

MICHAL VANĚK*, MILAN MIKOLÁŠ**, HANA RŮČKOVÁ***, JANA BARTOŇOVÁ***,
LUCIE KUČEROVÁ***, FRANTIŠEK ŽOČEK****

Analysis of Mining Companies Operating in the Czech Republic in the Sector of Non-metallic and Construction Minerals

Introduction

People have various needs, most of these are satisfied by the consumption of goods (products and services), which result from the process of transforming input production factors (Tomek, Vávrová 2008). Going back through the value chain of finished goods, we arrive at the starting point, namely, the mineral wealth of our planet. So the satisfaction of our needs begins with mining.

Interestingly, there is one mineral that has been with people for 3.5 million years already, namely, stone. Stone was used in the Paleolithic age. Easy cleavable minerals (flint, chert, quartz) were used, from which – by threshing and splitting – hand-axes were obtained (Charvát 1981). Even now, stone is one of the most frequently used raw materials in the construction industry. The list of extracted raw materials is now much broader. It is understandable that the importance of individual raw materials changed over the centuries and reflected technological development.

Only a few countries, like the Czech Republic, can boast of a long and rich mining tradition. Kutná Hora, Jihlava, Příbram, Jáchymov, Ostrava are examples of towns with

* Doc. Ing. Ph.D., *** Ing., Institute of Economics and Management Systems, Faculty of Mining and Geology, VŠB – Technical University of Ostrava, Czech Republic; e-mail: michal.vanek@vsb.cz, hana.ruckova@vsb.cz, jana.bartonova@vsb.cz, lucie.kucerova.st3@vsb.cz

** Doc. Ing. Ph.D., Institute of Mining Engineering and Safety Faculty of Mining and Geology, VŠB – Technical University of Ostrava, Czech Republic; e-mail: milan.mikolas@vsb.cz

**** Ing., Kamenolom Javorka, s.r.o., Horní Nová Ves 108, 507 81 Lázně Bělohrad, Czech Republic; e-mail: frantisek.zoczek@czechstonecluster.eu

mining history. The importance of Czech mining is underlined by history of mining law. The Czech mining right is the first written law of its kind in the entire Central Europe region. The mining right of Jihlava and Kutná Hora served as a model for the laws of many countries in Europe (Makarius 1999).

In today's scenario, the 90's of the last century have become an absolutely crucial turning point. In former Czechoslovakia, like in other countries of the so-called Eastern Bloc, social and economic changes took place that affected all sectors of national economy and society. In the last decade of the 20th century, the transformation process of a centrally planned economy into market economy took place. The transformation of ownership policy was also an integral part of this systemic transformation. Private entrepreneurship was restored and the government privatized the state mining enterprises through the National Property Fund.

The economic transformation gave rise to new challenges and tasks for mining companies and their management. Profit, not the requirement to extract the volume of mineral resources specified by the State Planning Commission, became imperative.

Thus, mining and mineral processing has become a standard business activity, despite the specifics the industry carries with it.

The authors carried out research focusing on mining companies operating in the Czech Republic in the sector of non-metallic and construction minerals. The aim of the research was to investigate the prevailing legal status of the mining companies. Furthermore, the authors examined the proportion of foreign capital in mining companies operating in the Czech Republic, focusing on the companies' capital strengths and number of employees. They also investigated whether the firms operate in one or more mining sectors.

1. Present situation in the mining sector in the Czech Republic

The form of the Czech mining sector changed considerably in the last 20 years, as indicated in the introduction of our article.

From a long-term view, the mining process is of a cyclical nature, and its ups and downs are influenced mainly by the level of prices and the conditions for providing the raw materials, either by own production or through import (Dvořáček 1999).

As price liberalization has been an integral part of economic changes in the Czech Republic since 1989, the prices of minerals have also begun to depend upon the commodity prices in the foreign exchange market (e.g. LME – London Metal Exchange, NYMEX – New York Mercantile Exchange). These facts have resulted in the reassessment of the justification of exploitation of many mining sites. When it became clear that the continuation of mining activities was not profitable, reduction and subsequent disposal of mining capacities were initiated. The result of these activities was not only a reduction in the share of mining in GDP, but also structural changes in the mining of mineral resources.

During the 90's of the last century, the extraction of ore deposits was complete (1992 – RD Příbram, 1994 – Zlaté Hory), along with the extraction of barite and fluorite. There was

also a significant reduction in the mining of uranium deposits occurred, and the extraction was restricted, or stopped, in many coal districts. Coal mining was essentially maintained in the Ostrava-Karviná part of the Ostrava-Karviná Coalfield and within the area of the Paskov Mine, Staříč Plant. The construction minerals came to fore especially, as evidenced by the statistics of the Czech Statistical Office and the Czech Mining Authority.

At present, dozens of private mining companies operate in the sector of construction minerals. The most important are: Českomoravské štěrkovny, a.s. (crushed stone, gravel, sand), Českomoravský cement, a.s., successor company (limestone), Hanson ČR, a.s. (gravel, sand), Kamenolomy ČR s.r.o. (crushed stone), Kámen Zbraslav, spol. s.r.o. (crushed stone, gravel, sand), Lom Jakubčovice s.r.o. (crushed stone), Lasselsberger, a.s., division Suroviny (gravel, sand, brick raw material), EUROVIA Kamenolomy, a.s. (building stone, gravel, sand), Tondach Česká republika, s.r.o. (brick clays), Wienerberger cihlářský průmysl, a.s. (brick clays).

