Financial aspects of Corporate Social Responsibility based on the hard coal mining industry in Poland

Izabela Jonek-Kowalska[a]

[a]Silesian University of Technology, Faculty of Organization and Management, ul. Roosevelta 26,
41-800 Zabrze, Poland
izabela.jonek-kowalska@polsl.pl

Abstract. The purpose of the article is to present the financial aspects of Corporate Social Responsibility in the context of the Polish mining industry. The aspects are mostly connected with the currently borne costs of natural environment protection and development in a stage of exploitation and liquidation of hard coal mining plants (collieries). Various types of these costs, their amount and long-term character affect in a considerable way the production effectiveness, reducing at the same time CSR implementation in a broader, voluntary dimension. The mining enterprises in Poland, consisting in their structures of 26 collieries, bear 16 types of obligatory fees and environmental costs in the course of exploitation. The most important ones are: expenses connected with removing mining damages, devastated land development and reclamation expenses as well as sewage transport to surface water expenses. Furthermore, after collieries liquidation it is basically necessary to maintain the liquidated longwalls without time limit, the costs of mining damages liquidation also occur in a long term. Apart from high costs, CSR application in the hard coal mining industry rises many controversies due to a dominant position of mining enterprises in a stakeholder chain. These enterprises very often use CSR only as an instrument that allows to obtain agreement for conducting exploitation, forgetting about its application in the course of exploitation and its end.

Keywords: Corporate Social Responsibility, coal-mining, cost of environmental protection

1. INTRODUCTION

1.1. Theoretical backgrounds of Corporate Social Responsibility (CSR)

Corporate Social Responsibility (CSR) has become popular at the beginning of 21st century along with popularization of the conception of enterprise sustainable development (Van Marrewijk, 2003). At that time the group of enterprise's stakeholders, apart from owners, recipients and suppliers, was also extended by employees as well as participants of social and natural environment of the enterprise (Buysse & Verbeke, 2003; Clarkson, 1995; Delmas & Toffel, 2004; Pater & Lierop, 2006). Without their co-participation in the realization of corporate objectives, sustainable development is impossible (Porter & Kramer, 2006; McWilliams et al., 2006). Nor is it possible to create enterprise value in a long-term perspective.

CSR is determined as „a commitment to improve community well-being through discretionary business practices and contribution of corporate resources" (Kotler & Lee, 2005; Clarkson, 1991). In the enterprise's activity, CSR constitutes a tool enabling realization of the conception of sustainable development. It is also perceived as a part of long-term strategy in

which the value creation for owners is strictly correlated with providing safety and welfare for employees along with respecting local societies and natural environment (Safa, 2012).

Despite a clear definition and common acceptation, the implementation of CSR conception in the enterprise is not an easy task. It constitutes a serious challenge for owners and managers (Bhattacharya et al., 2009; Calvano, 2008). Among the factors motivating to implement CSR there are internal drivers and external drivers distinguished. Internal drivers are connected with the attitudes and value system represented by owners, employees, and managers of enterprise (Menon & Menon, 1997; Prothero, 1990; Heugens et al., 2008; Carroll, 1991). The stronger their attachment to ethical behavior, the stronger motivation for a proper implementation of CSR (ElZein & Alameddine, 2012; Khan, 2009). External drivers are connected with pressure from the external environment, the participants of which require ethical behavior from the enterprise (Muller & Kolk, 2010; Ditlev-Simonsen & Midttun, 2011; Vormedal & Ruud, 2009).

Among the benefits accompanying CSR implementation there are the most often mentioned: establishing long-term relations with enterprise's stakeholders, favoring building a positive image and reputation. Moreover, CSR allows to comply with legal regulations, reduce costs and losses and co-create local public politics (Lynch-Wood et al., 2009; Kehbila et al., 2009; Merino & Valor, 2011).

Nevertheless, it should be remembered that CSR implementation means a necessity to bear additional expenditures and costs for the enterprise (Nakao et al., 2007; Jenkins & Yakovleva, 2006; Hamann, 2004). These may be the expenses of direct character, most often having an obligatory character connected with maintaining a high standard of employment conditions, natural environment protection (fees, penalties) or benefits for local societies (local taxes). These may also be indirect expenses, mostly voluntary ones, linked to organizing social campaigns, making research concerning influence of conducted activity on environment and supporting local initiatives.

Expenses connected with CSR implementation do not bring direct economic benefits and it is difficult to estimate their favorable influence, and undoubtedly postponed in time one, on financial results of the enterprise (Sirgy, 2002; Al-Momani & Al-Shboul, 2013). It constitutes a serious limitation in CSR application. Therefore, in the hereby article there is a financial issue of CSR aspects examined, using an example of the Polish hard coal mining for this purpose, an industry which especially intensively interacts with social and natural environment.

