

# Age management in the mining industry

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**Abstract**

The article explores how the lifecycle of mining companies impacts staff turnover and the workforce, with a particular focus on the potential role of age management. Content analysis of several companies' internal and publicly available documents provided the necessary data, in particular with regard to the micro-environment of the company, some of which are under threat of bankruptcy. The findings suggest that the potential failure of such companies has a significant effect on staff turnover, requiring the implementation of an effective age management strategy to resolve the resulting problems. At the same time, and in parallel to the aforementioned, the current conflict in Ukraine is having a significant impact on the mining industry and state energy policies. Many (open-cast) mines were reopened or given a stay of execution, with all the implications this has. The article is limited by the fact that it lacks sufficient data on enough mining companies that are facing bankruptcy and have restructured on the basis of effective age management.

**Keywords**

Mining companies, corporate lifecycle, workforce, age management, restructuring



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## Introduction

The mining industry is teetering on the edge of an economic boom and crisis. Although fossil fuels are still widely used across manufacturing sectors, many organisations are increasingly looking for alternative sources of energy. Strategic planning and implementation of innovations ensure corporate competitiveness and sustainability (Ershavova et al., 2019; Šafránková et al., 2020). Effective policy-making is essential for companies to operate in the mining industry, especially when the demand to cut down on coal use is rising (Altari et al., 2021). A large influx of people into cities requires a sustainable energy policy, obliging European municipalities to reduce carbon emissions and fossil fuel consumption (Czupich et al., 2022). Reasonable alternatives include hydrogen and biodiesel from algae, yet these resources cannot compete with the prices of fuels currently in use (Maroušek et al., 2022). Vochozka et al. (2020) argue that oil is an essential commodity for goods and energy production. The Covid-19 pandemic made the mining industry a vital sector for economic growth, providing the materials necessary for healthy infrastructure development (Jain, 2021). Despite the high income the industry generates, the business of extracting coal and other fossil fuels will come to an end. The resulting closure of coal mines will leave hundreds of people unemployed, which will require society to consider where their future employment lies. The coal sector predominantly involves private companies, which have failed in the public arena to stimulate an interest in improving the infrastructure and modernising the workforce to ensure future productivity (Parida & Madheswaran, 2021). Although the industry has partly integrated Corporate Social Responsibility (CSR), its function is purely informative. Making use of CSR to its fullest extent would generate more public interest (Buchanan & Marques, 2018; Phiri & Mantzari, 2018).

The Covid crisis has led to a sharp upturn in the prices of non-renewable resources, industrial processing and final products (Bartoš et al., 2022). The corporate lifecycle depends on the value added created for the majority and minority shareholders, accounting data and critical business events (Bartoš et al., 2021). An example of the latter is the current unstable socio-economic and (geo)political situation, which, while delaying industrial reform, is changing perceptions of miners, who are now viewed as precious social capital. In embodying psychological, physiological, moral, ethical, economic and other traits, miners currently hold all the aces in terms of social adaptation (Gavurova et al., 2022; Kelemen et al., 2022). Mining companies should focus on reviving their social capital, completely overhauling social, material and psychological aspects of the mining sector and stimulating its employees likewise (Klokar et al., 2020; Skýpalová et al., 2021). Stakeholders' knowledge varies according to their socio-demographic characteristics, experiences and awareness of the industry. Perceiving mining as a vital asset ensures its sustainability. After all, investment in commodities is an excellent opportunity for increasing corporate asset value (Svobodová et al., 2019). This daunting task involves dealing with global climatic changes and geopolitical tensions, including financing electricity produced from biogas and weakening delayed socio-economic and environmental impacts (Rowland et al., 2021). These practices severely harm soil, endangering its production (Skapa & Vochozka, 2020).

The mining industry is in a tight spot, heading towards permanent closure. Therefore, employers should find equal opportunities for employees throughout all age categories, using age management to counter age discrimination. Effective age management solves demographic issues by taking into consideration the expertise and education of employees of all ages. Workers appreciate pleasant working environments that unlock their potential and skills. Effective age management can deliver a competitive advantage since the effective use of all age groups helps achieve corporate goals (Urbancová et al., 2021). Predictable socio-demographic changes and unpredictable labour market trends will drive away many managers and specialists, especially in the mining industry. Companies should therefore explore the potential of young and middle-aged workers, who are generally thought not to hold much promise (Joniakova et al., 2015). Many organisations apply pre-planned processes, using key performance indicators to ensure certainty. These metrics are highly applicable in large companies, providing certainty in individual mining areas (Kotel et al., 2018). Although age management often involves only soft elements, companies appreciate its favourable impact on corporate prosperity (Vraňáková, Babelová & Chlpeková, 2021).

