



EXPLORING WORKER EVALUATION PRACTICES IN MECHANICAL ENGINEERING ENTERPRISES: A CROSS-SECTIONAL STUDY

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ABSTRACT

This study examines three hypotheses regarding motivation and remuneration within organizations. A questionnaire survey investigates whether over 50% of companies have an internal reward system, if more than half of employees are dissatisfied with their salary, and if a majority of individuals perceive their compensation as unjust. Findings confirm these hypotheses, emphasizing the importance of understanding internal remuneration systems in evaluating employee motivation and satisfaction. The research underscores the need for organizations to ensure equitable compensation practices and highlights the significance of employees comprehending financial evaluation criteria for enhancing performance and skills development. It also emphasizes the importance of periodic evaluation and updating motivation and reward systems to improve benefits and mitigate drawbacks. Overall, this study contributes to the discourse on employee motivation and remuneration, offering insights into organizational practices to enhance employee engagement and satisfaction.

KEYWORDS

Mechanical engineering, industrial engineering, motivation of workers, remuneration of workers, reward systems.

1. Introduction

In the contemporary landscape of industrial enterprises, particularly within the domain of mechanical engineering, the optimization of employee compensation and motivation strategies stands as an indispensable facet of organizational management [1, 2]. As organizations strive to enhance productivity, maintain competitiveness, and foster sustainable growth, the imperative to comprehend and address the intricacies of employee rewards and motivation becomes increasingly paramount [3].

The mechanical engineering sector, characterized by its rigorous demands for technical expertise, innovation, and precision, presents a unique milieu wherein the efficacy of employee remuneration and motivational schemes profoundly influences organizational performance [4, 5]. Given the complex nature of tasks undertaken within such enterprises, where design details, manufacturing precision, and project timelines converge, personnel's intrinsic motivation and engagement emerge as pivotal determinants of operational excellence [6].

Furthermore, in an era marked by rapid technological advancements, global market volatility, and shifting workforce demographics, the conventional paradigms of

employee compensation and motivation necessitate reassessment and adaptation [7]. Traditional models predicated solely on financial incentives are being supplanted by more nuanced approaches that integrate elements of intrinsic motivation, professional development, and organizational culture [8].

Moreover, the ramifications of employee reward systems extend beyond mere operational efficacy, permeating organizational culture, employee satisfaction, and ultimately, stakeholder value. In an era characterized by heightened awareness of workplace dynamics and the imperatives of talent retention, the ability of mechanical engineering enterprises to devise and implement robust reward structures directly influences their capacity to attract, retain, and harness top-tier talent [9].

Consequently, this study endeavors to delve into the sophisticated interplay between employee compensation, motivation, and organizational performance within the context of mechanical engineering enterprises [10]. By elucidating prevailing practices, discerning emergent trends, and synthesizing empirical insights, this research aims to furnish stakeholders with actionable insights essential for navigating the evolving landscape of human resource management in the mechanical engineering domain [11].

In light of the foregoing, the imperative to undertake an in-depth examination of employee reward and motivation strategies in mechanical engineering enterprises emerges as not merely a pragmatic necessity, but as an exigent imperative requisite for sustaining organizational resilience, fostering innovation, and fortifying competitive advantage in an increasingly dynamic global marketplace [12].

2. Methodology

This investigation aims to discern the prevailing remuneration systems employed within operational contexts, followed by an examination of worker evaluation practices within engineering enterprises in central Slovakia. The organizational composition of engineering enterprises exhibited considerable diversity. Survey questionnaires were distributed among large and medium-sized enterprises, while small-scale businesses were excluded from the survey scope. The criteria for the selection of these engineering entities were contingent upon their scale, workforce magnitude, and operational niche.

This survey was conducted specifically in central Slovakia and within medium-sized and large enterprises for several reasons. Primarily, it is important to note that central Slovakia is characterized by a significant presence of industrial and corporate sectors, particularly in the fields of mechanical engineering and industrial engineering. These sectors are pivotal for the Slovak economy and play a crucial role in the overall industrial structure of the country.

Medium and large enterprises constitute the cornerstone of the Slovak economy. Their scope, range of activities, and number of employees provide a representative sample for studying various aspects of human resource management, such as compensation and performance evaluation systems. Larger enterprises often employ more complex compensation systems and exhibit greater diversification in terms of remuneration. Additionally, these enterprises often have established and specialized procedures for employee evaluation, which can serve as an inspirational source of knowledge and best practices.

Furthermore, the decision to focus on central Slovakia and on medium-sized and large enterprises helps provide relevant and significant data. If we achieve conclusions or trends regarding these enterprises, we can assume their greater representativeness for the broader Slovak industrial landscape. Their position and influence in the economy make their research valuable and indicative of understanding the structure and trends in employee compensation and evaluation in Slovakia.

