

# ECONOMIC INFORMATION SYSTEM

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## ABSTRACT

*The development of market economy, the direction of all its components in a convergent sense, ensuring the attainment of objectives established within the general economic development strategy, requires the organisation of a specialized system in the acquirement, storage and use of information within the field of social-economic activity. Through the economic informational system, there are practically achieved the knowledge of all processes occurring within the economic area, of results of activities carried out by each cell of the economic body, the deviations that might occur are measured and their causes are determined.*

**Keywords:** *system, information, economy, resources, social, decision.*

**JEL Classification:** M10; M15; M19

## Introduction

The amplification of activities performed within the national economy area, as well as of those regarding the flows that are formed with the area of world economy, the increase of complexity and interdependence between the productive branches involve the accurate and operative knowledge of evolution of all economic processes and phenomena, of their information properties constituting basic elements for the elaboration of decisions of their regulation and self-regulation.

The economic information system is defined as being “the assembly of procedures and means of collection and transmission of information necessary for the management process”<sup>15</sup>, the scientific instrument of economic-social knowledge and action in the national economy area, which ensures, at the same time, the information necessary for the connection with the world economy system.

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<sup>15</sup> Ion Coteanu, Luiza Seche, Mircea Seche, coordinators, Romanian Academy, “Iorgu Iordan” Institute of Linguistics, *Explanatory Dictionary of Romanian Language (DEX)*, “Univers Enciclopedic” Publishing House, Bucharest, 1998, page 993.

**HOLISTICA Journal of Business and Public Administration**  
**No. 1/2016**

Alongside other systems, such as the social system or the administrative one, the economic information system ensures the knowledge of realities of economic space; it helps to the organisation and direction of economic activity at micro and macroeconomic level and allows the knowledge of phenomena and mutations occurring in the world economy.

The economic information system, through its specific structure and functionality, has a special practical importance in ensuring the background of information necessary for the elaboration and foundation of the national model of optimal, proportional and balanced economic growth. This refers both to vertical coordinates of the respective plane, to the departmental and branch profile respectively (branch of national economy, sub-branches, groups of products and products), as well as to the horizontal coordinates of the plane, those referring to its territorial profile respectively (county, municipality, town, commune).

The efficient operation of economic information system<sup>16</sup>, for the provision of requirements involved in the elaboration of national models of optimal economic growth, requires the adoption of measures regarding the continuous improvement of quality and quantity of information, the permanent update of all information flows from the national economy area.

The current conditions, of some economic and social changes occurring in the world, made possible the organisation and operation within the economic information system of a component regarding the world economy. It has the role to supply the data necessary for the adoption of the most efficient decision for the development of economic and commercial relationships both with the countries of European Union and with those of the extra community area. At the same time<sup>17</sup> of economic information system serves to the systematic knowledge of multiple phenomena and processes occurring in the world economy. Therefore, the conjunctural tendencies and states of the world economic area are identified, the disruptive “currents” that are formed within it, as a result of crises that appear in the world economy, of the attempts to divide and re-divide the influence, politic and economic spheres.

Therefore, there is an isomorphism relation between the economic information system and the other systems that evolve in the national economy area. Within economic information system, the information regarding the evolution of processes and phenomena necessary for the organisation, direction and performance under the

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<sup>16</sup> Concept defined by O. Nicolescu and I. Verboncu in *Management*, Economica Publishing House, 1995, p.170.

<sup>17</sup> Dumitru Oprea, *Analysis and Design of Economic Information Systems*, Polirom Publishing House, Bucharest, 1999

best conditions of economic activities are collected, processed and stored continuously<sup>18</sup>.

The databases of which the economic information system disposes allow the analysis of evolution in the dynamics of all components of general cybernetic system of economy. They are elaborated according to some specific methodologies, allowing the definition of indicators, as well as of procedures of collection, validation, processing, transmission and memory of information, achieving therefore the full congruity between the content of the system and its material support. The technical-material base of economic information system is composed of the totality of equipment necessary for the collection, verification, transmission, storage, processing, memory and interrogation of databases.

### **1. Conditions and requirements of economic information system**

So as to fulfil under the best conditions the multiple tasks incumbent on it, the economic information system uses largely the modern computing technique, as well as the newest results of technology of information and communication, mathematics, statistics, etc. In this way, on the basis of collection of a rational volume of primary data, the economic information system has the capacity to transmit to the direction system the optimal volume of information necessary for the foundation of decisions and it participates directly to the performance of direction activities under efficient conditions.

The efficient operation of economic information system economic represents a very important condition for the optimal evolution of all systems of national economic area, with which it has a close relationship.

