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ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

**DETERMINANT OF PROFITABILITY FIRMS IN LEATHER INDUSTRY IN ADDIS ABABA
ETHIOPIA**

BY

TSIGEREDA SHIBRU MEGERSA

ADVISOR

D/R ZINEGNAW ABIY

June 2020

ADDIS ABABA, ETHIOPIA

**DETERMINANT OF PROFITABILITY FIRMS IN LEATHER INDUSTRY IN ADDIS ABABA
ETHIOPIA**

BY

TSIGEREDA SHIBRU MEGERSA

A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF GRADUATE
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ADDIS ABABA, ETHIOPIA

ST. MARY`S UNIVERSITY
SCHOOL OF GRADUATION STUDIES
FACAULTY OF BUSINESS

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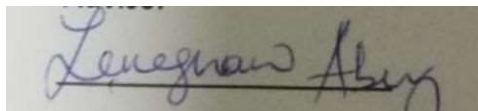
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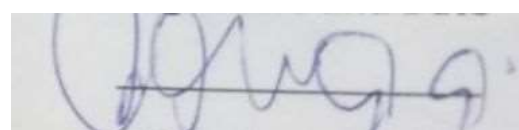
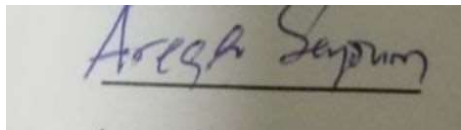
Advisor

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External Examiner

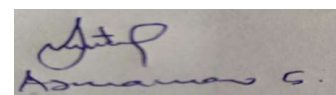
Signature and Date



Internal Examiner

Signature and Date

Asmamaw.s (Phd)



DECLARATION

First, I declare that this Thesis is my work and that all sources of materials used for this thesis have been fully acknowledged. ``**Determinant of profitability of leather industry in Addis Ababa Ethiopia**``. This thesis has been submitted in partial fulfillment of the requirement for the Degree of Master of Business Administration in accounting and finance

(MBA ACCOUNTING AND FINANCE)

Name: Tsigereda Shibru



Signature

Date of Submission: June ,2020

ENDORSEMENT

This thesis has been submitted to St. Mary's University, school of Graduate Studies for examination with my approval as a university advisor.

Zenegnaw Abiy (Phd)

Advisor

A rectangular box containing a handwritten signature in blue ink, which appears to be 'Zenegnaw Abiy', followed by the date '25/08/2'.

Signature and Date

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Finally, I would also like to thank staff members of ERCA LTO and saris around kadisco branch for giving me most of the financial statements of companies. This thesis would not have been possible without their support.

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LIST OF ABBREVIATIONS

LTO	Large taxpayer Office
MIS	Management Information System
MOFED	Ministry of finance and economic development
MOT	Ministry of Trade
NIAT	Net income after Tax
ROA	Return on assets
SCP	Structure-Conduct Performance
LIDI	Leather industry Development Institution
CSA	Central Statistically Agency
ERCA	Ethiopian Revenue and customs Authority
ROE	Return on equity
ASE	Amman stock exchange
GPR	Gross Profit Ratio
MEF	Management efficiency

Abstract

Determinant of profitability of large manufacturing leather companies of Addis Ababa in Ethiopia.

This study sets out to examine the determinants of the leather industry profitability specifically focused on large manufacturing companies of the sector who submitted their annual financial statements report to LTO partially from during the period 2008 up to 2018 and partially from 2014 to 2018. Consequently, the researcher used secondary data obtained from the financial statement balance sheet and income statement of leather companies. The study used explanatory research design to check the relationship between dependent variable profitability and independent variables (liquidity, capital adequacy, leverage, tangibility of asset, firm size, managerial efficiency, and inflation). The regression result showed that , firm size, tangibility of asset, and capital adequacy have statistically significant and negative impact on profitability but managerial efficiency has statistically insignificant and negative impact on profitability, on the other hand, leverage, liquidity and inflation have statistically insignificant and positive impact on profitability. Quantitative research approach was adopted. The study conclude managerial efficiency has negative impact on profitability so the stakeholders that give more attention on managerial efficiency. The researcher recommend that the manager should have to consider how they utilize firms' resource efficiently and effectively.

Key words: profitability, leverage, liquidity, firm size, capital adequacy, managerial efficiency and inflation.

Chapter One

Introduction

This chapter consists of 8 sections. which includes background of the study, background of leather industry in Ethiopia, statement of the problem, objectives of the study (general and specific objectives), research hypothesis, scope, limitation, and significance of study.

1.1 Background of the study

Performance evaluation is managing various economic resources and their efficient use within operational, investment and financing activities. It is optimized economic results a special attention should be given to the proper grounding of managerial decisions. These should be based on complex information regarding the evaluation of all types of activities within the company.

To the financial management, profit is the test of efficiency and a measure of control to the owners a measure of the worth of their investment to creditors, the margin of safety, to the government a measure of taxable capacity and basis of legislative action and the country profit is an index of economic progress, national income generated and rise in the standard of living. (Weston and Brigham 1978).

According to Ifeoma, David and Sylvia (2012) profitability ratios show firm's overall efficiency and measure both the profit margin that the firm can be able to generate as well as the return it provides on the physical facilities and fund it employs. For any firm to continue to be in business, it should be able to earn enough revenue to cover its operating cost and generate enough profit as amends to the providers of capital. Any firm is most concerned with its profitability. Profitability indicates how well management of an enterprise generates earnings by using the resources at its disposal. In the other words the ability to earn profit i.e. profitability, it is made up of two words profit and ability. the word profit represents the absolute figure of profit, but an absolute figure alone does not give an exact idea of the adequacy or otherwise of increase or change in performance as shown in the financial statement of the enterprise. The word ability reflects the power of an enterprise to earn profits, it is called earning performance.

Investment point of view, which is important for success of the leather industry, profit in the accounting term sense tends to become a short-term objective which measure not only the success of product but also the development of the market. thus, this research focused to study the determinant of profitability in leather industry in Addis Ababa. the motive behind to undertake this research paper is to provide some identification of the factors which affects profitability and also to contribute a slight to help management and other stakeholders to measure the overall success of these sectors.

1.2 Background of leather industry in Ethiopia

The Ethiopian leather and leather products industry is relatively an older industry with more than 80 years of involvement in producing leather products. The history of the industry goes back to the establishment of Asco Tannery in 1928 and the subsequent establishment of Asco Shoe factory. the tanning industry in Ethiopia produces and exports all types of finished leather from hides, sheep skins and goatskins (LIDI, 2015).

The leather and leather products sector are the fifth largest export sector of Ethiopia which is considered as highest priority sector of the government for its increasing value addition. finished leather represents the largest share of Ethiopia's output and export and it accounted for around 60 % of total leather-related exports in 2016. the value of exports of crust leather fell from more than \$90 Million in 2011 to nil in 2016 after the introduction of a 150% tax on export of semi-finished crust leather in December 2011. In parallel, finished leather exports rose from \$25.3 Million to \$67.6 Million during the same period, the main destinations being China, Hong Kong, Italy, Thailand India and United Kingdom which constitute 88.8% share (ERCA, 2016).

Ethiopia is generously endowed with livestock resources. Its cattle population of more than 53 million, along with sheep and goat populations of 25.5 and 24.1 million, respectively, put the country first in Africa. with an annual off-take rate of nearly 10% for cattle, 33% for sheep and 38% for goats, the country is endowed with huge potential for cheap supply of skins and hides. there is a clear recognition of this potential by policy makers in Ethiopia as indicated by the Growth and Transformation Plan (GTP) and several other national plans that preceded it. in the GTP document, the leather and leather products industry are one of the priority industries that

is expected to contribute considerably to export diversification and foreign exchange earnings through greater value addition and productivity improvement (CSA, 2013).

Due to the availability of cheap raw materials including hides and skins as well as labor the leather and leather products industry (LLPI) has been one of the sectors which a range of industrial policies were introduced. This is because of the presence of wide ranging and mutually reinforcing problems at several stages of the leather value chain that have kept product quality low. The government has thus devised policies to improve the supply and quality of raw materials and has sought to stabilize their prices. Efforts have also been made to upgrade the production facilities and techniques of leather processing units while attempting to improve the international marketability of leather products in short the government intervention in the industry range from the point of skin and hides collection to the leather production and marketing stages. These were problems that inhibit industrial transformation and growth of the LLPI and that the market, left to its own devices, cannot help overcoming. thus, proactive state intervention was not only required, they are also now recognized to have brought about extensive progress in the leather industry (Altenburg, 2010).

The leather and leather products industry are highly labor intensive in the raw material sourcing, transportation, water utilization, processing and marketing phases. The industry thus possesses a huge potential to create much needed non-agricultural employment and looks set to play an important role in poverty reduction. yet this potential has remained largely unexploited. in the presence of far reaching structural problems unique to the leather sector, ranging from adhoc hide and skin collection systems to weak marketing infrastructure, it is not immediately clear whether the sector would take off without proper policy support .Ethiopian leather industry and pharmaceuticals industry development Institute the Ethiopian manufacturing industry has contributed much to the growth and development of Ethiopian economy. it has also offered emerging employment opportunities and participating in social responsibilities. while consumption of leather product is on rise for the last decades, consumers have also become more refined in demanding more products (Ethiopian News Agency, 2016).

1.3 Problem statement

Profitability is primary goal of any firms in economic point of view. it will have improved capital structure, increase employment opportunity, and strength of dividend payment to owners. Profitability provides overall performance of a company and useful tool for forecasting measurement of a company's performance. the overall objective of a business is to earn a satisfactory return on the funds invested in it, while maintaining a sound financial position, profitability measures financial success and efficiency of management.

Ethiopia is the 8th largest livestock in the world, and the second largest in Africa. thus, Ethiopia has naturally developed its leather industry in the past decades, mostly through large exports of raw skins. tanneries are key factors as they process the transformation of the raw material into finished leather that will then be transform into commercial goods Central Statistics Agency recorded (CSA 2012).

The whole leather transformation process appears to be a byproduct industry. it is specialized in midrange products because of the lack of design skills and quality problems. the shoe industry faces different problems. the production is not self-sufficient, and the import costs of several shoe components compensate the comparative advantage due low salaries and government incentives. as for the other products, they suffer from distance to the markets (Mines,2016).

The leather and leather products industry have multiple linkages to the wider rural economy. it is also highly labor intensive in its raw material sourcing, transportation, processing, and marketing phases. the industry thus possesses enormous potential to create much needed non-agricultural employment and looks set to play an important role in poverty reduction. yet this potential has remained largely unexploited. It is beset with far reaching structural problems unique to the leather sector, ranging from unorganized hide and skin collection systems upstream to poor marketing infrastructure downstream. it is not easy for the sector to achieve significant growth without properly addressing these deep-rooted problems. as described in the GTP-II plan, the leather and leather products sector contribute on average about 6-8 percent of the gross value product of all manufacturing industries. moreover, according to the same source the sector contributes about 6 percent to national GDP and the export of leather product

continues to be an important source of foreign currency earning. in the fiscal year of 2015, records indicate that 22,673 both permanent and temporary jobs have been created in the leather sector. Of this figure, 11,598 are female workers and the remaining 11,075 are male employees. These figures exceed the Government's forecasted target of creating 16,726 new jobs. (UNCTAD,2018)

There is no study about the profitability of leather industry in Addis Ababa Ethiopian but other researcher related studies Lisanework (2018) determinant of export performance of leather and leather industry, Kumlachew (2012) market share, concentration, and profitability of Ethiopian leather industry, Hunegnaw(2015) leather industry and environmental challenge. The absence of study the researcher interested to put own contribution on what factors affecting leather industry profitability in Addis Ababa Ethiopia. Because of the above problem decreasing the profitability of leather industry in our country. The researcher study's the profitability of leather industry in Addis Ababa Ethiopia what factors reduce the profitability of leather industry.

1.4 Objectives of the study

In this section the general and specific objectives of the study are discussed.

1.4.1 General objective

The general objective of this study is to identify the determinants of large leather manufacturing companies' profitability in Addis Ababa. Particularly companies which report their annual financial statement at Ministry of Revenues Large Taxpayers' Office (LTO) for the period of five years from 2014/15 to 2018/19.

1.4.2 Specific objective

- To find out the relationship between leverage and leather industry profitability in Addis Ababa Ethiopia.
- To check whether tangibility of asset have significant impact on profitability of leather industry in Addis Ababa Ethiopia.
- To find out the relationship between liquidity and profitability of leather industry in Addis Ababa Ethiopia.

- To identify the impact of managerial efficiency in profitability of leather industry in Addis Ababa Ethiopia.
- To investigate on the relationship between the firm size to profitability.
- To examine whether inflation have an impact on profitability of leather industry in Addis Ababa Ethiopia.

