relationship between leverage and growth opportunities. According to trade-off theory, firms holding future growth opportunities, which are a form of intangible assets, tend to borrow less than firms holding more tangible assets because growth opportunities cannot be collateralized. Agency theory also says firms with greater growth opportunities have more flexibility to invest sub optimally, thus, expropriate wealth from debt holders to shareholders. There are several studies that support these two theories. From this, Titman and Wessels(1988) and Booth et al. (2001) found that growth opportunity has a negative effect on debt management.

2.4.4. Liquidity of the Firm and Debt Management Practices

Pecking order and agency cost theory shows that the relationship between liquidity and debt management is negative. Pecking order theory suggests that firms with higher liquidity prefer to use internally generated funds when financing new investments. Mazur (2007) and Ozkan (2001) support this theory. Antoniou (2008) suggests that firms with more liquid assets may use such assets as sources of finance to fund future investment opportunities. The agency cost theory argues that managers can manipulate liquid assets in favor of shareholders against the interest of debt holders. This will increase the agency costs of debt. Thus, this theory suggests a negative relationship between liquidity and leverage. Myers and Rajan (1998) support this theory. According to AL- Shubiri (2010) liquidity ratios may have a mixed impact on the capital structure decision.Companies with higher liquidity ratios might support a relatively higher debt ratio due to greater ability to meet short-term obligations. On the other hand firms with greater liquidities may use them to finance their investments.

2.4.5. Tangibility of the business and Debt Management Practices

Another important variable under this study is tangibility. The trade-off theory predicted that tangibility or asset structure of a firm is positively associated with debt. This theory suggests that the extent to which the firm's assets are tangible results in the firm having a greater liquidation value. This reduces the degree of financial loss incurred by financiers if the

firm defaults. According to Shah and Khan (2007) firms with large amount of fixed assets tend to incur debt at relatively lower rate of interest by providing these assets to creditors as an assurance. Thus, firms with higher percentage of fixed asset tend to borrow more as compared to firms whose cost of borrowing is higher because of having less fixed assets. Consistent with this prediction, many studies indicate a positive relationship between the tangibility and leverage (see for examples, Bradley et al. (1984); Titman and Wessels 1988; Harris and Raviv 1990; Rajan and Zingales 1995; Fama and French (2000); DeJong et al. (2008); Drobetz and Fix (2003). Furthermore, based on the study by Jensen and Meckling(1976) and Myers (1977) argue stockholders of borrower firms are prone to over invest, which gives rise to the classical share holder and bondholder conflict.

In contrast, the agency theory suggests that firms with less collateralizable assets may choose higher debts level to limit managers consumptions of perquisites. The monitoring costs of this agency relationship are higher for firms with less collateralizable assets. Hence, agency cost theory predicts that the relationship between tangibility and leverage is negative. Grossman and Hart (1982), Booth et al. (2001) mazur (2007) and Sheikh and Wang (2011) support this theory and shows negative relationship between tangibility and debt ratio.

2.4.6. Age of the firms and debt management Practices

Age of the firm shows firm reputation and to overcome problems associated with the evaluation of creditworthiness use of firm reputation Diamond (1989). According to Daniel K. (2011) reputation refers to the good name firms have built up over the years (historical) and which is understood by the market, which has observed their ability to meet their obligations in a timely manner. Myers (2001) suggests that if the investment is profitable, shareholders will collect a significant share of the earnings, but if the project fails, then the creditors have to bear the consequences. It shows that the relationship between age and leverage positive. Esperança *et al*. (2003) and Hutchinson (2003) show that leverage decreases with age of the firm, although they cite agency issues as a potential explanation, age of the firm may also proxy for lower information asymmetries.