Adhering to the principles of age management encourages intergenerational cooperation within companies. Increasing longevity generates an ageing workforce, making it hard for companies to adapt. Although older workers possess considerable expertise, companies do not fully utilise their professional skills (Tonelli et al., 2021). Age management rejects stereotyping workers according to their age. Soueid and Martins (2021) suggest that Agile Project Management increases productivity and helps determine priorities and requirements. Simple software enables effective interaction between team members, the undertaking and performance of tasks, and the introduction of innovations within the mining industry. Forming intergenerational teams may greatly encourage elderly workers, whose job opportunities dwindle with age (Sobolewska-Pniedzialek, 2020). Widyanti, Rajiani and Basuki (2021) cite the Covid-19 pandemic as the reason behind adjustments to management models. Despite the availability of widespread information to the contrary, the mining sector must ensure the increased productivity of its employees and foster innovations. A stressful mining environment requires psychological

insight and innovation in workers' behaviour. Such key competencies involve factors crucial to corporate competitiveness, which should be reflected in corporate social responsibility (Sun et al., 2021).

This article focuses on the lifecycle of a mining company and puts forward suggestions for an effective age management strategy for those companies under threat of closure.

Global trends means there is intense pressure on mines to close, leaving companies in various stages of their lifecycles, with the associated effects on their workforces and corporate structures. After all, most companies invest in human capital to give them a competitive edge in the labour market.

RQ1: How does the lifecycle of a mining company affect their workforce and corporate structure?

Efficient age management increases team productivity. Young workers are ambitious and full of enthusiasm, seeking improvement and perfection. On the other hand, older staff feel their strength declining, often caused by worsening health, deteriorating abilities or poor relationships, which are not beneficial to the company. Mining companies should therefore explore coherent strategies for implementing effective age management when terminating their business.

RQ2: What does an effective age management strategy look like for mining companies on the verge of bankruptcy?

### Literature Review

Age management is a term that encompasses global trends. Holistic and individual changes in human resource management have turned a multigenerational staff into a sustainable workforce, thereby supporting consistent performance. Vraňáková et al. (2021) focused on age management pillars, studying data from questionnaire surveys using paired comparison software, including the chi-square test. As prioritised by employees, the authors gained deep insight into age management in Slovakia. Urbancová et al. (2020) confirmed that the effective use of all age groups gives a considerable competitive advantage, ensuring and achieving a company's goals. Quantitative research and evaluation using descriptive and multidimensional statistics suggest that organisations should apply age management through various techniques. One of the effective methods of implementation is non-experimental quantitative correlation analysis using empirical data.

Although many employers think a company's staff should include all age groups, the reality is different (Belas et al., 2022; Bacik et al., 2020). Fisher et al. (2017) argue that a prolonged working age will increase the number of workers over 55 by 26% (US Bureau of Labour Statistics, 2013). Although older workers suffer from age discrimination the most, younger people often experience the same problem (Ziaran et al. 2021; Štefko et al., 2017). Pawera and Jančíková (2017) explored the link between age management in Slovakia and discrimination and job changes in the labour market. The authors synthesised data from 1,659 questionnaires and figures from the Slovak Statistical Office, revealing age as a decisive factor behind hiring candidates. Employers discriminate against people between 15 and 24 years of age on the grounds of their lack of experience and practice. The study recommends HR managers adopt effective headhunting devoid of any age partiality.

Using literary analysis of age management, Ciutiene and Railaite (2015) revealed a close interconnection of all HRM areas. The authors outlined effective methods, thereby defining stages, including self-evaluation, risk management and prevention. Ambarová and Zborovský (2019) emphasise transferring generational experience and knowledge. Elderly workers focus on self-realisation, compensating for missed opportunities and maintaining youth. Although occupational training may be rewarding, its costs often surmount the benefits. On the other hand, a multigenerational workforce ensures the sharing of personal and professional experiences, both cheaply and effectively. Human resource management should, therefore, focus on creating a friendly and stimulating environment for a multigenerational team.

