

# minib23

marketing of scientific  
and research organizations

no. 1(23)/2017



research  
for future

eISSN 2353-8414  
pISSN 2353-8503  
march 2017



**HR EXCELLENCE IN RESEARCH  
AS AN ATTRIBUTE OF SCIENTIFIC  
INSTITUTIONS' COMPETITIVENESS**



Open Access

## HR EXCELLENCE IN RESEARCH AS AN ATTRIBUTE OF SCIENTIFIC INSTITUTIONS' COMPETITIVENESS

**Sylwia Jarosławska-Sobór, Ph.D.**

Central Mining Institute, Poland

[sjaroslawska@gig.eu](mailto:sjaroslawska@gig.eu)

DOI: 10.14611/minib.23.03.2017.07



### Summary

In building competitiveness of the organization important role in plays not only the adaptation ability to changing environment, but also the acquisition of distinguishing qualities, which let it to maintain or improve its market position. For scientific institution its handicap could be HR Excellence in Research (HRE), a sign awarded by European Commission within the framework "Human Resources Strategy for Researchers" (HRS4R) strategy. It is given to scientific institutions which has adopted a European Charter for Researchers and a Code of Conduct for the Recruitment of Researchers so it friendly work environment and possibility of development is created.

Central Mining Institute in 2015 has taken actions to attain HR Excellence in Research, in order to make Institute more attractive to scientists and contribute to further development of science as well as achieving better market position. This paper discussed results of internal analysis, which included scientific employees and researchers opinion survey related to existing practices and regulations of conducting researches in Institute. As a result a special Report with an Action Plan was created, for improving friendly environment of scientific work and transparent recruitment principles of researchers. Paper also indicate main challenges the Institute faces for fully implementation HRE quidelines to stimulate economic and employment growth.

**Keywords:** HR Excellence in Research, scientist, management, researchers, recruitment, work environment



## Introduction

The competitiveness of an organization is one of key concepts in contemporary management. It is regarded as a generally understood ability to compete, which refers to the product, organization, or the whole economy. What plays an important role in the process of building competitiveness is the ability to adapt to the changing conditions of the environment. It is this ability that allows keeping, or improving your position on the market under global conditions. A premise for the market success of a company is achieving a competitive advantage over the rivals operating on a particular market. (Porter, 1999). This perception of competitiveness results from the assumption that an organization is an open system relying on the environment (Hatch, 2002).

According to M. Porter, competitiveness is supported mainly by strict environmental requirements, which have a positive impact on the innovativeness and eventually on the profitability of a venture. It is because they cause the so-called innovative effect by making a product and a production process more effective and the reduction of costs which may be achieved through these improvements is enough to cover the costs of new regulations and innovations (Porter and Van der Linde, 1995).

It is worth mentioning here that on the macroeconomic level there are voices opposing the application of the rule of competitiveness. The reasons for the opposition are such threats as: wasting public money for the improvement of competitiveness, protectionism, trade conflicts and bad state policies (Krugman, 1994).

In Poland the systemic concept of competitiveness has gained popularity. It consists of four elements:

- potential of competitiveness, treated as a general set of material and non-material resources of an organization, which the organization needs to function on the market,
- competitive advantage, the effect of such usage of the potential of competitiveness of an organization which enables efficient creation of an attractive market offer and tools for competing,
- tools for competing, resources deliberately created by an organization for the purpose of attracting clients,
- competitive position, the result of competing in a particular sector

achieved by an organization, regarded in comparison to the results achieved by rivals (Stankiewicz, 2002).

On this basis an integrated model of company's competitiveness has been formed. It has become the basis for the new methodology of investigating competitiveness, called the Barometer of Companies' Competitiveness (Flak and Głód, 2012).

Thus, it is possible to conclude that broadly understood competitiveness reflects the potential of an organization — resources, abilities and skills giving an advantage over other companies operating in the same sector. It constitutes a multidimensional feature of a company resulting from its internal characteristics, but also from the ability to adapt to the changes taking place in the environment, which guarantee a stable and lasting development and contribute to building market value (Walczak, 2010).

An attribute in its lexical meaning is a feature distinguishing a given entity from the others. For an organization such characteristics are the key to maintaining, or improving its position on the market and achieving a competitive advantage, one of the main components of the model of competitiveness. Competitive advantage allows an organization to better position its activity in relation to the competition. It consists of one, or a few factors distinguishing the manner of operation, the so-called success factors. Key success factors are resources and skills understood as the manner of using resources, which create competitive advantage and lead to success (Flak, Głód, 2012; Weng-Cheng, Chien-Hung and Ying-Chien, 2011). What is often added to these attributes is an element in form of reputation, which also substantially supports competitiveness (Davies et al, 2003).