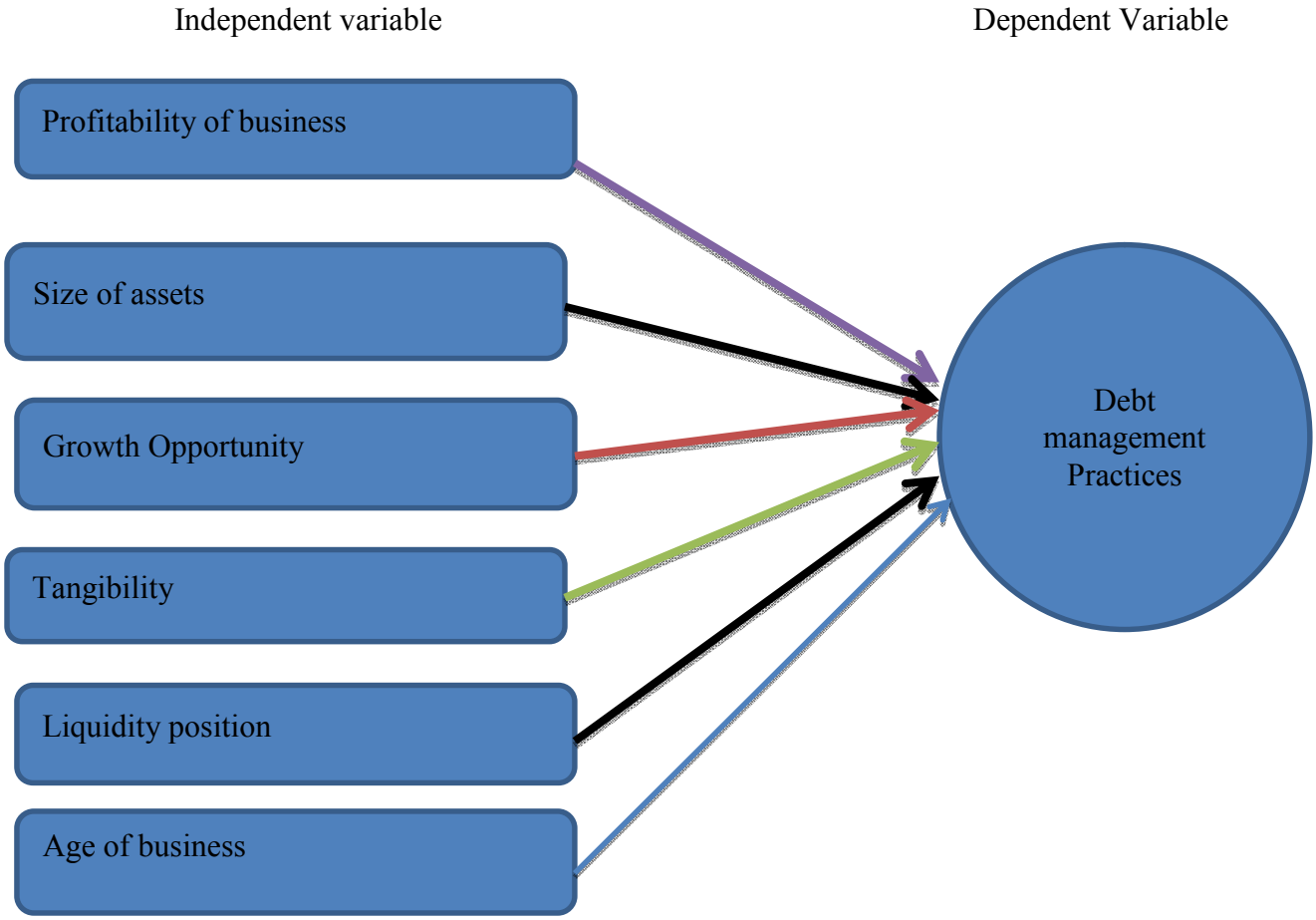
2.5. Summary and Research gap

We may summarize the findings from the literature review as follows: Individual andbusiness policies should be separated in terms of their objectives and accountability to provide an optimal policy mix for their debt management. Nevertheless, information sharing and cooperation should be further promoted, including sharing forecast data and developing strategies in coordination with other policies. The debt management should not be neglected in this process. A research gap is defined as a topic or area for which missing or insufficient information limits the ability to reach a conclusion for a question. The researcher found on studies conducted in Ethiopia uses different related titles on their source of finance and its availability, collaterals, and their financial performance. None of these studies conducted in Ethiopia as well as in Adama City checked those factors that are affecting their debt management practice; profitability of business, liquidity position of the firm. This paper aims to address the gap in the literature on debt management in the Ethiopia, specifically in Adama city and provide an example of the use of a theoretical framework for the practical allocation and management of debt.

We rely mostly on food complex share company data that found Ethiopia especially at Adama City and surrounding; the Ethiopian economy is an interesting example because of a long-standing environment of low interest rates on government bonds and recent experience with an exchange rate commitment, which was in place from 2013 to 2017.

2.6. Conceptual framework

Based on the theoretical and empirical studies the following hypothesis was developed by the researcher.



Source: Developed by the researcher, 2022

Figure 2.1: Conceptual Frame Work

CHAPTER THREE

RESEARCH METHODOLOGY

The main purpose of this study, as mentioned in first chapter is to investigate the determinants of debt management practices in food industry. This chapter describes the research approach and design, nature and sources of data, populations and sampling techniques, definition and measurement of variables, method of data analysis and model used in the study.

3.1 Research Design and Approach

Research design is a set of guidelines that connect theoretical paradigm to the inquiry strategies and empirical material collection methods to address research problems. For this study the explanatory research design used. This design is to understand phenomena by discovering and measuring causal relations among the variables (Zegeye et al, 2009).

Since the nature of data is quantitative, the quantitative approach was used. It is an approach that in involves the generation of data in quantitative form which can be subjected to rigorous quantitative analysis in a formal and rigid fashion (Cresswel, 2003).