Based on scientific literature and questionnaires, Joniaková and Blšťáková (2015) predicted there would be a lack of industry experts, blaming the imbalance between peoples' private and professional lives. Work-life balance motivates employees, increasing their commitment to work. Pak et al. (2019) analysed relevant literature on Strategy 105, acquiring data to identify the ability, motivation and opportunity to continue working. Grah et al. (2019) used inductive case studies in the fashion industry, analysing secondary data and doing in-depth interviews with managing directors. The authors found that factors including vitality, intrinsic motivation, responsiveness, life-long learning and positive emotions ensure an employee's prolonged stay in the labour market. Quantitative analysis of primary data and structured interviews enable the measurement of multigenerational cooperation and management, both of which have become essential determinants in all organisations. Such studies focused on the motivational factors behind the persistence of workers over 50 years of age in the market until their retirement or even longer have shown that an employee's internal motivation and lifelong learning are crucial aspects for them doing so.

Physically and mentally healthy human capital will guarantee the mining industry's success. Good quality human capital requires a close relationship between all age groups, thereby increasing corporate production capacity. Physical effort in the modern mining industry should give way to intellectual abilities based on personality traits and education. Thasi and Van der Walt (2019) analysed the workforce in mining companies,

revealing that all 188 workers suffered from extreme stress due to their physically and mentally demanding working conditions. In response, the mining sector should promote employee welfare according to the needs of individual age categories. Mikhalchenko and Seredkiny (2020) explored the implementation of educational phases using the Quality Function Deployment method, monitoring the quality of human capital in the sector. Fernandez-Stark et al. (2019) examined operational data, emphasising the interconnection of age management and gender groups. Despite the high level of mechanisation and automation in the mining industry, women do not hold many positions, not even within the administration. Women currently represent only about 8% of the workforce, showing a downward trend. Calzavara et al. (2019) focused on those traits of older workers that come in useful when performing physically or mentally challenging tasks. The authors relied on available literature on the current state of staffing in the sector. Rašticová et al. (2019) analysed the economic situation, health condition, age and gender of older workers in specific countries. Large-scale digitisation within the corporate sphere is known to affect the number of people employed throughout all industrial sectors, with the lack of digital and robotic competencies among older staff proving particularly significant. Managers must therefore invest in young as well as older employees (Pan et al., 2022; Škare et al., 2022).

Using a questionnaire survey, Hlatká et al. (2021) acquired data to which they applied the Work Ability Index method to analyse the abilities of workers across age categories. This age management technique combines work performance and personal lifecycles to improve the rational planning of work life. The results yielded from the data suggested that workers were satisfied with their working conditions. Tonelli et al. (2019) conducted a quantitative and descriptive study, which revealed that companies cannot fully adapt to the increasing age of employees. Unfortunately, and despite worldwide trends, when the issue of age management is raised, it still holds little interest with regard to choosing and maintaining a company's workforce.

Global climate change is pushing countries to stop extracting lignite for thermal energy generation (Qin et al., 2022; Lu et al., 2021; Zeng et al., 2021). As a result, coal mining in the Czech Republic is expected to experience severe cutbacks within the next 11-15 years. Although the Coal Commission of the Czech Republic has recommended terminating coal extraction by 2038, the Czech government is keen to speed up this process and has suggested doing so by 2033 at the latest. However, the current conflict in Ukraine and the unanticipated energy inflation this has unleashed may lead to a rapid expansion of coal mining. World Meter (2022), which provides real-time world statistics, indicates that globally there are 403 years worth of coal reserves, which suggests that mining companies could focus on recultivation to stay relevant and competitive. This could be seen as an appropriate response to the fact that Europe, having built nearly 20,000 ecological and profitable biogas stations, intends to abandon fossil fuel production (Škarpa, 2019). Within this context, microeconomic models have been proven to help companies boost performance and effectiveness on the basis of detailed production planning and the exploration of cooperation or competition opportunities (Škarpa, 2018). The application of such microeconomic models could therefore help companies survive the current global crises, which not only spans energy inflation, climate change, wage rises and ageing infrastructure but also the enormous financial pressures triggered by the Covid-19 pandemic and the current war in Ukraine (Yakymova et al., 2022).

The literature review findings prove that qualitative and quantitative analyses constitute an efficient data collection method for corporate education and age management.