In the Czech Republic, the traditional perspective non-metallic minerals are: kaolin; refractory, ceramic and expandable clay; glass, foundry and other sand; limestone, crushed stone and dimension stone, and possibly, some other building materials (gypsum, cast basalt). Even other non-metallic minerals (bentonite, diatomite, feldspar, graphite, etc.) extracted in smaller volumes try to penetrate the more demanding market applications. Non-traditional perspective non-metallic minerals explored in reduced quantities in the Czech Republic include alkaline rocks (phonolite, albitite, aplite and leucocratic granite), industrial garnet, muscovite flake, wollastonite. From among the non-extracted perspective non-ores, we may mention staurolite, minerals of sillimanite group, perhaps also olivine-rocks or serpentinites or glauconite (Havelka 1997).

Even though the extraction of construction minerals already exceeds the extraction of energy minerals in volume and value, we cannot forget to mention hard coal mining (OKD, a.s.), brown coal mining (Sokolovská uhelná, a.s.; Vršanská uhelná a.s.; Litvínovská uhelná a.s.¹; Severočeské doly, a.s.), and oil and natural gas extraction (Moravské naftové doly, a.s.; Green Gas DPB, a.s.; UNIGOE, a.s.; Česká naftařská společnost s.r.o.).

The liberalization of prices and the change in ownership were not the only changes in the Czech mining industry in the last twenty years. According to the Mineral Resources Policy the mining of mineral resources decreased by more than 38% between the years 1990–1998 in physical and financial expression. In the year of the Czech Republic formation, the mining sector accounted for 3.7% of GDP and five years later, in 1998, the share fell to 1.8%. At the beginning of the new millennium, this share further decreased to 1.12% of the GDP according to the Sector Classification of Business Activities (OKEČ), while in the later years of the first decade of the 21st century, the values were around 1% (Table 1).

Another change in the sector concerned the structure of extracted minerals (Fig. 1). We can see that in the years 2002–2008, a decrease in the importance of energy minerals and a simultaneous increase in that of construction minerals occurred. In 2008, the share

¹ The companies Vršanská uhelná a.s. and Litvínovská uhelná a.s. are parts of the Czech Coal energy group, the successor company of Mostecká uhelná společnost, a.s.

TABLE 1

Share of mining in the production value of the Czech Republic according to OKEČ in years 2001–2008

TABELA 1

Udział górnictwa w Produkcie Krajowym Brutto Republiki Czeskiej w latach 2001–2008

Year	2001	2,002	2003	2004	2005	2006	2007	2008
Share of mining [%]	1.10	1.10	1.00	1.03	1.02	0.97	0.94	1.03

Source: the Czech Statistical Office, inherent processing

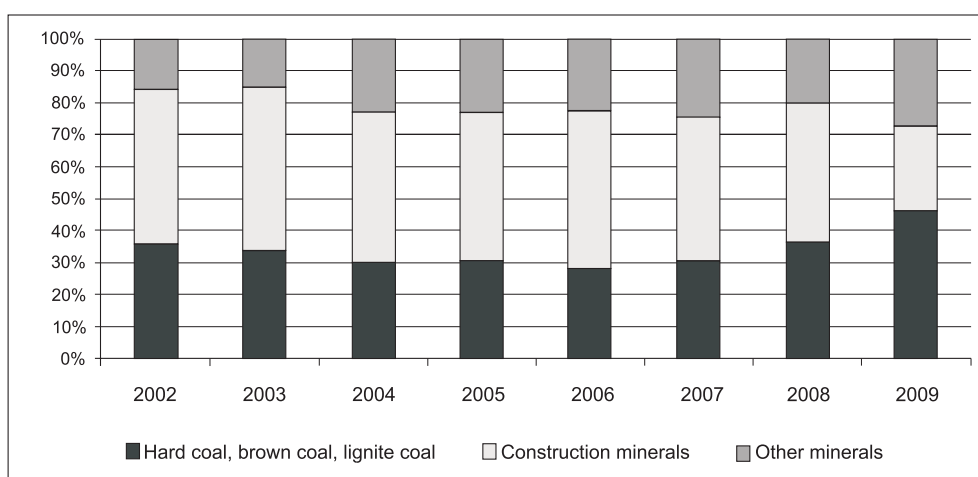


Fig. 1. Structure of revenues in the mining sector in the Czech Republic

Source: Mineral resources... 2008, 2009; inherent processing

Rys. 1 Struktura wartości sprzedaży w górnictwie w Republice Czeskiej

of energy minerals in the minerals sector revenues was 36.41%, that of construction minerals was 43.29% and of other raw materials 20.30%. The data from 2009 does not confirm this trend as economic recession and budgetary restrictions have dampened construction activities significantly, which resulted in lower revenues in the construction minerals sector.

2. Methodology of analysis of mining enterprises in the non-metallic and construction minerals sector

Before a detailed analysis of entities active in the sector of our interest, it must first be determined how many miners exploit non-metallic and construction minerals. The following Table 2 shows the number of firms operating in the sector of non-metallic raw materials, while Table 3 is an overview of miners in the construction minerals sector.

