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Social potential growth of a mining company on the basis of human capital and occupational safety



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ABSTRACT

Changes in the environment surrounding mining companies require a change in the way of thinking about the business and the reformulation of management strategies, especially in the area of human resources. Providing the right quality of human capital and ensuring its proper administration is essential to ensure efficient market operation.

In this paper the practical operation of key components, in relation to the social potential of a mining company, in terms of human capital and occupational safety is discussed. Analysis led to the evaluation of current actions and indicated possibilities for the future management of these two elements (human capital and occupational safety) within the scope of the operational strategy of a coal mine.

In the study qualitative methods were primarily used, such as: IDI — in-depth interviews with representatives (of collieries and coal companies) and social experts, a case study, and desk research (the critical analysis of existing documents). Qualitative methods were supported by quantitative study (existing data analysis).

On the basis of empirical research, key components of sustainable development in mining business operations were indicated. These components develop social potential and create new opportunities, which exist due to the use of modern strategic business management in accordance with the new economy business model.

Empirical studies conducted in coal companies and collieries in Poland attempted to explain which components are crucial for mining companies and how they have been used in operational practice; conclusions can be used in company management. Surveys like this have not been conducted in Poland to date. These surveys allow the social potential of a mining company and the consequences of its development or weakening to be understood.

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1. Introduction

The dynamically changing global economic market poses a number of new challenges for modern enterprises, in particular the constantly increasing impact of globalization processes on a company's ability to function and develop in today's economy. The competition between enterprises is ever increasing and this results in dynamic changes which until recently were difficult to imagine. Companies have to constantly review their basic

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strategic assumptions because they are under significant pressure due to changes resulting from both the increasing complexity of the environment and increasing competition on the market. One example that illustrates how important these issues are is the extraordinary economic-financial situation and how it relates to social problems within the mining industry, leading to a series of protests and conflicts between trade unions and governments. Therefore, there is a constant need to search for effective tools which will improve efficiency and increase an organization's ability to respond to changes quickly.

A new business model which contrasts the "business as usual" model can be used for this purpose. This model, sometimes referred to as NEBM (New Economy Business Model), from a strategic perspective, focuses on particular products and processes as opposed to the old business model which was based on horizontal diversification and vertical integration (Lazonick, 2006). The value of mobility and employment globalization is highlighted and, from a historical point of view, it signifies the end of the "The Organization Man". The concept of "The Organization Man" was used by W.H. Whyte, an American sociologist, in 1956 to describe a person who subordinates his/her personal goals and expectations to the requirements of the organization where he/she is employed. This dichotomy is based on the assumption that the current way of conducting a business activity does not solve social problems and it even exacerbates them and leads to environment degradation. The traditional way of doing business leads to a reduction of benefits which can be received by all participants in the long term and thus, it prevents long-term development (Ćwik, 2011). The intangible resources of an organization are highly significant in an economy based on the new economy business model and the development of employees constitutes an important factor in the development of an enterprise. To date, most organizations have been focussing their business activities mainly on tangible and financial resources and considered intangible resources as insignificant economic components. The significant role of core intangible resources in creating SCA (sustainable competitive advantage) has been indicated in a worldwide theory (Carmeli, 2001). However, a constantly changing social environment has led to a new way of thinking about intangible resources. Organizations understand that it is social capital and competences which significantly influence the formation of an organization's value, generation of profits and the achievement of competitive advantage in the 21st century (Petrick, Scherer, Brodzinski, Quinn, & Fall Ainina, 1999).

In this paper the practical operation of two key components influencing the social potential of a mining company are discussed, these being: human capital and occupational safety. Analysis led to the evaluation of current actions and indicated possibilities for the future management of these components within the scope of the operational strategy of a coal mine.

In the first part of the paper internal relations as a source of social innovation in mining companies and a possibility for its growth are discussed. Methodology research and the research area are discussed, as are the main values of the company and its significance for Polish mining. In the second section of the paper, the code of ethics and internal regulations in the scope of the Polish mining of hard coal are

described. The third section highlights occupational safety in the mining industry and its value for growth of a company. The conclusion indicates possible directions and problems to be solved in future studies in the area of potential social development.