1.2. CSR in the hard coal mining industry

CSR conception has a special significance in the hard coal mining as it is an industry that has a strong influence on both natural and social environment. Additionally, considering a destructing character of this influence, the use of CSR rules in the hard coal mining is desired and necessary in order to improve the image of mining enterprises and to provide the continuity of conducting exploitation. Currently, the need to implement CSR in mining is noticed and emphasized, both in the subject literature and economic practice (Kapelus, 2002; Crowson, 1998; Epps, 1996; Hamann, 2003; Hamann, 2004; Hilson & Murck, 2000). Nevertheless, it is assumed that even a full CSR implementation does not guarantee sustainable development for a mining enterprise due to a great scale and range of negative impact of this industry on micro and macroeconomic environment and on the inside of the mining enterprise. In this moment it is worth to explain that the negative results of this impact also depend on the way of conducting exploitation.

Hard coal may be extracted in the way of surface or underground mining method which depends on the depth of deposits localization. The first method finds its application in case of deposits localized not deeper than 300 meters underground. The second one allows to extract coal from deposits localized much deeper, even on the depth of 1000 meters.

In case of the surface methods (commonly referred to open cast mining) the upper layers of soil and rocks are destroyed using explosive materials and then removed with the help of excavators and trucks. When the coal deposit is revealed, it is drilled, crushed and extracted. Next, the extracted resource is loaded on big trucks or conveyor belts and transported to coal processing plants, to storehouse or the final recipient. An advantage of the surface method is its low cost of excavation and possibility to extract a greater part of the deposit. Nevertheless, its basic drawback is a considerable scale of natural environment degradation.

The underground method consists in drilling the accessing, development and excavation longwalls under the earth's surface. At that time coal may be extracted by room and pillar or longwall system. When using the room and pillar excavation the deposits are exploited by drilling a chain of rooms in the coal layer which are secured by coal pillars for the purpose of ceiling support. The pillars may even consist up to 40% of the coal in the deposit. In the further stages this part of coal may also be extracted.

Longwall technique excavation means a full coal extraction from a layer's segment, called as longwall face, using mechanized coal-cutting machines. During coal excavation the ceiling is temporarily supported by hydraulic linings. After coal extraction from the deposit, there is very often a controlled collapse made. The basic advantage of the underground method is a possibility to conduct excavation from deposits localized very deep and a possibility to conduct extraction on the urbanized areas. Disadvantage on the other hand is a high cost of resource mining.

The open-cast method is used in USA and Canada. In Europe, Asia and Africa there is mining with the use of underground method dominating. In Poland hard coal is excavated using the underground method in a longwall system, therefore in the empirical part of the article the considerations were limited to the analysis of activity of enterprises extracting coal using the underground method.

The influence of mining enterprises extracting hard coal by the underground method on environment may be analyzed in a colliery life cycle which includes launch phase, conducting exploitation and liquidation. On each stage the scale of interaction of mining enterprise with the social and natural environment is different. The basic types of interactions occurring in the aforementioned phases of colliery life cycle are presented in figure 1.

In the launch phase of colliery the natural and social aspects have a significant influence on construction start. Therefore, on this stage it is important to conduct a dialogue with local societies and ecologists who are afraid of the negative results of exploitation and do not want its launch. Care about environment protection in most cases is forced by proper regulations, however, their scale does not guarantee the liquidation of activity effects of colliery but only makes them less burdensome. Construction of the mining enterprise involves a number of changes in land development on a local and/or regional level. It usually means a necessity of buying land and residents resettlement, what rises an understandable concern and social resistance.

In the exploitation phase of hard coal the scale of hazards and discomfort rises. Negative effects appear in the whole ecosystem in a result of: draining mining water, ash and gases emission as well as waste storage and mining damages occurrence which deform the surface and damage the objects localized on the surface. In this phase there are also hazards for life and health of mining employees appearing, connected with the occurrence of natural and technical hazards typical for the hard coal mining. These include the following hazards: gas, that is mostly methane explosion hazard, water, ash hazards as well as fire and tremor hazards. The group of rather rare hazards includes seismic, climatic, radio elements and microbiological hazard.

