УДК 336.1:352

M. Bittner[1], PhD.,
T. Soroková[2], Ing. PhD.,
A. Csikósová[2], Prof. Ing. CSc.,
K. Čulková[2], Doc. Ing. PhD.,
D. Marasová[2], Prof. Ing. CSc.

1 – Barclays PLC Banking & Financial services, London, UK, e-mail: martinbitt@gmail.com
2 – The Technical University of Košice, Kosice, Slovakia, e-mail: tatiana.sorokova@tuke.sk; adriana.csikosova@tuke.sk; katarina.culkova@tuke.sk; daniela.marasova@tuke.sk

PRIVATE EQUITY WITHIN MINING INDUSTRY IN EUROPE

М. Біттнер[1], д-р філософії,
Т. Сорокова[2], д-р філософії,
А. Цсікосова[2], канд. наук, проф.,
К. Чулкова[2], д-р філософії, доц.
Д. Марасова[2], канд. наук, проф.

1 – Barclays PLC Банки і Фінансові послуги, м. Лондон, Великобританія, e-mail: martinbitt@gmail.com
2 – Кошицький технічний університет, м. Кошице, Словаччина, e-mail: tatiana.sorokova@tuke.sk; adriana.csikosova@tuke.sk; katarina.culkova@tuke.sk; daniela.marasova@tuke.sk

ПРИВАТНІ ІНВЕСТИЦІЇ В ГІРНИЧОДОБУВНІЙ ПРОМИСЛОВОСТІ ЄВРОПИ

Purpose. The purpose of the study is to determine the extent of private equity (PE) contribution to growth of various industrial branches, individual companies, particularly its impact on mining industry in the frame of Europe.

Methodology. Investors evaluated mining companies through index of attractiveness of private equity and risk capital.

Findings. In the frame of the countries evaluation the country's individual risk profiles have been created. Through analysis of private equity influence we have found out that the activity of PE investments in mining industry in Europe decreases, but in comparison the companies without PE investments are stable, but do not achieve significant growth in the context of Europe.

Originality. The analysis proved mining industry has significant potential for attraction of PE investors.

Practical value. The paper presents the results of research in the area of sustainable development of the region in context of human, capital and natural resources, in the frame of the Project No. 1/0176/13 developed by Grant Agency VEGA, Slovakia.

Keywords: *private equity, mining industry, investments, gross domestic product, development trend, Slovakia*

Introduction. The global economic crisis unveiled the approach towards public and private finances over last decades when markets and national governments released low interested and multi-structured financial resources with low level of liquidity into global economy. As a results of complicated structuring and over-flowing markets with low cost financing some parts of those structures turned out to be more vulnerable than others within the times of economic recessions. The first outcomes of financial crisis showed that national governments have started to focus on more strict regulation of financial sectors across global markets [1]. The initial actions of governments have already shown impact on high-risk capital with low levels of interests, and the necessity of this kind of financial resources is crucial and important for private equity operations. Private equity funds grew over last two decades significantly, and this grow was achieved in the USA as well as in Europe. These new kinds of debt financing and low-interest capital supported massive growth within industrial sectors within individual countries. Main goal of this paper is to show to what extend the private equity contributed towards growth within different industrial sectors, how private equity influenced companies within evaluated sectors and what was the impact on the mining sector.

Analysis of the recent research. Private equity can be defined as type of investments, which represents four basic forms of investing. "Leveraged buyout" (LBO), or buying out by using the debt, is the first type of investment and represents the form of purchase when the small number of investors buys the whole company or their parts by using the significant levels of debt. The second type of investments is "growth capital", also known as development capital, which is usually defined as minority investment focused on targeted company without gaining a controlling power over company. This kind of investment helps company to realize future investment and development plans, such as acquisitions, new market penetrations, including motivations for international investment, competitive strategies, and selection for foreign entry modes [2]. The next type of private equity investments is investment called "mezzanine capital", which represents investment into preferred stocks or subordinate debt without any voting rights at the general meeting. The last type of investment is "venture capital" (also known as risk capital), which represents investments focused on first stage of company development and this type of investments represents the high level of risk together with significantly higher rates of returns for investors [3].

