

Jacek BENDKOWSKI
Silesian University of Technology
Faculty of Organization and Management
Institute of Management, Administration and Logistics
jacek.bendkowski@polsl.pl

EMPIRICAL STUDY ON ENGAGEMENT OF COAL MINES EMPLOYEES

Abstract. Hard coal mines in Poland are currently required to increase their efficiency of operation. One of the postulated solutions is to increase employees' engagement. It plays a crucial role when it comes to influencing the coal mines efficiency in Poland. This is primarily due to the fact that despite of a high degree and level of automation, the labour input in hard coal mines still remains at a high level. The paper presents the results of the empirical study on engagement of hard coal mine employees working in one of the leading coal companies in Poland.

Keywords: engagement, effectiveness, motivation, identity, hard coal mine

BADANIE ZAANGAŻOWANIA PRACOWNIKÓW KOPALŃ WĘGLA KAMIENNEGO

Streszczenie. Kopalnie węgla kamiennego w Polsce stoją obecnie przed koniecznością poprawy efektywności działania. Jednym z postulowanych rozwiązań jest zwiększenie zaangażowania pracowników. Ma ono istotny wpływ na efektywność kopalń węgla kamiennego w Polsce. Wynika to przede wszystkim z faktu, że pomimo znacznego stopnia i poziomu automatyzacji nakład pracy ludzkiej w kopalniach węgla kamiennego utrzymuje się wciąż na wysokim poziomie. W artykule przedstawiono wyniki badań zaangażowania pracowników kopalni węgla kamiennego pracujących w jednej z czołowych spółek węglowych w Polsce.

Słowa kluczowe: zaangażowanie, efektywność, motywacja, tożsamość, kopalnia węgla kamiennego

1. Introduction

The main issue that the hard coal sector in Poland has to face nowadays is how to increase mines effectiveness. In fact, due to restructuring, coal companies have significantly improved their technical and economic indicators over the past few years, yet the competitive environment requires further steps to be taken to improve the overall results.

One of the postulated solutions is to increase employee engagement. Employee engagement can take different forms: as engagement towards a company in which they are employed, as engagement in work they perform or engagement towards social environment where they live¹. This paper concerns the first of the two mentioned forms, namely organizational engagement, understood as “identification with a mission, common values, goals and tasks of the company, the need to belong and readiness for action going beyond standards, prioritizing organization interests even over ones’ own needs².” The research proves, that there is a direct dependence between the effectiveness of organizations and employee engagement. Enterprises the employees of which show high level of engagement are, among others, better assessed by their customers, are characterized by higher profitability and productivity, they manufacture products of better quality, are characterized by reduced number of accidents at work, theft and absenteeism rate³.

Employee engagement significantly influences the effectiveness of hard coal mines in Poland⁴. This is primarily due to the fact that despite of a high degree and level of automation, the labour input in hard coal mines still remains at a high level. The final result is, therefore, to a large extent dependent on employee engagement, both in cognitive, behavioural and emotional scope.

The aim of this article is to present the results of research of engagement of hard coal mines employees working in one of the major coal companies in Poland⁵. The paper contains conclusions of cognitive and utilitarian nature.

¹ Juchnowicz M.: Zarządzanie kapitałem ludzkim a poziom zaangażowania pracowników. Zarządzanie Zasobami Ludzkimi, nr 3-4, 2010, s. 57.

² Wojtczuk-Turek A.: Zaangażowanie jako istotny wyraz postawy pracownika wobec pracy. Edukacja Ekonomistów i Menedżerów, nr 3(10), 2009, s. 25.

³ Harter J.K., Schmidt F.L., Agrawal S., Plowman S.K.: The Relationship Between Engagement at Work and Organizational Outcomes 2012 Q12® Meta-Analysis, Gallup, February 2013 (<http://www.gallup.com/services/191489/q12-meta-analysis-report-2016.aspx>, access: 05/20/2017).

⁴ The initiatives to increase the effectiveness by increasing employee engagement were successfully undertaken in the past. It is enough to mention work competition. On July 27, 1947, “Trybuna Górnicza” published an appeal of a miner from Zabrze Wincenty Pstrowski, titled “Who will hew more than me”.

