The Impact of Capital Structure on Firm Performance: Empirical Evidence from Private Manufacturing Companies of Amhara Regional State of Ethiopia

Kedir Seid, MSc
Department of Accounting and finance, College of Business and Economics
Arba Minch University, Arba Minch, Ethiopia

Abstract
The financial performance of the business is crucial not only for maximizing its value but also for its survival. Existing theoretical and empirical evidences suggests that the capital structure choice is the major among the other factors that influence firm's financial performance. Thus, the purpose of this study was to empirically examine the impact of capital structure on the financial performance of private manufacturing companies in Amhara regional state of Ethiopia. The study employed two of the most common profitability ratios: Return on Assets (ROA) and Return on Equity (ROE) as a proxy to measure financial performance (i.e. the dependent variable). Unlike other studies pertaining to Ethiopia on the issue under investigation, the current study employed four proxies: Total Debt Ratio (TDR), Short Term Debt Ratio (STDR), Long Term Debt Ratio (LTDR), and Debt-Equity Ratio (DER) to measure capital structure. Further, in the regression equation, natural logarithm of total assets was included as a control variable to check its effect on firm's financial performance. Using a panel data for 16 private manufacturing companies for the period 2010 through 2014, the regression result reveal a significant positive relation of profitability measured by ROA with short term debts while a significant negative relationship is found with long term debt, total debts and debt equity ratio. Further, a significant positive relationship is found between short term debt and profitability measured by ROE. While long term debt is negatively and significantly related with ROE. The relationship of ROE with DER and TDR is statistically insignificant. Finally, the relationship of firm size is found to be statistically insignificant with the two measure of financial performance. In general, consistent to the pecking order theory the study concluded that capital structure (leverage) has a significant negative influence on the financial performance of private manufacturing companies of Amhara regional state of Ethiopia.
Keywords: financial performance, capital structure, manufacturing companies

1. Introduction

Regardless of the type, form and size, the financial manager of business organizations faced a decision concerning ways in which the firm obtains and manages sufficient capital to execute their plans and support their operations. How managers choose to finance their investment might have a direct implication for many aspects of firm's operations, and often it may have a significant impact on its profitability, growth, value, and survival. Capital structure can be defined as the specific mix of debt and equity that a firm uses to finance its operations (Brigham, 2008). Much of the theory of capital structure is based on the assumption that the primary objective of a firm is to maximize the market value of the firm through an appropriate mix of long term sources of funds. One of the major cornerstones for the achievement of this goal is firm's financial performance. Firm value is determined by discounting all future cash flows with the weighted average costs of capital, which makes it very important to understand whether the weighted cost of capital can be minimized by selecting an optimal capital structure (i.e. mix of debt and equity financing). This mix, called the optimal capital structure, minimize the firm's overall cost of capital. The minimum cost of capital, in turn, results in higher profitability and value of the firm as well. This indicates that firm's capital structure is closely related with its profitability. Supporting this issue, Zeitun & Tian (2007) stated that Capital structure is said to be closely linked to financial performance.

The relationship between capital structure decisions and firm performance was highlighted by a number of capital structure theories. Particularly, the trade off theory, the agency cost theory, pecking order theory, and signaling theory. However, there is no consensus about the optimal capital structure and the associated effect on firm's financial performance. As a result, it is necessary to examine the relationship between firm's capital structure and financial performance. Accordingly, in the light of these theories several empirical studies have been conducted in corporate finance to determine the effect of capital structure on firm's financial performance. This is not only because that firm's performance is crucial to its value and consequently, its survival, but also because of the linkage between firm's profitability and its capital structure. While most of the literature examining the association between capital structure and performance of firms are directed mainly based on data from developed countries; contemporary, a lot of empirical studies have been conducted to assess the effect of capital structure on firm's performance in the developing countries context. Abor (2005), Abor (2007), Ebaid (2009), Onaolapo and Kajola (2010) , Khan (2012), Patrick et al. (2013) and Marobhe (2014), are