We have experienced the increasing rate of development of the secondary private equity market over last four years. Banks and other financial investors have increased efforts to sell their stakes in various investments classified as investments with high risk factors in order to increase their liquid financial resources, especially during years 2007 and 2008. The evidence of last economic trends

showed that not only private equity companies had tried to reduce their exposure towards high risk investments with low returns of positive cash-flows, but also various limited partnerships showed very similar behavioral patterns and activities. The sellers of private equity investment shares were mostly represented by three different groups of investors [3]. Those groups were: the investment groups under extensive financial pressure, such as banks or insurance companies, mostly because those companies were force to sell their assets in order to increase their liquid resources. The other groups were fund of funds, hedge funds and other direct investors, who were under financial stress and they weren't able to finance their positions from their re-sources. This eventually stopped the private equity distribution, which was furthermore pushed by further sales of stakes within investment partnerships by various foundations, which were not able to comprehend additional increases on the private equity markets [4].

The financial crisis started in 2007, affected the global private equity market and this effect impacted on ownership, stakes transfers and transformations within private equity investments. Over numerous decades in the USA and over last two decades in Europe, the private equity market showed consistent growth over all industries which had had positive impact on national GDPs, employment growth, productivity of industries and more other benefits which were measurable by other indicators.

The traditional model of private equity ended up under growing criticism and the questions of positive effects and survival of traditional private equity models had started to emerge on the global financial markets. As it was presented by publications from World Economic Forum (2008), Global Economic Impacts of Private Equity (2008), also by report about European Private Equity Market (2010), the private equity corporations are managed more effectively than other types of businesses and European private equity market has presented this evidence which shows that growth of private equity investments within national GDP and GDP growth boosted by private equity investments is in growing value of 0.1% which represents real growth of GDP of 0.3%. The one of the main reasons why private equity investments are more effective, with higher productivity and why those are more successful than other types of businesses is their understanding of different goals and management strategies. The differences are visible within implementations of continuous improvements in effectiveness growth and in improvements of business processes, in cost management, etc. The private equity companies gained not very favorable reputation from general perspective; mostly due to the implementations of processes to make new structure within targeted companies, for instance reduction of workforce, which was supported by the report from World Economic Forum (2008). The same publication also pointed out the findings that private equity investors together with reducing the levels of employees focused on improvement of effectiveness, and the further development of targeted companies allowed them to hire back let go employees over three years from the purchase of individual companies. In general, the companies with private equity investor have achieved much higher productivity, which is clearly visible in comparison with other companies within same sectors, and furthermore the employees' satisfaction is higher in those companies together with higher employment rate over all industries (World Economic Forum Publication, 2008).

The presence of private equity companies has as well positive impact on general management and whole companies within individual industry sectors and economies. The higher level of competitiveness is forcing other companies to be more productive and to use more effective management techniques [5]. There has been many academic works and publications focused on private equity presence within industries and its effect on particular industries. The problematic factors of private equity impact on various industry sectors and interaction of private equity during economic cycles [6].

The one of the very interesting studies focused on research of 76 particular management buyouts over the period of six years. The results of his research have concluded the fact that private equity companies are helping to increase the profitability within targeted companies, those investors improve the cash-flow and other financial indicators. The similar results have been also achieved by other studies and researches focused on transformation of targeted companies from public companies on private companies [7]. The results of mentioned researches have presented comparable results within different private equity segments, which provide the ground for further strengthening of overall opinion about positive effects of private equity investments.

On the other hand, the overall success depends also on economic conditions and management qualities of particular private equity company. Based on the presented researches we can conclude that some industries report better results than others, which have as well positive effect on overall industries. There had been as well cases which highlighted the reverse effects of private equity investments, where after the buyout of targeted company the private equity had been reducing the workforce while in the same time had been still achieving significant profits [6, 8].

As for the world's development, for example in Asia private equity has had a short but eventful history, characterized first by US firm dominance and then by a nationalistic backlash. Of particular importance have been US-Asian joint ventures, Asian nationals returning to domestic firms from US private equity and despite the relative localization of Asian private equity, industry practices are still largely shaped by the US model of private equity. Private equity investors are generally passive in the management of funds, but for example Chinese private equity market is dominated by funds whose investors are relatively active [9]. In other countries, for example in Bangladesh (Hassan et al., 2011) there has not been any study so far on private investments, it remains high on research agenda and deserves sincere academic attention [10].

It has been evident from the European economies perspective according to the number of researches conducted that the much detailed distinction of private equity classes hasn't been investigated and this only the handful of studies have been focused on private equity within Europe and its

differences. In this case, it is obvious that some results and testing criterion used in analyses will have bigger or smaller impact on different counties, which will vary basing on the development levels of particular economies, although in some cases some criteria will be applicable over whole sample without any distinction [11]. On the other hand number of countries, entering the European Union, obtained access to the internal European market as it was in case of Croatia that made institutional reforms, which consequently led to increase of income level [12].

