Informationsmodell versorgungssystem bei der erstellung der industriestrukturdatenbank in der region

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Anmerkung

Dieser Artikel entwickelt die Prinzipien und Prioritäten für die Modellierung der Bereitstellung von Informationssystemen bei der Erstellung einer Datenbank der industriellen Struktur der Region.

Als Ergebnis der Reformen, die Usbekistan als unabhängiger Staat bei der Entwicklung der Industrie in der Region durchgeführt hat, gibt es Möglichkeiten, moderne Technologien bei der Entwicklung der Industriestruktur einzusetzen. Dem Kommunikationsdienst wird mehr Aufmerksamkeit geschenkt. Die Schaffung moderner Industriemodelle in der Region hängt mehr vom Informationsaustausch und der Verbesserung von Informationsmodellen ab [6].

Schlüsselwörter: Programm, Information, Modell, Produkt, Element, System, Risiko, Methoden

Information model supply system in creating industrial structure database in the region

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Abstract: This article develops the principles and priorities for modeling the supply of information systems in the creation of a database of the industrial structure of the region.

As a result of the reforms carried out by Uzbekistan as an independent state in the development of industry in the region, there are ways to use modern technologies in the development of industrial structure. More attention is paid to the communication service. The creation of modern models of industry in the region depends more on the exchange of information, the improvement of information models [6].

Keywords: program**,** information**,** model**,** product**,** element**,** system**,** risk**,** methods

In this regard, we consider the structure of the information model of industrial development by industry and its analysis, computational experience on the basis of calculations performed in ICT. The general scheme of the computational experiment is shown in Figure 1.

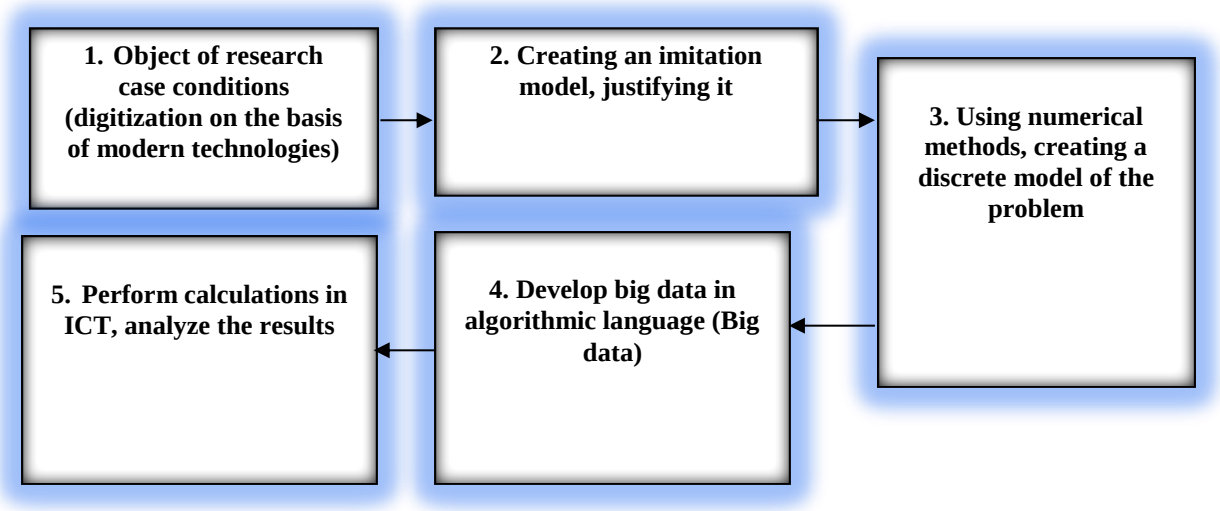


Figure 1. General scheme of information model computation experience in the industrial structure of the region

The mathematical model never fully embodies the properties of the object under study. It has an approximate character because it is based on various assumptions and constraints [1]. Hence, the results obtained on its basis will also be approximate. The accuracy of the model, the assessment of the level of reliability of the results is one of the main issues of information supply.

In the first stage, the problem is clearly stated, the given and sought quantities, the endogenous control parameters to be used to model the object are introduced.