2.1. Data collection methods: An overview

Within the scope of the study, it was imperative to establish methodologies for data collection aimed at analyzing employee remuneration within mechani-

cal engineering enterprises. The questionnaire method was selected as the primary means of data collection. This method acquired all the necessary data to achieve the objective delineated in the preceding subsection.

Employee satisfaction and opinions hold significant importance for the company. Through the questionnaire, all employees can express themselves without fear of reprisal, typically in the form of antagonizing superiors. Processing the results of the questionnaire survey is also relatively straightforward, yielding clear and comprehensible outcomes. For the study, 15 questions were asked. These questions pertain to employee satisfaction with their job roles, working conditions, motivation, and contentment with remuneration. Thirteen questions were closed-ended, offering various response types, while two questions were open-ended, soliciting insights into the benefits or additional forms of compensation employees would welcome in their work. Employees had the opportunity to supplement certain questions with alternative options not provided in the selection. The questionnaire survey was conducted anonymously, and the results were compiled and presented in concise graphical formats.

3. Formulating hypotheses

A crucial component of the inquiry involves the articulation of hypotheses, which serve as the foundation for assessing the efficacy of the motivation and reward system implementation upon the conclusion of the investigation. In alignment with the survey's objectives, the ensuing hypotheses were posited:

- first hypothesis: We assume that more than 50% of companies have an internal compensation system;
- second hypothesis: We assume that more than 50% of employees are not satisfied with the amount of their salary;
- third hypothesis: We assume that more than 50% of people evaluate their remuneration as unfair.

The first hypothesis is predicated on the premise that an examination of the questionnaire survey will reveal that more than 50% of the companies where respondents are employed adhere to clearly defined guidelines and methods for compensation. The formulation of the second hypothesis is based on the assumption that respondents hold diverse opinions and perspectives regarding the importance they assign to their financial remuneration. This hypothesis posits that individuals generally express dissatisfaction with their rewards and salaries, consequently perceiving their compensation for work performed as unfair.

These conjectured hypotheses necessitate validation or refutation through a questionnaire survey. Moreover, inquiries directed towards affirming or negating these hypotheses were responded to by employees within engineering firms and other sectors, augmenting the comprehensive understanding of motivation and compensation dynamics within companies.

4. Evaluation and confirmation of hypotheses

As part of the solution of the study, three hypotheses were established, which were evaluated in this part. It was necessary to confirm or refute these hypotheses.

4.1. The first hypothesis

The first hypothesis postulates that over 50% of enterprises possess an internal remuneration system. To assess this hypothesis, two questions in the questionnaire, specifically questions 8 and 9, addressed the presence of such a system within the respondents' respective companies. It was assumed that upon scrutiny of the questionnaire survey, a majority of companies where respondents are employed would exhibit delineated guidelines and methodologies for remuneration.

In Fig. 1, the eighth question of the questionnaire and its assessment are presented, pivotal for evaluating the first hypothesis.

Out of eighty-six respondents (57.4%), the majority affirmed the presence of an internal remuneration system within their respective companies, with employees being acquainted with it. Conversely, 14.7% of respondents indicated that remuneration, including wages, does not consistently align with the established sys-

tem. Additionally, 30% of respondents expressed uncertainty regarding the existence of an internal system at their company. Notably, twenty-one respondents (14%) reported stagnant salaries, indicating a perceived lack of correspondence between remuneration and performance. Furthermore, nineteen respondents (12.6%) reported the absence of any reward or remuneration system at their workplace.

The inquiry into the existence of an internal remuneration system within the company and employees' familiarity with it constitutes fundamental aspects of evaluating employee motivation. Subsequent inquiries will scrutinize adherence to this system and thereby assess the fairness of remuneration. The fairness of pay emerges as a paramount factor in determining employee satisfaction or dissatisfaction during the examination of employee contentment.

In Fig. 2, the ninth question of the questionnaire and its assessment are presented, pivotal for evaluating the first hypothesis.

Nearly half of the respondents (48.7%) reported familiarity with the criteria used for their evaluation, with 28% indicating a comprehensive understanding of these criteria. Conversely, 19.3% of respondents expressed uncertainty regarding the financial evaluation criteria, while 4% admitted to a lack of comprehension regarding the evaluation criteria employed.

