

## THE ANALYSIS OF SELECTED INCENTIVES IN THE POLISH MINING FROM THE PERSPECTIVE OF DIFFERENT EMPLOYEE GROUPS

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**Purpose:** This article is aimed at reviewing selected incentives in the mining sector and checking how they are perceived by blue-collar and white-collar underground workers.

**Design/methodology/approach:** The article is cognitive in nature and the basic research method is the analysis of reference works and surveys. The reference work studies cover the analysis of national and foreign works. Surveys are carried out for the sample of 4000 employees, with the survey return rate of 8.75%. This article also uses a case study based on analyzing the internal documents of a selected enterprise.

**Findings:** The analysis revealed that more than one half of surveyed blue-collar employees are satisfied with the intangible incentives used by the organization, including the conditions of qualification development, as well as further education and development opportunities, while their managers entirely agree with those statements. The majority of the surveyed blue-collar workers are well aware how their work contributes to the company efficiency and finance, and a bit more than one half of the surveyed employees in this group knows the company situation when compared to the market.

**Research limitations/implications:** The studies presented in this article may contribute to further empirical studies and may provide guidelines for the mining enterprise managers relating to the incentive system improvement.

**Practical implications:** The practical implications of the completed studies are connected with their applicability for the selection of incentives in the created and improved incentive systems in mining companies.

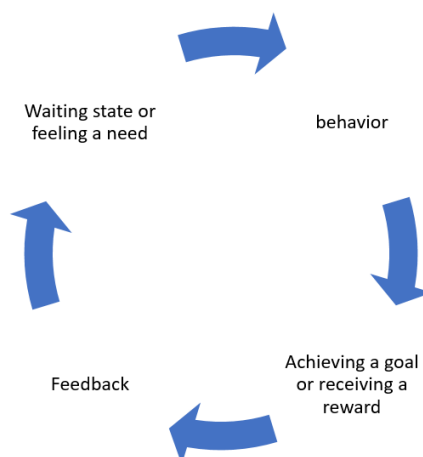
**Originality/value:** The reference work review and surveys point to the need for continuous improvement of incentive systems in mining companies.

**Keywords:** incentives, motivation, mining.

**Category of the paper:** General review, Research paper.

## 1. Introduction

In the traditional theory of management, motivating is one of four basic functions, besides planning, organizing, and control. The motivation is also broadly developed in the human resource management concept derived from the Michigan School group. An objective of the human resource management is to improve motivation, accountability, and commitment to work by implementing rules and processes which guarantee that the employees are recognized and rewarded for their achievements based on their competences and skills (Armstrong, 2012). The reference works define motivation in many ways as it is a term with many different meanings. In the first meaning, motivation comprises factors which provide energy for human behavior and conditions for it, or ensure human readiness to start the activity. In the second meaning, motivation refers to mental experiences of a human which shape the ability and direction of their activity and is a process controlling the activities so that they lead to achieving a specific goal (Kozłowski, 2009). According to other definitions, motivation is all driving forces stimulating an individual to choose, to initiate any activity or to keep ready to act, all the forces and factors stimulating and maintaining a human being in their behavior intending to achieve specific goals; the factors which affect the direction, power, and durability of the action (Jasiński, 2001). Generally speaking, it is the intention to do something to achieve something. If the intentions and actions of organization managers are reasonable, the major objective of motivating is the increased value and efficiency of the organization operations. The aim of motivating employees is to create higher work efficiency and to shape any attitudes and behaviors desired by the employer.



**Figure 1.** Basic motivation model.

Source: Kozioł, 2002, p. 28.

The model presented in Figure 1 depicts the motivation process:

- need — employees' activities to satisfy their needs,
- task acceptance — achieving better results by giving specific, challenging tasks which are feasible and give a sense of success,
- reinforcement — repeating specific behavior by earlier success,
- expected result — changing one's behavior when they think it will bring appropriate reward,
- anticipated efficiency — an employee who appreciates their abilities will be more persistent in their activities or will try any alternative activities,
- causal relationship — an employee is likely to repeat their behavior which brought success or to improve it if they understand the tie of this behavior with some previous failure or success.

