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Research Results
Резултати от научни изследвания

DETERMINANTS OF FIRM COMPETITIVENESS: ECONOMETRIC EVIDENCE FROM THE BULGARIAN INDUSTRY

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Abstract. The factor effects of profitability at company and sectoral levels have earned a special status in research literature as a general measure of competitiveness. The Covid-19 crisis resulted in restrictions in consumption, rising levels of company debt, and increased concerns about company liquidity, which has led to revenue risks for industrial production firms. This study attempts to examine several factor effects that have impacted the financial performance, respectively the competitiveness of Bulgarian enterprises.

Keywords: competitiveness; firm performance; panel data analysis

1. Introduction

During the new programme period of 2021 – 2027 the European Union will continue its policy of territorial cohesion by stimulating innovation and investment in modern technologies (Regulation (EU) 2021/1060). It is assumed that the lagging of certain regions may be overcome by increasing competitiveness of enterprises. This is a priority direction in a number of strategic documents, such as the European Regional Development Fund (European Parliament, 2022), the Operational Programme "Innovation and Competitiveness" of enterprises for 2021 – 2027 (European Commission, 2023), etc. Their logical follow-up is the nationally adopted Innovation Strategy for Intelligent Specialization 2021 – 2027 (Ministry of Innovations and Growth 2022), National Strategy for SMEs in Bulgaria 2021 – 2027 (Council of Ministers 2021), etc. All of them rely on efforts to support sustainable growth in the entire range of Bulgarian economical sectors through enhancing measures for the better financial performance of enterprises and their digitalization.

The relation between competitiveness, sustainable growth and firm performance has been the focus of numerous studies (Castellacci 2008; Ausina-Emsina et al. 2018; Martínez-Ferrero, Frías-Aceituno 2015). Prevalence is given to opinions on the positive correlation between investment activity and competitiveness, namely their facilitating role in the increased creation of added value, decrease in expenses and rise in assets (Hermundsdottir 2021). A lot of studies prove statistically that the higher economic development of a

certain country leads to a higher level of competitiveness of locally based enterprises. (Lall 2001, Sarker 2014). Despite numerous attempts, however, economic research has not yet produced a uniform definition of the term *competitiveness*, neither an exhaustive presentation of the factors that influence it. The knowledge of these factors and the power of their impact is of great significance for the successful management of every firm.

The aim of this article is to reveal the internal determinants that influence company competitiveness on the basis of financial performance. The object of the study are Bulgarian firms from the industrial sector during 2017 – 2021.

2. Literature review

Competition is a term which has attracted the attention of economists since the canonic works of Smith and Ricardo (Smith 1932, Ricardo 1817). They describe it as a mechanism which regulates market demand and supply. Their understanding of the concept is related to the competitive character of firm behaviour. In their terms, competition drives enterprises to invest in technologies with the expectation to achieve a greater productivity of labour and profit. Their interpretations are reflected even further in the works of Shumpeter, who links competition to the concept of *leadership* (Shumpeter 1942) and Drucker, who considers the impact of new technologies as a precondition for the development of industrial structures (Drucker 1969). The theory of *perfect competition* attracts the attention of a number of scholars (Walras 1969; Debreu 1972 etc.). Particularly heated is the debate on the essence of competition and competitiveness after the 1980s (Porter, 1980). Michael Porter views *competition* as a process of rivalry, and *competitiveness* as an outstanding advantage that the company has, compared to other market actors. It is important that this advantage be sustainable and yield high long-term economic results (Nenov 2008, Shterev 2012). The definition of *competitiveness* used by the Organisation for Economic Co-operation and Development (OECD) is related to the ability of active firms and sectors to compete at an international level on the basis of balanced costs and productivity (Aiginger 2013). The literature review of research publications by Bulgarian and other economists stratifies competitiveness into several levels (Table 1):

Table 1. Levels of manifestation of competitiveness

Level of competitiveness	Authors
Product	Chursin, A., Y. Makarov, 2015; Nenov, T., 2008; Shterev, N., 2012;
Firm	Buckley, P., Et. al. 1988, Lall, S., 2001. Varamezov, L., 2009, Shterev, N., 2012;
Industry	Velev, 2007, Iliev, 2005
National level	Buckley, P., Et. al. 1988, Fagerberg, J., 1988; Aiginger, K., 1998, Lall, S., 2001, European Commission, 2011

