



# Economic Evaluation of Effectiveness of Domestic Raw Materials Using



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## Abstract

Raw materials provide profit for owner, state and mining company, as well as single region. Mentioned means that problem of evaluation of raw material deposits is very actual and necessary area. In developed market economies evaluation of reserved deposits is considered as one of the most complex, but also most important activities during finding and research of any deposit of raw material. According national strategy for permanently sustainable development of Slovakia position of natural environment and using of raw materials in Slovakia is not sustainable from the long-term view. From the view of social and economic impacts of mining we analyzed chosen macroeconomic indexes in mining. By this way we analyzed individual regions of Slovakia. Results of analysis shows that mining activity is characterized by technological severity and high rate of human work, and by this way with regard to costs structure it presents important source of employment.

**Keywords:** Raw Material Base; Resource Policy; Economic and Social Impact; GDP; Unemployment; Export; Import

## Introduction

Base of mineral raw materials provides in the frame of certain region the value that is possible to evaluate with optimal using complexly, and by this way profit for owner, state and mining company, as well as single region is created [1]. Profit for the state can be possible reasonable and rational using of deposits, as defined in legislation of raw materials using. Profit for mining organization can be profit creation during providing of its sustainability. Profit for the region is in the sense of administration creation of wealth for region's inhabitants that is viewed through support of new working posts, support of regional taxes creation, or taxes, orientated directly to the region and availability of raw material sources that are necessary for region's development. Owner of reserved deposits of raw materials in conditions of Slovakia is single state, but state does not have definite obligation to evaluate economically all recorded deposits of reserved raw materials [2].

Sector of mining and processing of raw materials in Slovakia is full privatized and state as owner of reserved deposits of raw materials creates in accord with available legislation space and conditions for business subjects for effective using of raw materials. Principle of freedom in business during observing of determined rules applies also in area of raw material using. It means that problems of evaluation of raw material deposits are very actual and necessary for business sector, as well as for private sector [3]. In developed market economies evaluation of reserved deposits is considered as one of the most complex, but also most import

ant activities during finding and research of any deposit of raw material.

Market estimations of prices of deposits and raw material sources in Slovakia can exist only due to the Law about prices No 526/1990 Collection of Law. However, it would not be advisable to prescribe detailed pricing procedures for prices determination for a wide range of evaluation needs for all variants of real estate. Present mining practice shows that market estimations use for evaluation of non-monetary deposits to equity of the company mainly capital debts and warranty coverage.

## State of The Problem

Presently raw materials are mining in all counties of Slovakia. Majority of mined raw materials are consuming at the regions of Slovakia. Raw materials, which present surplus in Slovakia, are exported to surrounding countries. Shortage of raw materials is imported to Slovakia important attention is necessary to give mainly to social and economic indexes, among which belong employment, GDP, average monthly wage, migration and criminality. Such indexes characterize changes, connected with inhabitants of the country [4]. Extraordinary important and necessary condition for state development is availability of raw materials [5]. Availability is perceived from physical and economic side. Using of own raw materials is either most economic or ignoring of such possibility could present ownership negation, which in case of

raw materials is evaluated very significantly and directly by the Constitution of Slovakia.

According the Constitution SR raw material wealth must be protected and effectively used in connection to long-term needs of economic and social development of the society with regard to environmental aspects of sustainable development, beginning with geological research and using of verified stocks of raw materials. Process of raw materials using is subjected presently to legislation norms that divide deposits to two categories: reserved and non-exclusive. Non-exclusive deposits are characterized by attribute of ownership - owner of the land. Deposits reserved are part of raw materials wealth of the state and in the sense of the Constitution SR they are in ownership of the state and this ownership is unchangeable. Effectiveness of state ownership using is interpreted through rationality. Since raw materials are irrecoverable, state must care of their saving using with goal to provide protection and rational using of raw materials wealth as ownership of Slovakia, together with regarding of sustainability principles.