3.2 Nature and Sources of Data

This study used audited accounting data of each food complex factories sampled based on the availability of consolidated balance sheet and income statement for the period of 2016-2021. Hence, this study entirely employed a secondary data to examine the determinants of debt management practices of selected companies. Secondary data used because of high quality of data, permanent of data, the feasibility to conduct panel data and enhance the reliability of data in general.

This secondary data made to conduct a panel data, which include 10 food complex companies with observations of five years over the period 2017– 2021. A SPSS data comprises both time series and cross-sectional elements, that is, it embodies information across both time and space.

Panel data has the following advantage over cross-sectional and time series data: First, it controls for individual heterogeneity. Second, panel data give more informative data, more variability,

less collinearity among the variables, more degrees of freedom and more efficiency. On the other hand, time series studies are subject to the problem of mutilcollinearity which is less likely to exist in a panel data. Moreover, panel data are better able to identify and measure effects that are simply not detectable in pure cross-section or pure time series data. Finally, panel data are usually gathered on micro units and many variables can be more accurately measured at the micro level, and biases resulting from aggregation over firms or individuals are eliminated (Baltagi, 2001).

3.3 Sample size and Sampling techniques

For the purpose of this study, population has been defined in terms of the number of manufacturing companies, specifically Food complex Companies operating in Adama City at current period. At this time, the total number of Food Complex Companies reaches 30 including the new established. However, availability of data from this company is challenging one and mostly they tried to make the secret their data and they are not voluntary to give all needed data.

The sample was representative for the whole population and manageable with man power and means to do this research. In this study, purposive sampling technique was employed to select 10 food complex companies and the study year's coverage. The sample consists of panel data for the years 2017- 2021 and includes the set of all food complex found in Adama city issuing consolidated statements for six years consecutively. The most important factors that considered for the selection of the sample in this study is years of operations, that is, to be included in the sample factories should operate at least for seven years without interruption and have consolidated and audited data for six years consecutively. Accordingly, ten food complex Companies are selected. These factories selected because the recent established factories will distort the relationship of dependent and independent variables. Consolidated balance sheet for year 2016 used only to compute the growth opportunity for year 2017. Two Brothers biscuit Factory is excluded from the sample because they dissolved and reorganized as Private Limited Company and the data not fit to include it in the study.

Table 3.1: Factories selected for the study

	Name of Factories	Establishment date	No. branches	Type
1	Family food complex	1994 E.C	1	PLC
2	T.M food Complex	1997 E.C	1	PLC
3	Africa	1990 E.C	1	PLC
4	Muler Food Complex	2005 E.C	1	PLC
5	DMA Food Cpomplex	2007 E.C	1	Sole proprietor
6	Saymen Food Complex	2007 E.C	1	Sole proprietor
7	Rediet Food Complex	1996 E.C	1	Sole proprietor
8	Fikr Flour Factory	2004 E.C	1	Sole proprietor
9	Gonde Adama food Complex	2005 E.C	1	Sole proprietor
10	Awfat	1997 E.C	1	PLC

Source: Arranged by the researcher, 2022

3.4 Variables and Measures

Based on the past study the following variable selected for this study. There are seven independent variables and one dependent variable, which are summarized below with their appropriate proxies.

Table 3.2. Variables and Their Proxies

Variables	**Proxy Measures**
Debt management (Debt - Equity ratio)	Total debt/Total Equity
Profitability	EBIT/Total Assets
Size	Natural logarithm of total assets
Growth opportunity	Percentage change in total assets i.e. (TAt - TAt-1) / TAt-1
Tangibility	Fixed asset/Total Assets
Liquidity	Current asset/Current Liabilities
Age	Natural logarithm of number of years since the date of establishment

Source: developed by the researcher, 2022

3.4.1 Dependent variable

Debt management (Debt ratio): debt Ratio the dependent variable of this study. In literature, several definitions of debt management through survey and they used to investigate its associations with firm-specific characteristics. Booth et al. (2001) define total debt ratio as total liabilities divided by total liabilities and net worth. Another issue is whether these ratios are computed based on book values or on the market values. Fama and French (2002) suggested that these should be on book values. Following Daniel K. (2011), Rajan and Zingales (1995), Caglayan and Sak (2010) the ratio of book value of total debt to total assets is defined as leverage ratio. According to Salah (2010), the reason behind using total debt (liability) rather than long-term or short-term debt is to avoid their contradictory relations with using of debt. Xiaotian L. (2019) employed debt ratio to measure debt management. He explored that his study

the influencing factors of debt management, that is, to determine the appropriate debt level of the company. Then the ratio of assets and liabilities is chosen as the dependent variable (that is, the explained variable), and the ratio of assets to liabilities (total liabilities / total assets).
However, Elizabeth M. (2014) used the measurement of debt management as the ratio of total debt to total equity. To avoid these contradictory results and because of the secondary data was employed the researcher influenced to use only one dependent variable, i.e., Debt- equity ratio defined as total liabilities to total equity.