Human capital in a mining company is specific and unique. It is also a perfect base for building social capital which is closely related to the concept of social responsibility and sustainable development. F. Fukuyama, using the definition of J. Coleman, defines social capital as an ability of interpersonal cooperation within a group and organization in order to achieve common interests (Fukuyama, 2001). The most popular categories within social capital include trust, cooperation and social networks. It is not just tangible or financial resources that are important in a modern economy but also the knowledge and skills of people. The academics and experts of management emphasize that social capital has a number of positive functions (Adler & Kwon, 2002). It includes human resources and also the entire network of relationships. It enables the achievement of goals which would not be achievable without social capital (e.g. building new types of social relations), it allows for the rapid flow of knowledge and cooperation between various outside entities. Such a situation increases an organization's adaptability and makes it easier to adapt to the new requirements of a dynamically changing environment. The goal of a modern enterprise should be to enhance the value of its capital because it leads to greater trust and is the basis for teamwork, and these two things build the social potential of the company.

The social potential of a company is the collective of personal capital which express the potential of the given community. The main values are people and their knowledge, qualifications and attitudes. Social potential is also a philosophy of a humanistic approach to people in the labour process and treating human resources as strategic capital of the company (Drucker, 2005). It has been emphasized that such a presentation should be related to the employment, development and welfare of employees (Armstrong, 2011).

Among various other factors, such as knowledge or qualifications, people and their personal sense of responsibility for the success of the organization show the strength of the potential of an enterprise (Rybak, 2003). The management of this process takes place at two levels:

- the level of standards and values which regulate the actions of social actors (in this case: employees),
- the level of actions taken by these actors.

This approach outlines the shape of the institutional evolution of the economy and acts as background when attempting to answer the question: what mechanisms motivate an organization to act in accordance with the standards and values which are considered to be essential for good social interaction? The values of the social system of the organization and their acceptance by social actors should be the factor which builds social relations as well as mutual support and interdependence. In order to achieve this the principles of social responsibility in the strategic operations of an enterprise must be instilled.

2. Methods

This paper presents selected results of the author's empirical research conducted in 2012 and 2013 in connection with a doctoral dissertation at the Faculty of Social Sciences of the University of Silesia. The goal of this dissertation was to create a sociological study on corporate social responsibility in Polish hard coal mining, which is still a strategic branch of industry in Poland and the surrounding region. Such research had not previous been conducted in Poland.

The research area included the Polish mining of hard coal. As of January 1 at 2015, this sector consisted of:

- 4 coal companies: Kompania Węglowa SA, Katowicki Holding Węglowy SA, Jastrzębska Spółka Węglowa SA, Południowy Koncern Węglowy SA (these companies possess 27 coal mines),
- 1 independent coal mine KWK "Kazimierz Juliusz",
- 1 independent coal mine LW Bogdanka SA outside the Upper Silesian Coal Basin,
- 3 private enterprises: Siltech, PG Silesia and PPHU "Ekoplus".

On the basis of the characteristics of the Polish hard coal mining sector, purposive sampling was used. The prescribed research area covered all existing coal companies and coal mines

The methodology of the research task included various analytical tools in order to achieve optimal, complete diagnosis of the CSR in mining hard coal. Qualitative methods were primarily used in this study and these included: 25 indepth interviews (IDI) with the representatives of coal mines, coal companies and social experts, desk research and the case study. The group of experts were made up of professionals with vast knowledge and experience. The questionnaire covered about 40 issues in CSR thematic areas, such as: employees, customers, the environment and the social environment. Qualitative analysis of interviews includes 401,611 characters, excluding spaces. The case study concerned the issue of employer responsibility towards the mining community with regards to the lack of occupational safety. It includes the critical analysis of the project "Safe work - safe family. The promotion of corporate social responsibility in the context of occupational safety". The project includes the analysis of mining families' diaries and a series of workshops with the participation of coal companies' representatives, therefore the scope of the research material for analysis was extended by material from workshops codified into characters of workshop protocols.

This research concerns the author's own project conducted in 2010–2011. The results of desk research is crucial for the phenomenon being examined. This research involved the critical analysis of:

- literature on the subject,
- existing documents in the archives of all Polish mining companies, such as internal organizational documents, rules of procedure, codified principles and regulations, the national arrangements currently in force, as well as

- documents and reports available thanks to the agreement of the coal companies,
- research projects conducted in the Central Mining Institute from 1997 to 2012,
- reports of the Supreme Chamber of Control from 1995 to 2011.
- the Polish Ministry of Economy reports from 1997 to 2012,
- Polish legal acts, strategies and governmental programmes and ministerial decrees from 1949 to 2012,
- parliamentary bulletins.

