THE INFLUENCE OF FIRM-SPECIFIC FACTORS ON FIRMS´ PERFORMANCE

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Abstract: Sources and nature of factors that potentially influence firms´ performance has received huge attention within empirical literature. The aim of the present paper is to evaluate the influence of firm-specific factors on the performance of firms operating in the Slovak metallurgical industry. Despite importance of this sector for economy not only of Slovakia, there is a lack of sufficient empirical findings regarding determinants of metallurgical firms´ performance. The analysis is based on a firm level panel dataset using regression models with fixed effects. As regard to the firms´ performance, statistically significant ambiguous impact of liquidity and age, negative impact of asset turnover and positive effect of cost effectiveness was revealed. Surprisingly, the size of firm was not found to be significant determinant of firms´ performance. The results of the study bring significant managerial implications suggesting that even in sectors vulnerable to changes in the external environment, effective management of the firm´s internal factors can lead to performance gains.

Key words: firm-specific factors; resource-based view; performance, business strategy.

Introduction

One of the most intensive discussions within business economics literature is related to the factors that determine firms´ performance, comparing industry- as well as firm-specific factors in a broader or narrower context. It seems that in an effort to explain firms´ performance variance, there have recently been dominant opinions that prefer firm-specific factors (Blašková and Dvouletý, 2018). In the light of the previous studies, our ambition is to focus in more details on firm-specific factors potentially influencing business performance. Despite large empirical evidence in this field worldwide, there are very few comparable studies conducted specifically in conditions of Central European economies. Some studies have been conducted by Blažková and Dvouletý (2018, 2019) in the conditions of

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agricultural industry in the Czech Republic. The authors focused on single-sector investigation, similarly as Pervan and Mlikota (2013) in Croatian food and beverage industry, who state that studies related to the individual sectors are rare. With regard to metallurgical industry which faced gradual movements toward consolidation and reorganisation in the recent years (Bobenič et al., 2015) there exist only limited number of studies investigating the effect of firm-specific factors on firm performance majority of them being conducted recently in conditions of Asian countries (e.g. Nandhu, Kumar, 2020; Vaitoonkiat, Charoensukmongkol, 2020). Hence, the aim of this study is to evaluate the influence of firm-specific factors on the performance of firms operating in the Slovak metallurgical industry and thus to enrich the existing literature in this field. A firm-level panel dataset allows us to test the effect of selected factors on firms´ performance in the longer term using panel data regression approach.

At the same time, knowledge of the links among individual factors, as well as quantification of their effects, both in relation to business performance and among them, can have a significant pragmatic impact, particularly in terms of the business strategy development and its implementation. Therefore, we consider the issue of determinants of business performance to be interesting and worthy of further investigation, both from the theoretical, empirical and pragmatic point of view.

Literature Review

Theoretical approaches seeking to explain performance differences among firms can be roughly divided into industrial theory approaches and resource-based approaches. Pioneering works in this field prioritizing industry effects on one hand or firm-specific effects on the other hand as key performance determinants, inspired other researchers to provide a more comprehensive view on the issue (e.g. Hanggraeni et al., 2019). Significant work in this field is attributed to McGahan and Porter (2002), who have for the purpose of their study used an extensive database covering all sectors within the United States. They proved firm-specific factors to influence business performance more significantly and greatly in comparison to industrial factors. At the same time, it was found that the importance of individual effects on performance varies across sectors. Several recent studies have also confirmed the prevalence of the firm-specific factors in influencing business performance. Huang et al. (2015) have shown that while a strong market position leads only to a time-limited competitive advantage, superior technological resources and capabilities enable companies to gain a lasting and sustainable competitive advantage. Similarly, a study conducted by Pervan et al. (2018) confirmed that both industrial characteristics as well as firm-specific factors in the form of dynamic capabilities statistically significantly affect business performance, but the impact of the later was shown to be greater.