among the others who empirically investigated this relationship in the developing countries perspective. However, most of the empirical studies documented mixed and contradict results regarding the relationship of firm's capital structure and financial performance. According to Moyer (1997) the significance of the relation between capital structure and firm performance is influenced by the country of origin of the firm. In fact, Ethiopia is a unique case because it has no adequate and efficient capital market and the financial market comprising the interbank money and foreign exchange markets as well as the bond and TBs market is at an infant stage accommodating limited amount of transactions (Getnet, 2014). In such a country capital market is less efficient and incomplete and suffers from higher level of information asymmetry than capital markets in developed countries (Eldomiaty 2007). In connection to this the pecking order theory argued that capital structure has a significant effect on the financial performance of firms operating in a country where there is high information asymmetry. It is therefore crucial to examine whether the arguments of the pecking order theory holds true for firms operating in countries like Ethiopia where there is high information asymmetry between managers and external fund providers.

The existing empirical studies pertaining to Ethiopia on the relationship of capital structure with firm's financial performance measure capital structure using total debt (leverage) and exclude manufacturing companies from their sample frame. According to Titman and Wessels (1988) however, capital structure studies examining the determinants of leverage based on total debt may disguise the significant differences between long-term and short-term debt. It is, therefore, necessary to examine the implication of short-term debt and long-term debt separately from total debt (leverage) on firm's financial performance. In addition, the industry type affects the use of debt in particular and the company's overall performance in general (Harris and Raviv, 1991). The manufacturing sector requires huge amount of capital for investments in fixed asset. According to the latest report of IMF (2014) the shift towards manufacturing activities in Ethiopia is proceeding slowly. Underdeveloped financial system, limited range of financial instruments, inadequate leveraging of the private manufacturing sector and the higher collateral requirements in this sector are found to be the major reason among the other that hinders the growth of the industry (WB, 2009). This study, therefore, aimed at providing new evidence pertaining to Ethiopia on the relationship between firm's capital structure and financial performance by incorporating private limited manufacturing companies in the sample frame and by decomposing total debt in to short-term and long -term debt.

2. Literature review
2.1. Theoretical literature review
Over long period of time, most of the corporate finance literature has rotated around different theories that try to fully explain factors associated with capital structure choice and its relation with profitability and value of the firm. These theories cover various aspects of the firm that can explain how firms choose their capital structure to enhance their profitability. The first theoretical literature on capital structure was the irrelevance theory of Modigliani and Miller which is commonly referred to as M &M proposition I developed in 1958. Under this theory by assuming a perfect market, M&M suggest that the firm's weighted average cost of capital (WACC) and hence the value of the firm is not affected by the mixture of debt and equity employed in its capital structure. Thus, according to this theory, the value of the firm is the same regardless of the amount of debt employed in its capital structure. However, it is clear that the assumption of a perfect market does not held true in the real world, in which factors such as, taxes, transaction costs, financial distress costs, and information asymmetry have a significant effect on the firm's cost of capital, financial performance ,and its value as well. Thus, such factors must be considered in investigating the relationship between firm's capital structure and its financial performance. Under their subsequent theory of capital structure that considered the effect of corporate taxes on the capital structure decision; M & M (1963) argued that as interest expenses are tax deductible, firm value will increase with higher financial leverage. The higher the taxable income, the higher the interest tax benefits arising from the use of debt. According to this theory thus, more profitable firms (firms' with higher taxable income) should employ higher amount of debt (to the extent of 100%) in their capital structure than less profitable firms. However, this model does not consider the association between firm's capital structure and bankruptcy and agency costs and the resulting impact on the performance and value of the firm. Accordingly, it influenced the early development of the trade-off, the pecking order, and the agency cost theory of capital structure.

Myers (1984) under the trade-off theory suggests that the optimal capital structure represents a level of leverage that balances financial distress costs and the tax benefits resulting from debt finance. The tax benefit associated with debt is created, as the interest payments associated with debt are tax deductible, while payments associated with equity, such as dividends are not tax deductible. Therefore, the tax benefit resulting from borrowing encourages firms to increase the amount of debt in their capital structure. On the other hand, raising the debt-equity ratio beyond the point that the marginal tax shield benefit is exactly equal to the marginal financial distress costs may lead the business to be bankrupt. This is to mean that, the higher the amount of debt employed, the greater the probability that the firm will default on financing which enforce firms to incur higher