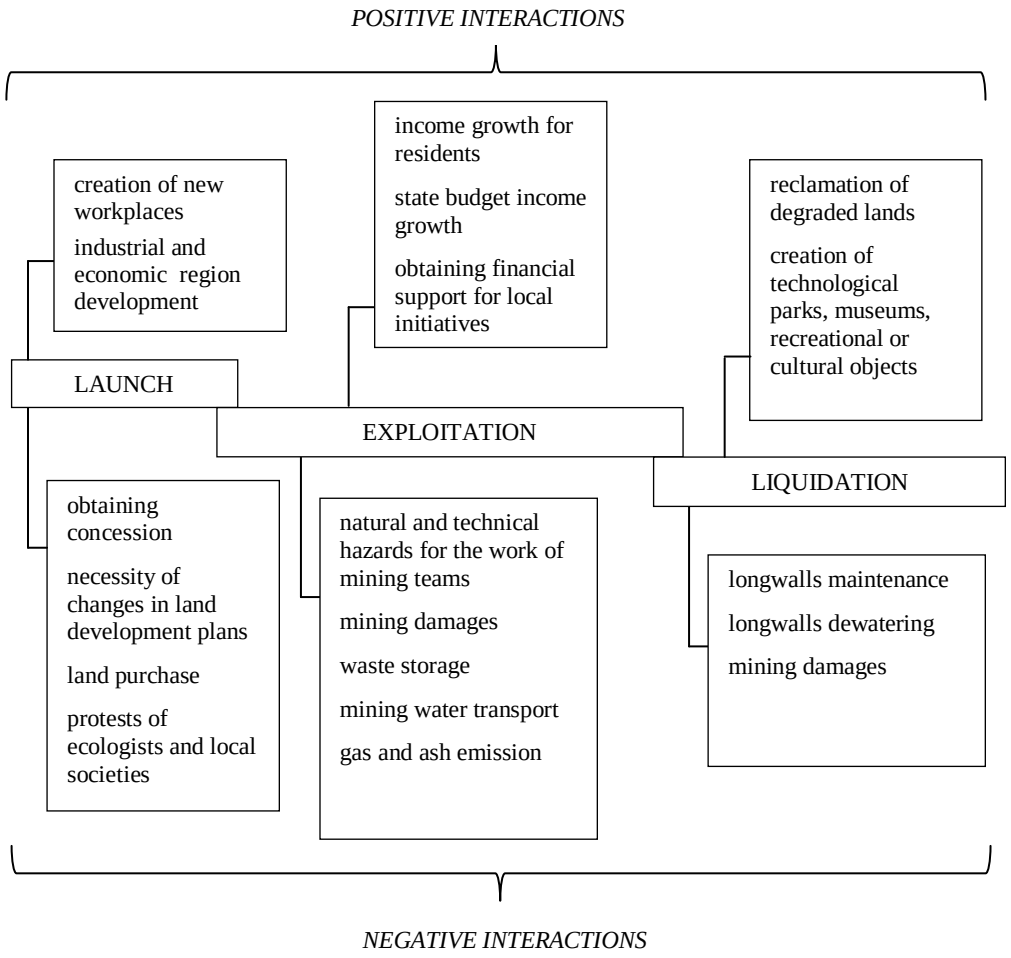

Fig. 1. Types of interactions with natural and social environment in a colliery life cycle
Source: own work

Negative impact of mining exploitation does not end with colliery liquidation. A chain of gate roads remains underground which require a proper securing as they should not collapse and cause irreversible damage on the surface. Dewatering of the liquidated longwalls is also a big problem where the underground water constantly accumulates (Bebbington & Williams, 2008). On the surface there are also dumping sites remaining which in a significant way change the lay of land and require an appropriate land development. These are the problems that need a responsible approach as in the liquidation phase the colliery stops existing, therefore the financing sources diminishing the negative sources of its activity are expired.

The negative effects of colliery activity influencing on social and ecological environment presented above may be reduced with the use of CSR conception oriented at sustainable development of these enterprises (Sa'nchez, 1998; Fitxpatrick et al., 2011). Among the activities supporting CSR there are the positive effects of exploitation highlighted which mostly include creation of new workplaces supporting individual, local and regional development, income increase of residents and local authorities (revenues from fees, penalties, local taxes) and obtaining financial support for realization of various local initiatives (sponsoring).

Nevertheless, many authors notice that mainly the scientists and researchers are interested in CSR application in the mining enterprises, not the managers of mining enterprises (Rakowska & Cichorzewska, 2012; Jenkins & Yakovleva, 2006; Cowell et al., 1999; Delios, 2010). Apart from a lack of wide interest of CSR conception, in literature there is also criticism appearing concerning its implementation possibilities in the mining industry. The authors pay attention to the fact that during CSR implementation in mining a key role is played by the enterprise which emphasizes the benefits resulting from exploitation launch and conduction. At that time the conception stops being morally indifferent. It often happens that local societies are offered a range of material benefits for obtaining agreement for excavation. It is treated as a form of patronage and paternalism (Mutti et al., 2012).

However, it seems that in such case negating the application of CSR does not come from disadvantages of the conception itself or specificity of the industry in which it is implemented but from its inappropriate implementation. CSR requires establishing a chain of equivalent stakeholders and working out the partner relations between them without domination of any party (Dobele et al., 2013). It is also important to adjust the conception of CSR application to a local specificity due to considerable cultural differences characterizing local societies in different countries and regions. CSR in the implementation phase must be a tailored conception (Jenkins, 2004; Kemp, 2010; Kepore & Benedict, 2010). Such approach constitutes a challenge for all stakeholders creating a CSR chain, mostly including local authorities and mining enterprise (Cheshire, 2010).

Despite a lack of interest or failure in CSR application in the hard coal mining, it is a conception fully deserving an attention of mining enterprises as it constitutes the only possible way for agreement with stakeholders situated in social and natural environment who have a great influence on permission to launch the enterprise and its non-conflict functioning (Yakovlever & Alabaster, 2003; Slack, 2011; Welker, 2009). The thesis above is also confirmed by CSR implementation in mining that ended up in a success (Velasquez, 2012; Mzembe & Meaton, 2013).

