

# National Accounting and the Macroeconomic Informational System

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## Abstract

*This paper illustrates an overview of the role and characteristics of national accounting, a "power accounting", as well as its fundamental element, the National Accounts System. National accounting measures, using numbers, the economic activity, nationally, constituting the main source of information for substantiating macroeconomic decisions, but also an answer to one of the inter-nationalization requirements.*

*National accounting allows the analysis of the productive process of goods and services, the formation and distribution of income, the use of income for consumption, the increase of the patrimony through the use of economies in order to accumulate economic goods.*

**Key words:** national accounting, macroeconomic system, information

**J.E.L. classification:** M41

## 1. Introduction

The paper aims to enhance the role of the national accounting as a basic component of the informational system in order to substantiate economical decisions and to track their implications macro-economically, using the national accounting indicators.

The provision of accounting information depends on various factors of social, economic, political nature, the way to conceptualize and normalize accounting, but also on the advances of the information technologies that contribute to the optimization of the time which is necessary for processing of data and also allocating this time in order to elaborate analyses or support services for decision making. At the same time, it is the effect of propagating the call for professional reasoning in accounting that demands the relevance of information and the uniqueness of monetary relationships as economic relationships.

Inter-nationalization also entails an increase in demand for macro-accounting information. National Accounts System is the main instrument to record and to analyze macro-economically and it is used in international statistics by almost all the states of the world, with market economy. However, the community of researchers in this field is reduced nationally to a very small number of specialists from universities, within the National Institute of Statistics and National Bank of Romania. In this respect, we considered that it was pertinent to initiate a scientific endeavour which presents the role and the importance of the national accounts within the macro-economic informational system. Moreover, in the European Union, part of the financial contribution of each member (the fourth own resource of the EU) is estimated taking into account the results of the national accounting (Dragan, 2011).

## 2. Literature review

The promotion of the role of accounting information is well known in substantiating the decisions of the users, but it is less emphasized on how it can put its mark on national accounts, which is an indication of the economic development of a nation.

Why is this aspect also important? One of the explanations could be given by the fact that in order to obtain performance, there must be control over the economic activity, but this control is dependent on the possibility to concretely measure the facts, transactions and economic results. The accounting accuracy involves and measures the effects beyond the scope of the actors micro-economically, respectively through the national accounts.

"The national accounting systems are relatively recent; their needs were reflected by the publication of Keynes's ideas in 1936 and were internationally standardized and developed after World War II. The national accounting systems in most countries are now under the patronage of the United Nations' System of National Accounts (NAS), ... and all the member states of the European Union follow the directives, more precisely, of the European System of Accounts (ESA)" (Dragan, 2011).

National accounting ensures the presentation of macro-economic information in an accounting framework. The informed macro-accounting is a stake for all the protagonists of the economic and social life of a nation: enterprises, households, state, trade unions, financial institutions etc. (Ionascu, 1995, p. 11). It is built on the basis of economic concepts and notions, passed through the filter of statistical and accounting techniques.

National accounting represents a powerful source of information processed and synthesized macro-economically by groups of economic agents, then materialized in a series of indicators that reflect globally the economic life of a nation (Capanu *et al*, 2001).

In Gilbert Abraham-Frois's vision (Gilbert Abraham-Frois, 1992) national accounting is characterized by favoring some analyses in terms of flow in a monetary expression. The economic reality captured in national accounting is presented in a synthetic way, the author having a Keynesian view on unemployment and the use of the labor force, allowing to explain the coexistence of unemployment and inflation.

Economic aggregates are variables that optimally reflect the functioning of the economy as a whole, being abstractions used in describing certain aspects of the economic life (Burja, 2003). Burja describes the process of aggregation in economy as a combination and synthesis in a macro-economic category of economic phenomena and processes expressed through a series of indicators.

The national accounts system, the fundamental element of national accounting is based on the theory of production factors, according to which participants in multiple economic activities are rewarded in relation to the services they provide (Sandu *et al*, 1992).

