Article

Job satisfaction in relation to the situation inside the organization—results of research at the technical university

Anna Karczewska, Ewelina Krzyżowska, Katarzyna Kukowska, Marek Szajt[*]

Czestochowa University of Technology, 42-201 Częstochowa, Poland
* Corresponding author: Marek Szajt, marek.szajt@pcz.pl

Abstract: Human capital, which is a key resource of every organization, is characterized by high sensitivity to social, cultural and other factors that are not necessarily economic in nature. In the process of managing this capital, employee satisfaction becomes key, resulting from various reasons. In this study, we attempted to examine the level of satisfaction of university employees. The aim of this study was to gather information on the level of employee satisfaction with their job positions and to examine the relationships between selected, identified factors influencing their job satisfaction. The paper used multivariate statistical analysis, mainly Wilcoxon tests and Spearman rank correlation. Analysis of the survey results confirmed significant relationships between factors such as work atmosphere, appreciation of work effects, proper division of responsibilities and possible help in the team.

Keywords: atmosphere at work; employee satisfaction; salary and non-wage conditions; social relations; university

1. Introduction

Human resource management at the enterprise level which is the subject of numerous studies and research in Poland and abroad, seems to be a constantly interesting topic. Changes occurring in the social structure and market situation, intensified by the political situation, the development of techniques for changing employee preferences, a constant increase in income and free time, and the availability of various services are changing the perception of the role of work. This paper attempts to analyze employee satisfaction of academic staff employed in a public organization and a university. Due to the duality of tasks (teaching and science), its functioning is characterized by a specificity different from other public enterprises operating in the conditions of a market economy.

Such organizations are forced to fight for a customer, i.e., a student, through their offer, often carrying out tasks imposed by the institution that systemically manages the sector. Every element of work is related to employee involvement. Universities simultaneously carry out non-commercial and commercial research work in the form of commissioned research, analyses, and reports, as well as external funds directed at predetermined research directions. Therefore, apart from the issues of uncertainty of student recruitment (affecting employment), there are also issues of uncertainty of the results of competitions in research projects, uncertainty of demand for commissioned research, or funding for specific fields of science. In this light, organizational management, and especially the management of research and teaching staff, seems to be an interesting issue. Satisfaction surveys in an organization, especially in large international companies, are almost a standard. At the university level, especially in

the countries of Central and Eastern Europe, this is still a rarity, or at least these results are not published.

The aim of this study was to evaluate the level of employee satisfaction with their positions. The results, aside from the anticipated recognition of the importance of remuneration, highlight the significance of workplace atmosphere and interpersonal relationships. Knowledge of the situation in the company, but more importantly for the generalization of the results, the relationship between the examined issues seems to be interesting.

2. Materials and methods

The study was conducted in 2022 on employees of the organization, of whom 188 completed a complete survey, which constituted 25% of the total workforce. The research was carried out electronically, ensuring anonymity and voluntary participation. To increase respondent trust—also at the request of their representatives involved in the study—the survey was distributed via the LimeSurvey platform to all employees. Information about the survey was disseminated through official channels.

The content of the questionnaire was approved by the ethics committee with the participation of trade unions. The questions did not directly refer to specific individuals, except for an optional section for comments, where participants could express opinions about individual employees, managers, or procedures. The questionnaire included 54 thematic questions and 8 demographic questions. Forty-eight questions used a five-point Likert scale, one employed a nominal scale, and the remaining were open-ended.

The reliability of the questionnaire was verified using Cronbach's alpha, which was determined to be $\alpha = 0.973$. The questions were grouped into seven categories:
1) Wage and non-wage conditions,
2) Occupational health and safety,
3) Working hours,
4) Social relations,
5) Employee recognition and development opportunities,
6) Self-fulfillment at work,
7) Barriers to the institution's potential development.

