

INFLUENCE OF THE BULGARIAN MINING INDUSTRY ON THE DEVELOPMENT OF REGIONS

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ABSTRACT. The report presents the results of a comparative analysis of some of the achieved economic and social indicators of the Bulgarian mining industry in general and by individual statistical regions of Bulgaria during the period 2018 ÷ 2023. The changes in the economic indicators were analysed: number of mining enterprises, number of personnel, and level of wage costs in the “Mining and Quarrying Industry” subsector. The aim of this study is to outline the territorial distribution of the number of mining enterprises, the personnel engaged in them, and the level of wage costs in the “Mining and Quarrying Industry” subsector by statistical regions during the period 2018 ÷ 2023, through an analysis of the available industry and national statistical information. The indicator of gross annual salary by economic activities in Bulgaria in 2023 is also presented. The results of the comparative analysis substantiate that the Bulgarian mining industry has a significant impact on the socio-economic development and well-being of the regions and municipalities.

Key words: Bulgarian mining industry, comparative analysis, socio-economic impact.

ВЛИЯНИЕ НА БЪЛГАРСКАТА МИННА ИНДУСТРИЯ ВЪРХУ РАЗВИТИЕТО НА РЕГИОНИТЕ

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РЕЗЮМЕ. В доклада са представени резултатите от проведен сравнителен анализ на част от постигнатите икономическите и социални показатели на българската минна индустрия общо и по отделните статистически райони на България през периода 2018 ÷ 2023 г. Анализирано е изменението на икономическите показатели: брой на минните предприятия, брой на персонала и равнището на разходите за възнаграждения в подсектор „Добивна промишленост“. Целта на настоящото изследване е чрез анализ на наличната браншова и национална статистическа информация да се очертае териториалното разпределение на броя на минните предприятия, на персонала, ангажиран в тях и равнището на разходите за възнаграждения в подсектор „Добивна промишленост“ по статистически райони през периода 2018 ÷ 2023 г. Представен е и показателят брутна годишна работна заплата по икономически дейности в България през 2023 г. Резултатите от проведен сравнителен анализ обосновават, че българската минна индустрия оказва съществено влияние върху социално-икономическото развитие и благосъстоянието на районите и общините.

Ключови думи: българска минна индустрия, сравнителен анализ, социално-икономическо въздействие.

Introduction

The mining industry, in addition to being important for the mineral and raw material independence and economic development of the country, also has a significant impact on the socio-economic development and well-being of regions and municipalities.

According to Blagoev (2019), the industrial sector of the Bulgarian economy is traditionally defined as a structurally determining sector, and the mining industry, as part of the sector, occupies due importance both in providing employment (especially in some regions of the country) and in the formation of the gross domestic product (GDP).

According to Arias et al. (2014), “Despite the predominant global scale and scope of the mining industry, its impact on socio-economic development is most noticeable at the regional level.” In this regard, it is at the regional and municipal level that the effect of the mining industry on the socio-economic development of the regions is most noticeable and therefore essential for the development of the individual regions of the country.

Over the past thirty years, significant transformations have taken place in the mining industry, changing the ways in which mining companies are organised within the territories where they operate (Castaño et al., 2019). One of the most important transformations is the way mining companies are functionally organised, moving from a vertical integration model to a horizontal one and outsourcing non-core activities in order to improve economic efficiency and reduce costs (Morris et al., 2012).

Research data and methods

The sources of information for this survey are: national and international databases with scientific information, statistical data of the National Statistical Institute (NSI) of the Republic of Bulgaria, and its information system “INFOSTAT”. The methods used in the development of this study are: research of scientific literature and statistical information, analysis and synthesis, system approach, method of inter-business comparisons, and graphical methods for analysis of time series and structures.

