Determinants of Profitability: Evidence from Large Manufacturing Food and Beverage Companies of Addis Ababa

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Statement of Declaration

I, the undersigned, declare that this thesis entitled"D**eterminants of profitability: evidence from large manufacturing food and beverages companies of Addis Ababa**" in partial fulfilment of the requirement of the MSc degree in Accounting and Finance with the close guidance and support of the research advisor.And it is my original work, has not been presented for award in any other university and that all sources of materials used for the thesis have been duly acknowledged.

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This is to certify that the thesis prepared by Yodit Yirgu, entitled: "**Determinants of profitability: evidence from large manufacturing food and beverage companies of Addis Ababa"** and submitted in partial fulfilment of the requirements for the degree of Master of Science in Accounting and Finance complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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Abstract

Determinants of Profitability: Evidence from Large Manufacturing food and beverage Companies of Addis Ababa.

This study sets out to examine the determinants of food and beverages profitability specifically focused on large manufacturing companies of the sector who submitted their annual financial statement reportto ERCA LTO, during the period 2011-2015. Consequently,the researcher used secondary data obtained from the financial statements (Balance sheet and Profit/Loss account) of food and beverage companies, and financial publications of CSA, MOFED and MOT. Quantitative research approach was adopted.The study performs a panel least square regression analysis to examine the proposed relationship. The study had a population size of 29 food and beveragecompanies operating in Addis Ababa. Simple random sampling technique was used to select the sampled companies from the period of 2011-2015, consisting of 14 companies with 70 observations.The results of panel least square regression analysis showed that: Firm size, Leverage and capital intensity, have statistically significant and negative impact on profitability. On the other hand, Managerial efficiency has a positive and statistically significant impact on manufacturing food and beverage companies' profitability. The study concluded that size may have no or negative impact on profitability, managerial efficiency has strong effect on profitability. Beside the study suggested for the stakeholders that give more attention on the major variables of the sectors such as firm size and capital intensity. While the results may not be generalizable to all food and beverage manufacturing companies found in the country, the findings should provide food and beverage executives and managers with valuable information for developing their strategies with regard to firm specific determinants.

Key Words: - ROA, Firm specific factors, Inflation

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List of Acronyms& Abbreviation

AACCSA	Addis Ababa Chamber of Commerce and Sectoral Association
CAPint	Capital intensity
CLRM	Classical linear regression models
CSA	Central statistical Agency
D-W stat	Durbin-Watson Statistics
DW	Durbin–Watson
ERCA	Ethiopian Revenue and Customs Authority
GR	Firm growth
GTP	Growth Total Product
IR	Inflation rate
Lev	Leverage
LQ	Liquidity
LTO	Large tax payer Office
MEF	Management efficiency
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

Chapter One

Introduction

This chapter conferred with introduction which entails about background of the study, background of food and beverage companies in Ethiopia, statement of the problem, objectives of the study, research hypothesis, significance, scope and limitations of the study, and structure of the paper.

1.1 Background of the study

Performance evaluation is carried out through two major measures: Financial measures and non-financial measures. Financial measures focus mainly on figures which may not tell the whole story of the company. Nevertheless, financial measures are commonly used to evaluate performance. The most commonly used financial measure for performance evaluation is profitability measures. This is because most business concerns function to earn enough profit in order to remain as a going business concern. To determine firm's profitability, one of the most frequently used tools is financial ratio analysis which include profitability ratios.

According to Ifeoma, David and Sylvia (2012) profitability ratios show firm's overall efficiency and measure both the profit margin that the firm is 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 generate enough revenue to cover its operating cost and make enough profit as compensation to the providers of capital.Every 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 composed 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 ideas 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.

Performance at microeconomic level is the direct result of managing various economic resources and of their efficient use within operational, investment and financing activities. To optimize economic results, a special attention should be given to the proper grounding of managerial decisions. These should be based on complex information regarding the evolution of all types of activities within the company. A synthetic picture of the company's financial position and its performance is found in the annual financial statements, which therefore become the main information sources that allow the qualitative analysis of how resources are used during the process of creating value. In order one company to run on a long-term performance way, it is needed to develop, implementation and maintaining the strategies, measures and coherent policies from economic and financial point of view, resulted from a good knowing of internal and external specific conditions in which the firm acts. The qualities of managerial options depend by the ability of identifying those elements that productively used could lead to increasing of the results and performance (Burja, 2011).

According to Ethiopian food beverage 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 food and beverage is on rise for the last decades, consumers have also become more refined in demanding more products. In addition export rate has grown significantly to the neighbouring countries. (Ethiopian News Agency, 2016)
The market gap, high demand for these product and other positive economic and political opportunities attracted international investors and companies for investment in Ethiopia. With the involvement of the international companies in the industry, food and beverage industry is becoming the biggest in the country.

In point of view of the heavy investment which is necessary for the success of the food and beverage industries, profit in the accounting term sense tends to become a long term objective which measures not only the success of the product, but also of the development of the market. Thus this research focused to study the determinant of profitability in the large manufacturingfood and beverage companies in Addis Ababa. The motive behind to undertake this research paper is toprovide some identification of the factors which affects profitability andalso to contribute a

slight to help the shareholders, investors other stakeholders to measure the overall success of these sectors.

1.2 Background of food and beverage industries in Ethiopia

Ethiopian manufacturing sector is among the key productivity sectors of the economy which can spur economic growth and development because of its immense potential for wealth creation, employment generation and poverty alleviation.

Manufacturing sector can be divided into various subsectors namely food and beverage products, textiles and apparel products, leather and leather products, wood and pulp products, chemicals and chemical products, rubber and plastic products, other non-metallic minerals products and metal and engineering products industries.

The food and beverage sector is one of the main components of Ethiopia's manufacturing sector accounted the highest percentage 29.46% distribution of large and medium scale manufacturing industries by the regional state public and private industrial group. The first GTP (2010-2015) ranked agro processing industries among top priorities industries. Based on the CSA (2014/15) abstract report of manufacturing survey, the number of establishment with responses under this subcategory are 908 and of this those under public 95.45% and private accounts about 98.01% of the ownership title.

According to Addis Ababa Chamber of Commerce and Sectoral Association (AACCSA) studies of October 2015, the top two manufacturing subsector, food and beverage and metal and engineering industries accounted for62.42 % of value added by the sector's and the food and beverage sector alone accounted 39 % of the employment in the sector in the year 2014/2015.

This subsector includes a wide variety of activities, mostly linked to the transformation of domestically produced agricultural products. The subsector comprises the following production industries: Vegetables, animal oils and fats, dairy products, grain mill products, prepared animal feeds, bakery products, sugar and sugar confectionery, macaroni and spaghetti, wines, malt liquors and malt, soft drinks and production of minerals water (MOT,2017).

The source of fund to the food and beverage subsector relies highly on domestic banks to meet its financial resources demand. In terms of employment, the number of employees under this subsectors private and public can be estimated at 128,954 which accounts to about 31 % which is

the highest of the labor force absorbed by the manufacturing industries found in all parts of the country in the year 2014/2015(CSA abstracts report,2017).

The majority of materials input availability which is around 69% used by this subsector are available domestically. However, it is large extent dependent on rain-fed production of raw materials, such as raw milk, oil crops, fruits and vegetables, grain/cereals, sugar cane, unprocessed tea/coffee, malt and etc. The production of processed products therefore to a large extent depends on the seasonality of weather, which largely determines the quality of the material available. The situation is true for most food and beverage agro-processed products. Volatility of production size due to inconsistent supply of input, which is again as a result of the weather-dependent nature of most raw materials for this subsector, was one potential difficulty raised(CSA abstracts report,2016).

Availability of Skilled manpower is another determinant factor that determines the wellbeing of this subsector. The food and beverage subsector currently absorbed a relatively large quantity of both skilled and unskilled workers available for the entire manufacturing industries of the country. In conformity with the national level status, data collected through company level survey revealed that availability of skilled manpower is not an issue at current condition(CSA abstracts report,2016).

There are also some major challenges in the food and beverages products producers faces while selling products in the domestic and foreign markets. Top on the list are high cost of production compared to imported goods, low tariff protection, insurgent of illegal goods and lack of access to market as major domestic market challenges. In similar fashion high cost of production compared to other competitor, lack of knowledge about foreign market trends, low capacity to produce in bulk and inability to keep product standards were most frequently mentioned foreign market challenges faced by the companies. Figures are modified by the current 2014/15 CSA report.

1.3 Problem statement

Profitability is essential for any firm from both shareholders and economic point of view because as the firm grows or performs well in terms of profitability, it will have strengthening dividend payment to owners, improve capital structure, safety and soundness of the financial operation, increase employment opportunity, tax payment and other positive impact on shareholders and other stakeholders.

Profitability is a leading indicator, as such, measures ultimate performance of industries and is an important area of review by the regulatory bodies. Apart from assessments made by investors and creditors and other stakeholders to ensure its sustainability, it helps the industries to understand scale and scope of their activity and enabling them to position and take appropriate actions to stay competitive in the market.

Profitability determinants are forces that directly impact the profitability of a firm, and as such are useful tools for relevant firms to understand what needs to be done and where they should focus in order to improve on the profitability of their business.

The study took the researcher attention that this manufacturing sector contribution in the country's economy is huge as compared to other manufacturing sectors as exhibited and modified from (CSA, 2016 abstract report). However, the sector doesn't show consistent profitability trend and some are not even profitable based on the data evidenced from ERCA 2016. Henceforth to identify the factors which determine the profitability are the one which desire clarification from this research paper.

To the best knowledge of the researcher, there are limited studies which examine determinants of profitability in the food and beverage sectors. (Imeokparia ,2015) explored the impact of working capital on the operation of an organisation particularly the food and beverage firms in Nigeria the study aimed at determining if there is any relationship between working capital management and the performance of the food and beverage industry in Nigeria; (MutungaS.L.2014) sought to analyse perceived effects of selected macroeconomic indicators of inflation, exchange and interest rates on the food and beverage manufacturing sector in Kenya; (Bhutta and Hasan, 2013);

(Ifurueze, 2013) examined the impact of effective management of credit sales on profitability and liquidity of Food and Beverage Industries in Nigeria.(Hirschet al., 2012), on their paper decomposes the variance in EU food industry return-on-assets into year, country, industry and firm effects using a hierarchical linear model (HLM) on food and beverage sector.

Signifying that determinants which affect the profitability of food and beverage sectors has not yet been sufficiently investigated. Though taking this into consideration the insufficiency of empirical investigation on the extent determinants of food and beverage companies' profitability, the researcher attempts to give some insight contribution and enhance new findings of this area of research for Ethiopian companies in order to fill the knowledge gaps in empirical evidence.

In addition, during this time where Ethiopia is attracting more investment as a business and world tourism destination, that food and beverage investments has become the rewarding market for the sectors investment.(ENA,2016).

To sightsee the determinants of profitability (firm size, asset growth, leverage, liquidity, capital intensity managerial efficiency and inflation); it becomes an interesting topic for the researcher to deploy empirically founded studies particularly on food and beverage companies.

1.4 Objectives of the study

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

1.4.1 Major objective

The major objective of this study is to assess the determinants oflarge food and beverage manufacturing companies' profitability of Addis Ababa. Particularly companies which report their annual financial statement at Ethiopian revenues and customs authority large tax payers' office (ERCA LTO) for the period of five years from 2011 to 2015.

1.4.2 Specific objective

In relation to the above major objective, the study had the following specific objectives.

i. To measure the extent to which firm specific factors (firm size, asset growth, leverage, liquidity, capital intensity, managerial efficiency) and other than firm specific (General inflation of the country) affect profitability of food and beverage companies' of Addis Ababa.
ii. To investigate on the relationship between the variables mentioned above determining profitability and the impact of those factors on profitability of the companies.
iii. To associate those determinantsaccording to their degree of influence on food and beverages profitability.

1.5 Research hypothesis

As stated by (Kothari 2004) ordinarily, when one talks about hypothesis, one simply means a mere 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 food and beverage companies in Addis Ababa grounding on different empirical research and theoretical review.

H1. Size has a positive or negative significant effect on profitability of food and beverages manufacturing companies in Addis Ababa.

H2. Leverage has a negative significant effect on food and beverages manufacturing companies' profitability.

H3. Liquidity has positive or negative significant effect on profitability of food and beverages manufacturing companies.

H4. Firm growth has positive and significanteffect on profitability of food and beveragesmanufacturing companies in Addis Ababa.

H5. Managerial efficiency has positive and significant effect on profitability of food and beverages manufacturing companies in Addis Ababa.

H6. Capital intensity has a positive and significant effect on profitability of food and beverage manufacturing companies in Addis Ababa

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

1.6 Significance of the study

The main reason for this study is that most of the researchers have not yet given emphasis on specific areas in Ethiopia related to the issue concerning determinants of profitability. Most studies had previously focused on manufacturing sectors in general. Therefore this study gives some inspiration on scarcity of thestudy in Ethiopia and also would havean ultimate significance to show the degree of the food and beverage internal (firm specific) factor determinants, in what extent it affect the profitability of the specific sectors, by identifying and showing the main determinants of profitability and to suggest policy implications after critical examination of the study on the area of this sectors in the country. To this end,the study is believed to have the following importance:

It enable and help policy makers and management bodies of food and beverage companies to adjust their management system and mechanisms, capitalize on other, like strong demand and cost complementarities that improve performance.After the assessment of this studyit would allow for the government to discover the status and the performance of state owned food and beverage sectorsand measure their competitiveness in terms of profitability withprivately and share owned companies and help them to pass policy implication. It would had benefit investors to measure the performance of their portfolios and proceed with readjustments as required andit would provide a road map for managers and shareholders to evaluate their industry performance in terms of profitability with respect to the above listed determinants.

Moreoverthe findings of the research also served as an input for the research beginners and academician who are interestedin this area to conduct their research.

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1.7 Scope and limitation of the study

The study encircled to examine the impact of determinants on profitability of food and beverage manufacturingcompanies. Specific focus areaof large manufacturers and producers which report their annual financial statementstoEthiopian revenues and customs authority large tax payers office (ERCA LTO) in Addis Ababa.

