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# The impact of corporate social responsibility on social acceptance as a determinant of the sustainable mineral extraction – Polish case study

#### Introduction

The Industrial Revolution was not only a powerful kick-start to technological advancement, but also significantly affected the natural environment. In the 1960s and 1970s, the public became much more aware of the state of the environment. This was the time when many environmental movements and organizations were established to prevent the negative impact of industry on the environment (such as The Environmental Protection Agency established in 1970; Greenpeace established in 1971; WWF established in 1961). There was also a shift in the approach to regulatory protection of the environment towards more comprehensive laws that would cover all aspects of such activities (Jedynak 2012). The Environmental Protection and Development Act of January 31, 1980 (Journal of Laws of 1980 No. 3,

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item 6, repealed), provided for the protection of all parts of the environment, while also introducing legal responsibility for their condition, and providing financial tools to support this (fees, penalties, funds). Now, when environmental aspects are regulated by law, more and more attention is being paid to the impact of minerals extraction on people. This is reflected in laws governing the involvement of local communities, e.g. in zoning procedures, environmental permits, and rehabilitation of degraded areas. Industry responds to the needs of the stakeholders by implementing policies to make up for the nuisances associated with mining (or industrial) operations. The growing sense of responsibility and the rising awareness of the impact businesses made on their environment have encouraged entrepreneurs to look for methods and tools to mitigate the adverse consequences of their operations. Many tools have been developed to implement, manage, and measure corporate social responsibility (CSR). The purpose of any CSR strategy is primarily to support sustainable growth, which also include social aspects. Sometimes, however, a CSR strategy serves as a way to improve the image of the company in the eyes of its stakeholders, which should not constitute the primary reason for its implementation.

The goal of this article is to explore whether, and – if so – to what degree, the use of a corporate social responsibility strategy influences the level of public approval for minerals extraction operations. The study examines a CSR strategy used by KGHM Polska Miedź SA – a Polish multinational company, a major copper and silver producer for more than 50 years. The studied population are people living in the area of Poland, where the company's copper mines and smelters operate. KGHM was chosen for this study because of the wide range of actions and financial measures the company uses each year for the benefit of its local communities. Moreover, the region of Lower Silesia, where the company operates, is rich in mineral resources, the extraction of which generates conflicts with the local community (Harjoto and Jo 2011). An important argument suggesting the need for research into ways of obtaining public approval for mining operations is the global demand for minerals, and metals in particular, or, more specifically, issues related to their extraction, which more and more often meet with social opposition.

#### 1. Definitions

Corporate Social Responsibility is one of the most significant terms used in relation to the social aspects of business operations (Carroll 2016; Harjoto and Jo 2011). Mining companies take a wide range of measures for people living next to their facilities to be able to benefit from their operations, and, consequently, to accept them. In more general terms, the goal of CSR is to create the image of a responsible company and a reliable business partner.

The literature provides many different definitions of corporate social responsibility. This is because the concept is hard to unambiguously define, as there are various management frameworks and business approaches which vary from one line of business to another.

Environmental, social, and economic issues as well, are characterized by a considerable variability, as a result of which businesses are required to constantly adjust their policies (Sheehy 2015). Bernatt (Bernatt 2009) defines CSR as a set of standards that describe the relationship between a business and its environment, with profit not being the only thing that matters anymore. Already back in the 1930s, Dodd (Dodd 1932) noticed that a company's stakeholders included not only its investors and employees, but also customers and society as a whole. The company should, therefore, behave like "a good neighbor", who respects the general rules of living in a community. Unfortunately, until the 1970s, businesses generally followed the principles defined by Friedman (Friedman 2007), stating that the only people to whom a business should be responsible are the company's investors, while business owners are the only ones to decide regarding what social projects to pursue and how much to spend on them. The World Bank describes corporate social responsibility as "the commitment of business to contribute to sustainable development-working with employees, their families, the local community and society at large to improve the quality of life, in ways that are both good for business and for social development" (Kwietniewska-Sobstyl and Żelazna-Blicharz 2014).

A term that describes the attitude of the public towards mining operations is social license to operate. For Prno and Slocombe (Prno and Slocombe 2012) a social license for a mining company exists when a mining project (or any other project) is seen as having the broad, ongoing approval and acceptance of society to conduct its activities. It is becoming as important to secure social support as it is to obtain legal permits (Cooney 2017; Boutilier and Thomson 2011). Through CSR policy, mining companies undertake various activities to support the local community, and SLO can be a measurable feedback.