In Europe, over the fifteen years period until 2008, the private equity industry grew enormously. In the UK, over the ten years period until 2001 private equity as a whole outperformed UK equities as an investment class [13]. There is made analysis of database covering the French private equity industry in 2011 and results showed that independent funds, which were needed to attract investors, were made likely than captive funds to develop socially responsible investing [14].

Furthermore, there has been different position of central and east European countries in global venture capital and private equity. In Latvia there is made research of private equity industry, which speaks Latvia suffered substantial losses during the crisis. Additional instruments of government support are needed for boosting venture capital, including development of country's infrastructure [15].

Presentation of the main research. The methods of evaluation offer wide picture of all relevant factors which should be considered by investors and also factors which can influence investment decisions. One of these evaluation methods is index of attractiveness of private equity and venture capital, which consists of six main factors [11]. Those factors are used as main aggregators for index construction. The main index factors are: economic activity, capital market, taxes, investors' protection and corporate governance, working and social environment and entrepreneurial opportunities.

The evaluation of companies by private equity investors is based on the principle of fair value of companies' assets, which are not public assets, which means that those assets are exchanged privately outside of the stock ex-changes. The environment of investments of private equity investors offers in principle the main six basic evaluation techniques based on the different approaches (table1), (Lawrence, CIM MES Survey).

Different approaches in evaluations of mining companies are derived from complicated evaluation characteristics of companies focused on commodities, where the value of company is very often influenced by a high cycle of mining industry. The large number of projects within the mining companies and companies itself operates over longer periods and cycles and this factors needs to be considered during the evaluation of companies or investments or their risks. The most serious risk are: financial risk, risk of gaining all required approvals prior mining extractions and its length, risks linked to geological questions and issues, risk focused on metallurgy, economical risks, risks of individual countries, political risks, geographical risks and social risks, as well as energy prices. Energy prices are explained in terms of a long term memory model that incorporates persistence components with autocorrelation [16].

Table 1

Evaluation techniques of private equity investors

Evaluation techniques	Approach
The price of current investment	Market approach
Multiplications	Market approach
Net assets	Costs approach
Discounted cash-flow or revenues (evaluation of company)	Revenues approach
Discounted cash-flow or revenues (evaluation of investment)	Revenues approach
Industrial benchmark	Market approach

(Source: [17])

During the countries evaluation the various risk profiles are created and those profiles are ranked on percentage scale from 0 to 14%. The corresponding percentage for each country based on the investment or targeted company is included into the evaluation of overall risk of country, geographical region and overall investment. The evaluation of investment is also considered from country's perspective, where in many cases private equity investor is not able to influence the risk level of each country and this has to be compensated over different indicators of investment.

The main and most popular evaluation techniques for selecting the targeted mining companies or mining investments are focused on evaluation of revenues and cash-flow, evaluation of markets and costs. The particular evaluation will differ based on development stages of mining companies, such as whether the company is focused on preparation of bearings for further mining or the mining company has already been performing mining operations with actual production [17].

Presentation of scientific results. The analysis of economical situation and presence of private equity companies has been performed over selected European countries and mining industry over the period of years 2007 until 2011 and all presented results are in aggregated values. Selection of countries has been primarily focused on members of OECD (source of information from STAN OECD database) and final selection has been based on 22 European countries. The selection includes following countries: Baltic countries, Bulgaria and Romania as well non-EMU countries such as Switzerland and Norway, and further aggregated values for Slovakia and Slovenia have been presented as lump sums, due to the size of particular economies, markets and further due to the comparability from European perspective [11].

For private equity investments, the data has been sourced from various databases, for instance Bloomberg, EVCA publications and aggregated data provided by research department of European Venture Capital Association.

The following fig. 1, 2 presents economical situation from the production in Europe and in mining industry. From the year 2007 the decline in overall production occurred and further decline occurred in production in 2010, which had created the fear of double dip recession. The

production of mining industry was not in correlated relationship with overall economical productions in European countries. Based on the short overview presented by figures, we can conclude that mining industry has had to some extend forecasted the coming trend of GDP development in all European economy. The figure lines represent percentage change of performance trend of recorded productions, and dashed lines represent the four year trend of economic productions [18].