Question 8: Is there an internal remuneration system implemented within your workplace?
150 answers

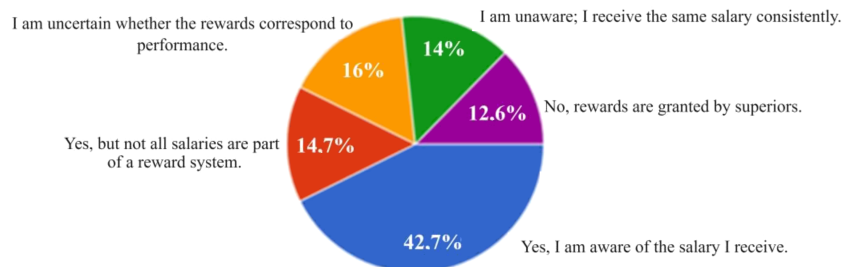


Fig. 1. The eighth question of the questionnaire: the remuneration system [source: Authors].

Question 9: Do you know the criteria based on which you are financially remunerated?
150 answers

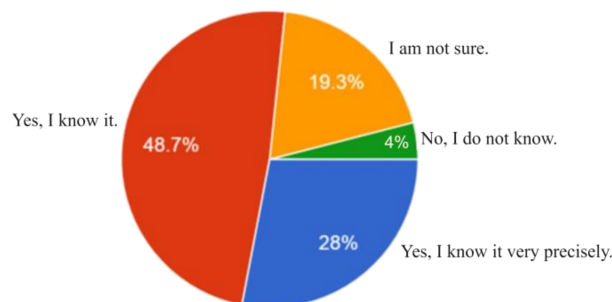


Fig. 2. The ninth question of the questionnaire: the financial system criteria [source: Authors].

Acquaintance with the criteria for financial evaluation in the workplace constitutes a crucial determinant of employee motivation. Only through delineated guidelines can companies foster highly skilled and effectively motivated employees, incentivized to continually enhance their performance. It is imperative for companies to meticulously articulate and consistently implement this financial system within the framework of employee performance assessment, aligning with results and predetermined objectives.

Based on these findings, it can be concluded that the majority of enterprises have established an internal reward system. Therefore, the formulated first hypothesis has been successfully confirmed.

4.2. The second hypothesis

The second hypothesis posits that over 50% of employees are dissatisfied with their salary level. To ascertain the validity of this hypothesis, questions 4 and 5 in the questionnaire were employed. These inquiries delved into the significance respondents attribute to their salary and whether they perceive its amount as adequate.

In Fig. 3, the fourth question of the questionnaire and its assessment are presented, pivotal for evaluating the second hypothesis.

The fourth query sought to gauge employees’ attitudes toward their remuneration. An insightful finding emerged, revealing that a significant majority of respon-

dents, totaling ninety individuals or 60% of the sample, expressed dissatisfaction with their current salary level, considering it insufficient. Conversely, a noteworthy segment comprising sixty individuals, or 40% of the sample, deemed their remuneration adequate.

In Fig. 4, the fifth question of the questionnaire and its assessment are presented, pivotal for evaluating the second hypothesis.

In the fifth question, respondents were required to rate on a scale of 1–10 the importance they attributed to their salary level. The majority of respondents fell within the range of 7–10 (up to 93.3%, totaling one hundred thirty respondents). From the results, it can be inferred that salary level holds significant importance. The highest number of respondents, precisely 45 individuals (30%), rated the importance of their salary level as eight points. Twenty individuals (13.3%) assigned a rating of seven to the importance of their salary level. Thirty-six individuals (24%) rated the importance of their salary level as nine. Thirty-nine respondents (26%) rated the importance of their salary level as ten, designating it as the most crucial factor. A very small percentage of individuals (4.7%), comprising seven respondents out of the total of one hundred fifty, assigned the first five points (indicating little to no importance of salary).

From the results, it can be concluded that the salary level is highly significant. Therefore, we have succeeded in confirming the formulated second hypothesis.

Question 4: Do you consider the level of your salary to be sufficient?
150 answers

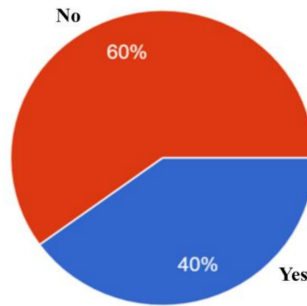


Fig. 3. The fourth question of the questionnaire: the level of salary [source: Authors].