TABLE 2

Number of mining companies per sector of non-metallic minerals during the years 2005–2009

TABELA 2

Liczba przedsiębiorstw górniczych w sektorze surowców niemetalicznych w latach 2005–2009

	Kaolin	Sand Glass	Sand Foundry	Limestone	Bentonite	Clay	Feldspar
2009	5	3	8	18	3	7	4
2008	5	3	7	18	1	8	5
2007	5	3	8	18	2	6	5
2006	5	3	8	18	2	6	4
2005	5	3	6	18	2	6	4

Source: Mining Yearbook 2005, 2006, 2007, 2008, 2009; inherent processing

TABLE 3

Number of mining companies per sector of construction minerals during the years 2005–2009

TABELA 3

Liczba przedsiębiorstw górniczych w sektorze surowców budowlanych w latach 2005–2009

	Brick clays	Dimension stone	Crushed stone	Sand and gravel	Companies in total
2009	12	48	78	116	254
2008	16	46	78	116	256
2007	18	52	84	121	275
2006	22	52	84	123	281
2005	23	50	91	125	289

Source: Mining Yearbook 2005, 2006, 2007, 2008, 2009; inherent processing

The remaining non-ore minerals (dolomite, wollastonite, cement correction silic minerals, moldavite-bearing rocks, gypsum, feldspar substitutes, diatomite, oxyhumolite, melting basalt) are always mined by one or two companies. In further analysis, no more attention will be paid either to these raw materials or to the companies engaged in their exploitation.

As the data in Tables 2 and 3 are presented according to individual sectors, the operating of a miner in multiple mineral segments is not considered, which is necessary to take into account during data interpretation.

The evolution of the number of mining companies is not identical in the two analyzed mining sectors. While the non-metallic minerals sector (Table 2) is characterized by greater stability, the construction minerals sector (Table 3) is yet a more dynamic sector. The concentration of mining companies is the most evident in the sectors of brick raw material

(2005 – 23, 2009 – 12) and building stone (2005 – 91, 2009 – 78). In other sectors the process of concentration of mining companies was not so considerable.

At the beginning of our research, the following hypotheses were formulated:

- 1) More than 60% of mining companies have the legal status LLC.
- 2) More than 50% of mining companies are owned by foreign holders.
- 3) Majority of mining companies (60%) have their registered capital higher than the statutory minimum imposed by the Commercial Code.
- 4) Majority of mining companies (60%) focus on the exploitation of a single mineral only.
- 5) Permanent staff in majority of mining companies (60%) do not prevail subcontractors.

These hypotheses were also examined in case of mining companies operating in non-metallic minerals and at enterprises extracting construction minerals².

Our analysis aimed especially at mapping the situation of mining companies in terms of their legal personalities, property, capital strength and activities in the sector.

The main source of information for the analysis is the Mining Yearbook 2009. Since it was not within the power of the authors to deal with all mining companies, reference groups of miners in individual mining sectors were formed. These groups were then subjected to the examination. The reference groups involved companies put in the overview of the mining sector (yellow pages of the Mining Yearbook 2009). The yearbook presents the data on mining outputs and staffing levels for these companies.

As significantly fewer mining companies operate in the mining sectors of non-metallic minerals, the reference groups were created only for the companies involved in construction minerals. The size of the reference groups and their share in the total number of miners in the sector are shown in Table 4.

TABLE 4

Selected data on reference groups for mining sectors of construction minerals

TABELA 4

Wybrane dane odnoszące się do sektora górnictwa surowców budowlanych

	Brick clays	Dimension stone	Crushed stone	Sand and gravel
Number of reference companies	12	18	29	20
Mining outputs of reference companies [m ³]	1 017 303	263 084	14 458 395	9 833 156
Share of reference companies in total extraction volume of the sector [%]	100%	86.47%	97.76%	71.92%

Source: Mining Yearbook 2009; inherent processing

² During testing the hypotheses, basic hypotheses were marked with the letter A. The hypotheses related to construction minerals were identified as B and the hypotheses tested in case of non-metallic materials as C.

Another important source of information was the Companies Register³, which provided the necessary data on capital, or owners, of trade companies. To complement and clarify some data, in particular the enterprise ownership, the authors of the article contacted the companies directly.

2.1. Analysis results

The first investigated area was the legal status of the mining companies. Figure 2 illustrates the legal status prevailing in each mining sector of non-metallic and construction minerals.

The graph clearly shows that trade companies predominate quite unambiguously. Only nine entities from a total of 104 analyzed companies run their businesses as private persons. It is interesting that cooperative as a legal status of business occurs only in one case, namely, feldspars. Regardless of the mined mineral, the prevailing legal status of mining companies is company with limited liability (LLC, 59%). This legal status especially dominates for