Each group concluded with an option for additional comments. Due to the sensitive nature of the results and the presence of sensitive organizational data, the findings were stored in the repository of the Commission for Strategy Implementation. Multivariate statistical analysis was employed to validate the results, using Microsoft Excel and Statistica 13 software. Due to the scale of grades used, the analyzes used the Wilcoxon test for comparisons and a correlation test using the Spearman coefficient.

3. Results and discussion

Conducting research at the organization level—especially on matters as crucial to its operations as employee satisfaction—is not an easy task and involves numerous challenges, which we attempted to address.

3.1. Research assumptions

The need for satisfaction, which is the focus of this study, is situated in the upper tiers of Maslow's hierarchy of needs. It can be related both to the need for respect and recognition and, in certain aspects, to the need for self-actualization. However, considering the broad spectrum of the concept of satisfaction, it is important to also mention elements from the lower tiers of Maslow's hierarchy, such as satisfaction with compensation for work performed. The multifaceted nature of satisfaction complicates its analysis. It can be examined from economic, social, or sociological perspectives (Yusoff et all., 2022). These viewpoints overlap and interact, producing—especially in the case of extensive studies—a generalized picture that, while potentially too broad in large enterprises, remains analyzable in terms of specific groups (Crossman and Harris, 2006) as well as in aggregate. The level of satisfaction depends on factors such as age (Mgaiwa, 2023) , gender—particularly in the context of pay inequalities (Ward and Sloane, 2000)—and, in connection with these, length of service (Drucker-Godard et all., 2015).

## 3.2. Purpose of employee satisfaction analysis

Research originating in sociology and psychology (Mishra, 2013) has gained recognition among economists. It has become evident—a notion no longer requiring justification—that as employee satisfaction increases, so does their effectiveness (Katebi et all., 2022), which can be measured directly or indirectly as it influences economic efficiency (Çelik, 2011) and ultimately benefits the enterprise. This applies to both profit-oriented and other types of organizations (Platis et all., 2015).

The study discussed in this article was one of several conducted as part of work on the organization's development plan for the 2030 perspective. The research within this project covered all stakeholder groups. The literature features numerous studies on job satisfaction conducted in African (Olusegun, 2013) and Asian countries (Ahmed, 2015; Chaudhry, 2012). However, even in these, cultural differences in employee attitudes were highlighted (Wong and Heng, 2009). Therefore, research conducted in Polish-European conditions may simultaneously exhibit similarities to many studies worldwide while accounting for the specificities of the national science system, state organization, and culture.

The aim of this study was to gather information on the level of employee satisfaction with their job positions and to examine the relationships between selected, identified factors influencing their job satisfaction. The results related to individual scores and personal comments are proprietary to the client and subject to confidentiality usually (except for scientific purposes). The insights into relationships between the categories studied and the behaviors analyzed constitute valuable material—according to the author—valuable material with a high potential for universality.

3.3. Key findings

Among the various aspects evaluated in the study, those concerning supervisors and employees' identification with the organization emerged prominently.
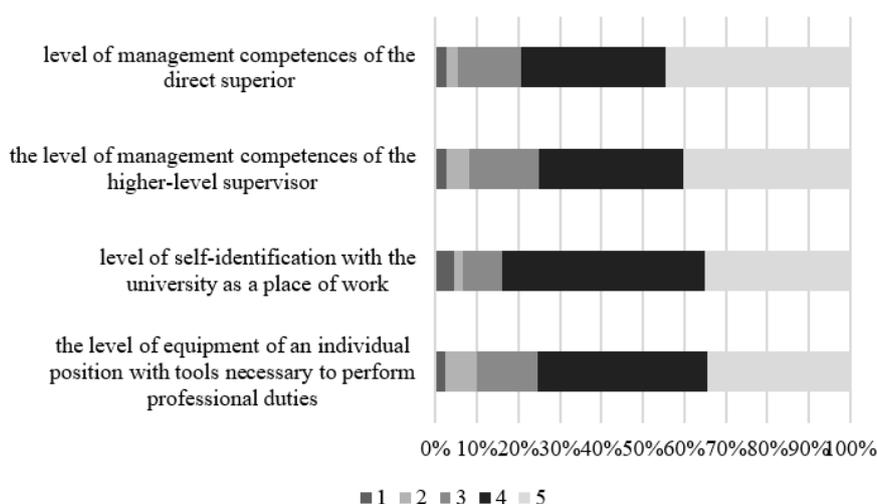
Figure 1. Distribution of scores for selected factors influencing job satisfaction.