According to the above mentioned motivation model, once the goal is achieved by an individual, the stimulus no longer acts (the stimulus is any change near or inside a living body which may bring about or change its state of agitation). Once the stimulus disappears, it eliminates the incentive for action and, consequently, also the behavior itself. The assumptions behind the presented concept, i.e. the causality, motivation, and goal orientation enable to analyze behavior of different people any time (Kozioł, 2002).

The problems of employee motivation become particularly important for the mining sector. The reason is the multitude of relatively complex documents governing miners' pay, including but not limited to collective labor agreements. Based on them, many pay components are created which may lose its motivating nature due to their fragmentation. The problems of motivation in the mining sector are not widely discussed in reference works. They usually deal with pay (Bator, Ślósarz, 2009, pp. 52-54; Gruca, Lacheta, 1984, pp. 266-273; Lisowski, 1992, pp. 275-278, Kutkowski, Zaniewski, 2010, pp. 100-103; Tchórzewski, 2011, pp. 77-81). Motivation systems in the mining sector become more and more expanded and contain a number of other tools beside pay incentives.

To analyze selected incentives in the mining sector, one of the largest mining companies in Poland, listed on the Stock Exchange, was selected as a study entity. Its choice was based on the availability of data and a large range of public information concerning the incentive system in the company. It stems from the need to publish data for the reporting process required by the Stock Exchange. The selected mining company has several mining plants (mines) using the same incentive system. For the survey, one mine in this company structure was selected. The survey was administered to 350 blue-collar and white-collar workers in the underground part of the mining plant. The article presents the analysis of selected incentive system aspects.

## 2. Classification of motivation theory

Every incentive system is based on motivating factors (stimuli, incentives) constituting tools and instruments. The motivating factors in the following groups are listed most often: coercion, encouragement, and persuasion. There are no perfect stimuli and their appeal to a given employee is conditional on many economic and psychological factors. The non-payroll incentives discussed in this category are the means of encouragement, as opposed to the means of coercion. They have high motivating load based mostly on rewards (Kozłowski, 2022).

The motivating factors making up the incentive system are characterized in Figure 2.

Coercive measures	Incentives	Means of persuasion
<ul style="list-style-type: none"> <li>• company status, regulations, instructions</li> <li>• Resolutions and regulations</li> <li>• Responsibilities</li> <li>• Punishments, threats, discipline system</li> </ul>	<ul style="list-style-type: none"> <li>• Wages, awards, bonuses, shares, shares, housing, trips abroad</li> <li>• Recognition, praise, distinctions</li> <li>• Career paths, training, evaluation system, job evaluation</li> <li>• Content and working conditions, standards, work restrictions</li> </ul>	<ul style="list-style-type: none"> <li>• Coaching, support</li> <li>• Advice, requests, agitation, negotiations</li> <li>• Quality circles, group forms of work organization</li> <li>• Employee opinion research, IT systems</li> <li>• Management style, management methods, quality systems</li> </ul>

**Figure 2.** Incentive system in a company.

Source: Kozłowski, 2022, p. 24.

Non-payroll incentives have a double motivating function. On the one hand, they reinforce the motivating activity of payroll stimuli, being recognition for the employee. On the other, those stimuli act on their own and are particularly effective for employees with highly developed social needs and the self-fulfillment needs.