Therefore, DER = Total Liabilities / Equity

3.4.2 Independent Variable

Six independent variables as determinants of debt management were used for this study. They are profitability, size, growth opportunity, liquidity, tangibility, and age of companies.

Profitability: The ratio of operating income to total assets and operating income to sales will represent profitability. For purpose of this study, the researcher used the measurement of profitability as the ratio of earnings before interest and tax (EBIT) to total assets. Salami and Iddirisu (2011) and Mira (2005) used EBIT to total asset ratio.

Therefore, Profitability (PRO) = EBIT / Total Assets

Size: As suggested by Reimoo (2008) **s**ize is one of the operational characters of firm that has the potential to determine debt and equity choice of firms. The Factories size is an important determinant of debt management which signifies the marketability and profit of factories as logarithm of the total assets. Xiaotian L. (2019) used capacity development to total asset growth rate, Increase rate of business revenue, net profit growth rate. For this study the researcher used natural logarithm of assets as indicator of size. As suggested by Daniel K. (2011) the total assets will be taken and to homogenize the measure of size, natural logarithm of total assets has been used.

Therefore, size= natural logarithm of Total Assets (Size= log (TA))

Growth: Many researchers have used ratio of book-to-market equity as proxy for the growth (Ozkan, 2001; and Gaud et al, 2005). Titman and Wessels (1988) suggest that the growth rate of total assets is considered as the proxy for growth. Therefore, in this study researcher used growth opportunity as the growth rate of total assets. Therefore,

Growth (GW) = (TAt - TAt-1) / TAt-1

Where,

TAt = Current year total assets

TAt-1 = Previous year total assets

Liquidity: liquidity is an ability of a company to meet its short term obligations using those assets that can be converted to cash in short period of time. This ratio describes the ability of company to cover a company's current liability using its current assets**.** Salah (2010) used the ratio of current assets to current liabilities as proxy for liquidity ratio. AL- Shubiri (2010) measured liquidity as ratio of cash to total assets. However, for this study the researcher measured liquidity as ratio of liquidity assets (cash on hand, cash at bank, reserve balance with NBE, deposit with foreign banks and treasury bills) to total assets.

Liquidity (LQ) = Liquidity Assets/Total Assets

Tangibility: It provides a collateral value to the assets and becomes a determinant of debt ratio, because these tangible assets can be used as collateral to enable firms to borrow at favorable terms (Rajan and Zingales, 1995). Different authors such as Akhtar (2005) and Mazur (2007) used the tangibility as the ratio of fixed assets to total assets. However, the researcher used tangibility Non-current asset which includes both intangible and tangible assets, because of most of the financial statement are not show both separately. Therefore,

Tangibility = /Total Assets

Age of banks: Following Daniel K. (2011) the researcher measured age by subtracting factories' year of establishment from each year under study.

3.5 Method of Data Analysis and Model

To test the hypothesis, the relationships between the debt management and six explanatory variables representing profitability, size, growth opportunity, liquidity, tangibility and age SPSS software application was used. These six independent variables are regressed against dependent variable that expressed in Debt Equity Ratio. Descriptive statistical tools such as mean, standard deviations, minimum and maximum used describe relevant information about each variable. In addition, the correlation analysis employed to measure the degree of relationship between two variables.

Data analyzed by using multiple regression techniques that measure the association of the independent variables and dependent variable. Hausman specification test was used to identify the model that is appropriate for this study.

The function of leverage is as follows:

Debt Management = f (profitability, size, growth, liquidity, , tangibility, age).

The model for this study is as follows:

$$y_{it} = \alpha + \beta X'_{it} + \varepsilon_{it}$$

i= Factories, t= year,

The regression model that will be estimated is:

$$DM_{it} = \beta 0 + \beta 1(PROF)_{it} + \beta 2(SZ)_{it} + \beta 3(GROW)_{it} + \beta 4(LQ)_{it} + \beta 5(TANG)_{it} + \beta 6(AGE)_{it} + + \varepsilon_{it}$$

Where,

DM = Debt Management,

PROF= Profitability,

SZ = Factories Size,

GROW= Growth opportunities,

LQ = Liquidity,

TANG = Tangibility of assets,

AGE= age of Companies,

$\varepsilon = \alpha_i + \mu_{it}$ = error term

$\beta 0$= constant term of regression equation

$\beta 1$, $\beta 2$, $\beta 3$, $\beta 4$, $\beta 5$, $\beta 6$, are the slopes show the sensitivity of leverage ratio to changes in independent variables.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

This chapter provides empirical evidence of the study. The descriptive analysis of the data set showing the mean, standard deviation, minimum, and maximum; correlation coefficients; comparison of specification models , OLS assumptions and statistical results of each explanatory variables are included under this chapter.

