Human Resource Cost Management and Organizational Performance System Optimization Strategies from the Perspective of Technological Innovation

Liangyong Ying

Tongji University, 200092, Shanghai, China

18768150740@163.com

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Abstract: In the context of the big data era, the management of enterprises is undergoing unprecedented changes and challenges, while also being given unprecedented development opportunities. With the rapid advancement of information technology (IT) and network technology, human resource management (HRM), as a key part of enterprise strategic execution, has greatly improved and expanded its effectiveness and influence. The introduction of information technology HRM not only achieves a leap from traditional manual operation to intelligent and automated management, but also greatly improves management efficiency and accuracy, laying a solid foundation for the long-term development of enterprises. Through the application of advanced technologies such as big data, cloud computing, and artificial intelligence (AI), enterprises can achieve deep mining and analysis of human resource data, thereby more scientifically predicting talent demand, optimizing recruitment processes, accurately training and developing employees, and implementing efficient cost control strategies. This article focuses on human resource cost management and organizational performance optimization strategies from the perspective of technological innovation, aiming to explore how to use emerging technologies to reshape the human resource management system, achieve maximum cost-effectiveness, and continuously improve organizational performance.

1. Introduction

In today's fiercely competitive and rapidly changing market, whether a company can steadily navigate the fierce business world largely depends on its ability to effectively manage and utilize its core resources - talent [1]. Talents, as the primary productive force for enterprise development, are the core driving force for promoting technological innovation, market expansion, cultural shaping, and even strategic transformation [2]. Therefore, HRM is no longer just an administrative matter within a company, but a critical strategic activity directly related to enhancing competitiveness, achieving strategic goals, and sustainable development [3]. The importance of performance management, as a core component of the HRM system, is self-evident. It is not only an effective means of measuring employee work results and stimulating employee potential, but also a bridge connecting corporate strategy and employee behavior, ensuring that each employee's work goals are highly consistent with the overall development direction of the enterprise [4].

Through a scientifically reasonable performance management system, enterprises can clearly define job responsibilities, set quantifiable work indicators, implement fair and transparent evaluation mechanisms, thereby stimulating employees' enthusiasm and creativity, promoting team collaboration, and ultimately driving the overall performance improvement of the enterprise [5]. However, the traditional HRM model often relies on manual operation, which has problems such as low efficiency, inaccurate data, and lagging decision-making, making it difficult to adapt to the rapidly changing market environment and business development needs [6]. With the rapid development and popularization of Internet technology, especially the concept of "Internet plus", it has brought unprecedented change opportunities for enterprise HRM [7]. By introducing Internet technology, enterprises can realize the informatization and intelligence of HRM, break the

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information island, improve management efficiency, reduce management costs, and provide more convenient and personalized service experience for employees [8]. Furthermore, the rise of AI technology has injected new vitality into HRM.

As a disruptive technology, AI can not only process massive amounts of data, but also achieve intelligent recruitment, training, evaluation, and other functions through machine learning, natural language processing, and other technological means, making HRM more accurate and efficient. For example, in the recruitment process, AI can quickly screen out outstanding talents that meet the needs of the enterprise by analyzing candidates' resumes, social media information, and other data; In the training process, AI can provide personalized learning resources and path planning based on employees' learning progress and ability level; In the performance evaluation process, AI can build a more objective and comprehensive evaluation system based on big data analysis, reducing the interference of human factors. Therefore, this paper focuses on human resource cost management and organizational performance optimization strategies from the perspective of technological innovation, aiming to deeply explore how to use the Internet, big data, AI and other emerging technologies to reshape the HRM system, maximize cost efficiency and continuously improve organizational performance.

2. The Impact and Strategies of Technological Innovation on Human Resource Cost Management

2.1. Impact

Technological innovation, especially the rapid development of AI and big data technology, is profoundly changing the face of enterprise HRM and has a profound impact on human resource cost management [9]. The integration and application of these technologies not only optimizes management processes, but also greatly improves the accuracy and efficiency of management, injecting strong impetus into the sustainable development of enterprises [10]. Firstly, in the recruitment process, AI technology can intelligently screen resumes through natural language processing (NLP), machine learning (ML) and other technologies, accurately match candidate skills with job requirements, significantly reduce the time and cost of manual screening, and improve the accuracy and efficiency of recruitment. At the same time, with the help of big data analysis, companies can have a more comprehensive understanding of candidates' professional backgrounds, potential abilities, and cultural fit, thereby making more scientific and reasonable recruitment decisions.