The researcher delimited to found 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.

In addition to that the researcher used the time period to analyze the financial statements starting from 2011 to 2015 fiscal year. Since the annual financial reports of the companies that is posted by ERCA is not included the recent data of the year 2016 and, so that this paper is limited to analyze the determinants of profitability of this companies up to 2015. Moreover, the study alsoaddresses only on companies which report their financial statement in Addis Ababa office, make the researcher constrained to access deeply on the area of research. Therefore the researcher be supposed to analyze only the food and beverage companiestheir annual report is found in LTO Addis Ababa.

1.8 Structure of the thesis

This research paper is structured in four main chapters. The first chapter composed; background of the study, background of food and beverage 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 food and beverage manufacturers'profitability is exhaustively presented. The fourth chapterpresented results and discussion and findings of the paper. The fifth chapter forwarded the previous sections, conclusion and recommendation of the research.

Chapter Two

Related Literature

In this section the researcher dwelled on the review of the related literature and establishes theoretical and empirical foundations on which the study had leaned. Specifically, literature review covered theoretical analysis composed of the concept of profitability, measurement tools of profitability and models of firm profitability and other related relevant issues to the study in hand has discussed. Moreover, it had uncovered the gap and how this particular study contributed to fill the same.

2.1 Theoretical review

There is no general theory of profitability that provides a unifying framework for the study of determinant of profitability in the food and beverages companies. Because of this reason, this study reviewed some theories which are nearer to the concept of profitability and its determinants. The theoretical frame work upon which this study is covered the concept of profitability, measurement tools of profitability the models based on profitability that is the structural approaches which investigate behavior of market regarding to profitability. A structural approach was mainly focused on the structure-conduct performance (SCP) model and firm- effect model which is the result of the distribution of firms and firm profits. Structural approach has investigated how the market concentration weakens the market competition by fostering collusive behavior among firms.

2.1.1 The concept of profitability

Profit is the primary objective of a business. In point of view of the heavy investment which is necessary for the success of most enterprises. Profit in the accounting sense tends to become a long term objective which measures not only the success of the product, but also of the development of the market for it. It is determined by matching revenue against cost associated

with it. Only those costs are placed against revenue, which have contribution in the generation of such revenue. An enterprise should earn profits to survive and grow over a long period of time. It provides evidence concerning the earnings potential of a company and how effectively a firm is being managed. If the enterprise fails to make profit capital invested is eroded and if this situation prolongs the enterprise ultimately ceases to exist. (Nimalathasan, 2009).

The word profitability is composed of two words, namely, profit and ability. The term profit has been explained above 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. In other words, in spite of their generic nature, each one of them has a distinct role in business. (Tulsian, 2014).

2.1.2 Measurement tools of profitability:

The most important measurement of profitability of a company is ratio i.e. profitability of assets variously referred to as earning power of the company return on total investment or total resources committed to operations." (Murthy 1978).

According to Block and Hire(1978) "The income statement is the major device or measuring the profitability of a firm over a period of time." Some managerial decision like rising of additional finance, further expansion, problem of bonus and dividend payments rest upon this measurement. It can be measured for a short term and long term. 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.

Profitability ratios are an indicator for the firm's overall efficiency. It's usually used as a measure for earnings generated by the company during a period of time based on its level of sales, assets, capital employed, net worth and earnings per share. Profitability ratios measures earning capacity of the firm, and it is considered as an indicator for its growth, success and control. Accordingly, the term 'profitability' is a relative measure where profit is expressed as a ratio, generally as a percentage.(Rajkot, 1984. P-61)

2.1.3 Models of firm profitability

2.1.3.1 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. Models of firm profitability can be classified into two major groups, structure-conduct performance (SCP) and firm effect models. (Stierwald, 2009)

- 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, see (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)

- 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)

Taken together, the evidence suggests that both SCP and firm effect models are plausible. This implies that industry effects, such as concentration and entry barriers, and firm effects, such as productivity differences or strategic management, are empirically important. Depending on the study, firm-level or industry-specific effects are found to be the dominant factor on firm profitability. (Stierwald, 2009)

2.1.3.2 A model from finance

Financial economists have also modelled and assessed firm profitability. Like members of the Chicago school, they tend to construct models in which markets are workably competitive. Nevertheless, in their models, returns to investing in assets such as firms vary considerably depending on the firms' characteristics. One characteristic that has been emphasized is systematic risk, where systematic means risk that is not diversifiable. Specifically, an asset with higher systematic risk should command a higher return. (Slade E.,2003).

The CAPM Model

The simplest model that embodies that notion is the capital asset pricing model or CAPM. Unlike the early IO models, the CAPM is derived from an equilibrium model of optimal decisions taken by economic agents.

The CAPM explains why highly risky assets such as gold need not command high rates of return. Gold is a real asset whose return is not highly correlated with, for example, the return to holding a portfolio of stocks. Indeed, when the stock market is expected to plummet, it is not uncommon for investors to switch from financial into real assets. Such behaviour leads to low risk premia and can even cause the return to holding real assets to be negatively correlated with *rm*. When this is the case, risk premia are negative. The CAPM predicts that a firm's risk class, not the structure of the market within which it operates, determines profit rates. If there is any possibility that market structure or market share is correlated with systematic risk, it is important to use measures of risk as conditioning variables in tests of IO models.(SladeE.,2003)

In addition, it is interesting to assess the relationship between risk and return in its own right. Many researchers from finance have attempted to assess the testable predictions of the CAPM. They tend to reject the model in its simplest form but find support for modified versions that include additional explanatory factors. Most of the factors that have been considered, however, are economy wide rather than market or firm specific. (SladeE.,2003)

2.2 Empirical review

The empirical review of this study is organised through the various study of previous researchers regarding different sectors of manufacturing industries in general and food and beverage industries in particular. The determinants of food and beverages profitability have been empirically examined by different authors, especially in the developed countries. Umpteen 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. Therefore it is pertinent for the financial managers to gauge the prime variables exerting substantial influence on the profitability. Therefore, it is better to see what factors were considered in previous times by different individuals in different countries.

2.2.1. Firm size and profitability

Firm size has been recognized as an essential variable in explaining organizational profitability and a number of 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. Meanwhile, on the control variables, a negative relationship 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, A.and Thirunavukkarasu, V. (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.

2.2.2. Leverage and profitability

Obigbemi I.et al (2016) studied on financial structure that finance mix is a major factor that affects the liquidity and the going concern of a business enterprise. After an idea has been conceived by an entrepreneur, there is need to also analyze the capital required for startup and means of financing the project. A good combination of sources of finance is expected to boost the profitability of an organization, but if not properly mixed, could have a negative effect on the profitability of the organization. The main objective of their study is to evaluate the effects of financial structure on the profitability of manufacturing companies in Nigeria. Their study employed the use of secondary data. The Spearman's Rank correlation and regression techniques were used for analysis, using the STATA Package for a sample of 25 manufacturing companies quoted on the Nigerian Stock Exchange for the period 2008-2012. Their study showed that equity has a significant positive relationship with the profitability of manufacturing companies in Nigeria. They recommended that managers should place greater emphasis on the facilitation of equity capital and policy makers should encourage manufacturing companies by reducing the cost of debt.

Alalade, S. A. and Oguntodu, A. (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 -0.0411856 unit change in ROA of the companies. Also, the coefficients of gearing shows that one 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, non-current / 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.

2.2.3. Liquidity and profitability

Samuel and Abdulateef (2016**)** examined on their study that the relationship between liquidity management and profitability of listed food and beverages companies in Nigeria over a 10-year period from 2004 to 2013.

They examined out of the 21 listed food and beverages companies in Nigeria, a sample size of 10 firms was drawn. They adopted an ex-post facto research design on their study. Panel data was

obtained from the annual reports and accounts of the sampled firms and analyzed using descriptive statistics and generalized least squares multiple regression techniques. On their findings, cash conversion cycle has an insignificant negative impact on Return on Equity and Earnings per Share respectively. They conclude on their study that management of listed food and beverages companies in Nigeria can maximize the return to shareholders by shortening the cash conversion cycle of the companies to a justifiable minimum. Based on their findings and conclusion they drawn a recommendation that among others, that management of listed food and beverages companies in Nigeria should maximize the use of trade credit and ensure effective and efficient management of cash flows, which result to shorter cash conversion cycles and improve profitability.

Alvin Iand Taufik, F.(2015) studied the relationship between liquidity and profitability in agriculture and consumer goods sectors in Indonesia between2005 – 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.

Endale,T. (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 analyzing the data applying SPSS (Version 20.0) Software. Estimation equation by both correlation analysis and pooled panel data regression models of cross-sectional and time series data were 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.

2.2.4. Capital Intensity and profitability

Adebayo (2013) examined the relationship between asset utilization and cooperate efficiency a case study of food and beverage industry on the Nigerian stock exchange. His study had an objective to find out the relationship between asset utilization and cooperate efficiency in addition to six objectives achieved by the study. He used the population of all firms in food and beverage industry quoted in Nigerian stock exchange. Stratified sampling technique was applied out of 21 companies selected for the study. His study adopted Ex-post facto research design and collected secondary data from the sampled companies for a period of five years from2007-2011 using STATA 12. to analyze the data multiple regression was used to determine the magnitude and statistics of the coefficient of the dependent variable by using the model $ROA=\alpha+\beta1(DRTO)+\beta2(INVTO)+\beta3(DEPASSET)+\beta4(DEPSALES)+\beta5(SALESPLANT)+\beta6(PLANTASSET)+\varepsilon$. The result of his hypotheses showed that only hypothesis one which says that there is no significant relationship between return on asset and debtors' turnover was accepted.

Lee & Xiao (2010)examined the potential curvilinear relationship between capital intensity and firm value for the US hospitality industry, specifically including publicly traded US Hotels and restaurants, during the period 1990-2008.Thier study performs a pooled regression analysis to examinethe proposed relationship. The sampled companies are from the period 1990-2008, consisting of 281and 1,406 observations for the hotel and restaurant industries, respectively. Their study additionally perform the analysis for the 1990s and the 2000s separately for a comparison purpose.Their findings support the U-shaped relationship between capital intensity and firmperformance during the 2000s for both hotels and restaurants, while no relationship exists during the1990s.They provide hotel and restaurant executives andmanagers with valuable information for developing their strategies with regard to the capital intensitylevel.

2.2.5. 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 in 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 on 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 are 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.

Camelia B.(2011) on her paper entitled the 'information about company performance' especially about its profitability, Information is useful in substantiating managerial decisions regarding potential changes in the economic resources that the company will be able to control in the future. This objective aims achieving superior economic results that will increase the company's competitiveness and will satisfy the shareholders' interests. Her paper presents some company performance analysis models, which highlight the influencing factors. Her models are based on regression analysis, and the obtained results emphasize the strong connection between the profitability of the analyzed company expresses through Return on assets and the management of available resources.

2.2.6. Macroeconomic indicators and profitability

Mutunga, S.L (2014) studied the perceived effects of selected macroeconomic indicators on sustainable competitive advantage of food and beverage firms in Kenya.

In his observation Kenya's industrialization, like that of most Sub-Saharan Africa countries, has been slow and continues to grow at an equally slow pace. Key among the constraints to growth are poor economic policies geared at promoting processing and value addition. Being largely an agrarian economy, the country will continue to depend on agricultural led industrialization with the food and beverage processing sector being the largest at 21.8 percent of all manufacturing value add sectors in the country by 2011.

Among the key determinants of industrialization is a favorable political and social economic stability that provides a stable macroeconomic environment for both local and foreign investors to put their money into ventures that spur economic growth. His study sought to analyze perceived effects of selected macroeconomic indicators of inflation, exchange and interest rates on the food and beverage manufacturing sector in Kenya. The implication of the findings was that macroeconomic factors have not had an adverse effect on performance of food and beverage processing firms in Kenya. The result was most probably due to the fact that most of the firms under survey were privately owned family businesses which derived their funding from family resources and were not necessarily involved imports or exports trade that would expose them to adverse interest or exchange rate fluctuations.

Moaveni (2014) investigated the effect of internal, external and macroeconomic factors on the profitability of tourism industry:

Considering the five large Turkish tourist companies from 1998 to 2011. With respect to the results of the regression analysis, he concluded that the internal factors are more related to profitability than the other variables. In this case, capital adequacy (equity over the total asset ratio) and logarithm of size have a significant impact on ROAA (Return on Average Asset) and ROAE (Return on Average Equity), which appear as the indicators of profitability. He concluded

that the profitability and financial performance of tourism industry is not affected significantly by the macroeconomic factors.

TariqandHasan (2013) examined on their study that the impact of firm specific and macroeconomic factors on profitability of food sector in Pakistan.

Their study explores the impact of firm specific factors on profitability of companies listed in food sector of Karachi stock market in the presence of food inflation by employing multivariate regression analysis in common effect setting for the period of 2002-2006. The firm specific factors include debt to equity, tangibility, growth and size and macroeconomic factor include food inflation. Findings of their study reveal the presence of significant negative relation- ship between size and profitability. However, tangibility, growth of the firm and food inflations are found insignificantly positively related to profitability. Similarly, an insignificant negative relationship is observed between debt to equity ratio of firm and its profitability. Empirical results provide evidence that the profitability of food sector is shaped by firm specific factors and not macroeconomic variables. One important limitation of the study is that it only considers one macroeconomic factor ***i.e.*** food inflation. In future studies more macroeconomic factors will be explored to examine their impact on profitability of food sector firms. However, this study still provides significant insight about dynamics of profitability in food sector and helps in making optimal decisions of resource allocation in food sector of Pakistani equity market.

2.2.7. Firm specific determinants and their relationship with profitability

Khaled and Hazem (2015) on their study investigated that the determinants of profitability for industrial firms in Oman.

By using a sample of 17 industrial companies listed on Muscat securities market covering the period from 2006 till 2013.Applied the panel ordinary least squares model the result reveal a positive and statistical significant relationship between profitability, firm size, growth, fixed assets and working capital. On the other hand, the average tax rate and the financial leverage variables show a negative relationship with profitability. However, this relationship is significant only for the financial leverage variable. They conclude on their study that large growing firms with efficiently managed assets improve revenue and ultimately enhance profitability.

