THE IMPACT OF WORKING CAPITAL MANAGEMENT ON PROFITABILITY: EVIDENCE FROM SERBIAN LISTED MANUFACTURING COMPANIES

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Abstract: Working capital management (WCM) plays a significant role in company's operations. The aim of this research is to explain how working capital management affects profitability of Serbian companies measured by ROA indicator. In order to answer the question, a quantitative analysis of working capital management was performed on a sample of 79 companies in the field of manufacturing industry from the territory of the Republic of Serbia. All the companies were listed on the Belgrade Stock Exchange in business year 2019. Analysis was performed via Spearman's correlation coefficient and multiple linear regression. The results of the research show that there is a negative and statistically significant correlation between profitability and accounts receivable turnover in days (ART), accounts payable turnover in days (APT) and inventory turnover in days (IT). On the other hand, it was found that there is no statistically significant correlation between cash conversion cycle in days (CCC) and profitability. The issue of working capital management has not been sufficiently examined in the territory of the Republic of Serbia and it is difficult to determine which theoretical knowledge about working capital is true, which emphasizes the importance of research on this subject.

Introduction

Working capital has a significant impact on survival of a company. The vitality of working capital management is especially present in manufacturing companies, which are characterized by a significant share of working capital in the form of inventories and accounts receivable. Working capital mainly represents the current assets of a

company, which is the portion of financial resources of business that change from one type to another during the day-to-day execution of business. Current assets mainly comprise of cash, prepaid expenses, short-term investments, accounts receivable and inventory. *Net working capital* can be measured by deducting current liabilities of a company from its current assets (Ponsian, et al., 2014, p. 347).

The level of working capital has a significant impact on the profitability and liquidity of a company. Efficient working capital management has the impact, not only on profitability as short-term financial performance, but also on shareholder's value maximization, as long-term financial performance (Vuković & Jaksić, 2019, p. 159). Working capital management can be defined as the way in which management of a company manipulates the relationship between current assets and current liabilities. Working capital management has a significant role in the process of ensuring an adequate level of cash, with a clear goal — smooth execution of short-term obligations of entities. The working capital management policy is based on the permanent control of the amount of cash and its equivalents, inventories, receivables, and other liquid assets on the one hand, and due liabilities on the other hand (Vuković, 2016, p. 1023). A firm may adopt an *aggressive* working capital management policy with a low level of current assets as percentage of total assets. (Afza & Nazir, 2007, p. 11). *Conservative* working capital policy refers to minimizing risk by maintaining a higher level of working capital. *Moderate* working capital policy refers to the unostentatious level of working capital, according to moderate level of sales. It means one percent of change in working capital is equal to sales (Paramasivan & Subramanian, 2009, p. 176). The main goal in working capital management is to ensure an adequate relationship between its components. Keeping a high level of short-term assets leads to a decrease in the company's profitability, while on the other hand a low level of short-term assets has an impact on the decline in liquidity. A high level of inventories is acceptable if an aggressive sales policy is in place, while companies without a clear sales plan only have additional and unnecessary costs from the inventories. The most important issue in WCM is maintaining of liquidity in the day-to-day operations of firm. This is crucial to prevent creditors and suppliers, whose claims are due in the short-term, from exerting unwarranted pressure on management and thus ensure the smooth running of firm (Akoto et al., 2013, p. 373). Firms must maintain the working capital management in a most favorable way which can maximize its value (Bagchi et al., 2012, p. 1).

The main goal of the research is to determine whether efficient working capital management has an impact on the success of Serbian companies measured by ROA indicator. An entity can be considered as one that efficiently manages working capital only if it can provide the shortest possible time for fulfillment of obligations to suppliers and the shortest possible time for collection of receivables from customers. At the same time, it is necessary to provide a short period of inventories binding, because unreasonable keeping of inventories at high level has no added value for the company and creates unnecessary costs. The paper is divided into two

sections. In the first section, a brief overview of the literature was made, while in the second section an analysis of working capital management was performed.