The basic goal of an organization is building a strategy which allows gaining and maintaining competitive advantages which lead to securing its functioning and value-building capacity in the long term. The essence of an efficient strategy involves the creation of uniqueness allowing both employees and the environment to clearly distinguish the company from the rivals, which means you have to be better than rivals, or operate differently and in a different area of the market (Obłój, 2007).

## HRE as an attribute of a scientific unit

Appropriate human capital management, knowledge, or the qualifications of employees, but also their internal feeling of comfort show the strength of a company's capital. The knowledge about basic values of employees and the company may be the basis for building relations with the environment, building an organizational culture (Konecki, 2007) and building a relational system (Myers, 2003) as well as competitive advantage. Research on the key attributes of research organizations has highlighted 4 main areas of their location:

- people
- leadership
- research management
- activities of an organization (Neufeld, Simeoni and Taylor, 2000).

In some research projects it is emphasized that attributes of scientific units allow the identification of the mechanisms of building trust in networks, which is important for the formulation of policies supporting the innovativeness of Polish economy (Sankowska, 2013).

For a scientific unit finding the attribute of competitiveness may be both simple and difficult issue. The first aspect is associated with reliance on human capital and the prestige of a scientist's work. The second aspect results from the very fact of conducting scientific research and attributes of good research are not that unequivocal and obvious (Lemire, 2009).

What may be such a handicap is the HR Excellence in Research (HRE) logo, a mark awarded by the European Commission under the strategy titled "Human Resources Strategy for Researchers" (HRS4R), aimed at raising the attractiveness of work conditions for scientists in the European Union (Euraxess, 2016). It is awarded to scientific institutions implementing the rules of the "European Charter for Researchers" and the "Code of Conduct for the Recruitment of Researchers" (European Communities, 2006) and thanks to this create a friendly work environment and possibilities of development. By assumption, they are supposed to contribute to raising the number of scientific employees in European institutions.

A scientific unit receiving the logo is obliged to create a favourable



environment for work, career development and transparent processes of recruitment of scientific employees. This activity is subject to regular verification. In order to obtain the HR Excellence in Research (HRE) logo it is necessary to, in the first place, conduct an internal analysis, which makes it possible to assess to what extent its functioning is coherent with the "European Charter for Researchers" and the "Code of Conduct for the Recruitment of Researchers". The assessment of activities is carried out by the European Commission only twice a year. Following the acceptance of the strategy and plan of activities, the European Commission awards the HR Excellence in Research logo and after 2 years the institution is supposed to conduct an assessment of the progress and effects of implementation of the Charter and the Code. After 4 years an internal analysis is carried out by experts appointed by the European Commission. The results of the analysis determine whether an institution can retain the right to use the logo.

## The path to HRE

Central Mining Institute took steps aimed at obtaining the HR Excellence in Research logo already in 2015. It wasn't the logo itself, but raising the attractiveness of the Institute for scientists, further development of science and achieving better market position that were the goals of this move. In the article the results of an internal analysis which covered an opinion poll among scientific and research employees of GIG concerning the existing rules and practices associated with research at the Institute are discussed. The conducted research allowed preparing a special Report together with an Action Plan, which are the basis for obtaining the HRE logo.

## Methodology

Following the recommendations of the European Commission concerning the implementation of the rules of Charter and Code, an internal analysis with the use of "Template for internal analysis" available at <http://ec.europa.eu/euraxess/rights> was carried out. Key representatives of scientists and administration were involved in the conduct of the analysis. Next, a questionnaire survey was conducted. It allowed the assessment of the current level of implementation of the "European Charter for

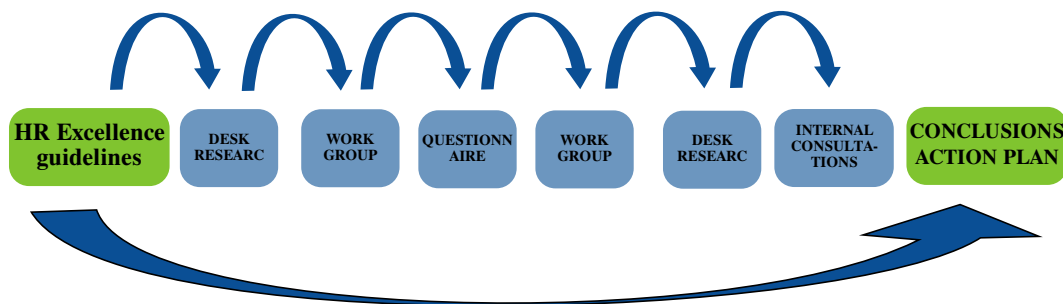


Researchers" and the "Code of Conduct for the Recruitment of Researchers" at GIG. The following tools were used as research instruments:

- the analysis of binding provisions of national law and internal regulations (desk research),
- Working Group (as a focus group),
- internal parametrical questionnaire,
- analysis of divergence (gap analysis).