## 2. CSR strategies in Polish mining companies and the level of public approval

The desire to minimize the negative impact on the environment and to build a positive corporate image encourages businesses to implement CSR strategies. However, since 2018, Poland has been bound by the guidelines of the European Directive (Directive 2014/95/EU), according to which the largest companies are obliged to report non-financial information (including policies applied to the environment and society). This makes CSR activities and reports voluntary only for smaller companies. There are indicators and business rankings to measure the effectiveness of CSR, and to show the stakeholders whether, and how, a company manages its relationship with the environment.

Polish mining companies use different CSR tools, such as Integrated Management System, Code of Ethics, Social dialogue and some aspects of the Global Compact and Global Reporting Initiative (Jarosławska-Sobór 2014). For instance, the three most popular instruments for CSR implementation, management and measurement used by Polish mining companies are as follows:

- ISO 26000, an international standard published in 2010, effective in Poland since 2012. It is not a standard in the technical sense. It provides some guidelines for business about corporate social responsibility. It seeks to organize and define the rules and methods associated with CSR (Jarosławska-Sobór 2014).
- SA 8000, a standard developed in 1997 by Social Accountability International in partnership with trade unions, NGOs, civic society organizations, and businesses. SA 8000 seeks to improve working conditions within companies by building on international human rights conventions. A company may describe its business as SA 8000-compliant only after successful certification. Even though the standard does not focus on the business environment, its use follows the CSR policy, e.g. by improving the corporate image and developing trust among customers (Kwietniewska-Sobstyl and Żelazna-Blicharz 2014).
- RESPECT Index, the first index in Poland to rank companies which follow CSR rules. Published since 2009, the ranking only covers Polish companies listed on the Warsaw Stock Exchange. In order to make its way to the ranking, a company needs to successfully go through a three-stage procedure. The first two stages are based on publicly available information, while the last involves a survey carried out among employees (Respect Index 2019; Jedynak 2012).

Table 1 shows Polish mining companies, which declare the use of CSR implementation and measurement instruments.

The use of ISO 26000 is voluntary and requires no certification. In practice, any company could declare that it follows its guidelines, without any consequences. With the Respect Index, it would seem that the three-step assessment procedure provides a comprehensive way to verify companies' strategies. However, businesses are tested on the basis of publicly

Table 1. Polish mining companies, which declare the use of CSR implementation and measurement instruments (as of Dec 2018)

Tabela 1.	Polskie spółki górnicze, które deklarują stosowanie narzędzi wdrażania i pomiaru CSR
	(stan na grudzień 2018)

Company	ISO 26000	Respect Index	SA 8000
Jastrzębska Spółka Węglowa SA (coal mining)	*	*	-
KGHM Polska Miedź SA (copper mining and production)	*	*	-
Lubelski Węgiel Bogdanka SA (coal mining)	*	*	-
PGE SA (power production)	*	*	_1
PGNIG SA (oil and gas exploration and production)	*	*	-

<sup>\*</sup> Company declares following the ISO 26000 guidelines/company is on the Respect Index list.

Source: own study.

Between 2001–2011 certificate was awarded to PGE Elektrownia Opole SA, but it was not extended (SAAS 2019).

available information about their CSR strategies, and the final stage is a survey conducted among their management members and, as such, is not unbiased. What would provide real insights is a survey among stakeholders, including local communities. The ranking, therefore, fails to answer the question 'Which businesses maintain the best relationship with their stakeholders?', because this is a subjective assessment.

When we look at the CSR tools that are used, we can observe that their effectiveness is usually assessed by business owners themselves. They do not evaluate the actual impact on the possible increase in public approval, or attitudes of the local community towards the company.

In order to successfully carry out all projects for the local community, it seems necessary to first analyze the socio-economic situation, and then use this input to adjust the company's actions to the needs and expectations of its stakeholders. But even if such analyses are performed, this usually takes place only after the CSR strategy is implemented. What is verified is the impact of the implemented strategy (usually in the form of financial expenditures) on the community. Instead, it would be more beneficial to first examine the social setting and use this knowledge to develop and implement a strategy.

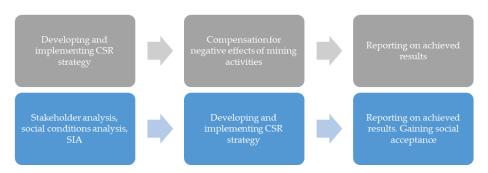


Fig. 1. Commonly used (grey) and preferred (blue) scheme of developing and implementing the CSR strategy Source: own study

Rys. 1. Zazwyczaj stosowany (szary) i pożądany (niebieski) schemat opracowywania i wdrażania strategii CSR