Non-payroll incentives can be divided into tangible and intangible ones. Tangible non-payroll incentives are granted to employees as an extra pay for work. They are often a basis of cafeteria pay which creates the opportunities to adapt the benefits and privileges to the employee's current needs and individual expectations. Tangible incentives which often have high motivating power and are frequently employed by organizations include education paid by the employer, including covering the costs of training and workshops, participation in conferences, seminars and symposiums, accommodation, company car, extra paid leaves, extra old-age pension and health insurance, company loans, vouchers or healthcare at the company's expense. These incentives are offered primarily in international companies, banks, and listed companies. The systems including expanded tangible non-payroll incentives are becoming

an important component of motivating in high market competition, allowing to retain the “intellectual capital” (Kopertyńska, 2009).

Intangible incentives have won increased interest of managers and employees recently. They have advantages and are popularly employed in all countries with developed market economy. Intangible incentives in the overall incentive system constitute an organizational area of the company. From the perspective of encouraging factor classification, intangible incentives are activated by external stimuli (Kamińska, Warzyński, 2011). The most frequently used of them with high motivating power include:

- professional development opportunity,
- employer’s trust,
- freedom of action, independence, autonomy and delegation of rights,
- appreciation from managers, celebrating employees’ achievements,
- honorary titles and functions,
- flexible working time,
- right to work from home,
- signing the work or product with one’s own name (Gick, Tarczyńska, 1990).

Medium-sized and small companies usually employ a small range of tangible and intangible non-payroll incentives. Sometimes none of them are used apart from appreciation.

Non-payroll incentives can be external, i.e. they improve working conditions and the standard of employee’s life (e.g. company car, mobile phone, advantageous insurance, catering) and internal, i.e. contributing to the fulfillment of the employee’s personal goals and ambitions (e.g. promotion opportunities, recognition, personal development). The internal factors influence primarily well-educated young people where they bring about an immediate result (Kopertyńska, 2009).

Another classification which gives rise to fewer doubts is the division into positive and negative incentives. Positive incentives bring about positive emotions in the motivated person and encourage them to more effective work, to make an effort because of the anticipated tangible and intangible goods. They create perspectives for the employee and ensure improved realization of their goals when then meet the employer’s expectations. Negative incentives cause negative emotions in the employee, are based on fear and anxiety, communicate improper attitude and behavior unwelcome by the employer to the motivated person. They are usually disapproved by them. Based on this classification, the incentive groups are not clear (Kozłowski, 2009). For example, the base pay or bonus is, as a rule, a positive incentive, but if the motivated person perceives its value as too low, it may cause the sense of humiliation or frustration, or even make them resign from work. Another example is the value of the bonus received by the employee. It may be satisfactory as long as the employee does not learn that another employee on an equivalent position received a higher bonus for similar work. This situation may discourage the motivated person in the future from effective work even

though the bonus is a positive incentive. This means that it can be difficult to say whether a given incentive is positive or negative, as one incentive can be deemed positive in some circumstances and negative in other. Motivating tools should not be identical for all social and professional groups, but they should be differentiated based on the expectations of employees and organizations. Motivating by remuneration should be positive, consisting in paying for the achieved result and not in punishing for its absence or improper level (this is connected mainly with the changing pay part, i.e. bonuses) (Borkowska, 2006). At present, it is popularly believed that it is necessary to use positive incentives, considering the negative ones to be the last resort. However, when it is necessary to employ a negative incentive, it is advisable to follow the principles presented below and proven in practice:

- the punishment should be just and adapted to the punished act. It should be more lenient rather than excessively harsh,
- no punishment should be administered before the wrongdoer is allowed to speak for them,
- do not punish under the influence of emotions, hastily, but it is also not permissible to delay punishment for too long,
- punishment gradation,
- avoid humiliating punishment in public.

At present, there is no social acceptance of severe treatment of employees; punishment often becomes a relic of the past in organizations. Companies which use excessive punishment shape passive and anxious peoples who want primarily to ensure safety and avoid errors and are reluctant to make any decisions. The ratio of the positive and negative incentives used is largely conditional on the company sector, its culture, managers' personality, and leadership style. Harsh treatment of employees by employing punishment and reprimands causing fear and general sense of anxiety reduces satisfaction from the work done significantly. It is impossible to expect that people who are not satisfied with their work will be innovative, creative, proactive or willing to make any extra work effort. This is why the reasonable direction of improving the incentive systems in contemporary companies is the strive to implement solutions based on the new paradigm, i.e. taking care of the employee satisfaction level (Juchnowicz, 2014).

