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THE ROLE OF ECONOMETRIC MODELS IN THE DEVELOPMENT OF THE DEHKAN FARMING SECTOR

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ANNOTATION. *Theoretical aspects of training for the development of the agricultural sector are covered. The search for and implementation of new approaches, models and methods for the development of the agricultural sector is described in detail. The factors influencing the training of personnel for the development of the agricultural sector were studied.*

Key words: *Agriculture, Agriculture, Farming, Horticulture, Econometrics, Econometric Model, Functional Model, Complex Modeling, Evaluation Criteria, Database, System Analysis and Forecasting.*

Relevance of the topic. *In world practice, scientific research on training personnel in agriculture and improving the scientific and methodological foundations of high-tech production mechanisms, complex modeling, and accelerating and increasing the efficiency of production processes is gaining importance.*

Introduction. In the context of globalization, a number of scientific works are being conducted on econometric modeling and forecasting of the development of personnel training and production processes in agriculture, including improving the systematic analysis of the production process of agricultural products, assessing the important factors affecting them, the widespread use of econometric models in the forecasting process, comparative assessment of statistical information systems, the introduction of automated information systems for comparative assessment of production indicators and their indicators, and the creation of an open data portal. In this process, the main scientific directions are also the issues of further accelerating the intensive production process, ensuring transparency and openness of statistical data on

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the volume of agricultural products, and improving the econometric and statistical calculation methods through the effective use of international standards and principles.

In the social and economic study of the agricultural sector, it is of utmost importance to theoretically reveal its essence as a category. In determining the efficiency of the agricultural sector, it is important to determine the essence of such interrelated categories as “agriculture”, “farming”, “homestead”. Therefore, it is advisable to scientifically and theoretically study these categories and develop their definitions.

The main goal of the social policy implemented by the state in our republic is to create a favorable social environment and conditions in society that ensure the satisfaction of the basic vital needs of the population through the development of the agricultural sector.

The development of the agricultural sector depends, first of all, on the results of the reforms being implemented in all regions and territories.

This study has extensively studied the problems associated with modeling the development of the agricultural sector.

Theories of econometric modeling of the development of the agricultural sector form the directions of state management in the socio-economic development of regions. However, one cannot be limited to their study alone, since they largely rely on the theories of economic growth of regions. It is necessary to search for and introduce new approaches, models and methods for the development of the agricultural sector.

The role of the agricultural training sector in the current conditions is determined by the following factors:

new jobs are constantly being created in the sector;

the sector is increasing its contribution to the country's gross domestic product;

due to the sector, the time spent on agriculture in households is reduced, which improves the quality of life of the population.

Econometric methods do not negate simple, traditional methods, but rather help to further develop them and analyze objectively variable outcome indicators through other indicators.

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The importance of econometric modeling of the agricultural sector is manifested in the following:

rational use of material, labor and monetary resources;

serves as a leading tool in the analysis of economic and natural processes;

makes it possible to make some adjustments when forecasting the development of the agricultural sector;

makes it possible not only to conduct a deep analysis of the agricultural sector, but also to discover new unexplored patterns in it. They also make it possible to predict the future development of the agricultural sector;

along with the automation of computational work, it facilitates mental labor, and creates the opportunity to organize and manage the labor of agricultural workers on a scientific basis.

The increase in the economic well-being of our republic and positive changes in economic life form a new type of demand, increasing consumer requirements for the quality of agriculture.

The agricultural sector operating in our republic is improving its equipment and technology, trying to meet the growing demands of consumers.

Previously, the agricultural sector was considered to be a complement to the material production sector. The quality of agriculture was low, it did not satisfy consumers and did not meet their needs.

In the current market conditions, agricultural enterprises and organizations operating in our republic are required to provide offers that meet international standards. They must deliver timely, convenient and safe AGRICULTURAL products to consumers.

In such conditions, the problems of agricultural personnel training and personnel shortages are:

Because in market conditions:

firstly, there are elements of risk and uncertainty;

secondly, resources are limited;

thirdly, there is competition between producers and consumers;

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fourth, to be able to predict the future state of economic indicators, etc.

