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MINING AND EMPLOYEES IN THIS SECTOR IN ROȘIA MONTANĂ AND ABRUD

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Abstract: *THE OCCUPATION OF THE MINER HAS UNDERGONE SIGNIFICANT TRANSFORMATIONS IN DIFFERENT PERIODS OF TIME DEPENDING ON THE DEGREE OF INDUSTRIALIZATION OF THE SOCIETY, RISKING NOWADAYS TO DISAPPEAR OR BECOME MORE AND MORE RARE. IN ROMANIA, EVEN THOUGH IN THE PAST MANY PEOPLE WORKED IN THE MINING SECTOR, AFTER THE RESTRUCTURING OF THIS SECTOR THEIR NUMBER DECREASED DRASTICALLY, AND THE COMMUNITIES AROUND THE MINES HAD TO FACE THE CHANGES DUE TO THE UNEMPLOYMENT OF THE FORMER MINERS. IN THE MINING VILLAGE OF ROȘIA MONTANĂ, THE OCCUPATION OF MINER HAS BECOME ALMOST NON-EXISTENT, AT THE MOMENT THE NUMBER OF PEOPLE WORKING IN THIS SECTOR IS LOW COMPARED TO THE PAST PERIODS. THIS STUDY PRESENTS AN EVOLUTION OF THE NUMBER OF EMPLOYEES OF TWO STATE-OWNED MINING COMPANIES AND OF THE COMPANY THAT WANTED TO INVEST IN THE MINING SECTOR IN ROȘIA MONTANĂ. AT THE SAME TIME, THE WAY THE MINING INDUSTRY WILL LOOK IN THE FUTURE WILL BE PRESENTED.*

Keywords: *OCCUPATIONS, EMPLOYEES, MINING SECTOR, ROȘIA MONTANĂ, ABRUD*

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INTRODUCTION

In general, over time, the mining industry has always been affected by various changes in the political and legislative regime, by industrial or workers' revolutions (trade unions) or by economic crises. At the same time, the change in the type of ownership of the mines, against the background of various legislative regulations, has caused disputes among the mining communities. The evolution of the mining occupation was a visible one, the miners and their families having certain facilities, created against the background of the risks to which the workers were exposed in the underground work. The socialist period at European level brought even more facilities among this social category, the workers



in the mining sector being considered those who carried out the first production of raw materials and consumption, which was to be used for the development of industry throughout the sector. In the twentieth century, miners were a force in the true sense of the word. If in western countries, such as the United Kingdom, mining strikes were imminent as early as 1984-85 (Phillips, 2016, p.144), in Eastern Europe, problems in this sector appear only a few years after the change of regimes. lead. However, regardless of political regimes and types of power, the mining sector and, consequently, its occupations have undergone significant restructuring and reorganization. All the more so as environmental and ecological issues have in many cases been put first, and resource exploitation has taken a back seat.

As the economy shifts from centrally planned systems to free market systems, the extractive industry often undergoes the same processes as developing countries. Thus, this industrial sector is becoming increasingly inefficient from an economic point of view. These industries are generally not able to restructure on their own due to the high costs involved or the resistance of trade unions to the reduction of jobs, but their restructuring becomes inevitable. Coal mining is a typical example in this case, immediately after the economic transition began in 1989, the demand for coal fell significantly, so the coal mining industry suffered. Before 1990, during the communist government, coal mining was strongly supported by the state, which also set the price of coal. For these states, most mining regulations have been amended with their accession to the European Union (Manowska, Osadnik and Wyganowska, 2017, pp.193-196). The lack of coal demand has increased with the global promotion of clean energy and the use of renewable resources. Even if the exploitation of precious metal (gold and silver) or rare metal deposits does not have the same utility as the exploitation of coal, in this sector the restructuring took place at the same time, the reasons being diverse. Thus, regardless of the resource exploited, the mining sector and the mining occupation have become irrelevant in the age of globalization, with some exceptions.

EMPLOYEES IN THE ROMANIAN MINING SECTOR

The biggest problem in the restructuring of the mining sector was related to the requalification of a significant number of miners for their employment in other sectors of activity. At the same time, the communities near the mines have suffered, making it very difficult for them to maintain their traditional occupation (Morawski, 1994, p.197) and cope with high unemployment, with the redundancies in this sector.

Social tensions, the resistance of trade unions and the fear of local communities and people to lose their jobs are obstacles that cannot be overcome without support from outside the industry. It also seems that slow, step-by-step restructuring without the introduction of rigid controls in the industry is not a viable option (Suwala, 2010). These general characteristics are valid for all European post-communist societies (Mucea, 2018, p.217-218). At the same time, the employees in this sector, with the destructuring of the companies in which they were employed, are forced to reorient themselves towards other occupations or fields of activity.

