

Motivation of Academic Staff at Universities in the Czech Republic: Qualitative Research

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Abstract: The subject and question of motivation of people in general and employees in particular are a well-known issue in the society and have been examined by many researchers. To develop the third pillar of public higher education, it is necessary to motivate academic staff to generate interesting R&D results in various ways. Financial incentives are not always the most important factor that drives forward the work of academic staff in various fields. Other factors may take precedence over finances and become the most significant motivator of our work. In our qualitative investigation, we explored precisely this question and analysed which fields of research across different public institutes of higher education are supported the most and above all by which factors of motivation. We conducted qualitative interviews with representatives of public universities and the Academy of Sciences, who hold a range of managerial positions in a range of different fields. The results we arrived at confirmed our assumptions and also showed which fields consider financial incentives, working facilities and conditions, and rules and policies as significant factors.

Keywords: Motivation, Academic Staff, Czech Republic, Public Universities.

1 Introduction

Based on relevant literature, factors of motivation can be generally divided into three main groups, that is, individual prerequisites, work factors and conditions, and conditions of the working environment. These three main groups of factors are closely related and together have a strong influence on the motivation of individuals. According to [2, 3], individual prerequisites include the abilities of each employee consisting in their knowledge and skills, morale, initiative, creativity, commitment as well as family background. Further influences are attitudes to oneself, one's work, and the workplace situation, the need for security and social needs, and, last but not least, the need for self-actualisation and level of motivation. Shaheen et al. [5] state that within the theoretical framework for motivating employees, internal factors of individual employees must be supported through academic policy and adequate conditions must be created.

Some studies show [1,4-6] states that work factors and conditions are created as background by each institution for its employees and the background is the same for everyone: technological conditions, workplace equipment, management style, work organisation and method of work evaluation, employee benefits, possibility of career advancement, monetary and non-monetary remuneration, rational (content) and emotional (experience) communication.

Characteristics of work environment include in particular the immediate work environment, co-workers and superiors, the overall organisation climate and workplace relationships, a broader system of requirements and control of their fulfilment, individual requirements, the employer's interest in and care of working conditions, recognition of and reward for one's work, fairness and equal treatment.

2 Methodology

In order to examine the remuneration of authors, we created a qualitative research questionnaire according to Hendl [2], which was composed of two distinct parts. The first part was designed as introductory and informative. There were free questions, where the respondents recorded answers about their gender, field of research, achievement of research results and information whether or not they were granted industrial property rights for any of their results.

The second part of the questionnaire was divided into four thematic areas, whose main intention was to identify the main motivators of research and academic staff working at research institutes and public universities. The first thematic area focused on working conditions and factors that directly or indirectly affect or may affect their work performance. The second thematic area focused on the characteristics of the working environment and the facilities available at the workplace. This section also included questions related to industrial property rights and the office of transfer of technologies and its activities. The third area focused on individual attitudes of employees towards their own abilities and knowledge, satisfaction with their own results, and whether their job is sufficiently satisfactory, also with respect to its recognition and appreciation. The fourth and final section of this part of the questionnaire consisted of a single question, where research and academic staff were asked to state what they regard as meaningful work at university. In the second part of the questionnaire, the respondents recorded their answers using a six-point scale, where 1 indicated a negative answer and 6 an affirmative answer. To evaluate the second part of the questionnaire, we compared the answers using the arithmetic average, which is a statistical quantity expressing in a sense a typical value describing a set of many values.

We recorded the results obtained from the respondents in tables, one for each research field, and then calculated the above-mentioned arithmetic mean for each

questionnaire question. As to evaluation, we proceeded to evaluate the results by research field.

For verification, we selected a structure of faculties of diverse universities varying in their main research fields and the Czech Academy of Sciences, where offices of transfer of technologies have been established for different lengths of time. We believe that this constitutes a significant representative sample of this qualitative study. In total, we included seven different institutions: University of South Bohemia in České Budějovice, Masaryk University in Brno, Technical University of Ostrava, Czech Technical University, Palacký University in Olomouc, University of Hradec Králové, and the Institute of Animal Sciences.

The research was conducted between July 2017 and April 2018. Respondents were gathered by the proven method known as snowball. The respondents were given individual time to consider the topics which were included in the questionnaire and subsequently discussed and consulted.

As to the structure of the respondent sample to be investigated, we approached research and academic staff who generate results applicable in practice, have experience of cooperating with companies or have commercialised their results in the market either through offices of transfer of technologies or on their own. Gender representation was fairly balanced (56% male, 44% female). Participants were researchers of all ages.

Age groups over 30 years were represented quite evenly, although there were fewer respondents aged between 30 and 35 and then 60 and more.