1. Literature overview

While in the field of domestic authors the issue of working capital management is relatively unexplored, foreign authors have paid more attention to this issue in the last 10 years. Authors Dong Phuong H. and Su J. T. (2010) examined the correlation between working capital management and profitability on a sample of 390 companies listed on the Vietnam Stock Exchange from 2006 to 2008. The results of their research show that there is a strong negative correlation between inventory turnover in days (IT) and profitability of a company. The same was proved for accounts receivable turnover in days (ART). On the other hand, a positive and strong correlation between accounts payable turnover in days (APT) and profitability has been proven. The Cash conversion cycle (CCC) was used as a comprehensive measure. A strong negative correlation between the CCC and profitability was proven.

Ponsian N. and co-authors (2014) analyzed the impact of working capital management on profitability in Tanzania on a sample of three manufacturing companies listed on the Dar es Salaam Stock Exchange in the time interval from 2002 to 2012, with a total of 30 observations. The results of their research show that there is a positive correlation between CCC and profitability, a negative correlation between ART and profitability, a positive correlation between APT and profitability, as well as a significant negative correlation between IT and profitability.

Akoto K. R. and co-authors (2013) examined the importance of adequate working capital management and its impact on the profitability of 13 manufacturing companies listed on the Ghana Stock Exchange, using the panel method in the period from 2005 to 2009. Their research shows the existence of a statistically significant negative relationship between profitability and ART. On the other hand, CCC, company size, and liquidity have a strong and positive impact on profitability, while APT has a positive, but not statistically significant correlation with profitability. The indicator of company size and liquidity ratio were used as control variables. A positive and statistically significant correlation between liquidity and profitability was found. Also, there is a positive and statistically significant correlation between profitability and company size.

Alipuor M. (2011) conducted a study of the impact of working capital management on profitability on a sample of 1063 companies from the territory of Iran in the period 2001-2006. He concluded that there is a statistically significant negative correlation between ART and profitability, negative and statistically significant correlation between IT and profitability, statistically significant and negative correlation between CCC and profitability, and a positive statistically significant correlation between APT and profitability.

Sen M. and Oruc E. (2009) examined the relationship between working capital management efficiency and profitability on a sample of 49 Turkish manufacturing companies. The results of their research show that there is a statistically significant negative correlation between CCC, ART, APT, IT and profitability. When it comes to control variables, it is important to look at the liquidity ratio (CR), whose correlation with profitability is negative and statistically significant.

Uyar A. (2009), found the existence of statistically significant and negative correlation between CCC and profitability on a sample of 166 listed companies in Istanbul. Gill and co-authors (2010) examined the relationship between working capital management and profitability on the sample of 88 companies listed on the New York Stock Exchange in the period from 2005 to 2007. They concluded that there is a significant and negative correlation between the CCC and profitability. However, no statistically significant correlation was found between profitability and APT, ART and IT. Unlike others, Niresh A. J. (2012) stated that there is no statistically significant correlation between CCC and profitability indicators on the example of 30 manufacturing companies in Sri Lanka.

Certain domestic authors have examined the impact of working capital management efficiency on company profitability (Vuković, 2016; Vuković and Jakšić, 2019), but their analysis is organized differently, and it is limited to companies in the food industry. Vuković B. (2016) examined the difference in profitability in the field of food industry companies from the aspect of working capital management efficiency through one-factor analysis of variance (ANOVA). The sample includes 95 companies from the territory of the Republic of Serbia. The following ratio indicators were used as working capital management indicators (independent variables): ART, APT, IT and CCC. The ROA indicator was used as a dependent variable. The entire sample of companies is divided into three groups. One group included companies with the lowest value of working capital management indicators, in the second group were those companies that have the average value of working capital management indicators, while the third group included companies with the highest value of working capital management indicators. The results of the research show that the group of companies with the lowest efficiency of working capital management has lower average profitability rate compared to other companies. The authors Vuković B. and Jakšić D. (2019) analyzed the effect of working capital management in the food industry, on a sample of 9883 active companies from the territory of Southeast Europe. Independent variables in the analysis included liquidity, CATAR (Current assets / Total assets), CLTAR (Current liabilities / Total assets), indebtedness and company size. The ROA indicator was used as a dependent variable. Liquidity and CLTAR are negatively correlated with profitability, while indebtedness has a negative but not statistically significant correlation with profitability. On the other hand, CATAR and size of a company are positively correlated with profitability.