Quantitative study focused on the examination of existing data, e.g. statistical analyses of registers and reports of the Polish government and other official documentation, including:

- Reports and the comparison of data from the State Mining Authority on mining accidents between 2001 and 2013,
- the Polish Ministry of Economy's reports on Polish mining from 2007 to 2012,
- reports on the state of essential natural risks in mining from 2000 to 2012,

Qualitative methods were supported by quantitative study supporting or opposing the proposed thesis.

3. Results and discussion

3.1. Values of mining companies

Mining is a peculiar sector of the economy and its proper functioning is determined by multiple economic and social factors. The author's research shows that all representatives of coal companies and coal mines consider social relations and occupational safety to be key values in contemporary management. In most cases, the following components, in the table below, were the most commonly specified as the values of the company (Table 1).

The concept of organizational culture of a company as a component of the value system of an enterprise appeared in the respondents' responses. According to the well known Schein model (Schein, 2010) organizational culture is a set of basic assumptions and beliefs shared by members of a particular organization which determine its existence. Therefore, it can be defined as the "normative glue" that holds an organization together (Scheel & Cross, 2007). However, only one respondent linked this aspect with the value system of a

Table 1- Common main values of the coal companies.

efficiency.

Coal companies Common main values 1. Kompania Węglowa SA, 2. Katowicki Holding Węglowy 2. Occupational safety, SA, 3. Environmental protection, Węglowa SA, 4. Customer orientation, Węglowa SA, 5. Activity among the local community, Węglowy SA 6. Operational and investment

mining company. Organizational culture currently has not only an integration function but also an adaptive function which allows the operations of the company to adapt to the requirements of the environment, and thus it facilitates the functioning of the principles of social responsibility in the enterprise. It is also an integral part of the structural capital which also includes the intellectual property of the company, databases, management processes, IT infrastructure, the reputation of the company, shareholders, organizational concept and documentation relating to particular management processes. Human capital together with structural capital are two basic forms of intellectual capital. The concept of human capital is understood as the knowledge, experience, qualifications and skills of the employees which are significant for the results of a company's operations. Structural capital includes knowledge acquired and instilled into the company's structure, its processes and culture (Edvinsson & Sullivan, 1996). It is a factor of great importance because: it has a positive impact on the improvement of key competences, it supports the process of organizational improvement, it is used to create innovative solutions, and it allows for links to be built building between the company and the environment. This is the reason for the more effective use of the intellectual potential of employees and therefore for building and maintaining a competitive advantage. Collective experiences and common skills usually lead to the occurrence of new forms of activities but also a new level of social relations. Recently, this has been accompanied by the concept of relational capital; this refers to the relationships within the networks of co-workers (including market channels, relationships with clients and suppliers, and capital ties), their satisfaction with such relationships and their loyalty level to the company (Cousins, Handfield, Lawson, & Petersen, 2006).

Human capital management and organizational culture are made up of linked relationships which cannot exist independently. The idea of the core values of the employees and the company can be the basis for establishing a relationship with the environment and building upon the preexisting organizational culture and identity. Organizational culture can be changed over a longer period of time, provided that the system of procedures and their internal criteria are consistent (Konecki, 2007). Contradictory criteria induce a cognitive dissonance and its liquidation usually contributes towards the confirmation of the existing organizational culture and rejection of the postulated culture. A perceived lack of consistency in the study led to claims that it has a negative impact on the employees and the system feedback means that the system has a tendency towards self-regulation and internal balance which reconstructs its former identity.

Values are specified in the form of a code of ethics in two of the companies investigated. In the case of Katowicki Holding Węglowy, the values adopted by the company as the key values are: trust, development, responsibility, honesty, transparency and professionalism. The results of the analysis of internal documents from all companies (including Jastrzębska Spółka Węglowa, Kompania Węglowa and Tauron Wydobycie) are that they all have particular values included in their strategy. In the case of LW Bogdanka, the value system is associated with the declared mission of social responsibility: the values which we follow are: honesty, professionalism and

responsibility. These values ensure a harmonious development of the enterprise which achieves its economic goals in accordance with the social expectations and environment requirements (LW Bogdanka, 2013).