In the second stage, an information model is created based on the laws. They cannot take into account all of the factors that affect the process being studied in a system at once, as the mathematical model becomes very complex. Therefore, only the main factors that have the strongest influence are taken into account in modeling. In this regard, we have selected the factors that determine the development of the information system of the industrial structure of our region:

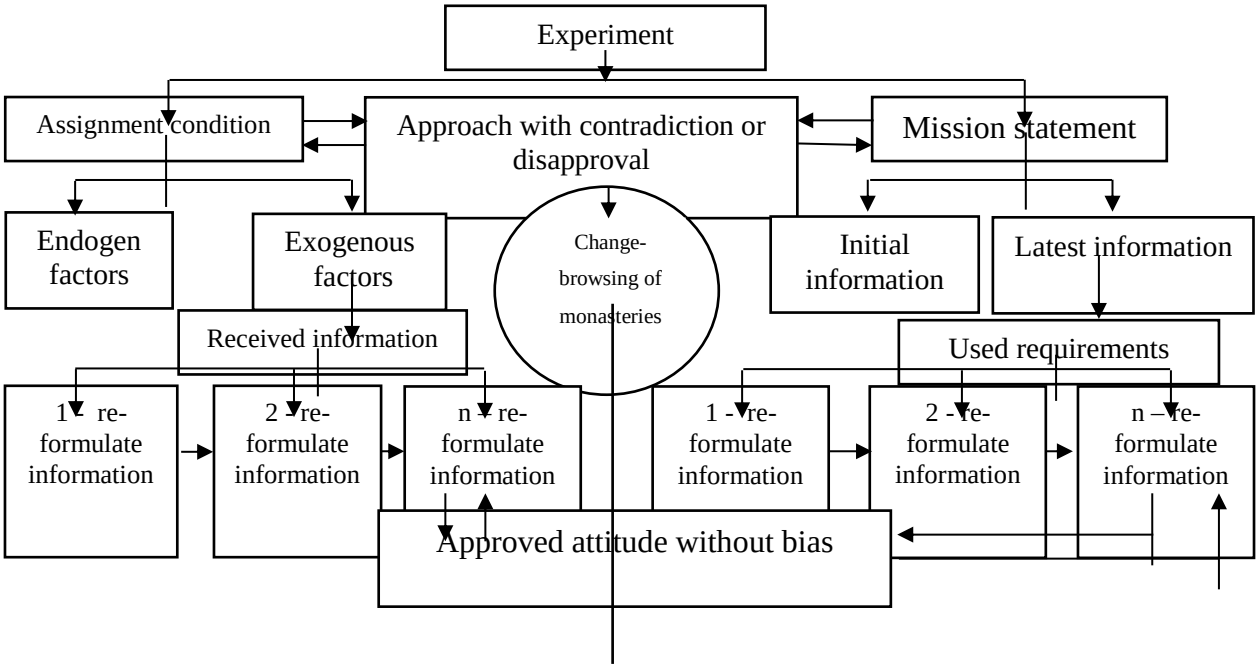
- Socio-economic characteristics of the region, the level of urbanization, the structure of industrial workers in the field of professional skills,
- National description of the region, national characteristics, composition, number of industries;
- Description of the material and technical base of the industrial structure in the region, the transport network and prospects for its development.

In the third stage, a mathematical model of the problem is constructed. At this point, the necessary appropriate equations must be solved and the indicators determined. For example, if a mathematical model is described by a differential equation, using numerical methods it is replaced by finite-difference equations defined at a finite number of points[2].

In the fourth stage, a program is created for use in a database management system (DBMS) in any algorithmic language based on an algorithm defined using

numerical methods. For example, it must have a general property, that is, the program must give good results at values of variables in a sufficiently large area of the problem parameters expressed in the mathematical model.

In the final stage, it is put into the program (MBBT) and the numerical results obtained are thoroughly analyzed and evaluated.



2- Figure. Industry region tuzulmasini information about modeling Expromettor MMBT bilan faol practical meetings oshirishning construction scheme

Depending on the results, the specialist draws conclusions about the analyzed process, influences its implementation on the basis of a specific goal, develops management tools, makes recommendations. With the help of computational experiments performed on the basis of many options, the designer can choose the most suitable of all the options according to this or that sign.

As can be seen from Figure 2, the experimenter is actively communicating with the MBBT. Information is used on the adjustable indicators of demand for the type of product and its final production in the industry. If the indicator is higher than the unit, the demand is higher than the supply, if it is less than the unit, vice versa. Adjustable indicators and the growth rate of the gross product across industries are analyzed by the experimenter at a position that can be tolerated. If they need to be changed, the experimenter can change this or that control parameter [3]. For example, norms, price scales change. Blocks Defines New Adjustable Indicators.