2. RESEARCH METHODOLOGY

Hard coal mining industry is a strategic industry in Poland which guarantees energetic security. Nevertheless, it is the industry that has been facing serious financial problems for years, among which increasing production costs are the most important ones as a result of deteriorating mining conditions and trade union pressure to increase salaries. In the years 1998-2002 and 2002-2004 there were many restructuring processes conducted aimed at improvement of extraction effectiveness. In effect, there were several non-profitable collieries closed down. The remaining mining plants are currently functioning in frames of three mining enterprises being a property of the State Treasury. Furthermore, in Poland there is a coal partnership owned by an energetic corporation and three private collieries. Altogether, in the area of Poland there are 26 active collieries. Due to abundance of hard coal deposits, these days the construction of new collieries is under consideration.

Application of CSR conception by the mining enterprises is connected with bearing quite high costs that strongly affect the financial results. In the research part of the hereby article there is an analysis and assessment made of obligatory environmental costs paid in the Polish hard coal mining. These are the costs connected with natural environment protection and development in the stage of conducting exploitation and in the stage of colliery liquidation (Zhengfu, 2001; Huertas et al., 2012; Bennett et al., 2004; Tiemstra, 2002). The research included the years 2007-2012. In the analysis and assessment there were structure and dynamics ratio used as well as cause and result analysis.

3. RESEARCH RESULTS

3.1. Environmental costs connected with colliery liquidation

The first group of environmental costs connected with the hard coal mining in Poland are the costs borne in connection with colliery liquidation that took place due to restructuring activities undertaken in the years 1998-2002 and 2002-2004, oriented at reduction of production capabilities and improvement of extraction effectiveness. These activities triggered the necessity to spend money on conducting technical and organizational liquidation of collieries and on covering the results of mining damages.

Technical and organizational liquidation of collieries in practice included the costs connected with:

- ✓ longwalls liquidation and securing,
- ✓ shafts and mini-shafts liquidation and securing,
- ✓ infrastructure liquidation that remained after finishing liquidation of mining enterprise and after facilitation of dewatering systems,
- ✓ post-mining land development,
- ✓ objects maintenance necessary for realization of activities conducted after finishing colliery liquidation,
- ✓ securing neighboring collieries necessary for actions realization made after finishing colliery liquidation,
- ✓ securing neighboring collieries from water, gas and fire hazards after finishing colliery liquidation,
- ✓ elaboration of projects, documents, opinions, expertise and analysis connected with realization of the aforementioned activities, required by law.

The amount of costs borne in this group of environmental costs in the years 2007-2012 is presented in table 1.

Table 1. Costs borne in connection with collieries liquidation in the years 2007-2012 [in thousand USD]

Specification	Year					
	2007	2008	2009	2010	2011	2012
Total:	66 586.76	64 688.69	63 248.44	68 243.00	73 466.43	74 078.84
including employee claims	416.64	83.41	92.83	9.33	56.85	86.87

Source: own work based on the data of Ministry of Economy

According to the data included in table 1, the costs connected with collieries maintenance, despite stopping the liquidation of other collieries after 2004, undergo low changes in time. They decrease to 2009 but rise from 2010 in connection with intensity increase of natural hazards in the abandoned underground longwalls. The data above mostly reflect a long-term influence of mining exploitation on social and natural environment. Indeed, it is possible to reduce the results and costs of excavation considerably on the surface but the chain of underground longwalls cannot be permanently liquidated and requires a continuous maintenance and securing.

The costs above are borne in Poland by the State Treasury (table 2) because of state ownership of mining enterprises. However, in case of private collieries this problem remains very often unsolved as a result of lack of proper legal regulations and securing cost coverage of liquidation already on the stage of colliery functioning (Lord & Manson, 2011; Williamson et al., 2008; Walsh et al., 1992; Mishra et al., 2012).

Table 2. Financing sources of costs borne in connection with collieries liquidation in the years 2007-2012 [in thousand USD]

Financing sources	Year					
	2007	2008	2009	2010	2011	2012

state budget subsidy	64 434.04	60 476.99	55 899.75	63 063.39	69 215.20	70 918.86
liquidation revenues	399.83	800.99	462.15	628.54	1 369.93	1 257.60
own sources	2 698.05	3 410.71	6 525.31	4 496,71	2 775.34	1 830.50
liabilities	54.84	0,00	361.19	54.35	105.95	71.88
Total	66 586.76	64 688.69	63 248.40	68 242.99	73 466.42	74 078.84

Source: own work based on the data of Ministry of Economy

Apart from the costs of collieries liquidation and maintenance of their underground infrastructure mentioned above, the costs of mining damages liquidation are evidenced separately. These costs are linked to repairing mining damages in residential buildings, institutional buildings, water-pipes and sewage system, road surface and to covering the expenses on replacement construction as well as compensation payment for crop losses. The amount of costs and number of activities realized for this purpose is included in table 3.