Raw materials wealth of Slovakia provides rather broad scale of raw materials from the view of volume and quality of stocks, proper mainly for production of products on base of non-metallic and construction materials that present economically most important group in structure of raw materials wealth of Slovakia [6]. One of the most important tasks in the future should be increasing of processing level and products finalization on base of non-metallic raw materials.

Stocks and quality of ore raw materials, as determining factor of their using, prove their decreasing economic importance in structure of raw materials wealth of the country. Similarly, domestic energetic sources (except brown coal and lignite) have due to the volume of imported commodities only small importance. Total rate of value of raw materials mining on GDP is negligible (0,5%), but this statistic data does not include value of consequently processed and adjusted commodities on mineral base that is multiply higher and it presents significant element in the economy and foreign trade of Slovakia [7].

### Methodology

Due to the evaluation of present state of raw materials in Slovakia there is necessary to limit position of mining sector according classification in conditions of Slovakia. According SK NACE Rev.2, published by Statistic Office of Slovakia, official indication of mining industry is in section B - Mining and quarrying. The sec-

tor includes include mining of minerals, appearing naturally as solid minerals (coal and ores), liquid (petroleum) or gas (earth gas). In the frame of mentioned section there are divisions 05-06: mining and quarrying of fossil fuels (coal, lignite, petroleum and gas), division 07-08, including: mining and quarrying of metal ores, various minerals and stone [8].

In spite of historic tradition in mining and processing of ore raw materials, presently Slovakia does not belong among states with developed mining industry. According UN for development and business (UNCTAD) to category of states with developed mining industry belong states, in which rate of mining and processing of raw materials on GDP is higher than 25%. According national strategy for permanently sustainable development of Slovakia position of natural environment and using of raw materials in Slovakia is not sustainable from the long-term view. Present situation of raw materials base in Slovakia is characterized almost by total exhaustion of ore raw materials stocks, big stocks, but different measure of non-metallic and construction materials using, as well as total limitation by state control over mining. Influences to the country and living environment, caused by mining, are vast. Such influences present only one of the most serious environmental problems of Slovakia (Government Resolution, SR, 2001). Sector B - Mining and quarrying due to the reporting from the side of Statistical Office SR, is mentioned in the analysis as part of aggregated sector Industry in Total.

From the view of social and economic impacts of mining it is important to follow up mainly employment and wages in mining. Also, there is necessary to search development and placement of mining companies in Slovakia. By this way we analyzed individual regions of Slovakia. By the way of obtained social and economic indexes we made analysis of macro environment and analysis of mining industry. Due to the evaluation of development we followed up influence of mining industry to GDP, employment and wage (due to the extend analysis we will mention only results and conclusions of analysis).

### Results

From the Table 1 there is obvious GDP development in sector Industry Total and Production remained during whole period rather stable. In last period there is gradual decline of mining activity due to the growth of input prices to mining activity process and activity, made by mining and last but not least also due to the consequences of economic crisis in Slovakia and in the world (Table 1).

**Table 1:** Development of GDP structure and unemployment (%)

Sector (SK NACE Rev. 2)	2004	2006	2008	2010	2012	2014	2016	Average
Sector Share on GDP in Present Prices ( %)								
Agriculture, forestry, fishery	3,6	3,2	3,7	2,6	3,2	4,0	3,4	3,3
Industry total	26,9	28,0	25,8	23,9	24,1	24,3	24,6	24,9
Production	21,1	21,2	20,2	18,9	19,0	19,8	20,5	19,7
Construction	5,5	6,9	8,6	8,1	8,2	7,0	6,8	7,3

Services	53,5	52,1	52,6	56,3	55,8	55,4	55,3	54,7
Sector Share on Total Employment ( %)								
Agriculture, forestry, fishery	4,7	4,0	3,6	3,4	3,2	3,3	3,1	3,6
Industry total	27,0	26,5	26,3	23,6	23,8	23,7	24,0	24,9
Production	24,1	23,7	23,9	21,3	21,6	21,6	22,0	22,5
Construction	6,8	7,5	8,1	8,5	7,8	7,4	7,3	7,6
Services	61,5	62,0	62,0	64,6	65,3	65,6	65,6	63,9

Source: own processing according Statistical Office, SR.

