HUMAN RESOURCES ANALYSIS

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Abstract: A key element in each working process refers to human resource, which have a major contribution to economic activity and in achieving company's goals and performances. Through a specific system of indicators human resources diagnosis aims to establish the strengths and weaknesses of the human potential in company activity. In the present paper, we analyzed the main aspects regarding the way of ensuring with human resources, aspects regarding size, structure, stability, qualification or efficiency through labour productivity. Using SWOT analysis, were synthesized the results of the study case, on Bituminous Coal Company from Petroşani. For all these aspects we take into consideration all changes in the last years, our case study being made on the period 2007-2011, and comparing the indicators with the beginning of the restructuring process of this industrial sector.

JEL classification: M50, O15, L71

Key words: human resources, diagnosis, structure, stability, labour productivity

1. INTRODUCTION

Human resources are a key element of the working process having a major contribution in achieving company's goals and performances. Human resources diagnosis through a specific system of indicators aims to establish the main strengths and weaknesses of human potential.

Restructuring mining sector in Jiu Valley had the aim to achieve optimal conditions to a sustainable development in the area, and the most important and strong impact during the restructuring process due to measures which hade to be applied was on workers from extractive industry.

One of the most important measures to achieve the efficiency of activity took into consideration the necessity of adapting the existing number of the workforce in the mining sector (eg. Bituminous Coal Company from Petrosani). (Monea, 2008).

For each enterprise to provide the human resources for the working process is one of the most important issues, the correlation between number of effective staff and the needed staff having influence on whole activity and future enterprise performances.

The activity of assessing the providing staff refers to the following main aspects:

- providing staff analysis (average number of employee, average number of workers);
- employee's structure analysis;
- analysis of the employee's qualification,

- analysis of employee's mobility;
- labor productivity.

We will analyse the following aspects of the human potential of the Bituminous Coal Company from Petroşani, taking into consideration a period of time between 2007-2011, and where is relevant we will compare the indicators value with the beginning of the restructuring process.

2. OBJECTIVES OF THE PAPER

The main objective of the paper are comparative analysis in time with the aim to view the changes occurred in the evolution, assurance and employment of the staff. Theoretical aspects are presented both with a case study at Bituminous Coal Company from Petrosani (in the last twenty years passed through a major restructuring process, being monitories at the present time). We use a system of indicators related to staff and will analyze the following aspects of the human potential of the Bituminous Coal Company from Petroşani, (average number of employee, average number of workers, staff qualification, staff structure, staff flexibility) and also aspects of effective time use and efficiency. Through SWOT analysis were synthesized the results of the case study. Informational sources necessarily for such a diagnosis and for achieving the purposes of the present paper are represented by staff records structured by a needed content, or obtained after a preliminary processing of staff data.

3. EVOLUTION AND STRUCTURE OF THE STAFF

Before the beginning of the restructuring process at the Bituminous Coal Company from Petrosani the total number of employee was 54.493 and decreased until 1997 to 37.808 employee. The major decreasing was registered in 1997, a results of applying the Govern policy which was a policy of no compulsory redundancies. The mineworkers were therefore offered a financial compensation to leave the coal industry and to accept redundancy compensation terms. Each mineworker who was agreeing to leave his job in the coal mining industry was paid with an amount of money (compensation), depending on years of seniority, with the condition that the worker not to wish to get his job back in the mining sector. (Monea, 2008)

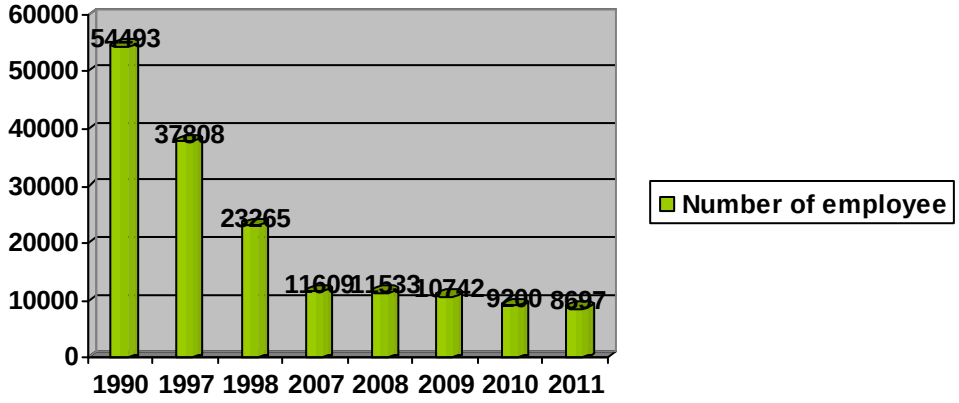

Figure no. 1. Trends in average number of employee

After the dismissals from 1997-1998, staff number from Bituminous Coal Company recorded a decreasing trend until today. In the period 1997-2007 the number of employee decreased with 50,1% (from 23265 employee at 11609 employee). In 2011 the number of employee is 8697, so a decreasing with 25% in the period 2007-2011.

