

THE DETERMINANTS OF SMES PROFITABILITY IN THE WHOLESALE AND RETAIL SECTOR IN SERBIA

Kristina Mijić*, Daniela Nuševa, Dejan Jakšić

University of Novi Sad, Faculty of Economics Subotica, Subotica, Serbia

*mijick@ef.uns.ac.rs

Abstract

The purpose of this paper is to investigate the determinants of profitability for small and medium-sized enterprises (SMEs) in the wholesale and retail sector in the Republic of Serbia. The wholesale and retail sector is a very important sector for Serbian economy, and also one of the most profitable sectors. The research of determinants of profitability includes two phases. First, the differences between the profitability of SMEs and large enterprises were conducted using the Student t-test. Second, the panel data estimation techniques were used to detect determinants of firm profitability. The profitability measure is based on the return on assets, and the determinants of profitability were defined as follows: size, leverage, liquidity, tangibility, investment, sales growth and lagged profitability. 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.

Key words: Return on assets (ROA), SMEs, profitability determinants, trade companies.

ДЕТЕРМИНАНТЕ ПРОФИТАБИЛНОСТИ МАЛИХ И СРЕДЊИХ ПРЕДУЗЕЋА У СЕКТОРУ ТРГОВИНЕ У СРБИЈИ

Апстракт

Циљ рада је да се истраже детерминанте профитабилности малих и средњих предузећа у привредном сектору трговине у Републици Србији. Трговина представља веома важан сектор за привреду Србије, а уједно спада и међу најпрофитабилније привредне секторе. Истраживање детерминанти профитабилности обухвата две фазе. У првом реду, испитано је постојање разлика у степену профитабилности између малих и средњих предузећа, са једне стране, и великих трговински предузе-

ћа, са друге стране, применом студент т-теста. У другом делу, применом статистичког метода регресије на основу панел-података препознати су фактори профитабилности трговинских предузећа. Профитабилност је мерена на основу показатеља поврата на имовину, док су се као независне детерминанте профитабилности поставиле следеће варијабле: величина, задуженост, ликвидност, рацио фиксне имовине, инвестиције, раст и претходна профитабилност. Подаци су прикупљени из финансијских извештаја и обухватају укупно 9005 опсервација од 1801 предузећа из групе малих и средњих предузећа и 1605 опсервација од 321 предузећа из групе великих трговинских предузећа која су пословала у периоду од 2010. до 2014. године. Резултати истраживања указују на то да трговинска предузећа из групе малих и средњих предузећа остварују статистички значајно бољу профитабилност од великих трговинских предузећа. Даље, резултати указују на то да на профитабилност позитивно утичу задуженост, ликвидност, раст и претходна профитабилност, док негативно утичу величина и рацио фиксне имовине.

Кључне речи: поврат на имовину (РОА), мала и средња предузећа (МСП), детерминанте профитабилности, трговинска предузећа.

INTRODUCTION

The wholesale and retail sector is one of the most important sectors in the economy of the Republic of Serbia. While the Serbian economy consists of 21 sectors, 35 per cent of the enterprises belong to the wholesale and retail sector (Statistical Office of the Republic of Serbia, 2015). The main indicator of the success of economy, sectors and enterprises is profitability. Profitability, as a measure of the ability of companies to make a profit in relation to investments, is a key indicator of performance for two reasons. First, enterprise profitability is generally regarded as an important precondition for the long-term firm survival and success. Another factor explaining the importance of firm profitability is its effect on economic growth, employment, innovation, and technological change. In order to achieve better competition, improve efficiency, and answer to the pricing pressure, enterprises are experiencing greater difficulty attaining the required profitability (Yazdanfar, 2013).

Since 2009, the profitability of the Serbian economy is consistently positive. In the period 2009 – 2013, the profitability of the Serbian economy was 5.95 percent, measured according to the return on assets (Mijić, Jakšić, 2015, p. 1). Besides the fact that the wholesale and retail sector is the largest sector according to the number of enterprises, this sector is also among the most successful sectors in Serbia. The average ROA in the period 2009-2013 of the wholesale and retail sector was 7.13 percent (based on the sample of 13,982 observations).

