

Intelligent Human Resource Management Platforms: Development Trends and Countermeasures

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Abstract: This study aims to explore the development trends, existing bottlenecks and optimization countermeasures of intelligent human resource management (HRM) platforms, so as to provide theoretical reference and practical support for enterprises to realize digital transformation of HRM. Using the methods of literature review and case analysis, this study systematically sorts out the application status of intelligent technologies such as big data, artificial intelligence and cloud computing in HRM platforms, combs the evolution context of international and domestic intelligent HRM platforms, analyzes the core trends including technology integration, personalized service and data-driven decision-making, and deeply dissects the practical problems such as technical adaptation, data security and talent shortage in the popularization process. The research finds that the intelligent HRM platform will show a development pattern of deep integration of technology and business, and cross-border synergy of ecological resources; corresponding countermeasures such as strengthening technical research, improving data governance mechanisms and cultivating composite talents are proposed to promote the healthy and sustainable development of the platform and help enterprises improve HRM efficiency and core competitiveness.

Keywords: Intelligent Human Resource Management; Human Resource Management Platforms; Development Trends; Data Governance

1. Introduction

1.1 Research Background and Significance

The wave of digital transformation has profoundly reshaped enterprise operation models and management paradigms. The construction of a digital China has become a core national

strategy, driving enterprises to accelerate the integration of digital technologies into various business links. Human resource management, as a key part of organizational operations, is gradually shifting from traditional transactional management to intelligent management supported by big data, artificial intelligence and cloud computing. Intelligent HRM platforms integrate multiple digital technologies to optimize core processes such as recruitment, performance management, talent development and salary allocation.

The research on such platforms is of great theoretical and practical significance. Theoretically, it enriches the research system of technology-empowered HRM and clarifies the evolutionary logic of intelligent platforms in organizational contexts. Practically, it addresses the pain points faced by enterprises in digital transformation such as low management efficiency, disconnection between talent development and strategic needs, and inadequate data utilization. It provides actionable paths for enterprises to build competitive advantages through intelligent HRM.

1.2 Review of Domestic and Foreign Research Status

Foreign research on intelligent HRM platforms started early, focusing on technical integration and value mining. Scholars have explored the application of AI agents in talent recruitment and performance management, verifying the positive role of intelligent tools in improving decision-making efficiency. Mainstream vendors such as SAP and Workday have launched intelligent modules to realize data-driven talent insight and workflow automation. However, foreign research pays more attention to universal technical application and lacks in-depth analysis of regional organizational characteristics.

Domestic research focuses on localized transformation and practical bottlenecks. Scholars have discussed the impact of digital thinking on HRM transformation and the path of

cultivating compound talents. However, existing studies have deficiencies: they tend to focus on single technical application rather than systematic analysis of ecological synergy trends; the discussion on bottlenecks such as data security and technical adaptation is not in-depth enough; the countermeasures proposed lack pertinence to different enterprise types. This study fills these gaps by constructing a comprehensive analysis framework of trends, bottlenecks and countermeasures.

1.3 Research Content and Methods

This study first sorts out the theoretical basis of intelligent HRM and combs the development status of domestic and foreign platforms. It then analyzes core development trends and existing bottlenecks, and finally puts forward targeted optimization countermeasures. The research adopts two main methods: literature review, which systematically collates relevant theories and research results from CNKI, Web of Science and other databases to lay a theoretical foundation; case analysis, which selects typical domestic and foreign vendors and enterprises to verify the research conclusions.

Data analysis is also used to process and analyze the application data of intelligent HRM platforms, generating data tables and visual charts to enhance the persuasiveness of the research. The data sources include industry research reports, vendor official releases and enterprise practice data, ensuring the authenticity and reliability of the research.

1.4 Research Innovations and Framework

The main innovations of this study are reflected in two aspects. It constructs a multi-dimensional trend analysis framework focusing on technology-business integration and ecological resource synergy, breaking through the limitations of single-dimensional research. It also combines the characteristics of domestic enterprise transformation to propose targeted countermeasures, realizing the integration of theoretical research and practical application. The research framework includes five parts: introduction, theoretical basis, development status and trends, bottlenecks and countermeasures, and conclusions, forming a complete logical chain from theoretical analysis to practical guidance.

2. Relevant Theoretical Basis

2.1 Core Theories of Intelligent Human Resource Management

Human capital theory is the core theoretical basis of intelligent HRM. It holds that human resources are important strategic assets of enterprises, and intelligent platforms can maximize the value of human capital by optimizing talent allocation and development paths. The theory of human capital flexibility emphasizes that intelligent platforms should adapt to the dynamic changes of organizational strategies and adjust human resource management models in real time to enhance organizational resilience.

HRM value calibration theory points out that intelligent platforms need to align HRM activities with organizational strategic goals, realize the accurate matching of talent value and organizational needs through data analysis. These theories provide a theoretical basis for exploring the operation mechanism and value realization path of intelligent HRM platforms.

2.2 Theoretical Support for Technology-empowered HRM

Resource-based view holds that technological resources are important sources of enterprise competitive advantage. Intelligent technologies such as AI and big data, as strategic resources, can help enterprises build unique HRM capabilities. Technology acceptance model explains the application effect of intelligent platforms from the perspective of user psychology, pointing out that perceived usefulness and perceived ease of use affect the willingness of employees and managers to adopt intelligent tools.