finance costs due to the potential financial distress costs. In turn, this results in lower financial performance. Supporting this issue, Zeitun and Tian (2007) documented a positive correlation between risk and leverage ratio, which implies that leveraged firms have a high risk as debt holders can take over the firm. On the other hand, order theory argued that the pecking argued that in the presence of information asymmetry between managers and external fund providers (investors) issuance of new equities and long term debts instruments may be mispriced (expensive) (Myers and Majluf, 1984). This may have a significant effect on firm's financial performance. As a result, managers should follow a pecking order, using up internal funds first, then using up risky debt, and finally resorting to equity. Therefore, firms with higher performance will have the tendency to reinvest the internally generated funds and the lower the amount of funds employed in their capital structure. Similarly, Flannery (1986) suggests firms should issue short-term debt to minimize the effect of information asymmetries on financing costs.

2.2. Empirical literature reviews

Following the aforementioned theoretical standpoints, several empirical studies have been conducted in different countries to examine the relationship between firm's capital structure and financial performance. Khan (2012) examined the relationship of capital structure with the financial performance of 36 engineering sector firms in Pakistan listed on the Karachi Stock Exchange (KSE) for the period 2003-2009. The multiple regression analysis of this study revealed that capital structure measured by STDTA and TDTA has a significant negative relationship with the firm performance measured by ROA, GM and Tobin's Q. However, the LTDTA have a positive impact on the performance of the firm due to long term financing obtained by some of the large size companies on reasonable rates. Similarly, Marobhe (2014); in his study titled "The Influence of Capital Structure on the Performance of manufacturing Companies in East Africa" documented a negative relation of profitability (ROA) with Long Term Debt to Total Capitalization and the positive relation with LTDTA. The negative relationship between capital structure measures and profitability of the engineering sector of Pakistan is compatible with (Gleason et al, 2000; Zeitun and Tian, 2007; Khanam et al., 2014; Mohammadzadeh et al., 2013) who also found a negative and significant relation of leverage level with firm performance measured by the ROA and GM. In contrary to these studies, however, Mujahid, et al. (2014) documented a significant positive relationship between capital structure and firm's financial performance and shareholders wealth in textile sector of Pakistan.

The negative relationship between return on asset and TDTA in the engineering sector of Pakistan while LTDTA is found to be positively related with return on asset was explained due to the higher proportion of short-term debt employed in the total debt of engineering sector of Pakistan. However, this finding was in a sharp contrast to Ebaid (2009) who found negative relation between return on asset and long term financing as the long term debt was more expensive in that market; and a positive relation with total debt because of the larger proportion of short term debt in the total debt. On the other hand, Mohammadzadeh, et al. (2013) in their study of the relationship between capital structure and profitability of pharmaceutical companies in Iran; found that profitability is negatively related with all of the measures of capital structure (i.e. short-term debt, long-term debt and total debt ratios). Moreover, In line with the pecking order theory and information asymmetrical theory it was further concluded by Khan (2012) that the negative relationship of profitability with STDTA and TDTA is due to the higher cost of debt and strong covenants attach to the use of debt. Besides, Khanam, et al. (2014) found a significant negative relation between capital structure and return on equity of firms in Food Sector of Pakistan. Surprisingly, Khan (2012) concluded that STDTA, LTDTA and TDTA have a weak relationship with the financial performance of the engineering sector of Pakistan measured by return on equity. This result is in accordance with the results of the study by Ebaid (2009), Marobhe (2014); Zeitun and Tian (2007). On the other hand, Abor (2005) by evaluating the relationship of the profitability with capital structure of firms in Ghana found a positive relation between return on equity and short term debt to total assets because of low interest rates on short term debts.

The negative relationship of SDTA, TDTA with ROA and the weak relationship with ROE in the engineering sector of Pakistan are in contrast to a significant positive relationship between firm's capital structure and financial performance in textile sector; and significant negative relation between capital structure and ROE in Food Sector the same country. This might be because of the nature of industry in which they are operating.