2. Analysis, results, and discussion

The main goal of the analysis is to give an answer to the question of how and whether efficient working capital management has additional value for a company in the form of higher profitability. The following research hypothesis is set:

H1: Factors related to working capital management (ART, APT, IT & CCC) have a statistically significant impact on a company's profitability (ROA)

Testing of the above hypothesis will be performed using four auxiliary hypotheses:

$H_{1.1}$: Indicator *Days of inventory turnover* (IT) has a statistically significant impact on a company's profitability.

$H_{1.2}$: Indicator *Days of accounts receivable turnover* (ART) has a statistically significant impact on a company's profitability.

$H_{1.3}$: Indicator *Days of accounts payable* (APT) has a statistically significant impact on a company's profitability.

$H_{1.4}$: *Cash Conversion Cycle* (CCC) indicator has a statistically significant impact on a company's profitability.

2.1. Sample

The sample initially included companies listed on the Belgrade Stock Exchange that belong to the manufacturing sector (Sector C). A total of 140 companies in the field of manufacturing industry were listed on the Belgrade Stock Exchange, but not all of them met the condition to be a part of the analysis, as shown in *Table 1*.

Table 1. Research sample

1.	Number of companies initially included in the sample	140
2.	Number of companies whose financial statements were not accessible through the database	- 41
3.	Number of companies that had to be excluded from the analysis [1]	- 20
	Final number of companies in the sample	= 79

Source: Author

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[1] This group includes companies that have not generated a single dinar of sales revenue, have not paid a single dinar of liabilities to suppliers or do not have inventories, and it was impossible to determine some of WCM management indicators.

2.2. Variables

The following variables are included in the analysis:

1) Dependent variable - ROA (Return on Assets)

2) Independent Variables - Inventory turnover days (IT), Receivables turnover days (ART), Payables turnover days (APT) and Cash conversion cycle days (CCC)

3) Control variables - Liquidity (LIQ), Leverage (LEV) and Company size (SIZE)

ROA is an indicator of profitability which depends on two components - net financial result and total value of assets available to a company. ROA ratio measures a company's ability to use its assets for profit-making purposes by relating profit and profit-generating assets (Gibson, 2000, p.288).

Inventory turnover (IT) is the ratio of sales revenue and average inventories. By comparing the number of days in the year (365) with the inventory turnover ratio, the indicator expressed in days is calculated. Inventory turnover is a measure of efficiency and effectiveness of a company's inventory management (Subramanyam & Wild, 2009, p.260).

Accounts receivable turnover (ART). This turnover ratio puts into relation operating income and average receivables. By dividing the number of days in the year (365) and the turnover ratio of receivables, the indicator expressed in days is calculated.

Accounts payable turnover (APT). This turnover ratio is the quotient of accounts payable in a specific year and average accounts payable. By dividing number of days in the year (365) and the ratio, the indicator expressed in days is calculated.

Cash conversion cycle (CCC) is calculated as follows: IT+ART-APT. Companies usually primarily have various types of credit transactions where they procure materials that they shape into a finished product they sell and thus create receivables they collect later. This flow is called cash conversion.

2.3. Research results

The efficiency of working capital management was examined using the Spearman's correlation coefficient. After that, a linear regression was performed, with the aim to determine the predictive power of the model and the degree to which the given independent variables explain changes of ROA as dependent variable.

2.3.1. Descriptive statistics

The characteristics of the sample are briefly presented through descriptive statistics.