As soon as the experimenter concludes that production and consumption are in satisfactory balance, he transfers the system to next year's calculations.

Thus, the provision of the information model allows us to find forecast options that provide the best ratio of industrial structure to the use of information through the human-machine simulation system.

Separation of control parameters, evaluation of intermediate decisions and selection of final decisions is left to the experimenter, most of the possible solution

options are solved in MBBT. To do this, first of all, its specific key features are separated and an imitative relationship is established between them. Once the simulation model is constructed, that is, when the problem is expressed mathematically, it can be analyzed through certain simulation experiments.

The study is based on the need to develop a system-structural model that corresponds to the macroeconomic nature of modeling in the development of regional processes through the development of an industrial database of the region, allowing a full analysis of the state of industrial production.

The use of communication services also has a direct impact on production efficiency.

In the article, we focus on the information supply to obtain the practical results of the model system solution and the calculated indicators. Materials and documents related to the development of industrial facilities, infrastructure improvement, documents in statistical reports, planning organizations, the results of research were used to obtain general information.

Conceptual design is the starting point in the creation of an information model, which allows the emergence of logical modeling by structuring and organizing physical and logical relationships based on data collection, analysis, and regulation. Determining the components of a data set and the interactions between them is a key design problem Figure 3.

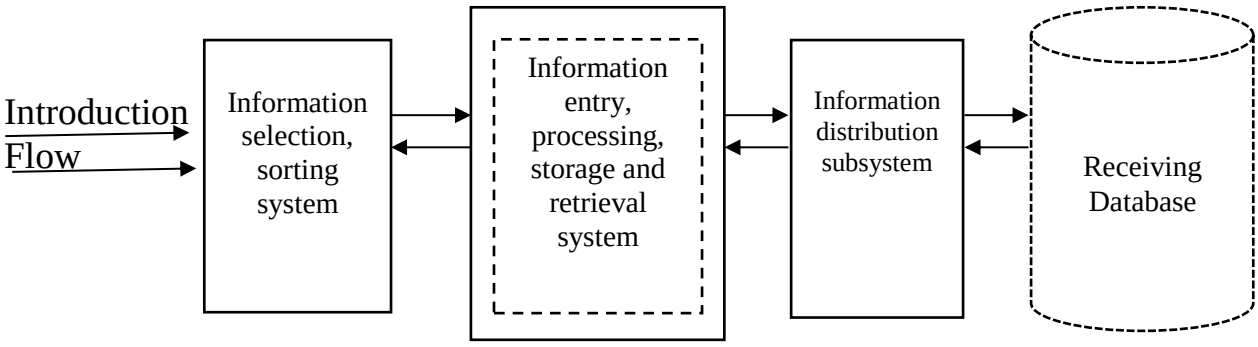


Figure 3. General scheme of the information base supply system

Based on research in this area, it can be argued that the creation of a database model is a strong and sufficiently well-founded method of more precise coordination in the information subsystem on which the effectiveness of decisions made in the social sphere depends. At the same time, marketing information should be considered not as a set of statistical indicators and unrelated operations for their collection and processing, but as a single, sufficiently justified element of social development in rural areas. In creating such a set of information, criteria and functional criteria on the specifics of decision-making are taken into account. K.Xovard, N.D.Eriashvili, V.A.Solovev, D.A.Tsigichko, L.Abdullaeva, M. Based on the research of scientists such as Nasretdinova [4], it is possible to distinguish three main elements within the first aspect:

-information for management decisions;

-information required for forecasting and planning calculations;

- information required to conduct research.

The first element consists of information about the general situation in the social sphere, in particular, the production process in the industrial structure of the region. Such information is based on the operational and technical accounting system. In this case, the database is based on the initial data of accounting, as well as operational and periodic statistical reports.