### 3. Research methodology

The research methodology represents "the study of the methods used throughout the research, which give relevance and validity to the process of knowledge development" (Niculescu *et al*, 2011, p. 108).

"It is true that nothing comes for granted, (only exceptionally), all the achievements, especially in the scientific field, are determined by a necessity: the need to understand some mechanisms or the development of processes, the need to realize certain products, technologies that meet the demands of the moment" (Ciobotaru, 2008).

The predominant research stream used during the present research is the positivist one, so that we aim to explain the different theoretical aspects of the problem regarding the accounting accuracy reflected by the national accounting.

The concrete study methods were the *descriptive method* used in the revision of the specialized literature regarding the way of expressing the accounting truth macro-economically. And the method of participatory observation used in expressing opinions during research.

Also, to achieve this scientific endeavor, we resorted to reasoning, analysis, synthesis, interpretation. Obviously, our approach is likely to be affected by subjectivism, because each individual "perceives reality through the distorted lenses of their own attitudes and values" (Goleman, cited in Gorski, <http://stagiipractica.roger-univ.ro/wp>).

## 4. Findings

### 4.1. Characteristics of national accounting

National accounting, through its own accounts system, is the most important accounting instrument, providing information needed to perform calculations as well as macro-economic statistical analyses widely used in world statistics. National accounting is subject to an evolutionary process determined by the action of some important political factors, through the intervention of the state in the economy, constituting a powerful instrument in the application of macro-economic policies. National accounting does not have the capacity to quantify individually the effect of administrative measures in the economy, being necessary to resort to disciplines such as statistics, macro-economic analysis, this fact underlining the multidisciplinary character of national accounting. The recourse to statistics and macroeconomic analysis implies a huge multitude of statistical data, as G. Teseleanu considers that "only the multitude of observations allows the elaboration of general traces that mask the individuality of the cases under study" (Teseleanu, 2007, p. 153).

Through national accounting, an extension of the accounting knowledge from the micro-economic to macro-economic level is realized. Most of the information about stocks and flows that reach the national accounts is of an accounting nature, coming from the financial statements and the cash flows of the entities. A feasible connection would be the modification of the financial position of the entity reflected in the balance sheet and the statement of cash flows from the accounting, similar to the financial account from the national accounting, the profit and loss account from micro-accounting, resembling to the production accounts and the income accounts from the national accounting, but also the way in which the information in the company's balance sheet completes the result account, in the same way the information in the equity account adds up the flow account in the national accounting.

National accounting is viewed as applying the accounting principle of double registration, on the one hand the resources and on the other the use of them. Thus, there is a presentation of the flows from economy related on the one hand to the formation of resources and on the other, to their use through the distribution and redistribution process.

Through national accounting, the economic reality is quantitatively reflected at certain moments, or over a period of time. The result of the economic activity is constituted by the products and services which have a merchandise character, as well as those goods which are not destined to be marketed.

National accounting highlights the production of material goods and services, which is confined to the principle of "market production", that is to say those productive activities which have goods, that through market transactions pass from one economic subject to another. The productive activities are the endeavors carried out with the purpose of obtaining goods and services, by using production factors, which satisfy the consumption needs of the company, the accumulation and the export.

There are also exceptions to the principle of "market production" based on conventions, respectively:

- the capital goods which come from self-production, although not purchased from the market, are considered the result of a productive activity;
- the changes in inventories, arising from the production in the calculation period;
- the public services, even if they are not performed as a result of market transactions;
- the self-consumption of entrepreneurs from their own production, the reasoning being that if the goods were not produced by the entrepreneurs for their own consumption, they would have to be traded on the market;
- the house rentals are conventionally considered productive activities.

Regarding national accounting, Abraham-Frois asserted that, "it emphasizes the relationships between agents, economic units grouped into categories, classes or groups with homogeneous behavior. So, the exchange flows between agents are inventoried, reviewed and evaluated" (Abraham-Frois, 1992, p. 466).

Ionaşcu views national accounting as a flow accounting, "because, macro-accounting quantifies and records value flows" (Ionascu, 1995, p. 23).