In addition, Patrick et al. (2013) also attempted to investigate the impact of capital structure on firm performance in Nigeria, particularly to examine whether private sector firms of Nigeria apply the traditional theory of capital structure in the determination of their capital structure. The results revealed that leverage is negatively correlated to firm's performance (ROI). Strong evidence was found in support of the traditional theory of capital structure which asserts that leverage is a significant determinant of firms' performance. However, surprisingly inconsistent to the traditional theory of capital structure, it was found that the optimal amount of debt employed in the capital structure of selected has a negative effect on firm's performance. They

believe that the reason for the negative effect of optimal amount of debt on firm's performance is because of the compounding nature of interest rates on debt of Nigerian private sector firms. The study also makes a comparative analysis by classified firms into highly and lowly geared firms setting a leverage threshold of above 10% as being highly geared. The result of the comparative analysis shows that high gearing has a larger impact on firm's performance compared to low gearing. In the highly geared firms a 100 percent increase in leverage reduces firm's performance by 17%, but for the lowly geared firms it reduces firm's performance by 15 percent. This indicates higher levels of debt are correlated with lower firm performance. However, it was found that highly geared firms have better performance in terms of value than the lowly geared firms, and the authors believe as it is probably because of the size of firm's investment. Similarly, Onaolapo and Kajola (2010) in their study on the non-financial listed firms in Nigeria found that leverage have a significantly negative relation with performance in Nigerian firms. Due to agency conflicts between various stakeholders, firms have employed high leverage levels which have negatively affected the performance of the firm.

In summary, existing empirical evidences on the relationship of firm's financial performance with capital structure documented mixed and contradict results. In addition, the existing evidences pertaining to Ethiopia on the issue under investigation do not show the effect of short- term and long-term debt separately from total debt (leverage) on firm's financial performance. Thus, this study tried to fill this gap by decomposing total debt ratio (leverage) in to short term debt and long term debt in line with relevant prior empirical studies such as (Abor,2005; Abor 2007; Ebaid ,2009; Khan, 2012; and Marobhe , 2014).

3. Methodology
3.1. Data and Sample
The necessary data for conducting this study was collected mainly from the financial statements of private manufacturing companies of Amhara regional state of Ethiopia for the year 2010 through 2014.These companies have provided audited financial statements to Ethiopian Revenue and custom Authority (ERCA), Bahir dar and Combolcha branch for the purpose of taxation. According to the company registration manual maintained by ERCA there are 54 private manufacturing companies, of which only 16 companies are with audited financial statements for the study period. This results a balanced panel data for 16 private manufacturing companies consisting of 80 total observations.

3.2. Variables measurement, Hypotheses and Model Specification
The theoretical literatures and the empirical findings in both developing and developed countries point out a significant association between capital structure and firm's financial performance.
3.2.1. The Dependent Variable (Financial performance) and its Measurement
Prior literature related to the measures of firm performance employed a number of measures to judge firm performance. Some researchers used accounting based measurements to evaluate firm's financial performance under different setting. Accounting based measure of performance are profitability ratios. Profitability ratios are the best known and most widely used measure of the firm's return on its investments. To remain consistent with previous studies, two of the most common profitability ratios were employed as a proxy to measure financial performance. These are: Return on Assets (ROA) computed as the ratio of net profit to total assets and Return on equity (ROE) computed as the ratio of net profit to equity.
3.2.2. Explanatory Variables and their Measurement
There are various measures of leverage, which can be classified as accounting based measures, market-value measures and quasi-market value measures. However, Rajan & Zingales (1995) suggest that the choice of measure of leverage should be based on the objective of the study. Thus, by considering the objective of this study and Similar to previous literature such as (Abor, 2005; Abor, 2007; Ebaid , 2009) on the issue under investigation capital structure was measured using four variables: Total Debt to Total Assets (TDR), Long Term Debt to Total assets (LTDR), Short Term Debt to Total Assets (STDR), and Debt To Equity Ratio (DER). Short-term debt is defined as debt due within one year and long-term debt is defined as debts due after a year (i.e., all debts other than short-term debts). As it is difficult to determine market value both the dependent and independent variables was measured at book values. The total debt is the sum of short-term and long-term liabilities.
3.2.3. Control variable (Firm size) and its measurement
Existing evidences suggest that firm size may influence its performance; larger firms have a greater variety of capabilities and can enjoy economies of scale, which may influence firm's financial performance. Besides, Titman and Wessels (1988) argued that Transaction costs play an important role in determining whether to issue short-term debt or long-term debt. Small firms are more likely to issue short-term debt because of the lower fixed costs associated with issuance. On the other hand, large firms are more likely to issue long-term debt to take advantage of economies of scale. Therefore, this study used firm size as a control variable. Size is measured by the natural logarithm of total assets of the firm and included in the model to control for effects of firm size on

dependent variable. The following table (Table I) provides a summary of variables and their measurements.