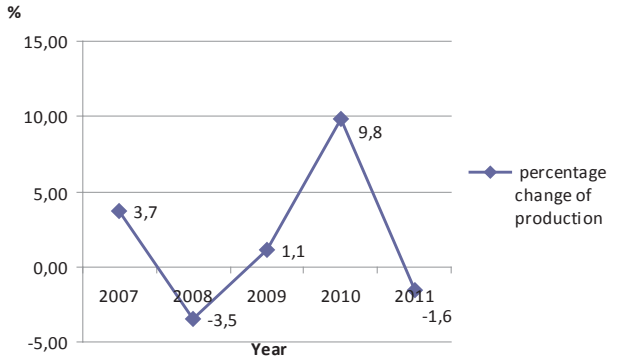

Fig. 1. Percentage change of production within mining industry in Europe

Furthermore, from the fig. 2 we can conclude that activity of private equity investments within mining industry in Europe has recorded decline as well, respectively the negative change in amounts of invested resources, and this trend has been similar over all industries and sectors with private equity investments. As mentioned, private equity reacts with higher flexibility and more promptly to changes within world markets and according to this statement; we can conclude that changes in volume of invested resources within European markets change more quickly [19].

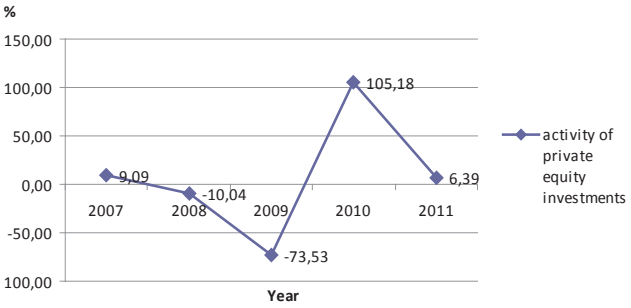

Fig. 2. Activity of private equity investments within mining industry in Europe

The comparison of industrial production with activity of private equity investments shows development trend of volumes which is comparable from declining characteristics. The difference is visible from range of declines, where industrial sectors in Europe in years 2007–2008 showed growth with slowing trend, whereas the activity of private equity investments was in that period in negative growth with declining trend. The next important fact is that since 2009, which represents the first recession dip the activity of private equity, investments have remained positive year on year basis of changing investments volumes, although year on year trends differed significantly. The overall outlook presented by trend dashed lines shows that over the period of years 2007 to 2011 private equity investments have shown growing trend which is clearly visible from European and mining industry perspective in comparison to European GDP [18,19].

Those private equity investors that invest into individual industries are able to support growth of particular industries and basing on this finding we have decided to test presence of private equity investors in mining industry in Europe. Particular analyses have been performed on the sample of selected countries and indicators, while the presented results are in aggregated values. Our research view and analyses have been focused on evaluation of the share of mining industry on overall GDP of Europe and the share of private equity investments on production of particular industry. Consequently, we have analyzed the growth of mining industry potential with and without private equity investors. The following fig. 3 presents the share of European mining industry on overall European GDP.

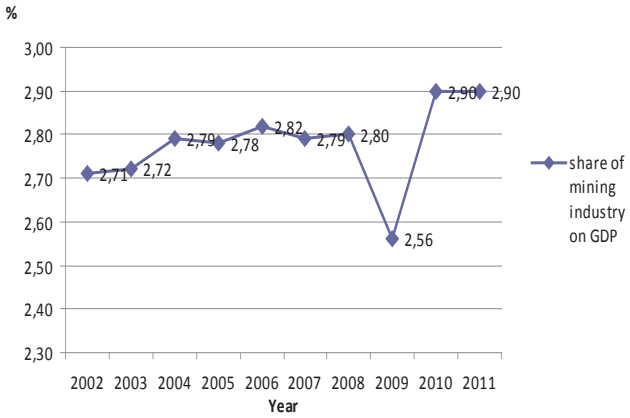

Fig. 3. Share of mining industry on GDP Source: Calculation performed based on databases EVCA (2011) and Eurostat (2012)

The share of mining industry on overall GDP in Europe had mostly stable and slightly growing trend. The analyzed period of 9 years showed growing trend of share of industry production on GDP with one year slowing growth. The slowing growth in 2009 was more or less expected and this was due to the rapid decline in production pace of European industries. The particular performance of mining industry in Europe can be understood as low, however the overall share of all industries in Europe on GDP are on average in 20% levels. On the following fig. 4, we can see the percentage share of all industries to European GDP.