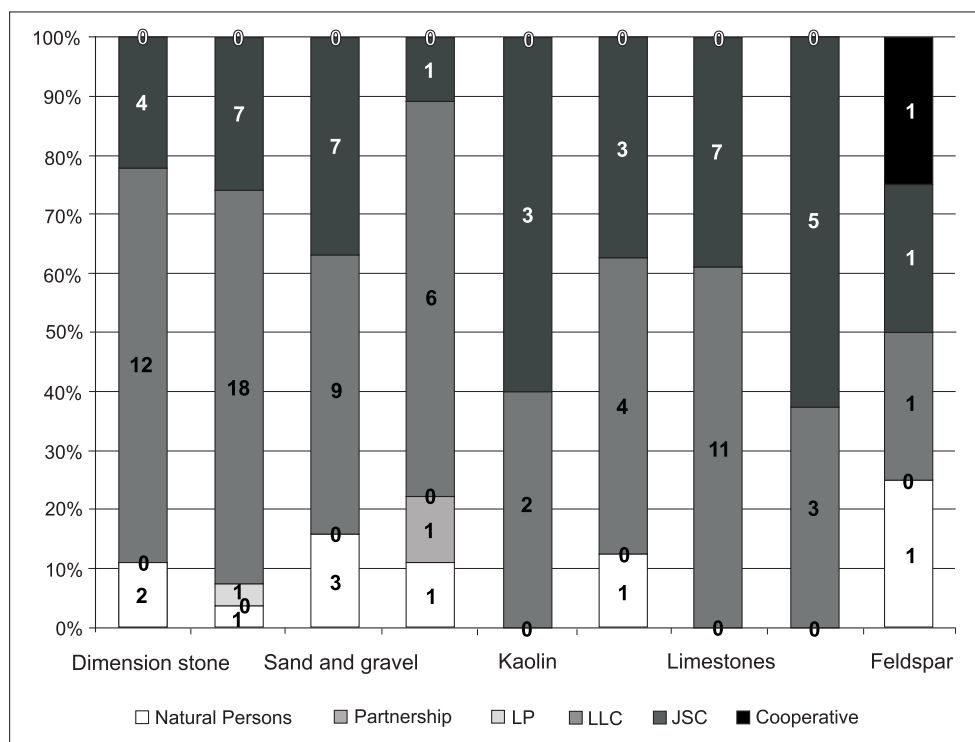


Fig. 2. Legal status of enterprises operating in non-metallic and construction minerals
Source: inherent processing

Rys. 2. Status prawny przedsiębiorstw działających w przemyśle surowców niemetalicznych i budowlanych

³ <http://portal.justice.cz/justice2/uvod/uvod.aspx>

the miners exploiting crushed stone (67%), brick clays (67%), limestone (61%) and foundry and glass sand (50%). Joint stock companies (JSC) are represented among trading companies at 30%. However, in the case of kaolin, it is 60%, and for bentonite and clays, 63%. Limited partnership (LP) is the legal status used in one case only, in particular of the firm BÖGL a KRÝSL, k.s. extracting pieces of crushed stone.

The ownership of mining firms was also examined. The result of the investigation is shown in Figure 3. As we can see, mostly domestic miners are represented – their representation in the sectors of non-metallic and construction minerals is 64%. The domestic miners are represented by more than 75% only in three mining sectors. These are: (i) dimension stone (78%), (ii) brick clays (78%), (iii) feldspar (75%). However, many mining companies have a foreign owner. Strongly represented is the capital from Germany (13%) and Austria (11%). A higher proportion of foreign capital is reported in case of companies exploiting kaolin (20% Germany, 20% Austria) and clays and bentonite (25% Germany, 13% Austria).

It would be interesting to perform the analysis with regard to the amount of capital used by individual owners in their business. However, as almost all joint stock companies have bearer shares, it is very difficult, if not impossible, to make such analysis. Rigorous analysis execution is also impossible in many cases due to a complex ownership structure. The company BÖGL a KRÝSL, k. s. is a good example. It has, as a member, the general partner:

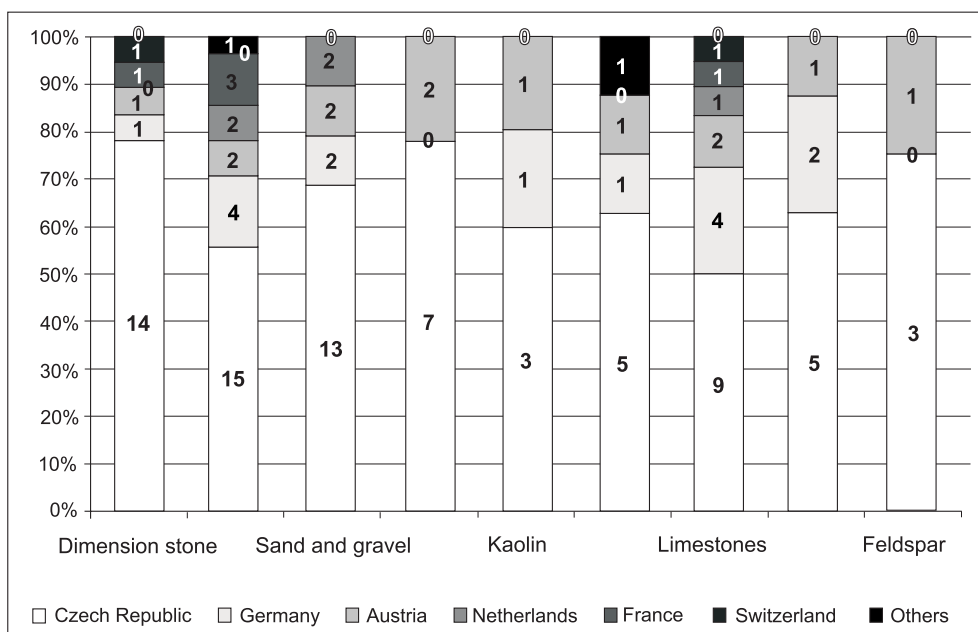


Fig. 3. Nationality of the majority owner of the company

Source: inherent processing

Rys. 3. Większościowy właściciel firmy według kraju siedziby

GRANIT – ŠUMAVA, spol. s r.o., and two members as limited partners (Max Bögl Bauunternehmung GmbH & Co.KG, Josef Krýsl, Max Boegl international SE). The members of the company GRANIT-ŠUMAVA, spol. s r.o. are then Max Bögl Bauunternehmung GmbH & Co. KB and Josef Krýsl.

