

Exploring factors affecting profitability in SME: Evidence from Albania

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Abstract: Companies who operate in bank based financial system countries tend to be more sensitive to working capital management. In this context working capital takes a special attention from academic point of view and economic stability as well of the private companies. That's the reason why we develop this study since 90% of the companies which operate in Albania are classified as SME. According to literature review profitability is a wide concept since it can be expressed as an accounting measure, usually ROA. In this study we refer to the accounting measure ROE and it is considered our dependent variable. Independent variables are classified in two groups: internal indicators and external indicators. Internal variables are: Working capital measures, size of the company, sales growth, financial leverage. The country specific variables are: GDP growth, Ease of doing business. Working capital represented by CCC has an insignificant relationship to company profitability, but variables like Days Acc. Receiv and Days Invent. seem to have a significant impact. Size seems to not have any significant effect on profitability, perhaps the reason behind this is that these are all SME and their size does not differ regarding to profitability. While sales growth and has a significant positive relationship. Sales growth increases the profitability while leverage decreases it. Also the indicators of total asset turnover and acc. receivable turnover have a significant positive impact on profitability. What about country specific? Since GDP growth represents the economy cycle, it should have a positive significant relationship to profitability, but in our study the country specific indicators does not have any significant impact.

Keywords: Debt ratio, Profitability, Turnover ratios, Size, Working capital, Country specific indicators

Jel codes: M40, G3, G3

1 Background

Companies who operate in bank based financial system countries tend to be more sensitive to working capital management, basically banks represent their main financing source after internal financing. In this context working capital takes a special attention from academic point of view and economic stability as well of the private companies. That's the reason why we develop this study since 90% of the companies which operate in Albania are classified as SME and their existence represents the economy wellbeing. Studies regarding the identification of factors that affect profitability in Balkan Countries are not as evident as the importance of the issue. Even in Albania there are some studies that relate to specific sectors, on a small number of companies. Through this study we are focusing in manufacturing and merchandising companies that operate in Albania, spreading more the sample than in previous studies.

2 Literature review

Liargovas and Skandalis (2010) identified the factors affecting financial performance of Greek industrial firms ,using a sample of 102 listed firms in the Athens Stock Exchange over the period 1997-2004. Return on sales reveals how much a company earns in relation to its sales, return on assets determines an organization's ability to make use of its assets and return on equity reveals what return investors take for their investments. The study shows that leverage, export activity, location, size and effective management significantly affect firm performance in Greece. Profitable firms in Greece are large, young, exporting firms with a competitive management team, which have an optimal debt-equity ratio and use their liquidity to finance their investments.

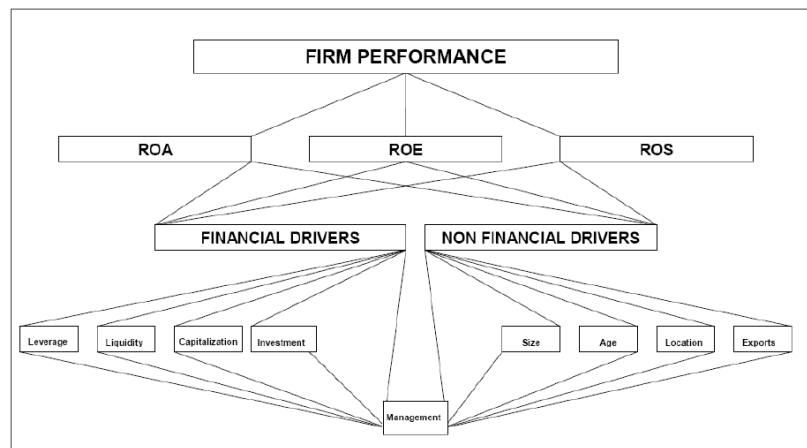


Figure 1: Factors affecting firm performance
Source: Liargovas and Skandalis (2010)

Mijić, Nuševa and Jakšić (2018) investigate the determinants of profitability for small and medium-sized enterprises (SMEs) in the wholesale and retail sector in the Republic of Serbia. The data was collected from the financial statement of enterprises. For this purpose, 9,005 observations of 1,801 SMEs and 1,605 observations of 321 large trade companies over the period of 2010-2014 were included. The results indicate that SMEs achieve statistically significant better profitability than large wholesale and retail companies. The findings indicate that leverage, liquidity, sales growth and lagged profitability positively influence the profitability of SMEs. Furthermore, the results show an inverse relationship between the size and tangibility on one side and profitability on the other side.

Batrancea, Morar, Masca, Catalin, Bechis (2018) analyzed the financial equilibrium factors that have an important effect on SME financial performance, as this performance is considered to have played a vital role in Romania's recovery from the economic crisis. Romanian SME' performance was influenced by the independent variables like: fixed assets, current assets, inventory, receivables, equity and liabilities. The study's results indicate that return on assets is influenced by the current assets ratio and the inventory ratio in all models, as well as by the equity-to-total liabilities ratio in 80% of the models. Assets ratios have the highest influence on performance evaluation, namely inventory ratio in all models and current assets ratio in 87.5% of the models. The study shows that liabilities ratios influence performance as follows: equity-to-total liabilities ratio in 80% of the models and total debt-to-assets ratio in 35% of the models.