The question of what factors determine profitability should be one of high priority for both researchers and practitioners, including managers, investors, debt holders, and policy makers (Yazdanfar, 2013). This study will provide an answer to this question specific for small and medium enterprises (SMEs) in the wholesale and retail sector in the Republic of Serbia. SMEs are

very important for the development sector and economy. Despite the crucial and growing role of SMEs in Serbian economy, where they account more than 99 percent of enterprises (Statistical Office of the Republic of Serbia, 2015), a very small number of researches were made to their profitability determinants, especially in the wholesale and retail sector. Since small and medium-sized enterprises (SMEs) are usually burdened by a lack of capital, this limitation can and must be replaced by a focus either on the efficient use of limited resources or on quality (product quality, process quality, and quality of business). Therefore, in SMEs the need to achieve business excellence is even more emphasized compared to large enterprises (Radosavljević et al, 2015, p. 926). This study attempts to investigate the determinants of enterprises profitability of SMEs in the wholesale and retail sector, in contrast to large enterprises, utilizing the enterprise-specific publicly available accounting variables using panel data estimation techniques.

The study consists of six sections. The first section describes the background of the study. The second section provides reviews of the previous literature. The third section describes the determinants of profitability. The fourth section describes the data and methodology used, while the fifth section provides empirical results. Finally, the sixth section concludes.

LITERATURE REVIEW

Research papers about profitability determinants are focused on specific industry sector or on the specific type of enterprises in one sector for example on the level of SMEs or large companies of the specific sector (e.g. Adams and Buckle, 2003; Goddard et al., 2005). These research papers can be classified into two groups. The first group focuses on external determinants, i.e. factors that reflect the market, business, and economic environment in which enterprises operate (Scherer, 1980; McGahan, Porter, 1997). The second group focuses on internal determinants, i.e. factors at the level of the enterprises (McDonald, 1999; Goddard et al. 2005; Stiewald, 2010; Asimakopoulos, Samitas, Papadogonas, 2009; Chandrapala, Knapkova, 2013; Chandrapala, Guneratne, 2012; Coban, S. 2014; Agiomirgianakis et al. 2006; Papadogonas, 2005; Bonić et al., 2015). Since the focus of this study is on the internal profitability determinants, the literature review will be based on relevant studies for this group.

The profitability determinants of Australian manufacturing enterprises for the period 1984-1993 were examined by McDonald (1993). The results indicate that lagged profitability and industry affiliation are crucial factors of profitability.

Goddard et al. (2005, p. 1269) investigated profitability determinants of manufacturing and service sector in Belgium, France, Italy and the UK

for the 1993-2001 period, using the panel data technique. Their research suggests that enterprises size and gearing ratio are negatively related to profitability, while market share and liquidity positively influence profitability.

In order to identify the factors of profitability, Stierwald (2010) used a panel data set of 961 large Australian enterprises for the period 1995-2005. The author used a random and fixed-effect regression including lagged profitability, productivity, size and industry affiliation as independent variables. The results indicate that lagged profitability, productivity, and size are crucial factors of profitability, while the effect of industry affiliation is not.

Asimakopoulos et al. (2009, p. 929) investigated the factors of profitability for the Greek non-financial enterprises listed on the Athens Stock Exchange for the 1995-2003 period. They used the panel data estimation technique and found out that size, sales growth, and investment positively related to profitability. On the other side, leverage, current assets, EMU participation, and adoption of the euro are negatively related to profitability.

Chandrapala and Knapkova (2013, p. 2184) investigated the impact of firm-specific factors on the financial performance of 974 firms in the Czech Republic over the period from 2005 to 2008. They used the pooled and panel cross-sectional time series techniques for the analysis of the impact of eight independent variables on the return on assets (ROA). The results indicate that the firm size, sales growth and capital turnover have a significant positive impact on ROA, while debt ratio and inventory have significant negative impact on it.

Chandrapala and Guneratne (2012, p. 171) examined the impact of ownership concentration and other internal factors on the financial performance of enterprises listed on the Colombo Stock Exchange. The pooled and ordinary least square regression was used to analyze the data. The results indicate that the ownership concentration does not have a statistically significant relationship with the return on assets. Furthermore, firm size, quick ratio, and the ratio of inventory investment to total assets have a positive impact on the ROA, while debt ratio has a negative impact on the ROA.

Coban (2014, p. 73) used a panel data of 137 Turkish listed manufacturing companies over the period 1997-2012 to investigate the interaction between firm growth and profitability. The research, based on the system-GMM, showed that there is a statistically significant positive relation between current profit and current growth.