Emeka (2014) assessed the impact of materials management on the profitability of Nigeria brewing firms.The purpose of his study is to investigate whether there is effective and efficient materials management in Nigeria brewing firms and the extent to which it has contributed to their profitability. He took for the population of this study is 4648 being the total staff strength of Nigeria Breweries and Guinness Nigeria PLCs, and a sample size of 368 was selected. Materials inventory, Materials procurement, materials storage and interdepartmental collaboration were adopted as sub variables of materials management while profit before tax, return on equity, earnings per share, tax paid and dividend paid was used as profit indicators to ascertain the profitability of organizations under study. Questionnaire and oral interviews was major instrument used in data collection and simple percentages were used to analyzing the data collected from the questionnaire. Four hypotheses were formulated. Z statistics was applied for test of hypotheses and he detected the following findings: materials procurement, materials storage, materials inventory and interdepartmental collaboration have significant contribution to the profitability of brewing firms. Based on the above findings,

Emeka concludes in his study that effective material management is indispensable to brewing firms in making profits. However, he recommended that all manufacturing firms should embrace effective and efficient materials management in order to remain profitable.

Vătavu (2014) in his research aimed to establish the determinants of financial performance in 126 Romanian companies listed on the Bucharest Stock Exchange, over a period of ten-years (2003-2012). His analysis is based on cross sectional regressions. Return on assets is the performance proxy, while the variables expected to have a significant impact on profitability are debt, asset tangibility, size, liquidity, taxation, risk, inflation and crisis. His findings in regression result indicate that profitable companies operate with limited borrowings. Tangibility, business risk and the level of taxation have a negative impact on return on assets. Although earnings are sustained by significant sales turnover, performance is affected by high levels of liquidity. Periods of unstable economic conditions, reflected by high inflation rates and the current financial crisis, have a strong negative impact on corporate performance.

Nishanthini and Nimalathasan(2013) determined on their research, the profitability of listed manufacturing companies in Sri Lanka. In order to meet the objectives of their study, data were collected from secondary sources mainly from financial report of the selected companies, which were published by Colombo stock exchange in Sri Lanka. According to their result the profitability of manufacturing companies is less satisfactory. On their basis of outcome and analysis, selected manufacturing companies has different ranking based on each profitability indicators such as Gross Profit Ratio (GPR), Operating Profit Ratio (OPR), Net Profit Ratio (NPR), Return on Investment (ROI), and Return on Capital Employed (ROCE). Based on the Gross Profit Ratio, Operating Profit Ratio, Net Profit Ratio, Royal Chemical Plc is at first whereas Chevron Lubricants Plc is at first based on ROI, ROCE. They suggest on their outcome is that the study is beneficial to academicians, policy makers, practitioners and so on.

Mary and David (2012) evaluated the Nigerian brewing industries and discovered the problem facing brewery companies the growing trend of input costs which erodes business profit and as such leads to constant shut down of brewery factories in Nigeria. Given the important contributions of the brewery sector to the Nigerian economy, their research deems it necessary to evaluate the effect of input costs on the profitability of brewing firms in Nigeria. They gathered a cross sectional data for the analysis from the annual reports of the sampled brewery firms for a period of 1999 to 2010. Measures of profitability are examined and related to proxies for the

inputs cost assumed by brewers. The Ordinary Least Squares (OLS) stated in the form of a multiple regression model was applied in the analysis. Their study revealed that the focal variable RSGAE (Ratio of Selling and General Administrative Expenses) designed to capture the effect of a company's operating expenses on profitability is statistically positive and impacts on profitability of the brewery firms in Nigeria. Therefore, cost of sale is a major factor to be contained with by Nigerian brewers in enhancing or boosting their profitability.

Kouser et al. (2012) provided an in-depth description of inter- relationship between firm size, growth, and profitability of non-financial companies listed at Karachi stock exchange. Their study is based on the sample of 70 (seventy) non-financial companies listed at Karachi Stock Exchange of Pakistan, selected on the basis of market capitalization. Employed panel data techniques of 700 observation of each of the variables of study; size (log natural of total assets), growth (sustainable growth rate for firm) and profitability (return on assets) for the period of ten years (2001-2010). According to the conclusion of their study profitability has strong positive relationship with the growth of the firm; however size has less significant and negative impact on the profitability. One suggestion for further research would be to replicate the study in order to get more cases. Furthermore, it would be valuable to take a more long-term focus to examine the described relationships in the long run. Their paper highlights the importance of these measures which are generally used for performance evaluation. Their paper sets out the criteria that under which situations the company should focus which of the measure, so that company may derive its strategies on that way. Their findings improve our preferences about the three major measures of the firm. Moreover, it contributes to the literature of financial management that how these three measures have trade-off between them.

Theuvsen and Heyder (2010) they observed the concept of strategic groups has been successfully applied for analyzing firm strategies, structures and performance in various industries. Based on a large scale empirical study, their paper identifies strategic groups in the German brewing industry and analyses the effects of group membership on economic performance. The brewing industry is an interesting research object. The severe economic crisis German breweries face in their home market and the deep structural changes reshaping the global beer industry are forcing German breweries to rethink their strategic position. Their analysis reveals a limited number of strategic

groups and significant performance differences between these groups. Both results are in line with the central hypotheses of the concept of strategic groups. The empirical results enable firm managers to benchmark their breweries against more successful strategic groups, to better adapt corporate and competitive strategies to firm environments, to identify more profitable strategic positions, and to take action to switch from one strategic group to another.

Asimakopoulos, Samitas and Papadogonas, (2009) examined the determinants of profitability for a sample of Greek non-financial firms listed in the Athens Stock Exchange for the period 1995-2003.

That was a very important period for the Greek economy on the way to European monetary union (EMU). Employed panel data estimation techniques utilizing firm- specific publicly available accounting variables rather than cross-sectional analysis. According to their findings, firm profitability was positively affected by size, sales growth and investment and negatively by leverage and current assets. Additionally, they found that the EMU participation and the adoption of the euro were negatively related to firm profitability. On their Practical implications the Greek economy has undergone significant transformation during the period under examination on its way to join EMU and to adopt the euro currency, a model has been formulated where both firm-specific and economy wide factors determine firm profitability. Their paper focuses on a less developed and efficient stock market. In contrast to previous studies that did not take into account the convergence of the Greek economy to EMU averages and the subsequent adoption of the euro, their paper analyses data for the pre-EMU and the post-EMU periods in an attempt to quantify a potential macroeconomic effect on firm-specific profitability.

2.3. Gap on Literature

Although the literature review soundly revealed that various studies have been conducted on the determinants of profitability on different manufacturing sectors including food and beverages. The researcher has got an access to visit some areas of studies regarding the topic. Studies held on countries like Croatia, 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;(Birassa F.,2016) analyzed the corporate capital structure and its

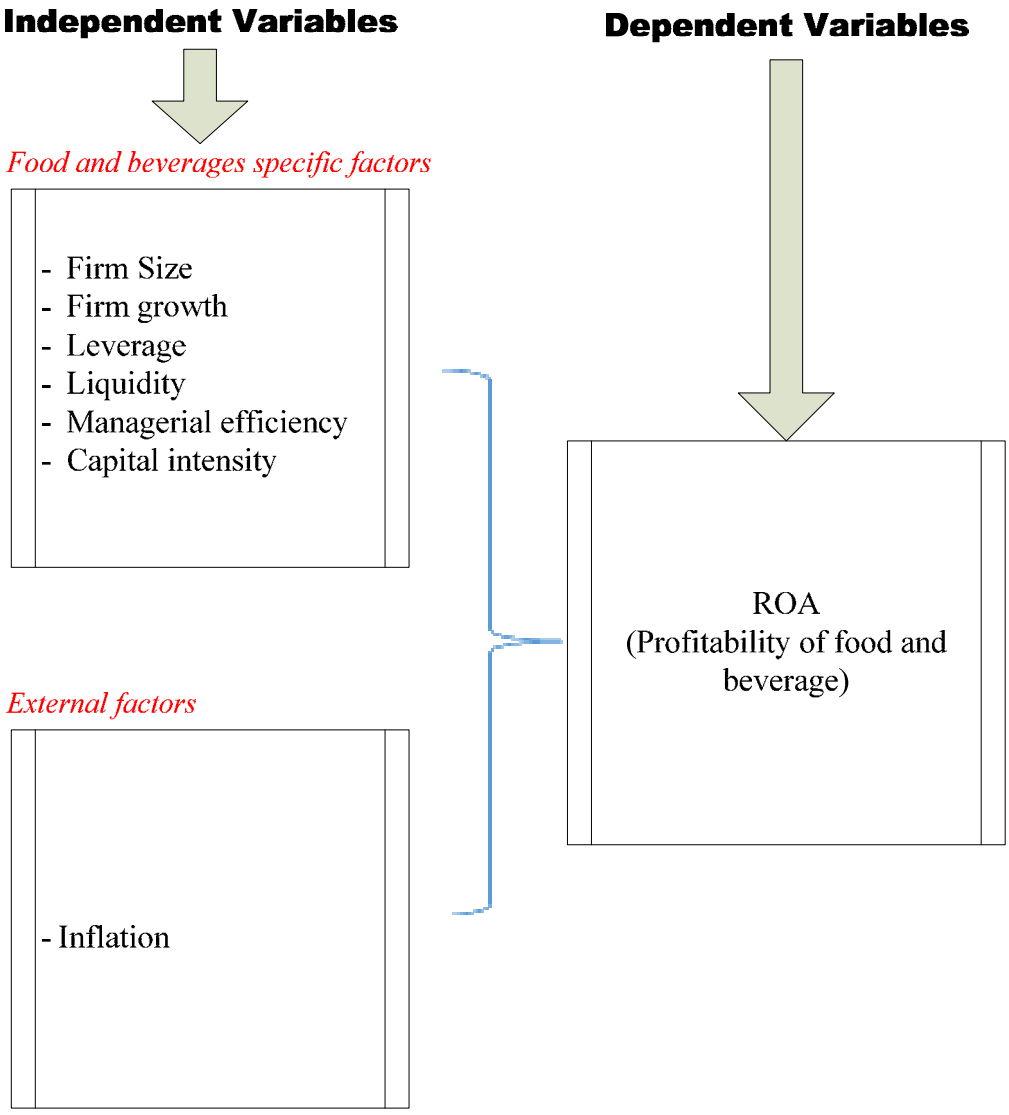
impact on profitability of large tax payer manufacturing firms in Ethiopia;(Solomon,2011) studied the level of technical efficiency in the Ethiopian brewery industries using stochastic frontier production function model;(Yifru,2007)Market structure, conduct and performance of some selected Large and Medium Scale Food Manufacturing Companies;(Menta F.,2015) factors affecting profitability in Airline industry; (Nuru,2011) the effect of working capital policies management on firms' profitability evidence from manufacturing private limited companies;and (Mifta,2010) impact of working capital management on profitability of manufacturing share companies. From financial sectors (Demis,2016;Reshid,2015;Melesse,2014; Abebaw,2014;Birhanu2012) to list some. But the researcher wants to focus only on determinants of profitability on food and beverage manufacturing companies. The main reason for selection of such industry is that there are much paucity in literature investigating the determinants on profitability regarding specific industries to show their performance and to add contribution for filling this gap and to check whether ithad impact for the firm specific and macro-economic variables which were reviewed from empirical literature.

Therefore this research paper makes an endeavor to determine the profitability of listed food and beverage manufacturing companies Addis Ababa Ethiopia with a five years accounting period from 2011 to 2015.

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, food and beverage sectors 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 2.1: Conceptual Framework: Relation between food and beverages profitability and its determinants.



Source: self-developed based on the literature survey.

Chapter Three

Research Design and Methodology

The literature review part above, tried to review the theories in relation to determinants of profitability and also the literature gap. This chapter discussed the research methodology used in the study.

3.1 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 theoriesby 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 Research Approach Adopted

Building on previous studies, the objective of this paper is to examine the impact of size of companies, leverage, liquidity, growth in asset, capital intensity, managerial efficiency and inflation on food and beverage companies' profitability. To achieve the research objective and to examine the relationship of the stated variables the researcher appliedpanel data ordinary least square method which combines the attributes of cross sectional (inter-firm) and time series data (inter-period).

The advantage of panel data analysis is that more reliable estimates of the parameters in the model can be obtained (Gujarati, 2004). Panel data comprise data sets consisting of multiple observations for each sampling unit. By using panel data, we can get better estimations and we can test more sophisticated behavioural models, with less restrictive assumptions.Working with panel data allows using various techniques to estimate models with specific effects. The cross-sectional or cross-temporal specific effects can be identified and analysed by using techniques for fixed effects or random effects.

The data for this study is gathered from secondary source annual financial statement and reports of subjected companies basically balance sheet and income statements. A model assembled with the aim of analyzing the continuation of relationships between the dependent and the independent variable, and in addition probable relationships between and amongst the variables. The variables

had examined through descriptive statistics, and the different relationships amongst the variables analyzed through the correlation matrix. The Ordinary Least Squares (OLS) regression analysis technique had been used with the aid of E-Views 9.The study has undertaken through descriptive statistics for twenty nine of the large tax payers of food and beverage companies, among the twenty nine which is operating in Ethiopia for five years (2011-2015 G.C.)

3.3 Source of data and collectionprocedures

The researcher used secondary sources of data for this research. To have higher quality data of five consecutive years i.e. from 2011-2015 of respective companies annual financial report, to examine the food and beverage manufacturing companies–specific variables. The data hadbeen collected from MIS department of Ethiopian revenue and customs Authority large tax payers office ERCA(LTO) located at Mexico square Addis Ababa and for the analysis of external-specific variables the researcher collected the appropriate data from Ministry of finance and economic development (MoFED), Ministry of trade (MOT) and central statistical agency (CSA) through structured document review.