A first condition that imposes for the optimal operation and with maximum efficiency of economic information system consists in the achievement of a full congruity between the tasks incumbent on the system and its working methodology. In this sense, one must show that the reception and supply of economic information must be made on the basis of methodology of collection and processing of data that must satisfy the information needs of all management hierarchical levels.

Another major requirement for the information-economic system consists in the provision of data preciseness, both *statically* (collection - record - transmission - processing without information errors), and *dynamically* (the transmission of data in relation to the evolution speed of economic processes and phenomena). Therefore, the methodology of economic informational system must be conceived so as to allow the detection and correction of possible errors, and information flows and their material supports to be designed in agreement with the requirements of optimal operation of the system. At the same time, a requirement especially important for the optimal

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<sup>18</sup> Marinescu G., Petrescu Gh., *Marketing*, Gr. T. Popa Publishing House Iași, 2004, p.131.

**HOLISTICA Journal of Business and Public Administration**  
**No. 1/2016**

operation of the economic information system is related to the provision of a high degree of correctness and clarity of information, a scientific processing based on a unitary methodology. It represents a basic prerequisite for the operative knowledge of the level at which all the activities of the national economic area are carried out.

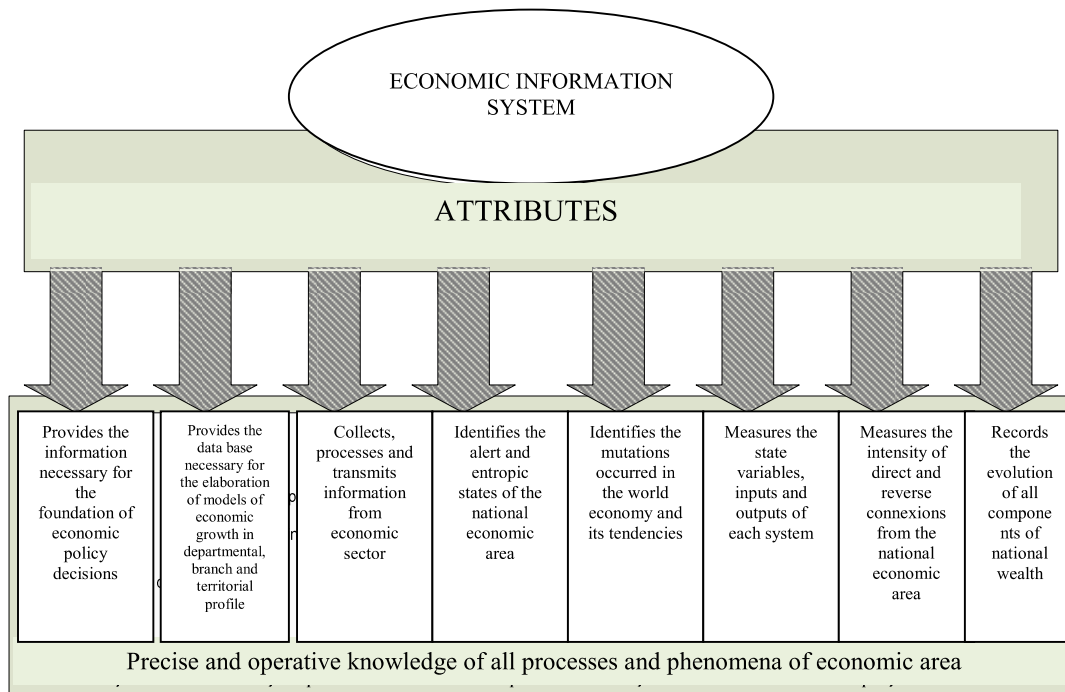
The connections existing between the component elements of the economic information system, between them and all the other systems evolving in the national economic area are generated by information flows.

The economic information system provides a continuous connection, such as the direct and reverse connexion (the economic feedback), between the management system and the other components of the national economic system, contributing to the optimal use of human, material and financial resources. It has the task to permanently provide the information connections from all the components of the national economic system toward the management system. For this purpose, the economic information system, through its ramifications spread in all the economic body cells, collects, selects, processes and transmits the data necessary for the foundation of economic policy decisions.

For the satisfaction of information requirements according to various management hierarchical steps, both vertically and horizontally, the storage of information in databases is achieved by fields of activity. A major requirement being imposed related to the organisation of information bases regards the rapid accessibility to the data fund, the existence of some sufficient programs for the processing of information in agreement with the needs of scientific management of the entire economic-social life. The efficiency of these databases must be characterised by the rapid supply of the elements necessary for the elaboration of models and scenarios regarding the prognosis variants necessary for the foundation of optimal, balanced and proportional economic growth plans. The operation with maximum efficiency and efficacy of the economic information system is based on the optimal structure of informational connexion classes that are formed with all the economic systems and subsystems, the organisation of information treasure and of database in close agreement with the needs of management process.

