SCIENTIFIC-THEORETICAL AND METHODOLOGICAL FOUNDATIONS OF PRODUCTION COSTS UNDER THE CONDITIONS OF A DIGITAL ECONOMY

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Abstract

The article analyzes the scientific-theoretical and methodological foundations of production costs in the context of the digital economy, as well as the issues of reducing costs in farming enterprises.

Keywords: innovative agrotechnologies, production, cost, quality, prime cost, agriculture, enterprise, economic efficiency.

Introduction

In the context of the digital economy, the continuous improvement of economic efficiency in existing agricultural enterprises has become an objective necessity. This is primarily due to the annual growth of the population in our country, which requires the effective use of intensive production methods. The ultimate result of intensive methods is a competitive product — one that is high in quality and low in cost.

Numerous scientific studies have been conducted to improve product quality, and practical results are being achieved. However, reducing production costs has become one of the central issues of today's economy. This is because there remains a significant imbalance between state procurement prices for agricultural products and the rising costs of production resources. Consequently, optimizing production costs in agriculture, ensuring the production of more and higher-quality goods at minimal cost, and increasing economic efficiency are among the most important economic challenges.

During the reform process, our government has implemented several measures to address these issues. Notably, by the Decree of President Sh. M. Mirziyoyev, the Strategy for the Development of Agriculture of the Republic of Uzbekistan for 2020–2030 was adopted, aiming to diversify production, create a favorable agribusiness environment, develop high value-added chains, and introduce advanced technologies in the sector.

In addition, on January 28, 2022, the Presidential Decree PF-60 "On the Development Strategy of New Uzbekistan for 2022–2026" was adopted. These documents highlight the relevance of this research topic.

Furthermore, several key legal acts have been issued to promote market-oriented reforms in agriculture, including:

Decree PF-5853 (October 23, 2019) "On Approval of the Strategy for Agricultural Development for 2020–2030";

Presidential Resolution (March 6, 2020) "On Measures to Widely Introduce Market Principles in the Cotton Industry";

Resolution (June 27, 2020) "On Improving the System of Testing and Certification of Agricultural and Land Reclamation Equipment."

The main goal of these legal frameworks is to ensure the stability of existing farms by producing more and higher-quality products at minimal cost.

Research Methods

Material costs form the main component of production costs, playing a crucial role in determining the prime cost of agricultural products. Efficient use of material resources in cotton and wheat production, under state procurement systems, is one of the key factors in achieving optimal efficiency in farms.

The study aims to develop scientifically based and practically significant recommendations for optimizing production costs using data from specific farming enterprises.

Research Results

The research developed theoretical approaches and practical recommendations to improve cost optimization in farming, identify influencing factors, and evaluate methods for assessing their impact. These findings can contribute to the knowledge and skills required for the development of the agricultural sector and serve as a basis for regional and district-level agricultural development programs.

Efficient and rational use of material, labor, and financial resources reduces production costs and waste, increases profitability and income, and enhances production organization.

However, qualified labor, modern technologies, and high-quality raw materials alone do not guarantee competitive products — effective production and labor organization are essential components.

Labor organization involves scientifically based measures to create safe and efficient working conditions, save time and energy, and enhance workplace culture. Achievements in technological, technical, biological, sociological, and pedagogical sciences play a key role in improving labor organization.

Thus, the mere existence of resources does not guarantee efficiency — they must be allocated to sectors that yield the greatest economic return. Uzbekistan, being rich in diverse natural resources, must effectively combine capital and management to achieve this.

The U.S. economic experience confirms this: production processes are divided into main and auxiliary processes. Main processes transform the form and properties of raw materials, while auxiliary processes ensure the continuity and stability of the main ones — for example, equipment maintenance, production of spare parts, and quality control.

Production processes typically consist of several stages — preparation, processing, and assembly — each composed of smaller technological operations. The overall volume of production, product prices, costs, and profits depend on the technology and production factors used.

In managing production, firms must consider questions such as: “What level of equipment is needed?”, “How many workers should be employed?”, or “Is it more efficient to build a new factory or expand the existing one?” Thus, production theory and cost management remain central issues in business operations.

Conclusion

Because changes in resource use take varying amounts of time, production is analyzed over short-term and long-term periods. The short-term period is the time during which a firm can alter its use of variable resources while fixed capacities remain constant.

Production is a universal human activity — present at all stages of civilization and across all nations. It has evolved from primitive tools and manual labor to modern robotics, aircraft manufacturing, and digital technologies.

Today, Uzbekistan's economy comprises hundreds of industries producing consumer goods, equipment, and materials necessary for production and everyday life. The largest sectors include industry, agriculture, transport and communications, construction, trade, and services. Each nation seeks to develop industries that align with its stage of development and resource base.

Given limited resources, priority must be given to sectors critical for economic growth, national security, and international cooperation..

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