The applied set of research tools was supposed to authenticate the collected data by confronting the obtained results. The diagram of the process of conducting internal analysis and developing the Plan of Action is presented on picture 1.

Picture 1. Diagram of the process of conducting an internal analysis and developing an Action Plan



Source: own materials.

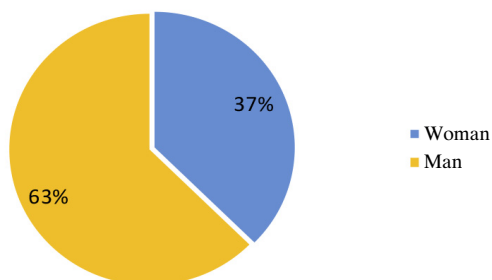
## Questionnaire survey

Questionnaire survey of the scientists<sup>1</sup> of GIG was carried out between December 14 and December 21, 2015. Its purpose was getting scientists involved in the process of analysing the compliance of GIG's activities with the provisions of the Charter and the Code.

As of December 14, 2015, 560 people, including 340 men (60.71% of the total number of employees) and 220 women (39.29%) were employed at the institute. The questionnaire was directed to 291 employees of GIG, including 119 scientific employees, 33 scientific-technical employees and 139 engineering-technical employees. In total, they constituted 51.96% of all employees of the Institute.

The survey was conducted in an electronic form. The questionnaire was fully anonymous and was filled out by 235 people. Out of this, 45 respondents didn't fill out the questionnaires completely. 190 people filled out the questionnaires completely. This constitutes 65.29% of the respondents. This result makes it possible to extrapolate the obtained information to the whole surveyed population. The structures of respondents with a division into sex, age, work experience and membership in employee groups have been shown on pictures 2, 3, 4 and 5.

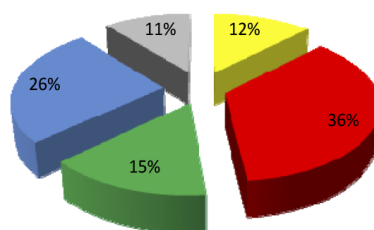
Picture 2. The structure of respondents (sex)



Source: own materials.

Picture 3. The structure of respondents (age)

under 30 31–40 years 41–50 years 51–60 years over 61



Source: own materials.

Men constituted 63% of the respondents. The biggest group of respondents (62%) was a group of employees aged 31 to 50. This is a credible reflection of the age structure of GIG employees, as the average age of GIG employees as of the moment when the survey was conducted, was 47.

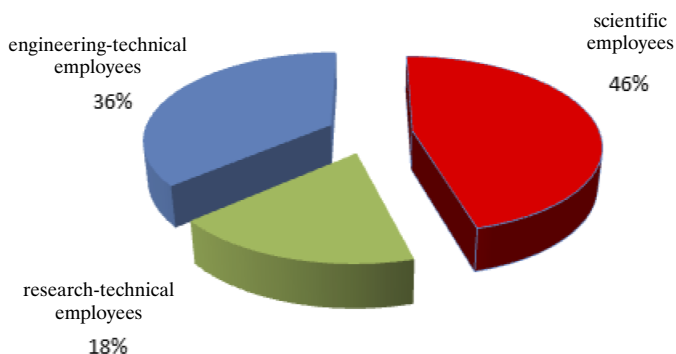
Respondents represented the following groups of employees:

- scientific (professor, associate professor, assistant professor, assistant),
- research-technical (chief research-technical specialist, senior research-technical specialist, research-technical specialist),
- engineering-technical (engineer, chemist, physicist, specialist, etc.).