The importance of internal factors in enhancing firm´s performance is explained in the light of resource-based view theory that was significantly developed by Barney

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(1991). This theory comes out from the premise that concurrence of worthwhile, scarce resources that are not easily imitable or substitutable by competitors are leading to superior performance. Several firm-specific internal factors have been examined as potential determinants of firm´s performance within subsequent empirical literature with often inconclusive results. Significant attention has been paid to the effect of firm´s size on performance. Most of studies have proved that larger firms generate higher profits and thus showed positive relation between size and performance (e.g. Asimakopoulus et al., 2009; Nunes et al., 2009; Pratheepan, 2014; Nakatani, 2019). On the other hand, Goddard et al. (2005) found evidence of a negative size-profitability relationship. This finding can be attributed also to changes in the ways and forms of conducting business activities. While in the past the emphasis on the business size was important, today its participation within networking activities predominates (Mura et al., 2017). Similarly, age of the firm has bi-directional impact on the firm performance, as it was proved in the study by Coad et al. (2013). The authors found evidence of ageing firms to have ever-increasing productivity levels accompanied by higher profits and equity ratios, as well as lower debt ratios. On the other hand, they also detected that in some case business performance retrogrades with age. Older firms usually have lower anticipated sales growth rates. Similarly, Blažková and Dvouletý (2019) found ageing of firms to be associated with the increase of profitability indicators on one hand, but Cowling et al. (2018) concluded that negative firm age-growth relationship still holds, on the other hand.

Another important group of firm-specific factors are indicators of financial health and credibility of a firm including a liquidity ratio. Liquidity has been shown to increase profitability in the medium to long term (Goddard et al., 2005; Nanda and Panda, 2018; Yameen et al., 2019), however also none (Zainudin et al., 2018) or a negative relationship between liquidity and profitability has been detected in the short term. In general, this reduced profitability is explained by high opportunity and maintenance costs connected with holding excess liquidity (e.g. Ross et al., 2016). Another frequently studied factor is leverage. Most empirical findings have confirmed the existence of an inverse leverage – profitability relationship, indicating that lucrative firms are less dependent on leverage (Asimakopoulus et al., 2009; Nunes et al., 2009; Khaled and Samman, 2015; Nanda and Panda, 2018; Blažková and Dvouletý, 2019).

Another set of variables studied within resource-based view theory are manufacturing and organizational capabilities (e.g. Bilan et al., 2020). Chavez et al. (2017) state that manufacturing capabilities are created internally and as such are difficult to imitate and transfer. The authors evaluated manufacturing capabilities such as quality, delivery time, flexibility, cost-effectiveness, in the context of entrepreneurial orientation. One of the recent studies conducted by Shih (2018) points out the significance of radical innovations in deepening competitive advantage. Similarly, the importance of innovation activities as well as the human factor in building a sustainable competitive advantage has been highlighted in the

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work by Grabara et al. (2019). Chatzoglou et al. (2018) sumps up that business performance is directly positively influenced by its strategic orientation and indirectly also by its organizational structure and its different manufacturing capabilities. However, many of the ambiguities and contradictions outlined above regarding the impact of various firm-specific factors on business performance justify the need for further research in this area. With respect to the outlined theoretical considerations it is in our interest to seek answer to the research question of which firm-specific factors and in what direction contribute to achieving performance gains of firms operating in specific industry.

Methods and methodology

For the purpose of the analysis the annual data from 2009 to 2017 for 48 firms operating in metallurgical industry in Slovakia were used. Going out from the Statistical Classification of Economic Activities SK NACE Rev. 2, the metallurgical industry is covered by the division 24 - metal production and processing. The choice of single sector orientation is motivated by the effort to best capture individual firm-specific effects on performance, given that these effects are considered sector specific (as previously proved e.g. by McGahan and Porter, 2002).