We classified the analysed data according to specific issues. The quantitative content analysis involved inputs for answering RQ1 and identifying the corporate lifecycle. The macro-environment survey suggested the need for corporate restructuring, thereby providing the answer to RQ2, with no clear correlation between the company's sustainability and its economic value added. Corporate sustainability includes environmental, social, governance and economic dimensions, with a distinct line drawn between economic value added on the one side and environmental, social and governance factors on the other (Pavláková & Dočekalová, 2022).

## Materials and Methods

Our survey involved the company *Sokolovská uhelná, právní nástupce, a.s.*, which is a mining company based in the Karlovarský Region which employs a substantial workforce in the area. Although the company is trying to adapt to massive industrial change, electric energy and lignite remain the primary commodities the company distributes and profits. It currently extracts coal from two mines, namely Jiří in Vintřov and Družba in Nové Sedlo, with reserves rapidly depleting. The mined coal meets customers' specifications in terms of size, sulphur and water content, and other properties. In addition, the company refines and utilises more than half of the mined coal (Documents - Sokolovská uhelná, 2020).

The content analysis of *Sokolovská uhelná* was divided into two parts. The first part encompassed the company's own documents, annual reports, income statements from 2016 to 2020, and publicly available data from the Ministry of Labour and Social Affairs and the Labour Office of the Czech Republic. The analysis involved mapping the data lifted from the aforementioned sources to determine the company's corporate lifecycle. Archive material contained information on, for example, the company's age, quantities of coal

extracted, reserves and the deadline for closure. We then sought to quantify the corporate lifecycle by conducting an analysis of the annual average number of employees and income after taxation (RQ1).

The second part sought to determine whether there is a coherent strategy for age management in the mining industry. The data collection involved the same method as for RQ1, i.e. content analysis of companies that went bankrupt and closed their business. The survey encompassed in-house documents and publicly available data on the maintenance, retention, retraining and use of the workforce. The working assumption was that the corporate macro environment would indicate effective techniques for staff restructuring and that the qualitative analysis would indicate an efficient approach to age management for companies on the verge of bankruptcy, thereby offering solutions to companies in the same situation (RQ2).

## Results

**The average number of employees.** *Sokolovská uhelná* is part of the SUAS Group, which provides employment to approximately 3,500 people on average every year (see Figure 1). Of these employees, a substantial number work for *Sokolovská uhelná* (marked in red), with the remainder employed in the Group's subsidiaries (marked in blue). The in-house income statements revealed no significant staff turnover during the analysed period, with new daughter companies potentially creating job opportunities for current workers when the company finally announces its shutdown.

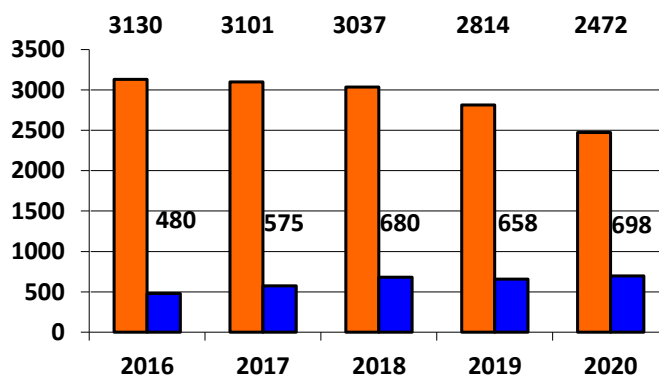


Fig. 1. Workforce breakdown and development in the period 2016-2020

In 2016, the Group employed 3,610 people on average, of which 3,130 were employed by *Sokolovská uhelná*. This year, the company's personnel department implemented and optimised its activities, which include instrumental work for newly opened industrial zones in Citice. The new manufacturing plants will create suitable job vacancies now and in the future, securing staff mobility and extending and increasing their knowledge.

Although the Group offered new job opportunities in 2017, overall staff levels remained almost the same as in 2016, with only a slight increase to 3,676 employees, of which 3,101 at *Sokolovská uhelná*. The personnel department blamed the staff decrease at *Sokolovská uhelná* on a lack of suitable candidates for vacant posts, which was caused by increased staff turnover. The year 2018 was also marked by a reduction in the working population, with many people retiring from working life completely. An unemployment rate of 2.93% puts even greater pressure on the qualified workforce. The year 2019 proved to be no better, with the unemployment rate in the Karlovarský Region dropping to 2.74%, indicating a profound decline in the available working population. The Group employed 3,472 workers, of which 2,814 in *Sokolovská uhelná*. The following year, the Group had to make critical staff cuts due to severe cutbacks in production. The Group laid off 741 workers, raising the local unemployment rate to 5.1%, indicating above-average values. Many people retired, with the rate eventually peaking at 2.93%. In 2020, the Group employed 3,170 people, of which 2,472 in *Sokolovská uhelná* and 698 in subsidiaries.