Popa and Ciobanu (2014) indicate that the profitability of a company cannot be explained only by microeconomic factors or the tendency of a particular industry. It should be considered some macroeconomic factors such as inflation, unemployment, economic crises, changes in GDP, etc., and qualitative factors such as innovation capacity of companies, the knowledge embedded in the business, etc. Return on equity and the return on invested capital ratios measures better the performance. The study verified the influence of fixed assets, turnover, price earnings ratio, duration of current assets by turnover and leverage on return on equity and the return on invested capital. The results were significant for most of them, and the regression models were valid with a coefficient of determination of more than 60%.

Govori (2013) showed that external factors such as access to finance, competition, corruption, and government policies have very important impact in the development of SMEs in Kosovo. Facilitating access to finance is important to set up a favorable environment to develop SMEs. SMEs in developing countries deal with numerous barriers to funding, although this problem is not unknown even in developed countries. Barriers that face SMEs usually relate to high administrative costs, high collateral requirements and the lack of willingness of banks to lend to SMEs. Raising the level of awareness of their role and availability of access to finance for SMEs can improve economic conditions in developing countries by promoting innovation, growth of GDP and reduce unemployment.

Puci (2018) examined 264 companies from different sectors of the economy between 2010 until 2017. ROA, ROE and PM as depended variables; whereas the independent variables include: capital structure, liquidity, company's size, company's risk, management efficiency, GDP growth, exchange rates, inflation and interest rates. The results indicates that liquidity, GDP growth, and inflation rate were proved to be statistically insignificant. The results indicated that size, risk, and exchange rates negatively affect ROA, ROE and PM. Differences are with regard to capital structure use and interest rates impact on ROA, ROE and PM.

3 Data, methodology and results

This study is based on 100 SME data from merchandising to manufacturing companies, in the period interval 2005-2017.. The companies that operate in financial intermediaries, insurance, financial services, construction companies, educational institutes etc. are excluded due to their size and features of their specific activity. According to literature review profitability is a wide concept since it can be expressed as an accounting measure, usually ROA, or can be expressed as an economic measures.

In this study we refer to the accounting measure ROE and it is considered our dependent variable. Independent variables are classified in two groups: internal indicators (company specific data) and external indicators (country specific data).

Internal variables are: Working capital measures, size of the company, sales growth, debt ratio, measures of turnover . The country specific variables are: GDP growth, ease of doing business (more specific on fiscal policies perspective).

Working capital can be measured from Days Accounts Receivable, Days Inventory, Days accounts payable which can be switched to cash conversion cycle indicator. The reason we used CCC as an independent variable instead of traditional liquidity ratios lies in the meaning that we want to measure an ongoing process. This feature is specifically offered from CCC indicator, while liquidity ratios are considered a one time position of liquidity.

Size of the company can be expressed by the number of employees, asset size or sales turnover. In our study we chose asset size. The turnover ratios refer to: asset turnover, inventory turnover, accounts receivable turnover, accounts payable turnover. Country specific variables include the GDP growth rate in Albania from 2005-2017 published by Bank of Albania and DB indicator can be accessed from Doing Business Issues.

Table 1- Variable description and selection

	<i>Variables</i>	<i>Variable description</i>
<i>Dependent variable</i>	ROA	Net Profit/ total Assets
<i>Independent variables</i>		
<i>Company specific factor</i>	D.Acc.R	$(\text{Acc. R} * 365) / \text{Sales}$
	D.Inv	$(\text{Inv} * 365) / \text{CGS}$
	D.Acc.P	$(\text{Acc. P} * 365) / \text{CGS}$
	CCC	$\text{D.Acc.R} + \text{D.Inv} - \text{D.Acc.P}$
	Size	Ln Total Assets
	Net Sales growth	$(S_2 - S_1) / S_1$
	Asset turnover	Net Sales/ Total Assets
	Acc. R. T	$365 / \text{D.Acc.R}$
	Acc.P.T	$365 / \text{D.Acc.P}$
	Inv. T	$365 / \text{D.Inv}$
	Debt ratio	Long term debt/ total Assets
	GDP growth	
<i>Country specific indicators</i>	Doing Business Indicator	

Source: Authors calculations

The data for this study is collected from financial statements of the companies which upload them on a yearly basis on the National Registering Center website. This is a government body which companies that operate in Republic of Albania are obliged to be registered and upload any financial or legal change and activity during each fiscal year ended on 31 December.

Companies under study operate almost in every city of Albania, but mainly in Shkodra, Lezha, Tirana and Durres. This area can by sure be selected to represent the biggest number of businesses operating in Albania.

Below are represented the descriptive statistics of the variables selected for this study.