The input data for construction of dependent and independent variables were collected from the non-public version of the database Finstat premium. Key dependent variables used in our analysis are connected with business performance. As it is stated by Suchánek et al. (2014) a wide range of individually compiled sets of indicators to assess the business performance are used by several authors. Within our research the financial performance is expressed by return on assets (ROA) and return on sales (ROS). Return on assets is calculated as the profit after taxes in relation to total assets. Return on sales, also known as profit margin, is calculated as the profit after taxes in relation to sales. Similar computation of the return on assets and profit margin as measures for business performance, was used by Nakatani (2019), Nanda and Panda (2018) as well as Pervan et al. (2018) in their research. As independent variables in our research following indicators are used: Liquidity ratio (Lq) in form of current ratio calculated by dividing current assets by current liabilities, similarly as in the work by Nanda and Panda (2018). As the proxy for firm size measurement the logarithm of total assets (l_Assets) was used as in the study by Nakatani (2019). The age (Age) represents the number of years from the establishing the firm including legal succession. Lee (2012) proxied the maturity stage of a firm with the variable age. Schmiele (2012) used the variables age, location and industry as the main characteristics of a firm. Additional firm-specific variables included in the study are asset turnover ratio (AT) measured as the value of a firm's sales relative to the value of its total assets, and cost-effectiveness (EATC) measured as earnings after taxes as a ratio of total costs.

In our study, the following general model is used to analyse the panel dataset:

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$$y_{it} = \beta_0 + \beta_1 x_{it1} + \beta_2 x_{it2} + \ldots + \beta_k x_{itk} + \varepsilon_{it} \quad (1)$$

where the dependent variable y_{it} refers to the vector of performance measures, namely return on assets and return on sales, of the ith firm in the tth year. $\beta_0 - \beta_k$ are vectors of the parameters to be estimated, $x_{it1} - x_{itk}$ represent explanatory (independent) variables referring to the ith firm in the tth year, ε_{it} is the error term. Panel regression modelling is a standard methodology for identification firm-specific determinants of business performance within empirical literature (e.g. Blažková, Dvouletý, 2018; Pervan, Mlikota, 2014). The appropriate estimation method for panel data regression analysis was selected according to several tests, namely the F-test for testing the existence of panel effects in the model. In case of rejection of the null hypothesis, the fixed-effect method is favoured compared to the pooled OLS method for the coefficient estimation. The Breusch – Pagan Lagrange multiplier test (LM-test) is used for testing of significant difference across units. In case of rejection of the null hypothesis, the random-effect method is favoured compared to the pooled OLS method for the coefficient estimation. Finally, the selection between the random- and fixed-effect methods was conducted on a basis of the results of the Hausman test. In case of rejection of the null hypothesis of errors not correlated with regressors, the fixed-effect estimation method is selected. We tested the appropriateness of the estimation method with several tests: F-test of goodness-of fit, Breusch – Pagan test for heteroscedasticity, Shapiro – Wilk test for normality of residuals, Durbin – Watson statistics for autocorrelation. The heteroscedasticity and autocorrelation problem is treated with use of Arellano estimator.

Results and Discussion

Prior designing the models it was necessary to exclude the possibility of apparent dependence in the time series. If the time series were not a co-integrated model, it would have to estimate from the first differences. Data panels of individual selected variables Lq, l-Assets, Age, AT, EATC were tested by Levin Lin Chu test, ADF and PP tests. The zero hypothesis shows the non-stationarity of time series. In case of our variables, the tests show that the time series are stationary. To select the most appropriate estimation method it conducted panel diagnostic based on which the model with fixed effects is the most appropriate. Table 1. shows the results of the model (1) for the dependent variable ROA including all the five explanatory variables.

Table 1: Estimation of fixed effects model – dependent variable ROA

	Coefficient	t-ratio	p-value
Const	−0.0514642	−0.131	0.897

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Lq	0.0069773	1.768	<0.001*
l_Assets	−0.0027040	−0.102	0.919
Age	0.0060855	2.034	<0.001*
AT	0.0038682	0.492	0.625
EATC	0.5377800	3.713	<0.001*

Mean dependent variances	0.0220	*S.D. dependent variances*	0.1575
Sum squared residual	3.0798	*S.E. of regression*	0.0901
LSDV R-squared	0.7118	*Within R-squared*	0.5698
Log-likelihood	454.8274	*Akaike criterion*	−803.6547
Schwarz criterion	−588.0282	*Hannan-Quinn*	−718.5262
rho	0.1273	*Durbin-Watson*	1.3819

* - Statistically significant at the level $\alpha < 0,001$

The variables Lq, Age, EATC are considered as significant on the basis of the low p-value resulting from the t-test. It has conducted comparison of parameters estimation determined by the theory on a basis of which it can confirm compliance with the expected direction of action. In the case of l_Assets, AT their insignificance cannot be denied. Moreover, the l_Assets parameter estimation is shown negative, which means that this parameter affects ROA negatively. Removing insignificant variables from the model will increase the adjusted coefficient of determination. The new model is shown in Table 2.

