

Determinants Of Profitability: Evidence From Selected Manufacturing Company In Hawassa, Ethiopia

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ABSTRACT

This study investigates the determinants of profitability of manufacturing companies. The research used secondary data obtained from the financial statements of manufacturing companies during the period 2012-2021. Explanatory research design and random panel model regression analysis were used. A sample of 10 manufacturing companies operating in Hawassa was included in the study, which consisting of 10 companies with 100 observations. The results of panel regression analysis showed that: firm size, growth and fixed asset ratio, have statistically significant and positive impact on profitability. On the other hand, liquidity, leverage and operating cost have a negative and statistically significant impact on manufacturing companies' profitability. Beside the study suggested for the stakeholders that give more attention on the major variable of the sectors such as operating cost. The results may not be generalizable to all manufacturing companies found in the city. The findings should provide manufacturing executives and managers with valuable information for developing their strategies with regard to firm specific determinants.

Key Words: Profitability, Firm Size, Manufacturing Company, Panel model, Ethiopia.

I. INTRODUCTION

Industrial transformation is not merely about increasing the number of manufacturing enterprises or number of employees working in there and/or earning hard currency from manufacturing exports. Such targets can be achieved through short-term campaigns sometimes at the expense of other sectors' growth or heavy public subsidies or depressing local consumption. To some extent, this was what happened in Ethiopia about 10-15 years ago. By then, the Ethiopian government announced that, for those who would need to establish manufacturing enterprises, it would provide the very expensive urban land for free or at very minimal prices and extend long-term loans at subsidized rates.

Manufacturing firms are viewed as an essential element of a healthy and vibrant economy. They are seen as vital to the promotion of an enterprise culture and to the creation of jobs within the economy (Opondo, 2004). Manufacturing firms are believed to provide an impetus to the economic progress of developing countries and its importance is gaining widespread recognition. There have been documented determinants of a firm's profitability and these include cost of capital, sources of funds, management style, availability of resources and the macro environment (Opondo, 2004). In the context of Ethiopia, the situation is somehow different as the industrial sector itself is at its fledgling stage of development with small number of manufacturing firms operating in the context relative to other developing countries (EEA, 2011).

Profitability is one of the importance preconditions for long-term firms' survival and success. There are factors that affected the profitability of manufacturing companies. Those factors are important because it gives an effect to the economic growth, Firm Size, Fixed Asset ratio and, even if some factors have negative effect on profitability of manufacturing companies. The primary goal of the business company is to maximize their profitability. Without profitability a firm could not attract outside capital and the business will not survive in the long run (Sivathaasanet al., 2017).

Different Empirical evidence has given varying results relating to the relationship between determinants and profitability. These lists of variables Firm Size ratio, Firms Growth, Fixed Asset ratio, Financial Leverage, Liquidity ratio, and Total operating cost management are investigated by different researchers and their result shows that some are positively related with profitability others result shows both positive and negative relation with profitability according to Bhayani (2010) examined factors that influence profitability for cement firms covering the period from 2001 till 2008. He concluded that liquidity, age of the firm, operating ratio, interest rate and inflation are important determinants of profitability for the Indian cement industry. In addition, Nunes, Serrasqueiro and Sequeira, (2009) examined the profitability of the Portuguese service industry. They found a positive relationship between size, growth and profitability. Moreover, they concluded that higher liquidity will not decrease profitability. The above lists of variables are investigated on different countries on manufacturing companies.

All mentioned provides importance of profitability determinants for manufacturing profitability and on the other hand, undoubted influence on the economy in the whole. Manufacturing industry in Hawassa is the important contributor to the Ethiopia economic growth, especially in the past. It is arguable that the impact of determinants of profitability, throughout the world, is not similar on the firm 'financial performance in every country that gives different influence on all stakeholders.

Most researchers find a strong positive and significant cause and effect relationship between independent variables (firm size, firm growth and fixed asset) , and a negative cause and effect leverage, operating cost, liquidity, average tax rate with profitability (Bhayani 2010; Mohammed, 2017; Hazem, 2015). In contrast, Ahumed(2017) stated that firm size has negative and significant and leverage does not significant effect on profitability. Zein&Tian (2007) showed tax has a positive effect on profitability.

Hence, the motivation of this research is address the problems and fill the existing gaps in the literature and also, due to the absence of empirical studies in Hawassa, the researcher interested to put his own contribution on what determinants of profitability in Manufacturing companies and a knowledge gap on this area. Therefore, the main objective of this study was to investigate the factors that determine the profitability of manufacturing companies in Hawassa City Administration, Ethiopia.

2. LITERATURE REVIEW

2.1 The concept of Profitability

The word "Profitability" refers to earnings of companies that are generated from revenues and after deducting all expenses incurred during a given period. It is considered one of the most important goals that management of every company strives to achieve and without it companies will ceased. Ultimately, the goal of the firm is to maximize the wealth of its shareholders by increasing the value of their stocks.