4.1 Descriptive Statistics

This study examines the determinants of debt management for the sampled food complex industry companies that found in Adama city, Ethiopia over five years' time period from 2017-2021. Table 4.1 below shows the descriptive statistics for the dependent variable and explanatory variables. It includes the mean, standard deviation, minimum and maximum. The mean value of debt management (which measured as the ratio of total liabilities to total equity) was 47.61% with a minimum and maximum value of 2% and 87% respectively. The standard deviation of debt-Equity ratio is .21398percent and it implies the debt ratio fluctuates less among sample companies and time.

Profitability, measured as the ratio of earnings before interest and tax to total asset, had a mean value of 3.71percent and varies from 00 percent to 10 percent. The standard deviation is 2.37 percent and it shows low variation among companies and over time. Growth opportunities vary from negative 3percent to positive 356 percent and which have a mean of .5863. This shows that, on average, growth rate in total assets was 58.63 percent per year during five-year period. Tangibility had a mean of 40.71 percent with the minimum value of 11 percent and maximum value of 86 percent. The mean of Factories size (natural logarithm of total assets), liquidity and natural logarithm of age, are 7.8049,4.3148, and 1.0279respectively.-.03 indicate that the growth rate for asset that for companies of one year were decreased than other years. This is because; the current year total asset was less than previous year.

Table 4.1 Descriptive Statistics of debt management and independent Variables

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
DM	50	.02	.87	.4761	.21398
PROF	50	.00	.10	.0371	.02367
SZ	50	6.32	9.15	7.8049	.60636
GROWTH	50	-.03	3.56	.5863	.76324
TANG	50	.11	.86	.4071	.20689
LQ	50	.56	18.30	4.3148	4.44936
AGE	50	.48	1.38	1.0279	.21776
Valid N (listwise)	50				

Source: SPSS Result, 2022

4.2 Correlation coefficient Analysis

A Pearson correlation coefficient describes the relationship between two continuous variables. Collinearity is the term used to explain the dependence of one variable to other. When variables are highly correlated they both express basically the same information. Statistically multicollinearity does not needed because if they exist, then independent variables are redundant and do not add any predictive value over each other (Gujarati, 2004). In this study the highest correlation value is 0.6836 (in table 4.2) that means collinearity should not constitute a problem in this regression analysis.

Table below presents correlation coefficients of this study in which debt management used as a proxy for total liability to total equity as dependent variable and profitability, size, growth opportunities, liquidity, tangibility and age are incorporated as independent variables. Profitability, size, liquidity, and age are significantly associated with debt equity ratio. However, growth opportunities and tangibility have insignificant relationship with debt equity ratio ($p > 0.10$). Profitability, size, tangibility and liquidity correlated negatively to debt management, while growth opportunities and age have positive correlation with debt management.

Profitability correlates negatively to all other independent variables except size of companies. More profitable factories tend to have lower growth opportunities, lower liquidity, lower tangibility, lower age, and more total assets. Size is significantly correlated to all variables

except profitability. It correlated negatively to growth opportunity and tangibility, while positively correlates to the remaining variables. This implies that, larger manufacturing industries, specifically food complex companies tend to have lower growth opportunity and tangibility and have more liquidity, and high age.

Factories with high growth opportunity tend to be less collateralized and the assets are more risky. Growth opportunity rate of total assets negatively correlated to all explanatory variables.

Table 4.2 Pearson's correlation

	DM	PROF	SZ	GROW	LQ	TANG	AGE
DM	1						
PROF	-0.4248*	1					
SZ	-0.4378*	0.1123	1				
GROW	0.0105	-0.0556	-0.3630*	1			
LQ	-0.2846**	-0.0467	0.3399*	-0.0682	1		
TANG	-0.0826	-0.1919	-0.3757*	-.2319***	-.2312***	1	
AGE	0.5945*	-0.0739	0.6836*	-0.5632*	0.1554	0.0922	1

- *and ** represent significant level at 1% and 5% respectively.

Source: SPSS result, 2022

Liquidity negatively correlated to profitability, growth opportunity, and tangibility, and positively correlated to size and age. It significantly correlated to size, and tangibility. Tangibility negatively correlated to all explanatory variables except age. It significantly correlated to size, growth opportunity and liquidity. Age positively correlated to all variables except profitability and growth opportunity. Size and growth opportunity are significantly correlated to age.