Source: Own contribution

It is apparent that competitiveness has many manifestations and the authors come to an agreement that its definition also depends on the aims of the study and the level of analysis (Sarker 2014). In view of the above-mentioned aim, the level of competitiveness that is analyzed and presented below corresponds to company level, whereas the working definition used refers to microeconomic concepts, i.e. competitiveness as a long-term advantage on the basis of firm performance (Ngatno 2019).

The study of competitiveness at a company level expressed through form performance is an actual topic that has been discussed extensively in economic research. Some authors measure firm competitiveness through financial performance (Liargovas et al. 2010, Akben-Selcuk 2016). Others, (Depperu et al. 2005) while discussing firm performance, make a direct reference to competitive advantage. Simultaneously, a sign of equality is placed between the factors influencing firm competitiveness and those determining the financial performance at a micro level. The literature review in this field offers the following information about the measures of firm competitiveness (Table 2).

Table 2. Determinants of firm competitiveness

Authors	Determinants of firm competitiveness
Liargovas, P., Et al., 2010, 2012	ROS, ROA, ROE, Leverage Ratio, Age, Size
Akben-Selcuk, E., 2016	Leverage, Liquidity, Size, Exports, R&D, Growth
Makovec Brenčič, Maja, 2001	Export, ROE, Market share
Koteva, N. Et al, 2021	Labor productivity, profitability, liquidity, Level of Financial autonomy, Net Income
Dahmash, F., 2015	Company size, ROA, Total Assets, Total Revenue, Leverage Ratio
Rijanto, A., 2022	ROA, Leverage, Size
Huang, X., 2023	ROS, Firm size, Firm age, R&D Expenditure
Serrasqueiro, Z., 2008	ROA, Size (Logarithm of total assets, sales and number of employees), Debt ratio, Liquidity, Assets structure (Tangibility), Risk, Shareholder control, Managerial control

Source: Own contribution

3. Data and methodology

Data

A source of data for this study are public firm balance data over a 5-year period of the observed totality. We have extracted a panel at national level depending on the type of production based on revenue and expenditure accounts and the balance sheet data of individual firms. The study uses a stratified proportional sample which covers 628 non-financial enterprises from the industrial sector, including

construction (Classification of Economic Activities 2008) for the period of 2017 – 2021. Thus structured, the sample overcomes a number of limitations, concerning the enhancement of statistical efficiency and provision of adequate data for the analysis of the various sub-totalities separately. On the other hand, it tackles potential problems with the periodicity with respect to data accountability and the adopted NSI methodology (European Central Bank, 2013). A procedure of data clearing has been conducted to build a balanced financial panel, while the final panel consists of 2655 observations – 422 enterprises from the industrial sector, operating on the territory of the Republic of Bulgaria. The greatest relative share (70%) is occupied by enterprises from the processing industry. The representatives of small businesses, comprising 76% of the observed subjects in the industrial sector, are given an advantage in the sample. There are no abrupt changes in the separate time periods within the relative shares of the firms operating in the sector, which to a certain extent indicates the preserved structure of the sectoral representation in the country.

Variables

The choice of variables in this study has been justified by a number of international research publications, which postulate the importance of financial performance of firms aiming to distinguish the main factors of firm competitiveness. The profitability measures are very often used to increase competitiveness of production companies through support and encouragement for improvements in productivity. (Tangen 2003).

We think that the selected two dependent variables in the two models palpably underscore the relation between corporate management, decisions made and firm performance in order to draw a more accurate picture of firm competitiveness. For the purposes of highlighting the efficiency of firm management in converting assets into profit, we use the *return on assets* indicator (ROA). Nevertheless, *return on sales* (ROS) is taken as a measure of revenue efficiency, which inevitably reflects market positioning.