Table 3. Costs of mining damages removal borne in connection with collieries liquidation in the years 2007-2012

Specification	2007	2008	2009	2010	2011	2012
Number of activities	250	135	49	34	19	15
Amount of activities [in thousand USD]	15 425.94	7 200.30	2 416.32	4 112.36	2 784.80	3.83

Source: own work based on the data of Ministry of Economy

The data presented in table 3 confirm a systematic cost fall and number of activities decrease realized for the purpose of surface impact of liquidated collieries. In 2012 it was managed to reduce expenses significantly related to covering mining damages connected with collieries liquidation, completed in 2004. Nevertheless, such expenses are borne in a long-term, over 8-year period.

3.2. Environmental costs connected with collieries functioning

In the course of functioning, the collieries in Poland bear costs linked to fees for natural environment use due to water and air pollution and also to damages caused by surface exploitation. The types of these costs along with their share in the structure of total obligatory environmental costs are presented in table 4.

Table 4. Structure of environmental costs connected with collieries functioning [in %]

Specification	Year 2007	2008	2009	2010	2011
Drinking and industrial water consumption from surface and underground water intake	0.31%	0.30%	0.33%	0.30%	0.26%
Sewage transport to surface water - total	11.88%	12.27%	14.28%	14.60%	10.79%
Mining waste storage on the surface	1.25%	0.55%	0.00%	0.00%	0.00%
Ash emission	0.09%	0.08%	0.07%	0.07%	0.07%
Gas emission - total	0.40%	0.39%	0.45%	0.44%	0.36%
Fuel combustion in internal combustion engines	0.06%	0.05%	0.04%	0.05%	0.05%
Meltwater or water fallout transport coming from hardened surface	0.10%	0.15%	0.25%	0.11%	0.07%

Forest and agricultural land use for other purposes	0.28%	0.27%	0.26%	0.17%	0.12%
Other fees	0.29%	0.28%	0.06%	0.06%	0.04%
Penalties	0.08%	0.10%	0.08%	0.06%	0.04%
Reclamation and development of devastated lands	17.87%	12.61%	11.09%	12.45%	9.66%
Mining damage removal	67.40%	72.94%	73.08%	71.69%	78.53%

Source: own work based on the data of Ministry of Economy

According to data included in table 4, in the structure the highest share belongs to expenses for removing mining damages. Among the remaining environmental costs a significant share have expenses on damaged land development and reclamation as well as expenses on sewage transport to surface water. The amount of all costs connected with environment protection is presented in chart 1. It definitely results from the chart that these costs, starting from year 2007, are systematically rising in time.

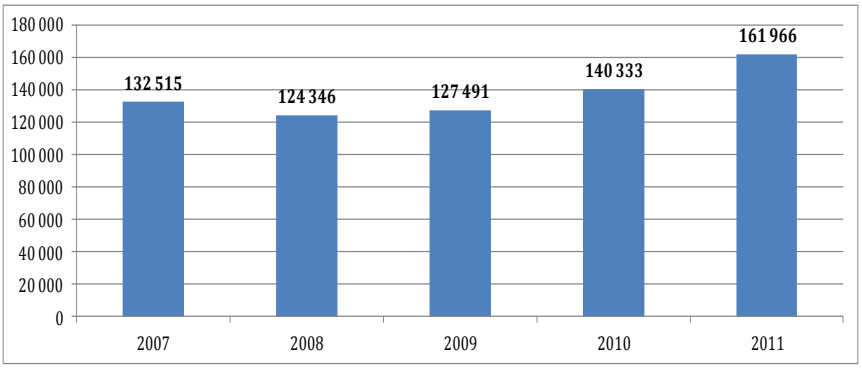

Chart 1. Obligatory environmental costs in the years 2007-2011 [in thousand USD]
Source: own work

In charts 2-7 there are values presented of particular costs mentioned in table 4, referring subsequently to costs connected with water, air and surface protection.

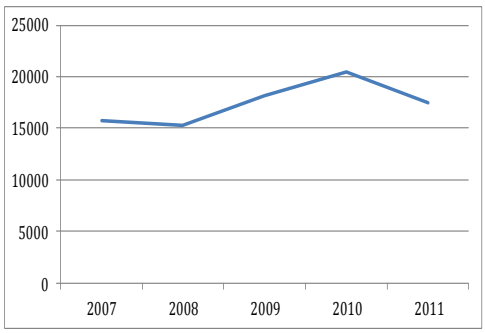

Chart 2. Cost of sewage transport to surface in the years 2007-2011
Source: own work

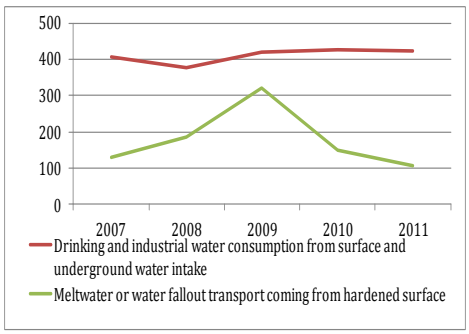

Chart 3. Meltwater or water fallout transport water coming from hardened surface as well as drinking and industrial water consumption from surface and underground water intake in the years 2007-2011
Source: own work

