Impact of Total Assets and Net Income on Return on Equity of Small Medium Enterprises of Pakistan

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8 June 2015

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Abstract

An attempt was done in order to reveal the bounding of snap shot and financial period of a firm with gaining value from the stock market. A study was conducted in the Pakistan context where rate of economy is at developing phase. It was assumed that the change in return of equity is a cause of Net income and entire assets of a firm. 11 years of data was taken from 50 small medium enterprises that was the reason of gathering 550 observations as a sample size and were put into analysis purpose to justify the hypotheses. Regression was put as a statistical tool with analysis of variance in order to test the research model that was a reason to confirm the impact of total assets and net income on return on equity. It was recommended to augment the size of sample for strong building the relationship among variables. A suggestions were not only restricted at number of observations but further study can be extended to find out the relationship and association with other factor by using same methodology in different context.

Keywords: *Total Assets, Net Income, ROE, SMEs, Regression, Anova*

1. Introduction

In European Union and international organizations small and medium enterprises are the corporations with wide margins and employ many people, these corporation are also known as innovative and competitive in many economic sectors. Assets are known to be economic resource in financial accounting. Any tangible or intangible has an economic value and owned by any organization or any individual person is known to be an asset. Total Assets consist of all non-current assets which are bought for long term use and current assets which can be easily converted into cash. Net income or total income are obtained after deducting all the cost incurred during the business which includes amortization, depreciation, salaries, wages, rents, taxes, interests and other expenses. Further net income is used to measure the earning per share of the company with the help of the number of the shares issues by the company. Return of equity measure's the profitability of a company with respect to the amount or number of shares invested in a company by shareholder. It can be used by the investors internally to evaluate the performance of the management or to investigate the return on shareholders' investment. It doesn't only measure the profitability on one share but it also measures the efficiency and effectiveness of the management. ROE is calculated by dividing Net Income by Shareholders Equity (Total Assets less Total Liabilities); it can also be calculated by Multiple Net profit margin by asset turnover by equity multiplier. Increasing ROE is a positive indicator where as decreasing ROE usually creates problem. In a study conducted earlier it was quoted that 15% of the ROE is a benchmark for the investors. If ROE is increasing due to fall in shareholders' equity which shows company is moving more towards debt financing which can create more problems and can lead an organization towards liquidity. If ROE is increasing due to increase in Net Income this indicates a positive growth in ROE or return on profitability per share.

Cassar and Holmes (2003) worked on the study with variables capital structure, financing and small-medium enterprises. The study focused on the importance of the capital structure and the determinants were asset structure, profitability, risk and growth. Hypothesis examined the static trade-off and pecking order of various characteristics like asset structure, growth, size, profitability and risk. Sample was gathered from Australian small medium enterprises with a panel survey and econometrical technique used was regression analysis. The end result concluded that asset, profitability and growth were the most important factors for financing and capital structure in small medium enterprises.

Abor (2007) worked on the variables capital structure (debt policy), financial performance and small medium enterprises. In this study impact of debt policy on financial performance of the Ghana and South African small medium was examined. A number of small medium enterprises of Ghana and South Africa were taken as sample and to investigate the relation among the capital structure and financial performance panel data analysis was used. The result indicated that capital structure especially debt ratios influences the financial performance of the companies, the affect showed the negative impact on the small medium enterprises due to high gearing ratio and found that companies got liquidate faster than large companies.

Mira (2002) worked on the financing theories and capital structure of small medium companies in Spain, the variables worked on were fiscal, trade off and pecking theories. In this study the main focus was on financing theories but hierarchy and some other covenants were also considered. Panel data of 3962 non financial small medium Spanish companies were taken as data. To verify the variables individually heterogeneity, correlation and regression analysis were used as econometric methodology. The end results showed a negative impact of fiscal theory with leverage ratios of companies especially with taxes and depreciations and it was also found that taxes had a negative impact on debts, whereas trade off theory found to have a positive correlation with the debt policies of companies. In the end it was found that long term debts effects positively and short term debts showed a negative relation.

Tran and Neelakantan (2006) worked on the determinants which influenced capital structure of small medium enterprises of Vietnam. The variables worked on were business risk, profitability, growth; net working, size of the firms and tangibility these companies. Small medium enterprises of Vietnam were taken as sample and it was gathered in a panel form, regression analysis and correlation were used as econometrical tool. In the result it was found that SME mostly used short term debt for financing the operations. A positive relation was found among the between capital structure and business risk, growth, size, relation with banks and networking where as a negative relation was found tangibility.

Francisco (2005) worked on the study which included the uniqueness impacts of capital structure on small medium enterprises specifically from the year 1994 to 1998. A total of 6482 non-financial small medium emprises of Spain were taken as sample as panel data. Correlation and regression analysis were used to conclude and interpret the gathered data. The results generated were on the basis of hypothesis and found that negative impact of profitability and taxation shield had been found with debt financing and related to leverage ratio where as positive relation was found in growth, asset structure and size with respect to debt financing in small medium enterprises. Furthermore a confirmation of maturity matching behavior of capital structure in small medium enterprises has been found.