Business activities are affected by many factors. One of them is the capital available to the company. It is clear that if the miner is financially strong, he can afford to acquire advanced technological equipment, purchase land in advance, etc. The analysis results show (Fig. 4) that a majority of mining companies are working with capital, that exceeds the minimum threshold set forth in Act No. 513/1991 Coll., Commercial Code, as amended.

Strong companies, based on the amount of registered capital, involve a number of companies, but only some firms have capital in excess of CZK 0.5 billion at their disposal. These are as follows:

- Velkolom Čertovy schody, a.s. – CZK 1,646 million
- TARMAC CZ, a.s.⁴ – CZK1,502 million

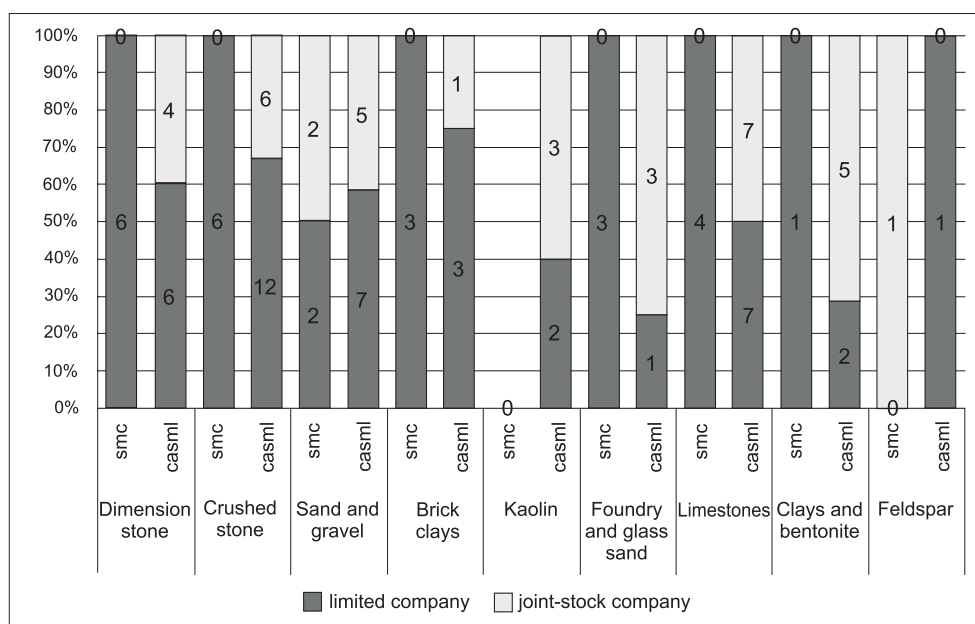


Fig. 4. Capital strength of mining companies

smc – statutory minimum capital; casml – capital above statutory minimum limit

Source: inherent processing

Rys. 4. Siła kapitału spółek górniczych

⁴ Since 1 October 2010, business assets of the company has been transferred to the company EUROVIA Kamenolomy, a.s. However, as the analysis was performed on the basis of the Mining Yearbook 2009, we give here the original company name.

- Lafarge cement, a.s. – CZK1,143 million
- Sedlecký kaolín, a.s. – CZK1,050 million
- Českomoravský cement, a.s. – CZK1,000 million
- LB MINERALS, s.r.o.– CZK 635 million
- Keramost, a.s. – CZK 601 million
- Omya CZ, s.r.o. – CZK 513 million
- Cement Hranice, a.s. – CZK 510 million

It is interesting to note among the mining companies, there are often limited liability companies that have capital much higher than the statutory minimum limit. As we can see, the companies LB MINERALS, s.r.o. and OmyaCZ, s.r.o. rank among those companies that work with capital exceeding CZK 0.5 billion.

Another analyzed area was the mining activity of companies in various mining sectors. Of the total of 104 miners examined, only 11 companies concentrated on more than one mineral resource. The following companies are involved in the exploitation of various mineral resources:

- Českomoravský štěrk, a.s. – building stone, gravel sand
- HOLCIM (ČESKO) člen koncernu, a.s. – sand and gravel, limestone
- Kalcit, s.r.o. – foundry sand, limestone
- Kaolin Hlubany, a.s. – kaolin, clay
- Kámen Zbraslav, s.r.o. – building stone, gravel sand
- Keramost, a.s. – kaolin, clay, bentonite
- LB MINERALS, s.r.o. – glass sand, foundry sand, kaolin, feldspar
- Provodínské pisky, a.s. – foundry sand, glass sand
- Sedlecký kaolín, a.s. – clay, bentonite
- Sklopísek Střeleč, a.s. – foundry sand, glass sand
- Tarmac, a.s. – building stone, gravel sand

The area investigated last was related to labour forces. The representation of permanent staff and staff of contractors in the production activity was examined. This investigation was done because a large number of mining companies outsource mining processes (Fig. 5).

The graph shows that in the majority of mining companies regular staff significantly exceeds the number of employees of external companies that are involved in mining activities. Most of the subcontracted workers can be found in exploitation of brick raw materials, kaolin, and glass and foundry sands.