The purpose of this study is to outline the territorial distribution of the number of mining enterprises, the personnel involved in them, and the level of remuneration costs in the Mining and Quarrying Industry subsector by statistical regions in the period 2018 ÷ 2023 through analysis of the available sectoral and national statistical information. In this study, we have limited ourselves to conducting a comparative analysis of part of the achieved economic and social indicators of the Bulgarian mining industry by the individual statistical regions of Bulgaria in the period 2018 ÷ 2023.

Key economic indicators of the mining and quarrying subsector

Based on the indicators Wages and salaries, and Persons employed in the mining industry, the indicator Wages and salaries, per employee has been calculated

The main economic indicators of the Mining and Quarrying subsector of Bulgaria in the period 2018 ÷ 2023 are presented in Table 1.

Table 1. Main economic indicators of Bulgaria's mining industry in the period 2018 ÷ 2023

Mining and quarrying industry - total	2018	2019	2020	2021	2022	2023
Number of enterprises, num.	373	354	359	379	404	390
Wages and salaries, BGN'000	454973	415738	483440	525294	575655	653185
Employed persons, num.	21554	19174	20313	19749	18736	18653
Wages and salaries per employee, BGN'000/employed person	21.109	21.682	23.800	26.599	30.725	35.018

Source: according to INFOSTAT data, compiled by the authors. https://infostat.nsi.bg/infostat/pages/reports/result.jsf?x_2=231
https://infostat.nsi.bg/infostat/pages/reports/result.jsf?x_2=2165

For the analysed period from the data in Table 1, there is a clear trend of increasing the number of mining enterprises in Bulgaria, the wages and salaries as a whole and per person, and decreasing the number of employed persons. The number of enterprises increased from 373 in 2018 to 390 in 2023, the number of employed persons decreased by 13.46%, and the wages and salaries increased by 43.57%. This leads to a sustained increase in the wages and salaries per employee by 65.89% for the entire period, which is significantly above the national average.

A study of the competitiveness of the Bulgarian mining industry (Mitev et al., 2025) summarises the following: "In the

period 2018-2024, the Bulgarian mining industry increased its economic indicators, labour productivity, staff remuneration, and competitiveness."

Main economic indicators of the Mining and Quarrying subsector in the different statistical regions of Bulgaria

The main economic indicators of the Mining and Quarrying subsector in the statistical region North-West in the period 2018 ÷ 2023 are presented in Table 2.

Table 2. Main economic indicators of the Mining and Quarrying subsector in the North-Western region in the period 2018 ÷ 2023

North-Western Region	2018	2019	2020	2021	2022	2023
Number of enterprises, num.	39	39	40	43	48	42
Wages and salaries, BGN'000	3579	3793	3761	4621	6291	7086
Employed persons, num.	283	305	307	430	424	410
Wages and salaries per employee, BGN'000/employed person	12.647	12.436	12.251	10.747	14.837	17.283

Source: according to INFOSTAT data, compiled by the authors. https://infostat.nsi.bg/infostat/pages/reports/result.jsf?x_2=231
https://infostat.nsi.bg/infostat/pages/reports/result.jsf?x_2=2165

The data in Table 2 shows that the number of enterprises in the North-Western region increased from 39 in 2018 to 42 in 2023. This leads to a sustainable increase in wages and salaries per employed person of 136.66%, which is significantly above the average for the North-Western region of the country.

The main economic indicators of the Mining and Quarrying subsector in the Northern Central statistical region in the period 2018 ÷ 2023 are presented in Table 3.

Table 3. Main economic indicators of the Mining and Quarrying subsector in the Northern Central region in the period 2018 ÷ 2023

Northern Central Region	2018	2019	2020	2021	2022	2023
Number of enterprises, num.	25	22	23	24	25	28
Wages and salaries, BGN'000	26591	28888	30773	31884	18651	19927
Employed persons, num.	1465	1419	1481	1428	762	755
Wages and salaries per employee, BGN'000/employed person	18.151	20.358	20.779	13.061	24.476	26.393

Source: according to INFOSTAT data, compiled by the authors. https://infostat.nsi.bg/infostat/pages/reports/result.jsf?x_2=231
https://infostat.nsi.bg/infostat/pages/reports/result.jsf?x_2=2165

The data in Table 3 show a slight increase in the number of enterprises in the Northern Central region. They increased from 25 in 2018 to 28 in 2023, the number of employed persons almost halved, and the wages and salaries decreased by 25.07%. The wages and salaries per employee increased almost 1.5 times. The wages and salaries per employee of the enterprises in the mining industry here is also above the average for the region.