Some respondents drew attention to the "bureaucratic" treatment of the existing value systems in their organizations. Recognizing it as a set of standards at the declarative and actual level calls attention to the role of consensus which rationalizes social and economic life. Rational actions, in contrast to emotional and traditional actions, are characterized by the clear determination of a goal and then a review of measures which allow for this goal to be achieved and then the selection of the most appropriate measure or measures. Some respondents stated that formalizing the values which are significant for a particular company would be important for their further dissemination and functioning.

One of the respondents underlined the fact that the unification of the values of coal mines at the central level and their top-down implementation determines the manner in which the entity operates socially: "Some rules have to be determined. If such rules are not determined, people have too much freedom". Thus, the rules in this case include some "general procedures" which the actors (employees) of a particular company know and use in various situations. As it is argued by A. Giddens, the rules are a part of the "wisdom" of the actors and very often they are of a normative nature (Giddens, 1991). The social standards which are present in the mining population studied are strongly rooted in tradition, which is created in part through customs. The fact that are some common behaviour for mining society, constitutes a sufficient reason why an individual acts in a particular manner and the past determines the operation mode and this is particularly visible in the

Four out of five representatives of the companies could highlight the basic values of their organizations: The greatest value of the company are employees. However, some respondents could not specify whether any value systems were present in their mining company or whether the employees of coal mines are aware of such values. A similar aspect is shown in the studies concerning the expectations of the employees of Polish coal mines with regard to motivation, which were carried out at the AGH University of Science and Technology. The results from the studies show that financial issues are not dominant and, in fact, issues concerning the possibility for personal development and active leisure are significant. Nevertheless, it should be stressed that such a result concerned a group of respondents made up of students of extramural studies in AGH, Cracow. A group of physical workers manifest slightly different preferences and expectations. First of all, they expect increased salaries but safety issues and working atmosphere were also highly important. Many of them are also keen to gain additional qualifications which could lead to more promotion opportunities. Employees expressed their willingness to change their approach to their tasks and to have greater involvement in others' work (especially white-collar workers), if it involved getting tangible benefits, resulting from an incentive based system, in return. Employees also highlighted the uniqueness of the expectations of their employer and the associated remuneration or other incentive factors (Bator, Fuksa, & Ślósarz, 2012).

Human capital is undoubtedly the key element in the implementation of the principles of sustainable development and building the values of a modern enterprise. The knowledge, skills, attitudes, creativity and values of employees is what falls under the concept of human capital. Human capital is the crucial factor which determines the competitiveness and innovation level of an entity. As a results of these studies a need to assess the values and characteristics of human capital in a mining company has arisen. As in the fundamental analysis, the basis of the study is the determination of the values of the company. More and more models for the determination of values appear in management science and they can be applied in any industry which is being studied. The measurement of values is also important for investors and shareholders as it explains the difference between the market value and book value of the company. The value can also be perceived from a manager's point of view, who by measuring intellectual value can appreciate and carefully guide his employees.

The results of pilot studies, carried out by other researchers, illustrate the need to measure intellectual capital which has a specific value and can be the source not only of values in the future but also of innovation and competitiveness of mining companies and their success (Kowal & Podobińska-Staniec, 2012). According to these results, "intellectual potential" is focused mainly on managers having relevant experience and qualifications as well as practical knowledge. The employees of the mining companies subjected to the study, greatly appreciate their knowledge, and therefore a hypothesis can be suggested that they can also use this knowledge to bring as many benefits as possible to the company. Therefore, it is worth attempting to assess intangible assets in order to obtain a full picture of the business and to determine its goals and development directions. The success of a company is in fact dependent on a properly constructed strategy and, above all, its consequent implementation which increases the development possibilities of the organization and fits in with the current needs of the economy based on the knowledge of its employees.

3.2. Mining codes of ethics in the value system of the company

Codes of ethics based on a common normative system play a significant role in creating a commonly acceptable value system in a company. Codes serve various interests and play multiple functions in achieving a consensus of professional values and ethical norms (Frankel, 1989). They can also be an element determining the relations of the enterprise with its surroundings and stakeholders (McKinney, Emmerson, & Neubert, 2010). Moreover, since they are instruments used for creating social and professional order in the operations of the enterprise, they contribute to the integration of employees with regard to the common value system. The same function is performed by informal codes (e.g. Tradition of a Treasurer or the mining ethos of work).