⁵ The research was conducted by Polish branch of Boston Consulting Group at the request of management of the studied coal company in November 12-22, 2013. The results were developed on the basis of the unpublished study report titled Employee engagement study results, December 2013.

2. Characteristics of the conducted research

The research was conducted among the group of 3,250 employees i.e. approx. 16% of the total workforce of one of the coal companies in Upper Silesia, representing all organizational entities of the enterprise.

The test model assumes, that engagement is the resultant of the existing management system (work organization) and individual motivation. Employees are engaged the most, when they perform their duties not because it is their obligation, but when it constitutes a certain value, a challenge of sorts inspiring them to act both as a professional and as an individual. Whereas management system (work organization) covers all systems, regulations and activities increasing employee responsibility for the achieved results. Combination of individual motivation and work discipline make employees passionate about their work while being aware of the responsibility for results and organizational awards related to them.

The employee engagement level depends on crucial factors in the following four areas being a combination of individual motivation and work discipline:

- *aims and aspirations* – employees know and accept the vision and goals of the organization. There is a correlation between company's aims and aspirations of employees (their motivation to act). Common vision is an inspiration for employees.
- *work organization and supportive environment* – effective work organization requires that employees have strictly defined scope of duties, have necessary resources and can rely on efficient coordination mechanisms. It is complemented by supportive social environment, making it possible for the employees to participate in the decision-making process and development of common goals, as well as characterized by high level of trust conditioning cooperation and mutual support,
- *results management and awarding and development of employees* – effectiveness requires that employees are provided with feedback on their work on the one hand, and on the other hand, they need incentive system supporting individual effectiveness, required behaviour and professional development,
- *management skills and manner of management* – employees need a supervisor who can efficiently communicate the organization's aims, providing them with feedback on work results and making the professional and personal development possible. They need a manager who is honest, who listens to what others have to say and who is fair. A manager who is not only efficient when it comes to implementation but also shows empathy as a mentor.

The research was conducted by way of a questionnaire. The questionnaire contained 35 standard statements concerning the key factors of engagement shaping in the following areas: (1) pride and satisfaction of employees, (2) aims and aspirations, (3) work organization

and supportive environment, (4) results management and awarding and development of employees, as well as (5) management skills and manner of management.

Moreover, the questionnaire contained 16 statements taking into account the specific nature of the mining enterprise, an additional multiple choice question concerning actual employee assessment criteria and two open questions concerning what the respondents like most about their work and what they would like to change. The respondents assessed each statement in 5-point scale: I strongly disagree (1), I disagree (2), I'm neutral (3), I agree (4), and I strongly agree (5). The final result is an arithmetic average of the results of all respondents. The obtained results allowed to create a benchmark based on the results of research of 26 companies from Central and Eastern Europe (see Fig 1).