3.4. Population of the study

The target population of this study include food and beverage manufacturing companies operating in Addis Ababa considered under large tax payer category. All food and beverage companies are appropriate for the study since they are operating under the strict government regulations, making their financial and accounting disclosures largely reliable. Currently, there are twenty nine (29) food and beverage companies operating in Addis Ababa under the large tax payer's office. Out of theseeighteenth wereclassified under manufacturing of food and eleventh's were from beverage manufacturers. Likewise, five werestate owned, fourteen of them were privately owned and the rest were share companies. (ERCA customer service, 2017).

3.5. Sample selection

This study used sample of 14 food and beverages from the total population of 29 food and beverage manufacturing companies located in Addis Ababa categorized under large tax payers office. To be included in the research analysis, the firms had to have available balance sheets and income statement for at least five consecutive years (2011 to 2015), to allow the researcher obtain sufficient data for calculating the representative from each firm.

Asegdew,(2016) cited different researchers who apply this sampling technique.Moreover(Amugune B.K,2014) prepared a workshop regarding sample size determination and sampling techniques. Amugune mentionedthat one of the sample size determination in quantitative studyis a simplified formula of Yamane (1967) where the sample size is with an error of 5% and with a confidence interval of 95%.

Therefore the researcher applied this sampling technique formula fromAsegdewand found it suitable forthis study and computed as follows:-

$$n = N/(1+N\ (e^2)$$
$$= 29/\ (1+29(0.05^2)$$
$$= 27$$

In circumstance, where there are small population elements, the sample would be equal to the population. In such case we can adjust the sample calculated by the formula:

$$n = n\ /\ (1+(n/N))$$
$$= 27/\ (1+\ (27/29))$$
$$= 13.9823 \approx 14$$

Therefore, out of the 29 companies with simple random sampling technique the researcher selected 14 Food and beverage manufacturing companies as sample size. Since the data obtained from ERCA's MIS department is a softcopy with coded companies' information. Therefore, the researcher had a challenge to classify the data under their brand. Taken this into consideration the

researcher believed that given the nature of the datait became manageable to havethis sample size as an unbiased representative of the population. For 5 years consecutive data from 2011 to 2015, and with 14 companies, the researcher obtained 70 observations.

Number of observation = Number of Year X sample selection

= 14 X 5

=70 Observations

To select sample firms, the researcher employed simple random sampling techniques in order to give equal chance for each food and beverage manufacturing company and the observations of the sample can be used for inferential purpose as stated by(C.R. Kothari, 2004). Random sampling from a finite population refers to that method of sample selection which gives each possible sample combination an equal probability of being picked up and each item in the entire population to have an equal chance of being included in the sample. This applies to sampling without replacement i.e., once an item is selected for the sample, it cannot appear in the sample again.

3.6. Choice of Dependent Variable and its measurement

In line with earlier studies that investigated the determinants of firm's profitability, this study relies on one commonly used measure of performance, which is return on total assets (ROA) and it is calculated as net profit to total assets. This is probably the most important single ratio in comparing the efficiency and performance of firms whether it is manufacturing, service and financial sectors as it indicates the returns generated from the assets that firms owns. These measures could be classified as profit performance measures and investment performance measures. However, most researchers stated that the key indicator of a firm's profitability is ROA defined as the after tax profits divided by total assets. (Alghusin, 2015;Sivathaasan, et al. 2013; Hirsch,et al.,2012;& Banoo, et al., 2012) are among others who applied NIAT as a ratio of ROA formula.

3.7. Choice of independent Variables and their Measurement

The choice of independent variables is based on their theoretical relationship with the dependent variable. Generally speaking, the chosen explanatory variables are expected to partly explain the variation of the dependent variable. In this paper, firm specific variables affecting the performance of food and beverage companies were accounted. These independent variables and their measurement are as follows.

1) Size of company (SIZE): Firm size is one of the most acknowledged determinants of a financial performance (Beard and Dess, 1981). In this study, total asset is used as a measure for company size.

   Firm Size = log of total assets

2) Leverage (LeV): It is a financial ratio that indicates the percentage of a firm's assets that are financed with debt. The Leverage(Debt) Ratio is measured as:

   Leverage Ratio= Total Liabilities/Total Asset.

3) Liquidity (LIQ): Liquidity Ratio measures the firm's ability to use its current assets to retire its liabilities.

   Liquidity Ratio = Current Assets / Current Liabilities.

4) Managerial Efficiency: - The ratio of asset turnover(efficiency ratio) was used to measure managerial efficiency and the higher the ratio the higher the managerial efficiency. The total asset turnover ratio is a general efficiency ratio that measures how efficiently a company uses all of its assets. This gives investors and creditors an idea of how a company is managed and uses its assets to produce products and sales.

   Managerial efficiency= Total revenue /Total asset

5) Capital Intensity: -describes the amount of plant, property, equipment, inventory and other tangible or physical assets required to generate a unit of sales revenue. We quantify this characteristic by using the ratio of a company's total assets divided by revenue.

   Capital intensity =Total Asset/ Total Revenue

6) Growth ofAssets: -In this study growth of the food and beverage companies asset is measured by the percentage change in total assets of food and beverage companies.

   $$\text{Growth} = \left(\frac{\text{Asset}_t - \text{Asset}_{t-1}}{\text{Asset}_{t-1}}\right) X\ 100$$

7) Inflation rates (IR)**:** The annual inflation rate was used.

3.8 Model specification

This research concerned only on profitability of food and beverage companies located in Addis Ababa Ethiopia as a firm performance that include financial statement from 2011 to 2015 for analysis and the internal and e bfvf vxternal factors that determine profitability. In line with earlier studies that examined the determinants of food and beverage 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 food and beverage 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.

$ROA_{fb,t} = \alpha + \beta_1 Sizefb,t + \beta_2 Levfb,t + \beta_3 LQfb,t + \beta_4 GR_{fb,t} + \beta_5 MEF_{fb,t} + \beta_6 CAPINT_{fb,t}\ \beta_7 IR_{fb,t} + Є_{fb,t}$

Where:

- ROA_{fbt}: Dependent variable return on Asset of company fb at time t
- $Size_{fbt}$: Size of company fb at time t
- Lev_{fbt}: Leverage;of company fb at time t
- LQ_{fbt}: Liquidity;of company fb at time t
- GR_{fbt}: Asset Growthof company fb at time t
- MEF_{fbt}: Managerial efficiencyof company fb at time t
- CAP_{INTfbt}: Capital intensityof company fb at time t
- IR_{fbt}: Inflation rateof company fb at time t
- β= 1, 2, 3…7 are parameters to be estimate;
- $Є$ = is the error term
- fb = Food and Beverage company, β = 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; Ahmadand Alghusin,2010).

Table 3.1. Description of the variables and their expected relationship

Variable		Measurement	Sign
Dependent	Profitability(ROA)	Net profit after tax/total assets	N/A
Independent	Firm Size	Logarithm of total assets	+/-
	Leverage	Total debt/ total Asset	-
	Liquidity	Current Assets / Current Liabilities	+/-
	Managerial Efficiency	Total revenue / Total asset	+
	Capital Intensity	Total Asset / sales	+
	Growth of Asset	Percentage change in Total Asset	+
	Inflation	Annual inflation	-

Source: self-developed based on the empirical literature.

3.9. Data analysis and presentation

Multiple linear regression data analysis method were employed to analyse the relationship between the profitability of food and beverage 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- 9 econometric software was used for analysis of secondary data regression and the results were presented through table's and graphs.

Chapter Four

Results and Discussions

4.1. Introduction

The major objective of this study is to identify the internal as well as the external factor affecting food and beverages profitability in Addis Ababa. The following discussion presents the results of the E-view analysis as follows. Section 4.2 presents descriptive statistics .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 section 4.5

4.2. Descriptive statistics

This section discussed the summary statistics of each variables of the study. The variables include the dependent and independent variables. The dependent variables used in this study in order to measure the sample food and beverage companies profitability is return on asset (ROA) whereas the explanatory variables (independent variables) are Size of companies, Leverage, Liquidity, Growth in asset, Managerial efficiency, Capital intensity and Inflation.

The researcher conducted descriptive statistic using Eviews.9 econometric software in order to give the audience more understanding about the study variables that are being analysed. According to J.M Wooldridge(2000) Descriptive statistics is the first step in our analysis. Descriptive Statistics is the foundation stone for any type of analysis which enables the researcher to describe the relevant aspects to all the study variables that will entail detailed information about each relevant variable Descriptive statistics is derived from statistical analysis before another test performed using multiple regression analysis (Djoko Suhardjanto, et al, p. 240, 2009). Descriptive studies produced the mean, minimum, maximum and standard deviation for each variable. Accordingly, the descriptive statistics for all variables are presented below in table 4.1.

Table.4.1. descriptive statistics of study variables

	ROA	SIZE	GROWTH	LEV	LQ	MEF	CAPINT	INFR
Mean	0.106531	8.297101	0.097077	0.463668	3.427488	0.296027	1.154879	16.30000
Median	0.084144	8.233765	0.079978	0.414232	2.404328	0.282355	0.918008	13.50000
Maximum	0.339377	9.661461	0.634240	0.962356	14.77751	0.661826	3.548370	34.10000
Minimum	-0.073276	6.953613	-0.271243	0.132818	0.044721	0.017389	0.147964	7.700000
Std. Dev.	0.095337	0.727836	0.136919	0.214250	3.165247	0.160752	0.695206	9.756217
Observations	70	70	70	70	70	70	70	70

Source*: *from Eviews summery Descriptive statistics result

Table 4.1 shows the descriptive statistics of each variable, computed based on the 70 observations recorded. It can be noticed that the return on total assets ratio fluctuates between 0.339377 and -0.073276, that means the most profitable food and beverage companies earned 0.33 of net income from a single birr of asset investment, and the maximum losses incurred by food and beverage companies had a loss of 0.07 cents on each birr of asset investment respectively. While an average value of 0.106531 ROA deviates from the average value with about 0.095337, which implies the presence of good variations among the values of profitability across the food and beverage companies included for this study.

There exists significant variation across the sample food and beverage companies for the reason that the mean value of size is 8.30 and the value of the standard deviation is 0.73. Hence the varieties of size among food and beverage companies might have significant impact on profitability of food and beverage companies. The maximum and minimum values of size were 9.66 and 6.95 respectively.

The mean value of liquidity ratio is 3.43 and the value of standard deviation is 3.17 with 14.78 maximum and 0.045 minimum values. This result shows that some food and beverage companies aremore liquid and others also shows the existence of low variation and almost no reserve to cover

its short term obligation, in cases of emergency among the liquidity level for food and beverage companies under consideration.

The mean value and standard deviation of leverage (Debt to Asset) is 0.46 and 0.21 respectively. This implies that there were moderate differences among leveraged level as measured by debt to asset ratio across the sample food and beverage companies under this study; and it also indicates those food and beverage companies are moderately levered because they used a 4% less from average borrowed funds to finance a company's operation.

The mean value of capital intensity is 1.15 with the standard deviation of 0.70 which shows high 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 intense the firm is said to be. Henceconsidering to this study the variation of standard deviation from its mean and the maximum which is 3.55 and minimum of 0.15 shows that large food and beverage manufacturing companies had classified into those industries considered to be more capital intensive.

The mean value of Growth is 0.10 and the value of standard deviation is 0.14 this implies that there were no significant variations among the level of growth as measured by the change in total assets over the years across the food and beverage companies. The maximum growth the company uses its asset to generate profit was the value of 63.42 percent and the minimum growth was -27.2 percent.

The average value for managerial efficiency (MEF) has become 0.29 with a standard deviation of 0.16 Therefore, there exists moderate variation among the managerial efficiency across the sample food and beverage companies included in this study. The mean value 0.29 indicates that food and beverage companies are efficient because their operating expense per unit of operating income is high , which means a 29% of gross profit related to operating income shows on average the company’s profitability is the contribution of managerial efficiency. The maximum and minimum managerial efficiency were 0.661 and 0.017 respectively.

The average inflation that occurred over the years is 16.30 percent with the standard deviation of 9.76. This indicates that there was significant variation in inflation within the study period cover. The maximum and minimum inflation over the year were 34.10 and 7.70 percent respectively.

4.3. Test results for the classical linear regression model assumptions

Here under presents the basic corner stone regression test assumptions which are carried out to ensure that the data fits the basic assumptions of classical linear regression model. Consequently, 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 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 hetroscedasticity

As Brooks (2008),it has been assumed thus far that the variance of the errors is constant, σ^2 -- this is known as the assumption of homoscedasticity. If the errors do not have a constant variance, they are said to be heteroscedastic. In this study as shown in table 4.2 both the F-statistic and Chi-Square versions of the test statistic gave the same conclusion that there is no evidence for the presence of heteroscedasticity, since the p-values were in excess of 0.05. The third version of the test statistic, Scaled explained SS, which as the name suggests is based on a normalized version of the explained sum of square from the auxiliary regression, also gave the same conclusion that there is no evidence for the presence of heteroscedasticity problem, since the p-value was considerably in excess of 0.05.