KGHM had already carried out activities in the area of social responsibility (i.a. through the Polska Miedź Foundation established in 2003), however, the official CSR strategy started to be developed in 2011. Since then, the company regularly reports on its CSR activities and every year allocates more and more funds to support the local community (Hop and Kudełko 2013). The objectives concerning the social aspect contained in the following strategies of KGHM did not differ significantly from each other. However, the first strategy did not include the local community among the key stakeholders (KGHM CSR Report 2012; KGHM CSR Strategy 2014). The integrated report by KGHM Polska Miedź shows that the primary

objective behind a CSR strategy is "to strengthen the position of a stable, growing and global leader that takes care of the common good". The emphasis is placed here on protecting and building up the good corporate reputation, while highlighting the benefits for the local community. What is missing is the element found in CSR definitions corresponding to the intention to improve this relationship or taking this cooperation to the next level. Nevertheless, KGHM is clearly a leader in Poland (not only among mining companies) in terms of initiatives for, and the amount of money it allocates to support, local communities and regions.

In 2018 alone, KGHM Polska Miedź SA successfully completed 469 projects for a total amount exceeding EUR 4 million (in areas such as health and security, sports and recreation, science and education, as well as culture and tradition), and made 463 donations corresponding to more than EUR 4 million (both in the Lower Silesia and in Poland in general). In addition, the KGHM Foundation paid more than EUR 100,000 euros to cover the cost of holidays for children from the Legnica—Głogów Copper Region. The company is also involved in some nationwide projects. As part of the Sponsoring program, in 2018 KGHM donated almost EUR 7 million for science, sports, and culture (Sustainable Report... 2018).

#### 3. Materials and methods

The study uses the method for the assessment of public approval for a mining project proposed by Boutilier and Thomson (Boutilier and Thomson 2011) and supported by Zhang and Moffat (Moffat and Zhang 2014; Zhang and Moffat 2015). The authors expanded the study by the addition of a third section to compare the factors that might influence public approval for mining activities conducted by KGHM Polska Miedź. In the first two parts of the study, respondents completed questionnaires by assessing sets of statements. The collected data was then used for statistical analysis to identify the level of public approval for a mining project, and to determine the relationships between different impact factors. This study was conducted using a questionnaire, which was published on websites associated with the Legnica-Głogów Copper Basin, and distributed in printed form during a local-government conference organized by Employers' Organization of Polish Copper. The survey was described as a study of the attitudes among local communities towards the CSR policy followed by KGHM Polska Miedź SA The study involved 78 respondents, including 36 men (46.2%) and 42 women (53.8%). Respondents were aged 18 to 72, with 20.8% being represented by 18–24 year-olds, 31.3% by 25–34 year-olds, 50.0% by 35–44 year-olds, 27.1% by 45–54 year-olds, 14.6% by 55-64 year-olds, and 16.7% by people aged 65+. Most of the people who participated in the survey lives in the area where KGHM Polska Miedź SA operates its mining or manufacturing business (84.6%). Some people were employed with the company (11.5%). The greatest number of respondents comes from Polkowice (30.8%), Lubin (21.8%) or Legnica (10.3%). The questionnaire consisted of three sections. The first section included 12 statements, as proposed by Boutilier and Thomson (2011), which were assessed by respondents using a five-level Likert scale (where: 1 - strongly disagree; 5 - strongly agree). The statements

referred i.a. to the quality of contact with the company, its contribution to the socio-economic development of the region and satisfaction with the relationship between respondents and the company. Four factors (institutionalized trust, socio-political legitimacy, interactional trust, economic legitimacy) were measured by the statements.

Section two, based on studies by Zhang and Moffat (Moffat and Zhang 2014; Zhang and Moffat 2015), had 19 statements (Table 2) which were to be assessed using a seven-level Likert scale (where: 1 – strongly disagree; 7 – strongly agree). To represent multi-item variables, mean values were used (each item was represented by the arithmetic mean of assessments for several statements).

Table 2. Set of 19 statements used to measure social acceptance

Tabela 2. Zbiór 19 stwierdzeń służących do pomiaru akceptacji społecznej

Factor	Statement
	The average Pole is wealthier because of the mining industry
General financial benefit	My family has benefited from mining
	I am better off financially because of the mining boom
	Mining has helped improve transport infrastructure (such as roads) in our region
Improvement in infrastructure	Mining has helped improve social, cultural and sport infrastructure in our region
	Mining has helped improve communications and information technology infrastructure in our region
	Mining provides opportunities for regional employment and training
Employment	Mining creates jobs for Poles
and community development	Mining provides employment and training opportunities to local community
	Mining has positive effects on local communities in Poland
Increased	Housing is more expensive in my area as a consequence of mining activity
living cost	The cost of living, excluding housing, has increased in my area as a consequence of mining
Impact on other	Mining negatively impacts on the tourism sectors
industries	Mining negatively impacts on the manufacturing sector (understood as competition for other industries (e.g. higher operating costs, lack of workforce))
	Mining has negative impacts on the environment
Environmental costs	Mining contributes to climate change
	Mining impacts negatively on water quality (ground water and surface water)
Balance of benefits over costs of mining	Considering the benefits and costs associated with mining, it is worthwhile to pursue mining in Poland
Acceptance of mining	I accept mining activity in my region

Source: Zhang and Moffat 2015.

