THE ANALYSIS OF CAPITAL STRUCTURE IN THE TRADING COMPANIES

Radojko Lukić, Ph. D., University of Belgrade, Faculty of Economic Nenad Lalić, Ph. D., University of East Sarajevo, Faculty of Education Srdjan Lalić, Ph. D., University of East Sarajevo, Faculty of Business Economics Nataša Tešić, MSc, University of East Sarajevo, Faculty of Business Economics Dragan Milovanović MSc, University of Banja Luka, Faculty of Economics

Abstract - Specific the capital structure of trade companies. There are numerous determinants of the capital structure in trade companies. Typical are: the growth opportunity (assets and sales growth), profitability, structure of assets, business risk, tax shield, liquidity, the analysis of capital structure and technology. The capital structure of trade companies is also affected by other factors, above all factors of external nature, like specific industrial determinants (industrial leverage, growth) and macroeconomic determinants GDP growth, capital flows, tax shield). industrial (inflation, Nevertheless numerous internal and external factors affect the capital structure of companies the issue of this analysis are only specific determinants of capital structure in a function of its optimization (and improvement of overall performance of trade in Serbia). The aim of this work is thorough analysis of the capital structure determinants in trade of Serbia. The knowledge of the intensity of their positive or negative effect is very significant for trade managers concerning the establishing optimal capital structure (with efficient financial management) in a function of meeting target performance on the level of single trade company and the trade as a whole. In that we find the scientific and professional contribution of this work. The capital structure of commercial firms in Serbia is unsatisfactory. It is necessary to take appropriate measures in function of its optimization. (JEL Classification: F65 L81 M40)

Keywords: determinants, theory of capital structure, financial leverage, performance, trade in Serbia.

I. Introduction

As widely understood, specific determinants of trading companies' capital structures are numerous. Typical examples include: opportunistic growth (asset growth, sales growth), profitability, asset structure, business risk, tax shield, liquidity, and analysis of capital structure and techniques [1]. Other factors— primarily external nature—are surely influential on the capital structure of trading companies, such as industry-specific determinants (industrial leverage, industrial growth) and macroeconomic determinants (inflation, GDP growth, capital flows, tax shield) [16], [17]. Regardless of the variety of internal and external factors affecting the capital structure of trading companies, this paper analyzes the subject of specific determinants of

the capital structure of a company, to optimize its function and thereby improve overall trade performance in Serbia.

This paper aims to thoroughly investigate the determinants of capital structure in Serbia's commercial sector. Knowing the intensity of their effect, whether positive or negative, is highly important for trade managers. Their determining of optimal capital structure (via effective financial decision-making) is used to achieve target performance at both the individual trading companies, and trade in general. This, among other things, manifests the scientific and professional contribution of this paper.

In recent years, both in theory and in practice, intensively investigating the structure of capitals of enterprises. It is quite understandable when one bears in mind that the capital structure is very important determinants of overall performance of all companies, which means trade. In terms of capital structure, among them there are some differences with regard to their nature and belonging to a particular economic sector. In this paper we explore the specifics and determinants of capital structure of trade companies, with special emphasis on Serbia.

The goal is to get as complex theoretical, methodological and empirical, in the case of Serbia, explore the specifics of the capital structure of trade companies. It should provide the basis for the efficient management of its capital structure in trading companies used to achieve the target performance. As for the capital structure of trade companies in Serbia are concerned, the results of empirical research using panel data analysis for 2008-2013. show that unsatisfactory. In the future, given that it is necessary to take appropriate measures to optimize the capital structure of trade enterprises in Serbia. The effect of this are to improve their overall performance.

In other words, in order to efficiently manage and optimize the capital structure, as a function of achieving the goal performance of the company, it is necessary to know its determinants. There are general and determinants specific to the nature of each company. This paper explores the determinants of capital structure in trading companies in Serbia. In that context internal determinants of the capital structure in trade of Serbia for the period 2008-2013 are specially researched. Their positive and negative effects are important for optimizing the capital structure, as significant determinant, in order to achieve the targeted total performance of the trade in Serbia in the future.

II. Literature overview

Rich is the literature devoted to general theoretical and practical analysis of capital structure factors, or to the impact of financial leverage on company performance (liquidity and profitability) [16], [8]. Due to its importance, special attention is increasingly, and in recent time, being paid to the analysis of specific determinants of capital structure and the impact of financial leverage on company performance in certain economic sectors, including trade. Nonetheless, very few specialized, particularly comprehensive works exist on the subject of specifics determinants of capital structure, as well as the impact of financial leverage on the performance of trading companies (wholesale and/or retail). This issue only partially tackles the context of principle research specifics and the importance of financial strategies for trading companies [37], [11], [10], [21], [13], [20], [18], [33], [6], [32], [19], [4], [39], [34], [35], [40], [41], [42], [43], [44], [45], [46], [47], [48], [49], [50], [51]. In recent times, regarding comprehensive written works on the topic of specificity factors and the effects of capital structure on trading/commercial companies, the works of the following authors are particularly famous [6], [11], [12], [1], [2], [3], [13], [14], [15], [18]. According to our knowledge in Serbia, as well as in the world, virtually no comprehensive work exists which is devoted to the research of specific factors of capital structure and the impact of financial leverage, such as measures of financial risk, on the performance of trading companies in Serbia. This issue is only partially addressed in the works of the following authors [22], [23], [24], [25], [26], [27], [28], [29], [30], [31]. Gaps are filled in, to an extent, by this paper, which by its content and methods of treating issues aims to provide an adequate basis for a more efficient management of financial leverage, in accordance with the theory of capital structure, and overall financial position as a function of future performance improvements of trading companies in Serbia. In this, among all else, lays its scientific expertise.