High percentage of responses from the group of scientific employees (46%) reflects the general structure of GIG employees, but may be evidence of the involvement of the group in further development of the Institute. What is also interesting is the distribution of respondents according to work

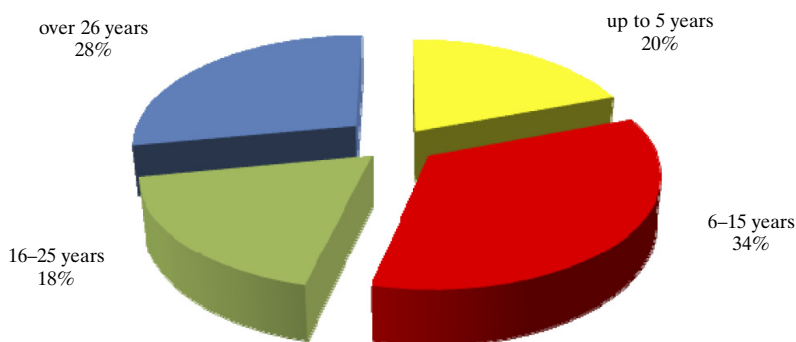
experience, as the fact that employees with a comparably short work experience constitute a majority (less than 15 years — 54%) plays an important role. This group determines the functioning of the Institute and care about systematic scientific development of the employees and their optimum utilization are regarded as a priority of HR policies of the Institute.

Picture 4. Structure of respondents, according to employee groups



Source: own materials.

Picture 5. Structure of respondents according to work experience



Source: own materials.

The questionnaire was prepared on the basis of the provisions of the Charter and Code and contained 38 statements divided into four areas:

1. Ethical and professional aspects
2. Recruitment

3. Work conditions and social security
4. Training and professional development.

The respondents were asked to assess each of the 38 statements on a scale from 1 to 6, according to the key presented in table 1.

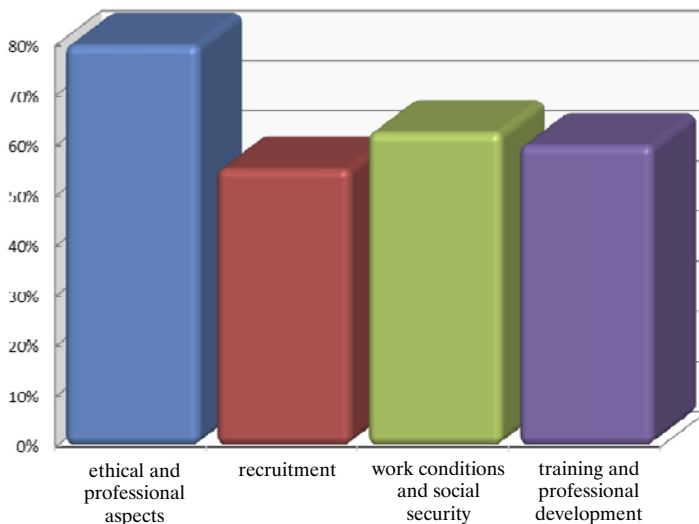
Tabela 1. Questionnaire — scale of answers and their meaning

| Scale | Answers            | Meaning                  | Feeling  |
|-------|--------------------|--------------------------|----------|
| 1     | yes                | I definitely agree       | positive |
| 2     | rather yes         | I rather agree           |          |
| 3     | hard to say        | I don't have an opinion  | neutral  |
| 4     | rather not         | I rather don't agree     |          |
| 5     | no                 | I definitely don't agree | negative |
| 6     | doesn't concern me | doesn't concern me       | neutral  |

Source: own materials.

Responses of a positive character ("yes" and "rather yes") for each of the four areas — according to the provisions of the Charter and Code are shown on picture 6.

Picture 6. Results of the questionnaire — % of positive answers



Source: own materials.

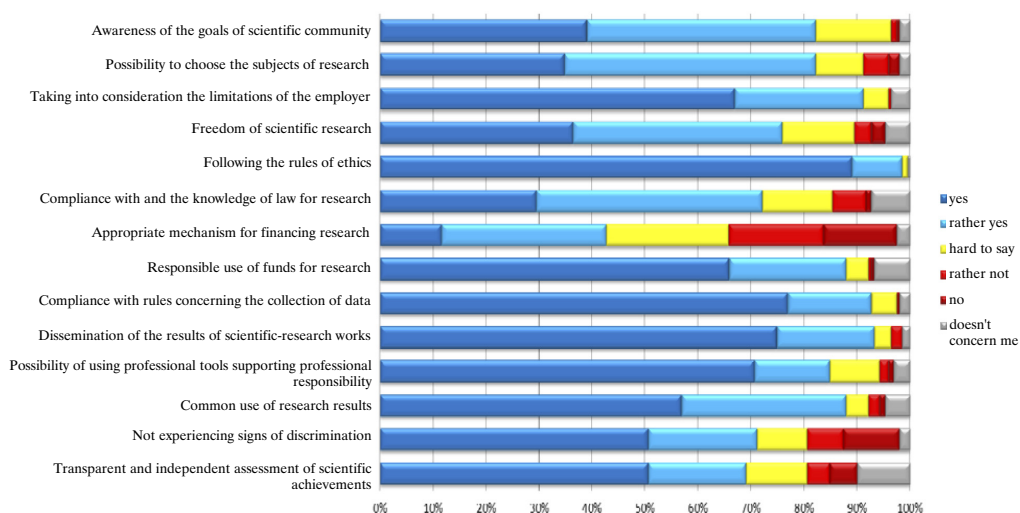
Below the detailed results of the questionnaire are presented for every area (GIG, 2016).