1.5 Research hypothesis

As stated by (Kothari 2004) ordinarily, when one talks about hypothesis, one simply means a more assumption or some supposition to be proved or disproved. But for the researcher hypothesis is a formal question that he intends to resolve. Thus a hypothesis may be defined as a proposition or a set of proposition set forth as an explanation for the occurrence of some specified group of phenomena either asserted merely as a provisional conjecture to guide some investigation or accepted as highly probable in the light of established facts. Quite often a research hypothesis is a predictive statement capable of being tested by scientific methods that relates an independent variable to some dependent variable. So that for achieving the objective of these study, the following seven hypotheses were developed regarding the determinants of profitability of leather companies in Addis Ababa grounding on different empirical research and theoretical review.

As far as Leverage ratio is conducted in this area come up with similar conclusion for instance, Hafiza (2011), Suheyli (2015), Meza (2014) showed leverage ratio is negative related to profitability which means when the company is more financed with equity than debt the profit of the firm will increase. On the other hand, Erick (2011) and Behaylu (2017), come up with different conclusion with the other studies they concluded leverage ratio and profitability of the firm have a positive relationship.

H1. Leverage has a negative significant effect on leather manufacturing companies' profitability.

With regard to liquidity ratio the other studies conducted by Abdulateef (2016),Endale (2015),Nwakeaeg(2014) their study revealed that the liquidity has negative relationship with

profitability on the other hand study done by Al-Samman (2015) and Ibe (2012) they founded that liquidity has positive and negative relationship with profitability. Therefore, the result shows no statistical significance between liquidity and profitability.

H2. Liquidity has negative significant effect on profitability of leather manufacturing companies.

With regard to tangibility the other study conducted by Hammes and Chen (2004) and Keberwar (2013) proposed that there is negative relationship between tangibility and profitability. Firm with high level of tangible asset tend to be less profitability.

H3. Tangibility has negative and significant effect on profitability of leather manufacturing companies in Addis Ababa.

As far as managerial efficiency is conducted in this area come up with different conclusion other studies for instance Althanasoglou (2005) and Yodit (2017) proposed that positive relation between managerial efficiency and profitability. Managerial efficiency has negative impact on profitability means leather industry management has week performance.

H4. Managerial efficiency has positive and significant effect on profitability of leather manufacturing companies in Addis Ababa.

The larger firm is the greater the influence it has on its stakeholders. Khandokar, Raul & Rahman (2013) has also performed the research towards determinants of the profitability performance of firms of non-banking financial industry in Bangladesh. In his research, the financial variable such as total asset (size of firms) has been employ and result has demonstrated a positive significant relationship towards the profitability of performance of firms.

H5. Size has positive significant effect on profitability of leather manufacturing companies in Addis Ababa.

With regard to capital adequacy other study conducted by Athanasoglou (2008), and Ponce (2011) proposed that there is positive relationship between capital adequacy and profitability.

H6. Capital adequacy has a positive and significant effect on profitability of leather manufacturing companies in Addis Ababa.

Adamson (1996) defines it as the rate of increase in general price level in an economy. Bhailu (2017), Nwankwo (1982) believes that inflation is an excess of demand over supply. Inflation could be creeping, galloping or hyper depending on the magnitude of its rate in a year. Generally, the rapidly fluctuating inflationary pattern creates high degree of instability in an economy. Where the structure of the economy is weak, the effect could be very devastating. As a result, depend upon the above theoretical basis the final hypothesis of the study was developed as follows

H7. Inflation has negative and significant effect on profitability of leather manufacturing companies in Addis Ababa.

1.6 Delimitation (scope) of the study

The study is basically on the profitability (performance) side of manufacturing firms in Ethiopia specifically focus area of leather industry their annual financial statement to Ministry of Revenue Large Taxpayer`s Office (LTO) in Addis Ababa. The researcher gets enough organized information from the responsible sectors and other stakeholders. besides, as institutions the sector government agencies lack of systematization, took the researcher time to organize and structured the resources received. The researcher used the period to analyze the financial statement starting from 2014/15-2018/19 fiscal year due to the availability of data of this period. There are 34 tanneries in Ethiopia and two of them are under establishment. The leather industry is segmented into three subsectors the production of finished leather from raw hides and skins (tanneries), the production of leather footwear, and the production of other leather goods such as garments, bags, gloves, belts and accessories.

1.7 Significance of the study

The results of this study will provide relevant information to investors to measure the performance of their portfolios, consumers to use quality products, donors to increase motivation, or Ministry of Trade and management bodies of leather industry to adjust their

management system and mechanisms, capitalize on other, like strong demand and cost complementarities that improve performance. after the assessment of this study it would allow for the policy makers to discover the status and the performance of state-owned leather industry sectors and measure their competitiveness in terms of profitability with privately and share owned companies and help them to pass policy implication) about how well the industries are performing, tells the industries growth of current operating systems, and suggest possible recommendations to improve or revise the existing financial and operational performances of the industries. Furthermore, the result of the study is hoped to serve as a base for further research that enable the sustained operation.

1.8 Limitation of study

The researcher used the period to analyze the financial statements starting from 2014 to 2018 fiscal year and partially from 2008-2018. Since the annual financial reports of the companies that is posted by LTO is not included the recent data of the year 2019 and, so that this paper is limited to analyze the determinants of profitability of this companies up to 2018. Therefore, the researcher be supposed to analyze only the leather companies their annual report is found in LTO Addis Ababa. This research has heteroscedasticity but using panel technique no evidence for heteroskedastic.

1.9 Structure of the thesis

This research paper is structured in five main chapters. The first chapter composed of background of the study, background of leather companies in Ethiopia, problem statement, objective of the study (major objective, specific objective) hypothesis significance, scope and limitation of the study. The second chapter presented the related literatures. The third chapter comprised research methodology, data analysis and presentation procedure in relation to the determinants of large leather manufacturers 'profitability is exhaustively presented. The fourth chapter presented results and discussion and findings of the paper. The fifth chapter forwarded the previous sections, conclusion, and recommendation of the research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Theoretical literature

There is theory of profitability that provides a unifying framework for the study of determinant of profitability in leather industry. this study reviewed some theories which are nearer to profitability and its determinants.

2.1.1 Concept of Profitability

The word profitability is made up of two words, namely, profit and ability. The term Profit in the accounting sense tends to become a short-term objective which measures not only the success of the product, but also of the development of the market for it. To determine by matching revenue against cost associated with it. only those costs are placed against revenue, which have contribution in the generation of such revenue and the term ability indicates the power of a business entity to earn profits. The ability of a concern also denotes its earning power or operating performance. The profitability may be defined as the ability of a given investment to earn a return from its use. Profitability is a relative concept whereas profit is an absolute connotation, as an absolute term, profit has no relevance to compare the efficiency of a business organization. A very high profit does not always indicate sound organizational efficiency and low profitability is not always a sign of organizational sickness. Therefore, it can be said that profit is not the prime variable on the basis of which the operational efficiency and financial efficiency of an organization can be compared. To measure the productivity of capital employed and to measure operational efficiency, profitability analysis is considered as one of the best techniques. despite being closely related to and mutually interdependent, profit and profitability are two different concepts. (Tulsian, 2014).

2.1.2 Theory of profitability

2.1.2.1 The Dynamic Theory of Profit

Clark (1900) profit is the difference between the price and the cost of production of the commodity. Profit is the result of progressive change in an organized society. The progressive change is possible only in a dynamic state. The whole economic society is divided into organized and unorganized society. The organized society is further divided into static and dynamic state and it is only in a dynamic state that profit arises. In astatic state, the five generic changes such as the size of population, technical knowledge, the amount of capital, method of production of the firms and the size of the industry. Everything is stagnant and there is no change at all. the element of time is non-existent and there is no uncertainty. the same economic features are repeated year after year and therefore there is no risk of any kind to the entrepreneur. the price of the good would be equal to the cost of production. Hence profit does not arise at all. the entrepreneur would get wages for his labor and interest on his capital. If the price of the commodity is higher than the cost of production, competition would reduce the price again to the level of the cost of production so that, profit is eliminated. the presence of perfect competition makes the price equal to the cost of production which eliminates the super normal profit. Thus, knight observes ``since cost and selling prices are always equal, there can be no profit beyond wages for the routine work of supervision``. it is well known that the society has always been dynamic. several changes are taking place in a dynamic society (Clark,1900).

2.1.2.2 The efficiency theory

The firms earn high profit they are more efficient. There are also two distinct approaches within the efficiency the x-efficiency and scale efficiency hypothesis according to the x- efficiency approach more efficient firms are more profitable because of their lower costs. Such firms tend to gain large market share which may manifest in higher levels on market concentration but without any causal relationship from concentration to profitability. The scale approach emphasizes economies of scale rather than difference in management or production technology. Large firm can obtain lower unit cost and higher profit through economies of scale. This enables

large firms to acquire market share which may manifest in higher concentration and then profitability (Athanasoglou 2006)

2.1.3 A model from Industrial organization

Firm profitability and its determinants are a well addressed research topic in the field of industrial organization. Modern literature provides two schools of competing models of firm profitability. It can be classified into two major groups, structure-conduct performance (SCP) and firm effect models. (Stierwald, 2009)

2.1.3.1 Structure conduct performance

In the SCP model the market structure determines firm behavior and profitability. The SCP model is embedded in neoclassical theory and asserts that firms in concentrated industries are more profitable than firms in perfectly competitive markets (Bain, 1951). A reason for that can be high industry concentration facilitates the exertion of market power, for example in the form of monopoly pricing. Colluding firms impose a higher markup on those goods with lower elasticity of demand without suffering the loss of demand to competitive rivals. The increased price allows firms to earn profits that exceed competitive rates. Due to the restricted quantity of supply, industry concentration and high profits are associated with sub-optimal welfare levels (Stierwald,2009).

2.1.3.2 Firm effect models

In firm effect models, market structure is the result of the distribution of firms and firm profits. The fundamental assumption in firm effect models is that firms are heterogeneous. According to the superior firm hypothesis, introduced by Demsetz,(1973) as cited by (Stierwald,2009), firms can be distinguished with respect to their level of cost- or production efficiency. Efficient firms have a competitive advantage over their non-efficient rivals. Higher levels of cost-efficiency can be caused by lower costs of production, economies of scale or higher quality of products. In the Demsetz model, superior performance can exist for some period of time. Potential reasons for that can be the firm's reputation, complex organizational structures, resource heterogeneity, factor immobility or uncertainty of investments. (Jovanovich, 1982) argues that only efficient

firms survive, stay in the market, grow larger and obtain a higher market share. At the same time, efficient firms are more profitable than non-efficient ones. (Peltzman,1977) asserts that high market concentration, in the form of high market shares, and high firm profitability occur simultaneously and are the result of the same cause, differences in productivity levels. Markets function competitively, and no collusion between firms takes place that restricts supply or enables firms to raise their price above marginal costs. For this reason, high firm profitability is not necessarily associated with welfare losses in firm effect models. There has been a substantial amount of empirical research undertaken in the area of profits, market structure and firm-level effects. (Stierwald, 2009).

2.1.4 Significance of Profitability

The aim of a firm is to derive maximum profit. Profit. Profit and profitability play the same role in business as blood and pulse in human body without adequate blood and ability to generate blood, human existence is not possible. the same is true for any business. It is very difficult for a firm to service without prospects and ability to earn adequate profit. Profitability is the most powerful motive factor in any business. Any company goal is to maximize profit or not the users of an accounts are certainly interested in its profitability. Therefore, the overall objective of a business to earn at least a satisfactory return on the funds invested, in it, consistent with maintaining a sound financial position (Bradley 1964).

2.1.5 Techniques of Measuring Profitability:

The measurement of profitability is as essential as the earning of profit itself for a business concern. To measure such a crucial phenomenon the ratio analysis technique may be use Ratio Analysis. Ratio Analysis is the principal technique used to measure the profitability of a business enterprise. The growth development and the present position of a business in terms of profit can be analyzed through the calculation of various ratios. The term accounting ratio is used to describe significant relationship which exist between figures shown in financial statement Profit and Loss Account and Balance Sheet. In financial analysis a ratio is used as an index or yardstick for evaluation of the financial position and performance of a firm. The technique involves four steps determining the accounting ratio to be used computation of the ratio comparison of ratio

with the standard set and interpretation. The interpretation of ratio required careful and detailed study and sound judgment on the part of the analyst (jaipur1986 p-172).