The main economic indicators of the Mining and Quarrying subsector in the statistical region North-East in the period 2018 ÷ 2023 are presented in Table 4.

The data in Table 4 show a slight decrease in the number of enterprises in the North-Eastern region. They decreased from 40 in 2018 to 38 in 2023, the number of employed persons decreased by 9.65%, and the wages and salaries increased by more than 1.5 times. The wages and salaries per employee increased by 62.88%. The remuneration of the staff of the enterprises in the mining industry is still above the average for the statistical region.

Table 4. Main economic indicators of the Mining and Quarrying subsector in the North-Eastern region in the period 2018 ÷ 2023

North-Eastern region	2018	2019	2020	2021	2022	2023
Number of enterprises, num.	40	37	31	33	36	38
Wages and salaries, BGN'000	10732	8327	7305	7875	13271	15794
Employed persons, num.	715	458	441	480	633	646
Wages and salaries per employee, BGN'000/employed person	15.010	18.181	16.565	16.406	20.965	24.449

Source: according to INFOSTAT data, compiled by the authors. https://infostat.nsi.bg/infostat/pages/reports/result.jsf?x_2=231
https://infostat.nsi.bg/infostat/pages/reports/result.jsf?x_2=2165

The main economic indicators of the Mining and Quarrying subsector in the statistical region South-West in the period 2018 ÷ 2023 are presented in Table 5.

The data for the Southwestern region, presented in Table 5, show an increase in the number of mining enterprises in the

region. They increased from 123 in 2018 to 135 in 2023. The wages and salaries during the period increased by 52.98%. The wages and salaries per employee increased by 84.23%.

Table 5. Main economic indicators of the Mining and Quarrying subsector in the South-Western region in the period 2018 ÷ 2023

South-West Region	2018	2019	2020	2021	2022	2023
Number of enterprises, num.	123	118	117	132	144	135
Wages and salaries, BGN'000	122665	128161	141537	149167	160293	187648
Employed persons, num.	6255	5392	5487	5259	5200	5194
Wages and salaries per employee, BGN'000/employed person	19.611	23.767	28.346	28.380	30.826	36.129

Source: according to INFOSTAT data, compiled by the authors. https://infostat.nsi.bg/infostat/pages/reports/result.jsf?x_2=231
https://infostat.nsi.bg/infostat/pages/reports/result.jsf?x_2=2165

Almost half of the enterprises in the subsector operate in this statistical region and the remuneration paid is one of the highest for the subsector, occupying second place in the branch.

Table 6 presents the main economic indicators of the Mining and Quarrying subsector in the statistical region Southern Central in the period 2018 ÷ 2023.

Table 6. Main economic indicators of the Mining and Quarrying subsector in the Southern Central region in the period 2018 ÷ 2023

Southern Central	2018	2019	2020	2021	2022	2023
Number of enterprises, num.	89	78	87	88	95	90
Wages and salaries, BGN'000	100743	61212	116292	126109	140972	153923
Employed persons, num.	4681	3388	4499	4283	4162	4120
Wages and salaries per employee, BGN'000/employed person	21.522	18.067	25.848	29.445	33.871	37.360

Source: according to INFOSTAT data, compiled by the authors. https://infostat.nsi.bg/infostat/pages/reports/result.jsf?x_2=231
https://infostat.nsi.bg/infostat/pages/reports/result.jsf?x_2=2165

The data in Table 6 show a slight increase in the number of enterprises in the Southern Central region. They increased from 89 in 2018 to 90 in 2023, the number of employed persons decreased by 11.98%, and the wages and salaries increased by 52.79%. The Wages and salaries per employee during the

period increased by 73.59% and were the highest in the subsector and the highest in the statistical region.