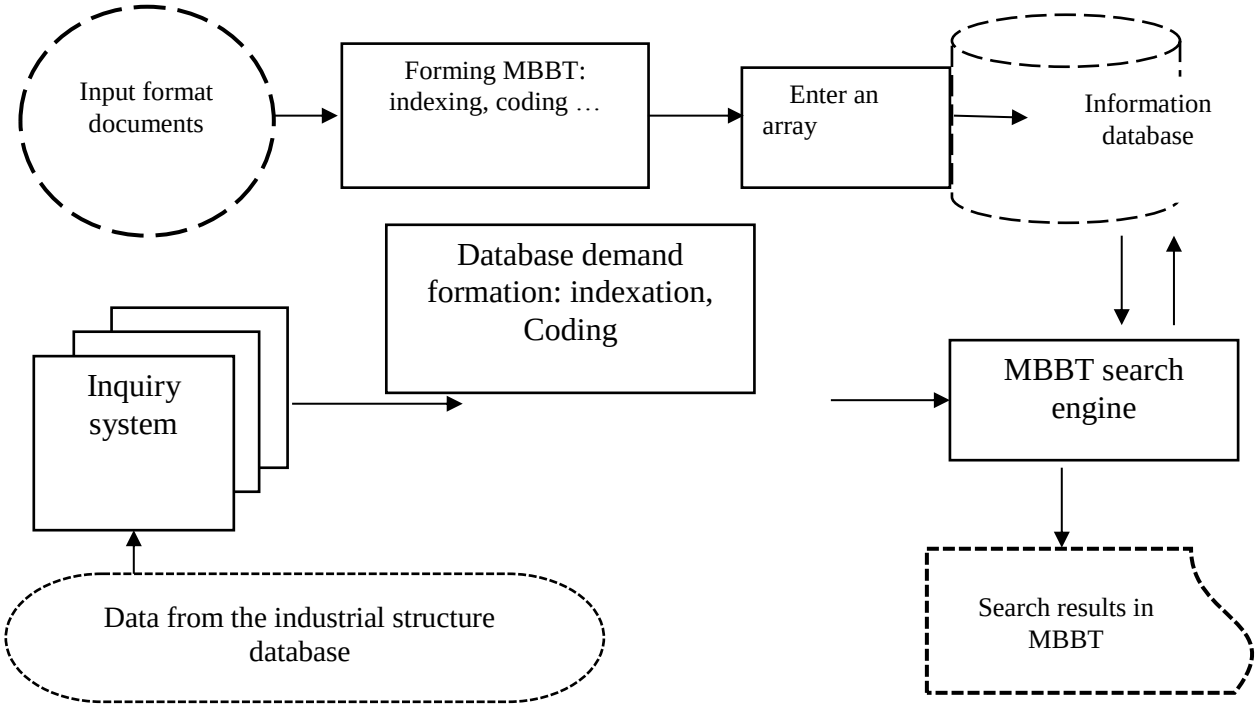


Figure 4. General scheme of the database search system in the industrial structure of the region

The second element contains the information needed for forecasting and planning. In this regard, its component should be data that allow a comprehensive analysis of the field under study.

The third element should include a problem-oriented piece of information that allows for the calculation of different models that reflect the interrelationships of the processes being studied.

In terms of functionality, the following should be noted:

- Information on the internal environment of the region;
- information on the condition of industrial infrastructure;
- data for research and analysis of industrial structure.

Information on the internal industrial environment in the region is formed on the basis of internal initial reporting data.

Every year, industrial enterprises of the region invest in the development and modernization of their production facilities, the development and modernization of information technology as a key factor in the development of production. Development of the information environment of the enterprise, introduction of new modules of the enterprise, modernization of data transmission channels lead to the emergence of vulnerabilities and create a favorable environment for the emergence of new information risk factors.

During the formation of these processes, managers at different levels constantly face the problem of obtaining reliable information about the situation in the controlled part of the industrial enterprise. The introduction of various information systems in the enterprise allows to address the issues of completeness, reliability and confidentiality of the received information. However, there is very little research on the introduction and use of financial methods of enterprise information risk management. Financial methods allow not only to assess information risk management activities and shape cost effectiveness, but also to plan costs for their assessment.

There is an information risk in carrying out any economic activity. For effective financial management of information risks, it is necessary not only to develop an optimal functional structure of risk management, depending on the type of management impact development and implementation system, but also to choose the appropriate management strategy to apply different methods: software-technical, organizational and financial-economic.

The functional structure of information risk management should be consistent with the goals and objectives of its creation and unite all the elements of the enterprise engaged in information risk management into a single system, as well as be included in the overall risk management system of the enterprise.