Table 4.2: Heteroskedasticity Test: White

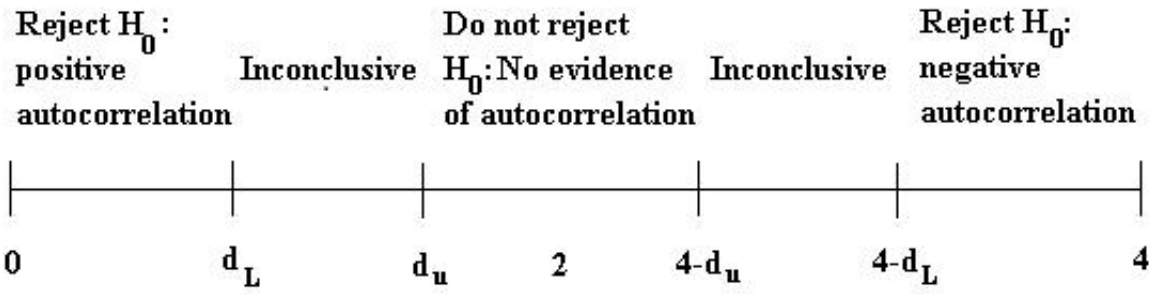
F-statistic	1.416493	Prob. F(35,34)	0.1562
Obs*R-squared	41.52335	Prob. Chi-Square(35)	0.2077
Scaled explained SS	29.84606	Prob. Chi-Square(35)	0.7151

Source: Eview output from financial statement of food and beverage companies

4.3.3. Test for autocorrelation

As noted in Brooks (2008) Assumption 3 tells that is made of the CLRM's disturbance terms is that the covariance between the error terms over time (or cross-section ally, for that type of data) is zero. In other words, it is assumed that the errors are uncorrelated with one another. If the errors are not uncorrelated with one another, it would be stated that they are 'auto-correlated' or that they are 'serially correlated'.Auto-correlation is an assumption that the errors are linearly independent of one another (uncorrelated with one another). If the errors are correlated with one another, it would be stated that they are autocorrelated. To test for the existence of autocorrelation or not, the popular Durbin-Watson test was employed. The rejection / non-rejection rule would be given by selecting the appropriate region from the following figure:

Figure: 4.1 Rejection / non-rejection rule



The DW test does not follow a standard statistical distribution such as a t, F, or $\chi 2$. DW has 2 critical values: an upper critical value (d_U) and a lower critical value (d_L), and there is also an intermediate region where the null hypothesis of no autocorrelation can neither be rejected nor not rejected! The rejection, non-rejection, and inconclusive regions are shown on the number line above in figure 4.1

So, to reiterate, the null hypothesis is rejected and the existence of positive autocorrelation presumed if DW is less than the lower critical value; the null hypothesis is rejected and the existence of negative autocorrelation presumed if DW is greater than 4 minus the lower critical value; the null hypothesis is not rejected and no significant residual autocorrelation is presumed if DW is between the upper and 4 minus the upper limits (Guajarati, 2004).

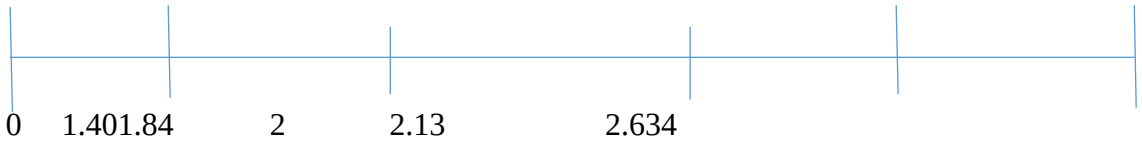


Figure: 4.2 DW results

Source: http://www.ekonomija.cg.yu/ Durbin-Watson%20statistika.htm.

From the results of this regression the value of DW result was 1.72. As mentioned in the previous chapters to empirically analyse the determinants of food and beverages profitability in A.A, 70

(5*14) observations were used in the model. Moreover, there were 7explanatory variables and an intercept term in the model. FromDurbin-Watson test statistic table therefore, the relevant values for the test are d_L= 1.40, d_U = 1.84, i.e., for 70 observations and 7explanatory variables excluding the constant term. Hence, 4 - d_U = 4-1.84=2.16; 4 - d_L = 4-1.40=2.60. The Durbin- Watson test statistic result 1.72 is clearly between the lower limit (d_L) which is 1.40 and the critical value of 4-d_U i.e.1.84and thus the null hypothesis of no autocorrelation is within the inconclusive region of the number line and thus there is no evidence for the presence of autocorrelation.

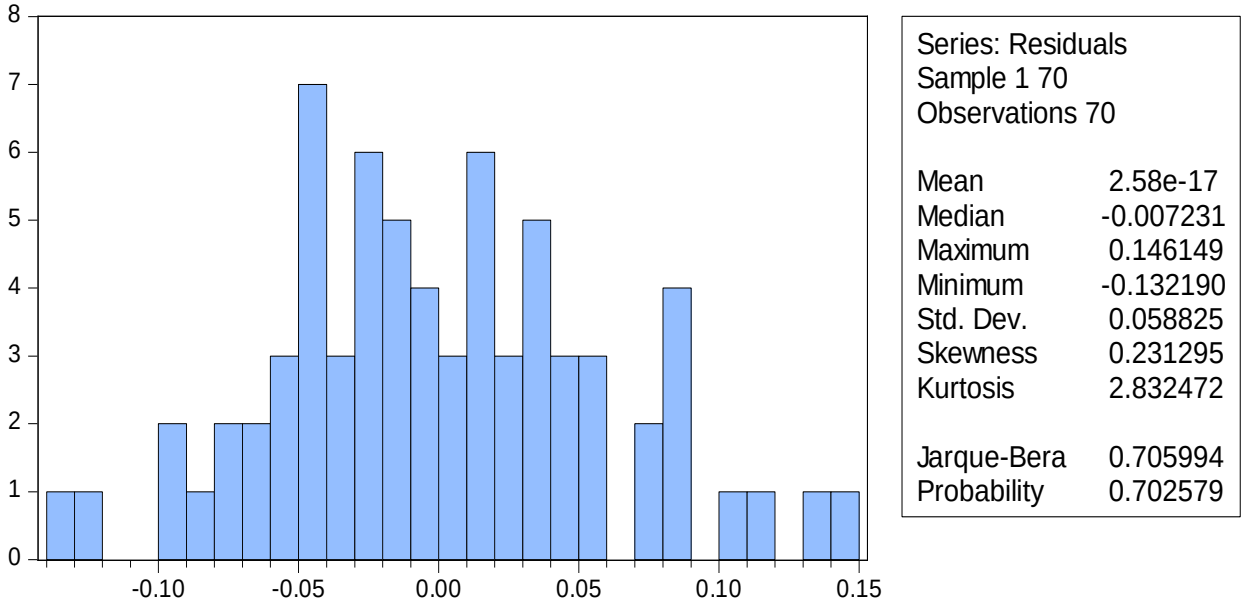
Source :http://www.ekonomija.cg.yu/

4.3.4. Test for normality

One of the most commonly applied tests for normality is the Bera-Jarque (BJ) test. BJ uses the property of a normally distributed random variable that the entire distribution is characterised by the first two moments the mean and the variance. The standardised third and fourth moments of a distribution are known as its skewness and kurtosis.Skewness measures the extent to which a distribution is not symmetric about its mean value and kurtosis measures how fat the tails of the distribution are. A normal distribution is not skewed and is defined to have a coefficient of kurtosis of 3. It is possible to define a coefficient of excess kurtosis, equal to the coefficient of kurtosis minus 3 a normal distribution will thus have a coefficient of excess kurtosis of zero. A normal distribution is symmetric and said to be mesocratic. If the residuals are normally distributed, the histogram should be bell-shaped and the Bera-Jarque statistic would not be significant. This means that the *p*-value given at the bottom of the normality test screen should be bigger than 0.05 to not reject the null of normality at the 5% level.(Brooks,2008)

The result of normality tests for this study is as shown in figure 4.3 below where the coefficient of kurtosis is around 3, and the Bera-Jarque statistic had a P-value of 0.702579it implied that the residual of this study are normally distributed and the data were consistent with a normal distribution assumption.

Figure 4.3 Normality test for residuals (results from Eviews)



Source: - Eview output based on financial statement of sample food and beverage manufacturing companies.

4.3.5 Test for multicollinearity

According to Brook (2008). The most mentioned author in this chapter; an implicit assumption that is made when using the OLS estimation method is that the explanatory variables are not correlated with one another. If there is no relationship between the independent variables, they would be said to be orthogonal to one another. If the independent variables were orthogonal to one another, adding or removing a variable from a regression equation would not cause the values of the coefficients on the other variables to change. In any practical context, the correlation between independent variables will be non-zero, although this will generally be relatively benign in the sense that a small degree of association between explanatory variables will almost always occur but will not cause too much loss of precision. However, a problem occurs when the explanatory variables are very highly correlated with each other, and this problem is known as multicollinearity. The multicollinearity test helps to identify the correlation between explanatory variables and to avoid double effect of independent variable from the model.As noted by Kennedy (2008) multicollinearity problem exists when the correlationcoefficient among the variables are

greater than 0.70. The current study used correlation matrix to detect the problem of multicollinearity. In section 4.3.5.1 and 4.3.5.2displays the correlation matrix between dependent with independent variables and the correlation matrix between independent variables.

4.3.5.1` Correlation matrix between return on asset and independent variables

The ROA reflects the ability of food and beverage managements to generate profits from the company assets 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; size, leverage, liquidity, firm growth, managerial efficiency, capital intensity and inflation. As it can be seen from the table below, there was a negativecorrelation between ROA and size, firm growth, capital intensity,leverage and liquidity. While, there is a positive correlation between ROA and managerial efficiency and inflationrate.

As per the table below, the correlation coefficient between ROA and leverage was -0.045 which is the smallest correlation coefficient as compared to other variables, this mean that leverage has small association with profitability which is similar to other previous studies. But, managerial efficiency had ranked the highest positive correlation coefficient compared to other variables. This result shows that the managerial efficiency is high in food and beverage companies it shows positive correlation with the profitability measured by return on asset. This means that these variablehad a major role on the profitability of food and beverage companies.

Table 4.3 Correlation matrix between ROA and independent variables

	ROA	SIZE	GROWTH	LEV	LQ	MEF	CAPINT	INFR
ROA	1.000000							
SIZE	-0.092632	1.000000						
GROWTH	-0.218070	0.147985	1.000000					
LEV	-0.044906	0.134921	0.109660	1.000000				
LQ	-0.132847	-0.449650	-0.020912	-0.280010	1.000000			
MEF	0.507729	0.169870	-0.002089	-0.174286	-0.146866	1.000000		
CAPINT	-0.463763	-0.046514	0.254392	-0.072313	0.129874	0.155757	1.000000	
INFR	0.121262	-0.125978	0.330223	-0.093723	-0.047799	-0.054269	-0.215998	1.000000

Source: Eview output based on financial statement of sample food and beverage manufacturing companies.

4.3.5.2 Correlation matrix of independentvariables

The correlation between independent variables; size, leverage, liquidity, firm growth, managerial efficiency, capital intensity and inflation included in thisstudy are presented and analysed.According to table 4.4 below, the growth of food and beverage companies with inflation rate and size with liquidity is highly correlated as compared to other independent variables includedin this study with the coefficient of -0.4497 and 0.3302 respectively.

Table 4.4 Correlation matrix between independent variables

	SIZE	MEF	LQ	LEV	GROWTH	CAPINT	INFR
SIZE	1						
MEF	0.1699	1					
LQ	-0.4497	-0.14689	1				
LEV	0.1349	-0.17423	-0.28001	1			
GROWTH	0.1480	-0.0021	-0.0209	0.1097	1		
CAPINT	-0.0465	0.1558	0.1299	-0.0723	0.2544	1	-
INFR	-0.1260	-0.0543	-0.0478	-0.0937	0.3302	-0.2160	1

Source: Eview9 output based on financial statement of sample food and beverage manufacturing companies.

As per the above table, the size of food and Beverage Company is negatively related with all independentvariables except liquidity and capital intensity and inflation rate. Managerial efficiency is positively related only to capital intensity. Liquidity is positively correlated only with managerial efficiency and capital intensity and negatively correlated with size, leverage, Growth and inflation rate. Leverage has a positive correlationcoefficient value with size, managerial efficiency and firmgrowth, but negatively related with other independent variables.

Growth has a positive correlation coefficient with size, leverage, managerial efficiency, capital intensity and inflation rate. But negatively correlated with liquidity.Capital intensity is negatively related with size,liquidity and inflation.But positively related with growth, leverage and managerial efficiency. Inflation rate has a positive correlation coefficient with leverage, managerial efficiency and growthbut, it has a negative correlation coefficient with otherindependent variables.

4.4. Choosing random versus fixed effectmodel

As noted by Brook (2008) there are broadly two classes of panel estimator approaches that can be employed in financial research: fixed effects models and random effects models. The simplest types of fixed effects models allow the intercept in the regression model to differ cross-sectionally but not over time, while all of the slope estimates are fixed both cross-sectionally and over time. An alternative to the fixed effects model the random effects model, which is sometimes also known as the error components model. As with fixed effects, the random effects approach proposes different intercept terms for each entity and again these intercepts are constant over time, with the relationships between the explanatory and explained variables assumed to be the same both cross-sectionally and temporally.As noted by Gujarati (2004) if T (the number of time series data) is large and N (thenumber of cross-sectional units) is small, there is likely to be little difference in thevalues of the parameters estimated by fixed effect model and random effect model.To achieve the objective of the study whether the fixed effect or random effect approach is appropriate the researcherhas to runHausman specification test at five percent level (Hausman, 1978). But the model is not allowed the researcher to run the Hausman test in this study, thereforefixed effects test was conducted for to determinewhether the fixed effect is appropriate for the models.

4.5 Regression analysis result

This section presents the empirical findings from the econometric output and results on determinants of food and beverage companies' profitability. Table 4.5 below reports regression results between the dependent variable (ROA) and independent variables firm size, leverage, liquidity, firm growth managerial efficiency, capital intensity and inflation. Under the following regression outputs the beta coefficient may be negative or positive; beta indicates that each variable's level of influence on the dependent variable. P-value indicates at what percentage or precession level of each variable is significant. The R-squared value measures how well the regression model explains the actual variations in the dependent variable (Brooks, 2008). R-squared statistics and the adjusted- R squared statistics of the model was 84% and 78% respectively. This indicates the independent variables in this study jointly explain about 84 percent of the variation in the profitability of food and beverage companies' measure, ROA. The

remaining 16 percent of the variation in the profitability of food and beverage companies explained by other variables which are not included in the model in this research. Thus these variables collectively, are good explanatory variables to identify the determinant of food and beveragecompanies' profitability. The regression F-statistic (13.65) and the p-value of zero attached to the test statistic revealed that the null hypothesis that all of the coefficients are jointly zero should be rejected. Thus, it implies that the independent variables in the model were able to explain variations in the dependent variable.