2.2. Hypotheses Testing

Through the above findings are clear, our assumptions may not be competently confirmed or disproved without exposing them to a test. We applied the relative frequency test in which we tested whether the relative frequency of a certain variation in the basic character set (π) is equal to a certain number (π_0) (Hindls et al. 2002).

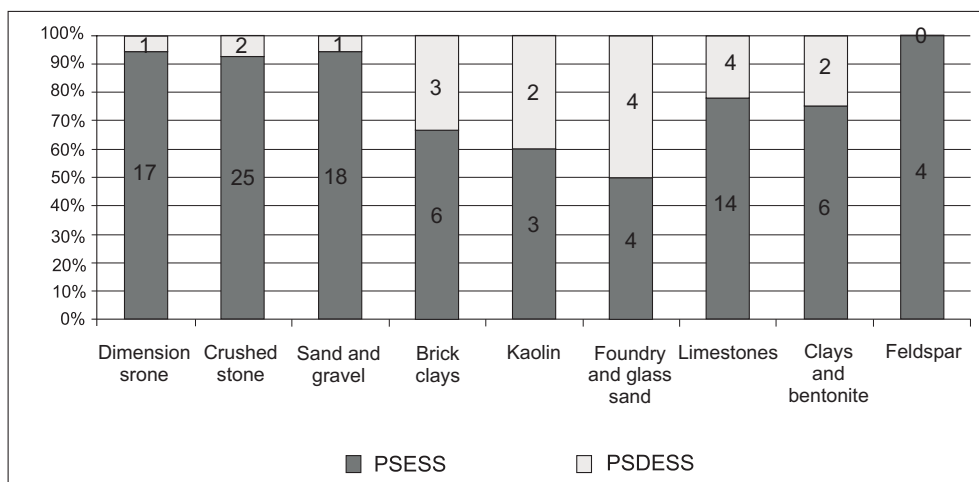


Fig. 5. Permanent staff to staff of subcontractors in the exploitation of selected mineral resources
 PSESS – Permanent staff exceeds staff of subcontractors;
 PSDESS – Permanent staff does not exceed staff of subcontractors
 Source: inherent processing

Rys. 5. Relacje pracowników stałych do pracowników podwykonawców w eksploatacji wybranych surowców mineralnych

Thus, the null hypothesis is:

$$H_0 : \pi = \pi_0$$

The alternative hypothesis was considered as follows:

$$H_1 : \pi > \pi_0$$

We used the following statistics as test criterion (Hindls et al. 2002):

$$U = \frac{p - \pi_0}{\sqrt{\frac{\pi_0(1 - \pi_0)}{n}}} \quad (1)$$

The mentioned test criterion has, at the validity of H_0 , an asymptotic standard normal distribution, where p is the selective relative frequency (Hindls et al. 2002). An usual level of significance, $\alpha = 0.05$, was chosen. For the alternative hypothesis the critical range is defined as follows:

$$U \geq 1.645$$

The results of the hypotheses tests are shown in Tables 5–7.

TABLE 5

Hypotheses testing – construction and non-metallic minerals in total

TABELA 5

Testowanie hipotez – surowce niemetaliczne i budowlane łącznie

Tested Hypothesis	A1	A2	A3	A4	A5
Total respondents	104	104	94	104	104
Total matching	61	34	64	93	41
Selective relative frequency p	0.587	0.327	0.681	0.894	0.394
H0 =	0.6	0.5	0.6	0.6	0.6
H1 >	0.6	0.5	0.6	0.6	0.6
Test criterion	-0.280	-3.530	1.600	6.125	-4.283
Critical range for $\alpha = 0.05$	1.645	1.645	1.645	1.645	1.645
Evaluation	We reject the hypothesis H1				

Source: Inherent processing

TABLE 6

Hypotheses testing – construction minerals

TABELA 6

Testowanie hipotez – surowce budowlane

Tested Hypothesis	B1	B2	B3	B4	B5
Total respondents	70	70	63	70	70
Total matching	44	22	41	67	7
Selective relative frequency p	0.629	0.314	0.656	0.957	0.100
H0 =	0.6	0.5	0.6	0.6	0.6
H1 >	0.6	0.5	0.6	0.6	0.6
Test criterion	0.488	-3.108	0.823	6.099	-8.539
Critical range for $\alpha = 0.05$	1.645	1.645	1.645	1.645	1.645
Evaluation	We reject the hypothesis H1				

Source: Inherent processing

TABLE 7

Hypotheses testing – non-metallic minerals

TABELA 7

Testowanie hipotez – surowce niemetaliczne

Tested Hypothesis	C1	C2	C3	C4	C5
Total respondents	37	37	34	37	37
Total matching	18	15	27	31	8
Selective relative frequency p	0.486	0.405	0.794	0.838	0.216
H0 =	0.7	0.5	0.6	0.6	0.6
H1 >	0.7	0.5	0.6	0.6	0.6
Test criterion	-2.834	-1.151	2.310	2.953	-4.765
Critical range for $\alpha = 0.05$	1.645	1.645	1.645	1.645	1.645
Evaluation	We reject the hypothesis H1				

Source: Inherent processing

Conclusion

Non-metallic minerals and especially construction minerals, dominate in the current Czech mining; scenario; therefore, the analysis of mining companies was focused on that mining sector. The results of investigation were, in truth, surprising for the authors, because most hypotheses were rejected. Our assumptions about the legal status of miners, nationality of owners, disposable capital and the ratio of regular employees to employees of subcontractors were not confirmed. The exception was hypothesis C3 (Most mining companies in the non-metallic minerals (60%) has their registered capital higher than the statutory minimum set forth by the Commercial Code), which was accepted. Moreover, the hypothesis related to the concentration of mining companies on one mineral was also accepted. Only 11% of miners exploit more than one mineral. It was also interesting to realize that even companies with limited liability were capable, due to their capital, of competing with joint stock companies. “The richest” limited liability company is Omya CZ, s.r.o. with the capital of CZK 513 million, whereas the company Velkolom Čertovy schody, a.s. (JSC) has absolutely the largest capital available (CZK 1.6 billion).