All stocks of raw materials in Slovakia are divided to four groups to following stocks:

- Energetic - petroleum, coal, earth gas, uranium, lignite, anthracite, bituminous rocks,
- Ores - iron, copper, lead, zinc, antimony, mercury, silver, gold, etc.
- Non-metallic - barite, bentonite, quartz, magnesite, talc, etc.
- Construction - building stones, gravel, bricks, etc.
- Other - mineralized waters, pyrites [9].

Deployment of raw materials deposits in Slovakia is uneven. It depends mainly on geologic construction of the locality. Raw materials mined in Slovakia are determined mostly for domestic consumption. Slovakia import from abroad prevailingly petroleum, earth gas, black coal, iron ores, and raw materials for metallurgy [9]. Mining of raw materials is characterized by high rate of human work; therefore, it presents very good source of employment, but on the other hand it is less profitable. Total value of profit achieved in analyzed period 330 million EUR, which presents 0,46% of total GDP.

From total mining in Slovakia 12,5% belongs to fuel and energetic materials, 2,1% to ores, 85,4% to non-metallic materials. Production of majority of non-metallic and construction raw materials (magnesite, limestone, dolomite, gypsum, building stones, etc.) covers considerably their domestic consumption. Raw materials and products on mineral base present important element of foreign trade of Slovakia. Important element of imported mineral materials belongs mostly to fuels (petroleum, earth gas, black coal) and ores raw materials (iron ores, raw materials for aluminum metallurgy, steel and ferryl-alloys). As for the materials, produced on mineral base, Slovakia exports mostly iron and steel, aluminum, ferryl-alloys, magnesite, concrete, bentonite, dolomite and other products mostly from non-metallic raw materials. From seven types of registered energetic raw materials (petroleum, earth gas, brown coal, lignite, uranium ores, anthracite, and bituminous rocks only four types are industrially used - petroleum, gas, brown coal and lignite [10,11]. Economic importance of uranium ores, anthracite and bituminous rocks is negligible due to their volume and quality. Slovakia has limited stocks of energetic sources, mainly petroleum and earth gas.

Main goal of raw materials potential searching in Slovakia is geologic task in accord with analysis and evaluation of chosen ores and other raw materials from the view of their importance for Slovakian economy - possibility of their using from the view of stocks volume, their quality, possibility of replacement, structure of demand and offer, as well as identification of weaknesses and strengths (SWOT analysis) of individual types of raw materials. According evaluation of raw material potential according chosen parameters, raw materials will be identified (resp. individual deposits objects) that are strategic for Slovakian economy and that are economically perspective for further using. Results of the task should serve as frame base for decision about using of evaluated raw material sources in the future.

### Export and import and its economic and social impacts

Mining and quarrying in Slovakia provides important inputs mainly for processing industry and energetics. But stocks of raw material and energetic materials are limited in Slovakia greatly. While as for the fuel and energetic and ores raw materials Slovakia is dependent on import, mining of several types of raw materials for industry and construction has positive economic importance.

Mining of brown coal and lignite covers domestic consumption approximately 80%. In the frame of energetic policy of Slovakia domestic sources of brown coal and lignite are considered as strategic raw material base, decreasing dependence on import of primary fuel and energetic materials, and as reserve in case of unpredicted situations and source of working possibilities. Due to the verified geologic stocks of petroleum and earth gas there is not possible to expect in the future considerable increasing of domestic mining volume and therefore it will be necessary to provide such commodities still by import.

Slovakia presents after Ukraine second biggest transition country of earth gas in Europe. Main attention will be orientated in the future in connection with gas market liberalization to increasing of quality of services, connected with earth gas stocking. Primary task would remain decreasing of energetic demand to level of EU countries. Regarding high production costs of mining and processing of domestic ores raw materials the mining is not profitable. Necessary ores commodities are provided by import. On the other hand, reserved deposits of non-metallic raw materials present most important group of raw materials in Slovakia.

