

HR ANALYTICS AND KPIS AS A TOOL FOR MANAGEMENT DECISIONS AT THE TOP MANAGEMENT LEVEL

Dana Ismagulova
HR Expert, USA

Abstract

This article focuses on HR analytics and key performance indicators (KPIs) as tools that assist top managers in making management decisions. It traces the evolution from the early ideas of Frederick Taylor's scientific management and Elton Mayo's human relations school, through Robert Kaplan and David Norton's "balanced" (but still financial) scorecard model, to a strategic management model that incorporates non-financial indicators, confirming the textbook idea of the importance of human capital as a company's strategic resource. It also demonstrates that understanding HR KPIs, combined with HR analytics methods, allows for linking HR strategy to financial performance. The article also examines various levels of analytical maturity and target timetables—from the principles of creating strategic HR indicators and quantitative analysis to approaches for integrating employee data with corporate reporting.

It's important to emphasize that HR analytics is directly relevant to restructuring, talent management, talent pool development, and organizational optimization. At the same time, the risks facing the server, both in terms of data quality and ethical issues related to handling personal information, are considered. Finally, the essential role of systematically implementing HR analytics at the senior management level is emphasized. This not only significantly improves the quality of strategic decisions and helps improve efficiency, but also creates sustainable competitive advantages.

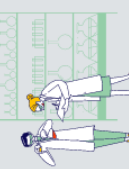
Keywords: HR analytics, key performance indicators, KPI, top management, strategic management, human capital, management decisions, digital transformation, corporate performance, balanced scorecard, organizational structure, talent management, analytical maturity, business analytics, data integration, corporate reporting.

Introduction

Scientific Novelty

The scientific novelty of this study lies in its comprehensive examination of HR analytics and the KPI system as an integrated strategic management tool at the top management level, rather than as a functional tool for the HR department.

This paper proposes a systematic approach to linking HR KPIs with a company's financial and operational metrics, allowing human capital to be viewed as a measurable factor in corporate



value creation. Unlike traditional studies, which analyze HR indicators primarily within the context of operational efficiency, this article substantiates their strategic role in fostering long-term competitive advantages.

The principles for developing a limited set of strategic HR KPIs for top management are clarified, taking into account their impact on business market value, management team sustainability, and organizational adaptability. A rationale for transforming HR reporting into an element of corporate management reporting is proposed.

Thus, the scientific novelty lies in rethinking HR analytics as a tool for the strategic architecture of company management and in developing an integrated approach to the use of KPIs in the context of making management decisions at the highest level of corporate governance.

Purpose of the Study

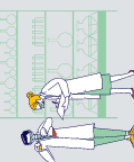
The purpose of this study is to theoretically substantiate and develop conceptual approaches to the use of HR analytics and a key performance indicator system as tools for supporting and improving the quality of management decisions at the top management level, ensuring the integration of human capital management into the strategic framework of corporate governance and the formation of sustainable competitive advantages for the organization.

Introduction

The creation of a modern HR management system as a strategic function of an organization is a question based on historical precedents. In the early 20th century, labor management was largely viewed through the prism of the scientific organization of labor and production, based on the work of Frederick Winslow Taylor. His version of scientific management included an emphasis on labor standardization, productivity measurement, and standardization of operations. People were viewed as a resource that needed to be rationalized and quantified.

Further advances in management thought followed the trajectory of human relations research (initiated, in part, by Elton Mayo in a series of studies known as the Hawthorne Experiments). It was demonstrated that factors other than material ones—in this case, socio-psychological factors—potentially influence employee behavior. This prompted a reassessment of the importance of people as a strategic resource.

In the second half of the 20th century, under the growing influence of strategic management and human capital theory, HR management began to merge with corporate governance. The introduction of the balanced scorecard methodology developed by Robert Kaplan and David Norton marked a significant milestone in the development of performance measurement tools. Companies began to view non-financial metrics, including those related to employees, as critical factors determining long-term business value. In the 21st century, digitalization, the development of information systems, and the accumulation of large amounts of data have led to the emergence of HR analytics as an independent area of management practice. HR analytics has ceased to be solely a function of the HR department and has transformed into a tool for supporting management decisions at the top management level. The use of KPIs in combination



with analytical methods allows managers to make informed strategic decisions based on data rather than intuition.

The relevance of this topic stems from the fact that in an environment of high uncertainty, accelerating change, and competition for talent, the quality of management decisions in the area of human capital determines a company's sustainability and competitiveness. The purpose of this article is to provide a comprehensive analysis of HR analytics and KPIs as strategic management tools at the senior management level.