For example, Romania experienced a period of transition to a free market economy after 1990. This brought significant changes in the country's economic geography. The industry has undergone serious changes as many of its branches have undergone a restructuring process, some businesses have been closed, others have changed their business objectives, and others have been privatized. Some companies have changed their economic activity, thus adapting to the new requirements of the market economy. Mono-industrial centers, in particular, have had to drastically reduce their manufacturing and production activities. Some of the regions that were largely affected by these changes were the mining areas, their economic activity was much reduced and, in the end, they stopped due to high production costs.



The Romanian extractive sector was strongly affected by the mining restructuring, over 386 localities from 20 counties were affected by this restructuring, which produced the strongest effects among the mining population. For example, in 1997 there were 175 thousand miners who were employed, reaching in 2006 38,717 people employed in this sector. It is true that some campaigns of communication, information and management of the socio-economic effects that the restriction of the mining activity had for the respective areas, for the local authorities and for the miners were carried out, these being characterized as having a specific typology (Petrescu and Stănculescu, 2012, p.134-135). All these chaotic destructures of the mining sector can be attributed to the inability of the national authorities to develop Romania economically and to efficiently reorganize the industry, cumulated with the lack of vision of the same union leaders (Năstase, 2019, p.88).

As I noted in a previous paper, in Romania from 1989 to 2015 there have been significant changes in the mining industry, which has undergone changes through restructuring, reorganization and concession of some deposits, but most often by stopping activities and closing targets mining (mines, quarries and related technological annexes). All this producing devastating effects on the economy, population and social life in general (Mucea, 2018, p.218).

The Romanian Mining Strategy, 2017-2035 states that "the closure of mines in Romania is not an objective in itself, but is a natural consequence of the evolution of the Romanian economy after 1989, when investments in the national economy were reduced, which generated a significant decrease in the need for raw materials (including mineral resources) and consequently, the production of mining (the amount of useful mineral substances extracted) has not been sold". Another reason presented is the "unprofitable exploitation of mineral resources, their economic inefficiency, due to technical conditions, access to the deposit but also its increasingly difficult operation, the moral and physical wear and tear of equipment and the equipment used". Having the same source of information, we note that "the closure of the mines led, both to the decrease of the incomes of the population from the respective regions, with restrictive consequences on the local economy, and to the decrease of the incomes of the local budgets. The impact of the cessation of mineral resources on the living standards of the population is manifested in several ways, namely: the difficulty of finding a job according to professional training, difficult access to basic services and declining financial support from the government. Therefore, it is easy to see how the restructuring of the mining sector has affected both the workers in the mine and their families, as well as the mining localities where they were, or even the whole area.

This can be achieved only by a relaunch of the industry and by refurbishment, taking into account the increase in the duration of exploitation and depletion of reserves, having as main goal the balance between economic and social development of mining areas (Mucea, 2018, p.219). Through Romania's membership in the European Union, it has committed itself to comply with the regulations established for each stage of mining restructuring. At the same time, our country must prepare the reorganization of the mining sector with professionalism and maximum exigency, keeping the national interest, but also the agreements regarding the achievement of the common objectives of the EU in this sector. In many countries, after the fall of communism, there were legislative discrepancies between the new rules and the economic and organizational structure in the field of mining. Must be a priority for national governments to restart industry and thus the economy.

At present, the mining activity is carried out based on the Mining Law no. 85/2003 including its application norms, regulated by the Government Decision (H.G.) no. 1208/2003. This legal framework is in line with the conditions established from a fiscal and environmental point of view, in a national and European context. Fiscal policy is focused on creating a stimulating and non-discriminatory environment, while focusing on transparent measures to consolidate and predict the economic stability. From a fiscal point of view, the mining activity is carried out according to the



provisions of the Fiscal Code approved by Law 227/2015 with subsequent amendments and completions. However, a detailed analysis of the mining tax regime is needed to produce a predictable framework for investment, whether we are talking about domestic investors or those coming from outside the country, the latter being more and more present on national markets. with the intensification of the process of globalization and globalization in this century.

EMPLOYEES IN THE MINING SECTOR FROM ROȘIA MONTANĂ

The economic restructuring of state-owned companies in Romania involved first of all the change of management and structure of enterprises, the change of production and production technology, but also of capital and sales, while bringing significant changes in the workforce. All this being done in order to streamline the national economy, restructure profitable companies and liquidate the non-viable ones, these measures being meant to provide economic sustainability (Popescu, 2009, p.37), while also having profound social implications.