2.1.6 Determinant of Profitability

Lenz (1981) undertook interdisciplinary review and assessment of empirical studies on the performance of an entire business venture. He outlined and made remarks on determinants of profitability of a firm both internal and external: essentially, human decisions in a firm affect a variety of factors which determine firm's performance. Additionally, environmental changes do not affect every part of the firm uniformly. Hirschey and Wichern (1984) in their findings analyzed the determinant of profitability. They examined the usefulness of accounting and market-value profitability. In their research, they found out that the differences in accounting and market measures provide information on profitability and upheld the validity of cautioning remarks concerning the utilizing of accounting information as it has a basic historical interpretation which is different from that of market-value measures of profitability which are forward looking. Finally, they saw that there was a significant explanatory role for research and development intensity, television advertising, and leverage as factors influencing profitability. Roquebert et al (1996) tackled issues surrounding the degree of variance in Return on Assets (ROA) represented by industry, corporate, and strategic business unit while controlling for the business cycle and relationship between the business cycle and industry. They came to a conclusion and discovered that there is an impact strategic management plays in the profitability of strategic business unit. Kambhampati and Parikh, (2003) analyzed the effects of increased trade exposure on the profitability of firms in Indian industry. The authors revealed that while trade reforms are often expected to decrease profit margins as firms struggle to compete in international markets, there is the possibility that increased competition may improve firm's efficiency and provide a positive impetus to firm's profitability. The authors indicated that their paper is different from many others in this area because it considered both possibilities. The authors developed an efficiency index to directly analyze the impact of changing efficiency levels on firm profit margins. Results presents that liberalization significantly influenced profit margins. The authors developed an efficiency index to directly analyze the impact of changing efficiency levels on firm profit margins.

Results presents that liberalization significantly influenced profit margins. Results from this analysis further indicated that liberalization main effect was through the impact that it had on the other firm variables: market shares, advertising, R&D and exports all that changed after 1991. The authors of the paper indicated that neither capital nor managerial capabilities (as proxied by remuneration) were particularly effective in increasing profit margins.

2.2 Empirical literature

The empirical review of this study is organized through the various study of previous researchers regarding different sectors of manufacturing industries in general and leather industries in particular. The determinants of leather industries profitability have been empirically examined by different authors, especially in the developed countries. Higher numbers of research papers have widely visited multi-facets of financial management in order to study the landscape of corporate profitability. Research papers have educated that there are multiples of variables, which bring to play varying degree of influence on the profitability of the organization.

2.2.1 Evidence from other countries

Earliest studies on firm performance have provided copious evidence in terms of core determinants of profitability in developed economies. Earliest studies on firm performance have provided copious evidence in terms of core determinants of profitability in developed economies. For example, Short (1979) found a direct relationship between bank concentration and return on equity (ROE) – a measure of firm performance-for banks in Japan, Canada and Western Europe. Using data on selected firms in US, Bartel (1995) deduced that investment in training of staff improved productivity and eventually influenced firm profitability positively. In the same vein, Lichtenberg and Siegel (1991) inferred that market share and industry's profitability have significant direct influence on firm profitability.

Lazar (2016) found that firm size, leverage, tangible intensity and labor intensity exerted negatively on firm performance while corporate value added, and sales growth had a positive impact on listed non-financial companies in Romania Bucharest Stock Exchange. In the case of Ghana, Boadi, Antavi and Lartey (2013) found a significant positive relationship between liquidity,

leverage and firm profitability. With the aid of generalized method of moments (GMM), Al-Jafari and Alchami (2014) showed that bank size, liquidity ratio, management efficiency and credit had significant impact on profitability of banks in Syria. Size and liquidity have significant positive effect on profitability of Malaysian construction firms, but capital structure impacted negatively and insignificantly on profitability (Zaid, Ibrahim and Zulqernain, 2014). For a sample of 17 listed industrial firms in Oman republic from 2006 to 2013, Al-Jafari and Al-Samman (2015) inferred that a significant relationship existed between growth, fixed assets, firm size, working capital and profitability.

Evidence from their panel ordinary least squares model however revealed that leverage and average tax exerted negatively on profitability. Meanwhile, in a study comprising of 22 small and medium enterprises (SMEs) listed on Indonesian Stock Exchange, Margaretha and Supartika (2016) found that firm size, lagged profitability and growth have negative effects on contemporaneous profit margin while industry affiliation and productivity have positive effect on firm profitability. However, firm age is obviously not significant in determining profitability. Focusing on the sovereign debt crisis from 2005 to 2015, Samitas and Kampouris (2017) examined the volatility spillover effects from the southern to the northern part of the Eurozone using the asymmetric dynamic conditional correlation (DCC) model and the Baba, Engle, Kraft & Kroner (BEKK) model. The two models were found flexible in revealing spillover effects, but the asymmetric DCC model fits better in terms of conditional correlation. Negative shocks in Greece tend to be co-moving with French index while Italy and Spain were capable of destroying all the economies in the northern Eurozone.

Mittal et al (2010) researched on the trend in the management of working capital, in the cement industry of India. Two firms namely Gujarat Ambuja Cements Ltd (GAC Ltd) and Associated Cement Companies Limited (ACC Ltd) were selected for this research. These two firms were the market leaders in India in the cement industry and also were the major competitors in India. This research was based on a four-year period which is from 2006 to 2009. Secondary data was utilized for this research and the financial statement of the firms were the source of data. The study examined the relationship between the working capital size, Sales, total assets and net profit. The mean, standard deviation, coefficient of variation, correlation, multiple regressions and

descriptive statistic were used for this study. The findings of the research stated that there was no significant relationship in the size of working capital and profitability of these firms and on the other hand, there was a positive significance relationship between the components of working capital and the profitability of firms in the cement industry of India.

2.2.1.1 Firm size and profitability

Firm size has been recognized as an essential variable in explaining organizational profitability and several studies tried to explore the effect of firm size on profitability. John & Adebayo (2013) examined the effect of firm size on the profitability of Nigerian manufacturing sector. Panel data set over the period of 2005-2012 was obtained from the audited annual reports of the selected manufacturing firms listed in the Stock Exchange. Return on assets (ROA) was used as a proxy for profitability while log of total assets and log of turnover were used as proxies for firm size. Furthermore, liquidity, leverage and the ratio of inventories to total assets were used as the control variables. On their results, the study revealed that firm size, both in terms of total assets and in terms of total sales, has a positive effect on the profitability of Nigerian manufacturing companies. Relationship Meanwhile, on the control variables a negative with inventory was obtained while others have positive relationship. They recommended for future researchers to investigate sector effects on the relationship between firm size and profitability in Nigeria. Niresh, and Thirun avukkarasu, (2014) explored the effects of firm size on profitability of quoted manufacturing firms in Sri Lanka: In their study, they have been used data of 15 companies which were active in Colombo Stock Exchange (CSE) between the years 2008 to 2012. As indicators of firm profitability, return on assets and net profit have been used whereas total assets and total sales have been utilized as indicators of firm size. Correlation and regression methods have been used in the empirical analysis. Their finding revealed that there is no indicative relationship between firm size and profitability of listed manufacturing firms. In addition, their results showed that firm size has no profound impact on profitability of the listed manufacturing firms in Sri Lanka.

2.2.1.2 Leverage and profitability

Alalade, and Oguntodu, (2015) carried out on their study that the quest to determine the relationship between firms' capital structure and its strength in improving financial performance, especially profitability motivated the researcher to conduct this study. In view of their study, among others is carried out to investigate the effect of gearing on ROA, ROE and ROCE on selected food product companies in Nigeria. They were adopted methodology non probabilistic technique through the use of purposive sampling. The population of the study comprises of food product companies that have been quoted on the floor of Nigeria Stock Exchange over five (5) years between 2009 and 2013. They have been collected the data through the published annual report of the firms selected. Their findings revealed that gearing has no significant effect on ROA, ROE and ROCE. For instance, gearing will cause a negative -0.041185-unit change in ROA of the companies. Also, the coefficients of gearing shows that on unit change in gearing will cause a negative -0.0099022 effect on ROE whereas, the coefficients of gearing for ROCE shows that one-unit change in gearing will cause a positive 0.0049688-unit change in ROCE of sampled companies. They established on their study that capital structure has negative effect on Return on Assets and Return on Equity but positive effect on Return on Capital Employed. They recommended that the management should reduce the level of gearing in order to enhance profitability performance. Also, management should make efficient use of the resources available with a view to reduce expenses for the firm, embark on more promotion to make their product acceptable by consumer and observe production process with a view to reduce wastages, since gearing could only explain barely very small level of change in profitability index as measure by the study.

Ahmad and Alghusin (2010) investigate the impact of financial leverage, Company's growth, noncurrent / total assets ratio, and firm's size as independent variables on profitability in proxy of Return on Assets ratio (ROA) as dependent variable. By using a sample of 25 Jordanian Industrial companies listed on Amman Stock Exchange (ASE) for selected period of 10 years (from 1995-2005). Results of their research showed that there is a significant effect of the Financial Leverage, and Growth on profitability of industrial companies. Therefore, industrial companies

may enhance the profitability of their firms by minimizing the debt, and increasing financial assets compared with total assets. So, their study concluded with some recommendations that are beneficial to the stakeholders.

2.2.1.3 Liquidity and profitability

Alvin land Taufik,(2015) studied the relationship between liquidity and profitability in agriculture and consumer goods sectors in Indonesia between 2005 – 2013: aimed to identify the nature of the relationship and whether the relationship is statistically significant or not. The result is there are negative relationship between liquidity and profitability indicators, in line with the risk and return theory. They found out that liquidity and profitability are two important aspects of a company's health. The higher the liquidity of a company, the lower the probability that the company could not fulfil its short – term debt. However, it means that the funds are confined and couldn't be used for productive activities, hence lowering the profitability. On the contrary, the lower the liquidity of a company, the higher the probability that the company could not fulfil its short – term debt, however it means that the funds could be used for productive activities or investment, hence improving its profitability. According to the risk and return theory which states that the higher the risk, the higher the return and vice versa, the relationship between liquidity and profitability should be a trade – off. However, there have been some studies that gave different results, which indicates there might be a difference in nature of relationship in different sectors and even different industries or countries.

2.2.1.4 Managerial efficiency and profitability

According to Jariya (2013) Management efficiency is an integral part of the overall corporate strategy to create shareholder value and for the survival of a business as it has direct impact of firm's profitability. He investigated the relationship between management efficiency and profitability for a sample of 20 manufacturing companies listed on the Colombo Stock Exchange for the period of 5 years from 2007 to 2011. Descriptive and simple linear regression analyses were used to study the relationship between management efficiency and profitability. The results of the statistical test of the hypothesis indicated that the relationship between Fixed Assets Turnover has significant impact on Return on Assets and it is positive. And also the relationship

between Fixed Assets Turnover and Net Profit is positive but it is not significant. The relationship between Total Assets Turnover and Return on assets is positive and significant while the relationship between Total Assets Turnover and Net Profit is positive and insignificant while Working capital turnover is insignificant in the study. He concluded that the implication of the study can be used by the managers to improve their financial performance and formulate policies that will promote effective assets management system.

Jamali and Asadi (2012) investigated in their paper that the relationship between management efficiency and firms' profitability for a sample of 13 auto manufacturing companies listed on the Bombay Stock Exchange, located in Pune for the period of 5 years from 2006 to 2010. Management efficiency is an important component of corporate financial management because it directly affects the profitability of the firms. Considering the importance of profitability for the survival of a business and the role of efficient management to achieve this aim, they explored the relationship between management efficiency and profitability in Automobile Industry of India. For the purpose of their study, 13 auto manufacturing companies located in Pune were chosen as the sample and their analysis is carried out using Minitab 14 and conducting Pearson Coefficient correlation test on variables of the study including Gross Profit Ratio (GPR) and Assets Turnover Ratio (ATR). The central conclusion of their study is that profitability and management efficiency are highly correlated to each other and based on their results recommendations for improving the management efficiency and profitability in this industry are suggested.

2.2.1.5 Tangibility of asset and profitability

Tangibility refers to the fixed asset in specific accounting year of the firm it is calculated by dividing fixed asset to total assets according to the previous literature there are two conflicting effects of tangibility on firms performance Himmelberg, Hubbard and palia (1999) found that tangible assets are easy to manage and a very reliable source for collateral. However, Bhutta and Hasan (2013) found that firm with high level of tangible asset tend to be less profitable because they have low R&D activities and lower long-term investment.

2.2.1.6 Capital adequacy and profitability

Crosse and Hamsel (1980) stated that the adequacy of capital is a dynamic concept and it is influenced by the prevailing and expected economic condition of the entire economy. Ebhodaghe (1991) defines capital adequacy as a situation where the adjusted capital is sufficient to absorb all losses and cover fixed assets of the bank leaving a comfortable surplus for the capital that can effectively exposition, functionally, adequate capital is regarded as the amount of capital that can effectively discharge the primary function of preventing bank failures by absorbing losses. On the other hand measurement of for adequacy purpose is determined by several factors (both internal and external) influencing the level of risk occasioned by operation furthermore the level of capital perceived to the adequate at one time may need to be adjusted over time as the risk characteristics the competitive environment, markets and economic conditions in which the bank operates change.