The performance and productivity of mining industry within Europe has been much better over analyzed period then performance of all industrial sectors. This fact means that mining industry is more attractive for private equity investors in comparison to other industries which have achieved lower level of production and performance during global financial crisis, and even prior the crisis. The low level of production is one of the factors on which a global market reacts negatively and this has direct impact on overall profit and investments returns.

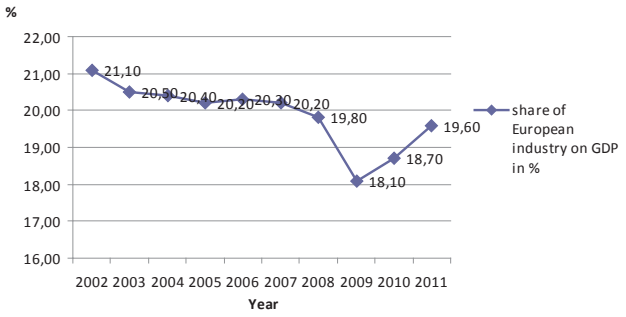

Fig. 4. Percentage share of European industry on GDP. Source: Calculation performed based on databases EVCA (2011) and Eurostat (2012)

The following analyses unveil whether private equity investors have had certain share within mining industries, whether the performance of those companies and parts of the industries is measurable and whether there are any differences between performances within industries with or without private equity presence. Firstly, we have focused on evaluation of share of private equity investments over European GDP. The following fig. 5 shows the share of private equity investments on European GPD over 11 years in percentage values.

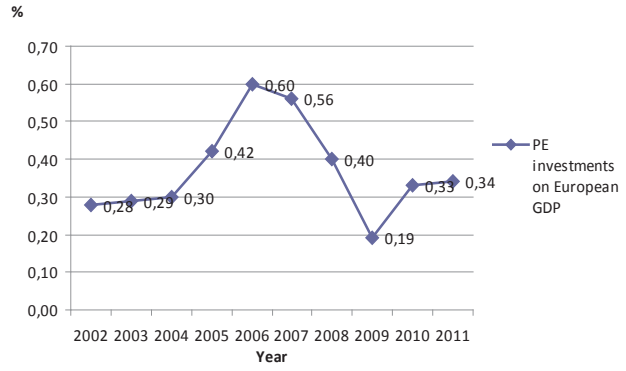

Fig. 5. Private equity investments share on European GDP. Source: Calculation performed based on databases EVCA (2011) and Eurostat (2012)

Private equity investments achieved the biggest level in share means to GDP in 2006. On the brink of global financial crisis, this was expectable result and this market situation influenced individual sectors with presence of private equity investors. From 2006 to 2008, the private equity investments declined, although this decline was only during the period of extreme financial stress when the financing through debt or leverage was extremely difficult. In 2009, the growth of private equity investments within European economies started again and this evidence supported the fact that private equity investors could drive target companies towards growth and profit. The following fig. 6 presents trend of GDP development and private equity investments in Europe over analyzed period of 11 years. This trend shows characteristic changes in investments and the reaction of European economies over this period.

Private equity investments have greater fluctuation of investment activities over the measured period, and those fluctuations can represent even double volume movement in comparison to previous years.

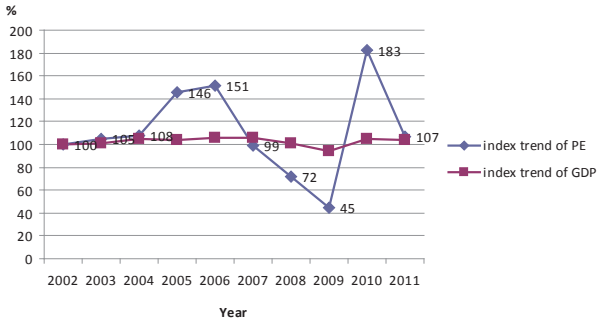

Fig. 6. Development index trend of GDP and PE investments in Europe. Note: data in index scores, 2002 = 100. Source: Calculation performed based on databases EVCA (2011) and Eurostat (2012)

On the following fig. 7 we can see the level of private equity investments directly focused on mining industry and what level of investments private equity companies have produced on the brink of financial crisis. The analysis has been performed over the horizon of 11 years and over the selected European countries.