Respondents serving as department heads, rectors, deans, and vice deans were evenly represented. By far the largest proportion of the sample was then made up of academic staff.

2.1 Data Processing (Applied Methods, Formulas, Software)

To evaluate the questionnaire, we used descriptive statistics, that is, descriptive methods to display the collected values. More specifically, we used the measure of location – the arithmetic mean. We used the arithmetic mean although we are aware of its sensitivity to changes in the values of the sample, especially the possibility of an extremely deviated value. The arithmetic mean is characteristic of its convergence with the increasing extent of the sample and usually also a fast convergence of average probability distribution and normal distribution. We used MS Excel for a graphic display of data.

3 Questionnaire Survey Evaluation

The seven institutions participating in the survey were represented by a total of nine different disciplines. The humanities were represented by faculties of law, theology,

economics, and health and social studies. Natural sciences were represented by faculties of agriculture and fisheries and by chemistry disciplines. Engineering was represented by disciplines of construction engineering, physics, and computer sciences.

What was interesting was also the representation of respondents with respect to their job roles. The vast majority was represented by academic staff, as illustrated in figure 1 below. Also of interest with respect to the qualitative questionnaires was the representation of respondents holding the posts of department heads, deans, vice deans, and rectors. It should also be added that one of the respondents, whose highest achieved academic title is that of professor, served as minister of education of the Czech Republic a few years ago.

Table 1. Respondents by job role.

Rector	2
Dean	3
Vice dean	4
Head of Department	5
Academic staff	40
Uncategorized	1

As to the comprehensive overview of the highest achieved academic title, by far the largest number of respondents held the PhD degree, followed by the MA and the Docent degrees. There was also a fairly strong representation of the professor title, also represented were the Doctor of Law and the Doctor of Science degrees, and one respondent did not obtain any academic degree as yet.

3.1 Working Conditions and Factors Influencing Work Performance

The first area focused on working conditions and factors affecting work performance and results. Table 2 below shows that among the most satisfied disciplines with respect to their working conditions, motivational incentives, their own results, job duties and workload, and recognition and appreciation on the part of their supervisor are physics and chemistry, followed by fisheries, health and social sciences, and theology. The least satisfied academic staff are in the disciplines of computer sciences and construction engineering, where the results indicate average satisfaction.

When comparing the individual questions for the purpose of interdisciplinary comparison, respondents in all disciplines are satisfied with respect to adequate working conditions and investments in facilities, also opportunities for further education – which are supported at workplaces throughout the disciplines – are evaluated in very positive terms.

Interdisciplinary comparison shows that the respondents are the least satisfied with systematic rewards for performance at their workplaces at universities. The respondents

are not particularly worried about a possible loss of employment. This can be explained by the current shortage of qualified candidates in the job market.

Table 2. Evaluation of working conditions.

	Conditions at the workplace	Infrastructure investments	Bonus system	Reward motivates me	Systematic rewards
Theology	5.7	5.7	4.7	4.7	4.3
Health and social	5.5	5.5	4.0	4.5	4.5
Agriculture	5.1	4.3	3.3	3.0	3.1
Construction	4.5	3.0	2.0	3.0	1.5
Fishery	6.0	6.0	5.7	5.7	4.3
Physics, chemistry	5.5	5.2	4.6	4.7	4.5
Informatics	5.2	4.3	2.8	3.0	1.7
Economy	4.4	4.4	4.4	3.8	4.0

3.2 Workplace Facilities and Infrastructure

Results of the second thematic area, which focused on the characteristics of the working environment and the facilities available at the workplace, are shown in table 3.

With respect to transparent conditions, goals and tasks, and the fulfilment of specified requirements, the most satisfied disciplines are health and social sciences, followed by physics, chemistry, and fisheries. The least satisfied respondents in this respect were in the discipline of computer sciences. Within the disciplines, it is apparent that the respondents are overall satisfied with the laboratory equipment and the transparency of requirements on the part of their supervisors, as well as with the individual tasks and goals, which the employees consider meaningful.

Table 3. Workplace facilities.