4.3. Assumption Test

In this study three estimation models are tested by using Hausman specification and the Breusch and Pagan Lagrangian Multiplier test. Hausman specification test was used to identify whether the fixed effect or random effect model is appropriate. The fixed effect and random effect regression were run and stored respectively. Then, the Hausman test was run and the output shows the p- values of 0.7688 and it is insignificant (see Table A on Appendix). Random effect model is selected for this study. After identified random and fixed by Hausman test, the Breusch and Pagan Lagrangian Multiplier test used to checks between random effects model and pooled OLS. The results from the test reveal significant p- values of 0.0001 (see Table B on Appendix). Thus, the null hypothesis is rejected. This implies that random effects model Generalized Least Square (GLS) regression is appropriate for this study. The Random effects model assumes that there is no correlation between the group specific random effects and the regressors (Cameron and Trivedi, 2009). However, the fixed effects model does not make such assumption and the possibility remains that the assumption of zero correlation in random effects model is not feasible in fixed effects model.

4.4. Tests for Ordinary Least Square Assumptions

Assumption 1: Multicollinearity

Multicollinearity checked through Variance Inflating Factor (VIF). Multicollinearity exists when the value of the variable is more than 10. For this study, the variance inflation factor (VIF) for all variables is significantly less than 10 and the tolerance is significantly exceeds 0.1 with a mean value of 2.81 which indicates that there is no problem of multicollinearity. Therefore, the researcher concluded that multicollinearity is not a problem for the study.

Table 4.3 Variance inflator Factors (VIF)

Variable	VIF	1/VIF
Age	5.54	0.180458
Size	4.25	0.235239
Tangibility	2.00	0.499727
Growth opportunity	1.77	0.566271
Liquidity	1.66	0.603507
Profitability	1.64	0.609158
Mean VIF |	2.81	

Assumption 2: Normal Distribution of residuals

Shapiro-Wilk test used to analyze the normality test assumption. It tests the null hypothesis that the distribution of the residual is normal. In this study, the p-value for model is insignificant and the researcher fails to reject the null hypothesis. Hence, the residual has normal distribution pattern. (See appendix)

Assumption 3: Heteroskedasticity test

Under this assumption Breusch-Pagan / Cook-Weisberg test was used. Breusch-Pagan / Cook-Weisberg test tests the null hypothesis that variance is constant. If p-value shows insignificant, that is, $p > 0.05$, the null hypothesis would be accepted and the variances are homogenous. If the p-value is significant, that is, $p < 0.05$, the null hypothesis would be rejected and its shows a heteroskedasticity concern.(See appendix 2)

In this study the researcher failed to reject the null hypothesis, because the p- value insignificant (greater than 0.05) and there is no heteroskedasticity.

4.5. Regression Results

The results of the random effect regression between the dependent variable and the independent variables are presented in table 4.4. The overall R-squared value is 44.6 percent. According to Brooks (2008) R-squared measures how well the regression model explains the actual variations

in the dependent variable. In this study it indicates that 44.6 percent of the total variability of determinants of debt management practices of food complex companies in Adama City is explained by the model, it can be concluded that the independent variables provide good explanatory power. P-value of zero shows that the null hypothesis that all of the coefficients are jointly zero should be rejected. Thus, it implies that the independent variables in the model are able to explain variations in the dependent variable.

Table 4.4: Model summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.668[a]	.446	.354	.17200

a. Predictors: (Constant) GROWTH, LIQ, AGE, PROF, TANG, SIZE
Source: Regression result, 2022

Table 4.5. Variance Analysis

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.001	6	.167	5.561	.000[b]
	Residual	1.243	42	.030		
	Total	2.244	48			

a. Dependent Variable: DM
b. Predictors: (Constant) GROWTH, LIQ, AGE, PROF, TANG, SIZE
Source: Regression Result

In terms sign four variables (Profitability, size, tangibility and liquidity) that have been negative sign and the remaining two variables (growth opportunities and age) have a positive sign. Profitability, size, liquidity and age have been found to be statistically significant at 1%, 5%, and 5% significance level respectively, whereas growth opportunities and tangibility variables found being statistically insignificant.

Table 4.6: Regression results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.247	.254		4.903	.000
	PROF	-.877	.188	-.125	-4.665	.001
	SZ	-.064	.024	-.413	-2.615	.012
	GROW	.052	.069	.118	.761	.451
	TANG	-.218	.134	-.211	-1.634	.110
	LQ	-.014	.006	-.289	-2.370	.022
	AGE	.426	.123	.434	3.464	.001

a. Dependent Variable: DM

Source: Regression Result, 2022

4.5.1. Profitability

Profitability is found to be statistically significant at 1%. The coefficient of profitability was negative sign and significant, not confirm the researcher's first hypothesis. A 1 percent increase in profitability, which is measured by the ratio of earnings before interest and tax to total asset, will result decrease in leverage ratio by 87.7 percent. The finding is consistent with the pecking order theory that predicts a negative relationship between profitability and debt ratio. This theory says that profitable firms prefer internal funds rather than external due to asymmetric information or transaction costs. This finding agrees with Titman and Wessels (1988) and Amidu (2007). This result indicates that as companies generate enough profit and they not put their intension on borrowing and management of debt.