III. Hypothesis, research methodology, and empirical data

Given the importance and complexity of the issues treated in this paper, we will test the following *hypotheses* using appropriate methodology based on original empirical data for trade in Serbia during the 2008-2013 period. The hypotheses are: H1 - a positive relationship exists between leverage raids and growth; H2 - a positive relationship exists between leverage raids and size; H3 - a negative relationship exists between leverage raids and profitability; H4 - a positive relationship exists between leverage raids and asset

structure; H5 - a negative relationship exists between leverage raids and business risk; H6 - a negative relationship exists between leverage raids and amortization raids (expressed as a percentage of sales); H7 - a negative relationship exists between leverage raids and liquidity; H8 - there is significant impact on leverage raids by profitability, physical assets, size, and growth.

Research methodology, consequential of the aim and defined hypotheses, is based on the ratio analysis and the application of statistical analysis. Also applied, to the extent necessary according to research, is a comparative analysis of the theory of capital structure, as well as exploring the rich literature of general problems treated.

For the purpose of research for this paper, original empirical *data* for trade in Serbia during the 2008-2013 period was used; data was obtained from the Serbian Business Registers Agency. The sample includes (for each analyzed year) a large number of trading companies which are required under applicable law to submit annual financial reports to the Business Registers Agency (illustration: number of involved trading companies in 2013 is 33,341; see: Table 6).

In other words, the paper used *panel analysis data* for the period 2008 - 2013. During the research, the application of the underlying methodology of factors affecting the capital structure of trade in Serbia is covered, at the same time, a large number of trading companies, i.e. all those that are required to annually submit annual financial statements of the Agency for Business Registers Agency. Number trading companies involved in the statistical sample by years is: 2008 - 37.077, 2009 - 34.982, 2010 - 35.474, 2011 - 33.451, 2012 - 33.393, and 2013 - 33, 341 (see: Table 6). This means that the size sample (since the to cover a large number of trading companies) statistically valid.

Limitation is reflected in the financial statements of commercial firms in Serbia are not harmonized due to changes in international accounting regulations, European directives enter other relevant legislation. But that does not substantially affect the assessment of what the capital structure of commercial firms in Serbia.

It is according to the results of empirical research using panel data analysis for the period 2008 - 2013 was unsatisfactory. In addition to the theoretical values, special security *contributions* of this study is that it indicates that it is necessary in the future to take appropriate measures in function optimization of capital structure of commercial firms in Serbia. This will improve their overall performance. In fact, among other things, reflected scientific and professional value of this work.

IV. Theoretical basis and specific dimensions of capital structure in trade

Generally speaking, under the notion of capital structure, financial leverage implies the

relationship between others' and own sources of funding (i.e., participation in the debt financing of specifics types of assets (business) of the company). Financing operations of the company by borrowing certainly has advantages and disadvantages. They are shown in the Table 1.

Table 1. The optimal ratio: debt financing versus issue of shares

Advantages of debt	Disadvantages of debt
financing	financing
1.Tax relief:	1. The cost of bankruptcy:
higher tax rate leads to	greater business risk leads
higher tax relief	to higher cost
2. enhanced discipline:	2. agency costs:
greater division between	greater division between
managers and	shareholders and the
shareholders leads to	creditor gives higher cost
greater benefits	
	3. The loss of future
	financial flexibility:
	greater uncertainty
	regarding future financial
	needs gives higher cost
a [7]	

Source: [7]

The advantages of borrowing, as opposed to raising funds by issuing shares, include tax reliefs and stimulating managers to acquire greater discipline when making investment decisions. Disadvantages include increased expected bankruptcy costs, reduced flexibility of gaining additional financing in the future, and conflict between the shareholder and lender. Generally, if the marginal utility exceeds the marginal cost, the company must borrow. In all other cases, the company should use the issuance of its own shares [6].

Analysis of the impact of financial leverage on the performance of the trade company in this paper is based on, in principle, the theory of capital structure [5], [37], [1], [17]. Two major theories of capital structure are the Trade-off theory and the Pecking-Order theory.

Regarding the *Trade-off theory*, whose main contributors are Modigliani and Miller (1958, 1963), the following factors are influential, regarding the formation of capital structure: tax shield, the market value of the company, and the cost of capital.

On the formation of capital structure, in addition to the mentioned factors, the following are also influential, according to Jensen and Meckling (1976) and Myers (1977): cost of bankruptcy and financial trouble and agency costs, respectively.

Regarding the *Pecking-Order theory*, advocated by Myers and Majluf (1984), perception of the order of financing is as follows: internal financing, debt, and issuance of shares. In trading companies, it is determined empirically that the Pecking-Order theory is more frequently applied. This is in keeping with the character of the business, treated as special, highly significant determinants of capital structure [7], [38].