In 2015 geological stocks of reserved deposits achieved level 16 605 mil. tones with considerable prevalence of non-metallic raw materials (12 586 mil. ton). 2015 presented year with smooth increasing of construction and non-metallic materials mining. From the long-term trend (2000-2015) there was significant decline of ores materials mining (by 95,3 %) and decrease of energetic materials mining by 50, 5%. On the other hand, growth had

been recorded in mining of non-metallic materials (by 9%) and construction materials (by 49 %). In 2015 rate of energetic materials mining to stocks presented 0,16 %, ores materials presented 0,01 %, and non-metallic materials 0,09 %, construction materials - 0,62 % (Ministry of Living Environment, SR, 2016). Chosen financial indexes in Mining and quarrying is given by (Table 2).

**Table 2:** Chosen industrial indexes in sector 05-09 Mining and quarrying in mil. EUR.

	2011	2012	2013	2014	2015
Costs					
05-09 Mining and quarrying	456,79	419,28	807,03	464,67	465,84
Revenues					
05-09 Mining and quarrying	600,99	562,98	617,09	601,14	608,76
Economic results before taxes (EBT)					
05-09 Mining and quarrying	144,20	143,70	-189,94	136,47	142,92
Debts to 31th December					
05-09 Mining and quarrying	267,50	274,12	148,70	141,85	128,28
Stocks to 31th December					
05-09 Mining and quarrying	31,59	37,34	52,20	47,55	43,39

Most important non-metallic materials from the view of export are magnesite, dolomite, stone salt, bentonite, limestone, and baryte. Magnesite industry with verified geologic stocks of magnesite and built mining and processing capacities belong to most important producer of alkaline refractory materials in the world

(Ministry of Economy SR, 2004). Petroleum is mined in Slovakia mostly in deposits Gajary and Dúbrava, gasoline in eastern Slovakia (Senné, Stretava, and Ptruška). But total consumption of the materials is covered rather by import, since rate of domestic production on consumption presents only 1% (Table 3).

**Table 3:** Balance of petroleum and production in TJ.

	2011	2012	2013	2014	2015
Primary production	9 396	9 270	9 522	9 603	9 944
Import	306 719	278 424	303 570	276 500	317 082
Export	164 406	147 497	175 244	155 288	186 484
Change in stocks	-2 010	159	-1 814	-3 505	-1 292
Gross domestic consumption	149 699	140 356	136 034	127 310	139 250
Transformation – input	301 238	267 580	292 794	255 444	289 036
Transformation input – production of electricity – heat equipment total	11 265	10 415	9 235	6 895	8 536

Earth gas is obtained mainly from deposits in eastern Slovakia (approximately 70% of mining), remaining production is from deposits in Viedenská panva and Podunajská nížina. Production of gas from Slovakian deposits covers only approximately 3% of consumption and therefore it must be provided by import. Sin-

gle producer of oil and earth gas is presently Nafta, Joint Stocks Company. Due to the volume of verified stocks of oil and earth gas this situation would be probably not changed in the future. This means permanent dependence on import. Mentioned is illustrated by data in Table 4.

**Table 4:** Balance of gas fuel in TJ.

	2011	2012	2013	2014	2015
Primary production	4 303	5 325	4 370	3 510	3 258
Import	203 567	165 774	182 455	165 643	154 390
Export	103	1 623	519	104	-
Change in stocks	-13 621	13 294	4 529	-11 109	4 779
Gross domestic consumption	194 146	182 770	190 835	157 940	162 427
Transformation – input	44 612	41 886	37 954	29 514	31 037
Transformation input – production of electricity – heat equipment total	30 178	28 130	26 349	19 804	20 203

Mining of brown coal is realized at deposits in Handlová, Cigel', Nováky (Hornonitrianske bane, a.s.) and Modrý Kameň (Baňa Dolina, a. s.). Lignite is mined at deposit Gbely (Baňa Záhorie, a. s.). Biggest domestic consumer of energetic coal and lignite presents Power plant Nováky, part of the production is consumed by