Section three compared the four factors that were considered to have adverse effects on how mining operations are perceived (economic, environmental, sentimental, and spatial factors). The study relies on the Analytic Hierarchy Process (AHP), a multi-criterion method designed to solve decision making problems. It constitutes an attempt to preliminarily verify how useful that method could be for studying factors that impact public approval for mining operations. The study used some AHP elements where respondents rank the negative factors

Table 3. The scale of relative importance

Tabela 3. Skala ocen porównawczych

Intensity of Relative Importance	Definition
1	Equal importance
3	Moderate importance of one over another
5	Essential or strong importance
7	Demonstrated importance
9	Absolute importance
2, 4, 6, 8	Intermediate values between the two adjacent judgments
$\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{1}{6}, \frac{1}{7}, \frac{1}{8}, \frac{1}{9}$	If an activity has one of the above numbers assigned to it when compared with a second activity, then the second activity has the reciprocal value when compared with the first

Source: Satty 2001.

Table 4. Factors recognized as negatively affecting perception on mining activity

Tabela 4. Czynniki negatywnie wpływające na postrzeganie działalności górniczej

No.	Factor	Example					
1	Sentimental	Need of relocation, changes in the surroundings – new, industrial landscape, etc.					
2	Economical	Loss of source of income (e.g. from arable land, tourism), decrease in property value (in their methodology, Zhang and Moffat proposed the statement "Housing is more expensive in my area as a consequence of mining activity" (Table 2), which refers to price increases caused by the migration of workers to industrial cities. However, mining activity can also lower real estate prices in case of close proximity to plants or mining damage), mining damages, etc.					
3	Environmental	Industrial landscape, air and water pollution, groundwater level reduction, noise, soil degradation, fear of ecological disaster e.g. in connection with waste storage, etc.					
4	Spatial	Spatial conflicts regarding the use of the area (e.g. the vicinity of mining and housing), a negative impact on tourism using the landscape and natural values of the region, etc.					

Source: own study.

that affect their perception of mining operations. A nine-level comparative scale (Table 3) was used, as proposed by Satty (Satty 2001). The objective behind this comparison was to identify the factors which are the most likely to affect respondents' attitudes to mining operations. These factors are described in Table 4.

In order to calculate the weight of each factor, and to determine how likely they are to shape respondents' opinions, the so-called priority vector is determined. This can be calculated on the basis of a matrix created by comparing individual factors. The order of the matrix corresponds to the number of compared elements (Ostręga 2004).

The procedure for determining the priority vector was as follows (Ostręga 2004):

Matrix normalization A (dividing each element by the sum of the elements in its column), according to the formula:

$$\overline{w}_{ij} = \frac{a_{ij}}{\sum_{i=1}^{n} a_{ij}} \tag{1}$$

Calculating the mean for each row and column in the matrix:

$$w_{i} = \frac{\sum_{j=1}^{n} w_{ij}}{n}; \quad w_{j} = \frac{\sum_{i=1}^{n} w_{ij}}{n}; \quad i, j = 1, ..., n$$
(2)

Calculating the priority vector:

$$\overline{w}_i = \sum_{j=1}^n w_j a_{ij} \tag{3}$$

Calculating the largest eigenvalue which is always equal to or larger than the order of a matrix. The closer  $\lambda_{max}$  is to n, the more consistent the comparisons between the factors:

$$\lambda_{\max} = \frac{1}{w_i} \sum_{j=1}^{n} a_{ij} w_j \tag{4}$$

Calculating the consistency ratio to see whether respondents were consistent in their assessments:

$$CR = \frac{CI}{RI} \cdot 100\% \tag{5}$$

-

 $CI - \text{consistency index}, CI = (\lambda_{\text{max}} - n)/(n-1),$ 

n – order of a matrix,

RI – random index, depending on the order of the matrix (Table 5).

Table 5. Random Index values

Tabela 5. Wartości random index

Order of a matrix n	1	2	3	4	5	6	7	8	9
Random index RI	0.0	0.0	0.58	0.90	1.12	1.24	1.32	1.41	1.45

Source: Ostręga 2004.

In order for answers to be considered consistent, consistency ratio (CR) needs to range between 0 and 10%.