The capital structure significantly affects the financial performance of the company. The negative relationship between capital structure and financial performance indicates that agency problems lead to the fact of using more loans than necessary in the capital structure, which produces poorer performance [9], [12]. All companies, including trade companies, strive for optimal capital structure in order to achieve profit and other target goals. In principle, the optimal capital structure is realized in maximizing the value of the company with a minimization of the cost of capital. This is in accordance with the theory of static compromise, which is now the prevailing theory of capital structure. Table 2 shows the different effects of some principal internal determinants on the leverage, considering the Pecking-Order theory and Trade-off theory.

Table 2. Theories of capital structure and the

 relationship between leverage and internal determinants

Determinant	Theory			
	Pecking-Order	Trade-off		
	theory	theory		
Profitability	Negative	Positive		
Size	Negative	Positive		
Growth	Positive	Negative		
Assets (reaches towards)	Positive	Positive		

Source: [2]

Observed in certain sectors of the economy, the capital structure, i. e. financial leverage is different. The capital structure is different not only in individual economic sectors, but within the same sector also trade in our case the, i. e. in different countries, types of trade (wholesale and retail), retail chains, retail formats, their lines of business (for example, organic food sale). Among other things, these differences are caused by the specific characteristics of their business (Table 3).

Table 3. The capital structure for selected retail chains,2014

Capital	Wal-	Target	Costco
structure	Mart	Corp.	Wholesale
	Stores	-	Corp.
	Inc.		-
Total debt/	74.28	89.93	41.40
Total			
shareholders'			
equity			
The total debt	42.62	47.35	-
/ total capital			
Total debt /	27.66	32.76	15.42
Total Assets			
Long-term	58.43	77.76	41.40
debt / Equity			

Long-term	33.53	40.94	29.28
debt / total			
capital			
Total assets /	2.68	2.74	2.68
Total			
shareholders'			
equity *			

Note: Author's calculations.

Source: www.marketwatc.com (accessed 15/10/2014 10:34 AM)

V. General characteristics of capital structure of trade in Serbia

Before we turn to the analysis of the determinants of capital structure of trade in Serbia, we will shortly look at their general characteristics. Table 4 and Figure 1 show the ratio of own funds and interest coverage ratio for the economy as a whole and by selective economic sectors, including trade, in 2012 and 2013.

Table 4. The ratio of own funds and interest coverageratio in Serbian trade, 2012 and 2013

	Ratio o	of own	Interest	
	funds		coverag	ge ratio
	2013	2012	2013	2012
Companies	36.6	37.3	1.21	0.39
— total				
Agriculture	46.5	42.3	3.46	1.69
, forestry,				
and fishing				
Manufactu	23.3	24.5	0.18	1.14
ring				
Constructi	35.3	36.0	-0.22	-2.31
on				
Wholesale	22.8	22.2	2.34	1.30
and retail				
Financial	47.5	51.8	-4.30	-4.66
and				
insurance				
activities				

Note: The ratio of own funds/resources - share of equity in total capital, whose extent is dictated by the needs of financing fixed assets and the effects of financial leverage. Interest coverage ratio - the ratio of net results and the interest paid from one side, as well as the other. *Source:* The Serbian Business Registers Agency



Figure 1. Ratio of own funds and interest coverage ratio for the economy as a whole and by selective economic sectors, including trade, in 2012 and 2013. *Source:* Prepared according to data from Table 4

The data in Table 4 clearly shows that in 2013, the lowest share in the total capital of their own went towards trade in relation to the economy as a whole, as well as other observed sectors. In other words, it is highly indebted. This is indicated by the interest coverage ratio. This appropriately reflects on its overall performance.

VI. Calculating dependent and independent variables

Table 5 shows the calculation of dependent and independent variables used in this work in general, and in particular, the statistical analysis of the determinants of capital structure of trade in Serbia.

 Table 5. Calculating the dependent and independent variables

Variable	Formula
Dependent	
variable	
Y Ratio of debt	Total liabilities / total assets
(leverage)	
Independent	
variable	
X ₁ Current	Current assets / current
liquidity	liabilities

X ₂ Accelerated	Current assets - Inventories /
liquidity	Current liabilities
X ₃ Yield of	Net profit / Operating
operating income	revenues
X ₄ Return on	Net income / Total assets
assets	
X ₅ Asset growth	Total Assets (t) - Total
	Assets (t - 1) / Total Assets
	(t-1)
X ₆ Asset structure	Fixed assets / Total assets
X _z Company	Operating income (t) -
growth $-$ percent	Operating income $(t - 1)/(t - 1)$
change in	Operating income $(t - 1)$
operating income	operating meetine (+ + +)
X ₀ Company size	Log 10 –operating income
Mg Company Size	Log to operating meane
X ₉ Business risk	Standard deviation of annual
	net profit for 6 years /
	Average annual net profit for
	6 years
X ₁₀ Gross	Gross operating surplus –
operating surplus	amortization / Operating
 amortization 	income
(in percentages)	
of operating	
income	
X ₁₁ Asset	Operating income / Assets
turnover	
X ₁₂ Return on	Operating income / Equity
equity capital	capital

Note: Calculations based on author's research through literature

Methodologically speaking, financial leverage can be expressed in many ways. Typical methods include: short-term leverage = short-term debt / total assets; long-term leverage = long-term debt / total assets; total leverage = total debt / total assets.