2.2 Theoretical Review

2.2.1. Pecking Order Theory

Pecking order refers to a hierarchy of financing beginning with retained earnings followed by debt financing and finally external equity financing. The theory basically suggests that companies with high profitability may use less debt than other companies because they have less need to raise funds externally and because debt is the 'cheapest and most 'attractive'

external option when compared to other methods of capital raising (Kaguri, 2013).

2.2.2. Traditional Theory

This theory suggests that minimizing the cost of capital when the optimal level of debt capital is employed maximizes the value of the firm (Brealey and Myer (2008) as cited in Kaguri, 2013). It is based on the argument that at low levels of debt, increased leverage does not increase the cost of debt hence; the replacement of an expensive source of capital (equity) with a cheaper source (debt) translates to an increase in the value of the firm.

2.3.3 Transaction Cost Theory

Transaction cost theory tries to explain why companies exist, and why companies expand or source out activities to the external environment. The transaction cost theory supposes that companies try to minimize the costs of exchanging resources with the environment, and that companies try to minimize the bureaucratic costs of exchanges within the company. Companies are, therefore, weighing the costs of exchanging resources with the environment, against the bureaucratic costs of performing activities in-house. Coase(1988) set out his transaction cost theory of the firm in 1937, making it one of the first (neo-classical) attempts to define the firm theoretically in relation to the market.

2.3. Determinants of Profitability

2.4.1. Liquidity

Finance manager has to take various types of financial decisions like investment decision, finance decision, liquidity decision and dividend decision, in different time. In every area of financial management, the finance manager is always faced with the dilemma of liquidity and profitability. He/she has to strike a balance between the two (Eljelly, 2004).

Liquidity means the firm has to have adequate cash to pay bills as and when they fall due, and it also have sufficient cash reserves to meet emergencies and unforeseen demands, in all time.

On the other hand, Profitability goal requires that funds of a firm should be utilized as to yield the highest return. Hence, liquidity and profitability are conflicting decisions, when one increases the other decreases. More liquidity results in less profitability and vice versa. This conflict finance manager has to face as all the financial decisions involve both liquidity and profitability.

2.4.2. Firm Size

The size of company may be measured by total assets, total sales, number of employees, and market capitalization. The bigger a company, the more easily it garners outside capital, the larger its capital, the bigger it will be and so on. An investor is interested in companies that provide high returns, so he would invest his capital. The availability of these funds from investor's capital makes companies easier to exercise investment opportunities (Kartikasari and Merianti, 2016).

2.4.3. Firm Growth

Growth opportunities it is expected that firms having high growth opportunities have a high rate of return, because these companies are able to generate more profits from the investment. Therefore, growth opportunities should positively influence profitability. The positive impact of growth opportunities on profitability is confirmed by most empirical studies such as Psillaki and Margaritis (2007), Zeitun and Tian (2007) and Nunes et al (2009). On the other hand, Margaritis and Psillaki (2010) find a negative effect only in the French chemical sector. Several measures to calculate growth opportunity for companies exists in literature. But in the context of our analysis, we use the ratio of growth opportunity (GROWTH) which is measured by the change in total assets from one year to another.

2.4.4. Fixed Asset Ratio

Fixed assets may have an important effect on the firm's profitability. Eriotis et al. (2000) investigated the relationship between debt to equity ratio and firm's profitability taking into consideration the level of a firm's investment and the degree of market power. The study used panel

data for various industries, covering a period 1995-96. They concluded that firms which prefer to finance their investment activities through self-finance are more profitable than firms which finance investment through borrowed capital. According to them, firms used their investment in fixed assets as a strategic variable to affect profitability. Ibam (2007) argued that a company's investment in fixed asset is dependent, to a large degree, on its line of business. Some businesses are more capital intensive than others.

2.4.5. Operating cost

Cost behavior according to Asaolu and Nassar (2007) is the study of the ways in which costs vary or do not vary with the level of activity in an organization. They level of activity was described as the amount of work done or the number of events that have occurred. Drury (2005) on the other hand, also defines cost as expenses, which have been consumed in earning revenue. Profitability was however defined by Lucey (1997) as the excess of revenue and cost. In other word, profit is determined by deducting cost from revenue. This shows the linearity of profit and cost. The term "variable" and fixed cost otherwise known as indirect and direct expenses have been traditionally used in the management accounting literature to describe how costs react to changes in activity level. Short-term variable costs vary in direct proportion to the volume of activity that is, doubling the level of activity double the total variable costs.

Operating cost = Cost of Goods Sold + Operating Expense

2.4.6. Leverage

In a broad sense, the solvency ratio is used to measure a company's ability to pay all its obligations, both short-term and long-term ones, especially when it is dissolved (liquidated). According to Hanafi and Halim (2007), a high leverage ratio means that the company's financial leverage is also high. On one's hand, the higher debt ratio, the higher the level of uncertainty of gaining returns expected by shareholders. But on

the others' hand, when used deliberately, financial leverage increases the returns for shareholders.