Table 2: Estimation of final fixed effects model – dependent variable ROA

	Coefficient	**t-ratio**	**p-value**
Const	−0.0825753	−0.1706	0.897

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Lq	0.0089788	1.6787	<0.001*
Age	0.0080917	2.5230	<0.001*
EATC	0.7359970	3.1240	<0.001*

* - Statistically significant at the level $\alpha < 0,001$

The final model with reduced explanatory variables explains 90.1% of the ROA variability. The model as a whole can be considered as significant based on the low p-value of the F-test. The Jarque-Bera test of normality with a p-value of 0.0757 does not lead to rejection of the normal distribution of the variables that were excluded from the model. This is documented by the appropriate Q-Q graph – in which the greater the compatibility of empirical values with the diagonal, the greater the compliance with the normal distribution – Figure 1.
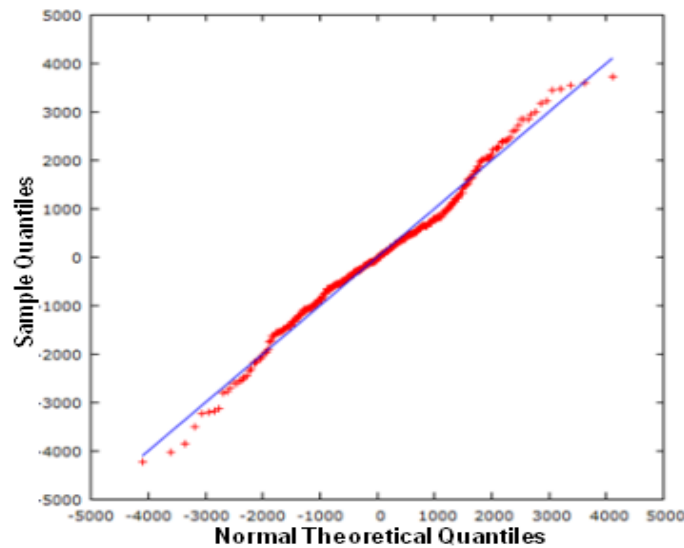

Figure 1: Q-Q graph verifying the normality of eliminated elements from the ROA model (own processing)

Results of our analysis show positive statistically significant influence of liquidity, age and cost effectiveness on performance measured by return on assets. It means that firms´ performance improve with holding excess liquidity, ageing and generating more profit per unit of costs. On the other hand, we found no evidence on the impact of the firm´s size on return on assets.

The non-stationarity of the time series of the individual variables was, as in the previous case, tested by Levin Lin Chu test, ADF and PP tests. The results proved the stationarity of the time series. Based on relevant tests, the time series of panel data can be considered to be co-integrated, the model could be estimated and the results were not distorted by false regression. It selected appropriate estimation method by using panel diagnostics based on which the model with fixed effects is the most appropriate. Table 3. shows the results of the model (1) for the dependent variable ROS including all the five explanatory variables.

Table 3: Estimation of fixed effects model – dependent variable ROS

	Coefficient	t-ratio	p-value
Const	−3.806840	−1.223	0.227
Lq	−0.127148	−2.008	<0.001*
l_Asset	0.367306	1.612	0.114
Age	−0.088290	−2.282	<0.001*
AT	−0.235103	−2.448	<0.001*
EATC	3.507960	2.984	<0.001*

Mean dependent variances	**−0.0402**	*S.D. dependent variances*	**1.5450**
Sum squared residual	331.2148	*S.E. of regression*	0.9348
LSDV R-squared	0.6781	*Within R-squared*	0.6351
Log-likelihood	−555.5992	*Akaike criterion*	1217.1980
Schwarz criterion	1432.8250	*Hannan-Quinn*	1302.3270
rho	0.0118	*Durbin-Watson*	1.4761