**Table 5:** Balance of solid fuels in TJL.

	2011	2012	2013	2014	2015
Primary production	26 355	25 580	25 674	25 400	21 810
Import	131 587	132 238	118 615	120 631	116 730
Export	6 986	3 312	3 527	2 850	2 104
Change in stocks	3 162	-8 703	3 564	-357	490
Gross domestic consumption	154 118	145 803	144 326	142 824	136 926
Transformation - input	169 202	168 980	165 795	167 420	164 833
Transformation input - production of electricity - heat equipment total	50 800	48 513	44 709	41 850	40 751

From 12 registered types of ores materials presently only gold ores has small economic importance. Stocks of other ores are due to the volume, but mostly due to the quality not important. For providing of metallurgical industry needs there is therefore necessary to import such materials with considerable volume. Mining of gold ores is presently declining due to the termination of stocks in single exploited deposit in *Banská Hodruša (Slovenská banská, spol. s. r. o.)*. Presently the deposit is practically mined, but at the same time there is realized searching deposit geologic

**Table 6:** Balance of RES fuels and waste in TJ.

	2011	2012	2013	2014	2015
Primary production	44 278	45 035	46 924	48 771	58 297
Import	1 303	1 263	2 149	2 942	4 236
Export	1 816	2 042	3 157	3 474	4 418
Change in stocks	-559	98	84	217	-8
Gross domestic consumption	43 206	44 354	46 000	48 456	58 107
Transformation - input	16 515	22 598	22 744	20 857	24 010
Transformation input - production of electricity - heat equipment total	13 494	19 390	19 536	18 617	21 551

**Table 7:** Development of building stones mining.

Mineral		2011	2012	2013	2014	2015
Building stone	kt	15 373,39	12 076,80	11 826,56	14 339,20	18 290,40

Mining of building stone moves in last years around 9 mil. tones per year and it has increasing trend. Most important producers of building stones in last period was *Slovenský vodohospodársky podnik, š.p., Stredoslovenské kameňolomy, a. s., Dopras-*

Heating plant and chemical industrial plants (Chemko Strážske). Domestic mining covers consumption of brown coal at level approximately 80% (Table 5). Dependence on black coal import is permanent.

research on the east side from mined spaces. Production by the way of concentrates is orientated mostly to export; part of concentrates is processing in Kremnica. Non-metallic raw materials present most important group of raw materials, connected their stocks, values of production and export. Most important export commodity of Slovakia belongs to concrete, followed by products from magnesite and dolomite. Perspective groups presents also raw materials, used in ecology (bentonite and zeolite), when then their importance is still increasing (Table 6).

*tav, a. s. and Malokarpatské štrkopieskovne, a. s.* Most important producers of gravel were lastly Alas Slovakia, spol. s r. o., VSH, a. s. (*Betox, spol. s r. o.*) and V.D.S., a. s., which provided together almost 70% of total gravel production in Slovakia (Table 7).

## Development of number of companies in mining industry

**Table 8:** Number of companies in mining and quarrying industry in Slovakia.

Number of Mining and Quarrying Companies - Quantity -						
County	Year					
	2010	2011	2012	2013	2014	2015
Bratislavský kraj	25	27	30	35	38	42
Trnavský kraj	16	16	16	16	13	17

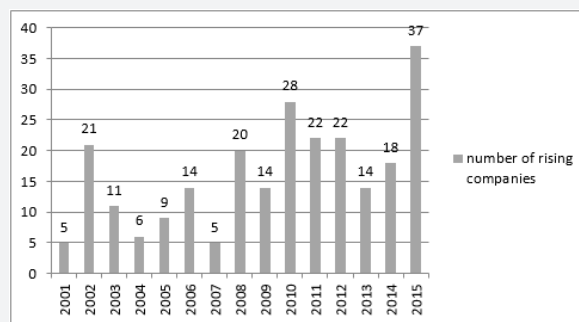
Trenčiansky kraj	14	13	11	10	11	11
Nitriansky kraj	11	12	14	13	14	14
Žilinský kraj	19	17	19	18	21	25
Banskobystrický kraj	39	39	40	37	39	33
Prešovský kraj	15	15	14	14	15	20
Košický kraj	27	26	27	23	24	25
Together	166	165	171	166	175	187

Source: own processing according Statistical Office, SR.