Frank (1997) worked on the variables discounted dividend growth model with the impact of inflation and return on equity. In this study the critical factor was the hedging the inflation into the growth model to evaluate the common stock price. The data was gathered from the 40 years from 1956 to 1995 components were of return on equity. The results showed that in 1960's there was a fall in profit margins and total assets and a minor increase in financial leverage was notified whereas other components were almost constant. During the study it was also notified that due to the fluctuation in inflation negative impact was notified in growth components and common stocks are found to have poor relation with hedging.

It was hypothesized that:

H1: There is significant impact of total asset on ROE in SME.

H2: There is significant impact of net income on ROE in SME.

2. Methodology

A longitudinal designed study examined the impact of total assets and net income on return on equity of small medium enterprises and secondary data was used in order to justify the relationship. In the study, three variables have been taken into account total asset, return on equity and net income. Net income could be measured by different ways but for this study net income has been referred as income after tax and total assets showed all the assets given on the annual reports of the companies considered for this research. Return on equity measured, profit earned by shareholders. This research has been conducted within the context of Pakistan with sample size of 550 observations; collected, organized and put into analysis purpose. The data has been collected from various financial statements in annual reports of small medium enterprises in Pakistan. Data for return on equity, total assets and net income have been taken from the annual reports of 50 companies in the form of time series for the period of 11 years, from 2000 to 2011. Regression analysis test has been used as a statistical tool in order to evaluate the impact of total assets and net income on return on equity. On the basis of analyzing the statistical interpretation, the OLS model has been deployed for supporting regression test.

Return on Equity = $\alpha 1 + \beta 1$ (Net Income) + $\beta 2$ (Total Assets) + ET

Here,

α is constant and intercept.

β is slope.

ET is error term.

3. Results and Discussions

For the data analysis statistical tests has been applied which was regression analysis, which showed the following models and findings. The nature of the data has been found in numeric form.

Table: 3.1 *Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	1.000[a]	1.000	1.000	938.304	.619

a. Predictors: (Constant), Net Income, Total Assets

b. Dependent Variable: ROE

The above table showed summary of the model obtained from the test of analysis of variance (ANOVA). A model was fully explained by independent variables (net income and total assets) by the value of adjusted R square which was (1.000). This model also revealed, positive autocorrelation in model by the value of Durbin- Watson which was (0.619). It has been observed from the result that there was huge standard error in model. This showed presence of space for error correction model.

Table: 3.2 *Regression Estimates*

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	199.003	41.803		4.761	.000		
	Total Assets	.000	.000	1.000	34934.229	.000	.943	1.060
	Net Income	3.99E-6	.000	.000	10.657	.000	.943	1.060

a. Dependent Variable: ROE

The above result revealed an alpha with the magnitude of (199.003). In other words, this magnitude also explained the predicted value of leverage when all other variables were 0 whereas, predictors showed significant values with the probability of 0.000. The result also suggested that there was significant positive relation between total assets and leverage with negligible magnitude. Net income also showed positive relation with ROE with the positive magnitude of $4x10^{-6}$.This result also explained that error could be ignored among variables because of having no standard error which was (0.000).

T-values also confirmed the impact of dependent variable (ROE) and exogenous variables (total assets and net income) that was also the reason for accepting the hypothesis which was significant impact of total assets and net income on return on equity of small medium enterprises in Pakistan. This result also obtained that there was no collinearity in variables which was determined by the values of tolerance and VIF. From the result it has been concluded that if total assets increased than the return on equity also increased similarly, return on equity also affected if there was a change in net income. Previously numerous studies were conducted to find out the relationship between these variables. Umar, Tanveer, Aslam, and Sajid (2012) discussed various variables such as return on equity, return on total assets, earnings before interest and tax, earning ratio and net profit margin. Result of this study suggested that ROE of a firm positively affected on the performance of a firm, also showed the positive impact of total assets on earnings before interest and tax. This study also revealed, insignificant impact of return on equity on current assets to total assets. But this research discussed about the impact of total assets and net income after tax on return on equity and showed contradictory result as compared with the previous research. The result for both independent variables can be further explained as, there was positive relationship between the total assets and leverage, net income also showed same result as for the total asset. Return on equity can be improved if there was a positive change in total assets and net income. On the basis of obtained results, the following chart showed the synthesis of all observations and conclusions of assumptions.

Table: 3.3 *Testing of Hypotheses*

Hypotheses	Empirical Conclusion
There is significant impact of total asset on ROE in SME.	Accepted
There is significant impact of net income on ROE in SME.	Accepted

A chart of summary for assessed hypotheses has been deployed above in order to provide a snap shot of all findings. Although a similar statistical technique has been found useful in order to assess the Chinese currency regime after de-trending of non-stationary data (alvi and kamal, 2015). Future research is possible of the same methodological model with some other variables in other context of the world.

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