#### 4. Results

The results of section one were used to show the level of public approval within the local community based on Boutilier's (2017) scale (Table 6). The median, which is also the mean, for all results was 3.3, which corresponds to high acceptance/tolerance. It is worth noting that the average level of acceptance among employees is significantly higher (4.47 – full trust) than the inhabitants of the region not directly associated with the company (3.15 – high acceptance/tolerance). Modes were 2.8 and 3.3. A histogram representing the levels of public approval among respondents (Figure 2) has multimodal distribution (i.e. there

Table 6. Scale points designating the brackets among six equal groupings (i.e., sextiles) of social license scores based on Boutilier's (2017) 2152 international interviews

Tabela 6. Skala punktowa wyznaczająca sześć przedziałów dla wyników pomiaru społecznej koncesji na działalność, na podstawie 2152 wywiadów Boutiliera (2017)

Sextile (1/6th)	Lower bracket	Upper bracket	Range and verbal label
1	4.30	5.00	>4.3 to 5.0 = full trust
2	3.93	4.30	>3.93 to 4.30 = high approval
3	3.56	3.93	>3.56 to 3.93 = low approval
4	3.08	3.56	>3.08 to 3.56 = high acceptance/tolerance
5	2.40	3.08	>2.40 to 3.08 = low acceptance/tolerance
6	1.00	2.40	1.00 to 2.17 = withheld/withdrawn

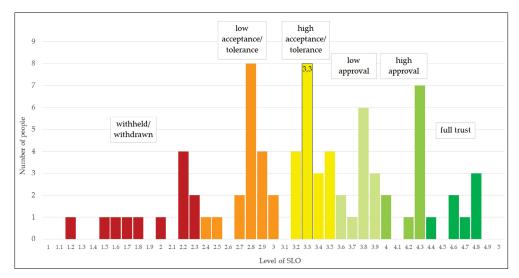


Fig. 2. Histogram of 78 social license scores collected in Legnica-Głogów Copper Basin Source: own study

Rys. 2. Histogram dla 78 wyników pomiaru społecznej koncesji na działalność w Zagłębiu Miedziowym

are several peaks). The reasons for this are varied, including extreme attitudes to mining operations among respondents. To some extent, this is also due to the small study sample. Therefore, these results correspond to the acceptance level described as acceptance/approval in Boutilier and Thomson's (Boutilier and Thomson's 2011) social licence model. The factor that achieved the highest score was economic legitimacy, which is the basis of that model, and refers to the economic benefits offered to the local community by the business operating in the area. On the other end of the spectrum, interactional trust, a factor describing the quality of the dialogue between the business and the local residents, who would wish their voice mattered more in decision-making received the lowest score. This factor analysis demonstrates that the company has yet to enjoy institutionalized trust from the local community towards its operations.

Table 7 shows mean standard deviations and partial correlations between some key variables identified on the basis of section two results. The variables that proved to have the largest impact on public approval for mining operations were overall financial benefits and infrastructure improvement. The overall benefits-to-costs ratio for mining was determined largely by infrastructure improvement and employment and community development. Negative correlations refer to the negative consequences of mining operations (impact on other industries, environmental costs). The benefits from mining operations showed negative correlations with costs (impact on other industries and the environment), which is understandable. The increase in the costs of living was not statistically correlated with benefits, which means that respondents believe that the improvement in the economic situation and

Table 7. Means, standard deviations, and partial correlations between the key variables

Tabela 7. Średnie odchylenia standardowe i korelacje cząstkowe pomiędzy głównymi zmiennymi

Variable	1	2	3	4	5	6	7	8
Increase living cost	1							
Impact on other industries	0.36**	1						
Environmental costs	0.20	0.41***	1					
Benefit in general wealth	0.16	-0.06	-0.22	1				
Benefit in infrastructure	0.22	-0.04	-0.25*	0.60***	1			
Benefit in employment and communities	0.29**	0.00	-0.16	0.51***	0.63***	1		
Balance of benefits over costs	0.06	-0.13	0.11	0.14	0.23*	0.37**	1	
Acceptance of mining	0.19	-0.10	-0.24*	0.51***	0.45***	0.35**	0.26*	1
• mean (M)	4.40	3.72	4.69	4.40	4.51	5.16	4.68	5.54
standard deviation (SD)	1.81	1.41	1.57	1.81	1.73	1.48	1.67	1.66

infrastructure does not affect the costs of living in the region. Respondents are aware of the impact of mining operations on the environment. This has a negative effect on the overall acceptance level.

In the last part, based on respondents' answers, the weights (priority vectors) were calculated for individual factors (Figure 3).