Agiomirgianakis et al. (2006, p. 236) used a panel data of 3,094 Greek manufacturing firms for the period 1995-1999 in order to investigate which internal factor has an impact on profitability. They found out that firm size, age, exports, sales growth, reliance on debt and fixed assets growth, as well

as efficient management of assets influence profitability. Similar research was conducted by Papadogonas (2005, p. 14), but his research is based on the small and large enterprises. The results of his study show that profitability is positively affected by the firm size and managerial efficiency, and negatively by leverage. Also, findings show that sales growth is significant for small firms, while it is not a significant factor for large companies.

DETERMINANTS OF PROFITABILITY

The profitability variable as a dependent variable is represented by the return on assets (ROA). The most relevant determinant in explaining the market value of enterprises is the ROA (Asiri, 2015, p. 4). The ROA is defined as the firm's book value of net profit after tax divided by total assets.

The group of independent variables consists of size, quick ratio, leverage, fixed assets to total assets ratio, sales growth, investment, and lagged profitability.

The size of enterprises can be measured using several proxies, such as assets, sales, and employees. In this study, the size is measured as the natural logarithm of the firm book value of sales. Larger enterprises not only enjoy a higher turnover and ability to generate higher income, but also have better access to capital markets (Titman, Wessels, 1988, p. 1), and lower cost of borrowing (Whited, 1992, p. 1425). According to this, it is expected that size is positively related to profitability. However, the findings of previous studies are not uniform regarding this expectation. While Ito and Fukao (2006), Asimakopoulos et al. (2009, p. 929), and Stierwald (2010) found that firm size has a positive influence on profitability, Goddard et al. (2005), Jensen and Murphy (1990), found the inverse relationship between firm size and profitability.

The quick ratio indicates the amount of liquid assets available to offset a current debt. The quick ratio is measured as a ratio of cash and accounts receivable to current liabilities. Healthy enterprises should have this ratio at the minimum level of 1.0. Therefore, the firm's ability to pay short-term liabilities is a key factor in determining the firm's performance. The findings of the influence of quick ratio on the profitability are also mixed. Barbosa and Louri (2005), and Kuntluru et al. (2008, p. 28) confirm that there is a positive relationship between quick ratio and ROA. On the other hand, Pratheepan (2014, p.7) found that quick ratio does not have an influence on profitability.

Leverage indicates the level of the debt. Leverage can be measured by using different indicators, such as ratio of the total debt to total equity, or ratio of total debt to total assets. In this study, leverage was measured by ratio of total debt to total assets. Higher debt can negatively influence profitability, because high debt requires more resources to pay the debt.

On the other side, additional debt can be implemented in a good investment, which will increase profitability. Asimakopoulos et al. (2009, p. 929) and Al-Jafari and Samman (2015, p. 303) found that leverage is negatively correlated to profitability, while Burja (2011, p. 215) found that leverage is positively correlated to profitability.

Fixed assets to total assets ratio shows which part of the fixed assets is financed with the owner's equity. The ratio of 0.5 or higher indicates an inefficient use of working capital which reduces the firm's ability to carry accounts receivable and maintain inventory and usually means a low cash reserve. Furthermore, this will limit firm's ability to respond to an increased demand. Pratheepan (2014, p. 7) supported this in his research and found out that there was a negative and statistically significant relationship between fixed assets to total assets ratio and profitability.

Growth measures the ability of the firm to achieve growth in sales. Growth is calculated as the growth rate of sales in two consecutive periods. If the firm achieves greater growth in sales, that means it provides additional income for the current period. Therefore it is expected that growth affects profitability positively (Asimakopoulos et al. 2009, Geroski et al. 1997). On the contrary, some researchers showed that growth can be negatively related to profitability (Kaen, Baumann, 2003; Hoy et al. 1992).

Investment refers to increase in fixed assets, and it is calculated as the growth rate of gross fixed assets in two consecutive periods. It is expected that investment affects profitability positively since it expands production capacity, in order to improve sales and at the end to increase profit (Asimakopoulos et al. 2009; Guariglia, 2009).

Lagged and current profitability are related, because lagged profit implies more resources in a current period, such as more liquid assets, better relationship with customer, and possibility to increase market share. Therefore, lagged profitability is expected to be positively related to current profitability (Coban 2014; Yazdanfar, 2013).

DATA AND METHODOLOGY

Describe of Data

The data used in this study refer to a sample of Serbian wholesale and retail enterprises for the period 2010-2014. The data were collected from the database "Amadeus" and includes a detailed balance sheet, income statement, and other data on Serbian firms (Amadeus, 2016). The original set includes 10,592 enterprises. In order to construct balanced panel data and avoid effects of new enterprises, and enterprises that shut down during the period, our sample consists of the enterprises that operated during the whole period 2010-2014. Furthermore, the missing or

abnormal data were removed, so the final sample consists of 2,322 enterprises. This sample was separated into two. The first sample consists of 1,801 SMEs represented by 9,005 observations and the second sample consists of 321 large enterprises represented by 1,605 observations.