2.5. Empirical literature review

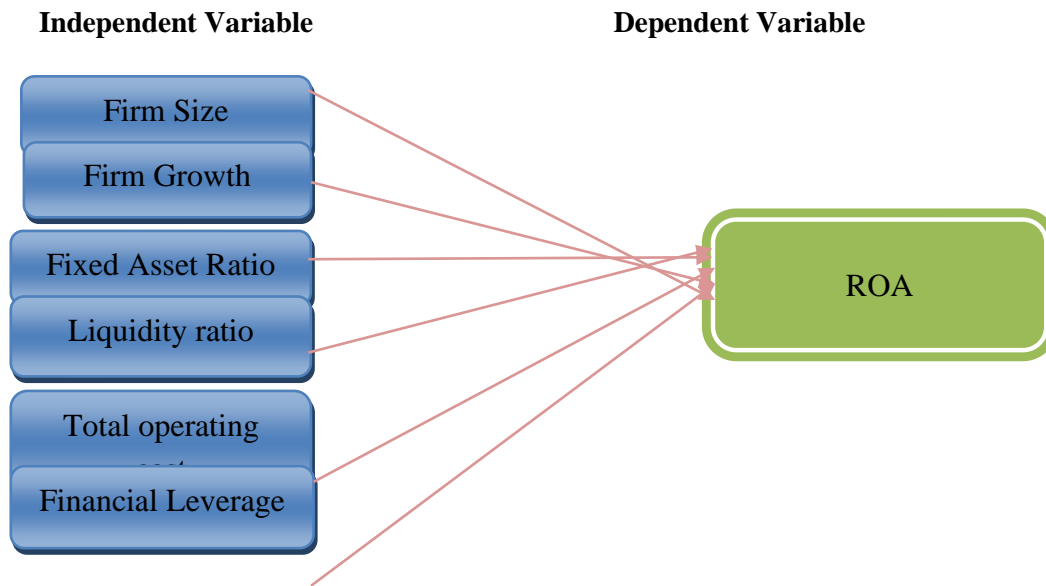
Nimalathasan (2009) mentioned that the profit is the primary objective of a business, which measures not only the success of a product, but also of the development of the market for it. Velnampy and Nimalthasan (2007) pointed out that sales are positively associated with profitability ratios except return on investment, and numbers of depositors are negatively correlated with the profitability ratios except return equity, likewise number of advances to the return on investment, and return on average assets in Bank of Ceylon.

The use of growth as a measure of firm performance is generally based on the belief that growth is a precursor to the attainment of sustainable competitive advantages and profitability (Markman, 2002).

The study conducted by Shah and Khan (2007) stated that size and tangibility has a positive and significant relationship with Leverage while profitability and non-debt tax shield has significant and negative relationship with leverage.

A more recent study by Al-Jafari and Alchami (2014) investigated the determinants of profitability of Syrian banks utilizing the generalized method of moments (GMM) technique. Their results reveal that liquidity ratio, credit risk, bank size, and management efficiency affect significantly the profitability of Syrian banks. Similarly, Pratheepan (2014) tested the determinants of profitability for 55 Sri Lankan manufacturing companies using static panel models. The results show that size has a significant positive relationship with profitability. Accordingly, tangibility found to have an inverse statistical relationship with profitability.

2.6 Conceptual Framework



Source: Own Model (2021)

Figure 1 Conceptual Framework of the study

3. RESEARCH METHODOLOGY

3.1. Research Design

The researchers employed an explanatory research design quantitative type of data has been used based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity (Kothari, 2004).

3.2 Research Approach

The research approach was employed in this study was a quantitative research approach. By combining time-series and cross-section observations, panel data give “more informative data, more variability, less co-linearity among variables, more degrees of freedom and more efficiency.

3.3. Types of Data

This study utilizes secondary data collected from annual reports of manufacturing companies. This study has been focused on 10 selected manufacturing companies to shows the determinant factors of profitability of manufacturing company in Hawassa city. The study has been used secondary sources of data from 2012 to 2021.

The length of time in this study is 10 years from 2012 – 2021 and this is due to the researcher’s intention to provide the reliable and most up-to-date result. However, the remaining manufacturing companies do not have the required period information. Due to this reason, the year service below 10 years is not included in sample frame to make panel data model structured.

Therefore, those manufacturing companies, which have started operation since 2008 and started to provide financial statement in the succeeding fiscal year, are included in this study because this study incorporated only manufacture that have financial statements for the year, 2008, and onwards. Therefore, a non- probability sampling method in the form of judgmental sampling technique has been employed in selected manufacturing into the sample. This is based on the concept of non- random sampling. Hence, only 10 Company’s information has been used in this study to examine the Determinants of Profitability of Manufacturing companies in Hawassa City Administration.

3.4. Analysis Technique

The aim of this section is to briefly explain the various methods that have been chosen to analyze the quantitative data. The quantitative data has

been obtained from the company has been analyzed using E-views software, and has been interpreted in percentages, tables, and graphs. The analysis of the relationship between dependent and independent variables is performed using correlation, regression method and Descriptive statistics.