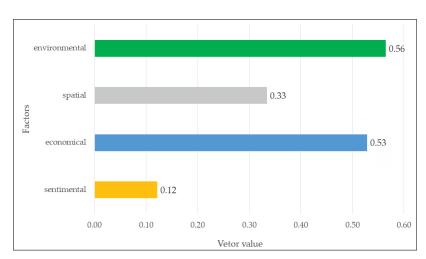


Fig. 3. Priority vectors for individual factors Source: own study

Rys. 3. Wektory priorytetów dla poszczególnych czynników

The analysis of the weights attached by respondents to individual factors shows that the greatest importance is placed on environmental ( $w_i = 0.56$ ) and economic ( $w_i = 0.53$ ) aspects. What respondents fear the most are negative changes that could possibly take place in the environment in connection with mining operations, but also financial losses associated, e.g., with mining damage and relocation. The least important is the sentimental factor related to the image of the place of residence and the landscape. Factor comparison, as used in AHP, illustrates the significance of the concerns expressed by the local community in relation to mining operations, and might provide decision-makers with some valuable insights as to which areas of concern need to be addressed more in their CSR strategies.

#### Discussion

The above analysis raises the following question – if the largest mining companies in Poland are so successful in implementing their CSR strategies, why there is still no wide-spread approval for mining operations? Unfortunately, there are no studies and indicators that would reflect the actual attitudes of stakeholders, and local communities in particular, and show whether a CSR strategy is being implemented effectively. Moreover, the important impact of public approval and relations with stakeholders on the success of mining projects is still not sufficiently appreciated. With a constructive dialogue, preceded with in-depth social studies, companies could significantly reduce protests and discontentment from stakeholders, and minimize the costs of the negative consequences of mining operations.

This study shows that KGHM Polska Miedź SA gained public approval for its operations, but only to some extent. While local communities recognize the role of industry operations (financial benefits for communes, region development), they consider the corporate-community dialogue to be lacking, and would like to be more involved in decision-making. Respondents included both the people who categorically oppose mining operations, and those who have absolute trust in the company and its actions. What was the most important for local residents were environmental and economic aspects, which is reflected in the weights attached to these factors. With environmental and economic factors being considered crucial, companies have plenty of opportunities for cooperation and negotiation with local communities. Indeed, these are areas where negative impacts on the environment can be easily reduced with the use of appropriate means (usually financial). These are, for example, environmentally friendly technologies, low-emission transport, prevention and efficient removal of mining damage, and sharing benefits with local communities. One of the successful tools used e.g. in Canada to gain public acceptance are the IBA (Impact Benefit Agreements). These are confidential, bilateral agreements, negotiated between mining companies and indigenous communities to discuss the negative socio-economic and biophysical effects that may result from a mining project and propose solutions (Hitch and Fidler 2007). In Poland, there is still a lack of accurate and indepth social analysis (such as Social Impact Assessment) before the project is implemented, which is common or even standard procedure in other countries. This should apply not only to new mining areas but also new projects in mining regions (e.g. building shafts, plants). It is also important to share the results of the analysis with stakeholders. An important element for both the company and the local community should be monitoring (in the socio-economic area, education, health, institutional development and others) in order to observe changes and impacts over the years. The situation is completely different when it comes to the sentimental factor. It is a great, and often impossible, challenge for mining businesses to make up for sentimental nuisances, such as the need to relocate. Therefore, the fact that respondents placed this factor last in their hierarchies can be considered positive from the business point of view. However, it is important to bear in mind that the Legnica—Głogów Copper Basin is a region with a well-established mining tradition, so the industrial landscape and the distinctive way in which its functions have become part of everyday reality for the people living there. In other places in Poland, the evaluation of sentimental factor could be significantly different.

The mitigation of the negative effects of mining activities in Poland usually comes down to financial compensation. More often, however, in the form of donations (as the KGHM Foundation does). Practice shows that obtaining compensation for mining damage is difficult and time consuming.

It is crucial to note that the social license to operate is dynamic by nature and changes over time in response to various factors. The fact that it has been given does not mean that such approval will continue unvaryingly throughout the operational life of the mine. It is the businesses' responsibility to maintain good relations with local communities. If this is not handled properly, it can result in conflict, which, in turn, can damage the corporate image and hamper future projects. Corporate social responsibility strategies are a useful tool for the companies to help them gain a social license to operate, if they are properly prepared and implemented. At the same time, CSR activities are insufficient to gain stakeholders consent for operation if they are not widely consulted with interested parties. The proper CSR strategy has a great impact on the company's stakeholders, can reduce the risk of conflicts and ensure a sustainable supply of minerals, which is one of the biggest challenges for the European economy these days.