2.2.1.7 Inflation

By inflation dynamics, mean the observation of the rate of inflation in the same economy over many years. this agrees with Adamson (1996). Palmer and Faseku (1982) explain inflation as a very complex set of phenomena, which is difficult to define in precise terms. Similarly, Turney (1951) sees inflation as a process consisting of alternating and successive increases in prices and costs due to struggle between social groups. in addition, others see inflation as a symptom of dis equilibrium or an excess of demand over supply (James, 1962; Wilson, 1961). Adamson (1996) defines it as the rate of increase in general price level in an economy. Nwankwo (1982) believes that inflation is an excess of demand over supply. Inflation could be creeping, galloping or hyper depending on the magnitude of its rate in a year. Generally, the rapidly fluctuating inflationary pattern creates high degree of instability in an economy. Where the structure of the economy is weak, the effect could be very devastating.

2.2.2 Evidence from Ethiopian

Endale, (2015) assessed in his study that the impact of working capital management and firm's performance in the case of Breweries in Ethiopia he used secondary data obtained from audited

financial statements of two Brewery firms registered and work in Ethiopia. The financial statements from the firms were analyzed to determine the effect of cash conversion cycle, inventory conversion period, day's sales outstanding and day's payables outstanding on the gross operating profit. He used to analyze the data applying SPSS (Version 20.0) Software. Estimation equation by both correlation analysis and pooled panel data regression models of cross-section a land time series data was used for analysis. His result revealed that there is statistically insignificant negative relationship between inventory conversion period, day's sales outstanding, day's payable outstanding and the profitability of the firms. Also, there is statistically insignificant positive relationship between cash conversion cycle and profitability. According to his results of study, it is suggested that breweries' can increase profitability by maintaining an optimal level of working capital. The firms can wait longer to pay the accounts payables and collecting payments from customers earlier, and keeping product in stock less time, are all associated with an increase in the firm's performance. It is also recommended that manufacturing companies should adopt efficient and effective working capital management policies to keeping working capital at optimal level. The brewery firms shall reduce the number of days of credit sales, payable period and inventory to improve their profitability. Hence, he concluded that there is no significant relationship between and no strong influence or impact of working capital management on profitability of Breweries in Ethiopia.

Lisanework (2018) assessed his study determinant of export performance of leather and leather industry the result of regression indicated that Ethiopia's partner country's Gross domestic Product, Foreign direct investment, and Ethiopia's domestic transport infrastructure found to be positive and significant factors affecting Ethiopia's leather and leather products export performance. In addition, Weighted distance between Ethiopia and partner countries found significant and negative result. Meanwhile, bilateral real effective exchange rate between birr and partner's currency and market accesses preference with trading partners found to be insignificant in affecting Ethiopia's leather and leather products export performance.

Kumlachew (2012) market share, concentration, and profitability of Ethiopian leather industry. The finding of his study indicates the existence of monopoly power. This monopoly power will affect the industry and the consumer due to long run efficiency problem. This monopoly power

is expected to be sustaining if the barrier to entry, asset variable, is significant and there exists either vertical or horizontal integration within the industry either to fix price or production. Even if vertical integration was not independently included in the regression, the top firms are, not all, vertically integrated with the tanneries which has an exclusionary impact and illegal per se in the completion law. so measures in this connection (use of monopoly power for excessive pricing or exclusionary acts) should be taken. The measure may include prison penalty with compensation and damage fee to the customer.

Hunegnaw (2015) leather industry and environmental challenge. he assessed Environmental policy, regulations and standards are not properly implemented by HAFPLC due to lack of cost-effective mechanism of treating its waste, financial constraint and skill in running CETP. Using ETP by HAFPLC has its additional cost of production, this cost coupled with the less competitiveness nature of the tannery in the internal market results in discharging waste water without treating adequately to the environment by different affecting variables. There is no study the profitability of leather industry in Addis Ababa Ethiopian. (efficiency of skill full and knowledgeable manpower, lack of training institution, increase consumer awareness).

2.3. Summery and Literature gap

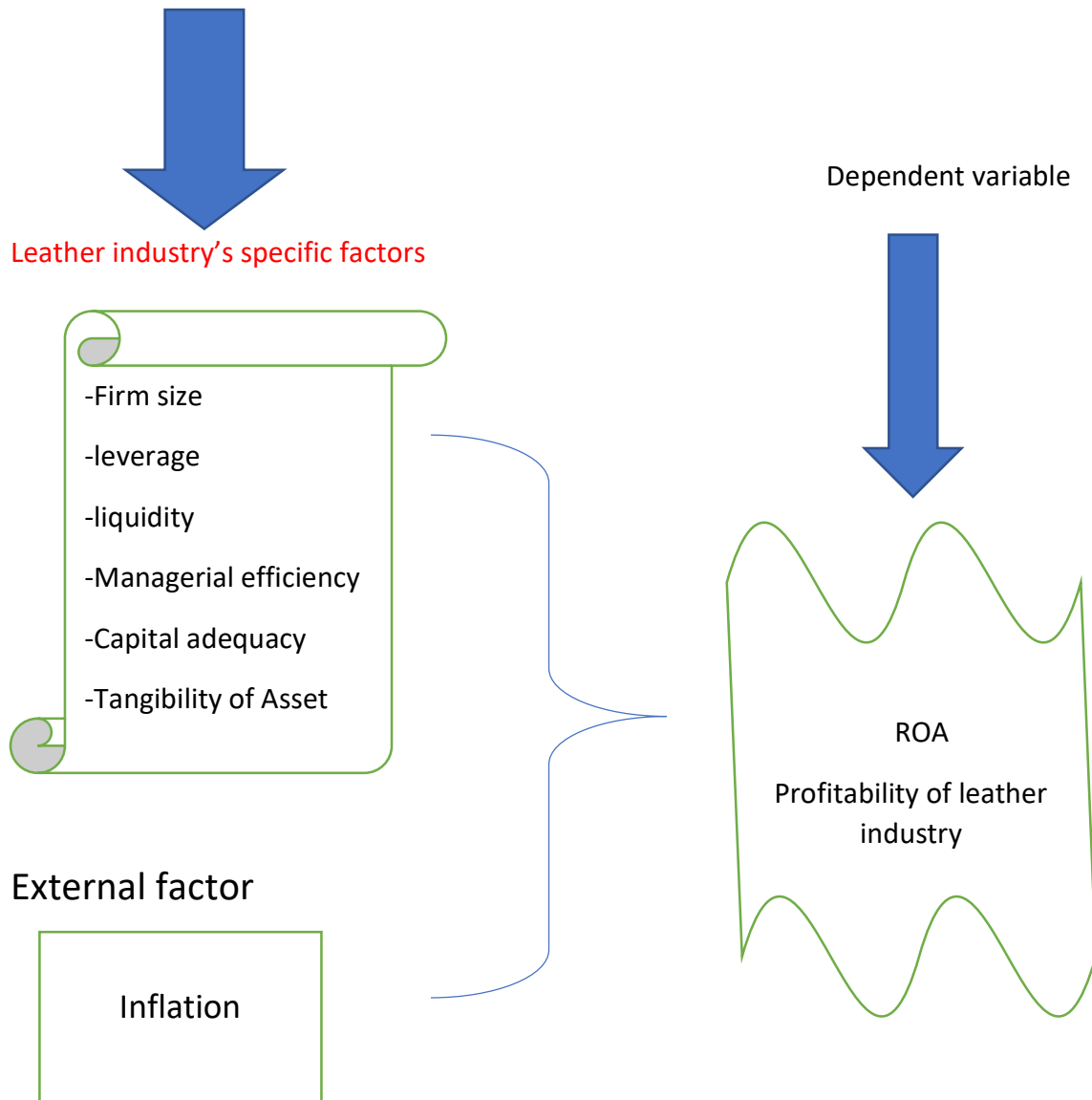
Although the literature review soundly revealed that various studies have been conducted on the determinants of profitability on different manufacturing sectors. The researcher has got an access to visit some areas of studies regarding the topic. Studies held on countries like , Pakistan, India, Sirilanka, Jordan, Nigeria, Kenya and few studies in Ethiopia not specifically but related to the topic (EndaleT., 2015),working capital management on brewery companies profitability; Lisanework G, (2018) determinant of export performance of leather and leather industry, KumlachewY(2012) market share, concentration, and profitability of Ethiopian leather industry, Hunegnaw A, (2015) leather industry and environmental challenge. Therefore, this research paper makes an endeavor to determine the profitability of leather industries Addis Ababa Ethiopia with a five years accounting period from 2014/15 to 2018/19.

2.4 Conceptual framework

Conceptual framework means the concepts that related to one another and used to explain the research problem. Since the companies' performance is influenced by various factors, leather industries need to understand what influences industry businesses to reach peak performance. The factors include from firm specific that is, firm size, leverage, liquidity, firm growth, managerial efficiency, capital intensity and from macroeconomic factors which is inflation. The influence of these factors to the firm performance is very important. To align the conceptual framework with the research objectives, profitability is the dependent variable whereas both the firm- specific and external or macroeconomic factor is the independent variables.

Figure 2.4 conceptual framework: the relation determinant of profitability and those factors

Independent variables



Source: self-developed based on the literature survey.

CHAPTER THREE

Research Methodology

This chapter describes in detail, how the study has been carried out, what activities to be done, research design, Subjects or data sources, sample size, sample method, the instruments for data collection, and the analysis particular procedures.

3.1 Research design

Research design is the plan and structure of investigation so conceived as to obtain answers to research questions. The plan is the overall scheme or program of the research. The main purpose of this research is to determine the profitability of leather industry in Addis Ababa Ethiopia for the period 2014 to 2018. The study adopted an explanatory research design that used a quantitative research approach through the use of secondary data. Schindler and Cooper (2001) discussed that explanatory studies unlike descriptive studies, go beyond observing and describing the condition and tries to explain the reasons of the phenomenon. According to Grover (2003) explanatory research is devoted to finding causal relationships among dependent and independent variables. It does so from theory-based expectations on how and why variables should be related. Hypotheses could be basic (i.e., relationships exist) or could be directional (i.e., positive or negative).

3.2 Research approach

According to Creswell (2014), there are three approaches of research: qualitative, quantitative, and mixed. Qualitative research is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. The process of research involves emerging questions and procedures, data typically collected in the participant's setting, data analysis inductively building from particulars to general themes, and the researcher making interpretations of the meaning of the data. The final written report has a flexible structure. Those who engage in this form of inquiry support a way of looking at research that honors an inductive

style, a focus on individual meaning, and the importance of rendering the complexity of a situation.

Quantitative research is an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures. The final written report has a set structure consisting of introduction, literature and theory, methods, results, and discussion. Like qualitative researchers, those who engage in this form of inquiry have assumptions about testing theories deductively, building in protections against bias, controlling for alternative explanations, and being able to generalize and replicate the findings.

Mixed methods research is an approach to inquiry involving collecting both quantitative and qualitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks. The core assumption of this form of inquiry is that the combination of qualitative and quantitative approaches provides a more complete understanding of a research problem than either approach alone (Creswell 2014).

Hence, based on the above discussions of the three research approaches and by considering the research problem and objective, this study has used the quantitative research approach.

3.2 Source of data and collection procedures

The researcher used secondary sources of data for this research. To have higher quality data of five consecutive years i.e. from 2014/15-2018/19 and partially data ten consecutive years 2008 to 2018 of respective company's annual financial report, to examine the leather manufacturing companies-specific variables. The data had been collected from department of Ethiopian revenue and customs Authority Large Taxpayers Office ERCA(LTO) located at saris kadisco Addis Ababa.

3.3 Research Model

Profitability of leather companies located in Addis Ababa Ethiopia as a firm performance that include financial statement from 2014/15 to 2018/19 and partially from 2008-2018 for analysis

and the internal and external factors that determine profitability. in line with earlier studies that examined the determinants of leather companies' profitability, accounting ratios are used as measurement of individual variables. In order to select the determinants as independent variables in the model, previous studies are reviewed, and this reviewed study suggests that the following seven factors exert strong impact on leather companies' profitability as internal and external determinants as a result they are adopted in the model. The researcher used major dependent variable of determinants of profitability measured by return on asset modified by (Etale and Bingilar 2016; Alalade, O. 2015, Tariq and Hasan, 2013; Ahmad and Alghusin, 2010).