Secondly, in terms of training and development, big data and AI technology can personalize training plans and content, and provide precise recommendations based on employees' actual abilities and development needs, ensuring efficient utilization of training resources and maximizing employee training effectiveness. This training model not only improves the effectiveness of training, but also stimulates employees' learning interest and career development motivation, thereby promoting the overall performance improvement of the enterprise. Furthermore, in terms of performance management and compensation system, the application of big data technology makes the collection and analysis of performance data more comprehensive, timely, and accurate. Through an intelligent performance evaluation system, companies can objectively and fairly evaluate employee performance, providing strong basis for salary adjustments, promotion decisions, and more. At the same time, data-driven salary design is more reasonable, which can better balance internal fairness and external competitiveness, enhance employee satisfaction and loyalty.

2.2. Strategies

The strategy of technological innovation in human resource cost management is a key way for enterprises to achieve refined management and enhance core competitiveness. By deeply utilizing cutting-edge technologies such as big data and AI, enterprises can build a more efficient and intelligent HRM system, effectively control costs, and promote the maximization of human resource value. Firstly, utilizing big data technology for in-depth analysis of employee behavior and

performance is a prerequisite for optimizing human resource allocation. Big data can capture multidimensional information about employees' work processes, including work efficiency, teamwork, innovation ability, etc. By analyzing this data through algorithm models, companies can accurately identify employees' strengths and weaknesses, providing scientific basis for job adjustments and skill development. This not only helps to improve the overall efficiency of the team, but also avoids resource waste caused by mismatched personnel and positions.

In response to the problem of lagging HRM information construction, enterprises need to increase investment in IT and develop customized HRM systems. The system should integrate full chain functions such as recruitment, training, performance, and compensation, reduce manual intervention through automated processes, and improve the accuracy and efficiency of information processing. At the same time, the system should have good data integration and analysis capabilities, support managers to quickly obtain the information needed for decision-making, and achieve the intelligent upgrade of HRM. The AI recruitment system shown in Figure 1 is the specific application of technological innovation in the recruitment process. The system can automatically screen resumes, evaluate candidate abilities, and even conduct preliminary interviews based on job requirements, greatly shortening the recruitment cycle and improving recruitment quality. Enterprises should actively introduce such systems and continuously optimize their algorithm models to adapt to the constantly changing recruitment market. In addition, enterprises should also start from a strategic perspective, build online training platforms, clarify talent training goals, and form a systematic talent training mechanism. Through various methods such as online learning, case analysis, and simulation exercises, we aim to enhance employees' professional skills and comprehensive qualities, and reserve talents for the long-term development of the enterprise.