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#### REFERENCES

- Bernatt, M. 2009. Corporate Social Responsibility. Constitutional and International Perspective, Warszawa, Centre of Antitrust and Regulatory Studies, Management Faculty, University of Warsaw, 192. [Online] https://cars.wz.uw.edu.pl/images/publikacje/podreczniki/116/Bernatt odpowiedzialnosc.pdf [Accessed: 2019-06-06]
- Boutilier, R. 2017. A Measure Of The Social License To Operate For Infrastructure And Extractive Projects. [Online] http://socialicense.com/publications.html. [Accessed 2020-06-06].
- Boutilier, R. and Thomson, I. 2011. Modelling and measuring the social license to operate: fruits of a dialogue between theory and practice. *Social Licence*, pp. 1–10.
- Carroll, A.B. 2016. Carroll's pyramid of CSR: taking another look. *International journal of corporate social responsibility* 1, 3.
- Cooney, J. 2017. Reflections on the 20th anniversary of the term 'social licence'. Journal of Energy & Natural Resources Law 35, pp. 197–200.
- Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups Text with EEA relevance. Official Journal of the European Union, L 330/1.
- Dodd, E.M. 1932. For Whom Are Corporate Managers Trustees? Harvard Law Review 45, pp. 1145-1163.
- Friedman, M. 2007. The Social Responsibility of Business Is to Increase Its Profits. [In:] Zimmerli, W.C., Holzinger, M. and Richter, K. (eds.) *Corporate Ethics and Corporate Governance*. Berlin: Heidelberg: Springer.
- Harjoto, M.A. and Jo, H. 2011. Corporate governance and CSR nexus. Journal of business ethics 100, pp. 45-67.
- Hitch, M. and Fidler, C.R. 2007. Impact and benefit agreements: A contentious issue for environmental and aboriginal justice. *Environments Journal* 35(2), pp. 45–69.
- Hop, N. and Kudełko, J. 2013. Social responsibility of business as element of development policy of mining company (*Spoleczna odpowiedzialność biznesu jako element strategii rozwoju przedsiębiorstwa górniczego*) [In:]. Dzieje górnictwa element europejskiego dziedzictwa kultury 5, pp. 85–110 (in Polish).
- Jarosławska-Sobór, S. 2014. Responsible mine. Corporate social responsibility in the Polish Hungarian mining industry a sociological study (Odpowiedzialna kopalnia. Społeczna odpowiedzialność biznesu w polskim górnictwie węgla kamiennego studium socjologiczne). Uniwersytet Śląski, pp. 88–90 (in Polish).
- Jedynak, T. 2012. The effectiveness of the strategy of investment in socially responsible stocks the case of Respect Index (*Efektywność strategii inwestycji w akcje spółek społecznie odpowiedzialnych na przykładzie Respect Index*). Zeszyty Naukowe/Polskie Towarzystwo Ekonomiczne 12, pp. 161–172 (in Polish).
- Jendrośka, J. and Bar, M. 2005. Environmental protection law: textbook (*Prawo ochrony środowiska: podręcznik*). Centrum Prawa Ekologicznego (*in Polish*).
- Journal of Laws of 1980 No. 3, item 6, repealed. The Environmental Protection and Development Act of January 31, 1980.
- Kwietniewska-Sobstyl, M. and Żelazna-Blicharz, A. 2014. Socially responsible human resource management: SA 8000 human rights-based workplace standards (*Odpowiedzialne społecznie zarządzanie zasobami ludzkimi: standard miejsca pracy na przykładzie normy SA 8000*). Zeszyty Naukowe Wyższej Szkoły Humanitas. Zarządzanie 1, pp. 247–256 (in Polish).
- KGHM Polska Miedź SA, Sustainable Report of KGHM Polska Miedź SA for 2018. [Online] https://kghm.com/sites/kghm2014/files/kghm-sustainable-report-2018 0.pdf [Accessed: 2019-06-06].
- KGHM CSR Report 2012 KGHM Polska Miedź SA, Corporate Social Responsibility Report for 2012. [Online] kghm.com/sites/kghm2014/files/raport csr kghm 2012 web 0.pdf [Accessed: 11.01.2021]
- KGHM CSR Strategy 2014 KGHM Polska Miedź SA, KGHM's Corporate Social Responsibility (CSR) Strategy for 2015–2020. [Online] kghm.com/sites/kghm2014/files/strategia csr final.pdf [Accesed: 11.01.2021]
- Moffat, K. and Zhang, A. 2014. The paths to social licence to operate: An integrative model explaining community acceptance of mining. *Resources Policy* 39, pp. 61–70.
- Ostręga, A. 2004. Management of mineral workings and areas after exploitation of carbonate minerals based on the example of Krzemionki Podgórskie in Cracow (Sposoby zagospodarowania wyrobisk i terenów po eksploatacji złóż surowców węglanowych na przykładzie Krzemionek Podgórskich w Krakowie). PhD thesis. Kraków: AGH.