Table 4.5:**Summary of Regression out put**

Dependent Variable: ROA
Method: Panel Least Squares
Date: 05/23/17 Time: 01:19
Sample: 2011 2015
Periods included: 5
Cross-sections included: 14
Total panel (balanced) observations: 70

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SIZE	-0.207573	0.041227	-5.034948	0.0000***
MEF	0.307591	0.106031	2.900939	0.0056***
LQ	-0.001422	0.002828	-0.502698	0.6174
LEV	-0.106215	0.052079	-2.039506	0.0468**
GROWTH	0.024046	0.056750	0.423721	0.6736
CAPINT	-0.035028	0.013365	-2.620836	0.0116**
INFR	-0.001382	0.000785	-1.759585	0.0847
C	1.852501	0.334352	5.540575	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.847852	Mean dependent var	0.106531
Adjusted R-squared	0.785751	S.D. dependent var	0.095337
S.E. of regression	0.044129	Akaike info criterion	-3.160095
Sum squared resid	0.095419	Schwarz criterion	-2.485547
Log likelihood	131.6033	Hannan-Quinn criter.	-2.892156
F-statistic	13.65275	Durbin-Watson stat	1.729765
Prob(F-statistic)	0.000000		

*****, **, indicates significant at 1%, and 5%, significance level respectively.**

Source:Eview- 9 output based on financial statements of food and beverage companies

Theoperational panel least square regression analysisabovewasused to estimate by the following model:-

$ROA_{fb,t}= \alpha + \beta_1 Sizefb,t + \beta_2 Levfb,t + \beta_3 LQfb,t + \beta_4 GR_{fb,t} + \beta_5 MEF_{fb,t} + \beta_6 CAPINT_{fb,t} \beta_7 IR_{fb,t} + Є_{fb,t}$

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

$ROA_{fbt} = 1.8525 - 0.2075Size - 0.1062Lev - .0014LQ + 0.02405GR + 0.3076MEF -$

(0.3343) (0.0412) (0.0521) (0.0028) (0.0567) (0.1060)

$-0.0350CAPint - 0.00138 IR + Є$

(0.0134) (0.0007)

Note: values in parentheses are standard errors

Table 4.5 above shows that independent variablessize, managerial efficiency, leverage, capital intensity,except these three variables i.e. liquidity, growth and inflation rate had significant impact onprofitability. Among the significant variablescompany size and managerial efficiency were significant at 1% significance level since the p-valuefor those variables were 0.0000 and 0.0056 respectively. Whereas variables like leverage and capital intensity were significant at 5% significance level.

Regarding the coefficient of independent variables; size, liquidity, leverage, capital intensity and inflation rate were negative against profitability as far as the coefficients for those variableswere -0.2075, -0.001422, -0.106215, -0.035015, and -0.001382 respectively. On the other hand,variables like managerial efficiency and company growth had a positive relationshipwith profitability to the extent that their respective coefficients were 0.30759 and 0.02409respectively.

Size

The panel OLS regression result of this study revealed that there exist a significant and negative relationship between size and profitability of food and beverage manufacturing companies with a regression coefficient of -0.2075, t-statistics of -5.0349 and p-value of 0.000. Size has been considered as a fundamental variable in explaining firm profitability. As cited by Yisau, A. (2013), a number of studies investigate the effects of size on firm profitability. He stated that according to the conclusions of various studies the impacts of size onprofitability can be negative or positive. Forasmuch as some authors argued that largerfirms have some advantages such as a greater possibility of taking advantage of scale of economies which canenable more efficient production, a greater bargaining powerover both suppliers and distributors or clients, exploiting experience curve effects and setting prices above thecompetitive level. It is also argued that larger firms are more stable and matureand they can generate greater sales because of the greater production capacity that enhanced capital costsavings with the economies of scale. On the contrary, some authors claim thatsize may have no or negative impacts on profitability (Shepherd, 1972), especially if growth in size causes adiseconomies of scale.

Thus from the result of the regression output and the above discussions the hypothesis of these study is not rejected. Size were hypothesized that it would have positive or negative significant impact with profitability of food and beverage companies.

Leverage

With a regression coefficient of -0.1062, t-statistics of -2.0395 and p-value of 0.0468 the regression results of the study showed that there is a statistically significant negative relationship between leverage ratio of food and beverage companies and their profitability at 5% significant level. For this reason, the results are reliable with the hypothesis of the study. Literatures in capital structure confirmed that a good combination of sources of finance is expected to boost the profitability of an organization, but if not properly mixed, could have a negative effect on the profitability of the organization. Most previous studies with regard to leverage also found statistically significant relationship but negative. For instance, in the study of Imoleayo F.

Samuel,O. and Kingsley, A .(2016)Azila M. Z.et al.(2014), S. A. Alalade and A. Oguntodu (2015) leverage have negatively and significantly influence on food and beverage company profitability.

Liquidity

As shown above in table 4.5, the regression coefficient of liquidity is -0.001422 with a t-statistics of - 0.502698 and significance value of 0.6174.The results of this regression regarding liquidity implied that there is no significant relationship between liquidity ratio of food and beverage companies and its profitability.Hence this result had consistent withthe formulated hypothesis of the study ,the researcher were initially begin with the hypothesis that liquidity could have positive or negative significant impact on profitability of food and beverage companies. The result is similar with the finding of Samuel and Abdulateef (2016**),** Endale (2015),Nwakaeg (2014) their study revealed that liquidity has negative statistically insignificant relationship with ROA on the other hand the study done by,(Al-jafari and Al- Samman, 2015)(Menta F.M. 2015); (On wumere and Ibe 2012) they founded that liquidity has Positive and negative statistically significant relationship with profitability. Therefore the results show no statistical significance between these variables, it can be concluded that the liquidity ratio of a firm still explains the variation in profitability of food and beverage companies negatively or positively.

Firm growth

The results of the fixed effect regression analysis shows that there is a positive and statistically in significant relationship between firm growth and profitability of food and beverage companies with a regression coefficient of 0.024046, t-statistics of 0.4237 and p-value of 0.6736. For this reason the results are not consistent with the hypothesis of the study. The researcher hypothesised that Food and beverage companies having more and more assets over the years have also better chance of being profitablefor the reason that they expected to have internal capacity though it depends on their ability to exploit external opportunities. Rather for this study the formulated hypothesis is rejected.

The study of Tariq B.and Arshad H.(2013), Kouser. R. et al (2012) have the result similar to this study, they found a positive and statistically in significant relationship between growth and profitability.

Managerial efficiency

Managerial efficiency is the proportion of total organization resources that contribute to productivity during the manufacturing process. The higher this proportion, the more efficient the manager. The more resources wasted or used during the production process, the more efficient the manager. Profitability and management efficiency are usually taken to be positively associated such that poor current profitability may threaten current management efficiency and poor management efficiency may threaten profitability. As it can be seen from table 4.5, managerial efficiency as measured by the ratio of total revenue to total assetis statistically significant at 1 percent significant level with ROA. Which means management of food and beverage companies are efficiently utilize their resources and had great contribution to improve profitability.From the table regression result coefficient is 0.30759, t-statistics 2.900939 and p-value of 0.0056. For this reason, the results are reliable with the hypothesis of the study and had similar result with Jamali and Asadi (2012).Therefore the formulated hypothesis was not rejected.

Capital intensity

The coefficient of capital intensity which is measured by total asset to total revenue was negative -0.35028 and statistically significant at 5% significance level (p-value=0.0116). According to (Lee and Xiao,2011) capital-intensive business is the one that requires large amounts of financial resources to produce products or services. Often as a ratio of total assets or fixed assets to sales or labor inputs, defines a firm’s efficiency in utilizing its assets to produce goods or services. As he noted, with empirical support, the financial economics literature suggested both benefits and drawbacks from capital intensity in relation to firm risk and performance. high level of capital intensity may increase a firm’s risk from high volatility in profitability, likely induced by the significant level of fixed costs that do not vary according to variations in sales (Brealey and

Myers, 1984; Shapiro and Titman, 1986) cited by (Lee and Xiao, 2011). On the other hand, capital intensity may help a firm to be financially efficient from its already committed and expensed costs for fixed assets that contribute to the firm's production during the life of those assets (Lubatkin and Chatterjee, 1994) again cited by(Lee and Xiao, 2011).The above regression analysis shows negative and significant results. The researcher believed that it could be one of the above reason for a negative result of capital intensity and the framed hypothesis is not rejected..

Inflation

Regarding to external macroeconomic variables table 4.5 regression result shows that the general inflation rate of the country does not showsignificant effect on profitability of food and beveragemanufacturing companies. According to the result coefficient of inflation rate is -0.001382 with a t-statistics of -1.759585 including a 10 % significance value of 0.0847. Thus from the result it can be concluded that there exists no relationship between inflation rate with profitability with a 5 % significant level. It is therefore consistent with the hypothesis of the study. The hypothesis of this study is not rejected. Most studies indicated that inflation have insignificant relationship with food and beverage company's profitability. To mention,Mutunga, (2014); Moaveni (2014); TariqandHasan (2013); Naceur (2003); Ayadi and Boujelbene (2012) concluded that the macroeconomic variables such as economic growth and inflation, do not have significant effect on profitability.It can be concluded that from this study thegeneral level of inflation do not havesignificant impact on profitability of food and beverage companies.

4.6 Summary of main findings

In this study, the empirical analysis of investigating the determinants of the profitability of food and beverage manufacturing companies was conducted using a panel data set consisting of financial data of fourteen food and beverage companies over the period of 2011 to 2015.

From the result of OLSregression analysis, the profitability of large category food and manufacturing companies which is found in Addis Ababa is highly affected by all variables included in this study except growth, liquidity and inflation. The findings of the study showed that firm size, leverage and capital intensity have statistically significant and negative relationship with food and beverages profitability. On the other hand, managerial efficiency have a positive and

statistically significant relationship with food and beverages profitability. The following sections discussed about the final conclusion remarks of the study, applicable recommendations and future research recommendation.

Chapter Five

Conclusions and Recommendations

The previous chapter presented the analysis of the findings, while this chapter deals with the conclusions and recommendations provided based on the findings of the study. Accordingly, this chapter is organized into two subsections. The first section presents the conclusions whereas the second section presents the recommendations.

5.1. Conclusions

This study aimed to identify the main factors that determine food and beverages profitability and the extent to which these determinants exert impact on food and beverages profitability. In doing so, previous studies have been reviewed and it is summarized that the profitability of food and beverages profitability is usually expressed as a function of internal and external determinants. The internal determinants refers to the factors originating from food and beverages financial statements (balance sheets and income statement) and therefore could be termed food and beverage companies specific determinants of profitability. The external determinants are variables that are not related to companies management but reflect the macroeconomic factor determinants that affects the operation and performance of manufacturing companies.

Empirical results from previous studies conclude that internal factors explain a large proportion of food and beverages profitability; nonetheless external factors do have an impact on the performance. Seven explanatory variables have been proposed for both categories, according to the nature and purpose of the study. Studies dealing with internal determinants employ variables such as size, leverage, growth in asset, liquidity managerial efficiency and capital intensity. While for external determinants one factor mostly related have been suggested as an impact on the profitability and these variable 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 food and beverages companies' annual reports, MOFED and MOT through documentary analysis; in order to identify and measure the determinants of food and beverage profitability. Panel fixed effect model, multiple regression analysis is adopted to measure the determinants of food and beverage profitability quantitatively.

For testing the research hypotheses, a sample size of fourteen food and beverage companies were randomly selected and the necessary financial data were collected for the time period of 2011 to 2015. From the empirical findings on the impact of food and beverage 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 economieswhich 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 sizecauses a diseconomies of scale.

Secondly, the result showed a negative relationship between leverage ratio and profitability with statistical significance. This shows that increasing debt for selected food and beverage companies would certainly hamper financial performance of that sector.

Third .the result showed strong significant impact on managerial efficiency and capital intensity with profitability. The coefficient of managerial efficiency is highest and positive whereas capital intensity coefficient is negative. As it showed by the result managements of food and beverage companies are efficient of their asset utilization in order to improve the profitability of those selected sampled companies. On the other hand profitability is declined by 3.5% when this listed food and beverage manufacturing companies increased by a level of 1% capital investment. This

situation implied that on this reference sample 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 Asset growth is a positive coefficient sign. However, liquidity, inflation, and asset growth are not statistically significant with the large p-values. Therefore, liquidity, inflation, and asset growth are not considered as powerful explanatory variables to define the profitability of selected food and beverage companies.

5.2 Recommendations

Based on the findings of this study and the conclusions drawn above, the following recommendations are made:

i) The results of significant negative relationship between leverage and return on asset leads to a 10 % decrease in firms' profitability. It seemsit lacks a good combination of source of financing. So that based on this study this manufacturing sector should expect to mix their financing activities properly in order to boost the profitability of their sector.

ii) The negative relationship between manufacturing food and beverage companies' profitability (ROA) and firm size, leads to a decrease in firm's profitability. The result of the study shows whenever the company increases its size, profitability decreases by 20 % percent. Based on this finding, the researcher recommends the following :-

- In order to increase their size, food and beverage companies should have to look for their competitive edge with their competitors to compete by lowering production costto increase their market share.
- If they are willing to expand in terms of size, they must have to take care of not losing their economies of scale advantage.

- Finally they should have to detect the availability of internal and external factors and the current market standing of the firm.

iii) The study found also that capital intensity has a negative relationship with firms' profitability.Therefore, based on the result regarding the capital intensity, the researcher recommend that:a 1 % increase in capital intensity lowering food and beverage profitability by 3%. It is likely due tothe induced significant level of fixed costs that do not vary according to variations in sales. Hencein order to cope up thisprevalence, firms' managers should have to search for the right financing alternative, to manage the significant level of fixed cost.

iv) The study also found positive relationship between management efficiency and firms' profitability. It indicated that whenever managers of the firm utilizedcompanies' resources efficiently they lead the firm to increases its profitability. Besides, the study found out there is significant 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.

Finally, management of large food and beverage 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.

References

Addis Ababa chamber of commerce and sectoral association (AACCSA) (2014). An overview of Ethiopian manufacturing sector. *Dab development research and training plc.*

Anila, D. & Shila, D. (2014).Determinants of firms' profitability in Pakistan: *research journal of finance and accounting Vol.5, No.19.*

Amugune B.K. (2014).Sample size determination and sampling techniques: *mental health workshop* Manzoni, 15th October.