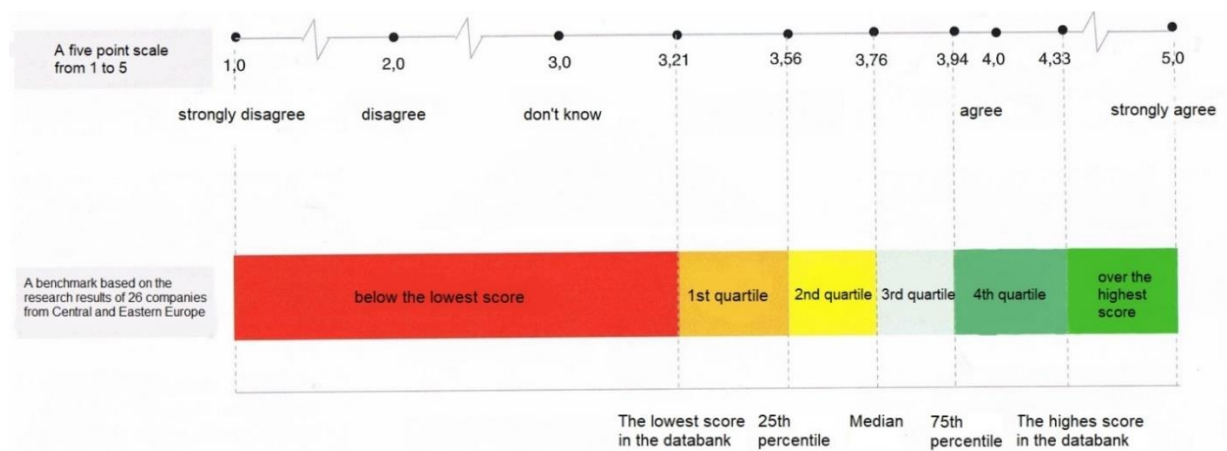


Fig. 1. Benchmark of survey results
Source: BCG: Engagement study results, op.cit.

All entities were characterized by high attendance at the level of approx. 88%. 50% respondents answered the open questions. From organizational point of view, in coal mines the research was conducted with the use of questionnaire in paper form, while in case of Material Logistics Department and Management Office the electronic version was used.

3. Test results

The employees are proud of being miners (4th quartile) As a result, their work for them is a source of satisfaction. At the same time, they critically assess the remaining areas of engagement development i.e. work organization and supportive environment (2nd quartile), results management and awarding and development of employees (2nd quartile), aims and aspirations (1st quartile) and management skills and manner of management (1st quartile). The lowest score was given to the management skills and manner of management. It needs to

be emphasized, that the assessments of administration and miners differ significantly. While the assessments of administration workers are above average (3rd or 4th quartile), the assessments of miners are below average (usually 1st quartile, less often 2nd quartile), and in several cases even below the lowest rank from among the entities being taken into account for benchmark purposes. The activities to incite the individual motivation and engagement in work were given the lowest marks by miners.

In Figure 2, the summary of results for particular areas is presented, while Tab. 1 shows the percentage of negative answers divided between administration workers and miners.

3.1. Pride and satisfaction

This is the area that was given the highest marks by the respondents (4th quartile) The research indicated, that the respondents, in general, are proud of what they do for the mining industry. When answering the open questions, they indicated that it was mostly due to the fact that they worked in a profession with traditions, esteemed by the society. On the other hand, it was due to the fact that the company offered huge material and financial potential. Working for a company of stable market position gives them the sense of security. The respondents declare, that they like their work, which results from the qualifications held and professional development opportunities it offers. Majority of them would not hesitate to recommend their work place for those seeking employment (4th quartile).

3.2. Aims and aspirations

This area was criticized by the respondents (1st quartile). They complained mostly about poor communication in the company. As much as 24% of miners and 14% of administration workers claim, that they do not know what is going on in their enterprise. Only two thirds of miners (64.7%) know the aims they pursue and only 14.2% know it very well. Similar percentage (61.8%) claims it understands the goals of the company. Only 9.9% of miners declared that they know very well the goals of the company they work for.