Model Specifications

Panel/longitudinal regression model was used to analyses the collected panel data. The panel model is specified as follows:

$$ROA = \beta_0 + \beta_1 FS + \beta_2 GR + \beta_3 FA + \beta_4 FL + \beta_5 LQ + \beta_6 OPC + \epsilon_{it}$$

Where:

ROA = Return on Asset

β_0 = Constant coefficient

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ = Regression coefficients for measuring

FL= Firm Leverage

GR= growth

FS = firm size

LQ = liquidity of the firm

OPC= Operating Cost

FA = Fixed Asset.

ϵ_{it} = Error component showing unobserved facto

4. RESULTS AND DISCUSSIONS

4.2. Descriptive statistics

This section discussed the summary statistics of each variables of the study. The dependent variables used in this study in order to measure the sample manufacturing companies profitability is return on asset(ROA) whereas the explanatory variables (independent variables)

are Size of companies, Leverage, Liquidity, Growth, operating cost and fixed asset.

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	CGS	GR2	LEV	LIQ	LOGTA	TAN
Mean	0.067642	2.733196	-5.924911	0.497329	1.878398	7.760274	0.431110
Median	0.066819	2.857187	-10.45597	0.476071	1.716220	7.734513	0.353709
Maximum	0.105401	4.753305	39.91395	0.797750	4.185572	8.638383	0.877450
Minimum	0.026780	1.252945	-58.55017	0.269772	0.933815	7.012767	0.105940
Std. Dev.	0.017436	0.779846	26.23032	0.131090	0.743343	0.381783	0.230822
Skewness	0.063811	0.026899	-0.025456	0.483644	1.107237	0.136100	0.306634
Kurtosis	2.512337	2.141124	1.931843	2.408426	3.632794	2.686703	1.571013
Jarque-Bera	1.058761	3.085674	4.764801	5.356690	22.10134	0.717703	10.07542
Probability	0.588970	0.213774	0.092329	0.068677	0.000016	0.698478	0.006489
Sum	6.764230	273.3196	-592.4911	49.73292	187.8398	776.0274	43.11101

Sum Sq. Dev.	0.030096	60.20783	68114.91	1.701275	54.70333	14.43005	5.274584
Observations	100	100	100	100	100	100	100

Source: from Eviews summery Descriptive statistic result

Table 4.1 shows the descriptive statistics of each variable, computed based on the 100 observations recorded. It can be noticed that the return on total assets ratio fluctuates between 0.026780 and-

0.105401, that means the most profitable for Manufacturing companies earned in the minimum 0.02 cent of net income from a single birr of asset investment, and the maximum losses incurred by Manufacturing Companies had a loss 0.10 cents on each birr of asset investment respectively. While an average value 0.067642 of ROA deviates from the average value with about 0.017436, this implies the presence of good variations among the values of profitability across the Manufacturing companies included for this study.

The mean value and standard deviation of leverage (Debt to Asset) is 0.497329 and 0.131090 respectively. This implies that there were low differences among leveraged level as measured by debt to asset ratio across the sample Manufacturing companies under this study; and it also indicates those Manufacturing companies are moderately levered because they used a less from average borrowed funds to finance a company's operation.

The mean value of Cost of goods sold is 2.733196 with the standard deviation of 0.779846 which shows high variation it implies the firm sale amount of money in order to get one dollar worth of incur output. Hence considering to this study the variation of standard deviation from its mean and the maximum which is 4.753305 and minimum of 1.252945 shows that for manufacturing

companies had classified in to those industries les cost Incurred.

There exists significant variation across the sample manufacturing companies for the reason that the mean value of Firm size is 7.760274 and the value of the standard deviation is 0.381783. Hence the varieties of size among manufacturing companies might have significant impact on profitability of companies. The maximum and minimum values of size were 8.638383 and 7.012767 respectively.

The mean value of Firm Growth is -5.924911 and the value of standard deviation is 27.44114 this implies that there were significant variations among the level of growth as measured by the change in total assets over the years across the Manufacturing Companies. The maximum growth the company uses its asset to generate profit was the value of 39.91395 percent and the minimum growth was 0.933815 percent.