* - Statistically significant at the level $\alpha < 0{,}001$

All estimated parameters corresponding with the expected assumptions. The l-Assets factor and its positive mark indicate that increasing of ROS value is achieved by increasing value. On the basis of low p-values, we can consider estimated individual parameters as significant. The P-value of the F-test rejects the zero hypothesis of the insignificance of all the estimated parameters at the same time and it can conclude that the model as a unite is statistically significant. The estimated model for ROS by using explanatory variables explained up to 92.1% of ROS variability.

The P-value of the Jargue -Bera test with a value of 0.1412 does not lead to rejection of the normal distribution of the selected variable, which is also indicated

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by Figure 2. Q-Q. The p-value of the Wald test 0.131 expresses the absence of heteroscedasticity between groups and the value of the Durbin-Watson test demonstrates the lack of first autocorrelation regulation.
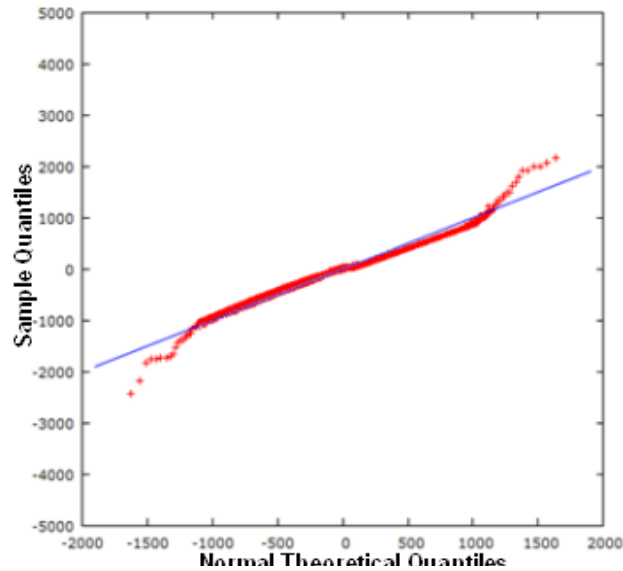

Figure 2: Q-Q a graph verifying the normality of estimated elements from the ROS model (own processing)

The model shows negative impact of liquidity, age and assets turnover, however positive impact of cost effectiveness on the return on sales. It means that higher profit margins are achieved by firms that are less liquid, younger, with slower asset turnover and higher cost effectiveness. On the other hand, size of the firm is surprisingly not found to be significantly related to its performance measured by return on sales.

Discussion

Our study proved an ambiguous statistically significant impact of some variables, namely liquidity and age on different performance variables. Thus, we can agree with Vieira et al. (2019) that determinants of firm performance vary depending on the variable used to measure the performance. Our findings can be explained by several circumstances.

Due to fluctuating trends in the demand for metallurgical products as well as overproduction, metallurgical firms tend to increase their inventories which positively affects the development of the firm's liquidity but increases the costs associated with maintaining a high level of liquidity, as it was pointed out by Ross et al. (2016). This negative market situation also weakens the bargaining power of

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metallurgical firms towards their customers, force them to apply low price strategies with which the low profit margins and thus the low profitability of sales is directly connected. These consequences are evident from the model of five competitive forces introduced by Porter (2008). The problem of overproduction and production on the stock can lead in the long run to a tendency to reduce production capacities mainly through the divestment of redundant assets, which ultimately increases return on assets. At the same time, as noted by Nandhu and Kumar (2020), the determination of the optimal cash balance is subject to a number of cash management models that management of metallurgical companies should also take into account, since an adequate level of liquidity seems to be critical in relation to performance outcomes.

Similarly, the age of a firm has positive impact on the return on assets, which may also be related to the gradual divestment of redundant assets in the case of older firms being in maturity or decline stage of their life-cycle. On the other hand, negative impact of the firm´s age on the return on sales can also be explained by the maturation of the firm, related to price reductions, low profit margins as well as lower growth rates of sales. Similar two-way impact of age on firm´s performance was identified also by Coad et al. (2013). They concluded that while younger firms are better able to turn employment growth into sales and profits growth, older firms, on the other hand, perform better at converting sales growth to profits growth. The managerial implications resulting from these findings suggest that earlier stages of firm life cycle should be focused on employment growth, while maturity stages on maintenance of sales growth.