In this model, all independent variables enter the regression equation at once to examine the relationship between the whole set of independent and dependent variable. The aim of this analysis is to determine which independent variables are highly significant to determine the company's profitability.

$$ROA_{li,t} = \alpha + \beta_1 \text{Size}_{li,t} + \beta_2 \text{Lev}_{li,t} + \beta_3 \text{LQ}_{li,t} + \beta_4 \text{TANG}_{li,t} + \beta_5 \text{MEF}_{li,t} + \beta_6 \text{CADQ}_{li,t} + \beta_7 \text{IR}_{li,t} + \mu_{li,t}$$

Where:

- $ROA_{li,t}$: Dependent variable return on Asset of company li at time t
- $\text{Size}_{li,t}$: Size of company li at time t
- $\text{Lev}_{li,t}$: Leverage; of company li at time t
- $\text{LQ}_{li,t}$: Liquidity; of company li at time t
- $\text{GR}_{li,t}$: Tangibility of Asset company li at time t
- $\text{MEF}_{li,t}$: Managerial efficiency of company li at time t
- $\text{CAPINT}_{li,t}$: Capital adquacy of company li at time t
- $\text{IR}_{li,t}$: Inflation rate of company li at time t
- $\beta = 1, 2, 3 \dots 7$ are parameters to be estimate.
- μ = is the error term

- li = Leather industry, $\beta = 1. . . 7$; and t = the index of time periods and $t = 1...5$

The above regression model form was employed in the studies carried out by (Etale, and Bingilar,2016; Ahmad and Alghusin,2010).

3.4 Measurement of variables

Table 3.1 Description of the variables and their expected relationship

	Variables	Measurement
Dependent	Return on asset	Net income over total asset
Independent	Firm size	Natural logarithm of asset
	Financial leverage	Total liability over total asset
	Liquidity	Current asset over current liability
	Managerial efficiency	Operating expense over total revenue
	Capital Adequacy	Capital over total asset
	Tangibility	Fixed asset over Total asset
	Inflation	Annual inflation

Source: self-developed based on the empirical literature.

3.5 Data analysis and presentation

Multiple linear regression data analysis method was employed to analyses the relationship between the profitability of leather manufacturing companies and the independent variable size of companies, leverage, liquidity, asset growth, managerial efficiency, capital intensity and inflation.

Descriptive statistics were used to quantitatively describe the important features of the variables using mean, maximum minimum and standard deviations. Diagnostic tests were performed to

ensure whether the assumptions of the CLRM are violated or not in the model. Correlation analysis was applied to identify the relationship between the dependent and independent variables. It shows only the degree of association between variables and does not permit the researcher to make causal inferences regarding the relationship between variables. According to (Kothari,2004), regression analysis is concerned with the study of how one or more variables affect changes in another variable. EViews- 8 econometric software was used for analysis of secondary data regression and the results were presented through table's and graphs.

3.6 Model Validity

The study employed different tests after estimating and selecting the model that best fits the data, the estimation procedures, and diagnostics so as to get robust results. Thus, the study undertook the following tests and in order to deal with the bias.

i. Normality Tests

One of the assumptions in panel regression analysis is whether variables in the model are obtained from normally distributed population or not. with the normality assumption ordinary list square estimation can be easily derived and would be much more valid and straight forward this study will use Jarque-Bera test (JB test) to find out whether the error term is normally distributed or not.

H0: Error term is normally distributed

H1: Error term is not normally distributed

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

ii. Test for Multicollinearity

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

consequence of multicollinearity are OLS estimators still best linear and unbiased large variances and covariance of OLS estimator wider confidence interval and insignificant ratio.

iii. Heteroskedasticity test

Heteroskedasticity means that error term do not have a constant variance. If heteroskedasticity occur the estimators of ordinary least square method are inefficient and hypothesis testing is no longer reliable or valid as it with underestimate the variance and standard errors. This study chooses to use white test to detect heteroskedasticity.

H0: There is no heteroskedasticity problem in the model.

H1: There is heteroskedasticity problem in the model.

Decision rule: Reject H0 if p-value greater than significance level otherwise do not reject

iv. Test for Autocorrelation

Autocorrelation normally occur while employing in long panel data. This problem occurs when two or more consecutive error terms are correlates. If there is autocorrelation problem in model, the estimator no longer efficient. In consequence, the tests may not be valid. When the covariance between two or more consecutive error terms is correlated the error, term is subject to autocorrelation. If there is autocorrelation in the data, the estimates become inefficient and standard errors are estimated in the wrong way. Thus, the study conducted this test.

CHAPTER FOUR

Results and Discussions

4.1. Introduction

The major objective of this study is to identify the internal as well as external factor affecting leather industries profitability in Addis Ababa. the following discussion presents the results of the E-view analysis as follows. Section 4.2 presents descriptive statistics linear regression 4.3 the tests for the classical linear regression model assumptions followed by the correlation analysis among the dependent and independent variables in section 4.4 the outcomes of the panel data regression analysis are presented in section4.5

4.2. Descriptive statistics

This section discussed the variables include the dependent and independent variables .the dependent variables used in this study in order to measure the leather industries profitability in return on asset (ROA) whereas the explanatory variable (independent variable)are size of companies ,leverage ,liquidity, managerial efficiency ,capital adequacy, tangibility of asset and inflation.

Table 4.1 Descriptive statistics of study variables

	ROA	CADQ	IRF	LEV	LQ	MEF	SIZE	TANG
Mean	0.285761	0.384054	14.99213	0.578828	5.598752	0.556920	8.359063	0.531738
Median	0.214578	0.243655	13.50000	0.558866	5.844751	0.573405	8.426063	0.410852
Maximum	0.970934	1.152514	40.10000	0.998602	11.97841	0.999686	9.951401	0.996125
Minimum	-0.177239	0.008316	6.300000	0.084213	0.064123	-0.124561	6.428409	0.039654
Std. Dev.	0.285532	0.317526	7.274580	0.301748	3.351232	0.324738	0.867072	0.348701
Observations	160	160	160	160	160	160	160	160

Source: From EViews summery Descriptive statistics result

Table 4.1 shows the descriptive statistics of each variable computed based on the 160 observations recorded. It can be noticed that the return on total asset ratio fluctuates between 0.970934 and -0.177239 that means the most profitable leather companies earned 0.97 of net income from a single birr of asset investment and maximum losses incurred by leather companies had a loss of -0.17 cents on each birr of asset investment respectively while an average value of 0.285761 (ROA) deviates from the average value with about 0.285532 which implies the presence of good variations among the value of profitability across the leather companies included for this study.

The mean value of capital adequacy is 0.384 with the standard deviation of 0.317 which shows loss variation it implies the firm invested large amount of money in order to get one-dollar worth of output. as noted by Shaheen and Malik (2012) the more capital applied to produce that same unit the more capital adequacy the firm is said to be hence considering to this study the variation of standard deviation from its mean and the maximum which is 1.15 and minimum of 0.0083 shows that large leather manufacturing companies had classified into those industries considered to be more capital adequacy.

The average inflation that occurred over the years is 14.99 percent with the standard deviation of 7.27. this indicates that there was significant variation in inflation within the study period cover. the maximum and minimum inflation over the year were 40.1 and 6.3 percent respectively.

The mean value and standard deviation of leverage (Debt to Asset) is 0.578 and 0.307 respectively. this implies that there were moderate difference among leveraged level as measured by debt to asset ratio across the leather companies under this study and it shows the long term solvency position of company it has minimum value of 0.084 this shows that from every 1 birr invest in the total asset 0.084 birr are financed thorough liability. While maximum leverage ratio is 0.99 of total asset are financed through liability.

The mean value of liquidity ratio is 5.59 and the value of standard deviation is 3.35 with 11.9 maximum and 0.064 minimum values. This result shows that some leather companies are more liquid, and others also shows the existence of low variation and some reserve to cover its short-term obligation.

The average value for management efficiency (MEF) has become 0.55 with a standard deviation of 0.32 therefore there exists moderate variation among the managerial efficiency across the leather companies included in this study. The maximum and minimum managerial efficiency were 0.99 and -0.12 respectively. It indicates that leather companies are not efficient because managerial efficiency has negative profitability.

There exists significant variation across the leather companies for the reason that the mean value of size is 8.35 and the value of the standard deviation is 0.86. Hence the varieties of size among leather companies might have significant impact on profitability of leather companies the maximum and minimum values of size were 9.95 and 6.42 respectively.

Tangibility of assets (tang) which is measured by dividing fixed asset by total asset shows the composition of the total asset with regards to current and fixed assets it has shows that the maximum and minimum values of 0.99 (for every Br.1 of total asset there 0.99 fixed asset) and 0.039 (for every Br.1 of total asset there is Br.0.039 fixed asset), respectively the average amount of tangibility 0.53 (53% of total asset is composed by fixed asset) and standard deviation of 0.348. This implies that leather companies are highly composed of current asset which may lead them to liquidity.

4.3 Test results for the classical linear regression model assumptions

As it is mentioned in methodology part diagnostic test were carried out to confirm that the data fits the basic assumption of classical linear regression model hence, the results for model misspecification tests are presented as follows.

4.3.1. Test for expected value of error term is zero

According to Brooks (2008) the first assumption of classical linear regression model (CLRM) required that the average value of the errors is zero. In fact, if a constant term is included in the regression equation, this assumption will never be violated. If the regression did not include an intercept, and the average value of the errors was nonzero, several undesirable consequences could arise. First, R^2 , defined as ESS/TSS can be negative, implying that the sample average, \bar{y} , 'explains' more of the variation in y than the explanatory variables. Second, and more

fundamentally, a regression with no intercept parameter could lead to potentially severe biases in the slope coefficient estimates. The effect is that the estimated line in this case is forced through the origin, so that the estimate of the slope coefficient ($\hat{\beta}$) is biased. Additionally, R^2 and \bar{R}^2 are usually meaningless in such a context. but, based on the result of this study the constant term is included in the regression, besides the result of the R^2 has a meaning. therefore, in this case the first assumption of CLRM is not violated.

4.3.2 Test for Heteroscedasticity

One of the CLRM assumption says that the variance of the errors is constant this is known as the assumption of homoscedasticity. If the error does not have a constant variance they are said to be heteroscedastic (Brooks, 2008, p 132). In this study as shown in table 4.2 both the F-statistic and chi-square version of the test statistic gave the same conclusion that the assumption (heteroskedasticity) is violated but used panel data technic.

Table 4.2 Heteroskedasticity Test: White

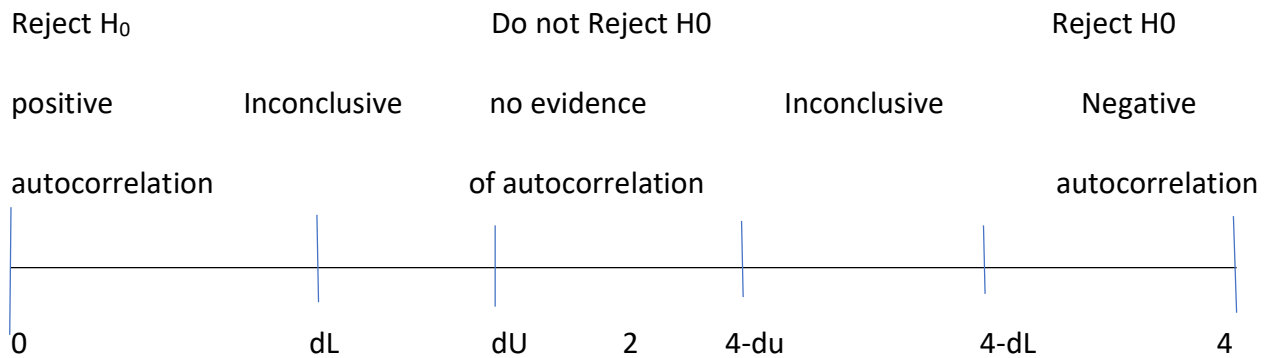
F-statistic	2.355988	Prob. F(7,152)	0.0259
Obs*R-squared	15.66073	Prob. Chi-Square(7)	0.0284
Scaled explained SS	13.84298	Prob. Chi-Square(7)	0.0540

Source: EViews 8 output from financial statement of leather companies

4.3.3 Test for autocorrelation

To identify determinants of profitability in leather companies 160 observations were used in the model. moreover, there were 7 explanatory variables the researcher tested the autocorrelation assumption that imply zero covariance or error terms that means error associated with one observation are uncorrelated with the error of any other observation as noted in Brooks (2008) the best well known test for detecting serial correlation is the Durbin Watson test. the Durbin Watson test statistic value for this study was 1.82.