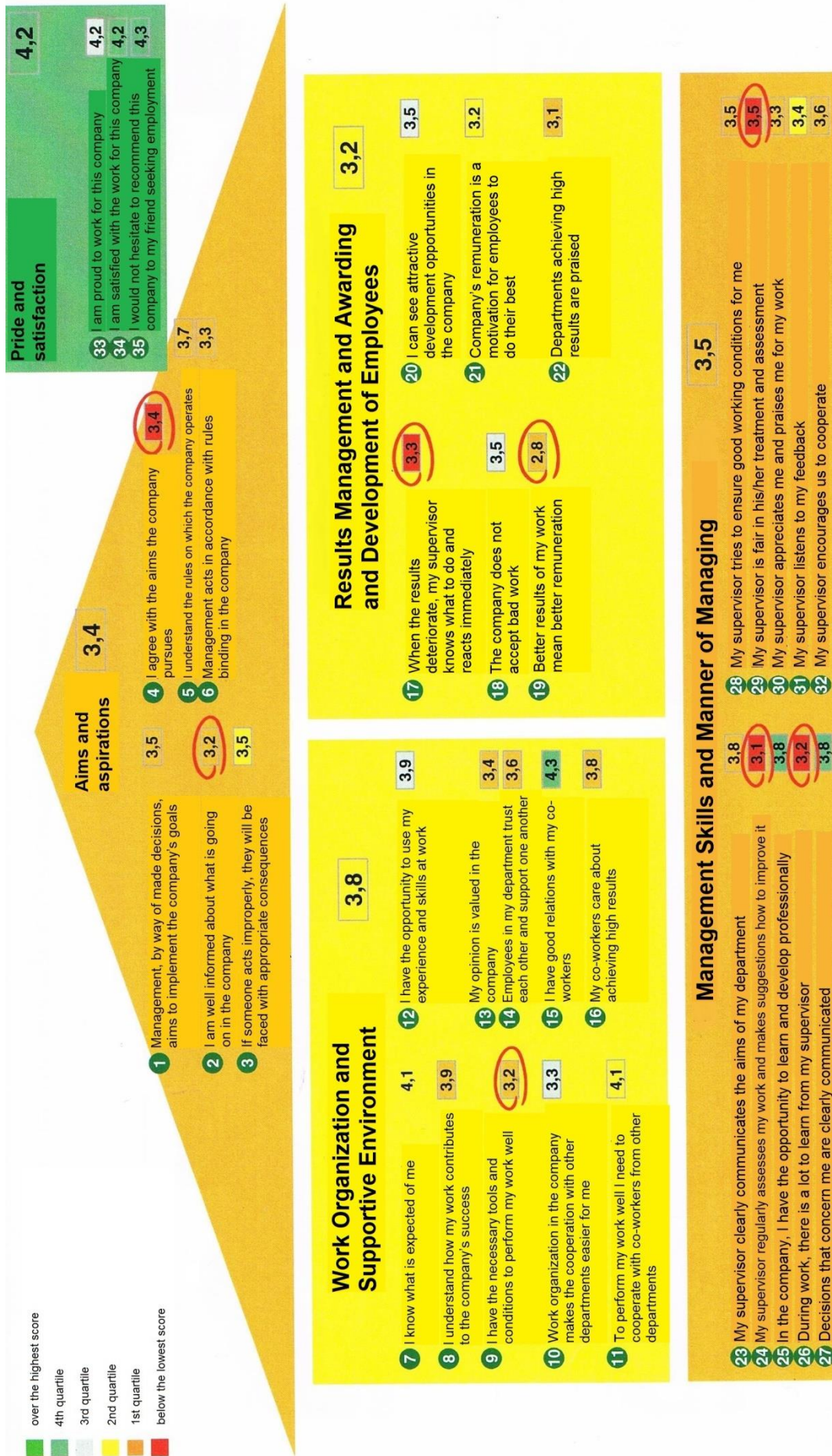


Fig. 2. Collective study results
Source: BCG: Results..., op.cit.

38.1% of respondents do not understand the aims the company is trying to achieve. They blame it on the management. Only a half (56.9%) of miners is regularly informed by their managers. Meanwhile 22% of respondents declare that their supervisors do not keep them updated on regular basis.

The respondents do not agree with the aims their company is pursuing. The result is below the lowest assessment in benchmark of 26 companies from Central and Eastern Europe. One third (34.4%) of the respondents do not see any correlation between the goals of their company and their individual goals. A similar percentage of respondents (32.9%) claim, that the implementation of assigned tasks encourages them to cooperate with other co-workers.

Answers to additional questions pointed to the visible distance between the miners and the management. Miners accuse their supervisors of lack of interest in their work and understanding of problems of (according to them – tedious and demanding) work of a miner.

The respondents do not believe in the sincere intentions of the management. A significant percent (19%) believes, that the management does not always follow the organization rules, and 10% claims that the management does not pursue the company's goals.

3.3. Work Organization and Supportive Environment

Work organization in the studied enterprise received good marks. According to the respondents, it is the result of clear and transparent distribution of tasks (2nd quartile) and very good conditions for cooperation (3rd quartile). It is especially important in case of mining enterprises, as good implementation of tasks requires cooperation with other employees of the organization, which was confirmed in the respondent's answers (2nd quartile). Respondents complain about the lack of necessary tools and work conditions (result below the lowest rated). The respondents pointed to the fact that the new tools purchases are not discussed with their end users.