In Tabel no.1 is presented the evolution of the average number of employee from 1990 until 2011 (total and by main categories – workers and administrative staff) and the trends are similar for all staff categories. But we observe that the number of workers decreased with 84,05% from 1990 until 2011.

Table no. 1 Employee evolution and structure by categories

Specification	1990	1997	2007	2011
Average number of employee	54.493	37.808	11.609	8.697
- workers (W)	48.444	33.650	10.504	7.409
- administrative staff	6.049	4.158	1.105	1.288
Iw (%)	**100**	**69,38**	**21,30**	**15,95**
Categories structure	*100*	*100*	*100*	*100*
- workers (%)	88,9%	89,0%	90,5%	85,2%
- administrative staff (%)	11,10%	11,0%	9,5%	14,80%

Source: own calculation with data from Bituminous Coal Company from Petrosani

Work at Bituminous Coal Company in order to achieve optimal mining conditions take place both underground and on the surface, but predominant underground. In the next figure (Figure no.2) are presented the trends and changes on employee structure by work type. If in 1990 half of the staff worked on the surface and half underground, in 2011 from total staff only 15% works on the surface, and 85% works underground.

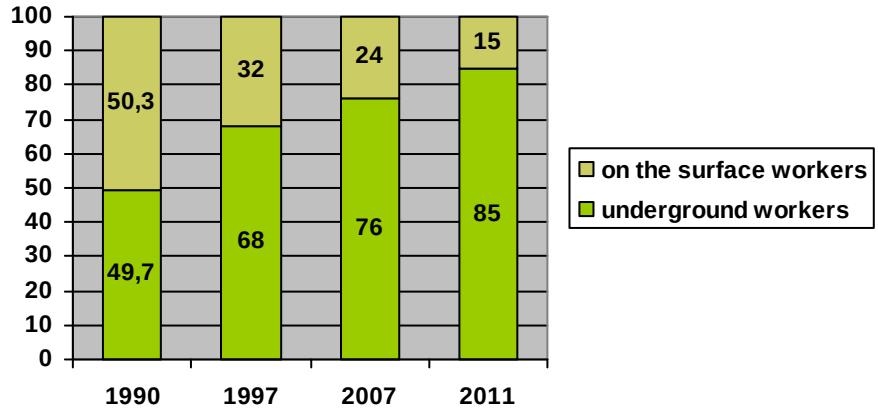

Figure no. 2. Trends in workers structure by work type in order to achive optimal mining activity

The number of employee who works underground is much higher than the number of those working on the surface because the company's activity is the extraction of coal from underground. Regarding the percent of staff working underground it is observed an increasing trend and that aspect can be considered positive with direct positive effects on labor productivity. This situation is a result of reorganization and

restructuring process mainly due to outsourcing related activities (external now), indirectly productive.

Another criteria for staff structure is age (employee age pyramid composed from year intervals which are considered adequately from studied company (Monea, 2008).

Employee structure by age is presented in the Table no 4.

Table no. 2 Employee structure by age

Age categories	2007		2008		2009		2010		2011	
	Nr.	%	Nr.	%	Nr.	%	Nr.	%	Nr.	%
< 30 years	2.102	18,1	2.122	18,4	1.955	18,2	1.683	18,3	1.530	17,6
30-50 years	8.962	77,2	8.881	77,0	8.368	77,8	7.195	78,2	6.871	79,0
> 50 years	545	4,7	530	4,6	419	3,9	322	3,5	296	3,4
Total number of employees	11.609	100	11.533	100	10.742	100	9.200	100	8.697	100

Source: own calculation with data from Bituminous Coal Company from Petrosani

Average age of staff from Bituminous Coal Company is almost 41 years old and is considered a negative aspect because of the miners retirement age of 45 years old (if the other legal conditions are accomplished).

Male and female percentage on total staff is presented in Table no. 3.

