

## METHODS OF FORECASTING AND BASIC STAGES OF MODELING

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Models that represent (quantify) the quantitative relationships between the indicators that determine economic processes and the factors that affect them, using economic mathematical methods, play an important role.

The science that interprets such quantitative aspects of economic processes as well as theoretical analysis of economics through mathematical and statistical methods is called econometrics. At the heart of econometrics is an economic-mathematical model of factor analysis, the parameters of which are evaluated by methods of mathematical statistics. This model serves to conduct research on the basis of statistics, such as predictions, analysis of economic processes. Such models are called econometric models.

The following is an analysis of econometric models of some economic issues.

In the current situation, it is important to determine the initial goals using science-based forecasts in planning the development of national economic processes.

As a result of forecasting, the future state of the economy is determined, and the results of the decisions made today are roughly determined.

In economic forecasting, the problems and tasks we may face when addressing economic development issues become clear. As we determine the future state of the economy, we can see it by predicting the pros and cons of its development.

We have a number of tasks that are identified and need to be addressed during forecasting, and we can develop specific actions in the form of a variety of programs, which we can use during the production of plan assignments.

The principle of interdependent and interdependent development of social events and processes is a prerequisite for the theory of socio-economic forecasting.

Many processes in social life have inertial properties in their development, and the more complex the system under consideration, the greater its inertia. In the context of the planned development of the national economy, the inertia of development is greater.

The method of disseminating information about the same event, the transfer of information from one event to another, is called the method of extrapolation under certain conditions. Extrapolation is based on information that is convenient for the part of the research object that can now be verified, the general laws that govern the identification of the whole object. The method of extrapolation as a method of knowledge is the basis for scientific prediction, because when predicting events, it is applied to the laws of future development of the system (object).

The purpose of forecasting is to scientifically determine the future development of the system based on the study and analysis of the past and present state, the laws of change, to reveal the nature and content of the situation.

Forecasting determines the possible future course and outcome of events and processes, and more or less evaluates the indicators that characterize these events and processes for the foreseeable future.

Forecasting tasks largely depend on the duration of the period for which the forecast is intended. The forecast period is divided into three groups: short-term forecasts - up to 5 years; medium-term forecasts up to - 15 years; long-term forecasts - up to 30 years; very long-term predictions - covering a period of more than 30 years.

In practice, all methods of forecasting can be divided into 3 groups:

- expert methods developed by specialists and based on certain information;
- statistical (economic-mathematical) methods based on the use of known data, characterizing the past of the object of forecasting;
- Mixed methods based on the use of existing and expert information.

We see one of the simplest forecasting models based on a system of interconnected equations. In this model, the value of the indicators is determined using the appropriate equations on the factors that affect them.

Since the factors under consideration are usually random in nature, one of the most common methods of determination is the correlation-regression method, which is to measure the relationships between factors, as well as to determine the extent to which one quantitative change affects others.

In other words, the essence of this method is to derive and analyze mathematical relationships that include quantities that interrelate the indicators that need to be researched and represent the relationships between them.

These relationships can take many forms depending on the nature of the problem and the clarity required. We try to explain what is said in normal mathematical language.

The procedure of building an econometric model can be divided into several interrelated stages:

1. Analysis of the specific features of the event and process under consideration and substantiation of the class of models suitable for their expression (identification of models)
2. Select the rational (optimal) composition of the variables included in the model and determine their quantitative characteristics, which determine the level in the past periods of time (any set of homogeneous objects - regions, enterprises, etc.).
3. Substantiate the shape and type of the model in the form of a mathematical equation (system of equations) connecting the variables included in the model.
4. Evaluate the parameters of the selected model variant on the basis of primary data representing the levels of indicators (variables) in different time moments or a set of homogeneous objects.
5. Verify the quality of the structured model and substantiate the conclusion that it is appropriate to use it in future econometric research.

If we conclude that it is not advisable to use the structured model in subsequent econometric studies, it is necessary to return to the first stage (or another stage) and try to create a more qualitative modification of the model (another version of the model).

#### List of used literature:

1. Address of the President of the Republic of Uzbekistan Shavkat Mirziyoyev to the Oliy Majlis. 22.12.2017.
2. Based on the site <https://stat.uz/>.
3. Dubrova T.A. Statistical methods of forecasting in economics, 2002.-52 p.
4. Ejemanskaya S.N. Econometrics –D: Phoenix, 2003.-160 p.