In contrast, the finding disagrees with the trade-off theory that suggests profitable firms tend to have more debt and managing ways for it. According to this theory, more profitable firms should carry more debt in order to benefit from the tax advantage obtained from debt so that they can protect the profit from taxation. Scott (1977) claims that a firm's optimal debt ratio and debt equity ratio is determined by a trade-off between the bankruptcy cost and tax advantage of borrowing.

4.5.2. Size

Size is found to be statistically significant and negative impact on the companies' debt ratio. This shows that companies tend to have higher debt ratio and companies borrow the smaller and manage less. This result is not consistent with the previous studies and the negative relationship between debt ratio and size not supports the researcher's second hypothesis. The finding not agrees with the tradeoff theory that suggests larger firms should operate at high debts due to their ability to diversify the risk and to take the benefit of tax shields on interest payments. Besides, it support the study done by Amidu (2007) which suggest the bigger the firms, the more external funds it will use because larger companies are more diversified and hence have lower variance of earnings, enable them to manage high debt ratios. The providers of the debt capital are more willing to lend to larger banks as they are perceived to have lower risk levels. It is also consistent with the agency theory, which suggests that large firms have a reputation in debt markets and consequently face lower agency costs of debt (Frank and Goyal, 2008).

4.5.3 Growth opportunity

This variable is found statistically significant in varies studies. In this study it has found to be statistically insignificant, though it has a positive sign. That is, researcher's third hypothesis was accepted. A one percent increase in growth opportunities will result increase in debt equity ratio by 5.2 percent. This result contradict the trade-off theory which suggests that firms holding future growth opportunities tend to borrow less than firms holding more tangible assets because growth opportunities cannot be collateralized. Agency theory also predicts a negative relationship because firms with greater growth opportunities have more flexibility to invest sub optimally, thus, expropriate wealth from debt holders to shareholders.

However, the results obtained here shows that no relationship between expected growth and leverage. The researcher measured growth opportunity as the percentage change in total assets in this study and it may not reflect future growth possibilities, only past growth. This variable fails to determine food complex companies' debt management practices in Adama city. Positive result agrees with the result of Amidu (2007), except that his result shows that there is positive and significant relationship between growth opportunity and debt to equity ratio.

4.5.4. Tangibility

This variable has a negative relationship with total liability to total equity but, statistically insignificant even at 10%. It has a coefficient of 0.218, which indicates a one percent increase in the tangibility of assets will lead to increase in total liability as the ratio to total equity by 21.8 percent. The fourth hypothesis was as an expected, it was accepted. This result not consistent with trade-off theory that suggests companies with relatively safe tangible assets tend to borrow more than companies with risky intangible assets. In other words, large tangible assets tend to have greater value of liquidation and relatively easier access to debt finance with lower costs of financing. It also consistent with the agency theory that suggests if debt can be collateralized, the borrower is restricted to use the borrowed funds for a specified project, thereby reduces the agency problem.

Even though the beta coefficient shows as hypothesized theoretical relation between tangibility and leverage, this is statistically insignificant. This can be interpreted as tangibility variable does not explain the variation in the debt equity ratio and is found to be insignificant factor to decide the debt management practices of food complex companies in Adama City. The finding consistent with Amidu (2007) and Caglay and Sak (2010) who's reported an inverse relationship between tangibility and total debt to total equity.

4.5.5 Liquidity

The regression result shows that there is negative and significant relationship between liquidity and debt equity ratio. As the researcher hypothesis shows significant, the fifth hypothesis was rejected. This suggests that the raising liability is depends on the liquidity of the food complex companies. It also suggests that companies with higher liquidity opts for lower total liability and management of it as they are able to meet there working capital requirements. Overall, a one percent increase in liquidity will lead to a decline by 1.4 percent in debt equity ratio. This result is consistent with pecking order theory, which suggests that companies with higher liquidity prefer to use internally generated funds when financing new investments.

4.5.6. Age

Age has a statistically significant positive coefficient of 0.426. It has a p-value of 0.001 from the explanatory variables under study. This implies the variable measured by logarithm of age is significant in econometric formulations. Age variable is included in the model in an intention that good image or reputation has a positive effect on the banks creditworthiness. The regression result agreed with this expectation; age is found being statistically significant even at 1% significance level. The finding not accepts the researcher's sixth hypothesis that age of the firm is has no significant relationshipwithdebt management, since it is statistically significant.

The result is not consistent with the agency theory, which suggests as firms grow old they develop reputation and this reputational capital is sufficient to ensure that they will avoid actions harmful to lenders even though they are unmonitored, and thus can manage high debt. In contrary, the finding is consistent with the pecking order theory which suggests older and more experienced firms need less external financing.

4.6. Summary Analysis

The researcher issued the following table for summarizing the expected relationship, actual relationship, the significance level, and the decision regarding to the acceptance or rejection of the hypothesis.