Prno, J. and Slocombe, S.D. 2012. Exploring the origins of 'social license to operate' in the mining sector: Perspectives from governance and sustainability theories. *Resources Policy* 37, pp. 346–357.

Respect Index 2019. [Online] http://respectindex.pl [Accessed: 2019-12-10].

Satty, T.L. 2001. Decision Making for Leaders: The Analytic Hierarchy Process for Decisions in a Complex World (New Edition), Vol. II AHP series. Pittsburgh PA: RWS Publication.

SAAS 2019 – Social Accountability Accreditation Services. [Online] http://www.saasaccreditation.org [Accessed: 2019-12-10].

Sheehy, B. 2015. Defining CSR: Problems and Solutions. Journal of Business Ethics 131, pp. 625-648.

Zhang, A. and Moffat, K. 2015. A balancing act: The role of benefits, impacts and confidence in governance in predicting acceptance of mining in Australia. *Resources Policy* 44, pp. 25–34.

## THE IMPACT OF CORPORATE SOCIAL RESPONSIBILITY ON SOCIAL ACCEPTANCE AS A DETERMINANT OF THE SUSTAINABLE MINERAL EXTRACTION – POLISH CASE STUDY

#### Keywords

corporate social responsibility, social acceptance, social license to operate, mineral extraction

#### Abstract

Corporate social responsibility policy is widely used by mining companies as a tool for reliable operation. However, the application of CSR activities does not ensure gaining social acceptance, which is crucial for undisrupted minerals extraction and project development. In this article, the authors review tools used by mining companies to implement and measure corporate social responsibility and examines the level of social acceptance for mining operations by conducting a survey among 78 members of the local community in Legnica-Głogów Copper Basin. The research is based on: 1. Existing methods of measuring Social License to Operate; 2. Analytic Hierarchy Process (AHP) method – proposed by the authors to verify its usefulness for defining factors that have an impact on the social acceptance for mining. The study, based on the case of one of the leading world's copper producers, shows that despite the large financial outlays allocated to the development of the local community, mining companies struggle with achieving a full social license to operate. The hierarchization of factors influencing the perception of mining activity can help companies prioritize areas that require a deeper dialogue with the local community. The success of future extractive projects depends on proper recognition of local community attitudes towards mining. The findings show that the successful implementation of the CSR strategy should be preceded by a broad analysis of social conditions to meet the expectations of stakeholders.

### WPŁYW SPOŁECZNEJ ODPOWIEDZIALNOŚCI BIZNESU NA AKCEPTACJĘ SPOŁECZNĄ JAKO WYZNACZNIKA ZRÓWNOWAŻONEGO WYDOBYCIA SUROWCÓW – PRZYKŁAD POLSKI

#### Słowa kluczowe

akceptacja społeczna, wydobycie surowców, społeczna odpowiedzialność biznesu, społeczna koncesja na działalność

#### Streszczenie

Polityka społecznej odpowiedzialności biznesu jest szeroko stosowana przez przedsiębiorstwa górnicze jako narzedzie do prowadzenia działalności w sposób godny zaufania. Stosowanie działań z zakresu CSR nie zapewnia jednak uzyskania akceptacji społecznej, co jest kluczowe dla zagwarantowania ciągłości wydobycia i rozwoju projektów górniczych. W niniejszym artykule autorki dokonują przeglądu narzędzi wykorzystywanych przez przedsiębiorstwa górnicze do wdrażania i pomiaru społecznej odpowiedzialności biznesu oraz badają poziom społecznej akceptacji dla działalności górniczej poprzez przeprowadzenie sondażu wśród 78 członków lokalnej społeczności Zagłębia Miedziowego. Badania zostały prowadzone w oparciu o: 1) istniejące metody pomiaru SLO; 2) metodę Analytic Hierarchy Process (AHP) – zaproponowaną przez autorki w celu weryfikacji jej przydatności do hierarchizowania czynników mających wpływ na społeczną akceptację dla działalności górniczej. Badanie, oparte na przykładzie jednego z wiodących światowych producentów miedzi, pokazuje, że pomimo dużych nakładów finansowych przeznaczonych na rozwój lokalnej społeczności, firmy górnicze borykają się z uzyskaniem pełnej społecznej koncesji na prowadzenie działalności. Hierarchizacja czynników wpływających na postrzeganie działalności górniczej może pomóc firmom w nadaniu priorytetu obszarom, które wymagają głębszego dialogu ze społecznością lokalną. Powodzenie przyszłych projektów wydobywczych zależy od właściwego rozpoznania postawy społeczności lokalnej wobec górnictwa. Wyniki badań pokazują, że udana implementacja strategii CSR powinna być poprzedzona szeroką analizą warunków społecznych, w celu spełnienia oczekiwań interesariuszy.