The choice of independent variables in regression models has been prompted by the possibility to identify the financial performance of firms and the determinants which mediate competitiveness in the sector. We admit that internal determinants and financial sustainability are a prerequisite for making strategic solutions with respect to constituting competitive firm advantages (Table 3). In view of the chosen period for the present study, two main determinants have been removed from the model, namely *net investment growth* and *intangible asset growth* as a value of the investment and innovation potential of firms. We also agree that the results would not be realistically impacted by the independent variables listed above due to the coinciding of the period with the Covid-19 crisis and the respective restrictive measures regarding various productions.

Table 3. Description of the study variables

Variables	EXPLANATION	FORMULA
Dependent variable		
ROA	Return on assets	Net profit/Total assets
ROS	Return on sales	Net profit/Sales
Explanatory variables		
SG	Sales growth	$(Sales_t/Sales_{t-1})$
CL	Current liquidity	Current assets/Current liabilities
DR	Debt ratio	Total debt/Total assets
DSC	Debt service capacity	EBITDA/Total debt
T	Tangibility	Fixed assets/Total assets
Firm size	Natural log of Total assets	LN(TA)
Age	Age of the firm operation	LN(Age)

The annual rate of *sales growth* is seen as a factor which is positively correlated to the dependent variable. We suppose that the possibilities for collection of means and capital are more limited in small enterprises. Thus, the financial risk depends on the relative share of financing with fixed payment credits. A number of studies postulate the positive role of debt in the financial performance of firms (Jensen et al. 1976). Conversely, the current liquidity would manifest the rapidness with which assets are turned into money, which reflects on the management of working capital. The positive effect of the size and the years of operation of the firms on profitability have been studied extensively by a number of authors. (Hardwick 1997, Fiegenbaum and Karnani 1991, Winter 1994, Goddard et al. 2005). The variable *debt service capacity*, which is a ratio between the pre-interest profit and taxes with aggregated liabilities, is used to cover the liquidity risk to an extent, and the ability to serve an outstanding debt by current revenue flows.

Methodology

The starting point of the empirical strategy is the use of financial indicators which are calculated on the basis of balance sheets and revenue and expenditure accounts, issued by industrial firms for the period of 2017 – 2021 on the territory of Bulgaria. We have formulated a panel on a national level depending on the character of production. The study has selected a stratified proportional sample covering a total of 531 enterprises (2655 observations) in the industrial sector over a period of five years. After the conducted procedure for data clearing in order to

derive a balanced panel, the studied totality finally amounts to 428 firms (2027 observations).

The conceptually selected indicators are based on the approach of Financial Ratio Analysis (FRA). It allows us to use eight indicators (*Table 3*) to account for the firm factor effects on the competitiveness of the sector.

In order to reveal the main characteristics of the samples and find out whether to use the fixed effects model, or the random effects model, we have run the F-test and the Hausman test. The modified Wald test is applied to the model to study group-wise heteroscedasticity. Under the current specification, our primary hypothesis states that the effects at individual level are adequately manipulated and the random effects model has been refuted definitively. Finally, a regression model has been performed to demonstrate the impact of factor effects on profitability at sectoral level.

The choice of this model is justified by the possibility to observe individual characteristics and effects included in the model as a constant. Thus, the correlation of the explanatory variable with the individual effects of each observed unit in the totality is enabled.

$$y_{it} = \beta x'_{it} + \alpha_i + u_{it}$$
$$\hat{\alpha}_i = \bar{y}_i - \bar{x}'_i \hat{\beta}$$

– α_i (i=1….n) is the unknown intercept for each entity
– y_{it} is the dependent variable (DV) where i = entity and t = time.
– x'_{it} represents independent variables
– β is the coefficients
– u_{it} is the error term

For the purposes of the present study, we have evaluated the following regression fixed effects model applied to panel data:

$$ROA_{it} = \alpha_0 + \beta_1 SG_{it} + \beta_2 T_{it} + \beta_3 DR_{it} + \beta_4 DSC_{it}\beta_5 + \beta_5 LNFirmSize_{it} + \beta_6 LIQ_{it} + \beta_7 LNAge + \epsilon_{it}$$
$$ROS_{it} = \alpha_0 + \beta_1 SG_{it} + \beta_2 T_{it} + \beta_3 DR_{it} + \beta_4 DSC_{it}\beta_5 + \beta_5 LNFirmSize_{it} + \beta_6 LIQ_{it} + \beta_7 LNAge + \epsilon_{it}$$

