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## MEASURING LABOR PRODUCTIVITY IN TERMS OF EMPLOYEE PERFORMANCE AND ORGANIZATIONAL PERFORMANCE FOR HUMAN RESOURCE DEVELOPMENT

*The article examines the problem of indicating labor productivity in the economic transition from stable, large-scale production to a dynamic, innovation-driven economy. The idea is substantiated that modern economic conditions require organizations and employees to adopt an entrepreneurial orientation to effectively address challenges, enhance adaptability, and ensure competitiveness. The need to revise traditional approaches to measuring labor productivity is emphasized, as they fail to reflect the key characteristics of the new economic reality, including changing demands for professional and organizational performance metrics. The article is dedicated to a comprehensive study of labor productivity measurement methods within organizations that meet the requirements of an innovation-driven economy. The research methodology involves an integrative review of theoretical and empirical studies, an analysis of existing approaches, and their application to develop a dual-level model for measuring labor productivity. Particular attention is paid to indicators such as employee proficiency, adaptability, and proactivity, evaluated at individual, group, and organizational levels, as well as internal and external organizational performance metrics. The comparison of traditional and modern approaches is provided, highlighting their advantages and limitations and demonstrating their relevance in the context of the innovation-driven economy. The article addresses the shortcomings of traditional approaches and the necessity of their adaptation. As a result, an innovative measurement system is proposed that reflects the characteristics of the new economy, enhances organizational efficiency, and serves as a reliable analytical tool. The scientific novelty lies in the creation of a model that enables researchers and practitioners to better understand the relationship between entrepreneurial orientation, labor productivity, and human resource development.*

**Keywords:** labor productivity; measurement; human resource development; employee performance; organizational performance.

### Introduction

In today's dynamic organizational environment, labor productivity remains a crucial metric for assessing both individual contributions and overall organizational effectiveness in the human resource development practices. What's more, it is necessary to recognize the complexity of modern workplaces and the need for nuanced measures of productivity that reflect both the micro-level (employee performance) and the macro-level (organizational performance). Under this background, this article explores why measuring labor productivity at these two distinct levels is essential, and how to evaluate employee performance and organizational performance comprehensively.

The purpose of this research is to substantiate labor productivity measurement methods within organizations that meet the requirements of an innovation-driven economy. Measuring

labor productivity at both the employee and organizational levels is crucial because each level provides unique insights into different dimensions of productivity. Employee performance at the micro-level is the building block of overall organizational success [1]. Without productive employees, organizational outcomes, such as profitability, market share, and growth, cannot be achieved. Conversely, organizational performance, as the macro-level indicator, reflects the collective contributions of individual employees and determines the broader success of the enterprise [2]. At the micro-level, labor productivity reflects how effectively individual employees fulfill their roles, directly influencing team dynamics and the organization's internal capabilities. For instance, a company may have cutting-edge technologies or abundant resources, but if employees are not performing optimally, the firm

will struggle to capitalize on these advantages. At the macro-level, labor productivity speaks for the organization's ability to convert individual contributions into tangible outcomes such as product quality, customer satisfaction, and financial performance [3]. Here, the cumulative effect of employee performance is translated into business metrics like growth, market share, and competitive positioning.

By measuring productivity at both levels, organizations can identify gaps between individual efforts and organizational outcomes, ensuring that employee capabilities are aligned with strategic goals [4]. Following this rationale, it is advised to adopt a dual approach, measuring labor productivity in organizational context at both the micro-level (employee performance) and macro-level (organizational performance) to provide empirical evidence how human resource development practices can serve as the predictive indicator of labor productivity.

The methodology involves examining the theoretical and empirical works and then, applying these works alongside with the established labor and organizational performance metrics, to create a dual-level measurement of labor productivity. This approach reflects the evolving requirements for organizations and employees in contemporary economic realities. The article is structured as follows: firstly, the theoretical and empirical review has been provided for measuring micro-level labor productivity in terms of employee performance, then the theoretical and empirical review has been provided for measuring macro-level labor productivity in terms of organizational performance, thirdly, this article provides an example how to use this measuring instrument in the empirical research or HR practice by establishing a research model using the example of employee intrapreneurship. This article concludes a comprehensive and practical measurement of labor productivity reflecting today's economic realities.