Motivating can also be divided into short-term and delayed. Intangible stimuli can entirely replace tangible encouragement solely for a short time and in the times of required sacrifice (Borkowska, 1985). For employees who sustain themselves on the salaries paid once a month and bonuses paid monthly or quarterly, the short-term incentives are most important. Short-term stimuli are more important for doing tasks on the operating level, including the acquisition, stabilization, and motivation of employees to achieve ongoing goals. Delayed income enables organizations to invest more here and now as the current payroll expenditure is relatively lower. Employing delayed incentives, e.g. organization securities which may usually be sold only after many years, is a good incentive solution. They make both the managers and the specialists cooperating with them interested not only in high assessment of their work but

also in the company operations in more remote future. Delayed income, including but not limited to company shares, is criticized due to the high income it gives to the managers. By means of long-term incentives, it is possible to foster global work standards, popularize values and patterns considered the most valuable by employees and desired by the organization. Short- and long-term stimuli should make a coherent whole and strengthen one another's impact. It is not easy to find a suitable composition of tangible and intangible motivating tools, both short- and long-term. This is a significant challenge for the incentive system designers, in particular if those systems are created for managers and specialists who are the driving force for the company development attitude (Borkowska, 2004).

### **3. Surveys — study assumptions**

A survey was aimed at learning the selected components of the incentive system. It was carried out in one of the largest mining companies in Poland. The mining sector was selected due to its extended incentive system governed by the Collective Bargaining Agreement. The incentive systems of mining companies, apart from payroll incentives, include many different non-payroll ones. They may take the form of informal, customary procedures and may be difficult to identify. To learn non-payroll incentives, usually not governed in internal documents but employed in mining companies, better, it was necessary to administer a survey. The survey was carried out in a mining company employing more than 20 thousand workers, including more than 17 thousand underground ones. The analyzed mining company excavates in four mines. All the mines in the company structure follow a uniform motivating policy. The analysis of selected incentives was carried out in a mine in the company structure. The study tool was an anonymous survey addressed to blue- and white-collar (managerial) employees working underground in the selected mine. The survey addressed to blue-collar workers had slightly different questions than the one addressed to the white-collar (managerial) ones. Thanks to it, it was possible to look at the same problems from two different perspectives (of an ordinary worker and a manager), and to compare the perception of the relationship between them.

The analyzed mine employs more than 4 thousand underground workers, the survey was administered to all of them, 350 surveys were returned.

First, questions requiring one selected answer, as listed below, were asked:

1 – I definitely disagree; 2 – I rather disagree; 3 – I rather agree; 4 – I definitely agree.

However, the last question in this part required a yes or no response.

The survey questions addressed to blue-collar workers are listed in Table 1, while the ones to the white-collar ones (managers) in Table 2.

**Table 1.***Study questions in the survey addressed to blue-collar mine workers*

<b>Please answer by putting X in the relevant box</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
In the previous year, I was given an opportunity to develop and learn new things in my work.				
What the Management Board of our company says conforms to what they actually do.				
My workplace is equipped sufficiently (tools, machines, and equipment) for me to perform my duties well.				
I am able to do what I can do best every day at work.				
At work, I have the opportunity to learn and develop.				
I often express my opinion and show initiative.				
The work I do gives me pleasure.				
Work organization is good at my workstation.				
I believe that I have too many duties at work.				
My work contributes to the company efficiency and finance.				
I know the company standing against the market, I know its development plans.				
I have high opportunities for promotion.				
I have conditions to improve my qualifications.				
I have complete information on what happens in the company.				
	Yes		No	
Has your work satisfaction level been analyzed for one year?				