Discussion of the results

The descriptive statistics of the variables in the present study (*Table 4*) shows a big volatility of profitability of assets and sales. The average firm in our sample has a relative share of obligations of aggravated assets at 79%. Reliable results have been obtained by means of the independent variables for growth, size, age, and tangibility, due to the lower levels of standard deviation from mean. The average age of the firms in the sector is 19 years, 11 for the youngest, and 30 for the oldest. The high levels of the standard deviation from mean in ROS, LIQ, LP show that the values are distributed in a wide range.

Table 4. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	2027	.09	.48	-11.359	10
ROS	2027	.793	25.605	-37	872.667
GROWTH	2027	1.02	.86	0	9.301
SIZE	2027	6.62	2.198	0	15.617
AGE	2027	2.929	.29	2.197	3.466
T	2027	.447	.292	0	1.015
DSC	2027	.949	5.754	-8	166.5
LIQ	2027	9.406	47.195	0	1118
DR	2027	.797	2.644	0	54.5
LP	2027	116.031	389.322	0	8186.045

The Hausman test and the modified Wald test are shown in *Table 5*. In the model, the null hypothesis is rejected (probability = 0,0000), which confirms that the fixed effects model should be selected. Following Green (2000), we regard as homoscedastic the calculated modified statistics of Wald for group-wise heteroscedasticity in the remainders of the regression fixed effects model.

Table 5. Hausman test and modified Wald test for group-wise heteroscedasticity of model

	Null Hypothesis	Coefficient
Hausman test	H0: Difference in coefficients not systematic	Chi2(733)=37.961
		Prob. > chi2 = 0.0000
Modified Wald test	$Ho: sigma(i)^2 = sigma^2$ for all (i)	Prob. > chi2 = 0.0000

The correlation matrix (Table 6) attests the absence of significant dependency among the studied variables.

Table 6. Correlate matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GROWTH	1.000							
SIZE	0.114	1.000						

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
AGE	-0.045	0.020	1.000					
T	0.014	0.239	-0.103	1.000				
DSC	0.042	0.032	0.001	0.007	1.000			
LIQ	-0.021	0.023	0.015	-0.084	0.111	1.000		
DR	-0.072	-0.225	0.023	-0.116	-0.044	-0.030	1.000	
LP	0.044	0.303	0.002	-0.027	0.003	0.014	-0.029	1.000

The model is evaluated with Stata 15.1. Its parameters, assessments and statistics are shown in *Table 7* and *Table 8*. The F-statistics for the general significance of the parameters is large enough to refute the hypothesis, because these parameters do not explain the changes in the dependent variable ROA. The empirical results expectedly show that profitability is positively correlated with asset growth, which is confirmed by previous findings in literature. Firm size also has a positive effect on economic profitability. The liquidity of credit users measured through *debt service capacity* (DSC) is positively correlated to the *return on assets and sales*, which shows that industrial firms manage to cover loans and other obligations with part of the profit. To validate the results, it is better to illustrate the impact of the asset intensity on investment activity considering money flow in the presence or absence of financial restrictions with the intention to highlight the credit multiplier. Our findings prove the thesis for the negative effects of leverage (González 2013). We suppose that its impact will change in a positive direction with the increase of the firm size and the availability of economizing from size. In view of the fact that the reported average levels of long-term tangible assets in the total asset structure is under 50%, we anticipate a negative impact of the latter on economic profitability, which has been proven by the model. The negative and significant impact of company age on its financial performance is perhaps due to a loss of flexibility and accumulation of fatigue while evaluating changes in the surrounding conditions. With "aging" knowledge and experience may become obsolete and the organization will fall into decay (Agarwal and Gort 2002).