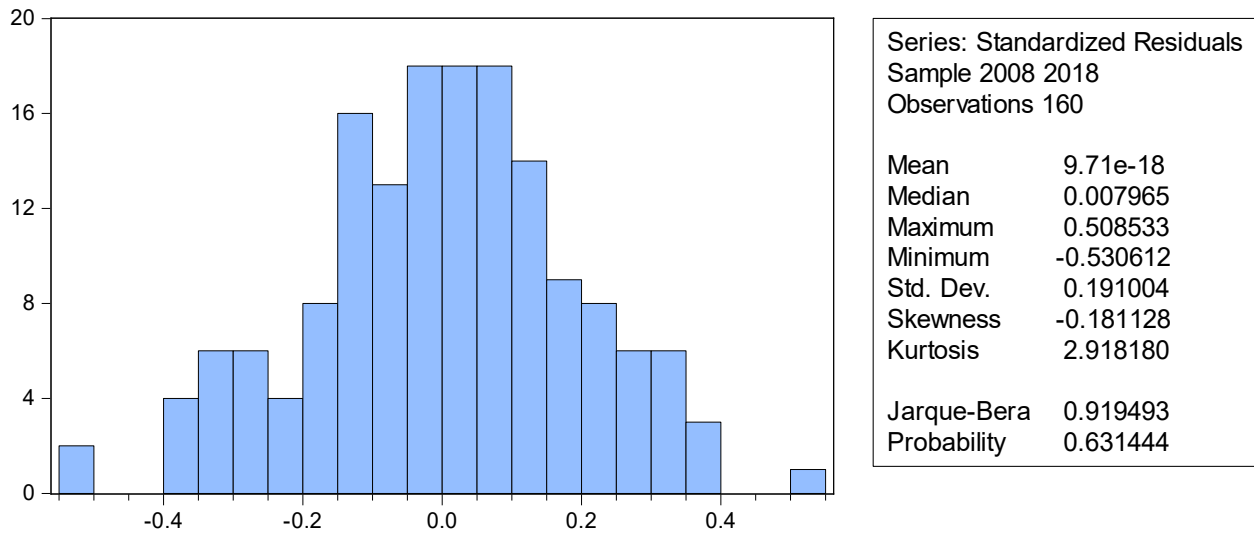
Figure 4.1 Rejection / non-rejection rule



4.3.4 Test for normality

The normality test for this study is shown in figure 4.3 if the residuals are normally distributed the histogram should be bell-shaped and the Jarque-Bera statistic would not be significant meaning disturbance to be normally distributed around the mean. this means that the p-value given at the normality test screen less than 0.05 to reject the null of normality at the 5% level. a normal distribution is skewed and is define to have a coefficient of kurtosis of 3 (Brooks, 2008).therefor, the normality test for this study the coefficient of kurtosis was 3 and the Bera-Jarque statistic has a P-value of 0.03 implies that the p-value for the jarque -Bera test for models is less than 0.05 which indicates that the errors are normally distribution. Based on statistic result the study to reject the null hypothesis of normality at 5 % significant level.

Figure 4.3 Normality test for residuals



Source: E-views output based on financial statement of leather manufacturing companies.

4.3.5 Test for Multicollinearity

An implicit assumption that is made when using the panel LS estimation method is that the explanatory variables (independent variable) are not correlated with one another. If there is no relationship between the explanatory variables (independent variables) they would be said to be orthogonal to one another. If the exploratory variables were orthogonal to one other adding or removing a variable from a regression equation would not cause the values of the coefficients on the other variables to change (Brooks, 2008). According to Gujarati, (2004) multicollinearity could only be a problem if the pair-wise correlation coefficient among regressor is above 0.90 (Hailer etal,2006).

4.3.5.1 Correlation between ROA and independent variables

The ROA reflects the ability of leather industry managements to generate profits from the company asset and this profitability measure is correlated with other independent variables either positively or negatively. In table 4.3 below the correlation analysis was undertaken between profitability measure ROA and independent variables capital adequacy, leverage, liquidity, firm size, managerial efficiency, Tangibility, and inflation. As it can be seen from the table below there was a negative correlation between ROA and liquidity, leverage, managerial efficiency, size, inflation rate while there is a positive correlation between ROA and capital

adequacy and tangibility. The correlation coefficient between ROA and firm size was -0.29 which is the smallest correlation coefficient as compared to other variables but tangibility had ranked the highest positive correlation coefficient compared to other variables this result shows that the tangibility asset is high in leather companies it shows positive correlation with the profitability measured by return on asset this means that these variable had a major role on the profitability of leather companies.

Table 4.3 Correlation between ROA and independent variables

	ROA	CADQ	IRF	LEV	LQ	MEF	SIZE	TANG
ROA	1	0.161500	-0.090949	-0.030197	-0.106996	-0.170209	-0.298202	0.205034
CADQ	0.161500	1	-0.041811	-0.017023	0.081802	-0.110168	-0.175863	0.148230
IRF	-0.090949	-0.041811	1	-0.036360	-0.126886	0.090935	-0.070016	0.033010
LEV	-0.030197	-0.017023	-0.036360	1	0.097753	-0.101722	0.075717	0.287452
LQ	-0.106996	0.081802	-0.126886	0.097753	1	-0.215555	0.011859	0.154863
MEF	-0.170209	-0.110168	0.090935	-0.101722	-0.215555	1	0.039030	0.053240
SIZE	-0.298202	-0.175863	-0.070016	0.075717	0.011859	0.039030	1	-0.147369
TANG	0.205034	0.148230	0.033010	0.287452	-0.154863	0.053240	-0.147369	1

Source: EViews output based on financial statement of leather manufacturing companies.

4.3.5.2 Correlation between independent variables

The correlation between independent variables capital adequacy, inflation, leverage, liquidity, managerial efficiency, size, and tangibility included in this study are presented and analyzed according to table 4.4 below.

Table 4.4 correlation between independent variables.

	CADQ	IRF	LEV	LQ	MEF	SIZE	TANG
CADQ	1	-0.041811	-0.017023	0.081802	-0.110168	-0.175863	0.148230
IRF	-0.041811	1	-0.036360	-0.126886	0.090935	-0.070016	0.033010
LEV	-0.017023	-0.036360	1	0.097753	-0.101722	0.075717	0.287452
LQ	0.081802	-0.126886	0.097753	1	-0.215555	0.011859	-0.154863
MEF	-0.110168	0.090935	-0.101722	-0.215555	1	0.039030	0.053240
SIZE	-0.175863	-0.070016	0.075717	0.011859	0.039030	1	-0.147369
TANG	0.148230	0.033010	0.287452	-0.154863	0.053240	-0.147369	1

Source: Eview8 output based on financial statement of leather companies.

The above table the capital adequacy of leather manufacturing company is negative related with all independent variables except tangibility and liquidity. Inflation is negative related with all independent variables except managerial efficiency and tangibility. Leverage is negative related with capital adequacy, inflation and managerial efficiency but positively related with liquidity, size and tangibility. liquidity is negatively related with all independent variables except capital adequacy, leverage and firm size. managerial efficiency is positively related with all independent variables except liquidity, leverage and capital adequacy. Size is positively leverage, liquidity and managerial efficiency and negatively related with capital adequacy, tangibility, and inflation. Tangibility is positive related with all independent variables except liquidity and firm size.

4.4 Regression analysis result

Based on the regression result the R^2 value is 0.669 (66.9%) which implies that 66.9% of fitness can be observed in the regression line. This can be further explained as 66.9% of the total variation in profitability is explained by the independent variables (leverage, liquidity, managerial efficiency, inflation, capital adequacy, size, tangibility) jointly the remaining 33.1% of change is explained by other factors which are not included in the model. the prob(F-statistic) value is 0.000 which indicates strong statistical significance which enhanced the reliability and validity of the model. each variable is described in detail under the following section.

Table 4.5 Summary of Regression out put

Dependent Variable: ROA
 Method: Panel Least Squares
 Date: 08/08/20 Time: 03:48
 Sample: 2008 2018
 Periods included: 11
 Cross-sections included: 24
 Total panel (unbalanced) observations: 160

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.564546	0.111176	14.07273	0.0000
CADQ	-0.033132	0.025562	-1.296146	0.1970
IRF	0.003894	0.001858	2.095544	0.0379
LEV	0.012724	0.033419	0.380741	0.7040
LQ	0.000344	0.003180	0.108100	0.9141
MEF	-0.024637	0.030094	-0.818666	0.4143
SIZE	-0.179623	0.011776	-15.25342	0.0000
TANG	-0.011409	0.014769	-0.772465	0.4411

Effects Specification

Period fixed (dummy variables)

R-squared	0.669375	Mean dependent var	0.072832
Adjusted R-squared	0.629793	S.D. dependent var	0.185579
S.E. of regression	0.112915	Akaike info criterion	-1.418715
Sum squared resid	1.810461	Schwarz criterion	-1.072758
Log likelihood	131.4972	Hannan-Quinn criter.	-1.278234
F-statistic	16.91112	Durbin-Watson stat	1.827175
Prob(F-statistic)	0.000000		

The operational panel least square regression analysis above was used to estimate by the following model: -

$$ROAL_{i,t} = \alpha + \beta_1 Size_{i,t} + \beta_2 Lev_{i,t} + \beta_3 LQ_{i,t} + \beta_4 GR_{i,t} + \beta_5 ME_{i,t} + \beta_6 CADQ_{i,t} + \beta_7 IR_{i,t} + \epsilon_{i,t}$$

Specifically, when the above panel least squares model is converted into specified variables with their coefficient it becomes:

$$ROA_{ft} = 1.5645 - 0.1796Size + 0.0127Lev - 0.0003LQ - 0.0114TANG - 0.02463MEF -$$

$$(0.1111) \quad (0.0117) \quad (0.0334) \quad (0.00318) \quad (0.01476) \quad (0.0300)$$

$$0.03313CADQt + 0.0038IR + \epsilon$$

$$(0.0255) \quad (0.0018)$$

Table 4.5 above shows that independent variables firm size, leverage, capital adequacy, except these variables i.e. liquidity, tangibility, managerial efficiency, and inflation rate had significant impact on profitability. Among the significant variables company inflation were significant at 1% significance level. Regarding the coefficient of independent variables, size, Tangibility, managerial efficiency, and capital adequacy were negative against profitability as far as the coefficients for those variables were -0.1796, -0.0114, -0.02463, and -0.0331 respectively. On the other hand, variables like leverage, liquidity and inflation had a positive relationship with profitability to the extent that their respective coefficients were 0.01272, 0.00034 and 0.0033 respectively.

A. Liquidity

Liquidity is measured by current ratio (CR). The coefficient of current ratio (CR) is positive (0.00034) and statistically significant with p-value of 0.197 which is greater than 5% of significant level the hypothesis is rejected. The positive result shows that there is positive relationship between liquidity and profitability. This positive relationship is not expected, and the result is consistence with previous studies which found a negative relationship between the variable and profitability for instance Abdulateef (2016), Endale (2015), Nwakaeg (2014), Yodit (2017) their study revealed that liquidity has negative statistically insignificant relationship with profitability.

B. Leverage

Leverage is measured by debt ratio (LV). the coefficient of leverage ratio (LV) is positive (0.0127) and statistically insignificant with p-value of 0.704 which is greater than 0.05 the hypothesis is rejected. The positive relationship between leverage and profitability. this positive relationship is not expected but the result is in consistence with previous studies which found a positive relationship between the variable and profitability. For instance, Erick (2011) and Behaylu (2017), showed leverage ratio is positive related to profitability which means when the company is more financed with equity than debt the profit of the firm will increase.

C. Tangibility of asset

Tangibility of asset is measured by dividing fixed asset by the total asset. the coefficient of tangibility is negative (-0.011) and statistically insignificant with p-value of 0.44 which is greater than 5% of significant the hypothesis is rejected. The negative relationship is expected, and the result is in consistence with previous studies which found a positive relationship between the variable and profitability for instance Meaza(2014) and Kalkidan (2016) come up the conclusion that tangibility of asset has positive effect on the profitability.

D. Managerial efficiency

Managerial efficiency is measured by dividing operating expense by revenues. the coefficient of managerial efficiency is negative (-0.024) and statistically insignificant with p-value of 0.414 which is greater than 0.05 the negative result shows that there is negative relationship between managerial efficiency and profitability. this negative relationship is expected, and the result is consistence with previous studies which found a negative relationship between the variable and profitability. For instance, Althanasoglous (2005) and Yodit (2017) they conclude that managerial efficiency has positive relation with profitability. The hypothesis is rejected.