A Code of Ethics and Anti-Corruption Handbook are in force in both companies studied. In the case of KHW, the Code of Ethics has been in force for 8 years and the company devotes a great deal of attention to ethical issues in the management system and has formalized structures in this regard. For example, the company employs an ethics counsel which prepares a report on operations every two or three years. Annually, the number of cases reported to the Ethics Counsel amounts to approximately 100 complaints and there is also information on what matters they concern and how these complaints are distributed among the various parts of the company.

LW Bogdanka also has an Ethics Code and according to its provisions, the company declares that it respects the applicable Polish regulations in its operation as well as good manners and the principles of corporate order. It operates in accordance with the ethos of work, respecting mining traditions and customs as well as standards of the Code of Ethics. It is not concerned with the political or ideological activity of employees as this is viewed as entirely personal. An employee may inform their direct supervisor or the Ethics Counsel about any violations of the code of ethics. It is believed that creating a special position in order to cope with staffing problems is a functional requirement of large organizations in the era of the rationalization of social ethics and it allows these social ethics to adapt to the values of the surrounding society, which consequently brings stabilizing and integrating results (Dahrendorf, 2008).

The proper functioning of the code of ethics is of great importance for the members of the organization because it provides "guidelines" on how to advance in the professional world. The code of ethics creates the culture of the organization, along with other elements of the systems of the organization, such as: artefacts, organizational slang, customs, rituals, patterns of action, heroes, normative systems, history and tradition. In some way, it provides the actors of the social life of the particular organization with a sense of security and constancy. Unfortunately, some codes of ethics can be somewhat illusive and they do not always prevent the occurrence of negative actions (e.g. corruption and other scandals).

3.3. The safety of an employee in an underground mining company as the superior value

The issues of occupational safety in an underground mining company are of utmost importance for the proper functioning of the institution. A range of documents which regulate both work organization and the discipline of coal mine operations are present in each mining company. The key documents related to ensuring safety and health of employees are as follows:

- a mine operations plan regarding the identification of natural hazards and classification of deposits, seams, excavations and their parts and other areas within the mine with particular degrees, categories or classes of risk (Regulation of the Minister of Internal Affairs and Administration (Journal of Laws No. 94, item 840, 2002))
- a health and safety document concerning the evaluation of risk related to the mining operations.

According to the provisions of the Regulation of the Minister of Economy of June 28, 2002 on occupational health

and safety, regarding the carrying out of mine operations and special fire protection in underground mines (Journal of Laws No. 139, item 116), the safety document constitutes a set of internal regulations and documents which allows for the evaluation and documentation of occupational risk as well as the use of necessary preventive measures which decrease this risk in the mine (Konopko, 2012).

Each respondent believes that their enterprise has adequate solutions concerning the health, safety and welfare for its employees. These solutions ensure protection of the employees and these standards have improved greatly over the last 10–20 years. The companies provide additional and extended health insurance and a significantly expanded scope of medical tests to all their employees:

In terms of steps taken to ensure the better care of the safety of employees, the respondents highlighted:

- the use of modern machinery and new technologies,
- a wide range and regular training sessions,
- the use of more modern technical equipment,
- more efficient organizational solutions,
- better personal protective equipment,
- the use of a financial incentive system, bonuses provided for safe work (it should be underlined that these awards are granted in the form of team bonuses and their aim is to trigger a sense of responsibility of an employee not only for himself/herself but also for other members of his/her team),
- the individual motivation of an employee through health and safety competitions based on voluntary participation and the willingness of employees; in this case, motivation is created mainly by financial awards,
- reviews of management systems which ensure the provision of information on the areas in need of improvement and enhancement,
- using the package of "common ideas" and using the experience of other coal mines based on the "benchmarking" principle,
- development of long-term action plans and an improvement in the level of health and safety at work plans,
- risk analysis for particular positions (Jarosławska-Sobór, 2014).