Table 7. Regression results

ROA	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
GROWTH	.023	.012	1.95	.052	0	.046	*
SIZE	.081	.031	2.56	.01	.019	.142	**
AGE	-.251	.11	-2.29	.022	-.467	-.036	**
T	-.306	.103	-2.96	.003	-.509	-.103	***
DSC	.005	.002	2.36	.018	.001	.008	**
LIQ	0	0	-0.96	.336	-.001	0	

DR	-.056	.01	-5.57	0	-.075	-.036	***
LP	0	0	0.60	.546	0	0	
Constant	.442	.399	1.11	.268	-.341	1.225	
Mean dependent var		0.090	SD dependent var			0.480	
R-squared		0.352	Number of obs			2027	
F-test		101.805	Prob > F			0.000	
*** p<.01, ** p<.05, * p<.1							

Table 8. Regression results

ROS	**Coef.**	**St.Err.**	**t-value**	**p-value**	**[95% Conf**	**Interval]**	**Sig**
GROWTH	-1.353	.711	-1.90	.057	-2.748	.043	*
SIZE	-2.831	1.888	-1.50	.134	-6.535	.872	
AGE	-6.987	6.59	-1.06	.289	-19.913	5.94	
T	9.152	6.208	1.47	.141	-3.026	21.329	
DSC	1.823	.117	15.61	0	1.593	2.052	***
LIQ	-.001	.015	-0.08	.934	-.031	.028	
DR	-.9	.601	-1.50	.134	-2.078	.279	
LP	-.005	.005	-1.03	.302	-.014	.004	
Constant	36.96	23.936	1.54	.123	-9.99	83.91	
Mean dependent var		0.893	SD dependent var			25.605	
R-squared		0.137	Number of obs			2027	
F-test		31.503	Prob > F			0.000	
*** p<.01, ** p<.05, * p<.1							

Conclusion

In our study we have presented a model of the sources of firm competitiveness through selected determinants of financial performance. Using panel data from the Bulgarian industry at company level and according to previous findings in scientific research, we note significant and positive effects of *sales growth* as a measure of growth, company size and its ability to serve its debt rationally. Negative and significant effects on the *return on assets* are found in firm size (InTA), leverage (DR) and in the structure of assets measured through the share of long-term tangible assets within total assets. The result shows differences in the financial indicators, such as ROA and ROS, power and direction of influence which impact management efficiency. The empirical application reveals only the internal sources of firm competitiveness.

This study presents the characteristics of financial structure as a source of firm competitiveness, however, the presence of limitations that do not necessarily reflect

firm and sectoral specifics, nor macroeconomic changes, would facilitate and improve the analysis significantly.

The obtained results offer elements for the improvement of decision-making by the company management and may serve as a starting point for investors attracted by this industry.

REFERENCES

AIGINGER, K., 1998. A framework for evaluating the dynamic competitiveness of countries. *Structural Change and Economic Dynamics*, Volume 9, Issue 2. Available at: https://www.sciencedirect.com/science/article/abs/pii/S0954349X9700026X?via%3Dihub.

AIGINGER, K., Et al., 2013. *Competitiveness under New Perspectives*. Working Paper № 44. Available at: https://www.oecd.org/economy/Competitiveness-under-New-Perspectives.pdf.

AGARWAL, R., & GORT, M., 2002. Firm Product Lifecycles and Firm Survival. *American Economic Review,* vol. 92, no. 2, pp. 184 – 190. DOI: 10.1257/000282802320189221.

AKBEN-SELCUK, E., 2016. Factors Affecting Firm Competitiveness: Evidence from an Emerging Market. *International Journal of Financial Studies,* vol.4, no.2. DOI:10.3390/ijfs4020009.

AUSINA-EMSINA, A., V. OZOLINA, R. POCS. 2018, Competitiveness and Economic Development. Scenarios of Latvia. *Business, Management and Education*, Vol. 16, Iss. 1. DOI:10.3846/bme.2018.2399.

BUCKLEY, P. J.; PASS, C. L. & PRESCOTT, K., 1988. Measures of International Competitiness. A Critical Survey. *Journal of Marketing and Management*, vol. 4, no. 2, pp. 175 – 200. DOI: 10.1080/0267257X.1988.9964068.

CASTELLACCI, F., 2008. Innovation and the competitiveness of industries: Comparing the mainstream and the evolutionary approaches. *Technological Forecasting & Social Change,* vol. 75, no.7, pp. 984 – 1006. DOI: 10.1016/j.techfore.2007.09.002.