Strong, direct and reverse connexions are formed between the economic information system and the efficiency - profitability system, for the permanent co-measurement and comparison of expenditures with effective results of all activities performed in the national economic area. In this sense, the economic information system has also the role to follow, in dynamics, the evolution and mode of reduction of material consumptions, of fuels and energy, the increase of investments, of external trade activities, the level of natural resource exploitation, and others. At the same time, the economic information system has multiple tasks in the field of knowledge of all sides providing the monetary balance.

**Fig.1 Attributes of the economic information system**

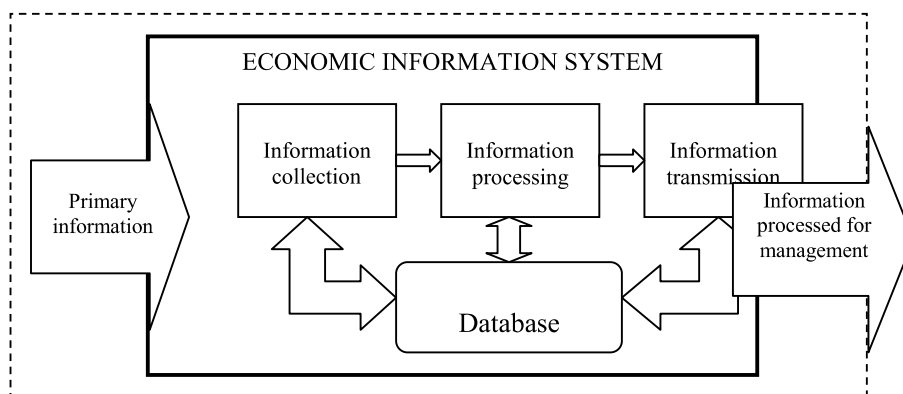


Through the connexions that are formed between the economic information system and the population system and work force, one should know at any moment the number and structure of total population, the socio-professional structure and according to ages of active population, its training and culture level, the distribution of work force by economic-social activity sectors: industry, agriculture, constructions, transports, trade, education, science, culture, health, etc.

Therefore, one knows permanently the level and efficiency of activities performed in the system of scientific research and technologic development and the mode of implementation of research results and their efficiency, and others. At the same time, the economic information system provides the elements necessary for the scientific research system for the identification of directions of technical progress in the national and global economic area, for the full exploitation of results obtained on a global level in the field of scientific research.

The economic information system is not confounded with the information system<sup>19</sup>. The economic information system has a larger coverage, which also includes the data processing system, which in its turn comprises the information system.

**Fig.2 Schematic representation of information flow within the economic information system**



Economic information is defined in the specialty literature as being “the raw material” made available for a leader regardless the field where he/she activates or his/her hierarchical level, by which one can intervene promptly in the organization and direction of production, in its optimization and elaboration of decisions. Economic information represents a piece of news, a message, a communication that brings novelties regarding a state, a situation, or modes of manifestation of some phenomena or processes of economic area and which refers to the past, present and future.

The classification of economic information can be made based on the following criteria:

- by content;
- by form of presentation;
- by coverage;
- by purpose;
- by the information standard used;
- by the mode of reflection in time;

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<sup>19</sup> M. Epuran, V. Băbăiță, *Basics of Accounting*, “Vest” Publishing House, Timișoara, 1994, page 17

## **HOLISTICA Journal of Business and Public Administration**

**No. 1/2016**

The economic information sphere comprises the budget of incomes and expenditures, the economic records, management, marketing, prognosis and

production scheduling, management control, the instructions and laws that make possible the knowledge, the settlement and control of some problems within economic bodies.

### **Conclusions**

The continuous development and improvement of the economic information system, as a result of amplification of activities that are carried out in the national economic area, lead to the change in time of information flows, in the sense of occurrence of some new connexions simultaneously with the renunciation to those that are not anymore characteristic for the analysed process.

As regards the precise knowledge at any moment of the dimension of general country wealth, the economic information system has the role of a real “national accounting”.

By the economic information system, the management system achieves the permanent knowledge of the mode of performance of activities that take place in the system of material production and services: the supply, the production, the sale, the level of work productivity, the consumptions of materials, fuel and energy, the fund use mode, the volume of stocks, the production quantity, the production costs, the level of efficiency and profitability levels in general. These pieces of information, processed and synthesised by the economic information system, allow the management system to adopt the most efficient measures in the system of material production and services.

The economic information system has an important role in the knowledge and management of phenomena and processes occurring in the system of international economic relations: the evolution of import and export, the efficiency of external trade activity by products and groups of products, the evolution of conjuncture on the world market, the evolution of demand and supply, the dynamics of prices, and others.

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**HOLISTICA Journal of Business and Public Administration**

**No. 1/2016**

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