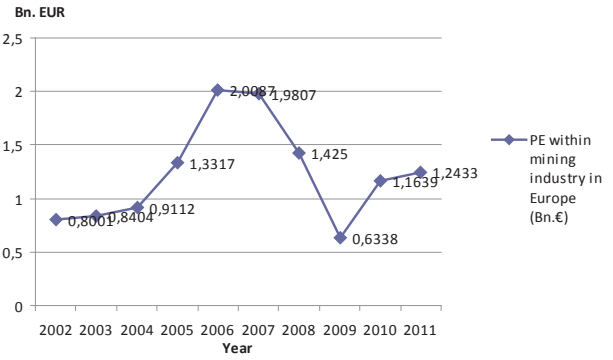

Fig. 7. Private equity investments within mining industry in Europe. Source: Calculation performed based on databases EVCA (2011) and Eurostat (2012)

The level of private equity investments flows toward mining industry in Europe has been copying the development of overall private equity investments in Europe. This development shows us that mining industry is competitively attractive for private equity investors and immediately a year after the beginning of global financial crisis (still during the crisis) the level of private equity investments within mining sector has started to grow.

Based on the following fig. 8, we can conclude that the level of private equity investments has growing trend over majority of years and this evidence is identified in comparison to "share of industries on GPD" and "share of mining industry on overall European GDP".

Activity of mining industry is less significant and volatile than the activity of private equity investments towards mining industry. Even the trend of private equity investments towards European industries has growing character and this trend is in correlation with trend line within fig. 7.

ISSN 2071-2227, Науковий вісник НГУ, 2015, № 2

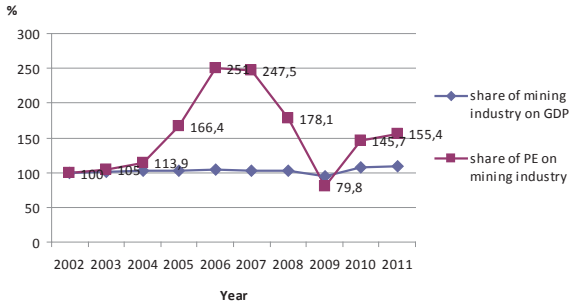

Fig. 8. Trend of development of mining industry from GDP and PE investments perspective. Note: data in index scores, 2002 =100. Source: Calculation performed based on databases EVCA (2011) and Eurostat (2012)

Based on the presented findings, we can conclude that mining industry has better performance over analyzed 11 years than overall industry. Furthermore, we can conclude that mining industry with presence of private equity investors has higher performance than overall mining industry. The growing trend of this part of industry is more significant from the perspective of all evaluated factors.

The last evaluation of impact of private equity investors from perspective of mining industry is performed based on the comparison of production and performance of mining industry with and without presence of private equity investors (table 2).

Table 2

Index movement of performance of mining industry in Europe

Year / Analysis (2002=100)	Mining industry share on GDP	PE investments towards mining industry	Performance of mining industry with PE investor	Product of mining industry without PE investor
2002	100	100	100	100
2003	100,38	105,03	103,57	99,99
2004	102,81	113,88	107,14	99,98
2005	102,30	166,43	150,00	99,86
2006	103,83	251,04	214,29	99,68
2007	102,81	247,54	200,00	99,72
2008	103,32	178,10	142,86	99,88
2009	94,45	79,84	67,86	100,09
2010	106,74	145,71	117,86	99,95
2011	108,29	155,38	121,43	99,94

Source: Calculation performed based on databases EVCA (2011) and Eurostat (2012)

Performance of mining industry is significantly different with private equity presence than without private equity presence and specifically when private equity investor isn't represented in any of the company within mining industry. The companies without private equity investor achieved over 11 year's period stable performance, although the stagnation of their growth was alarming. Over the examined period, the companies with private equity investors achieved lower performance than at the beginning of the period only in year 2002, while companies without private equity investors had lower performance during 6 years out of 11 years measured.

From the perspective of performance and growth it's very clear that companies with private equity investment presence are achieving high performance and growth, which will allow those companies to achieve further growth, development and creation of employment opportunities in long-term horizon (fig. 9).