CHURSIN, A. & MAKAROV, Y., 2015. *Management of Competitiveness: Theory and Practice*. London: Springer.

DEPPERU, D.; Cerrato, D., 2005. Analysing international competitiveness at the firm level: Concepts and measures. *Working Paper,* no. 32; Quaderni del Dipartimento di Scienze Economiche e Sociali, Università Cattolica del Sacro Cuore, Piacenza. Available online: http://dipartimenti.unicatt.it/dises-wp_azzurra_05_32.pdf.

EUROPEAN CENTRAL BANK, 2013. *On the Measurement of Foreign Direct Investment and its Relationship to Activities of Multinational Corporations*. Working paper series, no. 1614.

EUROPEAN COMMISSION, 2011. *European Competitiveness Report* 2011, Brussels. Available at: file:///C:/Users/Neo/Downloads/ECR2011_7129_en_7129.pdf

FAGERBERG, J., 1988., International Competitiveness. *Economic Journal*, vol. 98, no. 391, pp. 355 – 374.

FIEGENBAUM, A., KARNANI, A., 1991. Output flexibility—a competitive advantage for small firms. *Strategic Management Journal*, vol. 12, no.2, pp. 101 – 114. DOI:10.1002/smj.4250120203.

GERARD D., 1972. *Theory of Value: An Axiomatic Analysis of Economic Equilibrium*, Yale University Press, New Haven CT. ISBN 0-300-01559-3.

GODDARD, J,; TAVAKOLI, M. & WILSON, J., 2005. Determinants of profitability in European manufacturing and services: Evidence from a dynamic panel data. *Applied Financial Economics*, vol. 15, no. 18, pp. 1269 – 1282. DOI: 10.1080/09603100500387139.

GONZÁLEZ, V., 2013. Leverage and corporate performance: International Evidence. *International Review of Economics & Finance*, Elsevier, vol. 25, pp. 169 – 184. DOI: 10.1016/j.iref.2012.07.005.

HARDWICK, P., 1997. Measuring cost inefficiency in the UK life insurance industry. *Applied Financial Economics*, vol. 7, no. 1, pp. 37 – 44. DOI:10.1080/096031097333835.

HERMUNDSDOTTIR, A., 2021. Sustainability innovations and firm competitiveness: A review. *Journal of Cleaner Production*, vol. 280, 124715. DOI:10.1016/j.jclepro.2020.124715.

HUANG, X., 2023. The roles of competition on innovation efficiency and firm performance: Evidence from the Chinese manufacturing industry. *European research on management and business economics,* vol. 29, no.1, 100201. DOI: 10.1016/j.iedeen.2022.100201.

Iliev, J., 2005. *Competitiveness of Bulgarian industrial companies*: Research topic. Sofia: University of National and World Economy.

JENSEN, M. C., ET AL., 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, vol. 3, no. 4, pp. 305 – 360.

KOTEVA, N.; ANASTASOVA-CHOPEVA, M. & BACHEV, H., 2021. Approach to assessing the competitiveness of agricultural holdings in Bulgaria. *Ikonomika i upravlenie na selskoto stopanstvo*, vol. 66, no. 2, pp. 3 – 20. (In Bulgarian).

LALL, S., 2001. Competitiveness Indices and Developing Countries: An Economic Evaluation of the Global Competitiveness Report. *World Development*, vol. 29, no. 9 pp. 1501 – 1525. DOI: 10.1016/S0305-750X(01)00051-1.

LIARGOVAS, P., ET AL., 2010. *Factors Affecting Firm Competitiveness*: The Case of Greece. Vol. 2, No. 2.

LIARGOVAS, P. & SKANDALIS, K. S., 2012. Impact of leverage and other key variables on business performance. *Economics and Business Research*, vol.4, no. 4, pp. 472 – 484. DOI: 10.1504/IJEBR.2012.047423.

INDUSTRY. *Global Business and Management Research: An International Journal.*

MARTÍNEZ-FERRERO, J., VALERIANO FRÍAS-ACEITUNO, J., 2015. Relationship between sustainable development and financial performance& International Empirical Research, *Business Strategy and the Environment*, vol. 24, no. 1, pp. 20 – 39. DOI:10.1002/bse.1803.