**Sales.** The corporate lifecycle depends on annual yields and the prospect of further extraction. The Czech Republic ranked 18th worldwide in 2016, with estimated coal reserves of 4 billion tonnes. At current consumption levels, experts predict that supplies could last 81 years (World Meter, 2022). In 2016, *Sokolovská uhelná* produced about 7.6 million tonnes of lignite, with modest declines in subsequent years. In 2019, output fell to 6 million tonnes, reflecting inflated emissions limits that made the company pour CZK 1.4 billion into the national budget. 2020 saw a slump in lignite production to 4.6 million tonnes, causing massive layoffs. The following figures illustrate the dramatic cuts in coal output and the impact thereof.

*Sokolovská uhelná* extracts lignite mainly for its own needs and external customers. The decline in coal production also reflects the amount sold and generated sales. In 2016, the company sold 3.8 million tonnes of

lignite (marked in blue), which equates to CZK 1.8 billion in sales, with a further CZK 0.2 billion from pulverised lignite dust. Total sales from products, goods and services were CZK 6.2 billion. The sales from products and services peaked at CZK 6.2 billion in 2017, including solid fuels for CZK 2.2 billion and lignite for CZK 2 billion. The company sold 3.2 million tonnes of lignite from a total yield of 6.9 million tonnes. The company made a profit of CZK 2 billion in 2018, selling 3.2 million tonnes of the commodity. In 2019, sales topped CZK 6.7 billion, trading 2.5 million tonnes of lignite for CZK 1.6 billion. In the following year, the enterprise sold 2.1 million tonnes of lignite, with sales of CZK 1.4 billion.

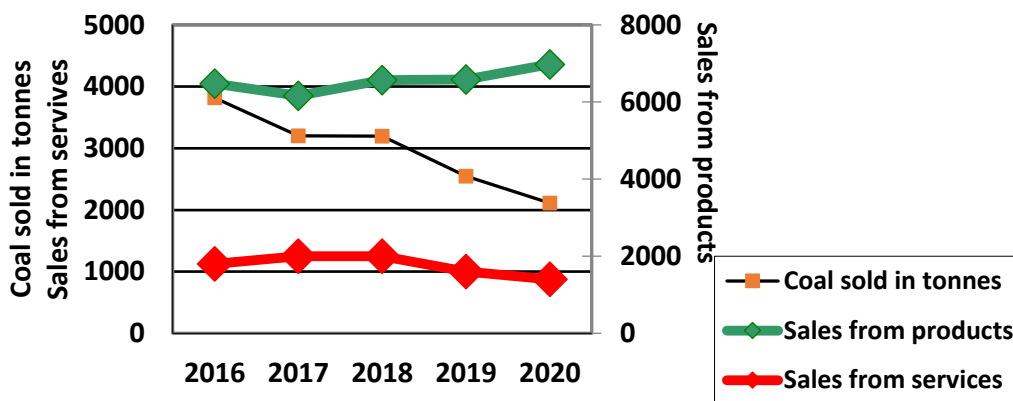


Fig. 2: Coal sold (in k tonnes) and sales from products and services

*Sokolovská uhelná* published an income of CZK 1.1 billion in its financial statement for 2016. Since then, profits have dwindled. In 2017, income after taxation equalled CZK 527 million, dramatically falling to CZK 252 million in 2018. The year 2019 saw the closure of coal pits, resulting in huge layoffs and a loss of CZK 300 million. The company got back into the black in 2020, generating a profit of CZK 105 million. The company's investments cover building maintenance for coal mine phase-out, eco-buildings and boosting the operation of the processing plant. A dump site for municipal waste processing in the Karlovarský Region was a vital investment in 2016, as well as the desulphurisation and modernisation of a heating plant. The investment activities involved the subsidiaries of the Group and amounted to CZK 1.4 billion. Business ventures dropped to CZK 957 million in 2017. The company also finalised work on a waste treatment site in the Karlovarský Region, as well as the construction of Silvestr, a new industrial zone, thereby securing enough job vacancies for the future. In 2018, the company invested in renewing gas turbines, extending belt conveyers and eliminating dust and noise pollution. The following year marked no significant changes in investment. In 2020, the company financed the operation of the Vřesová processing plant, reacting to sharp production cuts and maintenance at the gasworks. The Tisová power plant saw the installation of additional technological equipment for reducing NO<sub>x</sub>, CO and SO<sub>x</sub> emissions. Total investment activity in 2020 amounted to CZK 139 million.