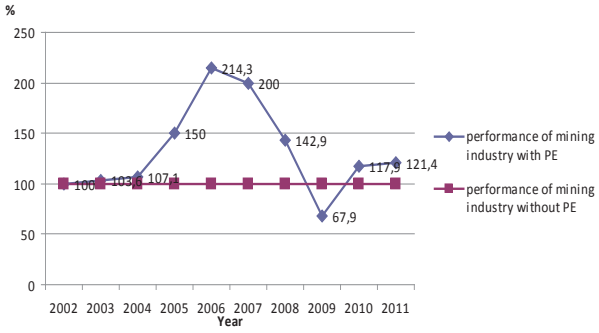

Fig. 9. Performance of mining sector with and without PE investments. Note: data in index scores, 2002= 100. Source: Calculation performed based on data-bases EVCA (2011) and Eurostat (2012)

When company over the period of 10 years presence has the same performance levels this kind of company can't offer any further opportunities for employment or other added values.

Research conclusions and recommendations. Based on the performed analyses, we can conclude that mining industry has investment potential from perspective of private equity investors, which is represented by 10 years growth from 11 evaluated years of the companies with private equity investments, and this has affected the entire mining industry in Europe. The companies without private equity investors' presence showed over analyzed period have stable performance, although their growth hasn't been at any significance level from European perspective. Performed analyses confirm that mining industry has hidden potential in terms of attractiveness for private equity investors.

The findings derived from analyses shows that mining industry has achieved during the researched years 2002–2011 significantly better performance than overall European industrial sectors. The presence of private equity investor within the particular industry has positive effects on other companies within the industry. Based on these findings, we have tested mining industry with presence of private equity investors, where we have evaluated the level of impact of private equity investors on companies within mining industry. The results of analyses show that companies and industry with support of private equity have achieved significantly better results of year to year concerning the growth of performance, and this growth is incomparably better than in companies without private equity investments. The presence of private equity investors within the mining industry from European perspective has achieved interesting position and performance trend, which

is evident only in case of companies with presence of private equity investors.

Conclusion. The main aim of this article is to present the level of private equity contribution to growth within European economies, and mainly to evaluate the presence of private equity companies within mining industry. Based on the performed analyses we have identified performance of mining industry, attractiveness and overall impact of presence of private equity investors within the mining industry and we have aimed to establish whether private equity investors create benefits for industry and if they do, then are those benefits transferred into improved companies' performances. The results of analyses within mining industry show that companies with private equity investors' presence have achieved better results than companies without private equity investors.

According to the results, we can conclude that private equity investors bring positive improvements to individual industrial sectors. It has been confirmed on micro basis by performance within mining industry. It is important for further future of all sectors and specifically the mining industry within Europe to focus on factors which may attract private equity investors. The main recommendation of our research is an appeal for more attention of industrial sectors in order to improve their market positions, economical growth and to attract more investors.

Acknowledgments. Results of the contribution have been obtained through solution of project VEGA 1/0176/13 "Sustainable Development of the Region in Context of Human, Capital and Natural Sources".

References / Список літератури

1. Zuzik, J., Weiss, R. and Antošová, M. (2014), "Use of technical analysis indicators at trading shares of steel companies", *Metalurgija*, vol.53, no.2, 2014, pp. 286–288.
2. Ahmad. S.Z. and Kitchen, P.J. (2008), "Transnational corporations form Asian developing countries: The internationalization characteristics and business strategies of Sime Darby Berhad", *International Journal of Business Science and Applied Management*, vol.3, no.2, pp. 21–36.
3. Stowell, D.P. (2010), *An Introduction to Investment Banks, Hedge Funds, and Private Equity, The New Paradigm*, Kellogg School of Management, Northwestern University, Publisher: Elsevier, cooperation with Academic Press.
4. Chemla, G. (2005), "The determinants of investment in private equity and venture capital: Evidence from American and Canadian pension funds", Working paper No. 556421, Social Science Research Network.
5. Farrell, D. (2007), *The New Power Brokers: How Oil, Asia, Hedge Funds and Private Equity Are Shaping the Global Capital Markets*, McKinsey Global Institute.
6. Bernstein, S., Lerner, J., Sørensen, M. and Strömberg, P. (2010), "Private equity and industry performance", NBER Working paper series, NBER No. 15632.
7. Guo, S., Hotchkiss, E. and Song, W. (2009), "Do buyouts (still) create value?", Working paper No. 1009281, Social Science Research Network, SSRN.
8. Rasmussen, P. (2008), "Taming the Private equity fund – Locus", *Europe Today*, vol. 8(3).
9. Lin, L. (2013), "Private equity limited partnership in Chine: A practical evaluation of active limited partners", *Journal of corporate law studies*, vol.13, issue 1, pp. 185–217.
10. Hassan, F.M., Kamrul, S. and Ruhul, A. (2011), "Determinants of private investment: time series evidence from Bangladesh", *Journal of developing areas*, vol. 45, issue 1, pp. 229–249.
11. Groh, A.P., von Liechtenstein, H. and Lieser, K. (2008), "The European Capital and Private Equity Country Attractiveness Index(es)", Working paper No. WP – 773, IESE Business School – University of Navarra.
12. Lejour, A., Mervar, A. and Verweij, G. (2009), "The economic effects of Croatia's accession to the European Union", *Eastern European Economics*, vol. 47, no. 6, pp. 60–83.
13. Payne, J. (2011), "Private equity and its regulation in Europe", *European Business Organization law review*. Vol.12, issue 4, pp. 559–585.
14. Crifo, P. and Forget V.D. (2013), "Think global, invest responsible: Why the private equity industry goes green", *Journal of business ethics.* Vol. 116, issue 1, pp. 21–48.
15. Prohorovs, A. (2013), "Attraction of investments into venture capital and private equity funds of Latvia", *Economic science for rural development conference proceedings*, Issue 30, pp. 269–277.
16. Barros, C.P., Gil-Alana, L.A. and Payne, J.E. (2014), "Long range dependence and breaks in energy prices", *Energy sources, part B: Economics, Planning and Policy*, vol.9, no. 2, pp. 196–206.
17. Lawrence, D.S. (2006), *Discounted Cash Flow Analysis, Methodology and Discount Rates*, Rio Algom Limited.
18. Eurostat 2012, "European Statistic Database", available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database, (accessed: August 2011).
19. EVCA Barometers 2011, "European Venture Capital Association Barometers Selected Months", available at: http://www.evca.eu/knowledgecenter/barometer.aspx?id=462, (accessed: August 2011).