Table 2. Descriptive statistics

Var.	N	Min.	Max.	Mean	Std. Dev.	Skewness		Kurtosis	
	Stat.	Stat.	Stat.	Stat.	Stat.	Stat.	Std. Error	Stat.	Std. Error
IT	79	0.9560	547.7017	121.6275	108.7722	1.9999	0.2705	4.7128	0.5350
ART	79	1.1253	596.2353	94.2104	110.2147	2.7032	0.2705	7.6770	0.5350
APT	79	4.8808	762.2364	119.0522	124.0896	2.8326	0.2705	10.2983	0.5350
CCC	79	-250.3606	478.8480	96.7857	132.1284	0.5725	0.2705	1.0267	0.5350
SIZE	79	7.6672	17.0104	13.2532	1.7353	-0.1747	0.2705	0.7615	0.5350
LEV	79	0.0423	3.6522	0.4590	0.4643	4.4513	0.2705	28.5145	0.5350
LIQ	79	0.0834	43.5795	2.8773	5.5228	5.7704	0.2705	39.1850	0.5350
ROA	79	-1.0324	0.1909	-0.0263	0.1612	-3.6781	0.2705	19.6963	0.5350

Source: Author via SPSS program

The lowest value of IT indicator is 1 day. Therefore, a company in the sample turns its inventories daily. On the other hand, the sample also includes companies that have difficulties in sales of inventories, as evidenced by the maximum value of 547 days required for inventory turnover. The average time required for inventory turnover is 121 days. When it comes to ART, the lowest value is 1 day, while the maximum value in the sample is 596 days. The average time required to collect receivables from customers is 94 days. The company with the highest efficiency paid its obligations to suppliers within 5 days, while the company with the lowest efficiency in the sample extended the settlement of its obligations to suppliers for as long as 762 days. On average, companies in the sample fulfilled their obligations to suppliers within 119 days. Companies that have extremely extended their obligations to suppliers have achieved a negative indicator of CCC. The lowest value of this indicator is -250 days, while the highest value is 479 days. Average conversion cycle is 96 days. A negative score at CCC indicates the number of days a company received money from sales before it had to pay its suppliers (Hutchison et al., 2007, p.42). The average indebtedness of the sampled companies is 45%. Average liquidity ratio is 2.87. This means that on average basis, companies have 2.87 dinars in current assets to finance 1 dinar of short-term liabilities. Theorists agree with the statement that a good level of profitability is present when the ROA indicator is higher than 10% (Dakić & Mijić, 2020, p.31). Many companies with a loss in the sample caused a negative average of ROA indicator. The previously stated theoretical assumption of profitability existence is not fulfilled. The company with the highest value of ROA has the value of this indicator at a level of 19%. A standard deviation of 0.16

indicates that the value of ROA indicator may deviate from the average by 16% in the positive or negative direction. A skewness of -3.67 indicates that the distribution is extremely negatively skewed. Kurtosis of 19.69 is far above the reference value and testifies to the fact that the distribution of data is extremely elongated.

2.3.2. Correlation Analysis

Before performing correlation analysis, it is necessary to perform normality test of the data series. Although descriptive statistics shows with great certainty that normal distribution is not present, it is necessary to verify this statement with a statistical test.

Table 3. Data series normality test

Tests of Normality						
Variable	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ROA	0.246	79	0.000	0.664	79	0.000
IT	0.151	79	0.000	0.806	79	0.000
ART	0.288	79	0.000	0.652	79	0.000
APT	0.206	79	0.000	0.705	79	0.000
CCC	0.097	79	0.061	0.962	79	0.018
LEV	0.185	79	0.000	0.632	79	0.000
SIZE	0.074	79	.200*	0.979	79	0.208
LIQ	0.316	79	0.000	0.395	79	0.000

Source: Author via SPSS program

The two most common statistical tests were used to test the normality of the distribution: Kolmogorov-Smirnov and Shapiro-Wilk. The results of both tests show that normal distribution is present only in the case of company size indicator. According to Field A. (2009) the fact that there is no normal distribution of the data series suggests the use of Spearman's correlation coefficient, rather than Pearson's (p.179). Unlike Pearson's correlation coefficient which takes individual, original values into account when testing, Spearman's coefficient takes ranks into account (Mold, et al. 1998, p.131). Ranks can be lined up from highest to lowest or from lowest to highest; the calculated rank correlation coefficient is identical regardless of order (Lee et.al. 2000, p.772).