Table I: Variable and their proxies

| No	Variables	Measurement
	Dependent variables	
1	Return On Assets	Net Profit/Total assets
2	Return On Equity	Net Profit/Equity
	Independent variables	
1	Total Debt Ratio	Total Debt/Total assets
2	Long-term Debt Ratio	Long-term Debt/Total assets
3	Short-term Debt Ratio	Short-term Debt/total assets
4	Debt Equity Ratio	Total debt/equity
5	Size	Natural logarithm of Total assets

3.2.4. Research Hypotheses

The study tested the following research hypotheses formulated depending on the capital structure theories, prior empirical evidences, and the nature of private manufacturing sector in Ethiopia.

H1: Profitability is negatively related to total debt ratio (leverage)

H2: There is a negative relationship between profitability and long-term debt ratio (LTDR)

H3: There is a positive relationship between profitability and short-term debt ratio (STDR)

H4: There is a negative relationship between profitability and Debt-equity ratio (DER)

H5: There is a positive relationship between profitability and firm size (LNTA)

3.2.5. Conceptual framework

The following figure depicts the conceptual framework of the study

Figure 1. Conceptual framework
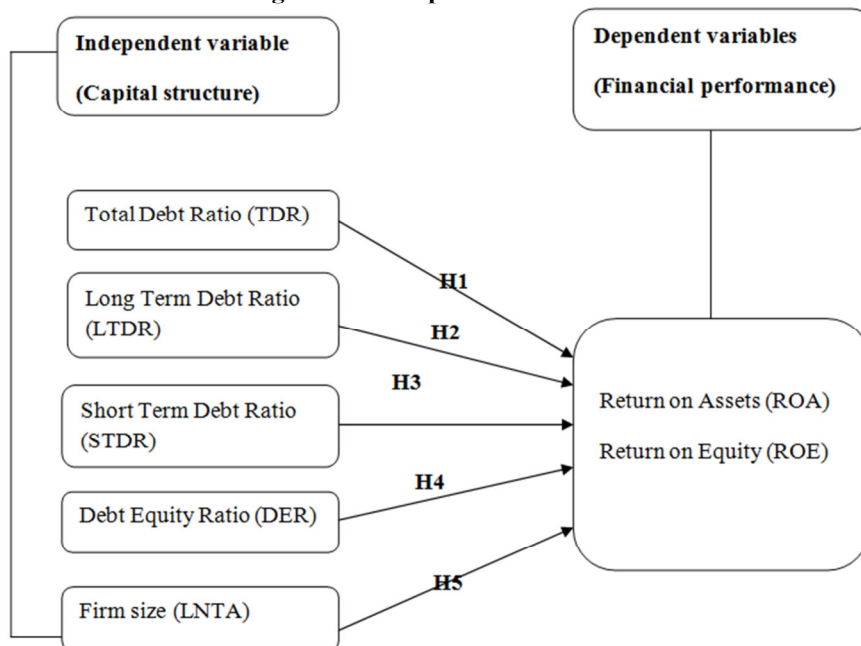
3.2.6 Model specification

To achieve the objectives of this study and depending on prior studies on the issue under investigation such as (Abor, 2005; Zeitun and Tian, 2007; Ebaid, 2009; Khan, 2012; Khan, 2013 and Marobhe, 2014) the followings multiple regression models have been developed using Ordinary Least Squares (OLS) method.

PRi,t = $\beta_0 + \beta_1\,STDR_{i,t} + \beta_2\,LTDR_{i,t} + \beta_3\,Size_{i,t} + e_{i,t}$……… **Equation 1**

PRi,t = $\beta_0 + \beta_1 TDR_{i,t} + \beta_2\,Size_{i,t} + e_{i,t}$………………..…… **Equation 2**

PRi,t = $\beta_0 + \beta_1 DER_{i,t} + \beta_2\,Size_{i,t} + e_{i,t}$………………..…… **Equation 3**

Where:

➢ PRi,t = profitability ratio (ROA and ROE) of firm i in year t.