Table 1 contains descriptive statistics of the variables for both groups (SMEs and large wholesale and retail enterprises) for the total period under examination. The profitability of the SMEs wholesale and retail enterprises is better than the profitability of the large enterprises. Regardless of numerous changes in the past few years, retail trade in fast moving consumer goods in Serbia has significant role on the FMCG market (Grubor et al. 2013, p. 402). Also, SMEs enterprises have better quick ratio and investment ratio. Both groups of enterprises are extremely high leveraged.

Table 1. Descriptive statistics of ROA for SMEs and large wholesale and retail enterprises

Variable	Observation	Mean	Std. Dev.	Min	Max
<i>SMEs</i>					
ROA	9,005	7.5614	8.4598	-28.1790	43.2910
Size	9,005	6.8807	0.9656	2.7429	10.2027
Quick ratio	9,005	2.3268	2.6568	0.1144	29.9423
Leverage	9,005	0.9326	0.1314	0.0395	0.9999
Fixed assets to total assets ratio	9,005	0.2378	0.1979	0.0004	0.9556
Growth	9,005	0.1374	0.5594	-0.9803	12.06753
Investment	9,005	1.2051	0.6746	-1.0059	18.2432
Lagged profitability	9,005	8.0329	8.6545	-28.1790	43.2910
<i>Large enterprises</i>					
ROA	1,605	5.2831	9.2939	-36.1490	47.3010
Quick ratio	1,605	8.9723	1.3029	5.2947	13.3768
Leverage	1,605	0.8612	0.2054	0.0046	0.9999
Fixed assets to total assets ratio	1,605	0.8612	0.2055	0.0463	0.9999
Growth	1,605	0.2884	0.2490	0.0001	0.98654
Investment	1,605	0.1369	0.6128	-0.9806	9.4825
Lagged profitability	1,605	0.2407	1.3708	-0.9766	25.3139
Quick ratio	1,605	5.7128	9.1125	-34.9230	45.8140

Source: Author's calculation

Methodology

The research of profitability determinants of SMEs enterprises of the Serbian wholesale and retail sector includes two phases. Firstly, the differences between the profitability of SMEs and large enterprises were investigated using the Student t-test. According to the aim of the first phase, the following hypothesis is defined:

H₁: There is a difference between the profitability of SMEs and large enterprises of Serbian wholesale and retail sector.

Secondly, in order to investigate profitability determinants of SMEs, panel data techniques were conducted. According to this, the following hypothesis is defined.

H₂: Firm internal characteristics (size, quick ratio, leverage, fixed assets to total assets ratio, growth, investment and lagged profitability) of Serbian SMEs wholesale and retail sector have a significant impact on profitability.

A major motivation for using panel data has been the ability to control the possibly correlated, time-invariant heterogeneity without observing it (Williams, 2015). The two models, depend on the nature of the variables, are included into this estimation. If variables are constant over time, the random effect model is better (Hsiao, 2010). The random effect model is given as (Bruderl, 2005, p. 3):

$$Y_{it} = \beta_0 + \beta_1 x_{it} + v_i + \varepsilon_{it} \quad (1)$$

It is assumed that the v_i are random variables (random effects) and that $\text{Cov}(x_{it}, v_i) = 0$. Using a pooled-GLS estimator provides the random effects estimator. The following transformation is required to estimate random effects model from the pooled regression (Bruderl, 2005, p. 4):

$$(Y_{it} - \theta \bar{Y}_i) = \beta_0(1 - \theta) + \beta_1(x_{it} - \theta \bar{x}_i) + \{(1 - \theta)v_i + (\varepsilon_{it} - \theta \bar{\varepsilon}_i)\} \quad (2)$$

Where

$$\theta = 1 - \sqrt{\frac{\sigma_\varepsilon^2}{T\sigma_v^2 + \sigma_\varepsilon^2}} \quad (3)$$

If $\theta = 1$, random effect estimation is similar to fixed effects estimator, but if $\theta = 0$, the random effect estimation is similar to pooled regression. Normally θ is between 0 and 1. If $(x_{it}, v_{it}) = 0$, it is good, it even increases efficiency. If $(x_{it}, v_{it}) \neq 0$ the random effect estimator will be biased and the degree of bias depends on value to θ . If $\sigma_{2v} \gg \sigma_2$, then θ is expected to be close to 1, and the bias of the random effects estimator will be lower (Bruderl, 2005).