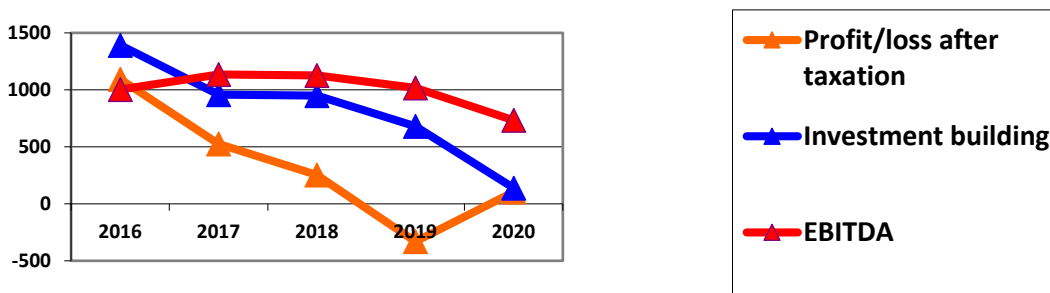


Fig. 3: Income ratios for the period 2016-2020

The annual income statements revealed the company's EBITDA (earnings before interest, taxes, depreciation and amortisation) between 2016 and 2020, which enabled comparisons to be drawn with other companies in the sector. Such statements ignore financial and capital costs, which make them suitable for assessing the company's ability to generate profit only from selling goods and services. The company achieved its highest gross operating profit and performance in 2018, at CZK 1.12 billion. In 2020, the EBITDA rates plummeted to CZK 730 million, reflecting the severe staff cuts' profound effect on corporate income and lifecycle.

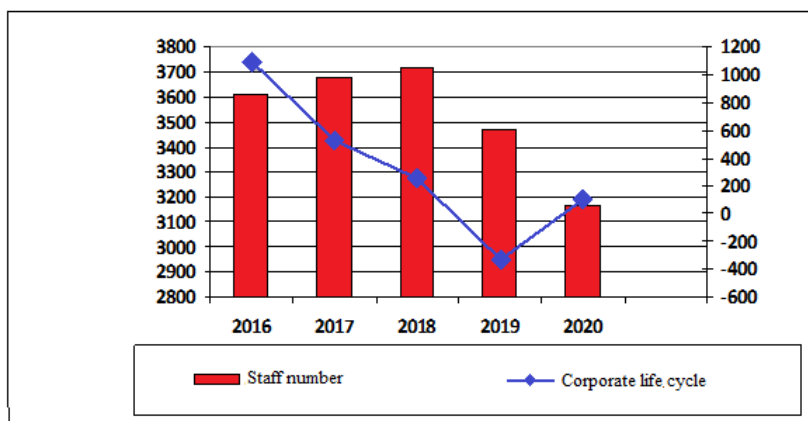


Fig. 4: Corporate life cycle and staff numbers

**Mining industry restructuring.** Restructuring processes have spread throughout all companies within the mining industry. The company OKD has recently undergone a massive overhaul, creating a restructuring department in reaction to production cuts within the sector. This specialised department is seeking to ensure sustainable production by reducing the costs and expenses of sustainable extraction while sticking to established production schedules (<https://ihli.cz/restrukturalizace-v-okd/>, 2022). Mine restructuring must observe the rules and regulations of the registered mining administration. The restructuring department at OKD, therefore, involves project specialists and experts in the field of legislation, mine surveying and operations, as well as corporate investment. The department is responsible for locations affected by mining activities, alleviating the devastating impacts thereof. The department provides the board of directors with an alternative scheme for ensuring continued operations in different locations, thereby reducing overall costs by a third. These cost cuts involve adjustments in energy consumption at the mine surface and modified water pumping operations.

Within the context of restructuring, OKD has developed a number of programmes with different goals. The first is an incentive programme, which offers grants to employees who are willing to move to the Karvinské mines after those in Ostrava close. The scheme promises steady jobs for several years. Alternatively, and upon request, employees can remain in the locations that will close or have closed, overseeing the production cuts and securing safety. Workers seeking voluntary retirement will also receive adequate severance packages through negotiations with trade unions.