REFERENCES

- Dvořák J., 1999 – Ekonomická stránka útlumu hlubinných uhelných dolů v OKR. (Economic side of the decline in underground coal mines in the OKR). *Acta Montanistica Slovaca*, FBERG, Technical University of Kosice, vol. 4, No. 4, p. 337–340.
- Havelka J., 1997 – Perspektívne nerudné nerastné suroviny a ich využitie. (Prospective non-metallic minerals and their use). *Acta Montanistica Slovaca*, FBERG, Technical University of Kosice, vol. 2, No. 5, p. 71–73.
- Hindls R., Hronová S., Seger J., 2002 – Statistika pro ekonomy. (Statistics for Economists). 1st edition. Prague: Professional Publishing, 415 p. ISBN 80-86419-26-6.
- Hornická ročenka 2004. (Mining Yearbook 2004). Issued by the Czech Mining Office and the Employers Association of Mining and Oil Industry – The Fellowship of the Miners of the Czech Republic. Ostrava: Montanex, 2005–300 p., ISBN 80-7225-152-X.
- Hornická ročenka 2005. (Mining Yearbook 2005). Issued by the Czech Mining Office and the Employers Association of Mining and Oil Industry – The Fellowship of the Miners of the Czech Republic. Ostrava: Montanex, 2006. 320 p., ISBN 80-7225-208-9.
- Hornická ročenka 2006. (Mining Yearbook 2006). Issued by the Czech Mining Office and the Employers Association of Mining and Oil Industry – The Fellowship of the Miners of the Czech Republic. Ostrava: Montanex, 2007. 328 p., ISBN 80-7225-233-X.
- Hornická ročenka 2007. (Mining Yearbook 2007). Issued by the Czech Mining Office and the Employers Association of Mining and Oil Industry – The Fellowship of the Miners of the Czech Republic. Ostrava: Montanex, 2008. 327 p., ISBN -80-7225-263-3.
- Hornická ročenka 2008. (Mining Yearbook 2008). Issued by the Czech Mining Office and the Employers Association of Mining and Oil Industry – The Fellowship of the Miners of the Czech Republic. Ostrava: Montanex, 2009. 320 p., ISBN -80-7225-292-3.
- Hornická ročenka* 2009. (Mining Yearbook 2009). Issued by the Czech Mining Office and the Employers Association of Mining and Oil Industry – The Fellowship of the Miners of the Czech Republic. Ostrava: Montanex, 2010. 318 p. ISBN -80-7225-314-2.
- CHARVÁT, Jaroslav. Světové dějiny. (World history). 10th edition. Prague: SPN, 1981. 598 p.
- MAKARIUS, Roman. České horní právo. díl I. (Czech mining law. Volume I). 1st edition. Ostrava : Montanex, 1999. 246 p. ISBN 80-72225-033-7.
- Commercial Register and the Collection of Documents [online]. [cit. 2008-07-02]. Available from www: <<http://www.justice.cz/xqw/xervlet/insl/index?sysinf.@typ=or&sysinf.@strana=searchSubject>>.
- State Mining Administration of the CR: Ostatní – Statistika – Těžební činnost (Other – Statistics – Mining activities) [online]. [cit. 20/07/2010]. Available from www: <<http://www.cbubs.cz/tezebni-cinnost.aspx>>.
- Mineral resources of the Czech Republic – the mineral situation in 2007. Prague: Ministry of Environment CR, 2008, 413 p.
- Mineral resources of the Czech Republic – the mineral situation in 2008. Prague: Ministry of Environment CR, 2009. 473 p.
- Tomek G., Vávrová V., 2008 – Řízení výroby. (Production Management). Second enlarged and updated edition. Prague: Grada, [2000]. 408 p. ISBN 80-7169-955-1.
- Decree No. 15/1995 Coll., on the authorization of mining activities and mining activities, as well as designing buildings and facilities that are part of these activities, as amended.
- Decree of CMA No. 298/2005 Coll., on requirements for professional qualifications and professional competence in the performance of mining activities or activities performed using mining methods, and on amendments to some Acts, as amended by the Decree of CMA No. 240/2006 Coll.
- Act No. 44/1988 Coll., on Protection and Use of Mineral Resources (Mining Act), as amended.
- Act No. 61/1988 Coll., on Mining Activities, Explosives and the State Mining Administration, as amended.
- Act No. 513/1991 Coll., the Commercial Code, as amended.
- Act No. 455/1991 Coll., the Trade Licensing Act, as amended.
- Act No. 627/2004 Coll., on European Company, as amended.
- Act No. 360/2004 Coll., on European Economic Interest Grouping, as amended.