The competencies of supervisors are highly rated, with the expected trend of higher scores for direct supervisors (**Figure 1**). Proper leadership and organizational support (Purwanto, 2020) are also frequently mentioned in other studies as critical not only for job satisfaction but for the overall functioning of the team (Skolik and Kukowska, 2022). Both research-teaching and administrative staff (distinguished as separate groups in the study) demonstrate strong identification with their institution, with over 80% indicating this connection. This represents a valuable asset that cannot be underestimated.

However, the situation is reversed when it comes to the evaluation of remuneration levels. More than half of the employees rate it poorly. In detail, as many as 25% rate their pay as very low. Within the framework of job satisfaction, remuneration emerges as a key factor (Ali and Anwar, 2021). A mismatch in pay can lead to professional burnout, even among younger employees (Rinny et all., 2020), and consequently result in reduced productivity or employee turnover, despite the inherent prestige associated with working at a university, which otherwise contributes to job satisfaction (Gadi et all., 2024). In this context, the university's efforts to foster identification with the institution are crucial for workforce stability. Satisfaction, in turn, translates into the work involvement (Chiracu et al., 2024) and the level of educational services provided (Sale Ma and Quirap, 2024).

The components of employee satisfaction tend to receive the highest ratings from those with the shortest tenure. Conversely, the most critical evaluations come from employees with 6–15 years of service. One of the key issues in recent times has been the manner in which tasks related to research, teaching, and administrative work are carried out. Apart from the noticeable lack of clear, organization-wide guidelines—partially due to the autonomy of internal units—there is also evidence of employees being overburdened with tasks unrelated to their primary responsibilities.

The quality of relationships with direct supervisors and the workplace atmosphere contribute to reduced duplication of work and better oversight of tasks performed by others. Strong relationships with supervisors also correlate with a higher level of employee recognition ($r = 0.813$; $p < 0.001$). Building appropriate

relationships further enhances peer assistance in overcoming challenges ($r = 0.741$; $p < 0.001$) and accelerates conflict resolution ($r = 0.752$; $p < 0.001$).

On the other hand, low ratings for remuneration and evaluation processes strongly correlate with poor assessments of promotion opportunities ($r = 0.532$; $p < 0.001$) and recognition of work outcomes ($r = 0.451$; $p < 0.001$). The study did not confirm differences in satisfaction levels based on gender; however, individuals who disclosed their gender reported significantly higher levels of satisfaction compared to those who chose not to disclose this information.

Table 1. Wilcoxon signed-rank test results for pay and non-pay condition factors.

Factor	2.	3.	4.	5.	6.
1) the level of equipment of an individual position with tools necessary to perform duties	-	-	←	←	-
2) the level of equipment of your unit with the necessary tools and infrastructure to perform duties		-	←	←	-
3) the level of equipment your unit needs to conduct classes			←	←	-
4) social rooms available for employees				←	↑
5) salary level					↑
6) availability and distribution of social benefits					

The results of the Wilcoxon signed-rank test for factors (**Table 1**) related to pay and non-pay conditions further reinforce these findings, highlighting the critical role these elements play in overall job satisfaction.

Among the analyzed factors, the level of remuneration appears (in the opinion of employees) to be less significant than, for example, the level of individual workplace equipment with tools necessary to perform duties or the level of equipment of the unit with the necessary tools to fulfill responsibilities.