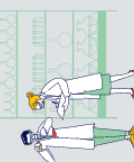
Theoretical Foundations of HR Analytics. Human resource analytics is becoming increasingly important as the contributions required of HR professionals can now be more directly linked to business outcomes. However, misconceptions persist regarding what HR analytics is and is not. This field is becoming a key component of the digitalization and digital transformation of human resource management (HRM), providing promising perspectives on changes in the structure and quality of human resources and related labor markets, as well as labor market infrastructure [1].

Human resource analytics is a methodological approach to proactively collecting, processing, analyzing, and interpreting workforce data so that the results can be used to improve the effectiveness of workforce decisions. In terms of maturity models, there are several levels of analytics maturity discussed in the scientific literature. Descriptive analytics answers the question, "What happened?" Diagnostic analytics identifies the causes of events. Predictive analytics models future employee behavior and organizational processes. Prescriptive analytics recommends optimal management actions.

The shift to analytical human resource management is driven by advances in corporate information systems and data warehouses, automation of human resource management processes, and enterprise business analytics tools [2]. At the senior management level, HR analytics acts as a consolidator of human capital data with financial and operational data.

Human capital as an object of strategic management. Modern organizations view personnel as a source of sustainable competitive advantage. Effective human capital management requires, first and foremost, an adequate understanding of its nature, including its nature, how it is formed, how it is influenced by economic development, and the options for its use. Depending on the answers to the above questions, human capital management strategies can vary significantly [3]. Human capital theory posits that investments in education, training, and employee motivation improve productivity and create value. At the senior management level, it is important to consider not only the cost of personnel but also to evaluate the return on these investments.

HR analytics allows for tracking the contribution of human capital to financial results through performance indicators, engagement, turnover, innovation, and the quality of management practices [4]. This establishes a link between a company's strategy and HR management.



KPIs in strategic management. Key performance indicators (KPIs) are quantitative indicators of the achievement of strategic and operational goals. At the top management level, KPIs serve as navigational benchmarks, ensuring control over strategy implementation.

KPIs in HR management can be classified according to several criteria. By functional focus, KPIs are categorized as recruitment, onboarding, training, motivation, and retention. By management level, KPIs are categorized as corporate, divisional, and individual. By timeframe, KPIs are categorized as short-term and long-term.

KPI development should be based on the company's strategic goals. Indicators should be relevant, measurable, comparable over time, and aligned with the incentive system. At the senior management level, integrating HR KPIs with financial metrics such as profitability, return on assets, revenue growth, and market capitalization is particularly important.

For example, the turnover rate of key employees should be analyzed in the context of their impact on operational efficiency and replacement costs. Engagement rates should correlate with labor productivity and customer service quality.

HR analytics as a management decision tool. HR analytics is a regular process of collecting and analyzing information about employees and their activities, aimed at identifying their impact on achieving the company's strategic goals. Its primary role is to provide substantiated data for management decision-making, improve operational activities, and proactively address HR issues [5].

At the top management level, decisions are made about business expansion, entering new markets, restructuring, mergers and acquisitions. HR analytics provides data on human resource potential, competency levels, risks of losing key employees and the cultural compatibility of organizations [6].

During mergers and acquisitions, analyzing organizational culture, competency structure, and engagement metrics helps reduce integration risks. Predictive turnover models help identify vulnerable employee groups and develop retention programs.

The use of analytical tools allows us to evaluate the effectiveness of the organizational structure, identify redundant management layers, and determine areas of overload. Analyzing the controllability coefficient, performance indicators, and workload distribution facilitates the development of a more flexible and adaptive structure.

One of the key tasks of senior management is to ensure the stability of the management team. HR analytics allows for the creation of talent maps, assessment of employee potential, and forecasting readiness for key positions.

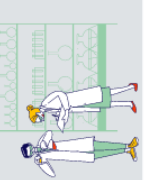


Table 1 - Comparison of HR analytics areas and top management decisions

HR analytics direction	Supported management decisions
Employee turnover analysis	Making decisions on adjusting the motivation system and retaining key employees
Engagement and satisfaction analysis	Adjusting corporate culture and management style
Labor productivity analysis	Optimization of organizational structure and redistribution of resources
Analysis of competencies and human resources potential	Formation of a talent pool and leadership development strategy
Forecasting staffing needs	Planning business expansion and investment projects
Analysis of personnel costs and training ROI	Making decisions on budget reallocation and investment priorities

The table illustrates the relationship between key HR analytics areas and the types of strategic management decisions made at the senior management level. The first column presents the analytical blocks of human capital management, while the second column lists the management decisions that can be justified based on the relevant data. The table demonstrates the practical value of HR analytics as a strategic business support tool.