The main economic indicators of the Mining and Quarrying subsector in the statistical region South-Eastern in the period 2018 ÷ 2023 are presented in Table 7.

Table 7. Main economic indicators of the Mining and Quarrying subsector in the South-Eastern region in the period 2018 ÷ 2023

South-Eastern Region	2018	2019	2020	2021	2022	2023
Number of enterprises, num.	57	60	61	59	56	57
Wages and salaries, BGN'000	188703	185637	184512	205638	232505	264429
Employed persons, num.	8155	8212	8098	7869	7555	7528
Wages and salaries per employee, BGN'000/employed person	23.140	22.606	22.785	26.133	30.775	35.126

Source: according to INFOSTAT data, compiled by the authors. https://infostat.nsi.bg/infostat/pages/reports/result.jsf?x_2=231
https://infostat.nsi.bg/infostat/pages/reports/result.jsf?x_2=2165

The data for the South-Eastern region, presented in Table 7, show a slight variation in the number of enterprises in the region.

Their number in 2023 remained at the level of 2018 and the number of employed persons decreased by 7.69%. The wages

and salaries during the period increased by 40.13%. The wages and salaries per employee increased by 51.80%. In the South-Eastern statistical region, the remuneration paid in terms of amount is in third place for the branch and the highest for the statistical region.

Regional distribution of Mining and Quarrying enterprises in Bulgaria

Fig. 1 presents the regional distribution of the number of Mining and Quarrying enterprises by statistical regions. The figure is built according to data from Table 2 to Table 7.

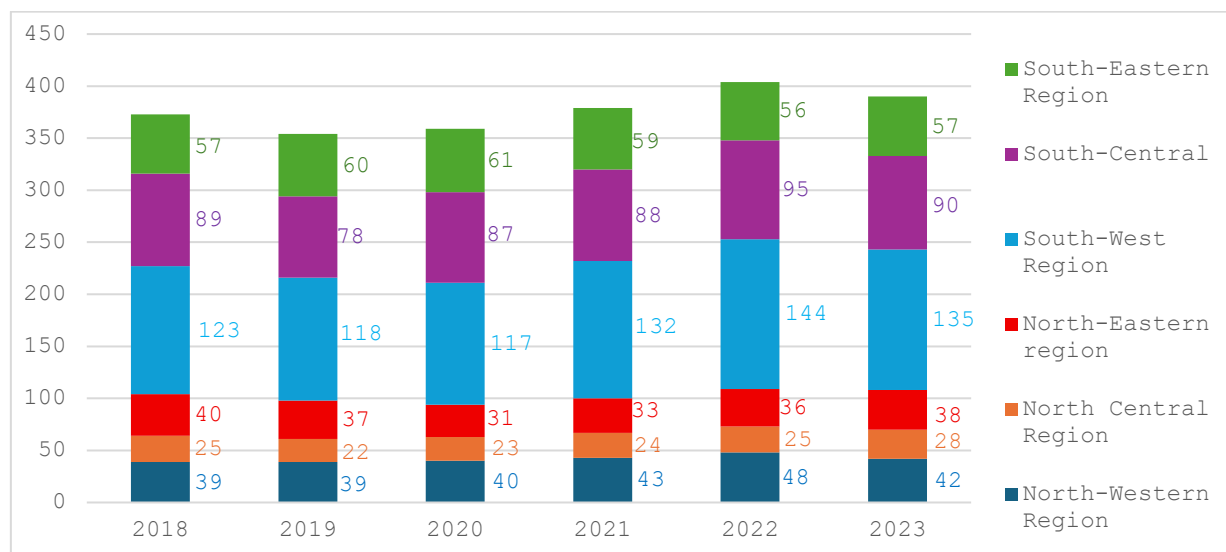


Fig. 1. Regional distribution of Mining and Quarrying enterprises by statistical regions

The data in Fig. 1 shows that one-third of the Mining and Quarrying enterprises are concentrated in the South-Western region, followed by the Southern Central, the South-Eastern, the North-Western, the North-Eastern, and the Northern Central.