Chart 4. Other fees and penalties in the years 2007-2011
Source: own work

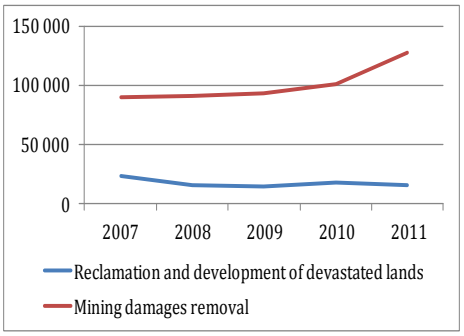

Chart 5. Reclamation and development of devastated land and mining damages removal in the years 2007-2011
Source: own work

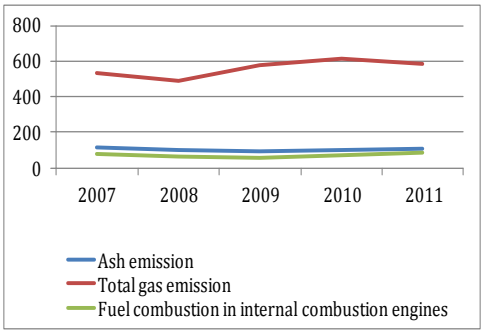

Chart 6. Cost of gas, ash emission and fuel combustion in internal combustion engines in the years 2007-2011
Source: own work

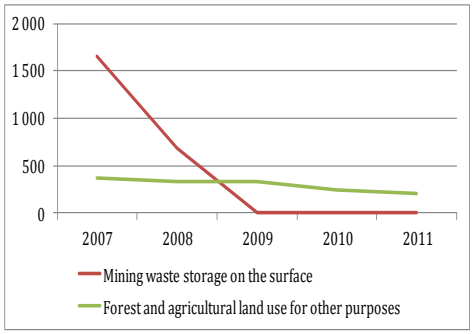

Chart 7. Cost of Mining waste storage on the surface and forest and agricultural land use for other purposes in the years 2007-2011
Source: own work

In the analyzed cost groups a visible decrease in relation with the year 2007 is only specific for the costs of low share in the total costs. These are the costs of mining fallout storage on the surface, costs of draining fallout or meltwater inflowing from the hardened surface as well as other fees and penalties. The costs of mining damages removal are strongly increasing, what in a considerable way affects the level of total obligatory costs. These costs increase in time although in the examined period the extraction amount is systematically limited, what has a negative influence on mining production costs in the Polish collieries.

4. CONCLUSIONS

The mining enterprises remain in a strong interaction with social and natural environment because of the type of conducted economic activity. Therefore, CSR conception should be especially close and necessary for them in order to establish relations with external stakeholders. However, these enterprises bear many obligatory environmental costs which in a significant way affect their final effectiveness. For this reason in this industry, there is a natural temptation to use CSR only as a tool convincing local societies to accept the launch of mining exploitation. A barrier in a proper application of CSR in the mining enterprises is also a limited time horizon of conducting activity due to deposits quantity. Such enterprises are not very often interested in a long-term relation with environment as they do not have the long-term perspectives of conducting activity. This additionally complicates the character of

relations with natural and social environment. The circumstances above allow to determine the directions of further research concerning CSR application in the mining industry. The research should be mostly oriented at elaboration of the rules of proper CSR implementation in the mining enterprises, guaranteeing respect and mutual benefits for all parties under the influence of mining exploitation.

References

Al-Momani, S.N., & Al-Shboul, M.F. (2013). Non-financial indicators and corporate annual reports. *American Academic & Scholarly Research Journal, 5*(4).

Bebbington, A., & Williams, M. (2008). Water and mining conflicts in Peru. *Mountain Research and Development 28*(3/4), 190–195.

Bennett, J., Van Bueren, M., & Whitten, S. (2004). Estimating society's willingness to pay to maintain viable rural communities. *Australian Journal of Agricultural and Resource Economics, 48*(3), 487-512.

Bhattacharya, C.B., Korschun, D., & Sen, S. (2009). Strengthening stakeholder-company relationships through mutually beneficial corporate social responsibility initiatives. *Journal of Business Ethics 85*(2), 257–272.

Buysse, K., & Verbeke, A. (2003). Proactive environmental strategies: A stakeholder management perspective. *Strategic Management Journal, 24*, 453–470.

Calvano, L. (2008). Multinational corporations and local communities: a critical analysis. *Journal of Business Ethics, 82* (4), 793–805.

Carroll, A.B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Busi*ness *Horizons, July–August*, 39–48.

Cheshire L. (2010). A corporate responsibility? The constitution of fly-in, fly-out mining companies as governance partners in remote, mine affected localities. *Journal of Rural Studies, 26*, 12-20.

Clarkson, M.B.E. (1991). Defining, evaluating, and managing corporate social performance: A stakeholder management model, In J.E. Post (Ed.), *Research in Corporate Social Performance and Policy* (pp. 331–358) JAI Press, Greenwich.