### **Measuring micro-level labor productivity in terms of employee performance**

In the modern organizational context, employee performance can no longer be evaluated

solely on the basis of task completion or output quantity. Instead, proficiency, adaptivity, and proactivity—across individual, team, and organizational roles—are critical dimensions that reflect a worker's overall contribution to productivity. Therefore, for measuring the micro-level employee performance, it is preferable to examine the employee's work role performance through three elements and at three levels. This scale has been frequently cited in recent years for assessing the employee work role performance because it not only accounts for traditional task performance but also emphasizes employees' adaptability and proactivity in their roles (e.g. [5,6]). Table 1 extensively summarizes the indicators to measure the micro-level labor productivity in terms of the employee's work role performance.

Proficiency refers to an employee's ability to complete tasks efficiently and effectively within their role. In today's knowledge-based economy, employees are required to possess deep expertise in their specific tasks [7]. However, proficiency alone is insufficient in a rapidly changing organizational environment where technological advancements and shifting market demands frequently alter job roles and expectations. Adaptivity is the ability of employees to adjust their behavior and skills in response to changing circumstances. With increasing global competition and technological disruption, organizations must continuously evolve, and employees must be able to adapt to new challenges, technologies, and market conditions [8]. An employee's adaptivity directly contributes to organizational agility, making it a key element of productivity in modern workplaces. Proactivity, the willingness to take initiative, is another critical dimension of employee performance. In a complex organizational environment, employees who actively seek opportunities for improvement, innovation, and problem-solving play a pivotal role in driving productivity beyond their immediate tasks [9]. Proactive employees often contribute to innovation and process improvements that benefit the broader organization.

**Table 1. The assessment method of organization's micro-level labor productivity****Таблица 1. Методика оценки производительности труда на микроуровне организации**

Categories	Indicators	Explanation
Individual task productivity	Individual task proficiency	High performance in this aspect indicates that an employee's core tasks are completed properly.
	Individual task adaptivity	High performance in this aspect indicates that an employee adjusts to new equipment, process, or procedures in core tasks.
	Individual task proactivity	High performance in this aspect indicates that an employee initiates a better way of completing core tasks.
Team member productivity	Team member proficiency	High performance in this aspect indicates that an employee coordinates the work with team members.
	Team member adaptivity	High performance in this aspect indicates that an employee responds constructively to team changes (e.g., new members).
	Team member proactivity	High performance in this aspect indicates that an employee develops new methods to help the team perform well
Organizational member productivity	Organizational member proficiency	High performance in this aspect indicates that an employee talks about the organization in a positive way.
	Organizational member adaptivity	High performance in this aspect that an employee copes with changes in the way the organization operates.
	Organizational member proactivity	High performance in this aspect indicates that an employee makes suggestions to improve the overall efficiency of the organization.

*Note.* The individual task productivity captures how an employee contributes to the individual task productivity; the team member productivity captures how an employee contributes to the team productivity; the organizational member productivity explains how an employee contributes to the organizational productivity.

Source: adopted from the works of Griffin<sup>1</sup>.

These dimensions require to be assessed at three levels—individual, team, and organizational—to fully capture their role as an indicator of labor productivity [10]. At the individual level, proficiency ensures that employees fulfill their specific duties, while adaptivity and proactivity enhance personal development and contributions to organizational objectives. At the team level, collaboration and shared goals require employees to adapt their skills and behavior to different team dynamics and contribute proactively to the group success. At the organizational level, employees must align their skills with the firm's strategic goals, adapt to corporate culture shifts, and take initiative to contribute to the organization's competitive advantage. Measuring these dimensions ensures a comprehensive evaluation of employee performance that aligns with the complexities of modern work environments.