Fig. 2 presents the regional distribution of the employed persons in the Mining and Quarrying subsector by statistical regions by years. The figure is built according to data from Table 2 to Table 7.

Regional distribution of employed persons in the Mining and Quarrying industry

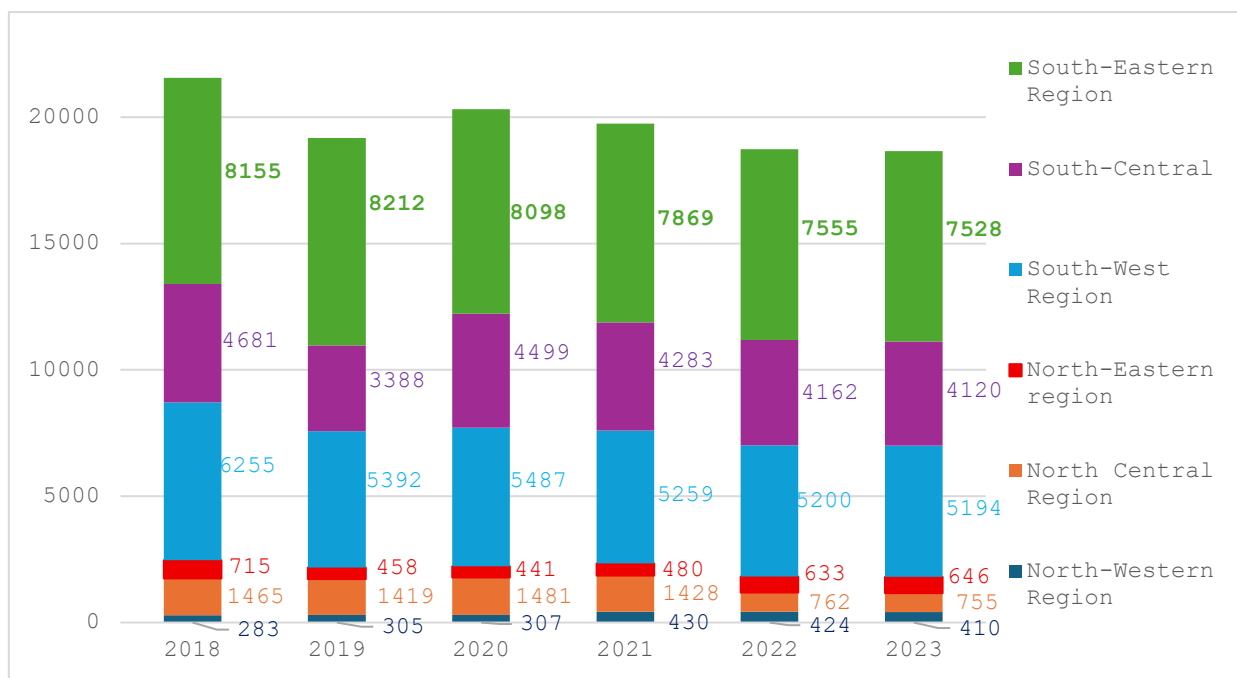


Fig. 2. Regional distribution of the employed in the Mining and Quarrying subsector by periods

The data in Fig. 3 show the largest number of employed persons from the Mining and Quarrying subsector is concentrated in the South-Eastern region, followed by the

Northern Central, the Southern Central, the North-Eastern, the Northern Central, and the North-Western.

Regional distribution of labour costs in the Mining and Quarrying industry

In Fig. 3, the change in the wages and salaries per employee of the Mining and Quarrying subsector by statistical regions is presented. The figure is built according to data from Table 2 to Table 7.