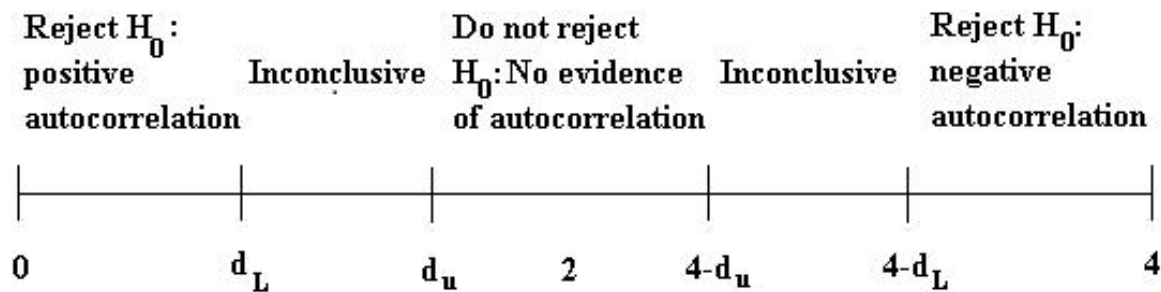
The mean value of liquidity ratio is 1.878398 and the value of standard deviation is 0.743343 with 4.185572 maximum and 0.933815 minimum values. This result shows that Manufacturing Companies are more liquid and others also show the existence of low variation and almost no reserve to cover.

The average value for Tangibility has become 0.431110 with a standard deviation of 0.230822. Therefore, there exists moderate variation among the tangibility across the sample manufacturing companies included in this study. The maximum and minimum tangibility were 0.877450 and 0.105940 respectively.

4.3.3. Test for autocorrelation

To test for the existence of auto correlation 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



Where: DL = Lower bound

DU = Upper bound

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 auto correlation is presumed if DW is less than the lower critical

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

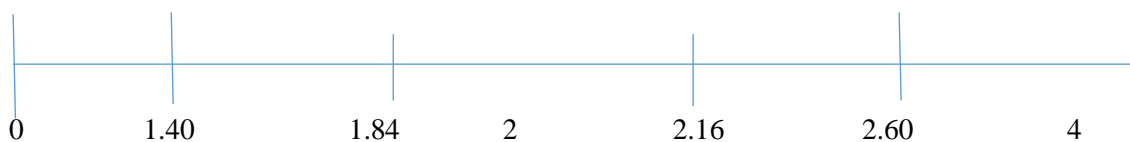


Figure: 4.2 DW results

4.3.4. Test for normality

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 0.440193 it implied that

the residual of this study are normally distributed and the data were consistent with a normal distribution assumption.

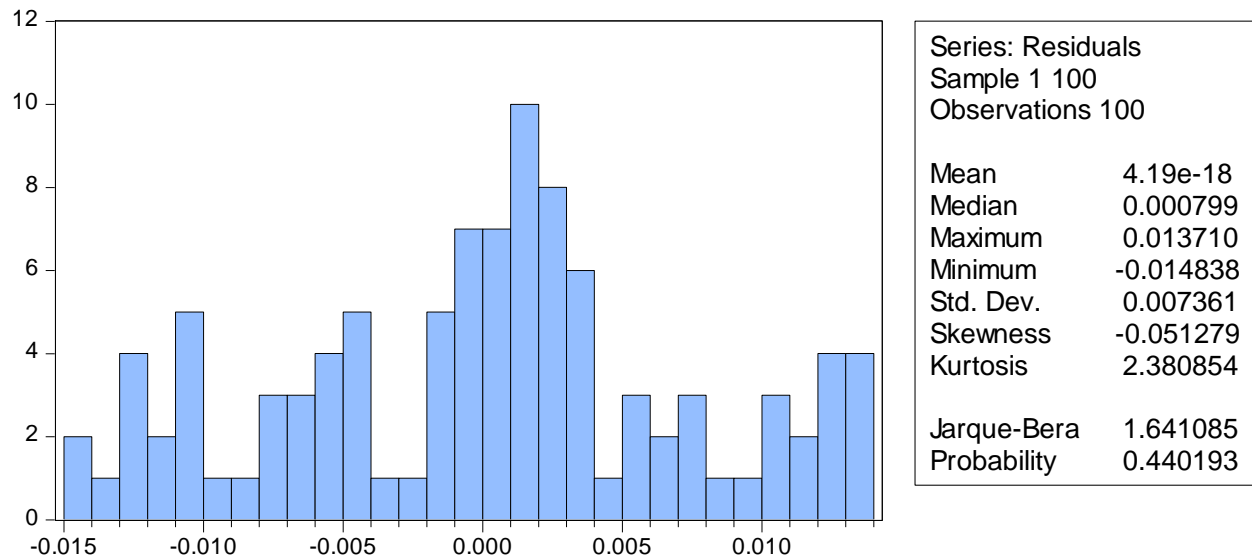


Figure 4.3 Normality test for residuals

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. 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 correlation coefficient among the variables are greater than 0.50.The current study used correlation matrix to detect the problem of multicollinearity.

VARIANCE INFLATION FACTOR

Table 4.3 Variance inflation factor

Variance Inflation Factors			
Date: 08/20/19 Time: 22:46			
Sample: 1 100			
Included observations: 100			
	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
C	0.000309	535.8135	NA
CGS	1.23E-06	17.20752	1.283413
GR2	9.28E-10	1.152661	1.096167
LEV	4.02E-05	18.42053	1.185492
LIQ	1.24E-06	8.743328	1.173597
LOGTA	4.94E-06	516.6026	1.234898
TAN	1.50E-05	6.188916	1.368136

Source: Eview output (2021).