Since the Roman period, the locality of Roșia Montană, due to its gold and silver deposits, has attracted various people of different religions and ethnicities, who were engaged in the extraction of deposits, thus the village experiencing periods of prosperity and well (Ozunu and Vlad, 2010). From that period until almost the present, in the locality the occupation of miner, manifested in various forms, was present and represented the main way of life of the locals being an important source of income for their families.

During the communist period, all mines, quarries and preparation facilities were designed in the country, designed with large production capacities and a high degree of concentration of underground and surface activities. Their large size also required adequate human resources. Thus, in the mining area of the Apuseni Mountains being employed a significant number of people, around 5000 people only at the Roșia Montană Exploitation (now Roșia Min) and at the Roșia Poieni Copper Mining Plant (now Cupru Min).

This study shows an evolution over time, from 1989 to the present, of the number of people employed in the mining sector from the two state-owned mining enterprises (Roșia Min and Cupru Min) and from the company that wanted to invest in locality (Roșia Montană Gold Corporation - RMGC). Even though Cupru Min is headquartered in Abrud and its quarry and mining plant is located in Roșia Poieni, a significant number of locals in Roșia Montană have been and still are employees of the company. In other words, the two state-owned companies are considered the main mining enterprises in the Roșia Montană - Abrud mining perimeter, even if now the Roșia Min enterprise is no longer active, in the past they offered several thousand jobs. On the other hand, after the restructuring of the state mining sector, RMGC was the main employer in the area, having several hundred employees during the period when it was very active in the area.

After 1997, the year in which the RMGC company (the name most frequently used by the locals being Gold) was established and entered the Romanian market, in Roșia Montană new changes appeared from the perspective of jobs. Even though the investment company initially had several foreign employees, the two Romanian mining companies had a significant decrease in the number of employees, RoșiaMin falling below 1000 employees, and CupruMin below 2000 people only in 1998. It is possible that a part of those who had been laid off to have been hired by RMGC now, the company periodically increasing the number of employees in the locality. It is not possible to say exactly whether the appearance on the Romanian market of RMGC influenced the number of employees in the mining sector of the other two companies in the area or was a coincidence, but it is obvious that during the period when the foreign company was active on the Romanian market employees in the state mining sector was lower.



The following table shows the number of employees of companies operating or have been active in the mining sector, according to data received from the two state mining companies (at the end of each year) and using the web source Romanian Companies List for the investment company from Roșia Montana. For the latter, the average number of employees from 2005 to 2020 is presented. From 1997 the year of establishment until 2004 we did not find any data on this issue, and the company did not respond or provide these data following past requests. It should be mentioned that not all the employees of these companies live in Roșia Montană, but a good part of them lived or come from the old mining village. At the same time, the number of employees of the three companies does not show the actual number of miners, the data including all employees of the companies regardless of occupation..

year	Number of people employed			year	Number of people employed		
	Roșia Min	Cupru Min	RMGC		Roșia Min	Cupru Min	RMGC
1989	1274	2981	-	2005	487	931	340
1990	1274	2700	-	2006	427	761	394
1991	1237	2432	-	2007	13	151	450
1992	1116	2566	-	2008	7	161	212
1993	1152	2529	-	2009	3	208	193
1994	1118	2170	-	2010	3	431	314
1995	1077	2231	-	2011	3	476	478
1996	1095	2225	-	2012	3	494	465
1997	1009	2190	no data	2013	3	491	487
1998	833	1808	no data	2014	3	509	250
1999	816	1499	no data	2015	4	534	83
2000	799	1465	no data	2016	3	533	32
2001	789	1442	no data	2017	3	539	30
2002	750	1356	no data	2018	3	568	26
2003	557	1201	no data	2019	3	585	26
2004	497	1100	no data	2020	3	588	24

Table 1 The number of employees in the mining companies from Roșia Montană and Abrud

Looking at the data in the table, we note that the copper mine had a larger number of employees, this trend being maintained throughout the rest of the activity of the two companies. In 1998, the two companies had a significant decrease in the number of employees due to the restructuring of the mining sector, a trend that has been maintained until now. Since 2007, the Roșia Min (MinVest) branch has completely closed its activity, an aspect that can be seen in the number of employees. Probably after this year, some of Roșia Min's employees will have re-employed at Cupru Min or RMGC.

Unlike Roșia Min, Cupru Min did not fall below 100 people in employment, not even in 2007, when the global economic recession began, during which time only 151 people were employed in the entire company. In the period 2007-2009, the copper mining company had the lowest number of employees, this period being the one in which the world economic crisis took place, which also had effects in Romania. Since 2009, this company has had an increase in the number of employees, a trend that has been maintained until today.