In the context of the strategic profit model, based on the *DuPont analysis*, financial leverage is displayed as: financial leverage = total assets / total shareholders' equity. This method of expressing financial leverage is exclusively adopted by trading companies, within the strategic profit model, which is widely used as an instrument of financial leverage.

In trading companies due to specific their very nature to express the capital structure mainly used the ratio between assets and capital (assets / equity), as an indicator of financial indebtedness, i.e. financial leverage. This also because it is an indicator of financial debt component so. *strategic profit model* that is based on the principles of DuPont analysis. The method and in this paper. In other words, the capital structure of trade enterprises is expressed through the ratio between assets and capital (assets / equity).

Table 6 and Figure 2 include summarized baseline variables, determined as shown in Table 5, for the purpose of statistical analysis of the determinants of

capital structure of trade in Serbia for the 2008-2013 period. The given variables also indicate the general performance characteristics of trade in Serbia. Thus, for example, financial indebtedness in the reporting period increased annually, except for 2012. It is high in relation to trade in countries with developed market economies and "industrial standards". Liquidity is also satisfactory in comparison to golden banking rules (2 : 1), particularly in 2013. Profitability explored through the prism of return on operating revenues is unsatisfactory (i.e., in the reporting period, it declined annuallv due to low purchasing power of buyers/consumers). Low purchasing power, combined with high unemployment and other unfavorable general conditions of production, is significantly reflected in other measures of performance, in the negative sense.

Table 6. Determinants of capital structure of trade inSerbia, 2008 – 2013

	200	200	201	201	201	20
	8	9	0	1	2	13
Number of	37,	34,	35,	33,	33,	33,
companies	077	982	474	451	393	34
-						1
Financial	0,6	0,6	0,7	0,6	0,6	0,6
leverage	16	31	08	86	22	83
Current	1,0	1,0	1,0	1,0	1,0	0,9
liquidity	37	04	03	06	17	95
Accelerated	0,6	0,6	0,6	0,6	0,6	0,6
liquidity	82	77	69	62	61	61
Yield of	3,5	3,3	3,2	3,4	3,0	3,1
operating	9	0	3	0	9	0
income						
Return on	4,0	3,3	3,8	4,2	3,9	3,7
assets	4	6	7	5	4	2
Asset	14,	5,0	-	3,4	9,3	1,9
growth	10	3	5,7	7	0	3
			3			
Asset	46,	45,	35,	33,	33,	33,
structure	75	74	37	02	05	02
Company	19,	-	11,	7,7	11,	-
growth -	29	5,1	23	3	47	4,0
percent		3				5
change in						
operating						
income						
Company	9,3	9,3	9,3	9,4	9,4	9,4
size	73	50	97	29	29	76
Business	0,9	0,8	0,9	1,0	1,0	1,0
risk	92	66	42	70	84	44
Gross	6,0 29	5,4 67	5,5 70	4,4 74	5,1 75	5,0 20
operating	27	07	10	/ 4	15	20
surplus -						
amortizatio						
n (in						

percentage s) of operating income						
Asset	1,1	1,0	1,1	1,2	1,2	1,2
turnover	25	16	99	49	73	22
Return on	10,	9,2	13,	13,	13,	12,
equity	66	3	53	78	15	02
capital						

Note: Author's calculations

Source: Business Registers Agency and Statistical Yearbook of Serbia



Figure 2. Determinants of capital structure of trade in Serbia

Source: Generated using data from Table 6

VII. Statistical analysis of determinants of capital structure of trade in Serbia

Table 7 shows the descriptive statistics of analyzed performance indicators (i.e., determinants of capital structure of trade in Serbia during the 2008-2013 period).

Table 7. Descriptive Statistics (analyzed determinantsof capital structure on trade in Serbia, 2008 – 2013)

	N	Mini	Max	Me	Std.
		mu	imu	an	Devia
		m	m		tion
Financial	6	,62	,71	,65	,0392
levelage				77	4
Current	6	1,00	1,04	1,0	,0148
inquianty				103	5

Accelerate d liquidity	6	,66	,68	,66	,0090
anquiany				87	5
Yield of	6	3,09	3,59	3,2	,1906
income				850	6
Return on	6	3.36	4.25	3.8	.3034
assets		- ,	7 -	633	9
Asset	6	-	14,1	4,6	6,746
growth		5,73	0	833	82
Asset	6	33,0	46,7	37,	6,592
structure		2	5	825	52
				0	
Company	6	-	19,2	6,7	9,574
growth - percent		5,13	9	567	29
change in					
operating					
Company					
size	6	9,35	9,48	9,4	,0451
Dusinass				090	9
risk	6	,87	1,08	,99	,0839
~				97	9
Gross	6	4,47	6,03	5,2	,5306
surplus -				892	3
amortizati					
on (in					
es) of					
operating					
income					
Asset	6	1,02	1,27	1,1	,0953
tarnover				807	4
Return on	6	9,23	13,7	12,	1,804
capital			8	061	32
r				7	
Valid N	6				
(list wise)	-				

Note: Author's calculations aided by statistical program SPSS

In the given period, as demonstrated by the results of descriptive statistics, average values of some indicators include: financial leverage 0.65; current liquidity 1.01; yield of business income 3.28; company growth — percent change in business income 6.75; company size 9.40. Their values, in principle, are worse than they are in countries with developed market economies and "industrial standards". This was influenced by unfavorable general conditions of production, high banking costs, unfavorable exchange rates, and low purchasing power of the population as a consumer.