If independent variables vary over time, than the use of the fixed effects model is appropriate.

$$Y_{it} = \beta_1 x_{it} + v_i + \varepsilon_{it} \quad (4)$$

The answer to the question which model (fixed effects or random effects model) is appropriate will be realized by the tests model validation such as the Bresuch-Pagan Larange Multiplies test and Hausman test.

EMPIRICAL RESULTS AND DISCUSSION

An independent samples t-test was conducted to compare the ROA for SMEs and large enterprises. The test for equal variance shows that there is unequal variance ($p=0.000$). Therefore, the Student t-test with unequal variance was conducted. The table 2 shows results of the Student t – test. There was a significant difference in the scores for the ROA of SMEs ($M=7.5614$, $SD=8.4598$) and large enterprises ($M=5.2831$, $SD=9.2939$); $t=9.1677$, $p = 0.0000$. According to this, hypothesis H1 is confirmed. It can be concluded that the difference between the profitability of SMEs and large enterprises of Serbian wholesale and retail sector is significant.

Table 2. Student t-test result

Group	Observation	Mean	Std. Err.	Std. Dev.	95% Conf. Interval	
SMEs	9,005	7.5614	0.0891	8.4598	7.386744	7.736251
Large enterprises	1,605	5.2831	0.2319	9.2939	4.828045	5.738107
Combined	10,610	7.216835	0.08378	8.6294	7.0526	7.381054
Welch's degrees of freedom =	t = 9.1677 p = 0.0000					
	2,105.16					

Source: Author's calculation

Table 3 shows the strength and direction of the relationship between variables which is examined by the Pearson correlation coefficient. Correlation is significant at the 0.01 level between the ROA on one side, and size, quick ratio, leverage, fixed assets to total assets ratio, growth and lagged profitability on the other side.

Table 3. Correlation matrix

Variables	ROA	Size	Quick ratio	Leverage	Fixed assets to total assets	Growth	Investment	Lagged profitability
ROA	1	-0.111**	0.279**	0.140**	-0.082**	0.121**	0.004	0.715**
Size	-0.111**	1	0.043**	-0.073**	0.149**	-0.113**	-0.033**	-0.069**
Quick ratio	0.279**	0.043**	1	-0.006	-0.113**	-0.054**	-0.013	0.294**
Leverage	0.140**	-0.073**	-0.006	1	-0.246**	0.017	-0.013	0.160**
Fixed assets to total assets	-0.082**	0.149**	-0.113**	-0.246**	1	-0.057**	0.007	-0.078**
Growth	0.121**	-0.113**	-0.054**	0.017	-0.057**	1	0.022*	-0.010
Investment	0.004	-0.033**	-0.013	-0.013	0.007	0.022*	1	0.010
Lagged profitability	0.715**	-0.069**	0.294**	0.160**	-0.078**	-0.010	0.010	1

** Correlation is significant at the 0.01 level; * Correlation is significant at the 0.05 level

Source: Author's calculation

Table 3 shows the results of the test of multicollinearity using the variance inflation factor (VIF). The (VIF) explains how much the variance of a coefficient is inflated due to the linear dependence with other independent variables. Less VIF means that the multicollinearity between independent variables is smaller. The referent value of VIF is that VIF should not be greater than 10. According to the results (Table 3), it can be concluded that there is no multicollinearity problem in this model.

Table 3. VIF results

Variable	SMEs	
	VIF	1/VIF
Size	1.05	0.956422
Quick ratio	1.12	0.891677
Leverage	1.1	0.912866
Fixed assets to total assets ratio	1.1	0.905596
Growth	1.02	0.982365
Investment	1	0.997912
Lagged profitability	1.13	0.882735
Mean VIF	1.07	

Source: Author's calculation

The Table 4 summarizes the results of the panel data regression analysis when random effect and fixed effect estimation were used for SMEs enterprises.