From the above table the variance inflation factor less than 10. Hence, there is no multi collinearity.

4.4 Correlation matrix

Table 4.4 Correlation

	ROA	CGS	GR2	LEV	LIQ	LOGTA	TAN
ROA	1.000000	-0.299802	0.838918	0.033680	-0.181261	0.263474	0.100328
CGS	-0.299802	1.000000	-0.160922	0.315508	0.040910	-0.190968	0.145754
GR2	0.838918	-0.160922	1.000000	0.154625	0.060577	0.133806	0.097034
LEV	0.033680	0.315508	0.154625	1.000000	-0.024647	0.053240	0.098932
LIQ	-0.181261	0.040910	0.060577	-0.024647	1.000000	0.149636	0.377106
LOGTA	0.263474	-0.190968	0.133806	0.053240	0.149636	1.000000	0.345088
TAN	0.100328	0.145754	0.097034	0.098932	0.377106	0.345088	1.000000

Source: Eview output based on financial statement of sample manufacturing companies (2021).

As per the table 4.4, the correlation coefficient between ROA and Liquidity was -0.181261 which is the smallest correlation coefficient as compared to other variables, this mean that liquidity has small association with profitability which is similar to other previous studies. But, Growth rate had ranked the highest positive

correlation coefficient compared to other variables. This result shows that the growth is high in Manufacturing Companies it shows positive correlation with the profitability measured by return on asset. This means that the variable had a major role on the profitability of manufacturing companies.

4.5. Choosing random versus fixed effect model

To achieve the objective of the study whether the fixed effect or random effect approach is appropriate the researcher has to run Hausman specification test at five percent level (Hausman,

1978). But the model is not allowed the researcher to run the Hausman test in this study, therefore fixed effects test was conducted for to determine whether the fixed effect is appropriate for the models.

4.6 Regression analysis result

Table 4.5 below reports regression results between the dependent variable (ROA) and independent variables firm size, leverage, liquidity, firm growth fixed asset and operating cost. 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 82% and 81% respectively. This indicates the independent variables in this study jointly explain about 81% of the variation in the profitability of manufacturing companies' measure, ROA. The remaining 19 percent of the variation in the profitability manufacturing companies explained by other variables which are not included in the research

Table 4.5: Summary of Regression out put

Dependent Variable: ROA		
Method: Least Squares		

Date: 08/20/21 Time: 22:43				
Sample: 1 100				
Included observations: 100				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.042457	0.017580	2.415078	0.0177
CGS	-0.002655	0.001109	-2.394251	0.0187
GR2	0.000545	3.05E-05	17.90245	0.0000
LEV	-0.010764	0.006340	-1.697800	0.0929
LIQ	-0.006788	0.001112	-6.101712	0.0000
LOGTA	0.006484	0.002222	2.918505	0.0044
TAN	0.008018	0.003868	2.072999	0.0409
R-squared	0.821764	Mean dependent var		0.067642
Adjusted R-squared	0.810265	S.D. dependent var		0.017436
S.E. of regression	0.007595	Akaike info criterion		-6.855287
Sum squared resid	0.005364	Schwarz criterion		-6.672925
Log likelihood	349.7643	Hannan-Quinn criter.		-6.781482
F-statistic	71.46319	Durbin-Watson stat		1.707997
Prob(F-statistic)	0.000000			

Source: Eview-8 output based on financial statements of manufacturing companies

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

$$ROA_{b,t} = \alpha + \beta_1 CGS_t + \beta_2 GR_t + \beta_3 LEV_t + \beta_4 LIQ_t + \beta_5 FS_{bt,t} + \beta_6 TAN_{t,t} + \epsilon_t$$

$$ROA = 0.042 - 0.0026CGS + 0.0005GR - 0.01Lev - 0.006Liq + 0.006FS + 0.008Tan$$

Operating cost (Cost of goods sold)

The results in table 4.5 indicate that cost of goods sold has a negative and significant effect on profitability of manufacturing companies ($\beta = -0.0026$, $P = 0.0187$). This indicates the cost of goods sold and the probability of manufacturing companies have negative effect. When the manufacturing companies cost of goods sold increase by one unit, the probabilities of manufacturing companies decrease by 0.0026 and vice versa.

Firm growth/ Growth rate

The results of the regression analysis in table 4.5 shows that the growth rate has positive and significant effect on profitability of manufacturing companies ($\beta = 0.00054$, $P = 0.000$). This indicates the growth rate and

probabilities of manufacturing companies have statistically significant positive relationship at 5% significant level. When the manufacturing companies growth rate increase by one unit, the probabilities of manufacturing companies increase by 0.0005 and vice versa. Consistent with the results, Ahmed (2011), Yuqi li (2007), Aynshet (2017), Ahmed Ali (2008).

Therefore the stated hypothesis is accepted. Growth rate was hypothesized that it would have positive and significant impact with profitability of manufacturing companies.