Thus, the advantage of this measurement is that it includes adaptability and proactivity in

the assessment of employee performance, which are particularly important in entrepreneurial organizations. First, the increasingly complex organizational environment requires individuals, teams, and organizations to adapt as needed, making adaptability a crucial factor [11]. Second, proactivity is singled out in the scale as the foundation of all exceptional performance [12]. The scale consists of 27 items that assess individuals' work mastery, adaptability, and proactivity at three levels: as individuals, as team members, and as organizational members. The reliability and validity of this scale have been well established, making it one of the more authoritative measures for evaluating the individual work role performance. Specifically, the reported Cronbach alpha for the 9 major subconstructs in this measurement respectively are 0.87, 0.93, 0.94, 0.83, 0.91, 0.93, 0.89, 0.86, and 0.88, further justifying the good reliability of current measurement for the current dissertation work.

<sup>1</sup> Griffin M.A., Neal A., Parker S.K. A New Model of Work Role Performance: Positive Behavior in Uncertain and Interdependent Contexts // AMJ. 2007. Vol. 50, no. 2. Pp. 327–347. DOI: 10.5465/amj.2007.24634438

### Measuring macro-level labor productivity in terms of organizational performance

Organizational performance, as a macro-level measure of labor productivity, reflects the collective output of all employees and how effectively their work contributes to achieving the organization's strategic objectives [13]. However, to fully understand labor productivity at this level, both internal and external per-

formance must be considered [14]. Table 2 summarizes the indicators of macro-level labor productivity in the current research. For measuring macro-level labor productivity, this study employs the organizational performance indicators including its performance within and outside the organization. This scale relies on managerial evaluations of perceived organizational performance and market performance.

Table 2. The assessment method of organization's macro-level labor productivity

Таблица 2. Методика оценки производительности труда организации на макроуровне

Indicators	Component	Explanation
Organizational performance within the organization	Quality of products, services, or programs	The standard and effectiveness of the company's offerings in meeting customer needs.
	Development of new products, services, or programs	The company's ability to innovate and introduce new offerings to stay competitive.
	Ability to attract essential employees	The effectiveness in recruiting key talent necessary for the organization's success.
	Ability to retain essential employees	The company's success in keeping critical employees, reducing turnover.
	Satisfaction of customers or clients	Measures how well the company meets or exceeds customer expectations.
	Relation between management and other employees	The quality of interaction and collaboration between leadership and staff.
	Relations among employees in general	The overall teamwork, communication, and workplace culture among employees.
Organizational performance outside the organization	Marketing	Strategies and efforts to promote the company's offerings and build the brand recognition.
	Growth in sales	The increase in revenue generated from selling products or services over time.
	Profitability	The company's ability to generate profit after covering costs.
	Market share	The company's percentage of total sales within its industry compared to competitors.

Source: adopted from the works of Delaney & Huselid<sup>1</sup>.

Internal performance indicators reflect the operational efficiency of the organization. Key factors such as the quality of products, services, or programs, the development of new offerings, and the ability to attract and retain essential employees are directly tied to the organization's internal functioning [15]. Additionally, the metrics such as customer satisfaction [16], relations between management and employees

[17], and relations among employees [18] in general highlight how well the organization's internal processes are aligned with delivering value. For example, an organization with strong internal performance will not only produce high-quality goods and services but will also maintain positive relationships within the workforce, fostering collaboration and innovation. Organizations that can develop new products

<sup>1</sup> Delaney J.T., Huselid M.A. The impact of human resource management practices on perceptions of organizational performance // *Academy of Management Journal*. 1996. Vol. 39, no. 4. Pp. 949–969. DOI: 10.2307/256718

and services while maintaining employee satisfaction and loyalty are better positioned to sustain long-term growth. External performance metrics, including effective marketing [19], growth in sales, profitability, and market share [20], reflect the organization's position within the broader market. While internal performance focuses on operational efficiency, external performance measures how well the organization competes and thrives in its industry.