➢ STDRi,t = Short Term Debt Ratio of firm i in year t.

- ➤ LTDRi,t = Long Term Debt Ratio of firm i in year t.
- ➤ TDRi,t= Total Debt Ratio of firm I in year t.
- ➤ DERi,t = Debt Equity Ratio of firm i in year t.
- ➤ Sizei,t =size of firm i in year t.
- ➤ ei,t = the Error Term.

Note: The model has three equations for each profitability ratios and it has a total of six equations.

4. Empirical results and discussions

This section presents and discusses the empirical results of the study. Section 4.1 discusses the results of descriptive statics and section 4.2. Briefly discuss the multiple regression results in OLS.

4.1. Descriptive statistics

The results in the following (Table II) show a summary of the descriptive statistics of the secondary data collected for 16 sample private manufacturing companies over the 5 consecutive years of study period (i.e. 2010 – 2014).

Table II. Summary of descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Return on assets	80	-.4232	.5308	.036503	.1452599
Return on equity	80	-1.6569	1.3677	.038342	.3269555
Total debt ratio	80	.0000	.7550	.336131	.2269738
Short term debt ratio	80	.0000	.5308	.103547	.1346865
Long term debt ratio	80	.0000	.7550	.232584	.2242783
Debt-equity ratio	80	.0000	3.0809	.749545	.7745202
LNTA	80	11.0387	20.1998	16.123124	2.0403928
Valid N (listwise)	80				

The results of the descriptive statistics shows that the average ROA and ROE in the private manufacturing companies of Amhara regional state of Ethiopia are found to be 3.7 % and 3.8% respectively. These indicate that profitability measured by ROA and ROE reveals almost similar results. Though these results show a better financial performance of firm's under investigation compared with the financial performance of Manufacturing share companies in Addiss Ababa city for the period from 2004 to 2009 ; it show a poor performance during the period 2010- 2014 by the firms in the private manufacturing sector of Amhara regional state of Ethiopia. The average total debt ratio is found to be 33 %, leaving the remaining 67% of total assets to equities. Out of the mean total debt ratio of 33%, short term debt ratio is found to be 10% and the remaining 23% belongs to the long-term debt ratio. These implies that private manufacturing companies in Amhara regional state of Ethiopia use more of equity than debt and more of long term debts than short term debts. The higher proportion of long term debt than short term debt could be due to the fact that manufacturing industry needs long term debt than short term debt for huge amount of capital investments required in the sector.

4.2. Regression analysis

This section presents and briefly discuss ordinary least squares regression results on the relationship of firm's capital structure with financial performance is presented. Table III and Table IV shows the result of multiple regression results that relate capital structure variables with financial performance measured by ROA and ROE respectively.

Table III

Capital Structure and Firm Performance measured by ROA

variables	Model 1	Model 2	Model 3
		Performance (ROA)	
Constant	0.236 (0.030)	0.179 (0.164)	0.188 (0.144)
STDR	0.365 (0.001)		
LTDR	-0.254 (0.000)		
TDR		-0.149 (0.043)	
DER			-0.040 (0.057)
LNTA	-0.011 (0.107)	-0.006 (0.479)	-0.008 (0.344)
R-square	0.361	0.070	0.064
F	14.329	2.893	2.623
Sig. F	0.000	0.061	0.079

As it is shown on Table III the value of R Square in the first model is 0. 361 indicating that about 36