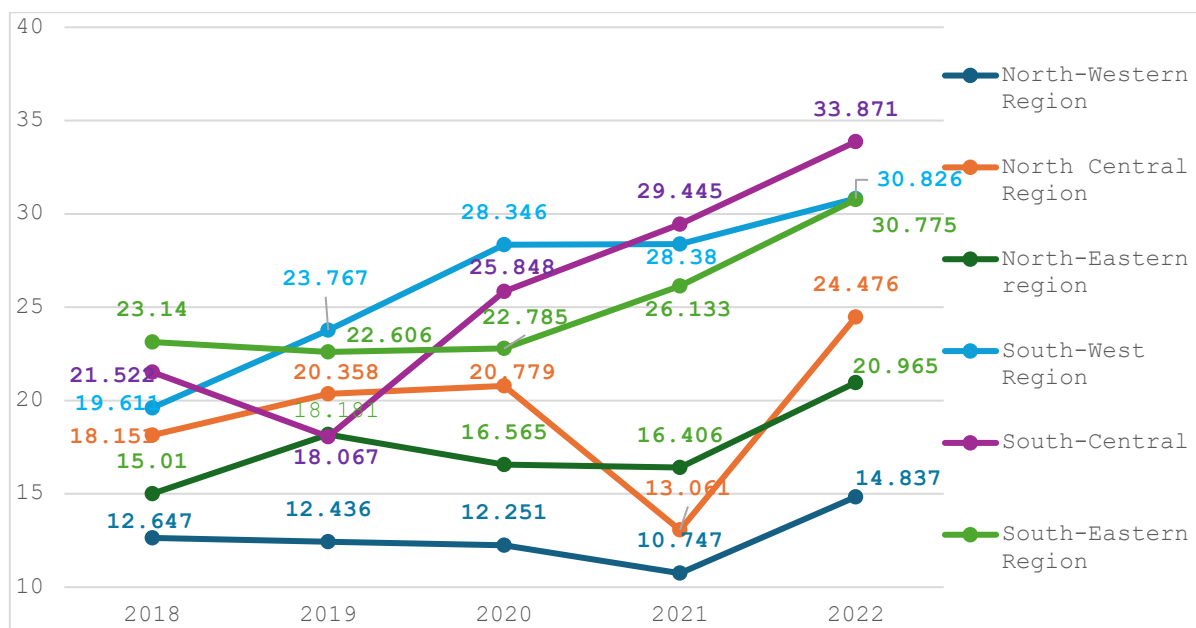


Fig. 3. Amendment of Wages and salaries per employee of the Mining and Quarrying subsector by statistical regions

The change in the annual wages and salaries per employee, presented in Fig. 3, shows some dynamics in the individual years. The highest wages and salaries per employee were made in the Southern Central region, followed by the South-Western, the South-Eastern, the Northern Central, the North-East and North-Western.

Fig. 4 presents the indicator gross annual salary by economic activities in Bulgaria in 2023, except for: unidentified activities of households as employers and undifferentiated activities of households in the production of goods and services for self-consumption (T); activities of extraterritorial organisations and services (U). The figure was generated using NSI data.