## The results of questionnaire survey

### Ethical and professional aspects

In the area concerning ethical and professional aspects most respondents gave positive answers. Almost everybody concluded that they know the goals of their environment and have an impact on the choice of research subjects. In the process of conducting scientific research they take into consideration the infrastructural, budgetary and personal limitations of the Institute. They definitely follow the rules of ethics and the binding norms, as well as procedures concerning the collection of data obtained as a result of conducted research, which constitutes evidence of responsibility and applying good practices in scientific research. Respondents declare that they have the possibility of using the professional knowledge of a patent agent and anti-plagiarism software allowing them to avoid infringing on someone's rights.

Picture 7. Respondents' answers —ethical and professional aspects



Source: own materials.

Practically all respondents concluded that they disseminate the results of their scientific work for the purpose of their practical utilization, this way also raising the level of common understanding of science in the society. 68.95% of the respondents think that the results of their scientific achievements are assessed in a transparent way by an independent commission.

Discrepancies in the answers given by respondents come up in case of the questions about the mechanism of financing research and handling of scientific-research projects by the employer. This mechanism is known among the employees covered by the questionnaire survey, which has been shown by the answers given by the respondents. The share of negative responses suggests that this mechanism requires taking additional measures aimed at improving its functioning, such as: introducing an internal instrument for awarding funds for research in course of contests organized, according to clear criteria, announced well in advance, ending with public announcement of results. Employees, especially new hires and young scientists, are supposed to regularly get information about the activities conducted at GIG in the area of financing research.

Vast majority of respondents (71.06 %) think that they haven't experienced any displays of discrimination at the Institute. However, the fact that some respondents (17.37%) have identified certain displays of discrimination, suggests it is necessary to take measures aimed at explaining and investigating every case.

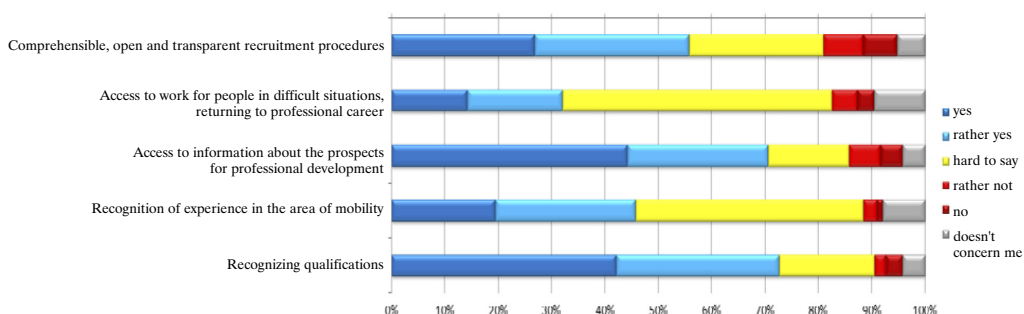
## Recruitment

Most of the respondents' answers in the area concerning recruitment were positive. 55.79% of respondents think that the Institute guarantees comprehensible, open and transparent procedures of recruitment. 72.64% of the respondents think that at the Institute the rules, procedures and norms defining the recognition of academic and professional qualifications, informal qualifications of job candidates, such as acquired knowledge, skills and social competences, e.g. completed courses, trainings project management, organizational and team skills are respected.

45.79% of the respondents think that the scientists' experience in the area of mobility is recognized in the process of recruitment (e.g. a stay in another country/region, work in the public/private sector, change of discipline), but at the same time 50.52% have a neutral (42.63% "hard to

say", and 7.89% "doesn't concern me") approach. High number of such answers may result from the fact that only 20% of the respondents are people working for GIG less than 5 years. Other people have much longer experience and the rules and system of recruitment have changed since the time when they were subject to the recruitment process. Additionally, most employees are not and have never been engaged in the process of recruitment, hence the choice of "hard to say" answer in this respect.

