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ANALYSIS AND DIRECTIONS FOR OPTIMIZING THE LABOR POTENTIAL OF AN ENTERPRISE

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Abstract.

This paper provides a comprehensive analysis of contemporary approaches to assessing and optimizing the labor potential of enterprises. It examines the key determinants of labor productivity, analyzes the role of employee skills, managerial practices, and investments in human capital. A methodological framework for evaluating labor potential is proposed, along with practical directions for optimization, including HR process digitalization, upskilling/reskilling initiatives, flexible employment models, and the integration of talent management strategies into overall corporate strategy. The practical recommendations are adapted to the evolving labor market conditions in Ukraine.

Анотація. У статті виконано комплексний аналіз сучасних підходів до оцінювання та оптимізації трудового потенціалу підприємства. Розглянуто ключові детермінанти продуктивності праці, проаналізовано роль навичок, управлінських практик та інвестицій у людський капітал. Запропоновано методологічну схему оцінки трудового потенціалу та практичні напрямки оптимізації, включно з цифровізацією HR-процесів, розвитком навичок (upskilling/reskilling), гнучкими моделями зайнятості та інтеграцією стратегії управління талантами у бізнес-стратегію підприємства. Практичні рекомендації адаптовано під умови трансформації ринку праці в Україні.

The labor potential of an enterprise (human capital) serves as a fundamental resource that determines the competitiveness, innovative capacity, and long-term sustainability of a business. Investments in the development of employees' professional skills, the improvement of management practices, and the formation of a favorable organizational culture directly translate into increased labor productivity, enhanced innovation processes, and reduced costs associated with employee turnover and inefficiencies in work processes (OECD, 2021). In this context, labor potential should be considered not as a static stock of human resources, but as a dynamic set of competencies, motivation, organizational conditions, and opportunities for the continuous renewal of knowledge and skills.

Currently, Ukraine faces several structural challenges that affect the formation and realization of labor potential. Key among these are a shortage of qualified specialists in certain priority sectors of the economy, excessive workforce outflow due to migration processes, and the need for rapid reskilling of employees from traditional professions to those required by the digital economy (Kyiv School of Economics, 2025). These factors create a situation in which enterprises cannot rely solely on traditional personnel recruitment approaches – proactive human capital development strategies that combine educational initiatives, corporate training, and flexible work models are necessary.

The aim of this study is to systematically analyze the determinants of an enterprise's labor potential and propose practice-oriented directions for its optimization based on evidence-based sources and modern human capital management practices. The analysis should cover several interconnected levels: macro-political (state policies in education, labor, and social protection), sectoral (skill demand characteristics in specific industries), corporate (HR strategies, investments in training, management practices), and individual (employee motivation and professional development). Only a comprehensive approach allows the identification of bottlenecks – for example, the mismatch between educational programs and employer requirements, or the low attractiveness of workplaces due to poor working conditions and reward systems.

Analysis of contemporary scientific research shows that labor potential is considered a multidimensional category, combining employees' professional skill levels, management practices, organizational conditions, and opportunities for continuous human capital development. Foreign researchers emphasize that the quality of human capital is one of the key drivers of productivity growth and firms' innovative activity.

For instance, analysts at the Organisation for Economic Co-operation and Development (OECD), in the extensive study *Productivity and Skills*, highlight that more productive companies have a higher share of highly skilled employees and well-developed management practices. OECD (2021) demonstrates that investments in skill development and management improvement have a multiplicative effect, contributing not only to labor productivity growth but also to enterprises' ability to adapt to technological changes and labor market shocks.

International financial and social institutions also focus on the link between human capital investments and sustainable economic development. The World Bank, in the report *The Changing Nature of Work*, emphasizes that policies integrating education systems, reskilling programs, and real employer needs are critical for creating quality jobs and increasing employment. The World Bank (2019) stresses that the skills gap between supply and demand is one of the main constraints on productivity growth in transforming economies.

A similar perspective is adopted by the International Labour Organization (ILO), which considers labor potential in the context of decent work and inclusive development. The ILO's *Global Employment Trends* report (2022) notes that effective utilization of labor potential is possible only when investments in skills, active labor market policies, and modern personnel management practices at the enterprise level are combined.

Domestic research also pays significant attention to methods of assessing labor potential. In a Ukrainian study, Zayukov (2023) treats enterprise labor potential as an integral category including demographic, educational, health, and production characteristics. The author justifies the use of multifactor and fuzzy assessment methods, which allow accounting for uncertainty and subjectivity in certain parameters, such as motivation and professional suitability.

The practical dimension of labor potential optimization is widely discussed in publications in leading international academic outlets. Collective monographs and articles published by Wiley (2021) emphasize the role of strategic workforce planning and the use of digital HR tools, including predictive analytics and skills gap analysis. Researchers argue that such tools enable enterprises to reduce gaps between existing and required competencies, optimize workforce allocation, and improve overall organizational efficiency.

In summary, international and domestic research indicates a shift in contemporary discourse from narrowly defining labor potential as a quantitative resource to understanding it as a strategic enterprise asset. This underscores the need for comprehensive approaches to labor potential analysis and optimization, integrating economic, social, and management tools while leveraging modern digital technologies.

Labor potential is a multi-component resource, encompassing not only quantitative characteristics of personnel but also qualitative aspects of their development and utilization. Its structure includes employees' professional knowledge and skills, motivation and engagement levels, health status, management practices, organizational culture, and adaptability in changing conditions. The interaction of these components forms the enterprise's real capacity for innovation, productivity improvement, and competitiveness. Therefore, effective labor potential management requires a systematic approach combining analytical assessment, strategic workforce development planning, and the implementation of modern HR tools with consideration of the enterprise's long-term objectives.