Spearman's correlation coefficient results (Table 4) show that there is a negative and statistically significant correlation between profitability measured by ROA indicator and IT indicator. Given the value of the coefficient -0.253, it can be concluded that this is a weak correlation. Considering the above said, the lower the number of days for selling of inventories is, the higher profitability of company is present. There is a negative and statistically significant correlation between ART and

ROA indicators. The value of the coefficient -0.262 indicates that this is a weak correlation. This means that the shorter the period of receivables collection is, the higher profitability of company is present. There is a negative, statistically significant, and moderate correlation between APT and ROA, which means that companies that paid their obligations to suppliers in a shorter period, have a higher value of ROA indicators. There is a negative correlation between ROA and CCC, but this correlation is *not statistically significant*. Leverage and profitability are negatively correlated, but that correlation is not statistically significant. This is in line with the results of research by Vuković B. and Jakšić D. (2019). Profitability is in a positive and statistically significant correlation with liquidity and size of company, but it is correlation of moderate strength. Certain authors have reached the same results. (Phuong Dong & Su, 2010; Akoto, Awunyo-Vitor & Angmor, 2013; Vuković B. and Jakšić D. 2019).

Table 4. Spearman's correlation coefficient

Correlations		IT	ART	APT	CCC	SIZE	LEV	LIQ	ROA
IT	Correlation Coefficient	1.000							
	Sig. (2-tailed)								
ART	Correlation Coefficient	0.128	1.000						
	Sig. (2-tailed)	0.259							
APT	Correlation Coefficient	.294**	.330**	1.000					
	Sig.(2-tailed)	0.009	0.003						
CCC	Correlation Coefficient	.566**	.378**	-0.219	1.000				
	Sig. (2-tailed)	0.000	0.001	0.053					
SIZE	Correlation Coefficient	0.012	0.074	0.016	-0.021	1.000			
	Sig.(2-tailed)	0.919	0.515	0.888	0.856				
LEV	Correlation Coefficient	-0.075	0.063	.494**	-0.195	-0.041	1.000		
	Sig. (2-tailed)	0.512	0.579	0.000	0.086	0.719			
LIQ	Correlation Coefficient	0.074	-0.042	-.573**	.428**	0.165	-.685**	1.000	
	Sig. (2-tailed)	0.516	0.712	0.000	0.000	0.147	0.000		
ROA	Correlation Coefficient	-.253*	-.262*	-.302**	-0.166	.377**	-0.175	.325**	1.000
	Sig. (2-tailed)	0.025	0.020	0.007	0.143	0.001	0.122	0.003	
**. Correlation is significant at the 0.01 level (2-tailed).									
*. Correlation is significant at the 0.05 level (2-tailed).									

Source: Author via SPSS program

2.3.3. Regression Analysis

In order to perform correct regression analysis, it is necessary to confirm the absence of heteroskedasticity of the data series, as well as the absence of multicollinearity and autocorrelation. Heteroskedasticity testing was performed using: Breusch-Pagan, a modified Breusch-Pagan and F test.

Table 5. Modified B-P heteroskedasticity test

Modified Breusch-Pagan Test for Heteroskedasticity		
Chi-Square	df	Sig.
13.960	1	0.000

Source: Author via SPSS program

The result of the Breusch-Pagan modified test indicates that the homoskedasticity hypothesis is rejected. Testing is performed for a significance of 5%, and as Sig. 0.000 is lower than 0.05, the data series is considered to be heteroskedastic.

Table 6. B-P heteroskedasticity test

Breusch-Pagan Test for Heteroskedasticity		
Chi-Square	df	Sig.
75.943	1	0.000

Source: Author via SPSS program

The result of the Breusch-Pagan test indicates that the homoskedasticity hypothesis is rejected. Testing is performed for a significance of 5%, and as Sig. of 0.000 is lower than 0.05, the data series is considered to be heteroskedastic.

Table 7. F heteroskedasticity test

F Test for Heteroskedasticity			
F	df1	df2	Sig.
16.527	1	77	0.000

Source: Author via SPSS program

The result of the F test indicates that the homoskedasticity hypothesis is rejected. Testing is performed for a significance of 5%, and as Sig. of 0.000 is lower than 0.05, the data series is heteroskedastic.