Picture 8. Odpowiedzi respondentów — rekrutacja



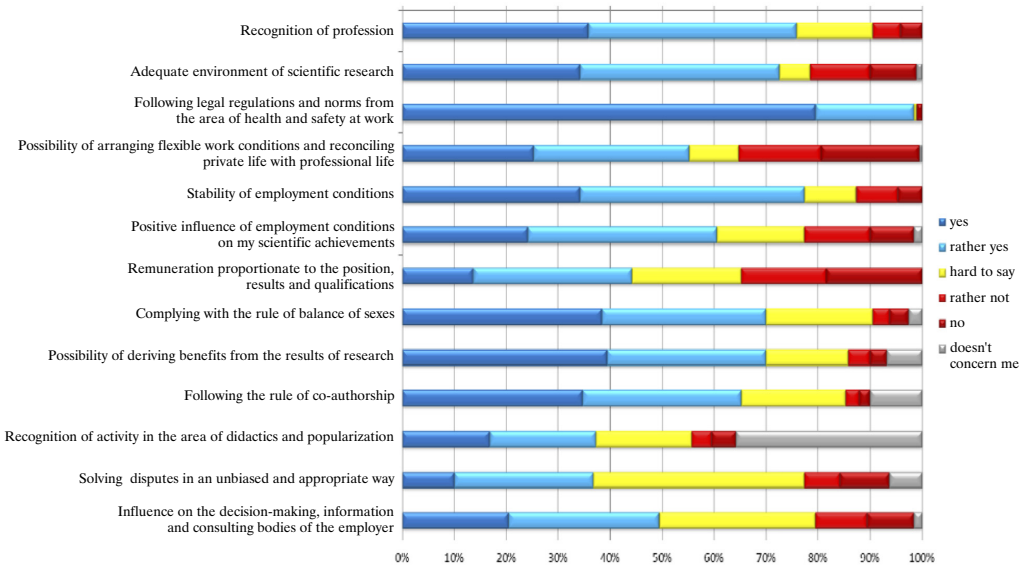
Source: own materials.

60% of the surveyed have neutral feelings towards facilitation of access to work for people in a hard situation and scientists returning to professional career (50.53% "hard to say" and 9.47% "doesn't concern me"). Analysis suggests a need to consider this aspect in the internal regulations concerning recruitment.

### Work conditions and social security

Vast majority of the respondents (75.79%) think that their profession is recognized and in their environment they are treated as professionals. They declare that they follow legal regulations and work safety norms. 72.63% of the respondents think that they have been given appropriate work conditions, devices and equipment necessary to conduct research. Modern techniques and methodology of conducting research works, as well as regularly conducted renovation-modernization works have substantially improved work conditions and comfort and have reduced the risks associated with the process of work.



**Picture 9. Respondents' answers — work conditions and social security, own materials**

Source: own materials.

The respondents declare that their employer guarantees the balance of sexes at every stage of management. 70% think that they have the possibility of deriving benefits from the utilization of the results of their research, especially through the protection of intellectual property rights.

Some respondents (34.74%) have negative feelings with regard to the possibility of using appropriate mechanisms serving the purpose of securing flexible work conditions and making it possible to reconcile private and professional life (e.g. flexible work hours, part-time work, work from home). This may show that despite appropriate provisions in documents concerning flexible work hours, a major part of the respondents don't regard the conditions as flexible. This percentage of negative answers may be associated with the fact that at the time when the survey was conducted, a new system of calculating time of work, less friendly than the previous one, resulting from the guidelines of institutions responsible for control over the labour market, was being introduced. The purpose of securing greater comfort of work is developing instruments, which comply with the requirements of controlling institutions and at the same time are friendly for the employees.

77.37% of the respondents recognized their conditions of employment as stable. Most of the respondents also have a positive approach to the correlation of employment conditions with the influence on scientific achievements, but 21.05% of the surveyed gave negative responses to this issue. Negative answer is the consequence of the above-mentioned problem-related issues defining the conditions of employment, e.g. mechanisms of financing scientific activity, flexibility of the time of work. The system of remuneration functioning at the Institute to a large extent depends on the market situation and generated revenues. Currently, the main clients of GIG come from the mining sector, which has been in a crisis in the recent years, due to low prices of resources. This has an impact on the revenues of GIG and thus on the level of salaries.

In case of the question concerning the recognition of activities in the area of didactics and popularization, high number of "doesn't concern me" responses comes from the fact that GIG is a research institute and doesn't deal with didactic activities like e.g. universities.