per cent of the variation in ROA is explained by the capital structure variables included in the model. The low value of R square 0.70 and 0.064 in the second and third model respectively reflects that only a single independent variable TDR and DER are included as a measure of capital structure. The term "sig. F" refers to the P-value that measures the significance of the overall model; A sig. value less than 0.05 and a high value of "F" indicates that the explanatory variables as a whole has statistically significant relationship with the dependent variable. The value of "F" in the first model is 14.329 which is greater than the critical value and p-value is 0.000 indicating that the model is significant not only at 95 percent but also at 99 percent confidence interval. As a result, the researcher accepts the alternative hypothesis that the explanatory variables (STDR, LTDR and LNTA) as a whole has a significant influence on firm performance measured by ROA. The value of the coefficients relating the STDR with ROA is 0.365 and the p-value is 0.001, implying a statistically significance positive relationship between short term debt and ROA. This is to mean that financial performance measured by ROA increases with increases in short term debts employed in the capital structure. The positive relationship between ROA and short term debts could be due to the lower cost of short term debts. Consistent to this finding, Abor (2007) have also found a positive relationship between short term debt and ROA. Contrary to this result, Khan (2012) and Ebaid (2009) documented a significant negative relationship. While (Zeitun & Tian, 2007 and Khanam et al., 2014) documented an insignificant relationship between short-term debt and ROA. Statistically significance negative relationship was found between long term debt and ROA because of the negative sign of the coefficient of LTDR (-0.254) and p-value is 0.000 (p<0.05). This implies that employing more of long term debts in the capital structure results in lower financial performance of private manufacturing companies in Amhara regional state of Ethiopia. The negative relationship of LTDR with ROA is in line with the pecking order theory, arguing that in the presence of information asymmetry between external fund providers and managers long term debt will be mispriced (expensive) which in turn results in lower financial performance for firms with significant amount of long term debt in their capital structure. In addition, Mohammadzadeh et al. (2013) and Abor (2005) are among others who found a negative relation between long-term debt and profitability. On the other hand, Ebaid (2009) and Khan (2012) found insignificant relationship between ROA and long term debt.

Total debt is found to be negatively related with profitability measured by ROA since the coefficient relating LTDR with ROA. The p-value for TDR is 0.043 (p-value <0.05) implying that the negative influence of TDR on ROA is significant at 95% confidence interval. The negative relationship between ROA and TDR could be due to the higher proportion (70%) of long term debt while short term debt accounted for only 30% of the total debt. This is to mean that though the magnitude of the positive effect of short term debt (0.365) is greater than the negative effect of long term debt (-0.254); the negative influence of total debt on ROA could be due to the higher proportion of long term debt in the total debt because total debt (leverage) is the sum of short term debt and long term debt. A number of studies provide empirical evidence supporting the negative relationship between leverage (capital structure) and firm's performance or profitability measured by ROA (Ebaid ,2009; Khan ,2012; Khanam et al ,2014; Marobhe ,2014;Patrick et al,2013; Zeitun and Tian ,2007). The value of the coefficient relating DER with ROA is -0.040 which indicates a negative relationship between the two variables. The p-value for DER is 0.057 which is in excess of 0.05 indicating that DER is not statistically significant at 95% of confidence interval. However, it is significant at 90% confidence interval since the p-value (0.057 < 0.1). Thus, DER has a statistically significant influence on ROA. A number of studies provide empirical evidence supporting this negative relationship between DER and firm's performance or profitability (Rajan and Zingales, 1995; Fama and French, 2002; Tehulu, 2013). On the other hand, a study by Mujahid & Akhtar (2014) revealed a positive relation while (Khanam et al., 2014 and Al-Taani, 2013) documented insignificant relation between capital structure measured by DER and financial performance measured by ROA. Finally, statistically insignificant relation is found between firm size and ROA in all of the three models as the p- values (0.107, 0.479, and 0.344) are in excess of 0.05. This finding is supported by Khan (2012), Ebaid (2009) who also fond insignificant relationship while studying the relationship between capital structure and financial performance of firms operating in Pakistan and Ghana respectively.

Table IV

Capital Structure and Firm Performance measured by ROA

| variables | Performance (ROA) | | |
	Model 1	Model 2	Model 3
Constant	0.408 (0.099)	0.276 (0.349)	0.286 (0.329)
STDR	1.004 (0.000)		
LTDR	-0.439 (0.003)		
TDR		-0.194 (0.247)	
DER			-0.071 (0.139)
LNTA	-0.023 (0.142)	-0. 011 (0.566)	-0. 012 (0.508)
R-square	0.339	0.027	0.038
F	12.995	1.065	1.511
Sig.	0.000	0.350	0.227

Note: P-values are in parentheses

Table IV presents the multiple regression results of the three models which relate financial performance measured by ROE and capital structure variables. The value of R-square in the first model is found to be 0.339 implying that approximately 34 percent of the variation in the dependent variable (ROE) is explained by the independent variables (STDR and LTDR) and firm size. The value of R-square in the second and third model are 0.027 & 0.038 respectively which very low, indicating that only 2.7% and 3.8% of the variation in ROE is explained by TDR and DER respectively. This is because only TDR and DER is used as a measure of capital structure in the second and third model respectively.