Table 2-Summary Statistics, using the observations 1 – 940 (missing values were skipped)

Variable	Mean	Median	S.D.	Min	Max
ROA	0.0582	0.0350	0.137	-0.296	1.88
DLLA	9.18e+005	28.0	1.48e+007	0.000	2.38e+008
DINV	2.58e+005	157.	4.41e+006	0.000	9.14e+007
DLLP	2.05e+005	128.	4.53e+006	0.000	1.00e+008
CCC	1.02e+006	76.4	1.49e+007	-5.59e+004	2.38e+008
RrSH	2.02e+004	0.0168	4.37e+005	-1.00	9.56e+006
Madh	17.8	17.8	1.78	0.000	22.0
RBorxhit	0.126	0.00115	0.236	0.000	3.06
QAT	1.13	0.673	1.74	0.000	16.6
QLLA	8.86e+005	6.96	1.11e+007	1.53e-006	1.57e+008
QLLP	41.6	2.32	337.	3.64e-006	4.93e+003
QINV	41.6	2.32	337.	3.64e-006	4.93e+003
DB	0.527	0.481	0.133	0.319	0.747
GDP	0.0339	0.0353	0.0160	0.0100	0.0590

Source: Authors Calculations

The regression analysis from this database was performed by Stata software. The data was tested before regression for multicollinearity, heteroscedasticity,

collinearity, and normality of residual. The final results after some alterations are as below:

Table 3- Regression results using OLS, Pooled OLS, using 940 observations
Included 100 cross-sectional units. Time-series length: minimum 1, maximum 7

	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	
const	0.00370330	0.0902904	0.04102	0.9675	
D. Acc.Receiv.	-1.76610e-05	8.83001e-06	-2.000	0.0512	*
D.Invent.	2.52203e-06	1.11728e-06	2.257	0.0286	**
D.Acc.Pay.	-2.88084e-06	1.95866e-06	-1.471	0.1479	
Sales Growth	0.00482928	0.00156522	3.085	0.0034	***
Size	0.000226725	0.00497919	0.04553	0.9639	
Debt Ratio	-0.105229	0.0857933	-1.227	0.2260	
T.A.Turn.	0.0466072	0.0128324	3.632	0.0007	***
Acc. Rec. Turn.	0.000201693	8.41938e-05	2.396	0.0205	**
Acc. Pay.Turn	-1.04891e-06	8.74345e-06	-0.1200	0.9050	
DBI	0.000519981	0.000531774	0.9778	0.3331	
GDP Growth	-1.03350	1.18216	-0.8742	0.3863	

Source: Authors calculation

We note that CCC variable which measures the ongoing working capital is omitted from the regression. That's due to the insignificant status of this variable. Since it is calculated from the days of account receivable, days of inventory and days of accounts payable, its effect is not so clear in our sample. Also Inventory turnover is omitted due to high collinearity.

So the results of the table above can be expressed as below:

$$ROA = 0.0037 * D.Acc.Rec + 2.522 * D.Inv + 0.005 * S.Growth + 0.047 * Total Asset Turn. + 0.0002 * Acc. Rec. Turn$$

The coefficient of determination, R-squared, measures the percentage (29.35%) of ROA variation explained by Accounts Receivable Days (D.Acc.Rec), Days Sales of Inventory (DInv), Sales Growth(S.Growth), Total Assets Turnover ratio (T.A.Turn.) and Receivable Turnover Ratio (Acc.Rec.Turn). Since p value of these variables are less than $\alpha(0,05)$ they are considered to be statistically significant for the analysis. The other part (not explained by R-square) is explained by factors not taken into consideration in this study.

We can conclude that only Accounts Receivable Days (the number of days that a customer invoice is outstanding before it is collected) have negative significant impact on ROA in Albania. An increasing in this ratio will decrease ROA of the company.

The days sales in inventory ratio shows how many days a company's current stock of inventory will last, increasing this ratio will affect positively ROA of the company.

Sales growth is used in the context of company's future perspective and long run health. The impact of sales growth is significantly positive on ROA .

The asset turnover ratio is usually used as an indicator of the efficiency, increasing asset turnover ratio will result in increasing ROA of the company.

The accounts receivable turnover ratio is a measure used to identify a company's effectiveness in collecting its receivables. According to the equation, an increase in receivable turnover ratio will result in increasing ROA.

Conclusions

Through this study we tried to estimate the effect on profitability of SME's in Albania of company specific accounting indicators and country specific indicators. The data retrieved from financial statements of the SME under study showed some key features that influenced the results and in the same time represent the restrictions of this study. We are listing them below:

- the data quality is a key issue regarding our study,

- the financial statements were not submitted on regular basis, so missing values is a consistent phenomenon,

- are observed extreme fluctuations on the values of some variables, especially on accounts receivable, inventories and accounts payable. These values affected especially their respective turnover ratios, and narrowed the sample size and number of observations.

We found that due to days of accounts payable, CCC is not significant so that's the reason that we switched to basic working capital indicators.

Company's size even showed a positive relationship does not have a significant impact on profitability. It is interesting why the same result is observed for the debt ratio. Theoretically it should affect negatively the profitability. It is observed from the data that up to 2013-2014 mostly the long term debt account reported on 31 December showed lower levels. After 2014 it is noticed a positive change on the way reporting financial accounting data from companies.

The issue related to debt is related to the level of informal debt companies have, which there are not reflected on financial statements.

Further, in order to improve the results of the relationship between profitability and explanatory variables, we should increase the number of selected companies.

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