Asaolu,T. &Awolowo O.(2012). Profitability and leverage evidence From Nigerian Firms: University, Ile-Ife, Nigeria. *Global Journal of Business Research vol 6, No 1*.

Alayemi, S. A. (2013).The Relationship between asset utilization and cooperate profitability: *a case study of food and beverage industry quoted on Nigerian stock exchange*: Merit Research Journal of Business and Management. Vol. 1(1) pp. 001-010.

Aja, P. & Monika, M, (2013).What determines the profitability of companies: case of *Croatian food and beverage industry?* Economic Research 26:1, 277-286.

Asaolu, Agorzie & Unam, (2012).Materials management: an effective tool for optimizing profitability in the *Nigerian food and beverage manufacturing industry*. Journal of emergingtrends in economics and management sciences .ISSN: 2141-7024.

Amdemikael A. (2012).Factors affecting profitability: An empirical study on *Ethiopian banking Industry*. The department of accounting and finance.

Amato, L., & Wilder, R. (1985)The Effects of Firm Size on Profit Rates in U.S. Manufacturing, *Southern Economic Journal*, 52(1), 181-190.

Agnieszka, P. & Beata, S (2011).Factors determining the profitability of enterprises: *influence assessment operations research and decisions No. 2*.

Andreas, S. (2009). Determinants of firm profitability: the effect of productivity and its persistence. *Melbourne Institute of applied economic and social research* the University of Melbourne.

Azila M. Z., Wan Muhd F.I.& Nurul S. Z,(2014), The Determinants of Profitability: Evidence from Malaysian Construction Companies. *Proceedings of 5th Asia-Pacific Business Research Conference 17, 18 February.*

Asegdew, K. (2016). Determinants of financial reporting quality: *evidence from large manufacturing share companies of Addis Ababa.* A thesis submitted to the department of accounting and Finance College of business and economics Addis Ababa University.

Alalade S. A. & Oguntodu, (2015). Firms' Capital Structure and Profitability Performance: A Study of Selected Food Product Companies in Nigeria.*IIARD International Journal of Banking and Finance Vol. 1 No. 8.*

Birassa, F. (2016) corporate capital structure and its impact on profitability: Evidence from manufacturing firms in Ethiopia: *A thesis submitted to the School of graduate studies of Addis Ababa University* in partial fulfillment of the requirements for the degree of Masters of Science in Accounting and Finance.

Babalola,Y. A. (2013). The effect of firm size on firms' profitability in Nigeria. *Journal of economics and sustainable development.* Vol.4, No.5.

Burja, C. (2011) Factors influencing the companies' profitability: *Annales Universitatis* Apulensis series oeconomica, 13(2),

Bhutta,T.N & Hasan,A. (2013). Impact of firm specific factors on profitability of firms in food sector: Faculty of *management sciences, international Islamic University, Islamabad, Pakistan.*

Brooks, C. (2008), introductory econometrics for finance, 2nd edn. *Cambridge University Press, New York.*

Beard, D.W., & Dess, G.C. (1981). Level Strategy and Firm Performance: Corporate –Level Strategy, *Business- academy of Management Journal*, 67(4), 78-99.

Block and Hire (1978) Fundamental of Financial management: *Richard D. Irwid Inc. Homewood Illinois P-24*

Creswell,J, (2009).Research design: qualitative, quantitative, and mixed methods approaches:*Third edition*, SAGE publications.inc.

Dwi, K. & Marisa, M.(2016).The Effect of Leverage and Firm Size to Profitability of Public Manufacturing Companies in Indonesia:*International Journal of Economics and Financial Issues*, 6(2), 409-413.

Dave, N.V. (1984). Industrial sickness and some key areas of management: A thesis submitted for the *degree of Ph. D. in comm. Sau. Uni. Rajkot. P-61*.

Demsetz , H. (1973) .Industry Structure, Market Rivalry, and Public Policy: *Journal of Law and Economics, , vol. 16, issue 1, 1-9*

Eya, C.I. (2016) Effect of Working Capital Management on the Performance of Food and Beverage Industries in Nigeria. *Arabian J Bus Manag Review 6:244.*

*Ethiopian trade journal, (1960).*Vol 1, No1.

ERCA *customer service, (2017)*

Golchia, M. (2014), Determinants of profitability in Tourism industry: *evidence from Turkey institute of graduate studies* and research in partial fulfillment of the requirements for the degree of Master of Science in banking and finance.

Goddard, J., M. Tavakoli and J.O.S. Wilson,(2005), "Determinants of profitability in European Manufacturing and services: evidence from a dynamic panel model", *Applied Financial Economics, 15 (18), pp. 1269-1282.*

Gujarati, DN,(2004), Basic econometrics, *4th e^{dn}, the McGraw Hill, New York.*

Harshada J.(2012): Multicollinearity Diagnostics in Statistical Modeling and Remedies.To deal with it using SAS.Session SP07.*available fromhttp://www.cytel.com/hubfs/0-library-0/pdfs/SP07.*

Hylegiorgis, D. (2016). Macroeconomic and Firm Specific Determinants of Profitability of Insurance Industry in Ethiopia:*Double Blind Peer Reviewed International Research Journal* Vol. 16 Issue 7 Version 1.0 Publisher: Global Journals Inc. USA.

Hausman, A.(1978). Specification test in econometrics.*Econometrica. Vol. 46, No. 6, 1251-1271*

Imoleayo F. Samuel, O. Kingsley, A. (2016). Financial Structure and the Profitability of Manufacturing Companies in Nigeria: *Journal of Accounting, Finance and Auditing Studies 56-63.*

Ifeoma M.O, David O. U & Sylvia U. A (2012) an examination of the factors that determine the profitability of the Nigerian beer brewery firms:*Asian economic and financial review,.* vol. 2, issue 7, pages 741-750

Ioannis,A. Aristeidis, S. Theodore, P.(2009). Firm-specific and economy wide determinants of firm profitability: Greek evidence using panel data *.managerial finance, vol. 35 Issue 11 pp. 930 – 939.*

Inun J.(2013). Management efficiency and profitability.

Jumono, A. Hakim & Fidaus, (2015). Market Concentration, Market Share, and Profitability: Study at Indonesian Commercial Banking in the Period of 2001-2012. *Asian Social Science. Published by Canadian Center of Science and Education. Vol. 11, No. 27.*

Jariya,H. (2013). Liberia - Economic Governance & Institutional Reform: Implementation Status Results Report: Sequence 09. *Washington, D.C.: World Bank Group.*

Jamali A. H. and Asadi,A.(2012) Management efficiency and profitability in Indian automobile industry: *from theory to practice*. Indian Journal of Science and Technology Vol. 5 No. 5.

Kefyalew, A. (2016). Ethiopia's beverage industry booming with increased foreign investment. Beverage processing directorate director *Ethiopian food beverage and pharmaceuticals industry development institute*: Ethiopian news agency.

Kennedy, P 2008,*a guide to econometrics*6th edn, Malden, Wiley-Blackwell.

Khaled and Hazem, (2015).Determinants of profitability: *evidence from industrial companies listed on Muscat securities market.*

Kouser,B. Azeem, &Hassan. , (2012). Inter-Relationship between profitability, growth and size: *a Case of Non-Financial Companies from Pakistan.Vol. 6 (2), 405-419.*

Kothari, C.R.(2004). Research methodology method and technique: *New Age International (P) Ltd., pp 184.*

Lyndon M. & .Etale, (2016).The effect of inventory cost management on profitability: a study of listed brewery companies in Nigeria:*International Journal of Economics, Commerce and Management United Kingdom Vol. IV, Issue 6, pp 446.*

Ludwig. & Matthias, H.(2010). Does strategic group membership affect firm performance? an analysis of the German brewing industry Vol 59, No 2

Lubatkin, M., & Chatterjee, S. (1994). Extending modern portfolio theory into the domain of corporate diversification: Does It Apply? *The Academy of Management Journal, 37 (1), 109-136.*

Lee,S. & Xiao .Qu,(2011). An examination of the curvilinear relationship between capital intensity and firm performance for publicly traded US hotels and restaurants. *International Journal of Contemporary Hospitality Management, Vol. 23 Issue: 6, pp.862-880,*

Mutunga, S.L, (2014)perceived effects of selected macroeconomic indicators on sustainable competitive advantage in food and beverage firms in Kenya: *European Journal of Business and ManagementVol.6, No.30.*

Mohammed, Z., Muhammad, N. Khan, & Imran, K., (2014) Select financial ratios as a determinant of profitability: evidence from petrochemical industry in Saudi Arabia. *European journal of business and management Vol.6, No.6.*

Murthy V. S. (1978): Management Finance: *Vakils Feller and Simons Ltd., Bombay*.

Menta F. (2015). Factors Affecting Profitability in the Airlines Industry: An Empirical Study on Major Airlines in *Sub-Saharan Africa. MSc Thesis*.

Melese , G.M.(2014)Determinants of insurance companies' profitability in Ethiopia. *A Thesis Submitted to Ababa University* Addis Ababa, Ethiopia.

Niresh,A and Thirunavukkarasu, V,(2014). Firm Size and Profitability: A Study of Listed Manufacturing Firms in Sri Lanka. *International Journal of Business and Management; Vol. 9, No. 4;*

Nwosu, H. E., (2014).Materials, management and firm's profitability: the *International Journal of Business & Management vol 2 Issue 7.*

Nishanthini & Nimalathasan, (2013).Determinants of profitability: A case study of listed manufacturing companies in Sri Lanka. *Merit Research Journal of Art, Social Science and Humanities Vol. 1(1) pp. 001-006.*

Nawaf, A. S. A., (2010) Do financial leverage, growth and size affect profitability of Jordanian industrial firms listed? *International journal of academic research in business and social sciences April 2015, Vol. 5, No. 4.*

Orshi, T., Samuel,Y.& Abdulateef, (2016).Liquidity Management and Profitability of Listed Food and Beverages Companies in Nigeria:*Journal of Business and Management*: Volume 18, Issue 2 .Ver. I, PP 167-176.

Osundina.(2014).*Working Capital Management and Profitability*: evidence from quoted food and beverages manufacturing firms in Nigeria. Vol.5, No.4.

Olatunji, T& Adegbite,T., (2014). Investment in fixed assets and firm profitability: empirical evidence from the Nigerian banking sector: *Asian journal of social sciences and management studies. ISSN: 2313-7401 Vol. 1, No. 3, 78-82.*

Okwo, I.M. & Ugwunta, D. O. (2012).Impact of firm's input costs on firm profitability: Evaluation of the Nigerian brewery industry. Research journal of finance and accounting Vol 3, No 6.

Roger C. et al, (1984). The profitability-concentration Relation: Market power or efficiency? The journal of industrial economics, Vol. 32, No. 4, 435-450.

Rajkot (1984) "Industrial sickness and some key areas of management", A thesis submitted for the degree of Ph. D. in comm. Sau. Uni. P-61

ReshidS. (2015) Determinants of Insurance Companies Profitability in Ethiopia. *A thesis submitted to the department of accounting and finance* presented in partial fulfilment of the requirements for the Degree ofMaster of Science.

Sorana,V.(2014).The determinants of profitability in companies listed on the Bucharest stock exchange:*annals of the University of Petro Sani, economics, 14(1), 329-338.*

Shaheen A. (2012). The Impact of capital intensity, size of firm and profitability on debt financing in Textile industry of Pakistan vol 3, NO 10.

Stefan, H. Jan S. Delina G. & Monika H, (2012).The determinants of firm profitability differences in EU food processing:*journal of agricultural economics, Vol. 65, No. 3*.

Seoki Lee & Qu Xiao, (2010) an examination of the curvilinear relationship between capital intensity and firm performance for publicly traded US hotels and restaurants: *School of Tourism and Hospitality Management.*

Shapiro, A.C., & Titman, S. (1986).*An Integrated Approach to Corporate Risk Management.* In J. M. Stern & D. H. Chew (Eds.), the Revolution in Corporate Finance: 215-229. Oxford, UK: Blackwell.

Stierwald, A. (2009), Determinants of Firm Profitability – The Effect of Productivity and its persistence. *Melbourne Institute of Applied Economic and Social Research*.

Slade, E.M. (2003). Models of firm profitability: *Department of economics University of Warwick Coventry CV4 7AL UK.*

Tulsian Dr. M. (2014). Profitability analysis: a comparative study of SAIL & TATA Steel. IOSR *Journal of economics and finance* .volume 3, Issue 2. PP 19-22

Tahira, B. Muhammad, A. & Masood-al-H.(2012).Inter-Relationship between profitability, growth and size: a case of non-financial companies from Pakistan. Pak. J. Commer. Soc. Sci 2012 Vol. 6 (2), 405-419.