As one of the basic conditions for performing multiple linear regression is the absence of heteroskedasticity, it is impossible to make the model with a given set of data. In order to be able to perform regression, it is necessary to perform a data series transformation. The most used method is logarithm. However, there are companies that have a negative cash conversion cycle, as well as a negative financial result in the sample. Therefore, before the logarithm, it is necessary to perform a transformation that would solve the problem of a negative sign. In accordance with the above said, all the data from the series were squared first, and then the natural logarithm was calculated. After transformation, three heteroskedasticity tests were performed again.

Table 8. Modified B-P heteroskedasticity test

Modified Breusch-Pagan Test for Heteroskedasticity		
Chi-Square	df	Sig.
0.165	1	0.685

Source: Author via SPSS program

The result of the Breusch-Pagan modified test indicates that the homoskedasticity hypothesis is accepted. Testing is performed for a significance of 5%, and as Sig. of 0.685 is higher than 0.05, the data series is homoscedastic.

Table 9. B-P heteroskedasticity test

Modified Breusch-Pagan Test for Heteroskedasticity		
Chi-Square	df	Sig.
0.153	1	0.696

Source: Author via SPSS program

The result of the Breusch-Pagan test indicates that the homoskedasticity hypothesis is accepted. Testing is performed for a significance of 5%, and as Sig. of 0.696 is higher than 0.05, the data series is homoscedastic.

Table 10. B-P heteroskedasticity test

F Test for Heteroskedasticity			
F	df1	df2	Sig.
0.161	1	77	0.690

Source: Author via SPSS program

The result of the F test indicates that the homoskedasticity hypothesis is accepted. Testing is performed for a significance of 5%, and as Sig. of 0.690 is higher than 0.05, the data series is homoscedastic.

Another condition that needs to be met for regression analysis is absence of multicollinearity. The values of VIF indicate that there is no problem of multicollinearity. The problem of multicollinearity exists when the VIF value is greater than 10 (Choen et. al., 2003, p.425).

Table 11. Multicollinearity test (VIF)

Coefficients							
Model 1	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
LIQ (Ln)	0.795	0.281	0.519	2.828	0.006	0.359	2.789
LEV (Ln)	0.579	0.298	0.322	1.942	0.056	0.441	2.269
SIZE (Ln)	0.104	1.374	0.009	0.075	0.940	0.854	1.171
CCC (Ln)	-0.100	0.185	-0.073	-0.541	0.590	0.660	1.516
APT (Ln)	0.321	0.255	0.183	1.258	0.212	0.575	1.740
ART (Ln)	-0.008	0.190	-0.005	-0.044	0.965	0.793	1.261
IT (Ln)	-0.351	0.193	-0.246	-1.818	0.073	0.658	1.519

Source: Author via SPSS program

The last condition that must be met is absence of autocorrelation. Testing of this aspect is done using the Durbin-Watson statistical test. The value of the D-W test ranges from 0 to 4. The value of the D-W 2.0 indicates that no autocorrelation is detected. Therefore, the obtained value of 2.2392 (Table 12) proves that there is no autocorrelation. As all conditions are met at this point, it is possible to conduct a regression analysis. The results of the regression analysis show that only 14.1% (R Square) of changes in the dependent variable (ROA) were caused by changes in the independent variables.

Table 12. Regression model and D-W test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.376	0.1414	0.057	3.0625	2.2392

Source: Author via SPSS program

Conclusion

Efficient working capital management should enable a positive impact on company's profitability. The recommendation for companies is to influence the shortening of

receivables collection period as much as possible, to regularly settle obligations to suppliers and to ensure the shortest possible period of inventories binding. The importance of the previously mentioned recommendations is evidenced by the results of the research.