Table 4. Panel data regression analysis

ROA	SMEs	
	Random effect	Fixed effect
Size	-0.4623121 0.00000*	-1.938653 0.00000*
Quick ratio	0.2817662 0.00000*	0.1587013 0.00000*
Leverage	1.668777 0.00100*	3.439262 0.01300**
Fixed assets to total assets ratio	0.1248836 0.69800	-1.990508 0.02700**
Growth	1.904655 0.00000*	1.755811 0.00000*
Investment	-0.0019567 0.38900	0.002801 0.26100
Lagged profitability	0.6669745 0.00000*	0.299875 0.00000*
_cons	2.883728 0.00000	15.14385 0.00000
	R sq. = 0.5367 Prob > chi ² =0.000	R sq. = 0.3987 Prob > F=0.000

Source: Author's calculation

The test and validation of the models were conducted before the results interpretation. First, the decision whether to use the simple ordinary least square (OLS) or random effect panel data regression is based on the Bresuch-Pagan Larange Multiplies test. The results show that random effect is appropriate for SMEs enterprises, because a significant difference exists ($p=0.000$ is less than 0.05).

Secondly, the selection of one model from random effect and fixed effect options is based on the Hausman test. The Hausman test result for SMEs indicates the use of fixed effect model ($p=0.000$ is less than 0.05).

Based on the results reported in Table 4, the following profitability determinants of SMEs wholesale and retail sector are identified: size, leverage, quick ratio, fixed assets ratio, sales growth and lagged ROA. On the other hand, investment as a factor is not a significant determinant of profitability for SMEs of wholesale and retail sector in Serbia. According to findings, it can be conclude that hypothesis H2 is partially confirm.

The finding indicates that leverage, quick ratio, sales growth and lagged profitability positively influence the profitability of SMEs. Firms with higher debt ratio have better profitability. This evidence is in line with the capital structure theory, which states that debt financing is favourable to the firm since it delivers tax savings. Furthermore, the minimum amount of capital for the constitution of enterprises in Serbia is only 1 euro, so in many enterprises high debt ratio is present (mean debt ratio for SMEs is 0.9326 , which indicate that 93.26% of assets is financed by debt). Serbian SMEs with higher quick ratio have better profitability. This is in accordance with the findings of other authors (Barbosa and Louri, 2005; Kuntluru et al. 2008). It confirms that firms with a higher quick ratio have the ability to pay short-term liabilities, which is one of the crucial factors in determining the firm performance. Sales growth, as expected, positively influences firm's profitability. The ability of sales increase provides higher revenues as a positive component of the net result. Lagged profitability and current profitability of SMEs are also positively related, which is according to expectation. SMEs with higher lagged profitability imply more resources in the current period and achieve better profitability in the current period.

On the other side, firm's size and fixed assets ratio are negatively related to profitability for SMEs of the wholesale and retail sector. Smaller firms in wholesale and retail sector achieve better relative profitability, which is according to the findings of other researchers (Goddard et al. 2005; Jensen and Murphy, 1990). In Serbian SMEs wholesale and retail sector, firms with less fixed assets ratio achieve better profitability. This funding is according to expectation (Pratheepan, 2014, p. 7) and mean that firms with lower fixed assets ratio have the ability to adequately respond to the increasing demand, which influences a better profitability at the end.

CONCLUSIONS

In this paper, profitability determinants of SMEs in Serbian wholesale and retail sector were examined. The wholesale and retail sector is a very important sector for Serbian economy, and one of the most profitable sectors. Furthermore, SMEs is a crucial part of economy development.

Results indicate that SMEs achieve statistically significant higher ROA than large enterprises in Serbian wholesale and retail sector. In order to investigate factors which affect the profitability of SMEs the panel data analysis was conducted. The results show that firm profitability is positively affected by leverage, quick ratio, growth and lagged profitability. Profitability of SMEs is negatively affected by firm's size and fixed assets ratio.

Our results are of interest to various stakeholders, including managers, investors, debt holders, and other users of financial statements, since it makes a profile of SMEs wholesale and retail companies by associating firm internal characteristics with intensity and direction of profitability ratio. Furthermore, our results are also of interest to further research in similar areas, especially in the area of SMEs. Future research of profitability determinants should be expanded in two ways. First, a comparative analysis of profitability determinants of SMEs between wholesale and retail sector, and other sectors or economy in Serbia should be conducted. Also, a comparative analysis of profitability determinants among SMEs of the wholesale and retail sector in Serbia and other countries will be of interest to research.