On the other hand, although the number of employees in the copper company has been growing slightly since 2009, the growth has become even faster after the dismissals made by RMGC, so we tend to believe that some of the employees of the investing company are now employees of the state-owned mining company Cupru Min.



THE FUTURE (WORK) IN THE MINING INDUSTRY

It is accepted by everyone that technology has changed your future and as the pace of technology evolves, the acceptance of technology in various fields of activity has determined the success of production. Human resources experts have acknowledged that this fourth industrial revolution is fundamental and different from the third, because the pace of change and its impact are much stronger. Rapid developments in artificial intelligence and automation have an impact on the workforce and skills needed by workers, making many skills obsolete and/or creating new ones. Jobs are changing much faster, and workers need to be able to adapt to these changes. Jobs and tasks previously performed by humans are being replaced by automations and robots or require a human-automation interface. Businesses will require workers to adapt to this change to optimize work (Arora, Jentsch, Pymm, & Jesuthasan, 2017).

This revolution has not gone unnoticed by natural resources and mining industries. While changes and innovations in the mining sector have not been very important in general, given the cost pressures due to falling prices, the mining industry has also created the need for technologicalization (robotization) and continuous improvement through the introduction of new technologies. . As can be seen, technology is significantly changing the way mining companies operate and the way they will have to operate. Undoubtedly, the human resources programs will change, as well as their design and implementation in the mining communities (Arora, Jentsch, Pymm and Jesuthasan, 2017).

For an industry that has traditionally been conservative in its approach to new technologies, it is encouraging to see that the mining industry is beginning to embrace digital technologies and systems. Mining companies are increasingly turning to digital technologies as they try to streamline their productivity and production, thus increasing the level of security in terms of environmental protection and human capital. However, turning it into a digital mining business will not be easy. There will be many challenges, as the transformation will disrupt the traditional patterns and cultures that have been established over many decades of existence. To make the transformation successful, these solutions simply cannot be implemented, workers must understand the implications of this revolution. The digital mine must force a rethinking of the whole approach to mining and management, from the mining model to the reorganization of the work that miners do.

First and foremost, the emphasis is on human safety, any automated solution or device that removes people from the mine and eliminates the danger of direct contact with mining activity is certainly a step forward in protecting workers. Mining companies show a particular interest in personnel safety and security systems that can be monitored and managed remotely. These systems integrate vehicle tracking access and real-time personnel tracking and tracing systems, allowing a mining company to control, monitor and communicate with personnel inside the mine. In the event of a mining accident, the devices allow staff to activate alarms and companies to quickly report who is safe and who was in the mine at the time of the crash. Real-time communications allow messages to be sent, alerting everyone to the incident and informing staff of the actions they need to take.

Thus, recent advances in IT services bring solutions and improvements for the mining industry as well. These upgrades are becoming more viable and we are beginning to see the “digital mine” become a reality, and mining companies that restructure traditional mining through upgrading will quickly gain a higher market share and dominate the mining industry.

CONCLUSION

With the development of society, the needs of people have changed and, implicitly, the types of work or occupations they hold. In the past centuries, people have had to put more physical effort into their daily activities and jobs than we do today. On the other hand, stress and mental wear and tear are much more common today among workers than in the past, regardless of industry..



With the evolution of technology and digitalization, the work in the mining sector will be different from the work done by people in the past. At the same time, the mining industry is now focusing on the human side and the habitat protection side, while taking into account the extent to which a certain resource is depleted. Thus, European and global directives and policies aim at a responsible, sustainable and environmentally friendly exploitation of natural resources in the mining field.

The two large mining companies in the Roșia Montană - Abrud area, except for the mining companies in Zlatna (Zlat Min) and Baia de Arieș (Arieș Min), were the ones that produced the jobs in the Apuseni Mountains area of Alba county, and especially in the commune of Roșia Montană, through the extraction and processing of gold and silver (Roșia Min), but also that of copper (Cupru Min). Thus, the number of people employed in this sector was significant, the occupation of a miner being widespread in the area. When we talk about this profession, we have in mind both the underground employees and those who worked in the surface mines. And if we take into account the people employed in this sector, we are already talking about the workers in the mining industry, the people who worked in the preparation plants or in other positions in these enterprises. But with the restructuring of mining companies, the number of people employed by these companies has dropped dramatically. Currently, only the company that extracts copper from Roșia Poieni is active, extracts and processes ore in the Apuseni Mountains area of Alba county.



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