On a sample of 79 companies in the field of manufacturing sector, the existence of a negative and statistically significant correlation between days of inventory turnover and the company's profitability was determined. Thus, companies that sell their inventories faster are more profitable than those companies that sell their inventories over a longer period. Most other authors came to the same results in terms of the correlation between the days of inventory turnover and profitability. (Phuong Dong & Su, 2010; Ponsian, Chrispina, Tago & Mkiibi, 2014; Alipour, 2011; Sen & Oruc, 2009). The foregoing points to the *acceptance of auxiliary hypothesis H $_{1.1.}$*

The results of the research indicate that there is a negative and statistically significant correlation between accounts receivable turnover in days and profitability. Therefore, companies that collect their receivables in a shorter period are also companies with a higher level of profitability, and vice versa. Most other authors came to the same results in terms of the correlation between the days of receivables turnover and profitability. (Phuong Dong & Su, 2010; Ponsian, Chrispina, Tago & Mkiibi, 2014; Akoto, Awunyo-Vitor & Angmor, 2013; Alipour, 2011 and Sen & Oruc, 2009). It follows from the above that the *auxiliary hypothesis H $_{1.2}$ is accepted.*

The research proved that there is a statistically significant and negative correlation between accounts receivable turnover in days and profitability, which would mean that companies that pay their obligations to suppliers in a shorter period, are companies that achieve a higher level of profitability, and vice versa. The same results were obtained by Sen & Oruc (2009). It can be concluded that the *auxiliary hypothesis H $_{1.3}$ is accepted.*

Results of the research indicate that there is no statistically significant correlation between profitability and the cash conversion cycle as a comprehensive indicator of the efficiency of working capital management. Only one author came to same result (Niresh, 2012). Auxiliary *hypothesis H $_{1.4}$ is rejected.*

Since one of the auxiliary hypotheses was rejected, the *main hypothesis H1 is rejected*. It is clear that the days of receivables, payables and inventories turnover have a statistically significant impact on profitability, which has been proven by research. However, in addition to these components, there is a whole range of other factors and influences that are reflected in the company's profitability. This is evidenced by the results of regression analysis, which indicate that less than 20% of changes in ROA are explained by this model.

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UTICAJ UPRAVLJANJA OBRTNIM KAPITALOM NA PROFITABILNOST: ISKUSTVA IZ SRPSKE PRERAĐIVAČKE INDUSTRIJE

Rezime: Upravljanje obrtnim kapitalom (WCM) igra značajnu ulogu u poslovanju kompanije. Cilj ovog istraživanja je da objasni kako upravljanje obrtnim kapitalom utiče na profitabilnost srpskih kompanija mereno pokazateljem ROA. Da bi se odgovorilo na pitanje, izvršena je kvantitativna analiza upravljanja obrtnim kapitalom na uzorku od 79 preduzeća iz oblasti prerađivačke industrije sa teritorije Republike Srbije. Sve kompanije su kotirane na Beogradskoj berzi u poslovnoj 2019. godini. Analiza je izvršena pomoću Spearman-ovog koeficijenta korelacije i višestruke linearne regresije. Rezultati istraživanja pokazuju da postoji negativna i statistički značajna korelacija između profitabilnosti i obrta potraživanja u danima (ART), obrta dugovanja u danima (APT) i obrta zaliha u danima (IT). S druge strane, utvrđeno je da ne postoji statistički značajna korelacija između ciklusa konverzije gotovine u danima (CCC) i profitabilnosti. Pitanje upravljanja obrtnim kapitalom nije dovoljno ispitano na teritoriji Republike Srbije i teško je utvrditi koja su teorijska znanja o obrtnom kapitalu tačna, što naglašava značaj istraživanja na ovu temu.

Ključne reči: Obrtni kapital, profitabilnost, prerađivačka industrija.

Author's biography

Denis Kušter, MSc, works as Financial Controller at Schneider Electric DMS since 2019. He is a PhD student in Corporate Finance, Accounting & Auditing program. He is the holder of several academic awards, of which he especially points out following: *Award from Endowment Funds of Matica srpska, Serbian Association of Economists plaque award* and *Exceptional Award of the University of Novi Sad for academic achievements.* Denis was the winner of several scholarships during his studies: *Carlsberg & Dundjerski Scholarship, Scholarship of the University of Novi Sad, Scholarship of the Republic of Serbia, Young Talents Fund (Dositeja) Scholarship...* During undergraduate and master studies, he wrote several student research papers, and for one of them he was awarded by the University of Novi Sad. His field of interest is financial analysis and accounting. Denis is member of the Assembly of Matica srpska.