Almost three quarters of respondents (73.1%) claim that the work they do can be made more efficient. Only a half (52%) of respondents believes, that good ideas concerning work are implemented in their department, and only 39.7% declare that they are encouraged to propose improvements.

In the area of supportive environment, the respondents rated highest the relations with co-workers (4th quartile) and the possibility to use their skills and qualifications at work (3rd quartile). In their answers to open questions, the respondents pointed to the fact, that positive atmosphere in the team makes the work easier. What the respondents also value is the lack of monotony in their everyday tasks and the possibility to use their skills.

The lowest rated element was the possibility to participate in the decision-making process. Only 53.2% declare, that the supervisor asks about their opinion when solving work-related problems. The second lowest rated element in the area of social support is trust and mutual support (16% of negative answers), which is a surprise compared to the high assessment of mutual relations and the belief in the necessity of cooperation. The respondents were also

critical towards the attitude of others towards work. In the answers to the open questions dominated the opinion that success can be achieved by unity and undisturbed cooperation and arguments during briefing introduce chaos and unnecessary tense atmosphere.

3.4. Results Management and Awarding and Development of Employees

The respondents vary in their opinion about the area of results management in the studied mining enterprise. The opinion that the company does not accept bad work was rated the highest (3rd quartile). The lack of correlation between the results obtained and remuneration and incompetence of supervisors were noted as the weakest elements in this area. Only 58.1% declare that their supervisor motivates them to be more effective.

Almost half of the respondents (39% and 46% respectively) believe, that there is no correlation between achieved results and remuneration (result below the lowest rated). And again, almost half of the respondents (46.4%) claim that their remuneration largely depends on the obtained results.

In the answers to the open questions dominated the opinion that there are no clearly defined and outlined conditions for pay rise, promotion and personal development, which could influence the development of the whole enterprise. The respondents also pointed to the fact, that the variable part of the remuneration is relatively low and – as a result – barely noticed by the employees. Only 39.4% claim that they receive bonuses for achieving expected results and 49.6% indicated that their supervisor regularly and clearly informs them about tasks/goals on which the bonus depends. For a majority of respondents (69.4%) only OHS bonus fulfils its motivation function.

As it was already mentioned, the second poorly rated element of the results management system is the management staff. Almost one fifth of the miners (19%) believe, that their supervisors do not have analytical and conceptual skills, which manifests itself in the fact that during emergency situations their supervisor is not able to immediately and correctly react (result below the lowest rated). In the answers to the open questions the employees indicated that in a situation requiring immediate reaction they expect from their supervisors detailed tasks to implement, that will aim to overcome the crisis.

The respondents rated highly the development opportunities in their company (3rd quartile). Almost a half of them (46.6%) believe, that acquiring new skills and knowledge is appreciated in the studied enterprise and the best employees have the best development opportunities (49.5%), which results in better pay. The lowest rated aspect was the willingness of management to recognize the employees' achievements, for example by way of praising.