Surprisingly, it did not find firm size as a statistically significant determinant of firm performance. However, the indicated direction of relationship corresponds to findings by Nakatani (2019) who found that firm size effects profit margins positively, while return on assets negatively. Thus, it can also agree with the author that small firms compete more flexibly on niche markets and larger firms focus on wider international markets and this is also a case of metallurgical firms.

Negative impact of asset turnover on sales profitability can be attributed to the technological specificities of metals production, in particular in terms of the duration of production stages, which limit the possibilities for its significant shortening. Hence, the acceleration of asset turnover in sales is limited. If it occurs, there is a risk of overproduction associated with pressure on reduction of profit margins, which negatively affects the profitability of sales. On the other hand, no significant role of asset turnover in determining assets´ profitability was detected, similarly as in the study by Pervan and Mlikota (2013). In the case of cost effectiveness, a positive impact on both performance indicators was identified. Orientation on cost reduction projects in connection e.g. with innovations in metals´ manufacturing process can have positive influence on the performance of metallurgical firms.

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Summary

Going out from resource-based view theory, the present study examined the influence of selected firm-specific factors on business performance of firms operating in Slovak metallurgical industry. To meet the main objective of the study, regression with fixed-effect models was used for analysis of panel dataset concerning a sample of 48 firms operating within the division 24 - metal production and processing, covering the period from 2009 to 2017. Financial performance expressed by return on assets and return on sales was considered as dependent variable.

The results of our analysis gave answer to our research question that firm-specific factors are significant determinants of firms´ performance, even in case of firms operating in sectors as metallurgy that are vulnerable to changes in the external environment. However, the effect of firm-specific factors varies depending on the variable used to measure the performance. In case of liquidity and firm´s age, the findings are not unambiguous, because we identified statistically significant positive relation of both variables to return on assets, but negative relation to return on sales. Asset turnover influences return on sales negatively and cost effectiveness influences both performance variables positively. Surprisingly, the size of firm was not found to be significant determinant of firms´ performance.

The results of the study provide initial guidelines for managers of Slovak metallurgical firms to understand how to improve firms´ performance using firm-specific factors. In particular, firms should implement individual measures in a differentiated way, depending on their size and age, as these factors influence individual performance indicators in a contradictory way. Similarly, with regard to effect of liquidity on performance it is recommended to test cash management models and find optimal cash balance. Maintenance of cost effectiveness e.g. through innovation of production processes can be another tool to achieve the required performance.

There are several limitations connected with the research process. Findings resulting from our study are restricted to the firms operating in Slovakia metallurgical industry with exclusion of micro-firms especially due to their heterogeneous nature and often incorrect inclusion in the relevant statistical classification. However, research oriented specifically on micro-firms could bring considerably different results, since the present study also indicated differences in performance depending on the size of firms.

Another limitation concerns the selection of variables and the time period of the research, which were primarily determined by the availability of data in the database. Future research should consider also other factors, especially organizational capabilities or innovation activity as potential determinants of metallurgical firms´ performance. At the same time, other performance oriented variables, such as productivity can be also taken into account.

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To sum up, the study extends prior findings regarding resource-based view on a sample of firms operating within metallurgical industry and its relationship to firms´ performance.

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References

Asimakopoulus I., Samitas A., Papadogonas T., (2009). Firm-specific and economy wide determinants of firm profitability: Greek evidence using panel data. *Managerial Finance,* 35(11), 930-939.

Barney J.B., (1991). Firm resources and sustained and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.

Bilan Y., Hussain H.I., Haseeb M., Kot S., (2020). Sustainability and economic performance: Role of organizational learning and innovation. *Engineering Economics,* 31(1), 93-103.

Blažková I., Dvouletý O., (2018). The causes of firm performance variation in the Czech food processing industry in the context of the outlier effect. *Management Research Review,* 41(8), 968-986.