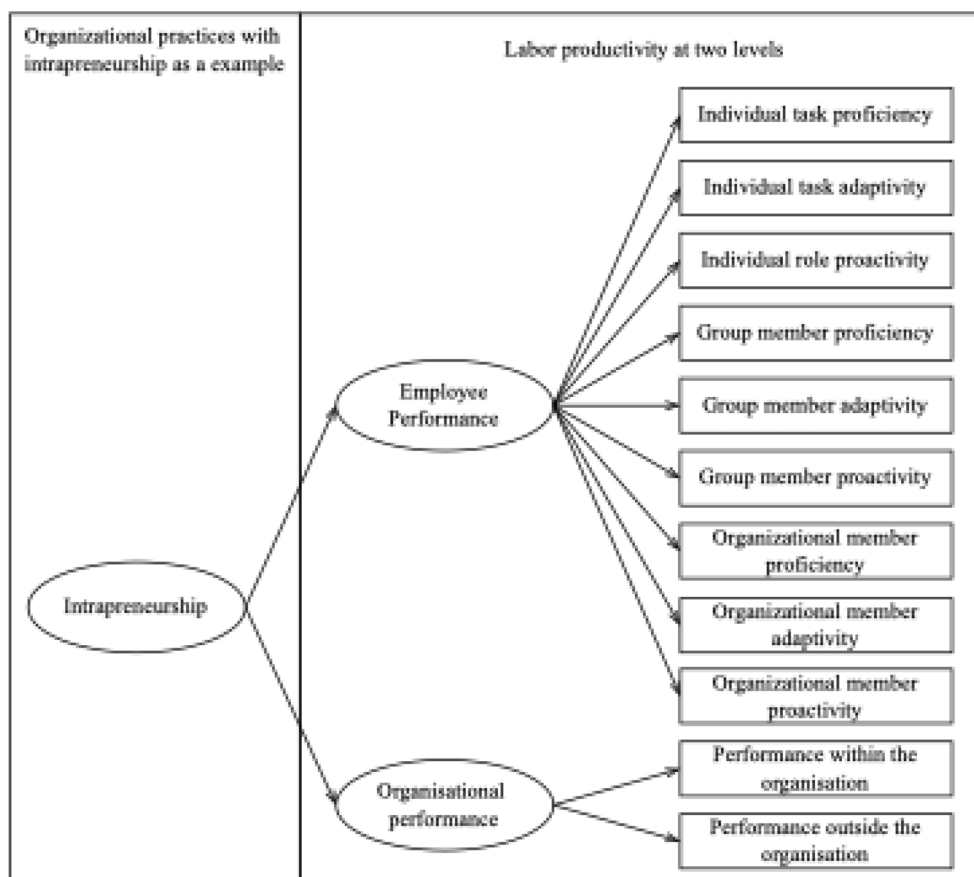
Labor productivity at the organizational level cannot be fully understood without considering how well the organization responds to external pressures, such as market competition and changing consumer preferences [21]. Growth in sales, profitability, and market share are essential outcomes that demonstrate the firm's ability to translate employee productivity into financial success. In today's competitive global economy, organizations must excel both internally and externally. High labor productivity at the individual level feeds into superior organizational performance, which is then reflected in external success. Only by measuring both internal and external performance can organizations capture the full spectrum of labor productivity.

Traditionally, organizational assessments rely on objective data; however, due to limitations in data availability, this scale provides a quick assessment tool based on the general functions of an organization. The scale comprises two constructs: perceived organizational performance and perceived market performance (items 1 through 7 for the former and items 8 through 11 for the latter). The former focuses on product quality, customer satisfaction, and new product development, while the latter emphasizes economic outcomes such as profitability and market share. The internal consistency reliability of these two constructs is 0.85 and 0.86, respectively, meeting the standards for measurement reliability.

### **The measurement application: a model example to empirically verify how employee intrapreneurship enhances labor productivity**

The measurement developed above has valuable implication for researchers or managerial practitioners to verify the effectiveness of organizational practices and human resource development policies. Especially, it provides an insight to quantitatively explore the relationship between a certain managerial practice and the positive labor results. Here, this article exemplified its application with employee intrapreneurship, an important managerial practice in today's business context.