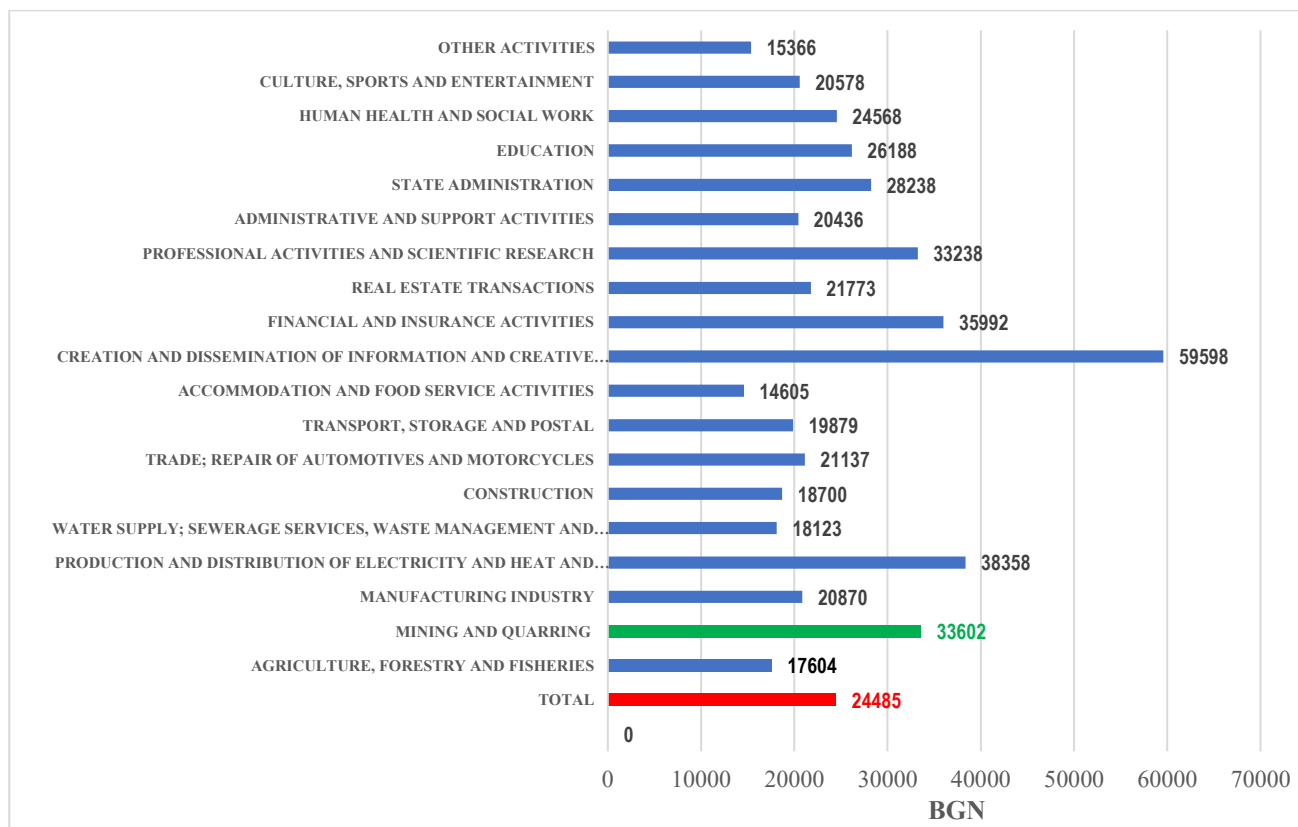


Fig. 4. Gross annual salary by economic activities in Bulgaria in 2023

The source for generating the Fig. 4 is based on NSI data, 2026, https://infostat.nsi.bg/infostat/pages/reports/query.jsf?x_2=567 and https://infostat.nsi.bg/infostat/pages/reports/query.jsf?x_2=2246.

From Fig. 4 it is evident that the average gross annual salary in the Mining and Quarrying subsector in 2023 was higher than the national average by BGN 9117, or by 37.24%. In 2023, the mining industry moved from third to fourth place among the highest-paid economic activities in the country. In 2023, it increased by BGN 4089, or by 13.85%; nevertheless it was also overtaken by economic activity "Financial and insurance activities".

Conclusion

The comparative analysis shows that the Bulgarian mining industry has a significant impact on the socio-economic development and well-being of regions and municipalities. It provides high labour incomes to the population of the regions. It provides livelihood for another 120 000 persons employed in ancillary activities. In a large part of the municipalities, the mining industry is the main employer, insurer, and taxpayer and supports local municipalities with the implementation of several infrastructure, social, donation and charitable programs and projects.

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