Table 4.7: summary and comparison of test result with the expectation

		Dependent variable: Debt management		
Explanatory variable	Expected relationship	Result	Statistical significance	Decision
PROF	No significant	Significant relationship	1%, significance	Rejected
SZ	No significant	Significant relationship	5%, significance	Rejected
GROW	No significant	Insignificant relationship	In significant	Fail to reject
TANG	No significant	Insignificant relationship	Insignificant	Fail to reject
LQ	No significant	Significant relationship	5%, significance	Rejected
AGE	No significant	significant relationship	1%, significance	Rejected

Source: Researcher's Constructions, 2022

The determinants of debt management practice of food complex companies in Adama City can be modeled as described below: -

Only statistically significant variables are included in the model after research have been conducted.

$$DM_{it} = \beta 0 + \beta 1(PROF)_{it} + \beta 2(SZ)_{it} + \beta 3(LQ)_{it} + \beta 4(AGE)_{it} + \varepsilon_{it}$$

As generated by regression analysis, shown in table 4.7 above, the established regression equation is:

$$\text{DER (DMit)} = 1.247 - 0.877prof - 0.064sz - 0.014lq + 0.426age + \varepsilon_{it}$$

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1. Summary

This study attempted to explore the determinants of debt management of 10 food complex companies in Adama city for time period 2017-2021. Debt equity ratio (a measure of debt management) is employed in this study as dependent variable. Profitability, size, growth opportunities, liquidity, tangibility and age are used as explanatory variables.

5.2. Conclusion

According to the results of empirical analysis, firm characteristics such as profitability, size, liquidity and age are found to be the most important determinants of food complex companies' debt management. No significant relationship of growth opportunity and tangibility, with debt equity ratio. Profitability, size and liquidity are negatively affecting the debt equity ratio. Companies'age is positive impact on debt management. The tangibility has negatively affect debt management, but insignificantly. Growth opportunities also positively affect the food complex companies' debt management practice which measured as the ratio of total debt to total equity.

Based on the findings the profitability and liquidity supports the pecking order theory, while size variable support the view of trade off theory (firm size as an inverse proxy for the probability of bankruptcy). Liquidity also confirms the agency theory. Even though tangibility and growth opportunities are also support the debt management theories by sign, they have insignificant relationship with the debt management.

Generally, these results consistent the theories developed in finance to explain the capital structures within firm level characteristics. The pecking order theory best explains debt management of food complex companies in Adama City, Ethiopia.

5.3. Recommendations

As the objective of the study is to investigate the factors that affect the debt management, there are variables that influence debt management of manufacturing companies specifically food complex companies, in Adama city. Based on the finding the following recommendations are given by the researcher.

- The research finding indicated that there is a significant negative relation between size of Food complex and debt financing, larger companies better to manage. Thus, the researcher recommends that the companies better to focus on their capital rather than borrowing and they have to manage their capital rather than giving attention to debt management.

- As companies' age increases debt management practices also increases. Because as companies old there is a lot of creditors that can be lend to them. This may lead loan that considered as doubtful for creditors and they may loss the creditors in future. So, companies should manage the liabilities dealings with the equity capital.

- Profitability affects the debt management of the companies significantly and negatively, it recommended based on the pecking order theory which assumed the profitable firms used first internal funds because of no transaction cost is existed. So, companies that have high profitable should manage and use the accumulated funds or generated profit to finance new investment.

- Companies better to manage their debt according to availability of current assets that help to pay to their debt.

5.4. Suggestions for Further Research

The limitations can be addressed here are both the firm level characteristics such as management competence, credit risk, earning volatility, non-debt tax shields, effective tax shield, market to book ratio and macro variables are exclude from the study. It is recommended that further studies should consider increasing both the period and the number of cross-sections. That is, it required to develop new hypotheses for the debt management of companies and to design

new variables to reflect the banks influence. For this a larger, comprehensive, and detailed database is also required.

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Appendixes

Appendix 1: Regression Result

Shapiro-Wilk W test for normal data

Variable	Observation	W	V	z	Prob>z
Residual	50	0.99042	0.548	-1.299	0.90310

Appendix 2:

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of DM

chi2(1) = 1.36

Prob > chi2 = 0.2441

Appendix 3

Table1. Factories selected for the study

	Name of Factories	Establishment date	No. branches	Type
1	Family food complex	1994 E.C	1	PLC
2	T.M food Complex	1997E.C	1	PLC
3	Africa Private Limited Company	1990	1	PLC
4	Muler Food Complex	2005	1	PLC
5	DMA Food Complex	2007	1	PLC
6	Saymen Food Complex	1998	1	PLC
7	Rediet Food Complex	1996	1	PLC
8	Fikr Flour Factory	2004	1	PLC
9	Gonde Adama food Complex	2005	1	PLC
10	Awfat	1997	1	PLC