REFERENCES

- Adams, M., & Buckle, M. (2003). The determinants of corporate financial performance in the Bermuda insurance market. *Applied Financial Economics*. 13(2), 133-143.
- Al-Jafari, M. K., & Al Samman, H. (2015). Determinants of profitability: evidence from industrial companies listed on Muscat Securities Market. *Review of European Studies*. . 7(11), 303-311
- Agiomirgianakis, G., Voulgaris, F., & Papadogonas, T. (2006). Financial factors affecting profitability and employment growth: the case of Gred manufacturing. *International Journal of Financial Services Management*. 11(2), 232-242.
- Amadeus. (2016). Database. Retrieved 10th April 2016 from <http://www.eui.eu/Research/Library/ResearchGuides/Economics/Statistics/DataPortal/AmadeusBvD.aspx>
- Asimakopoulos, I., Samitas, A., & Papadogonas, T. (2009). Firm-specific and economy wide determinants of firm profitability-Greek evidence using panel data. *Managerial Finance*. 35 (11), 929-940.
- Asiri, B. (2015). How investors perceive financial ratios at different growth opportunities and financial leverages. *Journal of Business Studies Quarterly*. 6 (3), 1-12.
- Barbosa, N., & Louri, H. (2005). Corporate Performance: does ownership matter? A comparison of foreign-and domestic-owned firms in Greece and Portugal. *Review of Industrial Organization*, 27, 73-102.
- Bonić, Lj., Mijić, K. & Jakšić, D. (2015). Prospects for survival and development of audit firms through integration into audit networks. *Temе*. 39(2). 409-423.
- Bruderl, J. (2005). Panel Data Analysis. Retrieved 5th May 2016 from <http://www2.sowi.uni-mannheim.de/lsssm/veranst/Panelanalyse.pdf>

- Burja, C. (2011). Factors influencing the company's profitability. *Annales Universitatis Apulensis Series Oeconomica*. 13 (2), 215-224.
- Chandrapala, P., & Guneratne, W. (2012). Ownership concentration and financial performance: the case of Sri Lankan listed companies. *Corporate Ownership and Control*. 9 (4), 170-177.
- Chandrapala, P., & Knapkova, A. (2013). Firm-specific factors and financial performance of firms in the Czech Republic. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*. 61 (7), 2183-2190.
- Coban, S. (2014). The interaction between firm growth and profitability: evidence from Turkish (listed) manufacturing firms. *Bilgi Ekonomisi ve Yoneimi Dergisi*. 9 (2), 73-82.
- Geroski, P. A., Machin, S. J., & Walters, C. F. (1997). Corporate growth and profitability. *The Journal of Industrial Economics*. 45 (2), 171-189.
- Grubor, A., Milicevic, N., & Mijic, K. (2013). Empirical Analysis of Inventory Turnover Ratio in FMCG Retail Sector – Evidence from the Republic of Serbia. *Inzinerine Ekonomika-Engineering Economics*, 24 (5), 401-407
- Goddard, J., Tabakoli, M., & Wilson, J. (2005). Determinants of profitability in European manufacturing and services: evidence from a dynamic panel model. *Applied Financial Economics*. 15 (18), 1269-1289.
- Guariglia, A. (2009). Modeling the relationship between financial indicators and company performance – an empirical study for US listed companies. France: Dissertation Vienna University of Economics and Business Administration.
- Hoy, F., McDougall, P. P., & D'Souza, D. E. (1992). Strategies and environments of high-growth firms. In Sexton, D. L., Kasarda, J. D. (Eds). *The State of the Art of Entrepreneurship*, Boston: PWS.
- Hsiao, C. (2010). *Analysis of Panel Data*. New York: Cambridge University Press.
- Ito, K., & Fukao, K. (2006). Determinants of the profitability of the Japanese manufacturing affiliates in China and regions: does localization of procurement, sales and management matter. Discussion Paper. Series No. 01-E_001. Retrieved 25th May 2016 from <http://www.rieti.go.jp/en/publications/summary/07010001.html>
- Jensen, M. C., & Murphy, K. J. (1990). Performance pay and top-management incentives. *Journal of Political Economy*. 98 (1), 225-264.
- Kaen, F. R., & Baumann, H. D. (2003). Firm size, employees and profitability in US manufacturing industries. Retrieved 25th May 2016 from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=382402
- Kuntluru, S., Muppani, V. R., & Khan A. M. (2008). Financial performance of foreign and domestic owned companies in India. *Journal of Asia Pacific Business*. 9 (1), 28-54.
- McDonald, J. (1999). The determinants of firm profitability in Australian manufacturing. *The Economic Record*. 75 (229), 115-126
- McGahan, A., & Porter, M.E. (1997). How much does industry matter, really? *Strategic Management Journal*. 18 (S1), 15-30
- Mijic, K., & Jaksic, D. (2015). Profitability Analysis of Serbian Economic Sector. *Economic Outlook*. 18 (2), 1-12.
- Papadogonas, T. (2005). The financial performance of large and small firms: evidence from Greece. *International Journal of Financial Services Management*. 2 (1), 14-20.
- Prathepan, 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.