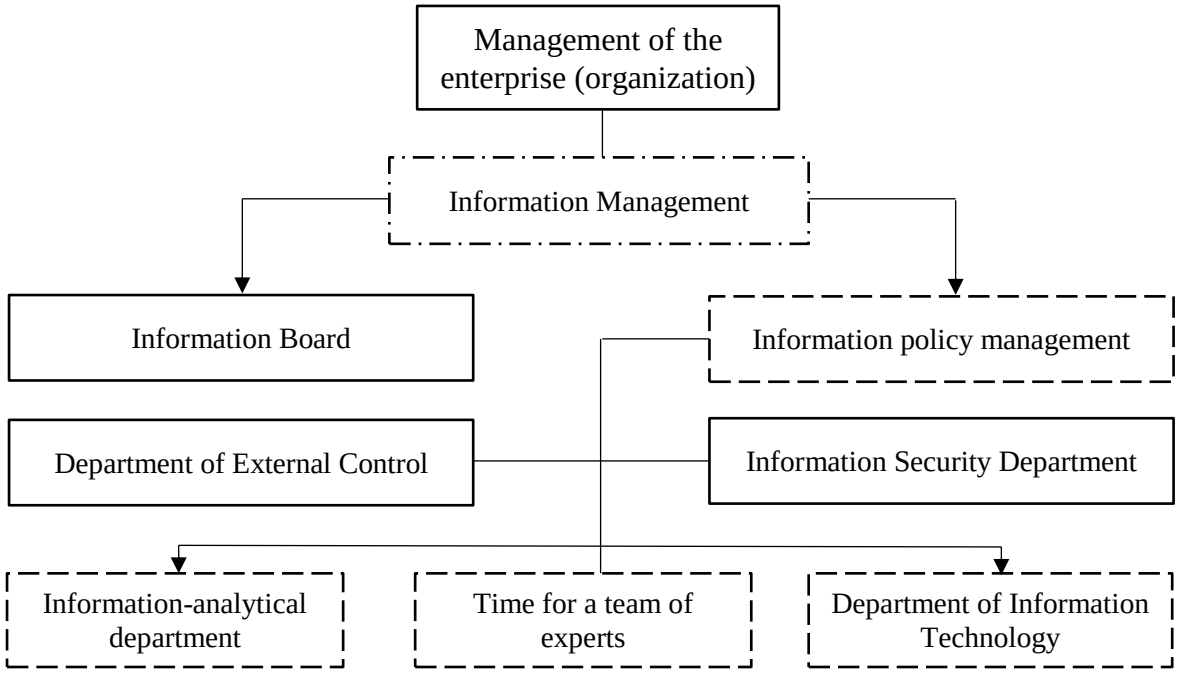


Figure 5. Functional structure of the information risk management system of the enterprise.

Creating effective information risk management is not a one-time project, but a complex process aimed at minimizing external and internal risks, taking into account resource and time constraints.

Financial methods of information risk management based on the assessment of the value of the object of management can be divided into a separate group, as they are a universal tool against almost any information risk. The following financial

methods are used in information risk management strategies:

- creation of financial reserves
- risk insurance
- information risk management cost analysis.

In order to apply the information risk management system, it is necessary to implement the information risk management methodology, which includes the following rules:

- information risk analysis information risk management;
- information risk management decision making;
- comprehensive coordination of information risk management methods and tools.

In view of the above, it is advisable to use the following procedure of the information risk management system.