Table 2. Results of Wilcoxon signed-rank test for occupational health and safety (OHS) factors.

Factors	2.	3.	4.	5.	6.	7.	8.
1) level of security related to continuity of employment	↑	-	←	-	←	-	←
2) level of self-identification with the university as a place of work		←	←	←	←	←	←
3) physical conditions of work performed			-	-	←	-	←
4) mental well-being at work				-	←	-	←
5) the level of stress experienced					←	-	←
6) with the work performed						↑	-
7) level of improvements in administrative services							←
8) work-life balance							
9) level of security related to continuity of employment	↑	-	←	-	←	-	←
10) level of self-identification with the university as a place of work		←	←	←	←	←	←
11) physical conditions of work performed			-	-	←	-	←
12) mental well-being at work				-	←	-	←
13) the level of stress experienced					←	-	←
14) with the work performed						↑	-
15) level of improvements in administrative services							←
16) work-life balance							

Further analyses confirm significantly higher ratings for identification with the organization compared to most other factors. Interestingly, work-life balance is rated lower than the majority of other factors (**Table 2**). Among these, job security associated with continuity of employment stands out as particularly significant, a factor that gained considerable importance during the COVID-19 pandemic (Siejka and Szajt, 2022). The greatest differences and clear advantages, however, are observed in the domain of social relations.

Table 3. Results of Wilcoxon signed-rank test for social relations factors.

factors	2.	3.	4.	5.	6.	7.	8.	9.	10.
1) atmosphere in your head unit	↑	↑	-	←	-	-	←	←	←
2) atmosphere in your direct unit		-	←	←	←	←	←	←	←
3) help from colleagues if they encounter a problem at work			←	←	←	←	←	←	←
4) resolving conflicts in your team/section				←	-	-	-	←	←
5) division of responsibilities in your team/section					↑	-	-	←	←
6) building positive relationships in the team by the direct superior						←	←	←	←
7) level of cooperation between colleagues in your team/department/section							-	←	←
8) the level of competition between colleagues in your team/department/section								←	-
9) the level of trust between colleagues in your team/ department/section									↑
10) the level of openness of communication between colleagues in your team/department/section									

The most critical factors shaping job satisfaction (in this study) were the atmosphere in the direct unit and coworkers' assistance in addressing problems encountered at work (**Table 3**). This factor is highlighted across various types of enterprises, even the largest ones oriented primarily toward commercial success (Karczewska, 2020). Collaboration and knowledge sharing are closely linked to an increased sense of self-efficacy (Krzyżowska, 2022). These characteristics proved to be significantly more important than all others. Similar conclusions can also be found in other studies (Kun and Gadanecz, 2022; Van Marle, 2018). Interestingly, in reference to previously mentioned research, the next most important factor was the ability of direct supervisors to foster positive team relationships (Korombel, 2013). The interdependence of these categories has also been confirmed in other studies conducted in relatively different environments but also within the context of technical universities (Ampha et all., 2022).

The study (**Table 4**) confirmed a clear synergy between workplace atmosphere, assessment of pay and non-pay factors, evaluation of coworkers' and management's competencies, and mutual collaboration and trust. Although these factors have been widely discussed in the literature, this study reaffirms the need for further exploration, particularly concerning the specific nature of higher education institutions.

Table 4. Directions of statistically significant relationships among selected factors.

atmosphere in your direct unit	→	help from colleagues if they encounter a problem at work
division of responsibilities in your team/section	→	atmosphere in your direct unit
the level of appreciation of the effects of your work by your direct superior	→	atmosphere in your direct unit
level of management competencies of the direct superior	→	matching the difficulty of the tasks assigned to you to your skills
the level of appreciation of the effects of your work by your direct superior	→	level of management competencies of the direct superior
salary level	→	level of improvements in administrative services
social rooms available for employees	→	salary level
time to rest during the working day	→	work-life balance
the level of openness of communication between colleagues in your team/department/section	→	the level of trust between colleagues in your team/department/section
level of management competencies of the direct superior	→	the level of quality of the relationship with the direct superior
the number of teaching duties performed during the year is adjusted to my working hours	→	level of management competencies of the direct superior