Blažková I., Dvouletý O., (2019). Investigating the differences in entrepreneurial success through the firm-specific factors: Microeconomic evidence from the Czech food industry. *Journal of Entrepreneurship in Emerging Economies*, 11(2), 154-176.

Bobenič T., Bobenič Hintošová A., Hliboká L., Vasková I., (2015). Effects of changes in steel industry concentration. *Metalurgija*, 54(3), 571-574.

Chatzoglou P., Chatzoudes D., Sarigiannidis L., Theriou G., (2018). The role of firm-specific factors in the strategy-performance relationship: Revisiting the resource-based view of the firm and the VRIO framework. *Management Research Review,* 41(1), 46-73.

Chavez R., Yu W., Jacobs M. A., Feng, M., (2017). Manufacturing capability and organizational performance: The role of entrepreneurial orientation. *International Journal of Production Economics,* 184, 33-46.

Coad A., Segarra A., Teruel M., (2013). Like milk or wine: Does firm performance improve with age? *Structural Change and Economic Dynamics,* 24(1), 173-189.

Cowling M., Liu W., Zhang N., (2018). Did firm age, experience, and access to finance count? SME performance after the global financial crisis. *Journal of Evolutionary Economics*, 28(1), 77-100.

Goddard J., Tavakoli M., Wilson J.O.S., (2005). Determinants od profitability in European manufacturing and services: Evidence from a dynamic panel model. *Applied Financial Economics*, 15(18), 1269-1282.

Grabara J., Cehlar M., Dabylova M., (2019). Human factor as an important element of success in the implementation of new management solutions. *Polish Journal of Management Studies*, 20(2), 225-235.

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Hanggraeni D., Slusarczyk B., Sulung L.A.K., Subroto A., (2019). The Impact of internal, external and enterprise risk management on the performance of micro, small and medium enterprises. *Sustainability,* 11(7), 2172.

Huang K. F., Dyerson R., Wu L.Y., Harindranath G., (2015). From temporary competitive advantage to sustainable competitive advantage. *British Journal of Management*, 26(4), 617-636.

Khaled A. J., Samman H. A., (2015). Determinants of profitability: evidence from industrial companies listed on Muscat securities market. *Review of European Studies,* 7(11), 303-311.

Lee S., (2012). Financial determinants of corporate R&D investment in Korea. *Asian Economic Journal.* 26(2), 119–135.

Mcgahan A. M., Porter M. E. (2002). What do we know about variance in accounting profitability? *Management Science*, 48(7), 834-851.

Mura L., Havierniková K, Machová R., (2017). Empirical results of entrepreneurs' network: Case study of Slovakia. *Serbian Journal of Management,* 12(1), 121-131.

Nakatani R., (2019). Firm performance and corporate finance in New Zealand. *Applied Economics Letters,* 26(13), 1118-1124.

Nanda S., Panda A. K., (2018). The determinants of corporate profitability: an investigation of Indian manufacturing firms. *International Journal of Emerging Markets,* 13(1), 66-86.

Nandhu N., Kumar R., (2020). Effectiveness of cashflow ratios to measure the performance divergences of selected steel companies in India. *International Journal of Scientific & Technology Research,* 9(1), 2691-2696.

Nunes M. P. J., Serrasqueiro Z. M., Sequeira T. N., (2009). Profitability in Portuguese service industries: A panel data approach. *Service Industries Journal,* 29(5), 693-707.

Pervan M., Curak M., Kramaric T. P., (2018). The influence of industry characteristics and dynamic capabilities on firms´ profitability. *International Journal of Financial Studies*, 6(4), 1-19.

Pervan M., Mlikota M. (2013)., What determines the profitability of companies: Case of Croatian food and beverage industry. *Ekonomska Istrazivanja*, 26(1), 277-286.

Porter M. E., (2008). The five competitive forces that shape strategy. *Harvard Business Review,* 86(1), 23-41.

Pratheepan T., (2014). A panel data analysis of profitability determinants: Empirical results from Sri Lankan manufacturing companies. *International Journal of Economics, Commerce and Management*, 2(12), 1-9.