Table 8 shows the correlation analysis of determinants on the capital structure of trade in Serbia.

Table 8. Correlation relationship between determinantsand financial leverage on trade in Serbia, 2008 – 2013

	Financial	Sig. (2-	Ν
	leverage	tailed)	
	Pearson		
	Correlation		
Financial	1		6
leverage			
Current	-,707	,116	6
liquidity			
Accelerated	-,491	,323	6
liquidity			
Return on	-,277	,596	6
business			
income			
Return on	,185	,726	6
assets			
Asset growth	-,902*	,014	6
Asset	-,614	,195	6
structure			
Company	-,210	,690	6
growth -			
percent			
change in			
operating			
income			
Company	,453	,366	6
size			
Business risk	,066	,901	6
Gross	-,454	,366	6
operating			
surplus -			
amortization			
(in			
percentages)			
of operating			
income			
Equity	,392	,443	6
turnover			
Return on	,612	,197	6
equity			
capital			

*. Correlation is significant at the 0.05 level (2-tailed). *Note:* Author's calculations aided by statistical program SPSS

As shown by the results of the correlation analysis, there is variation regarding the impact of individual analyzed determinants on the financial leverage of trade in Serbia. Some have positive impacts, while others have negative impacts. Significant, negative impacts on financial leverage are caused by determinants including current liquidity and the growth and structure of assets. Yield of equity capital is a positive determinant. Other determinants—positive or negative, less or more—minimally impact financial leverage. Based on the correlation coefficient of asset growth and structure, the increasing use of modern technology in trades in Serbia has a significant impact on financial leverage, as seen in countries with developed market economies. It will significantly improve the overall performance of trade in Serbia, in the future [36]. The situation is similar to the application of the concept of sustainable development [35].

Based on the correlation analysis, consequently the nature of the relationship between leverage and determinants, it can be concluded that certain tested hypotheses are confirmed (H2, H3, H7), while others are rejected (H1, H4, H5, H6).

With the regression analysis (i.e., linear regression equation), the impact of each individual, analyzed determinant on the capital structure of trade in Serbia is investigated. This is expressed in the general formula:

$$Y_{it} = \alpha_i + \beta X_{it} + \mu_{it},$$

where: Y_{it} = independent variable, i = unit (1,2,3 ... N), t = time (1,2,3 ... T); α_i = coefficient (dependent variable of each unit); β = coefficient (independent variable); X_{it} = independent variable; μ_{it} = error.

Table 9 shows the descriptive statistics of selective determinants of capital structure of trade in Serbia.

Table 9.	Descriptive Statistics (selective determinants
of capital	structure of trade in Serbia, 2008 – 2013)

	Mean	Std.	Ν
		Deviation	
Financial leverage	,6577	,03924	6
Current liquidity	1,010 3	,01485	6
Yield of operating income	3,285 0	,19066	6
Company size - percent change in operating income	6,756 7	9,57429	6
Company size	9,409 0	,04519	6

Note: Author's calculations aided by statistical program SPSS

Displayed average values of selective determinants of capital structure for trades in Serbia are, as mentioned, lower compared to the same values of trade in countries with a developed market economy and "industrial standards". This was certainly a contribution of poorer general economic conditions.

Table 10 shows the correlation matrix of selective determinants of capital structure for trades in Serbia.

Table 10. Correlation matrix of selective determinantsof capital structure for trades in Serbia, 2008 – 2013

2		Fin anc ial lev era ge	t liq uid ity	ld of ope rati ng inc om e	m pa ny gr o wt h - pe rc en t ch an ge in op er ati ng in co m e	co mp any siz e
Pearson Correla	Fin anc	1,	-	-	-	,4
tion	ial	00	,7	,2	,2	53
	lev era ge	0	07	77	10	
	Cur	-	1,	,6	,8	-
	t	,7	00	69	01	,4
	liq	07	0			41
	uid ity					
	Y ie ld	-	,6	1,	,5	-
	of	,2	69	00	03	,5
	ope	77		0		85
	ng					
	inc					
	om e					
	Со	-	,8	,5	1.	-
	mp any	,2	01	03	00	,1
	gro	10			0	91
	wth					
	-					

	per cen t cha nge in ope rati ng inc om e					
	Co mp any siz e	,4 53	- ,4 41	- ,5 85	- ,1 91	1, 00 0
Sig. (1- tailed)	Fin anc ial lev era ge		,0 58	,2 98	,3 45	,1 83
	Cur ren t liq uid ity	,0 58		,0 73	,0 28	,1 91
	Yie ld of ope rati ng inc om e	,2 98	,0 73		,1 55	,1 11
	Co mp any gro wth - per cen t cha nge in ope rati ng inc om e	,3 45	,0 28	,1 55		,3 58
	Co mp any siz	,1 83	,1 91	,1 11	,3 58	•

						1
	e					
N	Fin anc ial lev era ge	6	6	6	6	6
	Cur ren t liq uid ity	6	6	6	6	6
	Yie ld of ope rati ng inc om e	6	6	6	6	6
	Co mp any gro wth - per cen t cha nge in ope rati ng inc om e	6	6	6	6	6
	Co mp any siz e	6	6	6	6	6

Note: Author's calculations aided by statistical program SPSS

Results of the correlation analysis show that current liquidity has a significantly negative impact on financial leverage of trade in Serbia. Operating income yield and company growth — percent change in business income negatively, yet slightly, affects financial leverage. Company size positively and moderately impacts financial leverage.