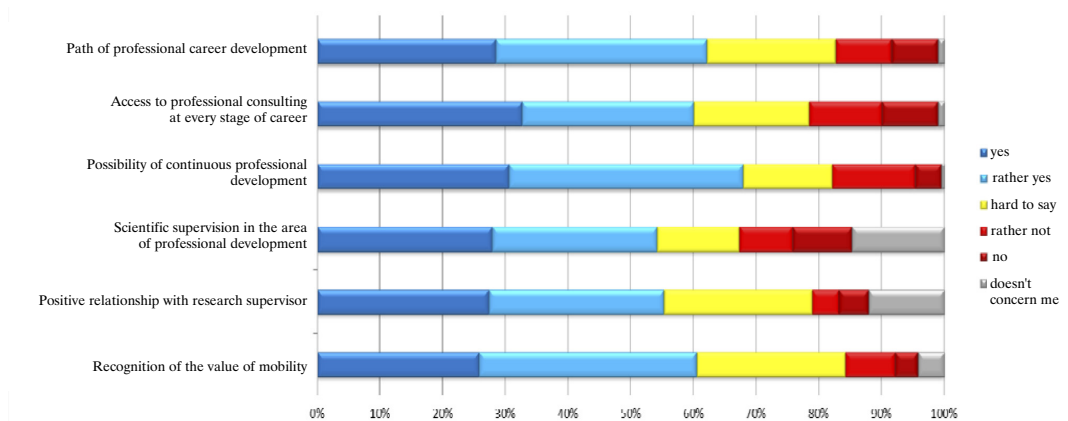
Respondents haven't expressed a clear opinion on the statement that at the Institute there are people and units which solve disputes and conflicts in a good and unbiased way, about 40.53% responded "hard to say", which may be evidence of incomplete knowledge of the procedure functioning at the Institute.

## **Training and professional development**

The answers given by the respondents in the area concerning trainings and professional development were mostly positive. 62.1% think that the Institute provides the employees with opportunities for professional development through a particular strategy of career development. 60% of the surveyed confirmed the claim that the Institute secures access to professional consulting at every stage of career (e.g. information concerning trainings, internships). 60.53% of the respondents think that at the Institute mobility is taken into consideration as an element of expanding scientific knowledge and conducting scientific research. 67.90% of the respondents confirmed the possibility of continuous development of their abilities and professional qualifications through, among others, participation in trainings, courses, seminars, conferences, or workshops.

55.26% of the respondents think that scientific supervisors/coordinators build positive relations and are supportive for their subordinates. The respondents positively assessed the functioning of scientific supervision at GIG, but at the same time 35.79% displayed neutral attitude (23.68% "hard to say", and 12.11% "doesn't concern me"). This probably comes from the fact that some of the respondents are independent scientific employees, so it is them who are obliged to supervise less experienced scientific employees.

Picture 10. Respondents' answers — Trainings and professional development, own materials



Source: own materials.

## Conclusions

The survey has shown that out of 40 considered rules of the "European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers", in 16 cases there is a need for additional measures securing full implementation of these documents at GIG. On the basis of the conducted analysis the "Internal analysis of gaps: reference to every rule from the Chart and Code; existing regulations, rules and/or practices and required actions" was prepared. Now, the conclusions of the analysis are being implemented continuously. This concerns the following areas: ethical and professional aspects, recruitment, work conditions and social security. The set of actions necessary for full implementation of the rules

of the Charter and Code together with the planned deadline for implementation and responsible persons have been described in detail in the Action Plan.

The analysis of the results of the survey allowed carrying out a partial SWOT analysis of the Institute in the area of HR potential. The strong points are: stability of employment conditions, high level of compliance with rules and ethical norms, complying with legal regulations in the area of health and safety at work, the possibility of deriving benefits and utilization of research results and popularization of the results of scientific works.

Among the weak points there are: system of financing research at GIG, lack of flexible work conditions making it possible to reconcile professional life with personal life, or the lack of procedures for cases of discrimination. Taking all of this into consideration, the actions necessary to eliminate the weak points were defined. These actions are supposed to support friendly environments for scientific work and transparent rules for the recruitment of scientific employees. The implementation of rules defined in HRE is a factor stimulating the development of a scientific unit and it certainly can be regarded as an attribute which facilitates achieving a competitive advantage.

## References

<sup>1</sup> The group of scientists includes employees reported during the parametrization of scientific units (the so-called N number), that is, employees dealing with the implementation of scientific research, or development works, in particular: scientific employees, research-technical and engineering-technical employees.

