Paulina Skalik-Lubieniecka

SUMMARY OF PHD DISSERTATION

The submitted phd dissertation entitled **"Optimization and utilization of human resources and knowledge in the context of improving enterprise performance"** presents the subject of the metal market in the context of the potential utilization of its human resources and associated intellectual potential. Within this doctoral dissertation, which arises from the identified knowledge gap in the area of human resource management in the metal industry in Poland, research and analyses were conducted. The main goal of the work was to determine the possibilities of implementing advanced mechanisms for managing people and knowledge in companies in the metal industry. Furthermore, the conducted study identified key factors for transforming the enterprise into a leaming organization and determining the potential benefits arising from such a transformation. An additional goal was to determine how the knowledge and experience of employees can be effectively utilized in production processes, contributing to innovation and organizational development.

The main hypothesis adopted in the work was the statement: **"Optimizing the use of human resources and knowledge in a metal industry enterprise allows for the implementation of mechanisms for improving the processes carried out therein and, as a result, morę efficient management of materiał and non-material resources."**

In order to conduct an in-depth analysis of the discussed issue, the following detailed hypotheses were formulated:

1. Knowledge and experience of employees, when used appropriately, are significant elements of the proper implementation of the improvement process.
2. Appropriately motivated and rewarded employees, possessing knowledge and experience, constitute a source of competitive advantage in the industry.
3. Knowledge management by employees leads to the improvement of production processes and the enhancement of the ąuality of finished products.
4. Employees' understanding of the concept of continuous improvement leads to the development and implementation of innovations, as well as the efficient fimctioning of the enterprise.

To achieve the research objectives, a ranked survey method and a ąuestionnaire interview using the PAPI method were applied. These studies were conducted using the Paper and Pencil Interview method, meaning they were conducted as traditional face-to-face interviews with respondents using a form to fili

out. The research tool underwent multi-stage testing to ensure its clarity and reliability. By answering 12 ąuestions in the survey, respondents were tasked with ranking various factors on a scalę of importance from most to least important. The areas analyzed in the survey included the HR function and key success factors in the context of improving processes in enterprises. Respondents also had the opportunity to comment on the impact of ąuality management principles on improving their enterprises. Another set of ąuestions presented to the respondents concemed the significance of ąuality management principles for the 4 areas of the Japanese knowledge management model. The last ąuestion in the ąuestionnaire survey related to the area of Toyota's 14 principles. Its purpose was to compare employees' knowledge regarding the potential impact of these principles on the improvement process. Data analysis relied on advanced statistical methods, such as the Cronbach's Alpha test, which allowed for a thorough assessment of the reliability of the obtained results (the test value ranged from 0.96 - above the reąuired 0.7).

As a result of the conducted research and their analysis, the following conclusions were drawn:

1. Intemal recruitment should be the preferred method where opportunities for advancement or interposition shifts exist. Research results indicate its positive impact on employee morale and satisfaction, as well as willingness to cooperate and share knowledge. However, there is a tendency to hire specialists extemally, which may lead to improper assessment of newly hired employees. Unfortunately, it is elear from the conducted research that in both analyzed enterprises, this factor is often overlooked - it ranked last in importance in both companies.
2. The level of ąualifications of employees often does not match their duties, and there is also a reluctance to share knowledge with newly hired employees. Employee motivation and incentive systems influence the ąuality of work and job satisfaction. An appreciated employee feels morę responsible for the work they do and is morę inclined to share their observations with their superiors, which brings tangible benefits to the enterprise. They demonstrate greater responsibility for the results of their work and pay much morę attention to the ąuality of the fmished product. The obtained results are consistent with the generał trend in the industry, according to which almost half of the employees consider themselves mismatched to their positions.
3. Key success factors in the metal industry, according to the conducted research, are production technołogy and product ąuality. Fully utilized machinery operated by ąualified Staff speeds up order fulfillment and improves the financial situation of the enterprise.
4. Defects in the production process have a significant impact on product ąuality. The high level of compłexity of technological processes and the number of production parameters reąuire properly

shaped employee competencies and appropriate procedures. It can be concluded that achieving a satisfactory level of ąuality in the metal industry, satisfying both the producer and the customers, reąuires time and a properly shaped set of resources possible only through the accumulation of the reąuired level of knowledge within human Capital.

5. Both analyzed enterprises implement elements of the Kaizen philosophy, but there are differences in priorities and the ąuality of actions. These differences result, among other things, from the level of embedding Toyota management principles in employees' consciousness. Therefore, it is important to focus on developing human Capital to enable continuous improvement of activities.

The metal industry is one of the most dynamically changing sectors of the Polish industry. The automation of an increasing number of processes in the metal industry contributes to changes in the demand reported by enterprises for employees, both quantitatively and qualitatively. This trend causes metal industry enterprises to increasingly struggle with meeting their workforce needs because the number of specialists in the labor market is limited. Another problem is the lack of developed and implemented training programs that would allow enterprises to educate employees ahead of technological changes. Non-material resources have become a key factor in building and maintaining uniąue market advantages over the last decades. The analysis of the obtained results indicates the need to adopt a holistic approach to human resource and knowledge management in the metal industry. This means that the management process should take into account not only formal organizational structures but also individual competencies, motivations, and employee engagement. Effective management of knowledge and experience of employees is crucial for continuous improvement of production processes and innovation introduction. Additionally, understanding the role of employee awareness in the organization is also important. Even in the era of advancing automation and technological development, people remain the main link that connects individual elements of the organization into a coherent whole. Awareness of this role can foster greater engagement and work efficiency. It is worth noting that employees are increasingly aware of their role in the organization - despite the development of technology and techniąues - it is people who remain the main link connecting individual elements of the organization into one coherent whole.