Clarkson, M.B.E. (1995). A stakeholder framework for analyzing and evaluating corporate social performance. *The Academy of Management Review, 20*, 92–117.

Cowell, S.J., Wehrmeyer, W., Argust, P.W., Graham, J., & Robertson, S. (1999). Sustainability and the primary extraction industries: theories and practice. *Resources Policy, 25*(4), 277–286.

Crowson, P. (1998). Environmental and community issues in the mining industry. *Natural Resources Forum, 22*(2), 127–130.

Delios, A. (2010). How Can Organizations Be Competitive but Dare to Care? *Journal of American Academy of Management – Perspectives, 24*(3), 25-36.

Delmas, M., & Toffel, M. (2004). Stakeholders and environmental management practices: An institutional framework. *Business Strategy and Environment, 13*, 209–222.

Ditlev-Simonsen, C.D., & Midttun, A. (2011). What motivates managers to pursue corporate responsibility? A survey among key stakeholders. *Corporate Social Responsibility and Environmental Management, 18*, 25–38.

Dobele, A.R., Westberg, K., Steel, M., & Flowers, K. (2013). An Examination of Corporate Social Responsibility Implementation and Stakeholder Engagement: A Case Study in the

Australian Mining Industry. *Business Strategy and Environment*, 2013, wileyonlibrary.com, DOI: 10.1002/bse.1775.

ElZein, H., & Alameddine, M. (2012). Development of Sustainable Ethics Education in Business: A Framework. *American Academic & Scholarly Research Journal, 4*(5).

Epps, J.M. (1996). Environmental management in mining: An international perspective of an increasing global industry. *Journal of the South African Institute of Mining and Metallurgy, 96*(2), 67–90.

Fitzpatrick, P., Fonseca, A., & McAllister, M.L. (2011). From the whitehorse mining initiative towards sustainable mining: lessons learned. *Journal of Cleaner Production 19*(4), 376-384.

Hamann, R. (2003). Mining companies' role in sustainable development: The 'Why' and 'How' of corporate social responsibility from a business perspective. *Development Southern Africa, 20*(2), 37–54.

Hamann, R. (2004). Corporate social responsibility, partnerships, and institutional change: The case of mining companies in South Africa. *Natural Resources Forum, 28*(4), 278–290.

Heugens, P., Kaptein, M., & van Oosterhout, J. (2008). Contracts to communities: a provisional model of organisational values. *Journal of Management Studies, 45*, 100–121.

Hilson, G., & Murck, B. (2000). Sustainable development in the mining industry: Clarifying the corporate perspective. *Resources Policy, 26*(4), 227–238.

Huertas, J.I., Huertas, M.E., Izquiedro, S., & Gonzalez, E.D. (2012). Air quality impact assessment of multiple open pit coal mines in northern Colombia. *Journal of Environmental Management, 593*, 121-129.

Jenkins, H. (2004). Corporate Social Responsibility in mining industry: conflicts and constructs. *Corporate Social Responsibility and Environmental Management, 11*, 24-34.

Jenkins, H., & Yakovleva, N. (2006). Corporate social responsibility in the mining industry: Exploring trends in social and environmental disclosure. *Journal of Cleaner Production, 14*, 271–284.

Kapelus, P., 2002. Mining, corporate social responsibility and the ''Community'': The case of Rio Tinto, Richards Bay Minerals and the Mbonambi. *Journal of Business Ethics, 39*(3), 279–296.

Kehbila, A.G., Ertel, J., & Brent A.C. (2009). Strategic corporate environmental management within South Africa automotive industry: motives, benefits, hurdles. *Corporate Social Responsibility and Environmental Management, 16*, 310–323.

Kemp, D. (2010). Community relations in the global mining industry: exploring the internal dimensions of externally orientated work. *Corporate Social Responsibility and Environmental Management, 17*(1), 1–14.

Kepore, K.P., & Benedict, Y. (2010). Mining and stakeholder engagement discourse in a Papua New Guinea Mine. *Corporate Social Responsibility and Environmental Management, 18*(4), 220–233.

Khan, M.D.A. (2009). Ethical issues in business: a definitional approach. *American Academic & Scholarly Research Journal, 1*(1).

Kotler, P., & Lee, N. (2005). *Corporate Social Responsibility: Doing the Most Good for Your Company and Your Cause*. Hoboken, New Jersey: John Wiley & Sons, Inc.

Lynch-Wood, G., Williamson, D., & Jenkins, W. (2009). The over-reliance on self-regulation in CSR policy. *Business Ethics: A European Review, 18*(1), 52–65.

Lord, R., & Manson, D. (2011). Report on iron-rich mine water from abandoned Cleveland Ironstone mine. *Geoscientist online, July*.

McWilliams, A., Siegel, D.S., Wright, P.M. (2006). Corporate social responsibility: strategic implications. *Journal of Management Studies, 43*(1), 1–18.