Table 11, the results of the regression model for selective determinants of capital structure of trades in Serbia are shown.

Table 11. Results of the regression model for selective							
determinants	of	capital	structure	of	trades	in	Serbia,
2008 - 2013							

	Dependent Variable: Financial leverage						
Indepen	Unstand	Std.	t	Sig.			
dent	ardized	Error		U			
Variabl	Coeffici	-					
e	ents						
(Const	2 (20	2 472	1 467	201			
ant)	5,028	2,475	1,407	,381			
Current	-4 610	990	-4 656	135			
liquidit	-4,010	,990	-4,050	,155			
у							
Yield	103	057	1 803	377			
of	,105	,057	1,005	,522			
operati							
ng							
income							
Comp	004	001	2 981	206			
any	,001	,001	2,701	,200			
growt							
h -							
percen							
t							
chang							
e in							
busine							
SS							
incom							
e							
Compa	,141	,208	,675	,622			
ny size	,	,	,	· · ·			
Weight							
ed							
statistic							
S							
R	966						
Square	,900						
Adjuste	820						
d K	,029						
Square							
F	,829						
Sig.	.274						
Durbin-	, <u> </u>						
Watson	2,200						

Note: Author's calculations aided by statistical program SPSS

The regression model results demonstrate that individual selective determinants do not significantly impact the capital structure of trade in Serbia (Sig. > 0.05). They collectively, as evidenced by the multiple regression coefficient, agree that the coefficient of determination significantly affects (of 83%) the capital structure of trade in Serbia. In view of these results, the conclusion of the regression model is to confirm the eighth hypothesis, H8. In the given regression model, there is no autocorrelation of independent residuals (Durbin-Watson test is within standard test limits). In addition to tested determinants that have influence of the capital structure of trade in Serbia, there are other determinants. In order to efficiently manage capital structure (i.e., optimization) to achieve the target performance of the company, it is imperative to know its determinants. General and specific determinants exist for each company, depending on various factors such as the very nature of its business, as in the case of commercial chains.

VIII. Conclusion

Based on the above empirical research (i.e., trade in Serbia), this conclusion serves to summarize the important general and obtained statistical results. This particularly suggests that the shown average value of all (including selective) analyzed determinants of capital structure of trade in Serbia is lower than the same value of trade in countries with developed market economies and "industrial standards". This was certainly a contribution of poorer general economic conditions.

Logically, the influence of certain analyzed determinants on the financial leverage of trade in Serbia varies. Some results are positive, while others are negative. Significant, negative impacts on financial leverage arise from determinants such as current liquidity and the growth and structure of assets. Positive determinants include yield of equity capital. Other determinants, whether positive or negative, minimally or moderately impact financial leverage. Judging by the correlation coefficient of asset growth and structure, the increasing application of modern technologies in trade, in Serbia, results in a significant impact on financial leverage.

Attained results of the regression model show that individual selective determinants-including current liquidity, yield of operating income, company growth, and company size-insignificantly impact capital structure of trade in Serbia (Sig. > 0.05). Collectively, however, they significantly affect the capital structure of trade in Serbia, as evidenced by the multiple regression coefficient and the agreed determination coefficient. In the shown regression model (i.e., trade in Serbia), there is no autocorrelation of independent residuals (Durbin-Watson test is within standard test limits). On the capital structure of trade in Serbia, additional pre-analyzed and other determinants have a significant impact, as shown by the value of the respective test.

For the future of trade in Serbia, in the context of analysis and improving performance in a broader sense, focused attention should be given to sustainable growth models, modeled on the countries with developed market economies [35]. They are among the important factors of cost reduction, thereby increasing profits, thus should become increasingly applied in trades in Serbia, in the future.

Generally speaking, there is great significance for modern technology as a performance improvement technique of commercial chains [36]. Its use in Serbia is currently unsatisfactory, in comparison to countries with developed market economies, but there are hopes for increased use in the future. This will satisfactorily affect the positive effects of financial leverage on the performance of commercial chains in Serbia.

To finally conclude, this paper investigates the determinants of capital structure in the service business, i.e. in trading companies, as in the matter of Serbia. In that context, special consideration is given to the internal determinants of the capital structure of trade in Serbia for the 2008-2013 period. Recognizing positive and negative effects and significant determinants is important for the optimization of capital structure, in order to achieve the overall target performance of future trade in Serbia.

References

capital ctructure in the UK retail industry: A comparison of multiple regression and generalized regression neural network", Intelligent Systems in Accouting, Finace and Management, Volume19, Issue 3, pp. 151-169.

[2] Ajanthan, A. (2013), "Determinants of Capital Structure: Evidence from Hotel and Restaurant Companies in Sri Lanka", International journal of Scientific and research publications, Volume 3, Issue 6, pp.1-8.

[3] Anhin, H. and Wenhe, L. (Kamla-Raj 2014), "A Study on Debt Sources Structure, Term Structure and Investment Level of Listed Retail Companies", Anthropologist, 17(3), pp. 769-775.