The second programme involves retraining courses for employees of closed mines or those that will close. The programme is called 'Nová šichta' ('New Shift'). It seeks to help former staff develop their skills and abilities and find new jobs. The workers also acquire more knowledge and insight into the regional labour market, track job vacancies or get help in setting themselves up in trades. The Labour Office of the Czech Republic contributes to organising the retraining courses.

As part of the third programme, OKD cooperates with the High School of Technology and Services Karvina, launching appropriate technical education programmes. OKD employees can extend their education at VSB - the Technical University of Ostrava, through courses, training sessions and seminars tailored to the needs of the organisation.

Beyond this, in 2017, companies in the Moravian-Silesian, Ústecký and Karlovarský Regions applied for a restructuring grant. These regions suffered badly as a result of mine closures because the sector was one of the biggest employers in the local labour market. The State subsequently awarded a restructuring grant of CZK 42 billion, which was to be shared across other afflicted regions, too. In the same year, the government assigned mining companies an additional grant of CZK 6.1 billion. However, in anticipation of forthcoming mine closures, the government raised this allowance in 2018 to CZK 11.4 billion and in 2019 to CZK 25 billion.

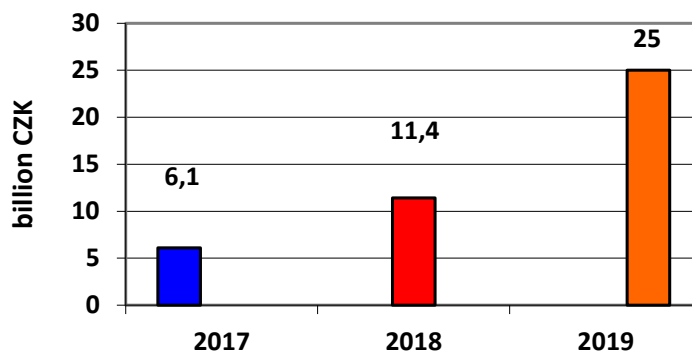


Fig.5: The value of grants for the period 2017-2019 (in CZK billions)

### Discussion

RQ1: How does the life cycle of a mining company affect their workforce and corporate structure?

Despite ranking third in the coal mining industry of the Czech Republic, the Karlovarský Region suffers from adverse labour market conditions. Although *Sokolovská uhelná* contributes greatly to regional employment, employing 3,500 people on average, the company continues to downsize. Knowing the closing date is vital for determining the life cycle of any company operating in the mining sector in the Czech Republic. The unanticipated war in Ukraine and the political repercussions of not sourcing alternative resources from external contractors have resulted in ongoing negotiations about whether to maintain the agreed schedule of mine closures or to postpone such moves as a backup for emergencies.

The planned closure of the mine run by *Sokolovská uhelná* in 2033 will undoubtedly have huge financial repercussions for the company, with bankruptcy a real possibility. This means the company must explore new opportunities. The period analysed was marked by severe production cuts, mine closures, staff downsizing and a dramatic slump in sales. In 2019, the company incurred a loss of CZK 300 million. Under crisis conditions, the company resorted to massive job cuts. Although the company returned to the black in 2020, the potential threat of bankruptcy adversely affected the workforce, with the company laying off over 700 employees. This raised the unemployment rate in the Karlovarský Region to 5.1%. Given the drastic organisational changes required, the company got rid of many workers of retirement age. The high risks related to the mining industry mean that management must continuously try to improve staff morale, which hugely impacts their performance. Although mining companies are operating under the threat of bankruptcy, they contribute hugely to the gross national product (Kuranchie-Mensah & Amponsah-Tawiah, 2016).

Since the company has been continuously cutting staff, the Labour Office of the Czech Republic has offered ex-employees in the Karlovarský Region retraining courses to gain new qualifications and jobs. In 2021, the Labour Office found jobs for 120 workers as part of its outplacement project, which is funded by the European Social Fund. The state budget of the Czech Republic contributed to the programme through the Operational Programme "Employment", which helps people find jobs, acquire knowledge about labour law, and develop their soft skills. Adverse labour market conditions associated with the objective of developing a sustainable mining industry imposed specific requirements on human resource management, including strategic mining control and safety (Chen et al., 2022). Like in the coal mining industry, recent estimates predict copper reserves to last 25 - 60 years (Nováková et al., 2022).