4. Conclusion

The results obtained provide excellent material to support organizational work within the studied enterprise. Due to the omission of assessments in itself and the indication of the relationships between the assessments of individual factors (including motivational) and the working conditions, these results are a valuable study with high potential for universalism. The cyclical nature of such studies (as recommended) can highlight the effects and effectiveness of implemented actions, contributing to the organization's success.

Limitations of this research include the sample size and the specific characteristics of the employees studied. Despite certain legal frameworks and regulations, even at the state level, there are significant deviations in university management methods and conditions resulting from factors such as location, economic development, demographics, traditions, etc. Therefore, generalizing the findings to a broader population should be done with caution.

Author contributions: Conceptualization, AK, EK and KK; methodology, MS; software, MS; validation, MS; formal analysis, AK, EK, KK and MS; investigation, AK, EK, KK and MS; resources, AK, EK, KK and MS; data curation, MS; writing—original draft preparation, AK, EK and KK; writing—review and editing, MS; visualization, MS; supervision, MS; project administration, MS; funding acquisition, AK, EK, KK and MS. All authors have read and agreed to the published version of the manuscript.

Conflict of interest: The authors declare no conflict of interest.

References

Ahmed, M. A. (2015). The Role of Self-esteem and Optimism in Job Satisfaction among Teachers of Private Universities in Bangladesh. Asian Business Review, 1(2), 114. https://doi.org/10.18034/abr.v1i2.322

Ali, B. J., & Anwar, G. (2021). An Empirical Study of Employees' Motivation and its Influence Job Satisfaction. International Journal of Engineering, Business and Management, 5(2), 21–30. https://doi.org/10.22161/ijebm.5.2.3

Ampha, O., Buathongrueang, K., Tupkrut, N., et al. (2022). The Study of Transformational Leadership, Effective of Use and Work Atmosphere Affecting on Online Classroom of Lecturer in Rajamangala University of Technology Srivijaya. Message From the Executive Vice President.

Çelik, M. (2011). A theoretical approach to the job satisfaction. Polish Journal of Management Studies.

Chaudhry, A. Q. (2012). The Relationship between Occupational Stress and Job Satisfaction: The Case of Pakistani Universities. International Education Studies, 5(3). https://doi.org/10.5539/ies.v5n3p212

Chiracu, A., Bratu, M., Oprisan, E., et al. (2024). Emotional intelligence, self-efficacy, basic psychological needs satisfaction and their role in job satisfaction and work involvement in teachers. Review of Psychopedagogy, 13(1), 110–126. https://doi.org/10.56663/rop.v13i1.78

Crossman, A., & Harris, P. (2006). Job Satisfaction of Secondary School Teachers. Educational Management Administration & Leadership, 34(1), 29–46. https://doi.org/10.1177/1741143206059538

Drucker-Godard, C., Fouque, T., Gollety, M., et al. (2014). Career Plateauing, Job Satisfaction and Commitment of Scholars in French Universities. Public Organization Review, 15(3), 335–351. https://doi.org/10.1007/s11115-014-0280-0

Gadi, P. D., Mailumu, A. S., & Wash, P. M. (2024). Employees' deviant workplace behavior, employee external prestige, and job satisfaction: Evidence from Nigeria. Human Resources Management and Services, 6(3), 3423. https://doi.org/10.18282/hrms.v6i3.3423

Karczewska, A. (2020). Joint Activities of Employees and Their Relation with Knowledge Sharing in Large Polish Enterprises. (2020). In: Proceedings of 21st European Conference on Knowledge Management. https://doi.org/10.34190/ekm.20.159