Leverage

The result in table 4.5 indicates that leverage has negative effect on probability but the leverage has insignificant effect on the profitability of manufacturing companies ($\beta = -0.010764$, $P = 0.0929$) omission coefficient of -0.000132, t-statistics of -0.870981 and p-value of 0.3860 the regression results of the study showed that there is a statistically insignificant negative relationship between leverage ratio of manufacturing companies and their profitability at 5% significant level. For this reason, the results are reliable with the hypothesis of the study. When manufacturing companies leverage

is increased by one unit, the profitability of manufacturing company decreased by 0.000132.

Therefore, the stated hypothesis is not accepted. Leverage was hypothesized that it would have neative and significant impact with profitability of manufacturing companies.

Liquidity

As shown above in table 4.5, the regression coefficient of liquidity is -0.006788 with a t-statistics of -6.101712 and p-value of 0.0000. The results of this regression regarding liquidity implied that there is negative and significant relationship between liquidity ratio of manufacturing companies and its profitability. Hence this result had consistent with the formulated hypothesis of the study, the researcher were initially begin with the hypothesis that liquidity could have negative significant impact on profitability of manufacturing companies. Therefore the results show statistical significance between these variables. Hence, the liquidity of manufacturing companies increase by one unit, the profitability of manufacturing company decrease by -0.0067 and vice versa.

Firm Size

The panel OLS regression result of this study revealed that there exist a significant and positive relationship between size and profitability of manufacturing companies with a regression coefficient of 0.006486, t-statistics of 2.918505 and p-value of 0.0044. Size has been considered as a fundamental variable in explaining firm profitability. Larger manufacturing companies make efficiency gains that can be captured as higher earnings due to the fact that they do not operate in very competitive markets. For as much as some authors argued that larger firms have some advantages such as a greater possibility of taking advantage of scale of economies which can enable more efficient production, a greater bargaining power over both suppliers and distributors or clients, exploiting experience curve effects and setting prices above the competitive level. The regression results by different researchers exists positive relation

between firm size and profitability of manufacturing companies. This is consistent with Ayneshet (2017), Sivathaasan et.al (2013), Swiss Re(2008), Shami(2008), Hafiz Malik(2011). When the manufacturing companies size increase by one unit the profitability of manufacturing company increase by 0.00648 and vice versa.

Thus from the result of the regression output the hypothesis of these study is accepted. Size was hypothesized that it would have positive and significant impact with profitability of manufacturing companies.

Fixed Asset Ratio/ Tangibility

The result in the table 4.5 indicates that the regression coefficient of tangibility is 0.008018 with a t-statistics of 2.0729 and p-value of 0.0409. The regression results of the study showed that there is statistically significant positive relationship between tangibility of manufacturing company and their profitability at 5% significance level. It can be conclude that the tangibility of assets still positively explaining profitability of manufacturing companies. Consistent with Hafiz(2011) When the manufacturing companies tangibility increase by one unit the profitability of manufacturing company increase by 0.00801.

Therefore, the stated hypothesis is accepted. Tangibility was hypothesized that it would have negative and significant impact with profitability of manufacturing companies.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

The objective of this study is to examine the internal factors determinants of profitability on manufacturing companies in Hawassa city administration measured by return on asset. This study used secondary data during the period 2012 to 2021 and sample of 10 manufacturing companies that were operating in Hawassa city administration. This chapter presents a conclusion of the study by summarizing the

study findings and discussing their implication, and providing subsections for future researcher.

The study investigates that the determinants of profitability on manufacturing companies over the period 10 years from 20 to 2021 .For this purpose, cost of goods sold, growth rate, leverage, liquidity, firm size, and tangibility asset are selected as explanatory (independent variables) while return on asset (ROA) is taken dependent variable.

The result of regression analysis reveal that cost of goods sold, leverage and liquidity were negative but leverage was insignificant at 5% confidence level while firm size, growth rate and tangibility asset have positive and significant effect on profitability of manufacturing companies. Except of leverage the remaining explanatory variables (independent) key determinants of profitability on manufacturing companies. The adjusted- R squared was 81%.

This study aimed to identify the main determinants of profitability on manufacturing companies the extent to which these determinants exert impact on profitability. In doing so, previous studies have been reviewed and it is summarized that the profitability of manufacturing company profitability is usually expressed as a function of internal determinants. The internal determinant refers to the factors originating from manufacturing companies financial statements (balance sheets and income statement) and therefore could be termed companies specific determinants of profitability.