The P-value, in the first model, is 0.000 implying that the model is significant not only at 95 percent confidence interval but also at 99 percent. As a result, the researcher accepts the alternative hypothesis that STDR, LTDR, and firm size as a whole are significantly related with profitability measured by Return on Equity (ROE). Similar to ROA, profitability measured by ROE found to be directly related with STDR while it is negatively related with LTDR and firm size. However, the magnitude of the impact of STDR on profitability differs among the two measures of profitability (ROA and ROE). The value of coefficient that relates STDR with ROE is approximately 1 which means that ROE increase/decrease by one Birr for each Birr increase/ decrease in STDR and the p-value (0.000) implies that the relation is significant not only at 95% but at 99% of confidence interval as well. The positive relationship between ROA short term debts could be the lower cost of short term debts. This finding is in line with the results of the study by Abor (2005) while it is contrary to the negative relationship of the results of the study by (Khan, 2012 & Ebaid, 2009). On the other hand, (Khanam et al., 2014 & Khan, 2013) documented insignificant relationship between short term debt and profitability measured by ROE. LTDR has a significant negative impact on ROE because of the negative sign of the coefficient (-0.439) relating the two variables and the value of p=0.003 (p<0.05) means that the relationship is statistically significant. This means that performance measured by ROE decreases with the increase in long term debts employed in the capital structure of firms under investigation. This finding is in agreement with the findings of the study by (Al-Taani, 3013; Mohammadzadeh et al., 2013) and Abor , 2005). However, (Marobhe ,2014; Zeitun and Tian ,2007) found a positive relation while (Khan,2012; Ebaid,2009; and Khanam et al., 2014) documented insignificant relationship between LTDR and profitability measured by ROE. The p-values in the second and the third model are 0.350 and 0.227 respectively which are in excess of both 0.05 and 0.1 means that the independent variables included in these model has no a statistically significant influence on firm performance measured by ROE. In other words, the relationship of firm performance measured by ROE with TDR and DER is statistically insignificant as the p-values (0.247 and 0.139) respectively are in excess of 0.1. Consistent to this finding, (Ebaid, 2009 and Khanam et al., 2014) founds insignificant relationship between capital structure (leverage) and ROE. While o Khan (2012) found a significant negative influence of total debt on the profitability (ROE) of the engineering sector of Pakistan. the insignificant relationship between DER and ROE is are supported by the findings of the study by (Al-Taani,2013 and Marobhe ,2014) who also empirically examined the relationship between capital structure and the financial performance of Jordanian and East African firms respectively while (Mujahid & Akhtar, 2014 Khanam et al., 2014) found significance negative relation between DER and firms financial performance measured by ROE. Similarly, the relationship between ROE and firm size is not significant in all of the three models because the p-values 0.142, 0.566, 0.508 respectively are greater than 0.05. This finding is in line with Ebaid (2009) who also found a weak relation between firm size and ROE by empirically examining the impact of capital structure choice on the performance of firms in Egypt.

5. Conclusions

This study examined the relationship between capital structure and financial performance using data from the financial statements of 16 private manufacturing companies of Amhara regional state of Ethiopia covering the period 2010 – 2014.

The results of the regression analysis revealed a statistically significance positive relation of profitability with short term debts while a significant negative relationship is found with long term debt and total debts. However, the negative coefficient of TDR is lower than LTDR indicating that LTDR has more effects on ROA than TDR. The positive relationship between ROA short term debts could be the lower cost of short term debts while long term debts are costly. the negative relation of total debt with ROA could be due to the higher proportion of long term debts in total debts; and the lower negative coefficient of TDR than LTDR implies the higher the positive effect of short term debt on ROA than the negative influence of long term debts. Further, DER is found to be negatively related with profitability implying that equity is positively related with profitability measured by ROA. Besides, the relationship of firm size was found to be statistically insignificant with the two measure of financial performance. In general, consistent to the argument of the pecking order theory, the study revealed that capital structure has a significant negative influence on the financial performance of private manufacturing companies of Amhara regional state of Ethiopia. Therefore, it is recommended for future researchers to extend this research to other sectors of the economy in the country and to similar industries operating under different area of the country.

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