RQ2: What does an effective age management strategy look like for mining companies on the verge of bankruptcy?

Mining companies in decline are heavily reliant on restructuring and the setting up and development of subsidiaries focused on multiple business activities. The industry must also soften its negative environmental impact by recultivating devastated landscapes and creatively using the unique reliefs and biotopes found at abandoned sites. Although such work is costly, it should also include relaxation zones for visitors.

As evidenced, multiple mining companies focus on retraining staff. As a result of attending courses organised by the local Labour Office, many ex-employees find employment in their original professions elsewhere or, if they are younger, gain a competitive advantage in the labour market. In contrast, older staff either take up jobs related to and in support of the production cuts, mine closures and securing safety. Alternatively, they simply retire early.

The companies concerned in this study hugely benefit from age management, providing threatened staff with retraining opportunities. Mining companies also seek cooperation with the local Labour Office, forming a support centre for job seekers and trainees. Employees over 50 years of age are a more difficult issue given their



advanced age and low work performance. These employees find it hard to retrain or get another job and prefer redeployment to a different mine.

Mining companies on the verge of bankruptcy greatly value loyal employees, who tend to be older. They, therefore, seek to lay off workers who can get a job more easily elsewhere, with many older staff reassigned to new positions in the restructured company that is the result of the new corporate strategy. Freshly hired, qualified staff can help workers over 50 years of age adapt to their new position. The unbeatable combination of experience and hard work is hugely beneficial to all companies.

Urbancová & Fejfarová (2017) suggest imposing preemptive measures before applying age management, including informing staff on ageing, adjusting working conditions for employees over 50 years of age, and raising awareness of ageism among younger workers. Attractive job perks and a healthy working environment also go a long way.

Workers over 50 years of age share their knowledge, skills and experience with the next generation, which is essential for a company's continued success. Effective age management involves educational support for older colleagues on age management, including managers and subordinate staff. Hlatká et al. (2021) emphasise age diversification and facilitation technologies. Adjusting working conditions for older and loyal employees will secure a large enough workforce, even in the event of downsizing.

Efficient age management also raises staff awareness of corporate autonomy, making workers more willing to understand and accept change (Garavaglio et al., 2021).

### Conclusions

The article explored the current life cycle phase of mining companies and its impact on staff, suggesting effective strategies for age management. The study also proposes methods for implementing such strategies in mining companies. Effective age management involves maintaining, training and retraining the workforce and sharpening their work skills.

The first research question concerned the difficulties of the business life cycle. The content analysis of in-house documents allowed us to determine the life cycle of the companies. Given the phasing out of the sector, the companies in question are facing the threat of bankruptcy. This phase in the life cycle of these businesses is seriously affecting the workforce, which is being subjected to massive downsizing, (early) retirements, poor staff retention, and people leaving after their contracts expire. Within this context, it is good that such companies, who are usually large regional employers, must notify their local Labour Office of mass redundancies in advance, giving them enough time to prepare accordingly.

The second research question explored the job opportunities available to current employees after business closures, suggesting that effective age management linked to corporate restructuring is the way forward. Effective age management heightens corporate awareness and encourages intergenerational social interaction resulting in knowledge, skills and experience sharing. The impending threat of bankruptcy requires companies to restructure, which involves fundamental business transformation and retraining permanent employees. Upon completing retraining and other courses, permanent staff can start taking up new jobs that match their expertise and skills. Older workers who are not interested in getting involved in the restructuring process should consider early retirement. Within this context, all these requisites must comply with the terms and conditions of collective labour agreements and agreements made with trade unions.

The article deals with a limited number of mining companies in the Czech Republic where age management is applied. The analysed companies are working on the basis of the impending termination of coal mining in the Czech Republic. Although the applied methods are valid for all companies that need to downsize or are at risk of going bankrupt, they are crucially important to employees specialising in mining activities because they face a particular competitive disadvantage in the labour market.

Our findings can contribute to managers of all companies that are in decline, helping them respond promptly to corporate transformation, offer loyal workers help, and solve problems through effective age management.

The article suggests a viable method for terminating employment under applicable terms and conditions, recommending effective age management to increase a company's productivity.

The paper also proposes comparing the remuneration of employees involved in retraining and corporate restructuring with the salaries of new workers in the subsidiaries. The research should also include age diversification and job perks mining companies offer to staff that are willing to retrain. The study could also be repeated after 2033, comparing the suggested solutions in this article with adopted practice and the results thereof.

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