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

5.2 Recommendations

Based on the conclusions drawn above the following recommendations forwarded

- ❖ The results show negative coefficient of variables liquidity specifies the negative relationship. However, the relationship between profitability and liquidity is statistically significant. Hence, manufacturing companies having more liquid assets should find any available investment alternative. As the finding shows the liquidity do have negative impact on profitability, and it provides further implication effective risk management practices in the companies.
- ❖ The manufacturing companies may reduce the cost because cost of goods sold is negative effect on profitability. The manufacturing companies face lower cost decrease bankrupt.
- ❖ The finding shows leverage is negative and statistically insignificant effect on profitability. Further researcher conduct fills the gap of the study.
- ❖ Firm size is positive and statistically significant effect on profitability. Size is the key determinants of profitability. The size is used to capture the fact that larger manufacturing companies are placed than smaller one in the economies of scale. Hence, the companies enjoy his/her level of profit by keeping of firm size.
- ❖ For further study conduct the effect of both internal and external factors. This study focuses only internal factors.

References

1. Al-Jafari, M. K., &Alchami, M. (2014). Determinants of bank profitability: Evidence from Syria. *Journal of Applied Finance & Banking*, 4(1), 17-45
2. Asaolu, T. O., &Nassar, M. L. (2007).Essentials of Management Accounting and Financial Management.Cedar Productions, Ile-Ife, Nigeria.
3. Ayneshet Agegneu(2017). The effect of working capital management on profitability a case of manufacturing and merchandize companies

4. Bashar, S. M., & Islam, Md. I. (2014). Determinants of profitability in the pharmaceutical industry of Bangladesh. *Journal of SUB*, 5(1), 56-76
5. Bryman, A., & Bell, E. (2011). *Business Research Methods* (3rd ed.). Oxford University Press.
6. Chandler GN, Jensen DA (1992). Gauging performance in emerging business: longitudinal Evidence and growth pattern analysis.
7. Coase R. (1988). The Nature of the Firm: Influence, *Journal of Law, Economics, & Organization*, 4(1): 33-47. Reprinted in *The Nature of the Firm: Origins, Evolution, and Development* (1993), O. E. Williamson and S. G. Winter, ed., pp. 61-74
8. Creswell, J.W. (1998). *Qualitative Inquiry and Research Design. Choosing Among Five Traditions*, Thousand Oaks CA: Sage.
9. Deloof, D. (2003). "Does Capital structure management affect profitability of Belgian Firms?"
10. Dogan, M. (2013), Does firm size firm profitability affect? Evidence from Turkey. *Research Journal of Finance and Accounting*, 4(4), 53-59.
11. Drury, C. (2005). *Management and Cost Accounting* (6th ed.). London: Thomson Learning
12. Eljelly, A. (2004). "Liquidity-Profitability Tradeoff: An empirical Investigation in an Emerging Market", *International Journal of Commerce & Management*, Vol 14 No 2 pp. 48 – 61.
13. Fabozzi Frank, J. and Peterson Pamela P., 2003, 'Financial management and analysis', 2nd ed, John Wiley and Sons, Inc., publisher, New Jersey Canada.
14. Grabel, Ilene, "Assessing the Impact of Financial Liberalisation on Stock Market Volatility in Selected Developing Countries," *The Journal of Development Studies* 31(1995): 903-917
15. Hair, J., Celsi, M., Arthur, H., & Page, M. (2011). *Essentials of Business Research Methods* (2 ed.). M.E Sharpe.
16. Hazem & Mohammed, 2015 Determinants of Profitability *European Journals*.
17. Hifza, M. (2011). *Determinants of Insurance Companies Profitability: An Analysis of Insurance Sector*
18. Kaguri, 2013, "Relationship between firm characteristics and financial performance of life insurance companies in Kenya", MSC thesis, University of Nairobi.
19. Karnani, A. (2006). *Mirage at the Bottom of the Pyramid: How the Private Sector can Help Alleviate Poverty*.
20. Kartikasari and Merianti (2016): The Effect of Leverage and Firm Size to Profitability of Public Manufacturing Companies in Indonesia
21. Kasmir. (2014), *Financial Statement Analysis [Analisa Laporan Keuangan]*. Jakarta: PT RajaGrafindo Persada
22. Kothari, C.R. (2004), *Research methodology methods and techniques*. New age international publisher, second edition.
23. Malik, H. (2011). *Determinants of Insurance Companies Profitability: An analysis of insurance Sector of Pakistan*. , Academic Research International, volume 1, Available at www.Journal.Savap.Org.Pk
24. Naveed Ahmed, Zulfqar Ahmed, Ahmed Usman. (2011). *Determinants of performance: A case of Life insurance Sector of Pakistan*. *International Research Journal of finance & Economics* .
25. Nimalathasan B (2009). Profitability of listed pharmaceutical companies in Bangladesh: An inter and intra comparison of AMBEE and IBN SINA Companies Ltd, *Economic and Administrative series*, 3:139-148.
26. Opondo, M. E., (2004): *Using Free Cash Flow to Evaluate Corporate Performance*, Unpublished MBA Dissertation, School of Business, University of Nairobi
27. Pandey, I.M. (1980). Concept of earning power. *Accounting Journal*, April, 4.
28. Pratheepan, T. (2014). A Panel data analysis of profitability determinants: Empirical results from Sri Lankan manufacturing companies. *International Journal of Economics, Commerce and Management*, 2(12), 1-9.