MAKOVEC BRENČIČ, M., 2001. Analyzing competitive advantages on the basis of resource-based view: The concept of price and non-price factors. *Journal for East European Management Studies*, Vol. 6, No. 3, pp. 313 – 330.

NENOV, T., 2008. *Upravlenie na konkurentosposobnostta I rastezha*. Varna: Nauka I ikonomika.

NGATNO, N., 2019. The role of adaptive ability in firm performance: Moderating effect of firm size and age. *Asian Economic and Financial Review*. vol. 9, no. 7, pp. 807 – 823. DOI: 10.18488/journal.aefr.2019.97.807.823.

PORTER, M., 1980. *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. The Free Press, New York.

RICARDO, D., 1951 (1817). *On the Principles of Political Economy and Taxation*, Pierro Staffa (Ed.), Works and Correspondence of David Ricardo, vol.1. Cambridge University Press.

RIJANTO, A., 2022. Political connection status decisions and benefits for firms experiencing financial difficulties in emerging markets. *Problems and Perspectives in Management*, vol. 20, no. 3, pp. 164 – 177. DOI: 10.21511/ppm.20(3).2022.14.

SARKER, R., 2014. Half-a-Century Competitiveness of Wheat Sectors: A Comparative Analysis of Canada and Australia. *Farm Policy Journal*, Australian Farm Institute 11.

SERRASQUEIRO, Z., ET AL., 2008. Performance and size: empirical evidence from Portuguese SMEs. *Small Bus Econ*, vol. 31, pp. 195 – 217. DOI 10.1007/s11187-007-9092-8.

SHUMPETER, J., 1943. *Capitalism, Socialism and Democracy.* Available at: https://periferiaactiva.files.wordpress.com/2015/08/joseph-schumpeter-capitalism-socialism-and-democracy-2006.pdf.

SHTEREV, N., 2012. Izsledvane na suvremennata firmena I produktova konkurentosposobnost v Bulgaria. *Research Papers – University of National and World Economy,* vol. 52, no. 3, pp. 98 – 158. (In Bulgarian). ISSN 0861-9344.

SMITH, A., 1932. *The Wealth of Nations*. Book II, Chapter II, Available at: bibliomania.com/2/1/65/112/frameset.html.

TANGEN, S., 2003. An overview of frequently used performance measures. *Work Study*, vol. 52 no. 7, pp. 347 – 354. DOI: 10.1108/00438020310502651.
VARAMEZOV, L. 2009. Modernization and firm competitiveness – theoretical and practical aspects and effects. *"Scientific Research" Almanac*. ISSN: 1312-3815.
VELEV, M., 2007. Cluster approach for competitiveness improvement. *Machines, technologies, materials*. N-1.
WALRAS, L., 1969. Elements of Pure Economics or The Theory of Social Wealth. *Augustus M Kelley* Reprint Edition January.
WINTER, R., 1994. The dynamics of competitive insurance markets. *Journal of Financial Intermediation*, vol.3, no. 4, pp. 379 – 415. DOI: 10.1006/jfin.1994.1011.
Regulation (EU) 2021/1060 of the European Parliament and of the Council of 24 June 2021. Avalable: https://eur-lex.europa.eu/legal- content/BG/TXT/?uri=CELEX%3A32021R1060.
EUROPEAN PARLIAMENT. Available at: https://www.europarl.europa.eu/ftu/pdf/bg/FTU_3.1.2.pdf.
INNOVATION AND COMPETITIVENESS OPERATIONAL PROGRAMME (2021) https://opic.bg/uploads/2022/02/nov-programen-period-2021-2027-g-27.pdf.
IMD World Competitiveness Center, IMD World Competitiveness Yearbook 2022 – Available at: www.imd.org.
MINISTRY OF INNOVATION AND GROWTH, 2022. Available at: https://www.mig.government.bg/wp-content/uploads/2022/12/isis-2021-2027.pdf.
COUNCIL OF MINISTERS OF THE REPUBLIC OF BULGARIA, 2021. Available at: https://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&Id=1403.

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