## Bibliography

1. Davies, G., Chun, R., Vinhas da Silva, R., Roper, S. (2003). *Corporate Reputation and Competitiveness*. London and New York: Routledge.
2. European Communities (2006). Europejska Karta Naukowca i Kodeksu postępowania przy rekrutacji pracowników naukowych, <http://europa.eu.int/eracareers/europeancharter>
3. Flak, O., Głód, G. (2012). *Konkurencyjni przetrwają*. Warszawa: Difin.

4. Flak, O., Głód, G. (2014). Koncepcja i przykład metody badania konkurencyjności przedsiębiorstw. *Studia Ekonomiczne. Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach*, no. 187/2014, pp. 87–100.
5. GIG (2016). *Strategia HR dla naukowców. Wewnętrzna analiza luk i plan działań*. Katowice: GIG.
6. Hatch, M.J. (2002). *Teoria organizacji*. Warszawa: Wydawnictwo Naukowe PWN.
7. Lemire, D. *Attributes of good research*, <http://lemire.me/blog/2009/08/31/attributes-of-the-good-research/>
8. Krugman, P. (1994). Competitiveness: A Dangerous Obsession. *Foreign Affairs*, marzec/kwiecień, pp. 28–44.
9. Konecki, K.T. (2007). Kulturowe uwarunkowania zarządzania zasobami ludzkimi. Sprzężenia zwrotne w działaniu. In: Konecki, K.T., Chomczyński, P. (ed.). *Zarządzanie organizacjami. Kulturowe uwarunkowania zarządzania zasobami ludzkimi*. Łódź: Wydawnictwo Uniwersytetu Łódzkiego.
10. Myers, C.A. (2003). Managing brand equity: a look at the impact of attributes. *Journal of product & brand management*, vol. 12, no. 1, doi: 10.1108/10610420310463126
11. Neufeld, G.A., Simeoni, P.A., Taylor, M.A., (2000). *Competitive advantage: attributes of high-performance research organization*, issues: November/December, <http://iveybusinessjournal.com/publication/competitive-advantage-attributes-of-high-performance-research-organizations>
12. Oblój, K. (2007). *Strategia organizacji*. Warszawa: PWE.
13. Porter, M.E. (1999). *Strategia konkurencji. Metody analizy sektorów i konkurentów*. Warszawa: PWE.
14. Porter, M.E., Van der Linde, C. (1995). Toward a New Conception of the Environment-Competitiveness Relationship. *The Journal of Economic Perspectives*, vol. 9, no. 4, Fall, pp. 97–118.
15. Sankowska, A. (2013). Zaufanie w sieci badawczo-rozwojowej jednostek naukowych. Rola jednostki inicjującej. *Nauki o zarządzaniu*, 1 (14). Wrocław: Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu.
16. Stankiewicz, M.J. (2002). *Konkurencyjność przedsiębiorstwa. Budowanie konkurencyjności przedsiębiorstwa w warunkach globalizacji*. Toruń: Wydawnictwo TNOiK „Dom Organizatora”.
17. Walczak, W. (2010). Analiza czynników wpływających na konkurencyjność przedsiębiorstw. *E-mentor*, 5 (37).
18. Wen-Cheng, W., Chien-Hung, L., Ying-Chien, C. (2011). Types of Competitive Advantage and Analysis. *International Journal of Business and Management*, vol. 6, no. 5, pp. 100–104, doi: 10.5539/ijbm.v6n5p100
19. <http://www.euraxess.pl/indexp/czym-jest-euraxess/euraxess-rights-start>

**Sylvia Jarosławska-Sobór, Ph.D., Central Mining Institute, Poland** — spokesperson of the Central Mining Institute. She has many years of experience in the area of PR and communication. In her scientific work she deals with researching social aspects of the functioning of companies. She is the author of 2 books on the subject, co-author of 3 monographs and the author of a few dozen scientific publications. She also gave presentations at a few dozen conferences. She was awarded in the contest organized by the Ministry of Family, Labour and Social Policies for the best doctoral works concerning the issues of work and social policy. She is a member of the Silesian Centre of Business Ethics and Sustainable Development. She works as a publicist for specialist press.



Institute of Aviation  
Scientific Publishers  
al. Krakowska 110/114  
02-256 Warsaw, Poland  
phone: (+48 22) 846 00 11 ext. 551  
e-mail: minib@ilot.edu.pl

**[www.minib.pl](http://www.minib.pl)**  
[www.twitter.com/EuropeanMINIB](https://www.twitter.com/EuropeanMINIB)  
[www.facebook.com/EuropeanJournalMINIB](https://www.facebook.com/EuropeanJournalMINIB)