In the context of the modernization of the country, it is necessary to solve a number of problems in order to widely use econometric modeling to produce agricultural products in the regions, taking into account the climate, consumer culture, and market economy conditions of each region.

For example:

to eliminate disparities in the agricultural sector between regions;

to model the priority development of entities engaged in agricultural activities in the regions;

to improve the competitive environment between entities engaged in agricultural activities in the regions;

to introduce modern advanced technologies in the regions and develop advanced technological processes that produce competitive products as a priority;

to more fully involve production funds and labor forces in the agricultural sector in the regions, that is, to model the management of the limited resources of society in the proper use;

to develop the agricultural sector and increase its production potential by introducing modern technologies, developing entrepreneurship and business, and achieving self-sufficiency and social equality.

Human life and labor are inseparable, because with the help of labor the necessary means of life are created, and man himself, considered only as labor power, is an object of nature, and labor is the material manifestation of this power. However, the influence of social factors on the efficiency of social production is sometimes direct or indirect, that is, on the one hand, the person himself is the object of direct influence, and on the other, his labor is indirect. In conditions of incomplete scientific impressions of collective practice, the prospects of the economy and social relations, the first step in the formation of new directions of economic policy is the elimination of specific contradictions and negative phenomena in production and the social sphere.

In order to assess the composition of the agricultural sector and determine its classification, it is necessary to develop signs and criteria characterizing the tasks

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performed by the agricultural sector in the system of the reproductive process of the economy and their specific features.

When predicting the future state of the agricultural sector, a simulation model is built for each sector. To do this, the following tasks must be performed:

Formation of a database of agricultural sectors and factors affecting them;

Determination of the relationship between each agricultural sector and factors affecting it, influencing factors;

Development of a separate model for each agricultural sector;

Verification of the developed models according to evaluation criteria;

Formation of a database forecast based on certain patterns of influencing factors in forecasting through models calculated as significant;

Obtaining resulting factors based on the database and models.

The resulting factor and evaluation criteria are determined from the resulting model.

To interpret the essence of this issue, we introduce the following modeling symbols in functional form:

$$Dx_t = f_1(E_t, M_{o't}, S_{rt}, T_{bt}, Au_{t-1}) + W; \quad (1)$$

Here: Dx_t – t volume of agricultural production per year; E_t – t Land area allocated for agricultural production in; $M_{o't}$ – t The amount of mineral fertilizers allocated for the cultivation of agricultural products in the year; S_{rt} – t The amount of water resources allocated for the production of agricultural products in; T_{bt} – t Number of machinery used in agricultural production in the year; $Au_{(t-1)}$ – t-1 The amount of demand for agricultural products in the year, W – external influencing factors.

One of the important elements of the development of agricultural sectors is the need for the produced product, because if there is no need for the produced product, there is no result from production. Therefore, it is necessary to calculate the per capita consumption of agricultural products. The level of per capita consumption of agricultural products is determined as follows:

$$I_{Dxi} = \frac{D_x}{A_u} \quad (2)$$

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Here: I_{Dx} – level of supply of agricultural products; D_x – quantity of agricultural products; A_u – The number of people with a need for agricultural products.

This ensures the movement of the agricultural sector, the economic mechanism. This method is widely used in analyzing and forecasting the development trends of agricultural processes. Since it is considered that the resulting effects of the actions of the main factors in development are summarized in the time factor.

Summary

In conclusion, agriculture is a complex socio-economic category. As a result of theoretical research, it is necessary to improve the training of personnel for the population in the agricultural sector. It is necessary to improve the scientific methodological foundations of complex modeling of innovative projects in the agricultural sector in practice.

Theories of econometric modeling of the development of the agricultural sector form the directions of state management in the socio-economic development of regions. However, one cannot be limited to their study alone, since they largely rely on theories of economic growth of regions. In addition, it is necessary to search for and introduce new approaches, models and methods for training personnel for the development of agriculture.

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