ANALIZA SPÓŁEK GÓRNICZYCH DZIAŁAJĄCYCH W SEKTORZE SUROWCÓW NIEMETALICZNYCH
ORAZ SUROWCÓW BUDOWLANYCH W REPUBLICE CZESKIEJ

Słowa kluczowe

Przedsiębiorstwa górnicze, surowce mineralne, forma prawna, kapitał

Streszczenie

Ważnym krokiem w rozwoju czeskiego górnictwa były przełomowe lata dziewięćdziesiąte ubiegłego wieku, kiedy nastąpiły zmiany socjalno-ekonomiczne, które z kolei miały wpływ na wszystkie inne działy gospodarki. W wyniku transformacji ekonomicznej wydobycie kopalín zostało przeniesione do spółek górniczych, gdzie sposób zarządzania przeszedł zmiany systemowe. Wydobycie i przetwórstwo surowców mineralnych stało się standardową działalnością gospodarczą.

Artykuł koncentruje się na spółkach działających w Republice Czeskiej, w sektorze surowców niemetalicznych i budowlanych. Pokróćce przedstawia on rozwój górnictwa w Republice Czeskiej w latach dziewięćdziesiątych ubiegłego wieku. Ciężar artykułu koncentruje się jednak na analizie wydobycia surowców niemetalicznych oraz surowców budowlanych.

Głównym celem było przedstawienie tych przedsiębiorstw z punktu widzenia ich statusu prawnego, własności kapitału zagranicznego, siły kapitałowej (które z przedsiębiorstw ma kapitał wyższy niż wymagany), ich działalności w segmencie wydobycia (jakie surowce mineralne są wydobywane w spółkach ściśle górniczych), a także reprezentację w sektorze wydobywczym podwykonawców prac.

Na początku na podstawie badań i analiz przyjęto hipotezy, które powinny zostać potwierdzone lub za-negowane. Choć co do zasady wyniki były jednoznaczne, to do ostatecznego ich przyjęcia konieczne było ich testowanie. Wyniki analizy przedstawione zostały w tabelach i na wykresach.

Z przeprowadzonej analizy jednoznacznie wynika, że dominującą formą prawną są spółki z ograniczoną odpowiedzialnością – (Sp. z o.o.). Pod względem własności, przedsiębiorstwa górnicze są własnością największych krajowych spółek górniczych. Jednak wiele firm górniczych jest własnością firm zagranicznych. Najczęściej reprezentowane są tutaj Niemcy i Austria. Ponadto analiza wykazała, że większość firm wydobywczych z kapitałem zagranicznym przekracza minimalny limit ustalony ustawą Kodeks Handlowy (513/1991 Sb. z późniejszymi zmianami). Większość tych firm skupia się na wydobyciu tylko jednego surowca mineralnego. Analizując te firmy okazało się, że coraz więcej pracowników i podwykonawców firm górniczych korzysta w procesie wydobycia z outsourcingu.

Można stwierdzić, że większość założeń (hipotez), które zostały sformułowane na początku, nie potwierdziła się, dlatego zostały odrzucone. Założenia dotyczące statusu prawnego spółek górniczych, udziału kapitału zagranicznego, posiadanego kapitału oraz stosunku pracowników zatrudnionych na stałe do stosunku podwykonawców również się nie potwierdziły.

THE ANALYSIS OF MINING COMPANIES OPERATING IN THE SECTOR OF NON-METALLIC
AND CONSTRUCTION MINERALS

Key words

Mining company, mineral commodities, legal form, capital

Abstract

An important milestone in the development of Czech mining was the turning point in the nineties of the last century, when socio-economic changes occurred that affected all sectors of the economy. As a result of economic transformation, totally new system changes were brought about for mining companies and their management. Mineral extraction and processing has since become a standard business activity.

The article is focused on mining companies operating in the CR in the sector of non-metallic and construction minerals. It briefly outlines the development of mining in the CR in the 90's of the last century. The focus of the article, however, lies on the analysis of mining companies extracting non-metallic and construction minerals. The aim was to map the status of these enterprises in terms of their legal status, foreign ownership, capital strength (whether firms have their capital higher than the statutory minimum set forth by the Commercial Code), their activity in mining sectors (which minerals are being extracted by individual mining companies) and the representation of sub-contractors in mining activities.

At the beginning of the research, several hypotheses were proposed that were either confirmed or disproved based on a survey and analysis. Although the findings were, in principle, unequivocal, in order to accept or reject the hypotheses, their testing was necessary. In our case, we applied the test of hypothesis related to relative frequency. The analysis results are processed in tables and graphs.

The analysis showed that as for the legal form, trade companies clearly prevail and limited liability companies are completely dominating. In terms of ownership of mining firms domestic miners have the largest representation. Many mining companies, however, have a foreign owner. German and Austrian capital being the most represented. Furthermore, the analysis proved that most mining companies operate with a capital that exceeds the minimum limit set forth by Act No. 513/1991 Coll., the Commercial Code, as amended. Most of the mining companies focus on the exploitation of a single mineral only. On examining the representation of ordinary workers and employees of subcontractors, it was found that more and more mining companies outsource mining processes.

We can conclude that most of the hypotheses formulated at the beginning of our research were rejected. Established assumptions about the legal status of miners, nationality of holders, disposable capital and the ratio of permanent employees to employees of subcontractors were not confirmed.