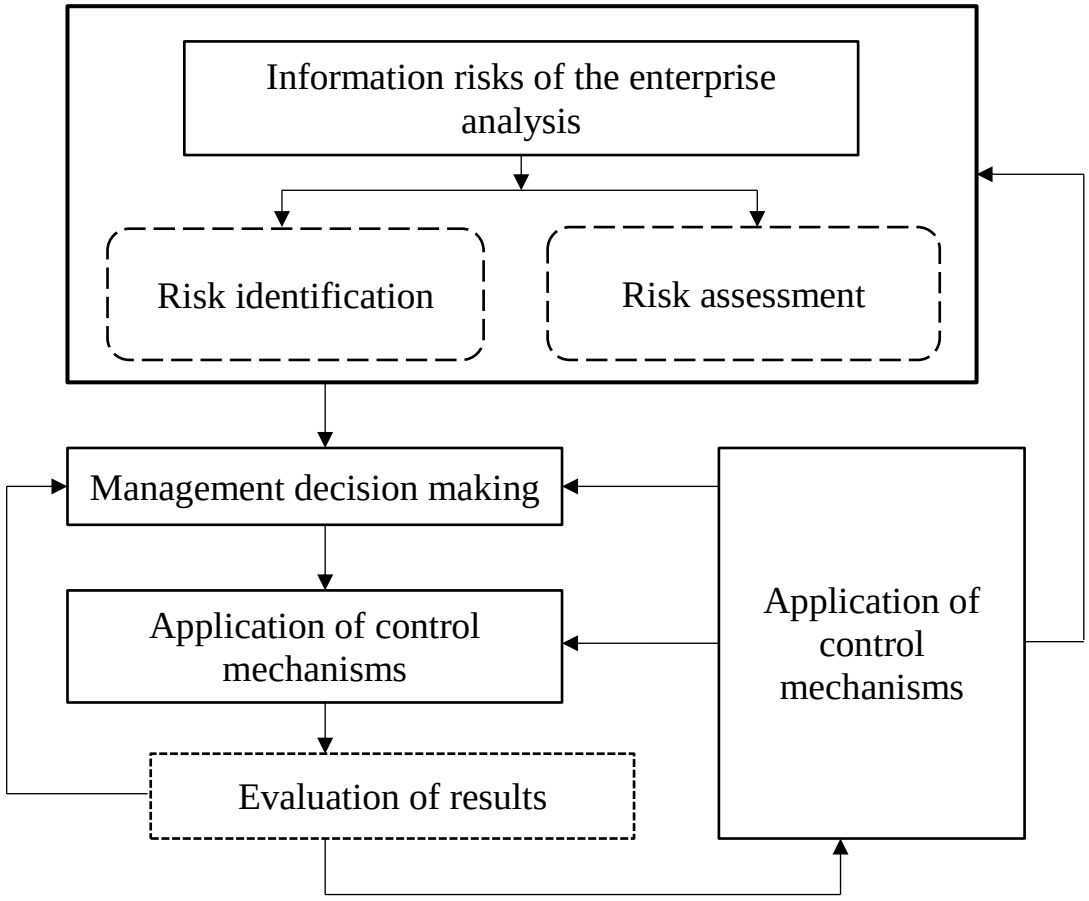


Figure 6. Procedure for risk management in information systems

Information risk analysis is a key management step and consists of two consecutive actions:

- identification of information risks;
- information risk assessment.

The first step in analyzing information risks is to identify them. At this stage, search for all possible information risks for the business and create a list of them. In the process of identification, the information model of the enterprise and the classification of information risks are proposed. They allow us to determine the

location of each threat, its nature, to understand the cause of its occurrence.

This information is mainly provided as a database. Here it is necessary to pay attention to the organizational and economic situation and the state of material resources to increase the use of database information by industry.

Information about the production process, prices, calculations will be the focus of external environmental information.

In our opinion, the classification of observation sources should be carried out according to the general scheme used in statistical research. Here, the information to be recorded during the direct observation is determined by the experts themselves, in the documentation the data are obtained from the documents, and in the inquiries the information is obtained from the answers of the requested persons.

The study of the practice of conducting surveys shows that in the implementation of forecasting in the array of expert assessments, various forecast options are formed, which can be described as "optimistic" or "pessimistic" options. That is, these options reflect the best and worst conditions for social development in the regional industrial structure of the economy of the Republic of Uzbekistan. In this regard, a strategy for the development of social conditions will be necessary from a practical point of view, as the best and worst conditions reflect the boundary conditions.

In the economy of the Republic of Uzbekistan there is an analytical relationship based on the processing of data obtained on the state of formation of the industrial database using mathematical statistical methods. This correlation allows us to take into account the factors of "optimism" and "pessimism" in the responses to the survey and to consider the possibility of expanding the sales market in Uzbekistan with the development of socio-economic processes.

The database model model involves the creation of a hierarchical structure obtained by dividing the overall goal into separate sub-goals. The general methodology of creating a database model is widely covered in the scientific literature. It consists of a number of requirements and limitations and seeks to strike a balance between completeness and simplicity. In our article, the region provides an opportunity to improve the composition of econometric models as a tool for the correct implementation of the production process of the industrial structure and the assessment and forecasting of its future development.

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