Table 1

Percentage of negative answers

Item	Area/Statements	A	M
<i>Aims and aspirations</i>			
1.	Management, by way of made decisions, aims to implement the company's goals	2%	10%
2.	I am well informed about what is going on in the company	15%	24%
3.	If someone acts improperly, they will be faced with appropriate consequences	8%	18%
4.	I agree with the aims the company pursues	8%	9%
5.	I understand the rules on which the company operates	2%	11%
6.	Management acts in accordance with rules binding in the company	5%	19%
<i>Work Organization and Supportive Environment</i>			
7.	I know what is expected of me	2%	3%
8.	I understand how my work contributes to the company's success	2%	14%
9.	I have the necessary tools and conditions to perform my work well	2%	31%
10.	Work organization in the company makes the cooperation with other departments easier for me	14%	21%
11.	To perform my work well I need to cooperate with co-workers from other departments	1%	3%
12.	I have the opportunity to use my experience and skills at work	4%	9%
13.	My opinion is valued in the company	9%	20%
14.	Employees in my department trust each other and support one another	8%	16%
15.	I have good relations with my co-workers	1%	2%
16.	My co-workers care about achieving high results	3%	7%
<i>Results Management and Awarding and Development of Employees</i>			
17.	When the results deteriorate, my supervisor knows what to do and reacts immediately	6%	19%
18.	The company does not accept bad work	11%	18%
19.	Better results of my work mean better remuneration	39%	46%
20.	I can see attractive development opportunities in the company	9%	14%
21.	Company's remuneration is a motivation for employees to do their best	22%	30%
22.	Departments achieving high results are praised	16%	25%
<i>Management Skills and Manner of Managing</i>			
23.	My supervisor clearly communicates the aims of my department	4%	11%
24.	My supervisor regularly assesses my work and makes suggestions how to improve it	22%	30%
25.	In the company, I have the opportunity to learn and develop professionally	5%	10%
26.	During work, there is a lot to learn from my supervisor	13%	25%
27.	Decisions that concern me are clearly communicated	5%	10%
28.	My supervisor tries to ensure good working conditions for me	3%	17%
29.	My supervisor is fair in his/her treatment and assessment	8%	22%
30.	My supervisor appreciates me and praises me for my work	11%	25%
31.	My supervisor listens to my feedback	6%	20%
32.	My supervisor encourages us to cooperate	6%	14%
<i>Pride and satisfaction</i>			
33.	I am proud to work for this company	1%	2%
34.	I am satisfied with the work for this company	1%	3%
35.	I would not hesitate to recommend this company to my friend seeking employment	1%	3%

Source: Own work on the basis of BCG: Engagement study results..., op.cit.

A – administration workers, M – miners

3.5. Management Skills and Manner of Managing

The respondents critically assess the qualifications of management and the dominating manner of managing. First of all, they believe that managers are incapable of efficient implementation of tasks of the team they are managing. The managers cannot clearly

communicate the goals of the department (1st quartile) and ensure good working conditions (1st quartile). The employees do not receive feedback on their work. Almost one third of the respondents (30%) indicated that the managers do not perform regular assessments of the work of their subordinates and do not propose any improvements (below the lowest rating). A similar percentage (25%) indicated that there is no opportunity to learn from one's supervisor. The respondents believe, that the management does not motivate them sufficiently enough to work. Management rarely appreciates or praises the employees for good work (1 quartile).

According to the respondents, the company is dominated by autocratic and bureaucratic style of managing, characterized by low cooperation level (1st quartile), strong focus on playing the roles by particular employees (4th quartile) and weak participation of the staff in the decision-making process (2nd quartile). This style of managing does not support organization atmosphere supporting strong employee engagement. In the answers to open questions, employees complained about poor personal culture, boorishness and conceit of the management. Tense interpersonal relations on the line employees-management the respondents justified by outdated mentality of the management, having its roots in the unwillingness to progress and self-development. As a consequence, the majority of respondents believe, that supervisors treat and assess employees in an unfair way (below the lowest rating).

By answering the additional questions about the actual criteria of employees' assessment, the respondents considered the following to be the most important: professional experience, skills, readiness and willingness to work, job seniority, knowledge, the quality of the performed work and availability. 8th place was taken by "suitable connections", 10th by "soft-soaping in relations with supervisors" and 11th. "subservience towards superiors" The very end of the list contains such criteria as: work results, ability to cooperate with others, independence, flexibility, responsibility and reliability.

4. Conclusions

1. The study indicates, that the overall employee engagement level of the studied mining enterprise is relatively low. The main source of employee engagement in the studied enterprise is pride of working in a profession of high social prestige due to hard and dangerous work. The satisfaction resulting from it, on the one hand is deepened by the awareness of stability and security of employment, on the other hand the opportunity to use the held qualifications and professional development. The most important factors influencing the increase of employee engagement in the studied enterprise include:

- good work organization;
 - no acceptance for bad work;
 - good relations with co-workers;
 - possibility to use the knowledge and skills;
 - development opportunity;
 - promotion possibility.
2. Main factors having negative influence on the engagement of employees of the studied enterprise include:
- low level of identification with parent company;
 - low level of trust in interpersonal relations;
 - undefined and inefficient incentive system;
 - insufficient management skills and bad organization atmosphere.