Ross S. A. et al., (2016). *Fundamentals of Corporate Finance.* McGraw-Hill Education Australia.

Schmiele A., (2012). Drivers for International Innovation Activities in Developed and Emerging Countries. *Journal of Technology Transfer*, 37(1), 98-123.

Shih T. Y., (2018). Determinants of enterprises radical innovation and performance: Insights into strategic orientation of cultural and creative enterprises. *Sustainability*, 10(6), 1-22.

Suchánek P., Richter J., Králová M., (2014). Customer satisfaction, product quality and performance of companies. *Review of Economic Perspectives*, 14(4), 329-344.

Vaitoonkiat E., Charoensukmongkol P., (2020). Interaction effect of entrepreneurial orientation and stakeholder orientation on the business performance of firms in the steel

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Bobenič Hintošová A., Bobenič T., Hajduová Z., Szajt M.

fabrication industry in Thailand. *Journal of Entrepreneurship in Emerging Economies*, ahead-of-print.

Vieira E. S., Neves M. E., Dias A. G., (2019). Determinants of Portuguese firms´ financial performance: A panel data evidence. *International Journal of Productivity and Performance Management,* 68(7), 1323-1342.

Yameen M., Farhan N.H.S., Tabash M.I., (2019). The impact of liquidity on firms´ performance: Empirical investigation from Indian pharmaceutical companies. *Academic Journal of Interdisciplinary Studies,* 8(3), 212-220.

Zainudin R., Mahdzan, N. S. A., Leong, E. S., (2018). Firm-specific internal determinants of profitability performance: An exploratory study of selected life insurance firms in Asia. In: *Journal of Asia Business Studies,* 12(4), 533-550.

WPŁYW CZYNNIKÓW SPECYFICZNYCH DLA FIRMY NA JEJ WYNIKI

Streszczenie: Źródła i charakter czynników, które potencjalnie wpływają na wyniki firm, zyskały dużą uwagę w literaturze empirycznej. Celem niniejszego artykułu jest ocena wpływu czynników specyficznych dla firmy na wyniki firm działających w słowackim przemyśle metalurgicznym. Pomimo znaczenia tego sektora dla gospodarki nie tylko Słowacji, brakuje wystarczających wyników empirycznych dotyczących czynników determinujących wyniki firm metalurgicznych. Analiza oparta jest na zestawie danych panelu na poziomie firmy z wykorzystaniem modeli regresji z ustalonymi efektami. Jeśli chodzi o wyniki firm, ujawniono statystycznie znaczący niejednoznaczny wpływ płynności i wieku, negatywny wpływ obrotu aktywami i pozytywny efekt efektywności kosztowej. Nieoczekiwanie okazało się, że wielkość firmy nie była istotnym wyznacznikiem wyników firmy. Wyniki badania niosą znaczące implikacje zarządcze, sugerując, że nawet w sektorach wrażliwych na zmiany w otoczeniu zewnętrznym skuteczne zarządzanie wewnętrznymi czynnikami firmy może prowadzić do wzrostu wydajności.

Słowa kluczowe: czynniki specyficzne dla firmy; widok oparty na zasobach; wydajność, strategia biznesowa.

企业特定因素对企业绩效的影响

摘要：可能影响企业绩效的因素的来源和性质在经验文献中受到了极大的关注。本文的目的是评估企业特定因素对斯洛伐克冶金行业企业绩效的影响。尽管该部门不仅对斯洛伐克的经济具有重要意义，但在冶金企业绩效的决定因素方面缺乏足够的经验发现。该分析基于具有固定效果的回归模型的企业级面板数据集。关于公司的业绩，显示了流动性和账龄的统计上显着的模棱两可的影响，资产周转率的负面影响和成本效益的积极影响。出人意料的是，公司的规模并没有成为决定公司绩效的重要因素。研究结果带来了重大的管理意义，表明即使在易受外部环境变化影响的部门中，对公司内部因素的有效管理也可以提高绩效。

关键词：企业特定因素基于资源的观点；绩效，业务策略。