During analysis of mining sector, it is appropriate to follow up number of rising and terminating mining companies in Slovakia. Table 8 illustrated total number of mining companies in individual counties. Data are obtained and available only for period 2010-2015.

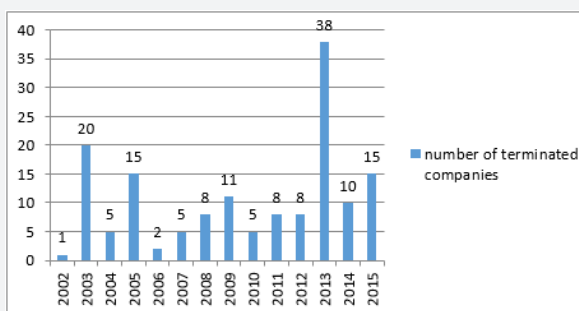
Most companies orientated to the activity of mining and quarrying were in 2014 in county *Banská Bystrica*. In 2015 there was recorded most companies in Bratislava county, yet 42 companies.

The least companies are appearing in county *Trenčín*. Total number of companies in mining industry in Slovakia was in 2015 with total number 187 companies. From 2013 the number of these companies is gradually increasing. It is ideal from the view of mining, sales and new working posts increasing in mining sector. Figures 1 & 2 illustrates number of rising and terminated companies in mining and quarrying industry in Slovakia during analyzed period.



Source: own processing according Statistical office SR.

Figure 1: Number of rising companies in mining and quarrying industry in Slovakia.



Source: own processing according Statistical office SR.

Figure 2: Number of terminated companies in mining and quarrying industry in Slovakia.

According Figure 1 we can see that in mining industry there is gradually increasing number of rising new companies and on the other hand smooth decrease is recorded for number of terminated companies, illustrated by Figure 2. It means positive situation for mining sector. By this way we can state that mining in Slovakia is still developing.

### Development of employment in mining industry

Important index during analysis of the sectors is employment in mining. Average registered number of employees in mining

industry for all Slovakian counties is illustrated by Table 9. The index is followed during 2010-2015.

From Table 9 there is obvious the majority of workers in mining and quarrying industry is in county *Trenčín*. In 2015 3 852 employees worked in the industry. It is caused by the way that mainly in this county the biggest employer is company, mining brown coal and lignite. From 2010 the least number of employees in mining were in county Nitra. Comparing of development of average number in individual sectors is given by Table 10.

**Table 9:** Development of employees in mining and quarrying industry in Slovakia.

Average Registered Number of Employees in Mining and Quarrying Industry in Persons						
County	Years					
	2010	2011	2012	2013	2014	2015
Bratislavský kraj	614	735	687	784	690	557
Trnavský kraj	835	686	421	363	589	553
Trenčiansky kraj	3 662	3 555	3 541	3 746	3 667	3 852
Nitriansky kraj	132	107	-	-	90	67
Žilinský kraj	310	362	463	444	455	507
Banskobystrický kraj	886	634	568	584	521	459
Prešovský kraj	483	111	184	-	254	189
Košický kraj	983	766	608	756	742	604

**Table 10:** Average number of employees in individual industries of Slovakia.

Average Number of Employees in Persons								
	2008	2009	2010	2011	2012	2013	2014	2015
Mining and quarrying	8 891	8 034	7 351	7 620	7 354	7 105	6 935	6 742
Industrial production	532 853	447 685	430 658	452 006	449 126	445 301	453 535	463 606
Supplementation of electricity, gas and steam	21 751	20 505	19 948	18 974	18 255	17 542	18 136	17 765
Supplementation of water and wastewater treatment	22 499	21 609	21 095	21 161	20 450	21 513	20 833	20 601
Sum	585 993	497 883	479 052	499 760	495 185	491 461	499 439	508 714