Insufficient communication between the management and employees, when it comes to communication of goals, results in the fact that the majority of employees does not know them, does not understand them and does not agree with the aims of the enterprise. As a result, they do not understand how company's goals translate into their individual aims.

As the results of the study indicate, the employees value their relations with their co-workers. These relations, however, are characterized by low level of trust, which mainly results from the different definitions the administration workers and miners have about the organization and the dominating authoritarian and bureaucratic organizational atmosphere. Lack of trust and, as a result, lack of necessary social capital blocks the processes of grassroots activities by workers, such as innovations and cooperation.

An important factor negatively influencing the level of engagement in the studied enterprise is the lack of clear correlation between remuneration and work results. Employees do not know what to do to get a pay rise or promotion. Moreover, huge part of the remuneration is considered unworthy of additional effort by the employees.

The empirical study shows that the factors determining low level of employee engagement in the studied coal mine company are insufficient management competences of the management and the dominating manner of management resulting in lack of trust and even in hostility. As it was mentioned before, nowadays an employee wants a supervisor who is not only efficient in implementation but also one who is an empathetic mentor.

3. Increasing employee engagement level requires decisive actions in the scope of:
- creation of common goals and values by mutual communication characterized by transparency and respect;
 - building social capital of cooperation by establishing relations build on trust, loyalty and solidarity;

- management of competences and employee effectiveness by linking goals with the incentive programme and organizational rewards and ensuring professional and individual development;
- creation of supporting organizational atmosphere.

Their effectiveness depends on the competences of coal mine management staff. Due to the above the following is recommended:

- during the recruitment for management positions – selection of candidates characterized by not only “hard” but also “soft” competences for example related to communication, team building or conflicts management;
- introduction of compulsory trainings aimed for the development of social competences, such as communication with an employee, coaching, mentoring, employee development, motivating employees, conflicts management, stress management, information overload handling or time management;
- work processes development in order to orientate them towards cooperation; use of project and process approach to tasks implementation;
- giving workers independence and autonomy of operation.

Hard coal mines in Poland are currently required to increase their efficiency. One of the postulated solutions is to increase employee engagement. Employee engagement can be understood as a workplace approach resulting in the right conditions for all members of an organization to give of their best each day, committed to their organization’s goals and values, motivated to contribute to organizational success, with an enhanced sense of their own well-being. Employee engagement is based on trust, integrity, two way commitment and communication between an organization and its members. It increases the chances of business success, contributing to organizational and individual performance and productivity. In case of the hard coal mines the engagement of the employees has a crucial role. In case of the hard coal mines in Poland the employee engagement plays a crucial role for their effectiveness. This is primarily due to the fact that despite of a high degree and level of automation the labor input in hard coal mines still remains at a high level. The paper presents the results of the empirical study on engagement of hard coal mine employees working in one of the leading coal companies in Poland.

Bibliography

1. Juchnowicz M.: Zarządzanie kapitałem ludzkim a poziom zaangażowania pracowników. *Zarządzanie Zasobami Ludzkimi*, nr 3-4, 2010, s. 57.
2. Wojtczuk-Turek A.: Zaangażowanie jako istotny wyraz postawy pracownika wobec pracy. *Edukacja Ekonomistów i Menedżerów*”, nr 3(10), 2008, s. 25.

3. BCG: Wyniki badania zaangażowania pracowników, grudzień 2013.
4. Harter J.K., Schmidt F.L., Agrawal S., Plowman S.K.: The Relationship Between Engagement at Work and Organizational Outcomes 2012 Q12[®] Meta-Analysis, Gallup, February 2013 (<http://www.gallup.com/services/191489/q12-meta-analysis-report-2016.aspx>, dostęp: 20.05.2017r).