[4] Berman, B. and Evans, J. R. (2010), Retail Management, Prentice Hall, Boston.

[5] Brealey, R. A., Myers, S. C. i Macus, A. J. (2007), Osnovekorporativnihfinansija, (prevodsaengleskogjezika), Mate, Zagreb.

[6] Chevalier, J. A. (1995), "Capital Structure and Product-Market Competition: Empirical Evidence from the Supermarket Industry", The American Economic Review, Vol. 85, No.3, pp. 415-435.

[7] Damodaran, A. (2007), Korporativnefinansije– teorija i praksa, (prevodsaengleskogjezika), MODUS – Centarzastatističkaistraživanja i prognoze, Podgorica.

[8] De Luca, P. (20149, "Capital structure and economic performance of the firm: Evidence italy",International Journal of Management, Volume 5, Issue 3, pp. 1-20.

[9] Degryse, H. et al. (2012), "The impact of firm and industry characteristics on small firms' capital structure", Small Business Economics, 38, pp. 431-447.

[10] Evans, J. R. (2005), "Are the largest public retailers top financial performers? A longitudinal analysis", International Journal of retail & Distribution Management, Vol. 33, No. 11, pp. 842-857.

[11] Gill, A. et al. (2009), «The Determinants of Capital Structure in the Service Industry: Evidence from United States», The Open Business Journal, 2, pp. 48-53.

[12] Gleason, K., Mathur, L., and Mathur, I. (2000), "The Interrelationship betweenCulture, Capital Structure, and Performance: Evidence frpm European retailers", Journal of Business Research, 50, pp. 185-191.

[13] Hielgen, M. (2014), "The impact of cultural clusters on capital structure decisions: Evidence from European retailers", University of Tvente, The Netherlands, pp.1-10.

^[1] Abdou, H. A. et al. (2012), "Determinants of

[14] Kamath, V. R. and Kulkarni, S. (2013), "Ratio ac a tool of financial analysis for Indian retail sector companies", IOSR Journal of Business and Management, Volume 10, Issue 5, pp. 32-34.

[15] Kaya, H. D. (March 2014), "The Impact of Leverage on Trade Firm' Profitability and Liquidity Measures", International Journal of Business and Social Science, Vol.5, No. 3, pp. 66-70.

[16] Köksal, B. and Orman, C. (2014), "Determinants of capital structure: evidence from a major developing economy", Small bus Econ, DOI 10.1007/s11187-014-9597-x, pp. 1- 28.

[17] Kühnhausen, F. and Stieber, H. W. (2014), "Determinants of Capital Structure in Non-Financial Companies", Discussion Paper in Economics, Ludwig Maximilian University of Munich, No. 38, pp. 1-56.

[18] Lee, B. (2014), Capital Structure and Predation: Evidence fro Retail Industry, McCombs School of Business, University of texas, Austin, pp. 1-42.

[19] Levy, M. and Weitz, B. A. (2007), Retailing Management, McGraw-Hill, Irwin, Boston.

[20] Li, C. et al. (2014), "Working Capital Management, Corporate Performance, and Strategic Choices of the Wholesale and Retail Industrz in China", The Scientific WoldJourna, Volume 14, Article ID 953945, pp. 15.

[21] Little, P. L. et al. (2011), "Evaluating the effect of reccession on retail firms' strategy using DuPont method: 2006-2009", Journal of Finance and Accountancy, 7, pp. 1-7.

[22] Lovreta, S. (2011), Trgovinski menadžment, Ekonomskifakultet, Beograd.

[23] Lovreta, S. et. al. (2013), «Competition Policy and Optimal Retail Network Development in Transitional Economies», Economic Annals, LVIII (199), pp. 57-84.

[24] Lukic, R. (2011), Evaluacija poslovnih performansi u maloprodaji, Ekonomski fakultet, Beograd.

[25] Lukic, R. (2012), "Sustainable Development of Retail in Serbia", Review of International Comparative Management, 13 (4), pp. 574-586.

[26] Lukic, R. (2013a), Računovodstvo trgovinskih preduzeća, Ekonomski fakultet, Beograd.

[27] Lukic, R. (2013b), "The Influence of Working Assets Efficiency Management on the Profitability of Trade in Serbia", Review of International Comparative Management, 14 (5), pp. 731-745.

[28] Lukic, R. (2014a), «The economic and financial status of trade entrepreneurs in Serbia», Ecnomic and Environmental Studies, 14 (3), pp. 239 -264.

[29] Lukic, R. (2014b), "The profitability of trade in Serbia," Asian Journal of Management Research, 4 (3), pp. 485-500.

[30] Lukic, R. (2014c), "The Analysis of the Efficiency of Trade Costs Management in Serbia", EconomiaSeria Management, Volume 17, Issue 2, pp. 1-15.

[31] Lukić, R. (2014d), "Analysis of the Efficiency of Small Independent Retailers in Serbia", Eurasian Journal of Business and Economics, Volume 7, Issue 13, pp. 91-103.

[32] McGoldrick, P. J. (2002), Retail Marketing, The McGraw-Hill Companies, London.