E. Firm size

Firm size is measured by logarithm of total asset. the coefficient of size is negative (-0.179) and statistically significant with p- value of 0.000 which is lower than 0.05 the negative result shows

that there is negative relationship between firm size and profitability. this negative relationship is expected, and the result is consistence with previous studies which found a negative relationship between the variable and profitability for instance. For instance, Yisau, A. (2013) he stated that various studies the impact of size on profitability can be negative or positive. Some authors argued that large firms are more stable and mature they can generate greater sale because of grater production capacity. Roul and Rahman (2013) conclude that firm size has positive relation with profitability. The hypothesis of this study is not rejected.

F. Capital Adequacy

Capital adequacy is measured by capital over total asset. the coefficient of capital adequacy is negative (0.157) and statically insignificant with p-value of 0.197 which is higher than 5% level of significant the hypothesis is rejected. The positive result shows that there is positive relationship between capital and profitability. this positive relationship is expected, and the result is consistence with previous studies which found a positive relationship between capital adequacy and profitability. For instance, Althanasoglou (2005) and Ponce (2011) conclude that positive relationship between capital adequacy and profitability.

G. Inflation

Inflation measured by the present year value mines previous year value over previous year value. the coefficient of inflation is negative (-0.017) and statistically significant with p-value of 0.0003 which is lower than 0.05 the hypothesis is not rejected. Negative result shows that there is negative relationship between inflation and profitability. this negative relationship is expected, and the result is consistence with other studies which found a negative relationship between the variables and profitability. for instance, Behailu (2017) and redwan (2018).

4.6 Summary of main findings

In this study the empirical analysis of investigating the determinants of the profitability of leather manufacturing companies was conducted using a panel data set consisting of financial data of sixteen leather companies over the period 2014 to 2018 and eight leather companies from 2008 to 2018. from the result of OLS regression analysis the profitability of large category leather

manufacturing companies which is found in Addis Ababa is highly affected by all variables included in this study except leverage, tangibility and capital adequacy. the finding of the study showed that firm size, liquidity, and inflation have statistically significant and negative relationship with leather industries profitability. on the other hand, managerial efficiency has a negative and statistically insignificant relationship with leather profitability. the following sections discussed about conclusion remarks of the study, applicable recommendations and future research recommendation.

CHAPTER FIVE

Conclusions and Recommendations

This chapter mainly deals with conclusion and recommendation of the results. It has three sections the first part present conclusion provides based on the finding of previous chapter; the second part presents recommendation and the last chapter will end up by giving a direction for future researcher.

5.1. Conclusions

This study aimed to identify the main factors that determine the profitability of leather industry and the extent to which these determinants exert impact on leather industry profitability. Studies dealing with internal determinants employ variables such as size, leverage, tangibility in asset, liquidity, managerial efficiency and capital adequacy. While for external determinants one factor mostly related have been suggested as an impact on the profitability and these variables that describe the macroeconomic factor which had general impact on this sector such as inflation.

To comply with the objective of this research, the paper is based on quantitative research method. The quantitative data were mainly obtained from respective leather companies annual reports, MOFED and MOT through documentary analysis; in order to identify and measure the determinants of leather industry profitability. Panel fixed effect model, multiple regression analysis is adopted to measure the determinants of leather industry profitability quantitatively.

For testing the research hypotheses, From the empirical findings on the impact of leather industry profitability in Addis Ababa for the sample suggest the following conclusions.

First, as expected, the result showed a negative relationship between firm size and profitability with strong statistical significance but the coefficient of the ratio of firm size is relatively lowest. It shows that the decreased in firm size result by a percent lowering the profitability by the coefficient amount. It can be concluded that as much as large size firms have greater possibility of taking advantage of scale of economies which enable more efficient production, greater bargaining power, exploiting experience curve effect and getting price above competitive level.

However, some authors claim that size may have no or negative impacts on profitability (Shepherd, 1972), especially if growth in size causes a diseconomy of scale.

Secondly, the result showed a positive relationship between leverage ratio and profitability with statistical significance. This shows that decrease debt for leather companies would certainly hamper financial performance of that sector.

Third the result showed insignificant impact on managerial efficiency and tangibility of asset with profitability. The coefficient of managerial efficiency is low and negative whereas tangibility of asset coefficient is positive. As it showed by the result managements of leather companies are inefficient of their asset utilization in order to improve the profitability of those companies. This situation implied that on this reference period this manufacturing sector had done large amount of capital (investment) for undertaking its operations.

Finally, the coefficient of explanatory variables, liquidity and inflation are with a negative coefficient sign and the beta values of capital adequacy is a positive coefficient sign. However, liquidity, inflation, and tangibility of asset are not statistically significant with the large p-values. Therefore, liquidity, inflation, and capital adequacy are not considered as powerful explanatory variables to define the profitability of leather companies.

5.2 Recommendations

The study also found negative relationship between management efficiency and firms' profitability. It indicated that whenever managers of the firm unutilized companies' resources efficiently, they lead the firm to decrease its profitability. Besides, the study found out there is insignificant relationship between MEF and profitability. Therefore, the researcher recommend that the manager should have to consider how they utilize firms' resource efficiently to have an impact on firms' profitability.

The researcher recommends this study leather manufacturing management has week performance so that the company gives more training for management to be skilled full and knowledgeable employees to increase their profit. The industry promotors give awareness to their consumers used the products.

Finally, management of large leather manufacturing companies made under this study can create value for the shareholders as well as to make the firms performance by giving more consideration on the above recommendation i.e. their financing mix, investment on capital intensive goods, accessible size of their firm status, efficiency of their managers, market situations and other internal and external factors.

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Appendix 1

Heteroskedasticity Test: White

F-statistic	2.355988	Prob. F(7,152)	0.0259
Obs*R-squared	15.66073	Prob. Chi-Square(7)	0.0284
Scaled explained SS	13.84298	Prob. Chi-Square(7)	0.0540

Test Equation:

Dependent Variable: RESID²

Method: Least Squares

Date: 04/25/20 Time: 06:47

Sample: 1 160

Included observations: 160

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.290957	0.255242	-1.139926	0.2561
CADQ ²	-0.061506	0.084181	-0.730644	0.4661
IRF ²	6.10E-06	5.55E-05	0.109786	0.9127
LEV ²	0.112645	0.075060	1.500747	0.1355
LQ ²	0.000277	0.000250	1.107842	0.2697
MEF ²	0.074919	0.055809	1.342435	0.1815
SIZE ²	0.004540	0.002936	1.546190	0.1241
TANG ²	0.101949	0.090721	1.123764	0.2629
R-squared	0.097880	Mean dependent var		0.200179
Adjusted R-squared	0.056335	S.D. dependent var		0.281048
S.E. of regression	0.273017	Akaike info criterion		0.290140
Sum squared resid	11.32980	Schwarz criterion		0.443898
Log likelihood	-15.21117	Hannan-Quinn criter.		0.352576
F-statistic	2.355988	Durbin-Watson stat		1.897816
Prob(F-statistic)	0.025941			

Appendix 2

List of Leather manufacturing companies of Addis Ababa as per their location and ownership status.

No.	Name of organization	Location	Owner ship	Brand
1	Abay tannery p.l.c	A.A	Private company	Other product
2	ANBESSA SHOES S.C.	A.A	Private company	shoes
3	BATU TANNERY PLC	A.A	Private company	Tannery
4	ETHIO LEATHER INDUSTRY PLC	A.A	Private company	Shoes
5	BALE TANNERY PLC	A.A	Private company	Tannery
6	DIRE INDUSTRIES PLC	A.A	Private company	Tannery
7	DEBERBERHANTANNERY FACTORY	A.A	Private company	Tannery
8	ELICO Tannery	A.A	Private company	Shoes
9	Bahierdar Tannery	A.A	Private company	Tannery
10	Awash Tannery	A.A	Private company	Tannery
11	Pittards	A.A	Private company	Glave
12	LYU	A.A	Private company	Glave
13	Abyssinia Tannery	A.A	Private company	Tannery
14	Ruth	A.A	Private company	Other product
15	Dave	A.A	Private company	Glave
16	Universal	A.A	Private company	Other product

Appendix 3

Summary of data used for regression

Firms	Years	ROA	Size	LEV	LQ	MEF	cadq	tang	IRF
1	2014	0.881024	7.981588	0.570002	0.499026	0.613934	0.847318	0.924019	12.9
1	2015	0.864025	8.075877	0.632800	0.990647	0.371640	0.851225	0.770673	16.2
1	2016	0.765448	8.102394	0.610309	0.229606	0.616893	0.892126	0.801038	25.5
1	2017	0.524158	8.400075	0.697117	0.475454	0.620527	0.735119	0.851872	34.8
1	2018	0.805095	8.270154	0.509011	0.881806	0.652972	0.677168	0.524397	13.1
2	2014	0.793845	8.646110	0.891329	0.223585	0.866899	0.894206	0.811862	27.1
2	2015	0.967347	8.557666	0.643307	0.229661	0.502130	0.776578	0.742120	21.4
2	2016	0.912301	8.829035	0.759927	0.076272	0.592199	0.888438	0.885245	16.5
2	2017	0.678481	8.654319	0.830624	0.064122	0.660774	0.878496	0.736878	32.1
2	2018	0.947680	8.727632	0.898351	0.276005	0.630241	0.854126	0.625121	26.8
3	2014	0.342837	8.962456	0.369088	0.751368	0.935813	0.254178	0.273681	15.2
3	2015	0.969668	8.548541	0.877058	0.207877	0.980579	0.925962	0.916507	24.2
3	2016	0.744957	8.739503	0.575337	0.373880	0.488063	0.851245	0.874777	31.6
3	2017	0.955477	8.639760	0.488426	0.094417	0.939033	0.984118	0.991538	14.6
3	2018	0.522013	8.826347	0.427172	0.988860	0.894702	0.206238	0.484706	12.7
4	2014	0.800688	8.102728	0.894214	8.151786	0.104644	0.838603	0.915905	26.2
4	2015	0.307565	8.908855	0.242025	7.406479	0.444471	0.874152	0.263297	9.8
4	2016	0.656232	8.583347	0.811655	9.841040	0.578456	0.751245	0.753302	30.7
4	2017	0.995499	8.961332	0.997074	11.61480	0.556285	0.644735	0.210593	26.6
4	2018	0.970933	8.717105	0.985677	8.826028	0.264505	0.975976	0.996124	15.2

5	2014	0.539055	6.428408	0.734051	11.078795	0.702273	0.458397	0.478282	38.8
5	2015	0.223526	8.167833	0.255996	8.769879	0.277230	0.292320	0.186841	16.2
5	2016	0.887821	7.618664	0.959920	11.045200	0.239673	0.674029	0.981273	34.7
5	2017	0.240285	8.120133	0.783526	9.899992	0.478854	0.110804	0.233435	10.3
5	2018	0.941114	8.955760	1.014733	10.965349	-0.124561	0.851425	1.056058	21.1
6	2014	0.189400	8.433886	0.254737	6.694676	0.416750	0.233471	0.254684	14.2
6	2015	0.739714	8.169717	0.388347	6.832612	0.259624	0.780952	0.839502	29.4
6	2016	0.693758	8.221083	0.390007	8.476994	0.958282	0.742303	0.912057	17.8
6	2017	0.954463	8.002943	0.720205	8.340533	0.457569	0.840173	0.750367	22.9
6	2018	0.309749	8.471254	0.567631	1.892637	0.194749	0.334197	0.633040	7.6
7	2014	0.916418	8.125267	0.145790	12.08955	0.131259	0.984090	0.230481	14.1
7	2015	0.492953	8.520539	0.848586	4.853591	0.645738	0.657920	0.083410	15.7
7	2016	0.745781	8.277008	0.399137	13.13072	0.213393	0.916350	0.438397	8.6
7	2017	-0.250032	8.712489	0.605811	11.26909	0.196790	0.873465	0.087461	11.8
7	2018	0.959821	8.418239	0.230949	8.502289	0.224447	0.962213	0.210386	18.1
8	2014	0.990558	8.153560	0.269374	10.788121	0.186239	0.988051	0.293349	17.4
8	2015	0.161404	8.689393	0.863010	4.563860	0.686426	0.202342	0.843562	7.8
8	2016	0.151261	8.555208	0.163405	11.08802	0.516625	0.882856	0.138458	52.5
8	2017	0.196005	8.800283	0.867195	9.282631	0.509262	0.336460	0.803622	17.7
8	2018	0.943696	8.023981	0.921511	0.904303	0.402225	0.858409	0.767185	29.1
9	2014	-0.812001	8.943846	0.892517	1.051398	0.233452	0.309110	0.092711	15.3
9	2015	0.100007	8.960096	0.992715	1.465089	0.898387	0.989065	0.991402	18.1
9	2016	0.626044	8.269137	0.817397	0.947105	0.953972	0.700784	0.870666	12.6
9	2017	0.815297	8.238215	0.812196	1.356167	0.992932	0.936204	0.705119	15.1