Question 5: Please indicate on a scale from 1 to 10 (1-least, 10-most) how important the level of your salary is to you.
150 answers

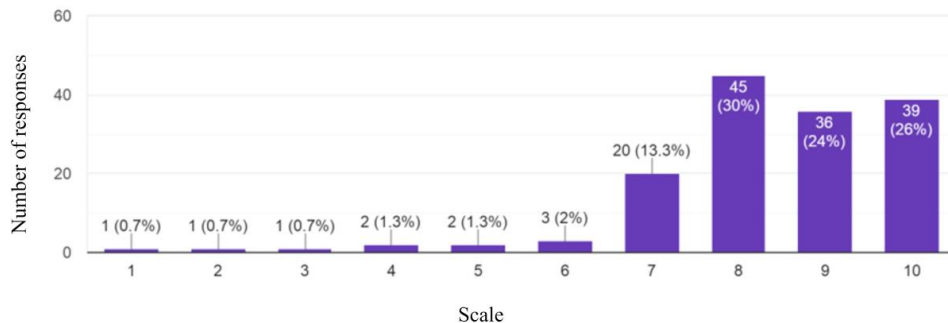
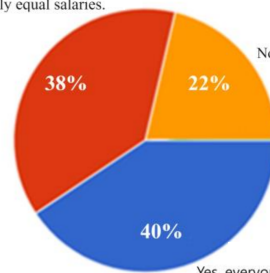


Fig. 4. The fifth question of the questionnaire: the importance of salary [source: Authors].

Question 10: Do you consider yourself to be remunerated fairly?
150 answers

No, we have approximately equal salaries.



No, individuals are rewarded even without merit.

Yes, everyone receives compensation based on performance.

Fig. 5. The tenth question of the questionnaire: the method of remuneration [source: Authors].

4.3. The third hypothesis

This hypothesis posited that more than 50% of individuals assess their remuneration as inadequate.

In framing this hypothesis, it was predicated on the premise that individuals express dissatisfaction with both the rewards and the amount of their salary. Consequently, they do not perceive their compensation for the work done as fair.

Question number 10 in the questionnaire was designated to ascertain the validity of this hypothesis.

In Fig. 5, the tenth question of the questionnaire and its assessment are presented, pivotal for evaluating the third hypothesis.

In question 10, consideration was given to the equity of compensation. Concerning the matter of justice and equitable compensation, the majority of respondents advocated for performance-based remuneration, with up to sixty-one respondents (40%) expressing this sentiment. Fifty-seven respondents (38%) indicated that their salaries remain relatively constant, irrespective of performance. The least represented cohort comprises respondents who perceive compensation as unjust, totaling thirty-two individuals (22%).

Employee compensation constitutes an exceedingly vital and highly sensitive subject for both parties involved the managers who administer compensation and the workers who receive it. For numerous companies, the compensation system has emerged as a competitive advantage. The equitable remuneration of employees stands as one of the oldest and most intricate human resources practices in motivating personnel.

Regarding the issue of justice and equitable compensation, the majority of respondents advocated for performance-based remuneration, comprising up to sixty-one respondents (40%). Fifty-seven respondents (38%) indicated uniform salaries, indicating that their compensation is not contingent on performance. The least represented demographic consists of respondents perceiving remuneration as unjust, totaling thirty-two individuals (22%).

The compensation of workers is an exceedingly significant and highly sensitive matter for both parties involved, including the senior employees responsible for remuneration and the workers receiving it. For numer-

ous companies, the remuneration system has evolved into a competitive advantage. Equitable employee compensation stands as one of the oldest and most intricate human resources practices in motivating employees.

In the context of assessing fairness in remuneration, the majority of respondents, comprising up to 60%, perceived their remuneration as unfair. Thus, we succeeded in confirming the formulated hypothesis.

5. Conclusions

In the research, three hypotheses were addressed, all of which were confirmed. The first hypothesis posited that more than 50% of companies have established an internal reward system. The second hypothesis proposed that over 50% of employees are dissatisfied with their salary level. The third hypothesis suggested that more than 50% of individuals evaluate their compensation as unjust.

The inquiry into the existence of an internal remuneration system within the company and employees' familiarity with it can be deemed fundamental in evaluating employee motivation and compensation. Likewise, adherence to this system and the fairness of remuneration, as evidenced by responses to question number ten, are critical considerations. Nearly 15% of respondents indicated non-compliance with these regulations. When assessing employee satisfaction, equity in pay emerges as a crucial determinant of employee contentment or discontentment. It is noteworthy that 38% of respondents perceive unfairness in the uniformity of salaries.

There are numerous rationales for employees to comprehend the criteria for evaluating their financial contributions. Through regular assessment, individual performance can be enhanced, skills and competencies developed, and managerial effectiveness improved, thereby facilitating a more accurate appraisal of each individual. Thus, it stands as a pivotal factor in fostering employee motivation and success.

Every organization should strive to implement an effective system of motivation and reward. Recognizing that even an innovative and commendable internal compensation system can falter and yield more drawbacks than advantages is imperative. Consequently, it is

essential to periodically review and update this system as necessary. At each juncture, meticulous attention to detail is imperative, as even minor differences can significantly enhance the efficacy of implementation.

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