Enterprise labor potential can be defined as a weighted sum of its components:

$$TP = w_1 \cdot S_k + w_2 \cdot Q_m + w_3 \cdot E + w_4 \cdot I + w_5 \cdot O,$$

where:

S_k – skill level (hard skills, transferable skills, digital competencies),

Q_m – quality of management and organizational practices,

E – employee engagement and motivation,

I – investment in training and development,

O – organizational agility,

w_i – normalized weighting coefficients

Skills are evaluated across three dimensions: technical (hard skills), cross-functional (transferable skills), and digital competencies. To identify gaps, a skill gap analysis is applied using internal HR data and external labor market trends (predictive analytics).

Subjective components (motivation, management) are modeled using membership functions $\mu(x)$, which allow accounting for the continuity and uncertainty of assessments (functions are initially set by experts and adjusted based on survey data).

Based on the analysis of sources and the proposed model, six priority directions are identified (Table 1).

Table 1 Key directions for optimizing enterprise labor potential

Optimization Direction	Implementation Tools	Expected Effect
Employee Skills Development (Upskilling/Reskilling)	Continuous training, micro-courses, online platforms, corporate skill enhancement programs, reskilling to meet technological and market changes	Reduced skill gaps, increased productivity, enhanced innovation capacity
Strategic Workforce Planning	Workforce demand forecasting, skill supply-demand analysis, scenario planning, talent pipeline development	Reduced risk of workforce shortages, improved organizational adaptability
HR Analytics and Digital Tools	Predictive analytics, skill gap analysis, HR process automation, AI-driven talent management	Enhanced decision-making, reduced personnel costs, real-time adaptation to changes
Flexible Employment Models	Hybrid and remote work, project-based contracts, outsourcing, freelance arrangements, flexible schedules	Improved labor utilization, access to scarce skills
Enhancing Management Practices	Leadership development, management by objectives (MBO), incentive programs, effective delegation	Increased employee engagement, higher productivity, improved quality of work
Improving Work Conditions and Social Responsibility	Competitive remuneration, social guarantees, workplace safety, employee support in crises	Increased retention, formation of a sustainable workforce

Thus, the labor potential of an enterprise is one of the key strategic resources that determines its ability to operate sustainably, drive innovation, and secure competitive advantages in the long term. Unlike the traditional understanding of labor resources, labor potential encompasses not only the quantitative characteristics of personnel but also qualitative parameters, such as the level of competence, adaptability, motivation, digital skills, and the capacity for learning in a dynamic external environment. It is precisely the multi-component nature of labor potential that necessitates the application of a systematic approach to its assessment and management.

The article substantiates the feasibility of combining an index-based approach, HR analytics tools, and fuzzy logic methods to develop a comprehensive model for evaluating an enterprise's labor potential. This approach allows the integration of formalized quantitative indicators (staff numbers, labor productivity, qualification levels) with qualitative characteristics that have a subjective or stochastic nature (motivation, loyalty, professional mobility). The use of fuzzy logic methods ensures an adequate representation of uncertainty and incomplete information, which is typical in human capital management processes.

The conducted analysis enabled the identification of key directions for optimizing enterprise labor potential, among which the most significant are the development of employee skills through upskilling and reskilling, strategic workforce planning, implementation of HR analytics, adoption of flexible employment forms, improvement of management practices, and enhancement of working conditions. The implementation of these directions contributes to increased labor productivity, reduced personnel risks, and the formation of a stable core workforce.

In the current Ukrainian context, the rapid development of employees' digital skills and the adaptation of reward policies to retain qualified personnel are particularly urgent. This is driven by structural changes in the labor market, growing competition for talent, and the impact of crisis factors. Therefore, the systematic optimization of labor potential should be considered a priority in strategic enterprise management, ensuring economic resilience and the ability to develop under conditions of uncertainty.

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МІЖНАРОДНЕ СПІВРОБІТНИЦТВО У ВІДНОВЛЕННІ ЕНЕРГЕТИЧНОЇ ІНФРАСТРУКТУРИ УКРАЇНИ: СУЧАСНИЙ СТАН ТА ПЕРСПЕКТИВИ

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Системне руйнування енергетичних об'єктів України внаслідок військової агресії створило прецедент, який не має аналогів у сучасній історії. В умовах дефіциту власних фінансових ресурсів та обмежених технічних можливостей для оперативного ремонту, міжнародне співробітництво трансформувалося з допоміжного інструменту в ключовий фактор виживання енергосистеми. На поточному етапі взаємодія з партнерами вийшла за межі класичної фінансової допомоги, охоплюючи постачання критичного обладнання (автотрансформаторів, генераторів, систем релейного захисту) та технічну експертизу.

Визначальним кроком стала синхронізація об'єднаної енергосистеми (ОЕС) України з континентальною європейською мережею ENTSO-E. Це дозволило не лише стабілізувати частоту в мережі під час кризових ситуацій, але й відкрило можливості для комерційного імпорту електроенергії, що є критично важливим для покриття дефіциту потужності в пікові години. Однак, просте відновлення зруйнованого до стану «як було» вже не розглядається як ефективна стратегія.

Окремий вектор співпраці спрямований на розвиток розподіленої генерації, яка є менш вразливою до ракетних атак. За підтримки USAID та урядів країн-партнерів в Україну постачаються мобільні газотурбінні установки та міні-ТЕЦ. Це обладнання дозволяє забезпечити живлення критичної інфраструктури міст (водоканалів, лікарень, котелень) у випадку повного блекауту. Такий підхід вимагає не лише "заліза", а й тісної консультативної роботи щодо інтеграції цих установок у наявні мережі, що часто не були розраховані на острівний режим роботи.

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