# DATA PRE-PROCESSING MECHANISM FOR ANALYSIS OF ECONOMIC INDICATORS

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**Abstract:** *This article examines today's digitization of the economy, ongoing research in this regard, computerization works in a specific area of the economy, economic analysis, issues of working with digital data in this regard.*

**Key words***: digitization of the economy, Information technologies, financial reports, economic analysis, finance, trade, service.*

## INTRODUCTION

Today, digitization of the economic sector, as well as in various fields, is being carried out rapidly. Digitization of the economy is the process of increasing efficiency, reducing costs and creating new opportunities through the use of digital technologies in various sectors of the economy. This concept applies to all sectors of the economy, including industry, agriculture, finance, trade, services and public administration. Digitization includes:

1. Use of information technology: For example, businesses use software to automate financial reporting, create online trading platforms, or optimize work processes.

2. Data analysis: Through Big Data technologies, it becomes possible to analyze the market, forecast customer needs and increase efficiency.

3. Artificial intelligence and automation: With the help of artificial intelligence, it is possible to automate production processes or improve the quality of customer service.

4. Blockchain and crypto-technologies: Helps to make financial transactions fast, secure and transparent.

5. Internet of Things (IoT): Resource management and real-time data acquisition with smart devices increase efficiency (for example, smart agriculture or logistics systems).

As a result of digitalization of the economy, the following advantages can be achieved:

• Efficient use of resources.

• Acceleration of work processes.

• Creation of new jobs and development of new business models.

• Creating convenience for citizens by providing public services digitally.

## OBJECTS AND RESEARCH METHODS

One of the main issues of the economy is the implementation of economic analysis. Organization of this process with the help of modern computer technologies is one of the main requirements of today. Implementation of economic analysis with the help of computer technologies is the use of computer programs, algorithms and special technologies to collect, store, analyze economic data and derive results from them. This process increases efficiency compared to traditional methods, allows for quick and accurate analysis of large amounts of data. Below are the main directions in which computer technologies are used in economic analysis:

1. Data collection and management. With the help of computer technologies, it is possible to collect, store and process economic data. Databases: SQL, Oracle, or other database management systems allow efficient storage and use of large amounts of economic data. Online platforms: Using the internet to collect surveys, sales data or market statistics.

2. Data analysis. Computer technologies make it easier to perform complex calculations and analyze large amounts of data in economic analysis. Spreadsheets: Using Excel and Google Sheets for simple analysis. Statistical software: Perform statistical and regression analysis using software such as SPSS, Stata, or R. Big Data Analysis: Real-time analysis of large volumes of economic data using Python and Apache Spark.

3. Forecasting and modeling. Computer technology helps create statistical and mathematical models to predict future economic conditions. Machine learning algorithms. Applying artificial intelligence algorithms to identify future market trends. Simulation. Modeling different economic scenarios using tools like Arena or MATLAB.

4. Visualization. Visual tools are used to present the results of the analysis in an understandable form. Graphing tools: Create graphs using Matplotlib and Seaborn libraries in Tableau, Power BI, or Python. Dashboards: Real-time data presentation by creating dynamic dashboards.

5. Automation. Automation of analytical processes allows effective management of economic processes. Bots: Use of bots and automated programs in data collection and reporting. ERP systems: Software such as SAP, 1C for enterprise resource management.

**RESULTS AND ITS DISCUSSION**

Categorization of types of analysis - to generalize and bring them into a single system, to identify the most important aspects and opens a wide opportunity for further improvement of this science in the future. All types of analysis are summarized in certain groups depending on their characteristics. The following can be included in such grouped signs: tasks of the analysis, its duration, the nature of the decisions to be made, the main aspects of studying the activities of enterprises, methods of determining reserves, the studied object, the subject of analysis, the phenomena of the studied phenomena. scope, information processing methods, etc. The main types of economic analysis

1. Current (retrospective) analysis of economic activity.

2. Quick analysis.

3. Prospective analysis.

4. Financial and economic analysis.

5. Technical and economic analysis.

6. Comparative (inter-enterprise) analysis.

7. Functional - value analysis.

In the practical activities of enterprises, the method of current analysis is fully developed. The current analysis is based on the officially accepted report in the analysis of economic activity of enterprises, and their monthly, quarterly, annual and several years are analyzed. The main task of the current analysis is to provide an objective assessment of the final results achieved in the economic activity, to comprehensively determine the unused internal economic reserves and to attract them to increase the production efficiency in the future.

Rapid analysis takes up about 50 percent of the working time of the management staff in the management system. In practice, its weight in the overall analytical work is 10 percent. Unlike current analysis, rapid analysis is based mainly on initial data.

Quick analysis includes the following: - determination of deviations of the main quantity and quality indicators of the enterprise and its departments in shifts, days, five days and decades; - to determine the factors affecting deviation from the norm; - to identify the responsible persons who made mistakes; - development of measures to eliminate negative factors; - to complete the results achieved at the indicated time and to identify "narrow" places and advanced joints.

Prospective analysis means the analysis carried out in order to study the future activities of the economic entity in advance, to determine the future processes in advance. For example, a business entity should have a clear understanding and indicators of how to complete its activities in order to draw up a business plan. This is done through perspective analysis. Currently, it is also called project analysis.

Financial and economic analysis. The essence of this analysis is expressed by studying the system of general value indicators and analyzing the results of financial activities of enterprises. Generalized value indicators include: fulfillment of the sales plan in accordance with the contractual obligation, product, annual productivity per worker, product cost, profit, and so on.

Technical and economic analysis is carried out in 3 directions: 1. Analysis of the technical level of production; 2. Analysis of production organization, labor and management; 3. Analysis of the technical level of the manufactured product.

Benchmarking is the most widely used method of economic analysis. There are 2 main types of comparative analysis: internal enterprise analysis, that is, the economic process related to this enterprise is studied as the object of the analysis; inter-enterprise, when the economic activity of a number of enterprises is analyzed and best practice in the network is studied.

Functional - value analysis. In order to reduce the cost of the product, unnecessary and excessive costs should be taken into account in all aspects during the design and production of the product. A functional-value analysis is needed to positively solve this problem.

## CONCLUSION

As a result of the study of this topic, it is possible to categorize the types of economic analysis, generalize them and bring them into one system, and to conduct further improvement of this field in the future, especially retrospective (current), rapid, prospective, financial economic, technical economic, comparative and functional value analysis. methods, main economic indicators used in economic analysis, information sources, correctness of used data sources methods of verification, for what purpose the external and internal users of the data are needed, and how to formalize the results of the analysis were studied.

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