Source: own work.

**Table 2.***Study questions in the survey addressed to white-collar (managerial) mine workers*

<b>Please answer by putting X in the relevant box</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
What the Management Board of our company says conforms to what they actually do.				
I believe that the flow of information in the organization is correct.				
The workplace of the people answering to me is equipped sufficiently (tools, machines, and equipment) for them to perform their duties well.				
The people answering to me are given the opportunities to learn and develop.				
I believe that the analysis of the sources of individual employee's motivation should identify the stage of their personal life.				
Work organization at the work stations of the people answering to me is good.				
The employee should be motivated with a reward connected with a financial promotion at early stages of professional activity.				
My work is stressful.				
I am provided with training dealing with stress management.				
I motivate every employee equally.				
I have a lot of tools which I can use to motivate employees efficiently.				
I strive to improve my motivating skills.				
I have complete information on what happens in the company.				
I notify the workers of problems, intentions, and achievements of the company.				
The work performed by the people answering to me is pleasant for them.				
I know how to motivate the employees to work.				

Source: own work.

Subsequent tables (Table 3 and 4) include questions asked in the survey addressed to the workers and to their managers respectively, together with suggested answers. It was required to tick one answer.



**Table 3.***Single-choice questions for blue-collar mine workers*

Question	My line manager:	To what degree I devote myself to work:
Responses	<input type="checkbox"/> Is always committed to work. <input type="checkbox"/> Is often committed to work. <input type="checkbox"/> Is sometimes committed to work. <input type="checkbox"/> Is rarely committed to work. <input type="checkbox"/> Is never committed to work.	<input type="checkbox"/> I am always committed to work. <input type="checkbox"/> I am often committed to work. <input type="checkbox"/> I am sometimes committed to work. <input type="checkbox"/> I am rarely committed to work. <input type="checkbox"/> I am never committed to work.

Source: own work.

**Table 4.***Single-choice questions for white-collar mine workers*

Question	The people answering to me:	Remuneration system in our organization:
Responses	<input type="checkbox"/> Are always committed to work. <input type="checkbox"/> Are often committed to work. <input type="checkbox"/> Are sometimes committed to work. <input type="checkbox"/> Are rarely committed to work. <input type="checkbox"/> Are never committed to work.	<b>a)</b> <input type="checkbox"/> Has many tools which allow motivating employees efficiently. <input type="checkbox"/> Has few tools which allow motivating employees efficiently. <input type="checkbox"/> Is not good in their role of motivating employee. <b>b)</b> <input type="checkbox"/> Is perfect, there is no need to introduce any changes. <input type="checkbox"/> Is good, but requires some correction. <input type="checkbox"/> Is hardly effective, many changes are required. <input type="checkbox"/> Is absolutely ineffective, a new remuneration system needs to be introduced.

Source: own work.

The subsequent part of the survey contains closed questions which had to be answered as follows:

- 1 – Never.
- 2 – Seldom (once every few months).
- 3 – Sometimes (several times a month).
- 4 – Often (several times a week).
- 5 – Always (everyday).

The questions are presented in Table 5 (for blue-collar workers) and in Table 6 (for managers) respectively.

**Table 5.***Closed questions for blue-collar mine workers*

Please answer by putting X in the relevant box	1	2	3	4	5
How often can I implement my own ideas?					
The manager rewards, appreciates, promotes the best workers.					
I work under pressure or in the atmosphere of uncertainty.					
My work is stressful.					
How often do you ask yourself a question of why you should do your best at work if it does not change anything anyway?					
How often am I motivated at work?					

Source: own work.

**Table 6.***Closed questions for white-collar (managerial) mine workers*

Please answer by putting X in the relevant box	1	2	3	4	5
How often do I allow the workers to implement their own ideas?					
I reward, appreciate, promote the best workers.					
The people answering to me work under pressure or in the atmosphere of uncertainty.					
My work is stressful.					
I make the people answering to me aware that their work is important and it is worth doing their best.					
How often do I motivate employees?					