Intrapreneurship, which refers to the entrepreneurial activities within an organization undertaken by employees, embodies characteristics like innovation, initiative-taking, and problem-solving. These behaviors align with established models in labor economics and organizational management that suggest innovation and initiative contribute directly to improving both individual and collective output. From the perspective of labor economics, labor productivity is commonly defined as the ratio of output to labor input. When employees engage in intrapreneurship, they are likely to introduce new ideas, streamline processes, and adapt more efficiently to challenges [22], all of which enhance their individual productivity. On the organizational level, the aggregation of these individual contributions can lead to more efficient operations, better use of resources, and overall improvements in productivity and efficiency. Thus, the theoretical link between intrapreneurial behavior and increased labor output is well-established in literature on innovation economics (such as Schumpeterian theory of creative destruction) and management theory.



Source: made by the author.

Fig. 1. Example of the application of current labor productivity measurement

Рис. 1. Пример применения текущего измерения производительности труда

By employing this measurement of labor productivity, a researcher can hypothesize that intrapreneurship plays an important role in enhancing labor productivity and efficiency if intrapreneurship can well predict the employee's and organizational performance (see Fig. 1). The hypothesis is strengthened by the predictive validity of the employee intrapreneurship. If intrapreneurship consistently contributes to the employee's performance – through measures like adaptability, proactivity, and proficiency – then it stands to reason that these enhanced individual performances will collectively lead to improved organizational outcomes. Organizational performance, often measured by factors like profitability, innovation, and market share, is closely tied to how well employees perform their roles. Since intrapreneurship potentially drives key performance dimensions at the individual level, it may serve as a reliable role to enhance labor productivity (as more efficient output per em-

ployee) and efficiency (as better resource allocation and innovation within the organization).

### Conclusion

In conclusion, measuring labor productivity at both the employee and organizational levels provides a more comprehensive understanding of how productivity is generated and sustained in modern workplaces. At the micro-level, employee performance must be evaluated in terms of proficiency, adaptivity, and proactivity to reflect the complexity of individual contributions in today's organizational environment. At the macro-level, organizational productivity requires assessing both internal and external performance to capture the full scope of how individual efforts translate into broader success. By using this dual-level approach, organizations can ensure that their productivity metrics are aligned with strategic objectives and competitive demands, positioning themselves for long-term success in an increasingly complex economic landscape.

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## ИЗМЕРЕНИЕ ПРОИЗВОДИТЕЛЬНОСТИ ТРУДА С ТОЧКИ ЗРЕНИЯ ЭФФЕКТИВНОСТИ СОТРУДНИКОВ И ОРГАНИЗАЦИИ ДЛЯ РАЗВИТИЯ ЧЕЛОВЕЧЕСКИХ РЕСУРСОВ

*В статье рассматривается проблема указания производительности труда при переходе экономики от стабильного крупного производства к динамичной, инновационно ориентированной экономике. Обосновывается идея о том, что современные экономические условия требуют от организаций и сотрудников принятия предпринимательской ориентации для эффективного реагирования на вызовы, повышения адаптивности и обеспечения конкурентоспособности. Прослеживается необходимость пересмотра традиционных подходов к измерению производительности труда, т. к. они не отражают ключевых особенностей новой экономической реальности, включая изменяющиеся требования к профессиональным и организационным показателям. Статья посвящена комплексному исследованию методов измерения производительности труда в организациях, соответствующих требованиям инновационной экономики. Методология исследования включает интегративный обзор теоретических и эмпирических работ, анализ существующих подходов и их применение для разработки двухуровневой модели измерения производительности труда. Особое внимание уделено показателям профессионализма, адаптивности и проактивности сотрудников, которые оцениваются на индивидуальном, групповом и организационном уровнях, а также внутренним и внешним показателям эффективности организаций. Дается сравнение традиционных и современных подходов, подчеркиваются их преимущества и ограничения, демонстрируя их релевантность в контексте инновационной экономики. Раскрываются проблемы несовершенства традиционных подходов и необходимость их адаптации. В результате предлагается инновационная система измерения, которая отражает характеристики новой экономики, способствует повышению эффективности организаций и служит надежным инструментом для анализа. Научная новизна работы заключается в создании модели, позволяющей исследователям и практикам глубже понять взаимосвязь между предпринимательской ориентацией, производительностью труда и развитием человеческих ресурсов.*

**Ключевые слова:** производительность труда; измерение; развитие человеческих ресурсов; эффективность сотрудников; организационная эффективность.

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