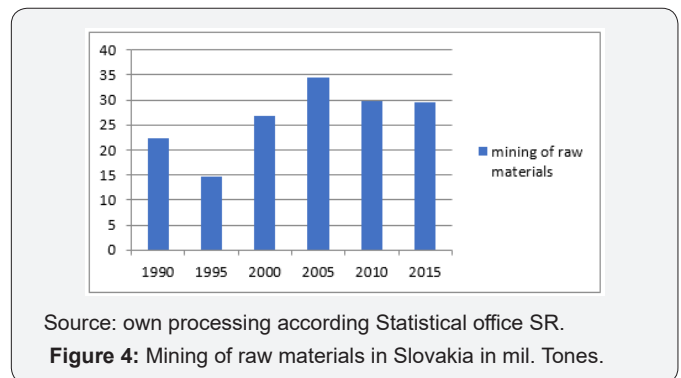
We can say that in all sectors, illustrated by Table 10 average number of employed persons had decreasing tendency. From total industry the least number is employed in mining and quarrying industry, which in 2015 employed only 6 742 persons. The biggest number of employed were in industrial production [8].

**Sales in mining industry**

In mining industry there is important to follow up also development of sales that is illustrated during analyzed period 1990-2015 by Figure 3. Values of the index are calculated by actual exchange rate.



According Figure 3 we can state that from 1990 sales had been gradually increasing. Smooth decrease of sales was recorded in 2005, but in following years sales repeatedly increased. In 2015 sales in mining industry were around approximately level 544mil. €. From the view of sales there is important to follow up sales from raw material mining. Figure 4 shows development of raw materials mining in Slovakia during last 25 years.



During analyzed period the highest volume of mining was recorded in 2005 at level 34, 6 mil. tones. From 2005 mining of raw materials decreased in Slovakia smoothly. In 2015 Slovakia mined 29, 6 mil. tons of raw materials.

**Discussion and Conclusion**

Effectiveness of raw material using is changing in accord with internal and external factors. Internal factors are as follows:

- I. Volume and quality of verified geologic stocks on concrete deposits,
- II. Mining and geological conditions of mining,
- III. Development of industrial infrastructure in surroundings of raw material occurrence and its placement of the market,
- IV. Local, mostly environmental conditions,
- V. Aim to realize other activities in the territory.

External factors are as follows:

- i. Liberalization of market with commodities with mineral origin,
- ii. Prices of similar raw materials in world markets,
- iii. Availability of raw materials and possibility of their replacement from domestic source, including secondary raw materials.

Raw material policy must respect principles of social and ecologically orientated market economy during mining and processing of raw materials and to regard also saving using of natural resources. Mining activity characterized by technological severity and high rate of human work, and by this way with regard to costs structure it presents important source of employment. In spite Slovakia is small country, it has own rich sources of raw materials. Mining is participating at GDP in Slovakia. Majority of mined raw materials is consumed in domestic market, as for example building stone, dolomite, gravel and sand. Mostly petroleum, earth gas, iron ores and black coal are imported to Slovakia. Among positive impacts of mining belong increasing average monthly wage in the sector. People automatically with increasing wage have a need to buy more and more products and services for providing of their needs, which can be met by using of raw materials.

Decrease of employment in mining can be considered as negative social and economic impact of mining activity in Slovakia. New companies purchase Technologies, by which they increase volume of mining, sales of products, and at the same time number of employees is decreasing. Further reason for employment decreasing in mining can be due to the disinterest of people to make such physically demanded job. By mining activity is influenced mostly living environment and inhabitants of the country. Mining of raw materials influences living environment mainly due to the change of relief and soil covering. Inhabitants, living in surroundings of mining works are influenced by too high dust and noise, which can cause rising of various illness. In spite of negative influence of mining there is necessary to support the sector from the side of state, since demand for raw materials in increasing by every year.

Estimation of life cycle of several stocks in Slovakia is over 200 years. Problems of raw materials using in Slovakia is fully reflecting in accord with available legislation of treatment with raw materials. Such treatment is documented through processes that are included in raw materials policy. In spite the policy is given at the level of state, it includes only general declarations that are not possible to use and realize effectively without institutional tools. In spite of mentioned the policy gives the frame that is obligatory and inspiring.

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