Katebi, A., HajiZadeh, M. H., Bordbar, A., et al. (2021). The Relationship Between "Job Satisfaction" and "Job Performance": A Meta-analysis. Global Journal of Flexible Systems Management, 23(1), 21–42. https://doi.org/10.1007/s40171-021-00280-y

Korombel, A. (2013). Cechy skutecznego menedżera XXI wieku. Przegląd Organizacji, 27–32. https://doi.org/10.33141/po.2013.11.05

Krzyżowska, E. (2022). Relationship Between Self-Efficacy, Trust, and Knowledge Sharing Among IT Industry Employees Working Remotely. European Conference on Knowledge Management, 23(1), 669–676. https://doi.org/10.34190/eckm.23.1.598

Kun, A., & Gadanecz, P. (2019). Workplace happiness, well-being and their relationship with psychological capital: A study of Hungarian Teachers. Current Psychology, 41(1), 185–199. https://doi.org/10.1007/s12144-019-00550-0

Mgaiwa, S. J. (2023). Job satisfaction among university academics: Do academic rank and age make a difference? Cogent Education, 10(2). https://doi.org/10.1080/2331186x.2023.2230395

Mishra, P. K. (2013). Job Satisfaction. IOSR Journal Of Humanities And Social Science, 14(5), 45–54. https://doi.org/10.9790/1959-1454554

Olusegun, S. O. (2013). Influence of job satisfaction on turnover intentions of library personnel in selected universities in South West Nigeria. Library Philosophy and Practice.

Platis, C. H., Reklitis, P., Zimeras, S. (2015). Relation between job satisfaction and job performance in healthcare services. Procedia-Social and behavioral sciences, 175, 480-487. https://doi.org/10.1016/j.sbspro.2015.01.1226

Purwanto, A. (2020). Effect of transformational leadership, perceived organizational support, job satisfaction toward life satisfaction: Evidences from Indonesian teachers. International Journal of Advanced Science and Technology.

Rinny, P., Purba, C. B., Handiman, U. T. (2020). The influence of compensation, job promotion, and job satisfaction on employee performance of Mercubuana University. International Journal of Business Marketing and Management (IJBMM).

Sale Ma., L. S, & Quirap, E. A. (2024). Teachers' Work Satisfaction and Service Execution. International Journal of Multidisciplinary Research And Analysis, 07(09). https://doi.org/10.47191/ijmra/v7-i09-48

Siejka, S., & Szajt, M. (2022). Impact of COVID-19 pandemic on the hierarchy of motivating factors among sales department employees. Polish Journal of Management Studies, 26(2), 310–329. https://doi.org/10.17512/pjms.2022.26.2.19

Skolik, S., Kukowska, K. (2022). Behavior of people in an organization in an evolutionary perspective—communication, integration, cooperation (Polish). Wydawnictwo Politechniki Częstochowskiej, Częstochowa.

Van Marle, K. (2018). 'Life is Not Simply Fact': Aesthetics, Atmosphere and the Neoliberal University. Law and Critique, 29(3), 293–310. https://doi.org/10.1007/s10978-018-9232-0

Ward, M. E., & Sloane, P. J. (2000). Non-pecuniary Advantages Versus Pecuniary Disadvantages; Job Satisfaction Among Male And Female Academics In Scottish Universities. Scottish Journal of Political Economy, 47(3), 273–303. Portico. https://doi.org/10.1111/1467-9485.00163

Wong, E. S. K., & Heng, T. N. (2009). Case Study of Factors Influencing Jobs Satisfaction in Two Malaysian Universities. International Business Research, 2(2). https://doi.org/10.5539/ibr.v2n2p86

Yusoff, N. M., Muhammad, R., & Sudono, A. (2022). Employeesâ€™ Self-Worth: Psychological and sociological factors influencing job satisfaction. Environment-Behaviour Proceedings Journal, 7(19), 385-391. DOI: https://doi.org/10.21834/ebpj.v7i19.3247