Three of the respondents highlight that the occupational safety standards concern cooperating partners of coal mines as well. Frequently, the respondents who were directly representing the coal mines pointed out that the use of rank-andfile initiatives and the fact that the ideas of employees concerning the improvement of potentially dangerous situations are taken into consideration in the operations, is of great importance for the improvement of the situation of employees with regards to safety. This promotion of "ingenuity" and involvement of employees is, in the cases of the organizations surveyed, some kind of a reaffirmation ritual and its purpose is to refresh or recover the sense of balance in the organization. The rituals and ceremonies do not constitute a means of communication between the employees but they have an integrational function. They shape the manner of understanding the way in which the organization works, the admissibility of particular behaviour and adaptation to the

changing environmental conditions. They are also conducive to the development of technical and social innovations. However, as discussed by academics, the creation of innovation does not mean its immediate success. It takes a significant amount of time before innovation is "accepted" by the wider community and becomes the preferred or expected way of conduct — that is, before it achieves the quality of acceptable standards (Sztompka, 2002). In this study, the "innovation agency" which operates within one of the coal mines studied can be used as an example. The respondents also mentioned the extensive system of employee medical care and health packages which are act as appreciation of the work of a miner.

This area of business activity of the company, and therefore the activities concerning safety at work was also positively evaluated by the experts who took part in the study. According to their opinion, health and safety at work competitions organized for the employees are particularly important in order to improve the current situation. As a potential source of problems in the relationship between employees and the management board of a coal mining company, the experts specified, among others:

- the development of soft skills, especially among mining supervisors:
- 2. issues surrounding the organization of work.

However, it is emphasized in the science of management that even if a favourable atmosphere for using the knowledge capital and information of the employees is created within a company, there remains the question, why should employees make strenuous efforts in order to benefit the organization? Such cooperation can only be expected if the employees feel the rewards of such efforts. This means that the release of the intellectual capital of the employees requires not only a strong emotional connection with the company, e.g. a sense of job security, but also motivation which is achieved through salaries being at an appropriate level and an extensive system of intangible awards and accolades (Obiój, 2001).

All respondents claimed that they do not carry out regular surveys concerning the level of confidence of their employees and their job satisfaction. These issues are raised during the assessment of the employees or when other surveys are carried out. This statement seems to be important due to the fact that sociologists frequently emphasize that the standards and values about, which the respondents were asked during an interview, play a significant role in shaping the ethos of work which is understood as a specific combination of ethics and work ideology (Mossakowska & Wasilewski, 2012). Ethos is expressed in a high valuation of work and consistency between the beliefs and practical behaviour of actors at work (Walczak-Duraj, 2010).

4. Conclusions

Polish enterprises are changing as a result of ownership changes and the economic environment. Very often, it requires: the reformulation of the management strategy (including human resources management), changes in the course of actions and changing the way of thinking about the business. Having the proper amount of human potential and its proper management is essential for the effective social growth of the company.

For mining companies, employees are a key component of this. On the one hand, they are the subject of social activities of the company, they take an active part in such actions by executing them and also inspiring others to take social activities. On the other hand — the employees are beneficiaries of the social activities of the enterprise. The managers of coal mines and coal companies demonstrate a sense of responsibility for the company's relationship with its employees. A growth in the interest of employees in ethical standards in the workplace can be observed. The functioning of mining ethical codes allows for the work ethics of the miner to be built.

Over the years, the priorities of mining companies have changed and this has led to an increased role of soft skills in management. According to research, social potential is concentrated especially in the group of managers with proper education and qualifications. And so a need for the estimation of the values and properties of the human capital in mining companies is now necessary.

Occupational safety is a superior value for coal companies and many tools have been used to improve it; quantitative analysis of statistical data concerning mining accidents confirms this.

A sustainable organization is an organization which provides its employees with a balance between their professional and private lives, it builds a friendly social environment inside the company, takes care about interpersonal relationships, as well as safety at work and respecting an employee's rights. Empirical studies conducted in the coal companies and collieries of Poland and analysis of selected key components, such as human capital and occupational safety led to the evaluation of the state of current actions and indicates possibilities for the future management of these components within the scope of the operational strategy of the coal mine. Conclusions can be used in the management of these company.

Relational capital which is built in this way creates a system in which individuals focused on social activity, citizenship and trust act as a resource of social capital which can be used for the building of structures which lead to economic development.

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