[33] Moatti, V. et al. (2014), "Disentangling the performance effects of efficiency and bargaining power in horizontal growth strategies: An empirical investigation in the global retail industry", Strategic Management Journal, Article first published online: 9 APR 2014 | DOI: 10.1002/smj.2244, pp.1-13.

[34] Mokhova, N. and Zinecker, M. (2013), "The determinants of capital structure: the evidence from of european union", ActaUniversitatisAgriculturae et SilviculturaeMendelianaeBrunensis, LHI, No. 7, pp. 2533-2546.

[35] Phillips, M., Anderson, S. and Volker, J. (July 2010), "Understading small private retail firm growth using the sustainable growth model", Journal of Finance and Accounting, V 3, pp. 1-11.

[36] Shin, S. and Eksioglu, B. (May/June 2014); "Effects Of RFID Technology On Efficiency And Profitabilitz In Retail Supply Shains", The Journal of Applied Business Research, The Clute Institute, Volume 30, Number 3, pp. 633-646.

[37] Van der Wijst, N. and Thurik, R. (1993), «Determinants of Small Firm Debt Ratios: An Analysis of Retail Panel Data», Small Business Economics, Volumen 5, Issue 1, pp. 55-65.

[38] Van Horne, J. C. i Wachowicz, J. R. (2007), Osnovi finansijskog menadžmenta, (prevod sa engleskog jezika), Data Status, Beograd.

[39] Yu, W., Ramanathan, R. and Nath, P. (2014), "The impacts of marketing and operations capabilities on financial performance in the UK retail sector: A resource-based perspective", Industrial Marketing Management, 43, pp. 25-31.

[40] Nenad, L., Srdjan, L.M., Srdjan, L.N., Mirko, M. and Mirko, D. (October 29-31, 2013), "Information System in Accounting in Function of Managerial Secision Making", North Atlantic University Union, Recent Advances in Information Science, Proceedings of the 4th European Conference of Computer Science (ECCS'13), Paris, France, pp. 165-171.

[41] Oksna, I.Y. and Svetlana, S.V. (2014), "Application of Database Technology to Improve the Efficiency of Inventory Management for Small Businesses", *Wseas Transactions on Business and Economics*, Volume 11, pp. 810-818.

[42] Paulo, J. R. et al., (2015), "Data Envelopment Analysis and Fuzzy Theory: Efficiency Evolution under uncertainty in portfolio optimization", *Wseas Transactions on Business and Economics*, Volume 12, pp. 74-87.

[43] Darja, H., Monika, B. and Libena, K. (2015), "Strategic management of small and medium-sized enterprises", *Wseas Transactions on Business and Economics*, Volume 12, pp. 65-73.

[44] Viktor, K. (2015), "Comparative Analysis Of Working Capital Management Of MSMEs In India", *Wseas Transactions on Business and Economics*, volume 12, pp. 289-306.

[45] Sevcik, J., Svoboda, P. and Paduchova, A. (2014), "Intelligent Video Surveillance System Evaluation Methods", *International Journal of Systems Applications, Engineering & Development*, Volume 8, pp. 187-192.

[46] Mariana, S.T., Sivo, D. V. and Krasimir, D.D. (2015), "Approach for ID Recognition in Person Identification Systems", *International Journal of Systems Applications, Engineering & Development*, Volume 9, pp. 38-41.

[47] Elcio, S. da B. et al., (2014), "Incorporating IT&AT Convergence into Lean Thinking/Six Sigma via the Smarter Operation Transformation (SOT) Methodology", *International Journal of Systems Applications, Engineering & Development*, Volume 8, pp. 62-75.

[48] Lukic, R., Lalic, N., Lalic, S., Tešić,N. and Milovanović, D. (2015). Statistical-Financial Analysis of Capital Structure in the Service Business, in *Recent Advances in Environmental and Earth Sciences and Economics*, Proceedings of the 2015 International Conference on Energy, Environment, Development and Economics (EEDE 2015), Zakynthos Island, Greece, Jul 16-20, 2015, pp. 116-124.

[49] Sekerka, B., Obrašlova, I. and Lešakova, P. (2015). Aggregation of Environmental Data, in *Recent Advances in Environmental and Earth Sciences and Economics*, Proceedings of the 2015 International Conference on Energy, Environment, Development and Economics (EEDE 2015), Zakynthos Island, Greece, Jul 16-20, 2015, pp.101-106.

[50] Belas, J. and Hlawiczka, R. (2015). Innovations in the loan process for SME segment. The findings and experience from the Czech and Slovak banking sectors, in *Recent Advances in Environmental and Earth Sciences and Economics*, Proceedings of the 2015 International Conference on Energy, Environment, Development and Economics (EEDE 2015), Zakynthos Island, Greece, Jul 16-20, 2015, pp.60-67.

[51] Popesko, B. and Šocova, V. (2015). Changes in Budgeting and Planning practices: comparative study of Czech and North American Companies, in *Recent Advances in Environmental and Earth Sciences and Economics*, Proceedings of the 2015 International Conference on Energy, Environment, Development and Economics (EEDE 2015), Zakynthos Island, Greece, Jul 16-20, 2015, pp.32-34.

Corespondence Addres: Radojko Lukic, Faculty of Economics, University of Belgrade, Kamenicka 6, Serbia; tel.; +381 11 3021 112; e-mail: rlukic@ekof.bg.ac.rs