Source: own work.

A direct open-ended question was asked in a separate part of the survey. The following question was addressed to blue-collar workers: What other word would you use for “motivation”?

The following question was addressed to white-collar workers: Order the employees’ needs in the descending order from the most important ones (1 – social, 2 – safety-related, 3 – respect-related, 4 – self-fulfillment, 5 – physiological).

#### 4. Needs Findings

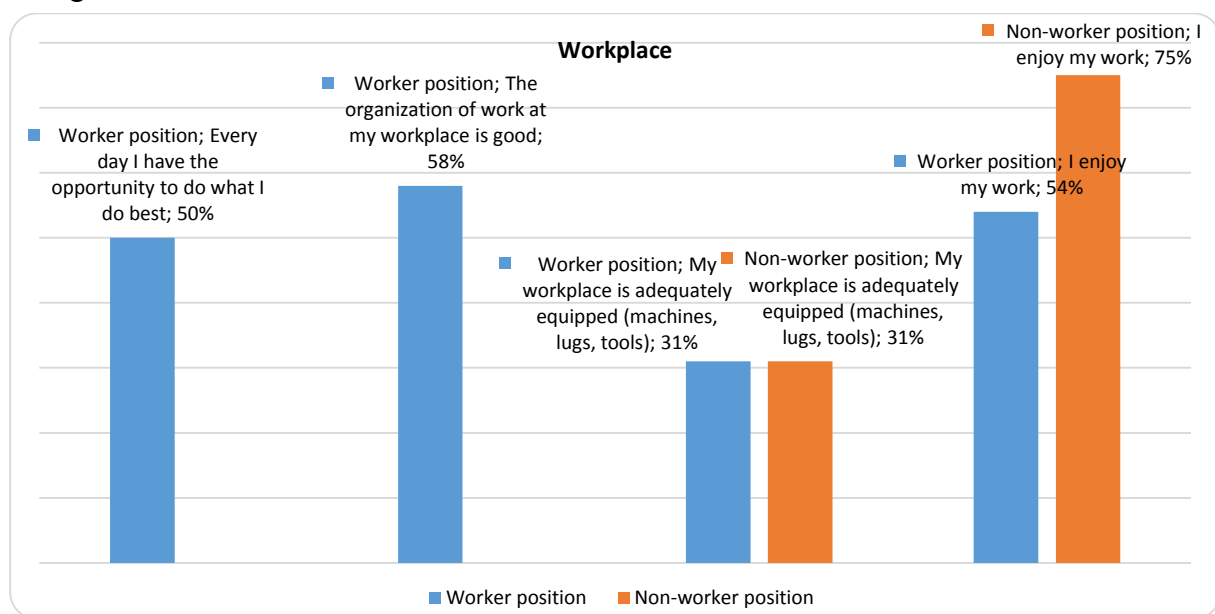
The survey enabled to identify non-payroll factors of the incentive system in the mining company. The studied components included primarily the workers’ opportunities relating to development and learning new things, employees’ access to information on the company standing and decisions made by it, the employees’ awareness of the company standing when compared to the market and its development plans, the ability to express their opinions and show initiative, the awareness of work efficiency and its impact on the company finance. An important group of incentives includes conditions connected with the workplace. In the survey, it was asked if the workstation is equipped sufficiently and if it enables the worker to perform their duties well, if the work organization at the workstation is good and if the worker finds their work pleasant, and also if they feel that they have too much duties. The workers were also asked if their work satisfaction level is analyzed. The managers were asked to assess the information flow in the company, to specify the ways of employee motivation and any aspects which were covered by the questions asked to those answering to them. Thanks to it, the same aspects could be seen from two perspectives.

