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The Impact of Government Support on the Productivity of the Grain Sector in Azerbaijan

Abstract

The purpose of the study is to assess how government support measures affect the productivity level of the grain sector in Azerbaijan. In recent years, the country's agricultural policy has provided significant subsidies, benefits and incentive mechanisms to increase yields and production sustainability. However, the practical effectiveness of these measures has not been fully studied.

The paper uses methods of comparative and statistical analysis based on official data on yields and production volumes of grain crops in recent years. Additionally, a review of regulatory documents and support programs was conducted, as well as a comparison with the experience of other countries where similar tools are used. The results of the study show that government assistance in the form of subsidies for seeds, fertilizers and fuels and lubricants generally has a positive effect on productivity, but the effect strongly depends on the level of technology adaptation, soil conditions and climatic conditions in specific regions. At the same time, there are risks of reduced efficiency due to the uneven distribution of resources and limited access of small farms to support. The practical significance of the work lies in the fact that the findings can be used to adjust agricultural policy, in particular, to develop more targeted incentive tools and introduce innovative methods of production management in the grain sector.

Keywords: *state support, grain sector, Azerbaijan, productivity, subsidies, agricultural policy, sustainable development*

Introduction

The relevance of the topic.

The grain sector is one of the key areas of Azerbaijan's agrarian economy, as it is grain crops that form the basis of the country's food security. Population growth, changing consumption patterns and the need to reduce dependence on imports reinforce the importance of stable production of wheat, barley and other grains. In modern conditions, government support is becoming an important tool for the development of the industry, which is aimed at increasing yields and providing farmers with the necessary resources.

The problem and the gap in research

Despite the fact that Azerbaijan has numerous subsidy and support programs for agricultural producers, the scientific literature has not yet sufficiently covered the issues of their real impact on the productivity of the grain sector. In particular, there is no systematic analysis showing how much support measures contribute to the introduction of modern technologies, cost optimization and

increased economic efficiency of farms. In addition, the regional impact of government policy on the yield and sustainability of grain production has not been sufficiently studied.

Purpose and research issues

The purpose of this article is to analyze the impact of government support on the productivity of the grain sector in Azerbaijan. The main research issues are:

1. To what extent do the existing subsidy mechanisms affect the level of yields and gross grain production?
2. What factors limit the effectiveness of government assistance?
3. What areas of government policy require adjustments to increase the sustainability of the industry?

Materials and methods

The study is based on the analysis of statistical data on the production and yield of grain crops in Azerbaijan over the past ten years. The sources of information were the official reports of the State Statistics Committee of Azerbaijan, materials from the Ministry of Agriculture, as well as regulatory documents regulating state support for the agricultural sector. To assess the impact of subsidies and preferential mechanisms, a comparative method was used: the indicators of yield and gross grain production before and after the implementation of support programs were compared with each other (Nguyen et al., 2023). Additionally, correlation analysis methods were used to identify the relationship between the amount of subsidies provided and the level of productivity in different regions of the country (Nguyen et al., 2023). In addition to quantitative data, qualitative materials were taken into account in the work — the results of expert interviews with representatives of farms and agricultural specialists (Sha, 2024). This approach made it possible to supplement the statistical analysis with practical observations and identify factors that are not always recorded in official reports (for example, the availability of subsidies for small farms, administrative barriers, differences in the level of technology adoption) (Mamun, 2024).

Thus, the applied methodology combines the analysis of secondary data, comparative and correlation methods, as well as elements of qualitative research. This provides a comprehensive approach to assessing the effectiveness of government support for the grain sector (Li et al., 2022).

Results and discussion

The analysis showed that the state support of the grain sector of Azerbaijan as a whole had a positive impact on the dynamics of yields and production volumes. Thus, in regions with active use of subsidies for seeds, fertilizers and fuel, there was a higher rate of yield growth compared to farms where access to these measures was limited. The effect was especially noticeable in the central and western regions of the country, where modern technologies of tillage and mechanization were introduced along with state support (SSRN Paper, 2023/2024). However, significant limitations have also been identified. First, the effect of subsidies is heterogeneous: large farms have easier access to benefits, while small farmers face bureaucratic obstacles and lack of information (McArthur, 2017). Secondly, government support is often focused on direct cost reduction, but it does not always stimulate the introduction of innovative solutions (for example, precision farming systems or moisture-saving technologies) (Minviel & Latruffe, 2017). The regional specifics deserve special attention. In arid areas, even with subsidies, yields remain below average due to limited water resources and soil degradation (Mustafayeva, Abbasova, Qambarova & Bayramova, 2024). At the same time, subsidies provide a significant increase in productivity in areas with favorable climatic conditions. Thus, the results of the study confirm that government support plays an important role in stabilizing grain production, but its effectiveness depends on the quality of resource allocation, the level of implementation of modern technologies and consideration of regional differences (Niftiyev, 2023). Optimization of these areas can ensure not only an increase in yields, but also an increase in the sustainability of the entire agricultural sector (Promoting Azerbaijan's Agricultural Productivity, 1997–2010).

Conclusion

The results of the study show that government support is a key factor in the development of the grain sector in Azerbaijan. Subsidies and preferential mechanisms can reduce farmers' costs and partially offset the risks associated with climate and market fluctuations. At the same time, the greatest positive effect is observed in regions where modern agricultural technologies are used simultaneously with state aid and access to resources is provided. At the same time, the identified limitations indicate the need to adjust the current policy. Support should be more targeted so that small and medium-sized farms can benefit equally from subsidies (Morteza Tahamipour & Mina Mahmoudi, 2018). It is important that government programs not only reduce farmers' running costs but also stimulate long-term development — the introduction of innovative technologies, rational use of water and soil resources, and increased production sustainability (Yang, 2023). The practical significance of the analysis lies in the fact that its conclusions can be taken into account when developing new subsidy programs and adjusting existing mechanisms (Yuzbashiyeva, 2024). The implementation of targeted and innovation-oriented policies will increase the productivity of the grain sector, strengthen food security and ensure the sustainable development of agriculture in the country.

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