Мета. Вивчення ступеня впливу приватних капіталовкладень на розвиток різних галузей промисловості, окремих компаній, зокрема його вплив на гірничодобувну промисловість у межах Європи.

Методика. Оцінка гірничодобувних підприємств інвесторами була здійснена за допомогою індексу привабливості для приватних капіталовкладень і венчурного капіталу.

Результати. У процесі дослідження країн були складені профілі індивідуального ризику по країнах. За допомогою аналізу впливу приватних капіталовкладень ми виявили, що активність інвестування в приватний (непублічний) акціонерний капітал гірничодобувної промисловості в межах Європи знижується. Наводячи, для порівняння, дані про компанії без приватного (непублічного) акціонерного капіталу, можна відзначити, що вони стабільні, але не демонструють значного зростання за мірками Європи.

Наукова новизна. Аналіз показав, що гірничодобувна промисловість має великий потенціал для залучення приватних інвесторів.

Практична значимість. Стаття надає результати дослідження в галузі сталого розвитку регіону в контексті трудових, капітальних та природних ресурсів у рамках проекту № 1/0176/13 Словацького Наукового грантового агентства VEGA.

Ключові слова: *приватний (непублічний) акціонерний капітал, гірничодобувна промисловість, інвестиції, валовий внутрішній продукт, тенденція розвитку, Словаччина*

Цель. Изучение степени влияния частных капиталовложений на развитие различных отраслей промышленности, отдельных компаний, в частности его воздействие на горнодобывающую промышленность в пределах Европы.

Методика. Оценка горнодобывающих предприятий инвесторами была осуществлена с помощью индекса привлекательности для частных капиталовложений и венчурного капитала.

Результаты. В процессе исследования стран были составлены профили индивидуального риска по странам. Посредством анализа влияния частных капиталовложений мы обнаружили, что активность инвестирования в частный (непубличный) акционерный капитал горнодобывающей промышленности в пределах Европы снижается. Приводя, для сравнения, данные о компаниях без частного (непубличного) акционерного капитала, можно отметить, что они стабильны, но не демонстрируют значительного роста по меркам Европы.

Научная новизна. Анализ показал, что горнодобывающая промышленность имеет большой потенциал для привлечения частных инвесторов.

Практическая значимость. Статья предоставляет результаты исследования в области устойчивого развития региона в контексте трудовых, капитальных и природных ресурсов в рамках проекта № 1/0176/13 Словацкого Научного грантового агентства VEGA.

Ключевые слова: *частный (непубличный) акционерный капитал, горнодобывающая промышленность, инвестиции, валовый внутренний продукт, тенденция развития, Словакия*

Рекомендовано до публікації докт. екон. наук А.В. Бардасем. Дата надходження рукопису 08.04.14.