Tilaye, E (2015) the Impact of working capital management on Firms' performance: A study on breweries in Ethiopia. MBA Thesis submitted to the school of graduate studies of *St. Mary's University in partial fulfillments of the requirement for the award of the degree Master of business administration (MBA) in finance.*

Uwalomwa, U. Jimoh, J. Auchi, P.& Anijesushola, A. (2012). Dividend Policy and firm Performance: a study of listed firms in Nigeria. *Accounting and management information systems vol. 11, no. 3, pp. 442–454.*

Appendix I

Heteroskedasticity Test: White

F-statistic	1.416493	Prob. F(35,34)	0.1562
Obs*R-squared	41.52335	Prob. Chi-Square(35)	0.2077
Scaled explained SS	29.84606	Prob. Chi-Square(35)	0.7151

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 05/29/17 Time: 23:34
Sample: 1 70
Included observations: 70

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.191062	0.199884	-0.955865	0.3459
SIZE^2	-0.001011	0.002458	-0.411203	0.6835
SIZE*MEF	-0.015654	0.016303	-0.960167	0.3438
SIZE*LQ	-0.000518	0.001163	-0.445569	0.6587
SIZE*LEV	-0.018418	0.012642	-1.456913	0.1543
SIZE*GROWTH	0.002169	0.013883	0.156255	0.8768
SIZE*CAPINT	0.004309	0.003265	1.319599	0.1958
SIZE*INFR	-5.74E-05	0.000182	-0.314832	0.7548
SIZE	0.029663	0.042245	0.702168	0.4874
MEF^2	-0.011425	0.040539	-0.281815	0.7798
MEF*LQ	-0.001494	0.004389	-0.340380	0.7357
MEF*LEV	0.005345	0.046617	0.114659	0.9094
MEF*GROWTH	-0.063002	0.070350	-0.895557	0.3768
MEF*CAPINT	0.008341	0.012547	0.664769	0.5107
MEF*INFR	1.74E-05	0.000570	0.030557	0.9758
MEF	0.142392	0.152052	0.936472	0.3556
LQ^2	-3.25E-05	0.000109	-0.298094	0.7674
LQ*LEV	-0.004304	0.003013	-1.428507	0.1623
LQ*GROWTH	0.001079	0.004264	0.252991	0.8018
LQ*CAPINT	0.001834	0.001381	1.327976	0.1930
LQ*INFR	-3.34E-05	3.88E-05	-0.860614	0.3955
LQ	0.005526	0.010170	0.543368	0.5904
LEV^2	-0.048564	0.027076	-1.793596	0.0818
LEV*GROWTH	-0.052287	0.049007	-1.066925	0.2935
LEV*CAPINT	-0.003484	0.009256	-0.376397	0.7090
LEV*INFR	6.68E-05	0.000666	0.100433	0.9206
LEV	0.226171	0.120386	1.878712	0.0689
GROWTH^2	0.000912	0.047121	0.019344	0.9847
GROWTH*CAPINT	-0.007673	0.019447	-0.394574	0.6956
GROWTH*INFR	-0.000147	0.001185	-0.123860	0.9022
GROWTH	0.032158	0.145665	0.220769	0.8266

CAPINT^2	0.001781	0.001494	1.192412	0.2414
CAPINT*INFR	6.20E-05	0.000350	0.177316	0.8603
CAPINT	-0.048185	0.039308	-1.225814	0.2287
INFR^2	-2.14E-06	1.35E-05	-0.158763	0.8748
INFR	0.000578	0.002224	0.259790	0.7966

R-squared	0.593191	Mean dependent var	0.003411
Adjusted R-squared	0.174417	S.D. dependent var	0.004651
S.E. of regression	0.004226	Akaike info criterion	-7.788817
Sum squared resid	0.000607	Schwarz criterion	-6.632448
Log likelihood	308.6086	Hannan-Quinn criter.	-7.329493
F-statistic	1.416493	Durbin-Watson stat	1.993993
Prob(F-statistic)	0.156236		

Appendix II

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

No.	Name of Organization	Location	Ownership	Brand	Comment
1	Misrak Flour and Breads	A.A	State owned	Flour, Biscuit and Breads	
2	Kality Foods Share.Co.	A.A	Share companies	Manufacturing of Bread Cake & Biscuit	
3	Tasty foods	A.A	Share Companies	Manufacturing of powdered Beverages and shakes	
4	Addis Modjo	A.A	Private companies	Manufacturing of Edible oil	
5	National Alcohol and liquor factory	A.A	State owned	Manufacturer of Alcohol and liquor product	
6	FAFA Foods	A.A	Private companies	Manufacturing of powder milk and powder milk inputs	Ethio-Swedish joint venture
7	NAS Foods	A.A	Private companies	Producer of Biscuit	
8	Awash Wine	A.A	Share companies	Different range of wines	since sep 2013 owned by local and foreign investor
9	Sugar Corporation	A.A	Share companies	Production of sugar	By the regulation No.192/2010 replacing the former Ethiopian Sugar Development Agency to sugar corporation

No.	Name of Organization	Location	Ownership	Brand	Comment
10	BGI Ethiopia	A.A	Private companies	Manufacturing of beer & Alcholic beverages St.George, Castel, Amber	Plant Addis Ababa combolcha,Hawassa
11	Meta Abo Breweries	Sebeta	Share company	Meta, Hakim Staout , nearly lounched new taste Zemen beer	As of January 10, 2012, Meta Abo Brewery Share Company SC operates as a subsidiary of Diageo plc.
12	Bedele breweries	Addis Ababa	Share company	Bedele Premium Beer, Bedele Special Beer, and Bedele Draught Beer	1993-2003 state owned and from 2003- Share company As of August 11, 2011,Bedele Brewery Share Company operates as a subsidiary of Heineken NV
13	Harar	Ho- Addis Ababa	Share company	HararBeer,a 4.25% abv, pale lager, as well as Hakim stout, a 5.8% abv stout., Harar Sofi,a non-alcoholic beverage that it markets toward the Muslim population	As of August 11, 2011, Harar Brewery Share Company operates as a subsidiary of Heineken NV.
14	Heineken	Addis Ababa	Share company	Waliya,	HEINEKEN N.V acquire, Bedele, Harar breweries,.
15	Ambo mineral Water	A.A	Share Company	Ambo Water,Ambo Flavours	Manufacturing of soft drinks and mineral water
16	Balezaf Alchol and Liquer Factory Plc	A.A	State owned	Manufacturing of Alcohol and Liquor	

No.	Name of Organization	Location	Ownership	Brand	Comment
17	Etch A Food Complex	A.A	Private companies	Manufacturing of flour and biscuit	
18	KOJJ food complex	A.A	Private companies	Manufacturing of flour and biscuit	
19	DH Geda Food Complex	A.A	Private companies	Manufacturing of flour and biscuit	
20	Health food Manufacturing Plc	A.A	Private companies	Canned /Nutritional food exporters	
21	Ethiopian Spice Extraction	A.A	State owned	Food retailers, herbs and spice business activities	
22	Afdera Salt Production	A.A	State owned	Production of edible salt	
23	Alnur Import and Export	A.A	Private companies	Oil seed exporters in Ethiopia	
24	Hora foodcomplex	A.A	Private companies	Manufacturing of flour and biscuit	
25	BOEZ Food complex	A.A	Private companies	Manufacturing of flour and biscuit	
26	Wakene Food Complex	A.A	Private companies	Manufacturing of flour and other grain mill product. Pasta macoroni	
27	Hayat food complex	A.A	Private companies		
28	East African Bottling	A.A	Share companies	Coke, and different soft drinks Water and More	
29	Moha Soft Drinks Plc	A.A	Private companies	Varieties of Soft Drinks	

Appendix III

Summary of Data Used for regression

Company ID	Year	ROA	SIZE	LEV	LQ	MEF	CAPInt	INFR	Growth
1	2011	0.274386	8.033401	0.399028	0.25044	0.348108	0.49759	18.1	-0.00012
1	2012	0.104017	8.372463	0.529103	5.472235	0.414759	1.399583	34.1	0.339061
1	2013	0.049228	8.42192	0.531178	0.678392	0.499242	1.692176	13.5	0.049458
1	2014	0.0919	8.516254	0.545762	0.975106	0.552618	1.516808	8.1	0.094334
1	2015	0.11885	8.622159	0.278099	2.353575	0.547731	1.452198	7.7	0.105905
2	2011	0.178501	9.338447	0.38769	3.005749	0.384468	0.834879	18.1	0.097696
2	2012	0.204385	9.430646	0.290385	4.183392	0.444407	0.786518	34.1	0.092199
2	2013	0.2277	9.510401	0.282185	3.970463	0.474206	0.773126	13.5	0.079755
2	2014	0.180397	9.616742	0.334059	2.437253	0.489053	0.843338	8.1	0.106342
2	2015	0.124213	9.661461	0.258278	2.674296	0.487388	0.90712	7.7	0.044719
3	2011	0.178264	7.916898	0.464634	2.945027	0.290422	0.844334	18.1	0.029596
3	2012	0.1027	8.113867	0.58331	2.365541	0.283114	1.304448	34.1	0.196969
3	2013	0.051161	8.137631	0.606441	1.955464	0.24332	1.466486	13.5	0.023764
3	2014	0.005424	8.121178	0.662388	1.646364	0.13145	1.246754	8.1	-0.01645
3	2015	0.016664	8.18525	0.71472	1.310367	0.340683	3.397095	7.7	0.064072
4	2011	0.163775	7.700913	0.409164	1.75766	0.140589	0.419716	18.1	0.021333
4	2012	0.029362	7.722423	0.501457	1.861542	0.114479	0.717892	34.1	0.021509
4	2013	0.117157	7.733059	0.495788	2.777757	0.16614	0.571034	13.5	0.010636
4	2014	0.018152	8.367299	0.186303	4.966451	0.202931	3.195399	8.1	0.63424
4	2015	0.013573	8.380022	0.192103	4.227135	0.108865	1.8408	7.7	0.012723
5	2011	0.062859	7.878907	0.333962	3.137856	0.105223	0.516146	18.1	0.01787
5	2012	0.065139	7.955566	0.380653	3.286249	0.09952	0.528841	34.1	0.076659
5	2013	0.010805	8.264793	0.687765	2.699203	0.059607	0.871398	13.5	0.309227
5	2014	-0.00333	8.486565	0.677532	1.032632	0.076337	1.280365	8.1	0.221772
5	2015	-0.07328	8.573094	0.610406	1.999859	0.017389	1.13922	7.7	0.08653
6	2011	0.158857	7.45777	0.326358	5.392051	0.215955	0.742787	18.1	0.128341
6	2012	0.104143	7.562613	0.198309	14.77751	0.220627	1.037667	34.1	0.104844
6	2013	0.223888	7.645545	0.350816	5.829195	0.268558	0.674424	13.5	0.082931
6	2014	0.186819	7.691388	0.284023	8.967697	0.266987	0.786912	8.1	0.045844
6	2015	0.19193	7.773799	0.277564	6.707189	0.304868	0.862339	7.7	0.08241
7	2011	0.22381	9.044049	0.457751	1.501081	0.327934	0.609405	18.1	-0.01527
7	2012	0.065527	9.446861	0.735332	1.242715	0.2789	1.394842	34.1	0.402812
7	2013	0.062936	9.519125	0.709513	1.250218	0.286537	1.545576	13.5	0.072264
7	2014	0.046688	9.59275	0.684938	1.250178	0.280792	1.797319	8.1	0.073625
7	2015	0.134873	9.321507	0.257078	2.371403	0.323932	0.843978	7.7	-0.27124
8	2011	0.180894	8.501168	0.473636	2.297219	0.525945	0.597865	18.1	0.146808

Company ID	Year	ROA	SIZE	LEV	LQ	MEF	CAPInt	INFR	Growth
8	2012	0.056787	8.898222	0.200337	1.880449	0.395796	1.249931	34.1	0.397054
8	2013	-0.01575	9.089987	0.406753	0.755705	0.277116	3.54837	13.5	0.191765
8	2014	0.066784	9.074456	0.382104	1.61716	0.375523	1.21639	8.1	-0.01553
8	2015	-0.02035	9.104325	0.420734	2.522423	0.404984	1.433913	7.7	0.029869
9	2011	0.288834	8.756448	0.309028	1.245053	0.401638	0.395968	18.1	0.154364
9	2012	0.165268	9.00473	0.251767	0.690589	0.42065	0.577391	34.1	0.248283
9	2013	0.005283	9.184147	0.534966	0.15329	0.361761	0.735115	13.5	0.179416
9	2014	0.0007	9.185049	0.668735	0.263966	0.281597	0.943449	8.1	0.000902
9	2015	0.041184	9.345477	0.489983	0.044721	0.317356	0.923337	7.7	0.160428
10	2011	0.302661	7.059372	0.66779	0.798411	0.131837	0.147964	18.1	-0.25317
10	2012	0.023997	7.517665	0.512508	3.1906	0.16776	1.008016	34.1	0.458292
10	2013	0.014975	7.70824	0.711986	3.107961	0.177021	1.138536	13.5	0.190576
10	2014	0.00812	7.912174	0.846279	13.02356	0.258661	1.933567	8.1	0.203934
10	2015	0.005264	7.947679	0.854968	10.69154	0.203637	1.887996	7.7	0.035504
11	2011	0.01757	6.953613	0.177613	5.548171	0.374976	3.432865	18.1	0.02343
11	2012	0.205865	7.057977	0.174657	5.670353	0.639036	1.467597	34.1	0.104364
11	2013	0.239032	7.03579	0.229167	4.337868	0.656792	1.450495	13.5	-0.02219
11	2014	0.228665	6.977657	0.168655	5.88474	0.661826	1.476356	8.1	-0.05813
11	2015	0.119943	7.061373	0.163244	6.080101	0.602859	2.322781	7.7	0.083716
12	2011	0.016267	7.517657	0.436139	4.349512	0.070852	1.069096	18.1	0.083704
12	2012	0.015615	7.650129	0.383388	4.242547	0.094325	1.126332	34.1	0.132472
12	2013	0.067506	7.723127	0.4193	7.218025	0.109261	0.743224	13.5	0.072998
12	2014	0.052624	7.755231	0.40894	10.47954	0.126776	1.062797	8.1	0.032104
12	2015	0.006603	7.780311	0.482868	11.82266	0.07639	0.712997	7.7	0.025079
13	2011	0.065093	8.223867	0.408473	2.079987	0.137262	0.83047	18.1	0.092555
13	2012	0.019102	8.237729	0.40889	2.131974	0.085315	0.774732	34.1	0.013862
13	2013	0.081884	8.242393	0.333357	1.601433	0.162634	0.850008	13.5	0.004664
13	2014	0.098014	8.262119	0.271917	3.509162	0.199086	0.91268	8.1	0.019726
13	2015	0.086404	8.2298	0.132818	6.897626	0.218639	1.040837	7.7	-0.03232
14	2011	0.339377	8.005859	0.828224	0.796832	0.313481	0.402513	18.1	0.080201
14	2012	0.286159	8.206609	0.817909	0.553214	0.412877	0.664927	34.1	0.20075
14	2013	0.192397	8.402966	0.94207	0.377025	0.381331	0.833023	13.5	0.196356
14	2014	0.243093	8.476789	0.951126	0.409153	0.434275	0.777517	8.1	0.073823
14	2015	0.239835	8.590167	0.962356	0.392312	0.465451	0.813928	7.7	0.113378