Menon, A., & Menon, A. (1997). Enviropreneurial marketing strategy: the emergency of corporate environmentalism as a market strategy. *Journal of Marketing 61*(1), 51–57.

Merino, A., & Valor, C., (2011_. The potential of corporate social responsibility to eradicate poverty: an ongoing debate. *Development in Practice, 21*(2), 157–167.

Mishra, S.K., Hitzhusen, J.F., Sohngen, B.L., & Guldmann, J.M. (2012). Cost of abandoned coal mine reclamation and associated recreation benefits in Ohio. *Journal of Environmental Management, 100*, 52-58.

Muller, A., & Kolk, A. (2010). Extrinsic and intrinsic drivers of corporate social performance: evidence from foreign and domestic firms in Mexico. *Journal of Management Studies 47*(1), 1–26.

Mutti, D., Yakovleva, N., Vazqez-Brust, D., & Di Marco, M.H. (2012). Corporate Social Responsibility in the mining industry: Perspectives from stakeholder groups in Argentina. *Resources Policy, 37*, 212-222.

Mzembe, A.N., & Meaton, J. (2013). Driving Corporate Social Responsibility in the Malawian Mining Industry: A Stakeholder Perspective. *Corporate Social Responsibility and Environmental Management, April*. DOI: 10.1002/csr.1319

Nakao, Y., Amano, A., Matsamura, K., Kenba, K., & Nakano, M. (2007). Relationship between environmental performance and financial performance: An empirical analysis of Japanese corporations. *Business Strategy and Environment, 16*(2), 106–119.

Pater, A., & Van Lierop, K. (2006). Sense and sensitivity: The roles of organisation and stakeholders in managing corporate social responsibility. *Business Ethics: A European Review, 15*(4), 339–351.

Porter, M.E., Kramer, M.R. (2006). Strategy and society: the link between competitive advantage and corporate social responsibility. *Harvard Business Review, 80*(12), 78–92.

Prothero, A. (1990). Green consumerism and social marketing concept:marketing strategies for 1990s. *Journal of Marketing Management 6*(2), 87–103.

Rakowska, A., & Cichorzewska, M. (2012). Instances of Corporate Social Responsibility in coal mining: an example of chosen Polish mines. *Management, Knowledge and Learning International Conference*, 393-401.

Safa, M. (2012). Examining the Role of Responsibility Accounting in Organizational Structure. *American Academic & Scholarly Research Journal, 4*(5).

Sa´nchez, L.E. (1998). Industry response to the challenge of sustainability:The case of the Canadian nonferrous mining sector. *Environmental Management, 22*(4), 521–531.

Sirgy, M.J. (2002). Measuring corporate performance by building on the stake- holders model of business ethics. *Journal of Business Ethics, 35*, 143–162.

Slack, K. (2011). Mission impossible? Adopting a CSR-based business model for extractive industries in developing countries. *Resources Policy*. doi:10.1016/j.resourpol.2011.02.003.

Tiemstra, J.P. (2002). Wasting time and wasting the earth. *International Journal of Social Economics, 29*(4), 260-270.

Van Marrewijk, M. (2003). Concepts and definitions of CSR and corporate sustain- ability: between agency and communion. *Journal of Business Ethics, 44*(2/3), 95–104.

Velásquez, T.A. (2012). The science of Corporate Social Responsibility (CSR): Contamination and conflict in a mining project in the southern Ecuadorian Andes, *Resources Policy, 37*, 233-240.

Vormedal, I., & Ruud, A. (2009). Sustainability reporting in Norway – an assessment of performance in the context of legal and social political drivers. *Business Strategy and the Environment, 18*, 207–222.

Walsh, R.G., Johnson, M.D., & McKean, J.R. (1992). Benefit transfer of outdoor recreation demand studies. *Water Resources Research, 28*, 707-713.

Welker, M. (2009). 'Corporate security begins in the community': mining, the corporate social responsibility industry, and environmental advocacy in Indonesia. *Cultural Anthropology, 24*(1), 142-179.

Williamson, J.M., Thurston, H.W., & Heberling, M.T. (2008). Valuing acid main drainage remediation in West Virginia: a hedonic modeling approach. *The Annals of Regional Science, 42*(4), 987-999.

Yakovlever, N., & Alabaster, T. (2003). Tri-sector partnership for community development in mining: a case study of the SAPI Foundation and Target Fund in the Republic of Sakha (Yakutia). *Resources Policy, 29*(3/4), 83–98.

Zhengfu, B. (2001). Case study on agricultural ecosystem rehabilitation of coal mine area in East China. *Environmental Management and Health, 12*(1), 10-16.

Izabela Jonek-Kowalska, Phd, is a lecturer at the Silesian University of Technology in the Faculty of Organization and Management at the Institute of Economics and Computer Science. In 2006 she defended her doctoral thesis titled: *Synergy effects in market cooperation of businesses* with credits. She has authored over 100 articles and four monographs in the field of corporate and public finances and financial markets, published in domestic and international publications. Her scientific achievements include participation in several projects funded by the Ministry of Science and Higher Education.