HR Analytics Methods and Tools. HR analytics is a field of knowledge and practice intended for both human resource management and IT professionals. Its primary goal is to collect, process, and analyze data to make informed decisions regarding human resource management at enterprises. In light of current trends, HR analytics is an integral part of digitalization and the digital transformation of production and management processes. This enables a detailed analysis of the dynamics of the structure and quality of the workforce, as well as an analysis of the state and development prospects of the labor market and its infrastructure in the context of rapid digitalization [7].

Correlation analysis, regression modeling, clustering, and machine learning are used for analysis. They reveal relationships between engagement and productivity, leadership style and turnover, and training costs and financial results.

Predictive regression models allow us to assess the likelihood of employee dismissal, personnel needs, and determine optimal staffing levels.

For senior management to utilize HR analytics, data integration from disparate information systems is key. Modern ERP and BI platforms enable the creation of a unified information field.

Analyzing revenue per employee, the incremental value added of human capital, and the return on investment in training provides directors with the information they need to make informed resource allocation decisions. In light of budget constraints, such data is used to prioritize projects.



Risks and limitations of using HR analytics. The reliability, completeness, and consistency of data are often questionable, which reduces the value of the resulting analytical insights. Errors in accounting systems, subjective performance assessments, and incomplete information can distort the results. [8].

Establishing a unified data collection standard, automating processes, and improving the analytical competence of HR specialists will help reduce risks.

When using employees' personal data, principles of confidentiality and transparency must be followed. Senior management must be mindful of legal restrictions and foster trust in analytical practices. Ethical violations can negatively impact the company's corporate culture and image.

Practical recommendations for top management. Enterprise workforces are complex systems [9]. To effectively utilize HR analytics at a strategic level, it is recommended to integrate the HR director into the senior management team and incorporate HR metrics into the corporate reporting system. It is important to foster a culture of data-driven decision-making and ensure regular analysis of key performance indicators.

It's important to define a limited number of strategic HR KPIs that truly reflect the contribution of human capital to achieving business goals. Excessive metrics lead to a lack of focus and reduced manageability.

Table 2 - System of strategic HR KPIs for monitoring at the top management level

Strategic HR KPI	Management interpretation and practical application
Key employee turnover	Assessing the risk of loss of critical competencies, adjusting the retention system and compensation policy
The share of internal appointments to management positions	Analysis of the effectiveness of the personnel reserve system and the level of management succession
Average income per employee	Assessing the contribution of human capital to financial performance and comparing it with industry benchmarks
Employee Engagement Index	Forecasting the Impact of Organizational Climate on Productivity and Customer Service Quality
ROI of training and development programs	Determining the economic feasibility of investments in competency development
Controllability coefficient	Making decisions on optimizing the organizational structure and the number of management levels

This table is intended for the practical portion of the article and demonstrates an example of structuring strategic HR KPIs for use by senior management. It reflects the logic of transitioning from an indicator to its managerial implications. The table illustrates how quantitative indicators are transformed into a basis for decision-making related to business sustainability, the effectiveness of human capital investments, and organizational adaptability.

Conclusion

HR analytics and KPIs are essential tools for strategic enterprise management in modern organizations. HR KPIs are metrics for assessing the effectiveness of the HR function and the performance of HR specialists. HR KPIs are a set of metrics that allow one to evaluate both the effectiveness of the HR function and the performance of individual HR specialists. They serve as tools for tracking progress, identifying weaknesses, and making informed decisions to optimize HR processes [10].

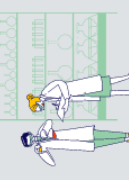
Their application at the senior management level can improve the rationality of decisions, minimize risks and contribute to the sustainable development of the enterprise.

HR data integrated with financial and operational data provides a comprehensive view of a company's performance. In the era of digital transformation and increasingly fierce competition for talent, the ability to analyze and understand human capital data will be the deciding factor between long-term success and failure.

It can be concluded that HR analytics is not a support function. It serves as a corporate management tool that takes into account the interests of employees and business owners to gain an advantage over competitors.

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