- Radosavljević, M., Bošković, G. & Kalač, E. (2015). Analysis of business performance of small and medium-sized enterprises in the Republic of Serbia according to the criteria of the EFQM model. *Teme*. 39(3). 925-941.
- Scherer, F. (1980). Industrial market structure and economic performance. Boston: Houghton-Mifflin.
- Statistical Office of the Republic of Serbia. (2015). Enterprises in the Republic of Serbia. Belgrade: Statistical Office of the Republic of Serbia.
- Stierwald, A. (2010). The causes of profit heterogeneity in large Australian firms. Working paper No. 7/10. Melbourne: University of Melbourne, Melbourne Institute of Applied Economic and Social Research.
- Titman, S., & Wessels, R. (1988). The determinants of capital structure choice. *Journal of Finance*. 43, 1-19.
- Whited, T. (1992). Debt, liquidity constraints and corporate investment: evidence from panel data. *Journal of Finance*. 47, 1425-1460.
- Williams, R. (2015). Panel Data: Very Brief Overview. Retrieved 10th May 2016 from <https://www3.nd.edu/~rwilliam/stats2/Panel.pdf>
- Yazdanfar, D. (2013). Profitability determinants among micro firms: evidence from Swedish data. *International Journal of Managerial Finance*. 9(2), 150-161.

ДЕТЕРМИНАНТЕ ПРОФИТАБИЛНОСТИ МАЛИХ И СРЕДЊИХ ПРЕДУЗЕЋА У СЕКТОРУ ТРГОВИНЕ У СРБИЈИ

Кристина Мијић, Даниела Нушева, Дејан Јакшић

Универзитет у Новом Саду, Економски факултет у Суботици, Нови Сад, Србија

Резиме

Трговина представља веома важан сектор за привреду Србије, а уједно спада и међу најпрофитабилније привредне секторе. Просечна стопа профитабилности трговинског сектора износи 7,13%, што је значајно изнад просека профитабилности привреде, која износи 5,95% у периоду од 2009. до 2013. године. Значај мерења и анализе профитабилности произлази из чињенице да профит представља кључни фактор опстанка, развоја и стицања конкурентских предности предузећа и привредних сектора. Такође, висока профитабилност обезбеђује економски раст, повећање запослености, иновације и технолошке промене. Давање одговора на питање који фактори одређују профитабилност предузећа у одређеном сектору од велике је важности за менаџмент предузећа, потенцијалне инвестиције, као и ствараоце економске политике. У раду је истражено који унутрашњи фактори су од значаја за профитабилност малих и средњих предузећа из трговинског сектора у Републици Србији. Мала и средња предузећа имају кључну улогу у развоју привреде Србије и обухватају 99% предузећа.

Истраживање детерминанти профитабилности обухвата две фазе. У првом реду испитано је постојање разлика у степену профитабилности између малих и средњих предузећа, са једне стране, и великих трговинских предузећа, са друге стране, применом студент т-теста. У другом делу, применом статистичког метода регресије на основу панел-података препознати су фактори профитабилности трговинских предузећа. Профитабилност је мерена на основу показатеља поврата на имовину, док су се као независне детерминанте профитабилности поставиле сле-

деће варијабле: величина, задуженост, ликвидност, рацио фиксне имовине, инвестиције, раст и претходна профитабилност. Подаци су прикупљени из финансијских извештаја и обухватају укупно 9005 опсервација од 1801 предузећа из групе малих и средњих предузећа и 1605 опсервација од 321 предузећа из групе великих трговинских предузећа која су пословала у периоду од 2010. до 2014. године. Резултати истраживања указују на то да трговинска предузећа из групе малих и средњих предузећа остварују статистички значајно бољу профитабилност од великих трговинских предузећа. Просечна стопа профитабилности малих и средњих предузећа износи 7,56%, док велика трговинска предузећа остварују просечну профитабилност од 5,28%. Даље, резултати указују на то да на профитабилност малих и средњих трговинских предузећа позитивно утичу задуженост, ликвидност, раст и претходна профитабилност, док негативно утичу величина и рацио фиксне имовине.