Averages	Transparent principles	Meaningful goals	Employees satisfaction	Know supervisor requirements	Laboratories quality	Administrative support
Theology	2.0	5.3	4.3	5.7	4.7	5.7
Health and social	5.0	5.5	5.0	5.5	5.5	5.0
Agriculture	3.1	4.6	4.0	4.9	5.3	4.3
Construction	2.0	5.0	4.0	5.5	4.5	2.0
Fishery	3.0	4.0	3.0	3.0	5.3	5.3
Physics, chemistry	4.1	5.1	4.5	5.4	5.3	4.4
Informatics	2.7	3.7	4.3	4.2	4.8	3.5
Economy	3.6	4.4	3.6	5.0	4.2	2.6

Because part of this section was also questions regarding industrial property rights and offices of transfer of technology and their activities, we will now evaluate this specific segment within this thematic area. The respondents report that they are well informed about the existence or non-existence of an office of transfer of technology at their institutes, and it is also apparent that most of the respondents have already dealt with the office, including respondents in the humanities. With respect to the worst-rated aspects of the office of transfer of technologies, the respondents were the least satisfied with the motivational incentives of the office to generate results and secure funding. It must be noted here that raising funds in the area of transfer of technologies or transfer of knowledge must be evaluated in the context of possible available funding schemes, which are few in the Czech and European environment.

The question regarding the motivation on the part of offices of transfer of technologies was the worst rated in this thematic segment. It followed from the interviews with the respondents that employees of offices of transfer of technologies are able to support academic staff with consultations, advice and help with tasks leading to industrial property rights, provided that this step is evaluated as economically efficient, necessary, and suitable. However, motivation in terms of themes or ideas relies mostly on the academic staff themselves because the employees of technology transfer offices do not monitor the progress and developments in science and are not aware of areas and directions of possible further development and research.

3.3 Aspects of Internal Motivation

Aspects of internal motivation focused on individual attitudes of the respondents towards their own abilities and knowledge, satisfaction with their own results, and whether their job is sufficiently satisfactory, also with respect to its recognition and appreciation. Table 4 below shows that overall the most satisfied in this area are respondents representing the disciplines of health and social sciences, closely followed by physics, chemistry, and theology. When comparing the nine disciplines under examination, the least satisfied respondents were in the disciplines of construction engineering and law. Across the disciplines, the highest-ranking question was that regarding creativity, which is highly inspiring, then satisfaction with one's own work, as well as the satisfaction with the achieved results. Overall, it is apparent that the respondents are stable employees who can mostly imagine working at these current positions until the end of their careers, which is true above all for representatives of theology and health and social sciences.

Table 4. Factors of motivation.

Average	Work satisfies me	My results are best motivation	Prestige	Skills are used
Theology	5.7	5.3	5.3	5.7
Health and social	5.5	6.0	5.5	5.5
Agriculture	4.8	4.7	4.6	4.5
Construction	4.5	4.0	4.0	4.5
Fishery	5.3	6.0	6.0	3.7
Physics, chemistry	5.6	5.7	5.4	5.5
Informatics	4.8	4.5	3.8	3.7
Economy	5.4	5.2	4.8	4.6

The motivation section consisted of a single question, where research and academic staff were asked to state what they regard as meaningful work at university. Based on their answers, the most respondents have agreed that what they find highly satisfying and motivating is the opportunity to educate the next generation of students in their chosen discipline as well as in their attitudes to life, society, and environment, and their subsequent entry in the job market; also motivating is the opportunity to pursue selected research topics and bring new impulses for further development of their disciplines.

Most of the respondents also highly value the opportunity to creative work and the freedom of decision-making. What is regarded positively is also the possibility of a gradual building of a work team, who is subsequently able to efficiently solve practical problems and transform the acquired skills into the educational process. Most respondents have also mentioned that they feel obliged to the society and that they feel the need to give back to the society in another form what has been invested from public funds into their research disciplines. The respondents are also highly appreciative of the opportunity to work with the latest state-of-the-art technologies in the market.

Respondents actively involved in the area of industrial property rights all agreed on the importance of cooperation with companies on research and development, which is needed, applicable in practice, and fairly fast to implement, owing to the collaboration with the company.

4 Conclusion

The conducted qualitative survey among academic staff shows that when it comes to industrial property rights, cooperation with companies is of the utmost importance. As to monetary remuneration, the most satisfied are employees in the disciplines of physics and chemistry, followed by fisheries, health and social sciences, and theology. At the same time, employees in these disciplines are satisfied with clearly stated requirements on them and with the transparency of these requirements. The least satisfied academic staff are in the disciplines of computer sciences and construction engineering, where the results indicate average satisfaction.

As to internal motivation, the most satisfied are respondents from the areas of health and social sciences, closely followed by physics, chemistry, and theology. When comparing the nine disciplines under examination, the least satisfied respondents were in the disciplines of construction engineering and law.

Overall, it is apparent that the respondents are stable employees who can mostly imagine working at their current positions until the end of their careers.

Our research has showed that monetary remuneration is not the key element of motivation. It is equally important for the employees to be clear about the goals and rules of the organisation, along with solid administrative background and appropriate working conditions.

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