More than one half of surveyed blue-collar employees claim that they are provided with the conditions of qualification development, as well as further education and development opportunities, while their managers almost entirely agree with those statements. The vast majority of responding white-collar employees (managers) claim that their work is stressful and only 35% of them have access to training relating to dealing with such conditions.

Good news is that most managers motivate using reward rather than punishment and that they strive to improve their motivating skills. However, it is worrying that only 19% of those employees claim that they have a wide choice of tools allowing to motivate the people answering to them efficiently.

The majority of the surveyed blue-collar workers (81%) are aware that their work contributes to the company efficiency and finance, and 58% of employees in this group know the company situation when compared to the market. The statistics for employees asked what happens in the company and if the company Management Board is reliable are less optimistic.

Another important factor is the workplace. Both blue-collar and white-collar workers claim that their workplaces are not equipped as appropriate. Selected answers are presented in Figure 3.



**Figure 3.** Workplace assessment by employees.

Source: own work.

More than one half of responding workers find their work pleasant, while three fourth of managers claim that the people answering to them derive pleasure from their work. One half of workers believe they are able to do what they can do best every day and that the work organization at their workstations is good. The workplace here does not mean prestige, as every worker works in similar conditions, usually harmful, onerous, and dangerous ones, and the insufficient equipment reduces the efficiency of their work significantly. It is worth paying attention to the “temperature” mentioned in the survey. Employees are eager to work in uncomfortable conditions in return for reduced working time. It proves that blue-collar workers do not feel any strong ties with their work establishment, but they want to do their work fast and leave it. In such a case, a solution could be to provide relevant equipment to the workplace. It could bring good results to spend funds which have been used as extra payment for work in specific conditions for improving the comfort, safety, and ergonomics in the place where work is done.

Another important incentive is promotion. Promotion, meaning raising to the higher position in hierarchy, is one of the major motivating mechanism. It satisfies the need for recognition and favorable self-esteem, and enables to access higher values and improved life quality. The promotion should be based primarily on the results achieved by the employee, including but not limited the quality and improvement of qualifications, skills, and capabilities. In the discussed company, just 12% of responding workers claim that they stand an actual chance of promotion and even their managers confirmed that the people answering to them stand hardly any chance to get it. In the company, there are no detailed rules of promotion (excluding the legal requirements). The promotion is frequently conditional on the relationship with the company top managers, trade union membership, interpersonal relationships, and nepotism. Such a policy results in reduced morale of workers, aversion to work, weakened ties with the work establishment and group ties. Such activities cause depression and frustration. For the promotion to play an efficient motivating role, the actual promotion policy is to be followed based on sound, fair and, first and foremost, proven rules which will help to open up the path to promotion to creative, talented workers who achieve extraordinary work performance. The criteria for promotion should be specified in the work rules and notified to all the workers. They need to be followed consistently and transparently. The criteria should be subject to social check.

Another important finding is that both groups of employees declared that they are often stressed while the managers admitted that they have no training relating to coping in such situations.

## 5. Summary

To sum up, it should be claimed that intangible incentives employed in the mining company are well received by workers. More than one half of surveyed blue-collar employees are satisfied with the intangible incentives used by the organization, including the conditions of qualification development, as well as further education and development opportunities, while their managers almost entirely agree with those statements. The majority of the surveyed blue-collar workers are well aware how their work contributes to the company efficiency and finance, and a bit more than one half of the surveyed employees in this group knows the company situation when compared to the market. Unfortunately, the scope of non-payroll incentives employed is relatively narrow when compared to their scope of applicability. For this reason, the motivating policy adopted in the analyzed mining company should be deemed to require expansion, in particular by means of non-payroll factors. The payroll policy is one of the most effective motivating tools, but it is hardly efficient if not supported with complementary incentives. In the face of the economic crisis, the company Management Board

could consider introducing training for managers devoted especially to the non-payroll means of stimulating motivation and coping in stressful situations.

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