9	2018	-0.501944	8.988765	0.961402	0.828798	0.353863	0.958877	0.966316	9.61
10	2014	0.927105	8.051436	0.922487	1.521241	0.990669	0.856091	0.907940	16.3
10	2015	0.648660	8.263792	0.832100	10.33698	0.924818	0.570310	0.935938	28.8
10	2016	0.546368	8.330309	0.703999	9.522155	0.983618	0.946594	0.991941	15.1
10	2017	0.822468	8.474820	0.187605	6.614227	0.993165	0.422842	0.951910	8.68
10	2018	0.385188	8.624745	0.509516	3.615576	0.961802	2.289007	2.192539	24.5
11	2014	0.080097	8.569537	0.719894	4.090742	0.178871	0.919504	0.082596	23.4
11	2015	0.083048	8.689056	0.902636	8.154975	0.265913	0.839611	0.082245	6.81
11	2016	0.095648	8.566215	0.959911	10.97952	0.306878	0.973384	0.093678	19.4
11	2017	0.082013	8.646542	0.747265	9.743250	0.263136	0.961410	0.097614	20.3
11	2018	0.093396	8.632923	0.947349	11.59670	0.268918	0.927563	0.089650	7.25
12	2014	-0.923355	8.978467	0.596634	2.170416	0.976449	0.936572	0.557839	8.14
12	2015	0.845658	8.459682	0.658956	9.003619	0.100747	0.628535	0.618838	11.5
12	2016	0.971932	8.532286	0.758689	5.141402	0.247551	0.948268	0.676718	7.32
12	2017	0.870703	8.561045	0.761525	4.053337	0.285938	0.867313	0.814392	36.5
12	2018	0.997354	8.981352	0.972651	4.392580	0.787831	0.934706	0.930097	39.9
13	2014	0.098209	8.912764	0.971267	4.720852	0.938826	0.087944	0.099845	15.6
13	2015	0.987711	8.118400	0.791918	5.863216	0.998237	0.718127	0.830756	7.2
13	2016	0.404072	8.406419	2.034455	2.090105	0.050206	0.613997	0.397400	9.53
13	2017	0.227197	8.731402	0.216256	10.12407	0.088065	0.221075	0.239427	17.2
13	2018	0.835122	8.133258	0.750241	1.335651	0.079299	0.947473	0.875900	18.8
14	2014	0.263794	8.838758	0.224086	11.97840	0.075405	0.250341	0.265134	18.3
14	2015	0.345678	8.108476	1.351624	9.076253	0.087692	0.562415	1.556622	15.7
14	2016	-0.276887	8.427973	0.474371	7.441906	0.993702	0.727011	0.721861	37.3

14	2017	0.245678	8.176848	1.573274	9.905239	0.083370	0.248725	1.486651	13.6
14	2018	0.100301	8.787232	0.953300	3.908508	0.991943	0.088783	0.924215	9.13
15	2014	0.848717	7.415256	0.997716	7.688310	0.826900	0.923710	0.979056	14.6
15	2015	0.981454	8.783901	0.882104	7.078588	0.894406	0.971092	0.857223	6.58
15	2016	-0.138887	8.962703	0.918927	9.264053	0.861503	0.923710	0.877694	12.2
15	2017	-0.969760	8.826670	0.983516	9.779053	0.938466	0.874512	0.593467	40.8
15	2018	0.981141	7.883694	0.948853	10.50051	0.865927	0.950720	0.937319	13.3
16	2008	0.939800	7.840103	0.986573	11.39819	0.917422	0.947708	0.961454	20.1
16	2009	0.915516	7.893972	0.980131	6.316625	0.355172	0.958988	0.837884	19.4
16	2010	0.940155	8.288898	0.825592	5.424160	0.868701	0.859310	0.976128	15.1
16	2011	-0.123151	7.940880	0.923196	8.775956	0.278544	0.961912	0.960154	34.6
16	2012	0.538252	8.991735	0.990215	10.72401	0.343617	0.088873	0.099097	16.2
17	2008	0.927729	7.886595	0.897264	4.282540	0.266059	0.986158	0.942255	25.7
17	2009	0.892223	8.099058	0.814923	11.06242	0.885796	0.916391	0.832290	9.8
17	2010	0.976404	7.688638	0.853276	3.91131	0.690831	0.886681	0.924265	17.3
17	2011	-0.371609	8.931542	0.219569	5.536736	0.761921	0.643075	0.204438	14.3
17	2012	-0.779092	8.134993	1.752209	2.407471	0.944857	0.678452	2.321041	26.5
17	2013	0.089160	8.743613	0.816928	5.164467	0.902664	0.736772	0.070232	40.1
17	2014	0.045923	8.991476	0.439016	7.682556	0.978048	0.146998	0.055997	9.4
17	2015	0.919950	8.035880	0.948200	9.843277	0.925697	0.950074	0.917075	13.5
17	2016	0.983531	8.049714	0.859752	7.013146	0.530359	0.919611	0.972277	25.3
17	2017	-0.977337	8.834388	0.935234	7.950926	0.914120	0.230151	0.374423	26.2
18	2008	0.098358	8.820637	1.457435	8.382620	0.927813	0.081737	0.083225	13.7

18	2009	0.563523	8.973734	0.450228	5.363046	0.763201	0.910911	0.376666	9.8
18	2010	0.826710	8.862301	0.940168	10.13590	0.946930	0.123839	0.217303	32.8
18	2011	0.950989	8.816985	0.935324	8.014199	0.892249	0.207729	0.937641	19.4
18	2012	-0.248420	8.693819	0.853121	5.551633	0.896824	0.745819	0.785268	18.3
18	2013	-0.173659	8.786892	0.346919	8.849465	0.934302	0.167120	0.430467	16.3
18	2014	-0.976655	8.965284	0.979045	8.817514	0.995985	0.232013	0.990339	29.4
18	2015	0.993352	8.850142	0.988292	9.218390	0.924348	0.654781	0.740720	25.1
18	2016	0.940547	8.898693	0.955550	10.92069	0.669942	0.220271	0.948070	24.6
18	2017	0.533762	8.883452	0.972907	7.579377	0.930831	0.019192	0.318521	16.2
19	2008	0.637916	8.507186	0.841636	8.407673	0.927813	0.656929	0.723510	15.71
19	2009	-0.605929	8.614983	0.995042	8.383268	0.863634	0.994787	2.196493	29.8
19	2010	-0.257480	8.712547	0.979100	8.816839	0.424706	0.945966	0.955480	17.3
19	2011	-0.263574	8.799100	1.422237	9.716817	0.892249	0.873315	1.349219	14.3
19	2012	-0.866889	8.860819	0.893927	11.73309	0.754693	0.962565	0.959488	37.6
19	2013	-0.036795	8.716962	0.978953	7.737722	0.982761	0.983241	0.805035	26.8
19	2014	-0.663319	8.986854	0.991869	7.490129	0.924811	0.584583	0.987415	19.4
19	2015	-0.696643	8.898630	0.787999	8.691072	0.274790	0.277317	0.908491	30.5
19	2016	0.858136	8.919820	0.871025	6.317033	0.124887	0.735988	0.615588	14.1
19	2017	0.985308	7.548739	0.799525	4.164682	0.119606	0.959948	0.842657	13.2
20	2008	0.905067	8.323929	0.910289	2.337923	0.985123	0.937542	0.889785	17.6
20	2009	0.746260	8.305885	0.917360	4.188494	0.992000	0.962919	0.978732	42.6
20	2010	-0.585051	8.408005	0.848150	11.08846	0.980379	0.863953	0.860152	29.2
20	2011	-0.412327	8.978356	0.965236	5.826284	0.948781	0.254125	0.984143	12.6

20	2012	-0.135413	8.763737	0.120653	6.890134	0.997152	0.145155	0.835304	15.7
20	2013	-0.478796	8.043463	0.956007	6.444822	0.994876	0.993547	0.956098	18.9
20	2014	-0.458969	8.511915	0.534739	5.510509	0.999685	0.472638	1.890683	26.8
20	2015	-0.754117	7.993869	0.941866	12.126795	0.997941	0.822320	0.524970	17.6
20	2016	-0.422744	8.504776	3.045068	8.607450	0.193564	0.241561	2.847123	10.5
20	2017	0.223286	8.837163	1.324410	10.421208	0.236750	0.206019	0.170863	34.1
21	2008	0.716617	8.305657	0.606747	7.774152	0.215402	0.945033	0.994636	11.2
21	2009	0.698725	8.537375	0.826826	8.088617	0.283519	0.701734	0.928085	20.3
21	2010	0.983419	8.319211	0.949031	6.913673	0.190423	0.247513	1.226175	13.5
21	2011	-0.095432	8.973058	0.973391	3.602170	0.239902	0.427240	0.748215	41.5
21	2012	-0.254861	8.458697	1.025345	3.151102	0.202385	0.209719	3.375083	12.5
21	2013	-0.358117	8.587725	0.360660	2.214923	0.783631	0.372101	0.398672	30.5
21	2014	-0.170524	8.686868	1.764533	2.156098	0.805508	0.170816	1.795931	17.1
21	2015	-0.935142	8.979371	0.579289	2.980816	0.751919	0.499341	1.019190	26.8
21	2016	-0.468831	8.303746	0.479730	1.399241	0.550786	0.453127	0.442757	34.5
21	2017	0.607723	8.476690	0.591425	1.342620	0.264920	0.404380	0.462328	19.5
22	2008	-0.181456	8.330123	0.763179	1.257949	0.466536	0.985058	0.662267	26.1
22	2009	0.234578	8.661993	1.995816	2.930910	0.386736	0.470864	2.060623	34.6
22	2010	0.383322	8.753851	1.099868	1.383737	0.503647	0.267798	0.443993	38.3
22	2011	0.564781	8.350220	0.452415	1.143663	0.782380	0.413488	3.716197	21.7
22	2012	0.240722	8.849577	0.270099	3.044411	0.900551	0.245123	0.228213	27.9
22	2013	0.245617	8.757212	1.336209	1.748166	0.888417	0.235145	0.972632	39.1
22	2014	0.265478	8.766144	0.876943	1.226309	0.782852	0.543192	1.221810	28.6
22	2015	0.294440	8.686368	0.608190	1.860091	0.775992	0.230214	1.090704	14.8

22	2016	0.978652	8.983484	0.900675	1.627275	0.590524	0.894536	0.850341	20.1
22	2017	0.529366	8.773889	0.623469	2.500158	0.653445	0.500083	1.217219	37.1
23	2008	-0.201378	8.973147	0.184006	2.881349	0.916617	0.223853	0.205222	32.2
23	2009	0.691994	8.836333	0.673020	1.586679	0.897765	0.209797	0.629661	13.5
23	2010	0.738720	8.951856	0.304039	1.742101	0.752010	0.161967	0.586537	26.4
23	2011	0.597867	8.185825	0.612203	1.985238	0.734520	0.883917	5.958030	29.4
23	2012	0.603421	7.254678	0.195648	2.008750	0.676742	0.870586	0.548965	26.4
23	2013	-0.577788	8.958572	0.775959	2.976446	0.668854	0.123607	0.446212	42.4
23	2014	0.457926	8.424601	0.742050	1.204841	0.913085	0.392327	0.411002	34.5
23	2015	0.256764	7.564781	0.452781	1.595991	0.741345	0.482541	1.744893	25.5
23	2016	-0.162871	8.935885	0.840122	3.004862	0.903594	0.165692	0.149671	20.9
23	2017	0.324561	7.365471	0.538543	1.639078	0.890047	0.529093	2.292028	24.9
24	2008	0.311289	8.844251	0.346230	2.379144	0.774512	0.231624	0.328027	38.5
24	2009	0.255985	7.345679	0.094578	2.178178	0.898784	0.254561	0.312207	29.5
24	2010	-0.471287	8.758519	0.559376	2.015831	0.885920	0.182345	0.516569	21.5
24	2011	0.433018	7.254678	0.535128	1.829693	0.677781	0.341234	1.394567	38.5
24	2012	0.259304	8.898562	0.742703	2.490799	0.788401	0.261234	0.372603	24.2
24	2013	0.440627	7.256478	0.594588	1.469349	0.792625	0.147894	0.423031	19.1
24	2014	0.155519	8.891638	0.474991	1.341815	0.424004	0.290147	0.219994	28.6
24	2015	0.186215	7.564789	0.985821	2.489585	0.891430	0.182345	1.453124	34.8
24	2016	0.287077	8.585704	0.507900	4.715117	1.730886	0.341235	0.315434	20.1
24	2017	0.140381	7.231456	0.451245	2.074285	0.891790	0.291457	0.966257	32.3