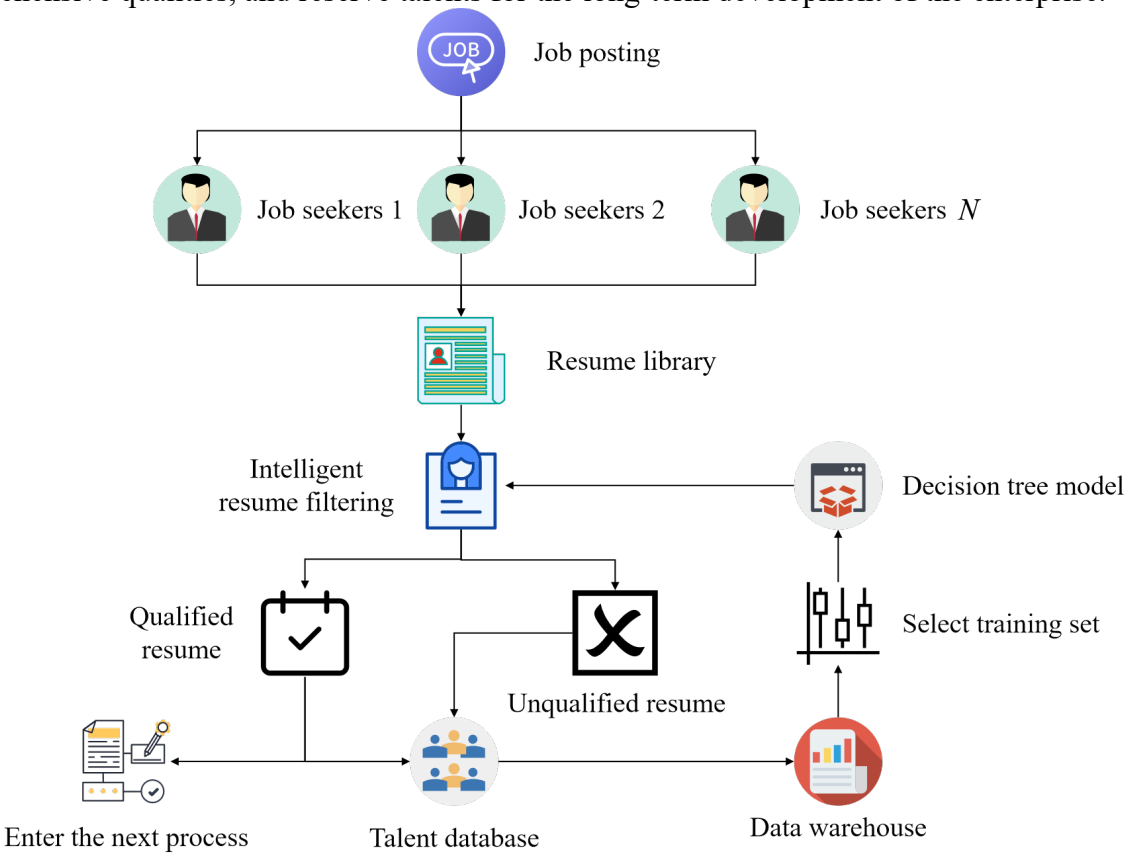

Figure 1 AI recruitment system

3. The Impact and Strategies of Technological Innovation on Organizational Performance System Optimization

3.1. Impact

The impact of technological innovation on organizational performance optimization is profound

and multidimensional. It is not only the core driving force for enterprise development, but also a key element in reshaping the organizational performance evaluation system. In traditional performance evaluation frameworks, financial indicators often dominate, and this single dimensional evaluation model is difficult to fully reflect the organization's true performance in complex and changing environments. The performance evaluation from the perspective of technological innovation advocates a more comprehensive and multidimensional evaluation system, aimed at more accurately measuring the comprehensive performance of organizations driven by innovation. Technological innovation drives organizations to incorporate non-financial indicators such as social, environmental, and customer factors into performance evaluation. With the deepening of the concept of sustainable development, organizations are increasingly realizing that pursuing economic benefits alone is no longer sufficient to meet the needs of long-term development.

Therefore, when evaluating organizational performance, it is necessary to fully consider its contribution to society, protection of the environment, and satisfaction of customer needs. This multidimensional evaluation approach helps organizations balance social responsibility and environmental protection while pursuing economic benefits, achieving a win-win situation for both economic and social benefits. In addition, utilizing advanced data analysis techniques and systems can effectively reduce the impact of subjective factors on evaluation results, ensuring the fairness and accuracy of the evaluation. Traditional manual evaluation methods are often influenced by subjective judgments of evaluators, information asymmetry, and other factors, resulting in biased evaluation results. Based on big data and AI data analysis technology, it can automatically collect, organize, and analyze a large amount of objective data, reduce human intervention, and improve the objectivity and accuracy of evaluation. At the same time, these technologies can also provide real-time and dynamic performance monitoring and warning functions for organizations, helping them discover and solve potential problems in a timely manner, ensuring the continuous optimization of organizational performance.

3.2. Strategies

The strategy of technological innovation for optimizing organizational performance is particularly important in today's data-driven era. With the rapid development of IT, various industries are undergoing profound changes, and organizational performance management is no exception. In order to fully unleash the potential of data and improve the efficiency and accuracy of performance evaluation, enterprises need to adopt a series of strategies based on big data and intelligent technology to optimize their performance management system. Firstly, building an intelligent performance management system is a crucial step. This requires companies to abandon the traditional manual processing of evaluation data and instead adopt big data analysis and AI technology to automate the collection, organization, and analysis of performance data. By constructing an intelligent algorithm model, the system can track employee performance in real-time, automatically calculate performance scores, and generate detailed performance reports. This intelligent management approach not only greatly improves the efficiency of performance evaluation, but also reduces human errors and biases, ensuring the fairness and accuracy of evaluation results. The optimization strategy for the performance management system is shown in Figure 2.

Secondly, when formulating performance indicators, they must be closely aligned with the strategic goals of the enterprise. By setting KPIs (Key Performance Indicators) closely linked to strategic goals, companies can ensure that each employee has a clear direction and objectives for their work, thereby stimulating their work enthusiasm and creativity. In addition, establishing effective incentive mechanisms and promotion channels is also an important strategy for optimizing performance management. By establishing clear reward mechanisms and fair promotion opportunities, companies can motivate employees to continuously improve their abilities and performance, while promoting talent flow and development within the organization. Finally, utilize IT tools such as instant messaging and online meeting platforms to enhance communication and

collaboration among employees. Establish regular communication mechanisms, such as employee meetings, department meetings, etc., to ensure timely transmission and feedback of information. Pay close attention to the latest developments in technologies such as AI and big data, and explore their new applications in HRM. Encourage employees to learn new technologies and knowledge, and enhance the overall innovation capability of the organization.