The percentage of male employee in total staff had a fluctuating trend during the analyzed period, influenced by the number of male employee or female employee who leave the activity during this period; but as an average value was relatively stable at around 85%, and only 15% of the staff represents the female, reflecting a normal situation taking into consideration the specificity of the activity from mining sector. In comparison with the period before 1997 we note the increase of male employee (due to outsourcing related activities through applied restructuring process measures - situation is considered as positive because male employee percentage on total staff being essential for this type of activity).

Table no. 3. Male and female percentage on employees

Specification	2007		2008		2009		2010		2011	
	Nr.	%	Nr.	%	Nr.	%	Nr.	%	Nr.	%
Total number of employees	11.609	100	11.533	100	10.742	100	9.200	100	8.697	100
Male	9.868	85,0	9.843	85,35	9.057	84,3	7.815	84,9	7.302	84,0
Female	1.741	15,0	1.690	14,65	1.685	15,7	1.385	15,1	1.395	16,0

Source: own calculation with data from Bituminous Coal Company from Petrosani

In Table 4 is presented employee structure by qualification categories. We can see the high percentage of qualified staff (94%-96%).

In general there is concordance between tasks qualification needed and employee qualification categories, the workers employed at Bituminous Coal Company are qualified in specific activities on extraction field who works to achieve specific tasks (mineworker, helpminer, , gas measurer, extraction machine worker, mechanic, electrician, technician, electrical field workers locksmiths ,welder, signer - coupler,

lather, millinger, winder, , etc.) and unqualified workers are achieving that jobs which do not need a specific qualification.

Administrative staff is considered also qualified staff and consists of specialists with higher or secondary graduates studies, in mining field or in other fields than mining(mining engineers, mechanical engineers,economist, et al.).

A positive aspect is that, for the unqualified workers are organised preparation courses (at the company) if these are needed.

Table no. 4. Employee structure by qualification categories

Specification	2007		2008		2009		2010		2011	
	Nr.	%	Nr.	%	Nr.	%	Nr.	%	Nr.	%
Total number of employees	11609	100	11533	100	10742	100	9200	100	8697	100
Qualified personnel	10994	94,7	10979	95,2	10323	96,1	8832	96,0	8340	95,9
Unqualified personell	615	5,3	554	4,8	419	3,9	368	4,0	357	4,1

Source: own calculation with data from Bituminous Coal Company from Petrosani

4. STAFF MOBILITY AND LABOR PRODUCTIVITY

Staff mobility is presented in Table no. 5, taking into consideration the number of registered employees, number of dismissed employees and the average number of employees.

Mobility can be appreciated by calculating the following indicators of workforce stability (Mihai, 1997; Valceanu, 2005):

Staff input rate = Number of registered employees/ Average number of employees

Staff output rate = Number of dismissed employees /Average number of employees

Staff mobility rate = (Number of registered employees+ Number of dismissed employees)/ Average number of employees

Table no. 5. Staff mobility

Specification	2007	2008	2009	2010	2011
Average number of employees	11609	11533	10742	9200	8697
Number of registered employees	546	646	687	451	408
Number of dismissed employees	1422	1822	1783	1555	1061
Staff input rate (%)	4,7	5,6	6,4	4,9	4,7
Staff output rate(%)	12,2	15,8	16,6	16,9	12,2
Staff mobility rate(%)	16,9	21,4	23,0	21,8	16,9

Source: own calculation with data from Bituminous Coal Company from Petrosani

In the last period staff input rate decreased from 6,4% in 2009 to 4,7% in 2011, and the staff output rate also recorded a decreasing from 16%-17% in 2008-2010 at 12,2% in 2011. Employee inputs and outputs had influence on staff mobility, recording a decreasing trend in the period 2008-2011.

Staff mobility was influenced mainly by the decrease of the number of employees who leaves the system because of the following reasons: retirement, own dismissal, death, social legal obligations (military services or child care), collective dismissal, and disciplinary problems.

One of the most pertinent dissatisfaction of employees (especially in the case of those working underground), is related to job security, which has not been and will not be at any time a "fad". This aspect is demonstrated by the number of work accidents. Trend in number of work accidents is shown in Figure no. 3.