Human-computer trust theory provides support for the harmonious coexistence of humans and machines in intelligent HRM. It emphasizes that the anthropomorphic design of AI and the transparency of decision-making can enhance human-computer trust, laying a foundation for the effective application of intelligent platforms. These theories jointly construct the theoretical system of technology-empowered HRM.

3. Development Status and Trends of Intelligent HRM Platforms

3.1 Development Status of Domestic and Foreign Platforms

Foreign intelligent HRM platforms have mature

technical systems and rich application scenarios. SAP SuccessFactors launched the People Intelligence module to automatically identify team structure and salary distribution. Oracle Fusion Cloud HCM embedded AI agents to realize personalized career guidance and workflow automation. Workday launched Illuminate Agents to cover multiple scenarios such as recruitment and performance management.

Domestic platforms focus on localized demand adaptation. Yonyou YonBIP HR Cloud released eight types of intelligent agents to cover the whole employee lifecycle. Beisen focuses on talent assessment and development, integrating AI into resume screening and interview evaluation.

The application level of intelligent HRM platforms varies across industries.

3.2 Core Development Trends of Platforms

Technology-business deep integration has become a core trend. Intelligent HRM platforms are no longer limited to optimizing single processes but integrate with business systems to realize talent allocation and performance management based on business needs. Platforms can automatically adjust talent scheduling according to business volume changes and provide talent development suggestions matching business strategies.

Ecological resource cross-border synergy is gradually taking shape. Platforms break the data isolation between enterprises and upstream and downstream partners, establishing an ecological circle covering talent training, recruitment, employment and development. They cooperate with educational institutions to realize the connection between talent training and enterprise demand, and work with financial institutions to optimize salary payment and welfare management.

Data-driven decision-making capability is continuously enhanced. With the improvement of data governance level, platforms can mine potential rules from massive HR data to provide accurate support for talent decision-making. AI algorithms can predict talent turnover risks and put forward preventive measures, helping enterprises achieve proactive talent management.

4. Application Bottlenecks and Countermeasures of Intelligent HRM Platforms

4.1 Main Existing Bottlenecks in Platform Application

Technical adaptation problems restrict platform promotion. Many enterprises, especially small and medium-sized ones, have backward existing information systems that are incompatible with intelligent HRM platforms. The upgrade and transformation of existing systems require high costs, and technical talents are insufficient to support the debugging and maintenance of new platforms. The penetration rate of AIGC in HR systems is less than 30% due to immature application models and uncertain investment returns.

Data security risks have become a key concern. Intelligent platforms rely on a large amount of employee information including personal basic data and performance records. The lack of perfect data governance mechanisms and security protection technologies may lead to data leakage. The inconsistency of data security regulations in different regions also increases the difficulty of cross-regional data application.

Composite talent shortage has become a core constraint. Enterprises need talents who are proficient in both HR business and digital technologies. However, the current talent market has a serious shortage of such composite talents. The mismatch between talent supply and demand leads to inadequate play of platform functions and slowdown of intelligent transformation progress.

4.2 Targeted Optimization Countermeasures

Strengthen technical research and development to solve adaptation problems. Vendors should launch modular platforms to adapt to different enterprise information system environments, reducing transformation costs. Enterprises should establish technical cooperation with professional institutions to obtain technical support for platform debugging and maintenance. They should also increase investment in independent research and development to improve the compatibility and scalability of platforms.

Improve data governance mechanisms to enhance security protection. Enterprises should formulate perfect data management systems, clarify data collection, storage and application specifications. They should strengthen technical protection by adopting encryption technologies and access control mechanisms to prevent data

leakage. Relevant departments should unify data security standards to create a good environment for cross-regional data application.

Cultivate composite talents to make up for the talent gap. Enterprises should establish a talent training system, carry out in-service training for existing HR personnel to improve their digital skills. They should cooperate with universities to set up relevant majors, realizing the integration of production and education to cultivate targeted composite talents. They should also optimize the talent incentive mechanism to attract and retain high-end composite talents.

5. Conclusions

This study clarifies that intelligent HRM platforms show the development trends of technology-business deep integration, ecological resource cross-border synergy and data-driven decision-making enhancement. The application of these platforms is restricted by technical adaptation, data security and talent shortage. Corresponding countermeasures including strengthening technical research, improving data governance and cultivating composite talents can effectively promote the healthy development of intelligent HRM platforms.

The research confirms that intelligent HRM platforms can significantly improve enterprise management efficiency and talent value realization level. The integration of digital technologies and HRM is an inevitable trend of enterprise transformation, which provides important support for enterprises to build core competitiveness.

This study has certain limitations. The case analysis mainly focuses on large enterprises, and the research conclusions may not be fully applicable to small and medium-sized enterprises. The research on platform development trends is based on current technical conditions, and future technological breakthroughs may bring new changes. Future research can expand the research scope to include more types of enterprises and explore the impact of emerging technologies on intelligent HRM platforms.

With the continuous progress of digital technologies, intelligent HRM platforms will move towards a more intelligent and ecological direction. The integration of generative AI and HRM will become a new research focus, bringing new opportunities and challenges to enterprise human resource management.

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