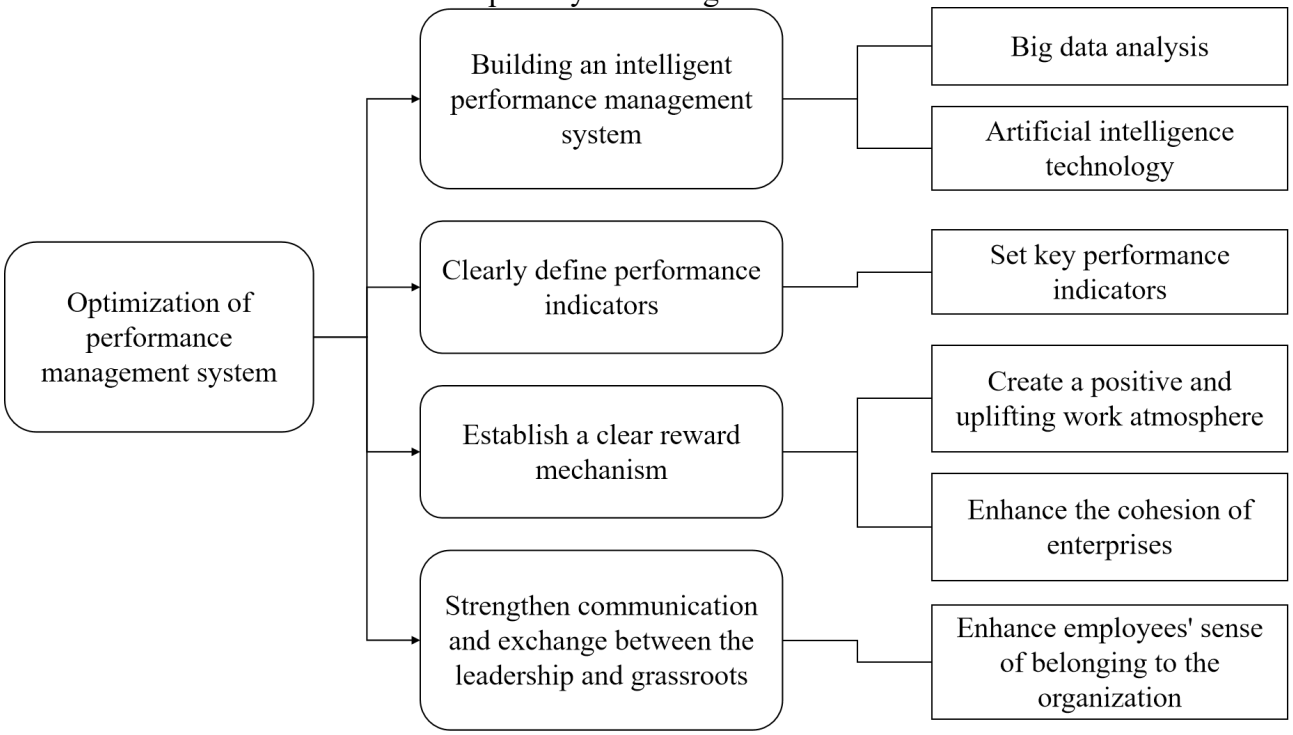

Figure 2 Performance management system

4. Conclusions

As one of the core components of enterprise operation, HRM's effectiveness directly affects the competitiveness and sustainable development capability of the enterprise. In the rapidly changing market environment, technological innovation is like a strong driving force, bringing unprecedented opportunities and challenges to HRM. This article delves into human resource cost management and organizational performance optimization strategies from the perspective of technological innovation. It not only reveals the important role of advanced technologies such as big data and AI in improving performance evaluation efficiency, accurately formulating performance indicators, and building incentive mechanisms, but also emphasizes how these technologies can help enterprises achieve maximum cost-effectiveness. Facing the future, enterprises need to continue exploring and innovating in the field of HRM, constantly integrating emerging technologies with traditional management wisdom, and responding to market changes in a more flexible and efficient way. This requires enterprises to not only focus on the application of technological tools, but also pay attention to the updating of management concepts and the improvement of team capabilities, ensuring that technological innovation can truly be transformed into a driving force for organizational development.

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