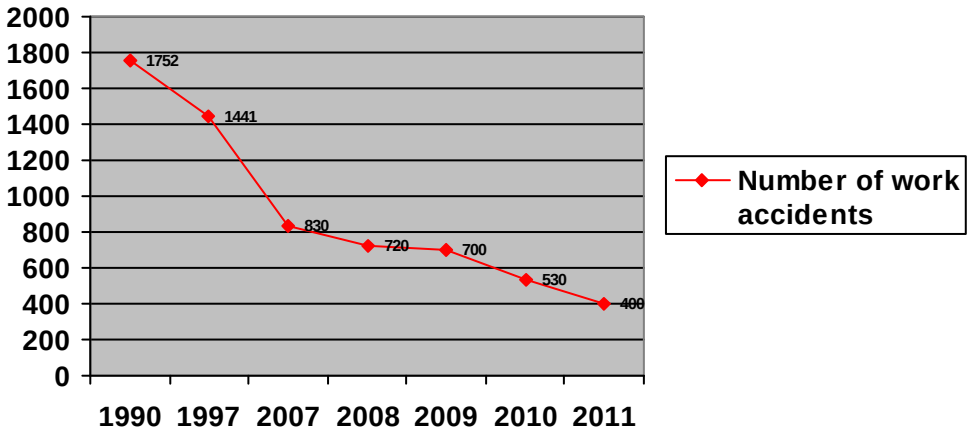

Figure no. 3. Trends in number of work accidents

The number of work accident decreased in the period 1990 - 2007 with almost 52%, and from 2007 to 2011 recorded the same trend. In 1990 were recorded 1752 work accidents and their number decreased at 400 in 2011, more than 1 every day.

Labour productivity is another indicator which we have to discuss when analysing human resources potential, because labour productivity express the workforce efficiency. The trend in labour productivity is presented in Figure no. 4.

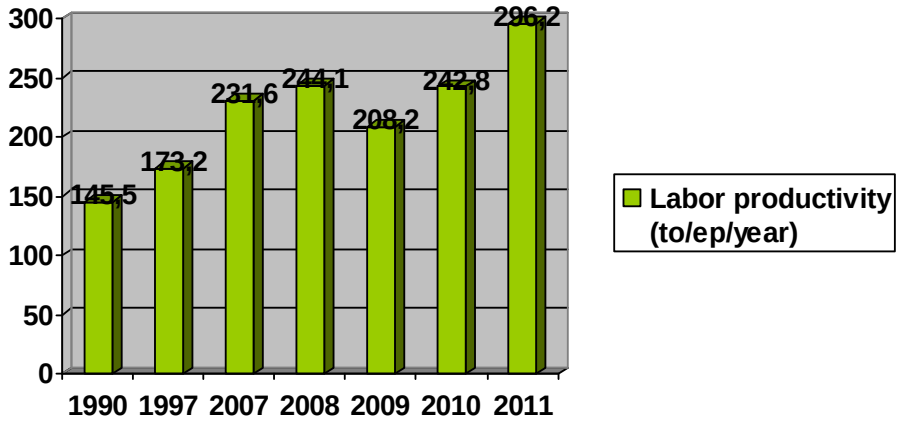

Figure no. 4. Labor productivity evolution

Labor productivity expressed by tones of coal per employee per year recorded a constant increase after 1990 untill 2007 from 145,5 tones/employee/year to 231,6 tones/ employee/year. After 2007 labor productivity registered an oscilant trend recording the high value in 2011 of 296,2 tones/ employee/year.

Another aspect to point out it is about the staff behavior, because they are very well known the conflicts occurred due to employee dissatisfaction in different period of time. Conflicts are generally determined by the number of strikes, the average number of days of a strike or strike importance.

5. CONCLUSIONS

The criteria for staff structure proves their utility in: forecasting of the staff, staff mobility assessment, development of the training policies, recruitment, analysis and forecasting of the labor productivity, the impact and effects of staff structure on the other resources, the influence of the human resources on company's economic and financial indicators.

Through a specific indicators system, hyman resources diagnosis aims to establish the main strengths and weaknesses of the human potential in company activity. Taking into consideration the aspects presented in the paper, using SWOT analysis, we synthesized the main strengths and weakness on human resources diagnosis at Bituminous Coal Company from Petroşani.

Strengths

- the level of qualification in accordance with the requirements of the job;
- staff structure is relatively balanced in accordance with the specificity of the mining activity (working process in underground and surface, but could be improved).
- higher level in fulfilling the labor requirements;
- good collaboration between leadership and cartel members.
- staff structure by sex (male - female) is balanced, according to the specific of the activity;
- existence of training and retraining activities of the employee at the workplace;
- average salary may be motivating, compared with average salary in economy and the average in the area;
- balanced personnel structure under the aspect of qualification level;

Weaknesses

- the number of existent personnel is higher than necessary, so that will be others dismissal in the next period;
- the existence of labor conflicts
- the labor productivity is not at predicted and expected level;
- the safety at the workplace, the number of accidents in mining activity are still very high;
- the average age of the staff of the unit is about 40 years older, considering the retirement age for staff working in the underground (45 years);

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