The flows of goods or material flows, as values of use, are important to be highlighted in order to obtain indicators achieved by aggregating them into categories of products and services.

Along with the material flows, the financial flows are also highlighted in the accounts by categories of income and expenses due to the importance they have in the process of obtaining the values of use. The material and financial flows are recorded in the national accounting on the principle of double registration, for each process of changing the value of the owner, two accounting operations are assigned.

Through national accounting, it is possible to verify all levels of the national economy, the achievement of the material and financial balance, by the equality of the material and financial flow within the economic circuit, as well as by the equality of resources and uses in all the reproduction phases and at all aggregation.

#### **4.2. National Accounts System**

The fundamental element of national accounting is the National Accounts System, which makes a great contribution to the macro-economic information system, which provides the following categories of information:

- information on the production of goods with their distribution on the production branches as well as the sectors of use;
- information regarding the distribution of these goods, from the formation of incomes to the formation and their use by different entities;
- information concerning their allocation for the purpose of creating and accumulating investment capital;
- information regarding the economic and financial operations carried out abroad.

"National Accounts System which is used macroeconomically aims to create informational conditions in order to know and explain the activity of the different groups of economic agents globally, as well as to reveal the causes that have determined the changes which have taken place, of the important indicators that characterize the state economy regarding the results that synthesize the economic activity, nationally" (Capanu *et al.*, 2001, p.102).

In order to achieve the comparability criterion of information, provided by the National Accounts System used in the market economy states, it is necessary that these systems undergo the process of normalization and harmonization worldwide. In our country, the system was implemented in 1990 following the standardized French model and it is currently in full process of alignment with the European Accounts System in accordance with the norms of the National Accounts System established worldwide. And, before its implementation, during 1945-1990, Romania had a system of material production that was based on a system of obtaining the added value directly from productive activities. Under this system, services were not seen as producing an added value, but only as material goods.

National Accounts System provides delayed information, sometimes quite large, from the national economy. This aspect questions the accomplishment of the criterion of timeliness of the information, which becomes subject to analysis or processing on time. However, the fundamental role of national accounting must be considered, so that it can reflect the past activities in order to have a better knowledge of the economic phenomena, in the interest of realizing some planning, economic policies and accurate macro-economic forecasts.

Based on national accounts, the most important indicators which illustrate results used in the economic calculations and analyses performed by international organizations are: gross global product, internal gross product, internal net product, gross national product, net national product, and the national income. These indicators are developed in compliance with the following requirements and principles:

- "their elaboration and foundation must be made in a systemic conception, taking into account the systemic character of the national economy;
- the existence of a unitary conception, methodology and area;

- ensuring the compatibility in time and space of the indicators that allow their comparison from different periods;

- reflecting economy flows from a material and monetary point of view" (Burja, 2003, p. 158).

The economic operations within the National Accounts are seen as economic flows, structured according to the institutional sectors and in relation to the nature of the economic activities in three main categories:

- operations on goods and services, such as: production, final consumption, gross capital formation, distribution of goods, storage;

- distribution operations, which include primary distribution, redistribution operations for the incomes realized within the national economy, such as: remuneration of employees, excise duties on imports, tax on production, transfers regarding subsidies on products or on production, transfers of social nature, income obtained from ownership (rents), capital (dividends), royalties, etc.;

- financial operations, regarding the creation and circulation of the means of payment, the debts and the claims of the economic entities of the national economy.

The categories of accounts included in the national accounting are the following:

- current accounts: the production account, the operating account, the primary income allocation account, the secondary income distribution account, the account regarding income using;

- accumulation accounts: the capital account and the financial account;

- heritage accounts.

For the elaboration of the national accounts in order to highlight the economic flows it is necessary that the information from the economic agents' accounts is aggregated at national level in relation to two criteria:

- aggregation on branch, by groups of homogeneous activities, according to the official classification of social-economic activities. This type of aggregation allows the analysis and detailed calculation of the production of goods and services, such as highlighting the relations of production - consumption between the branches of the national economy;

- aggregation in relation to the five major institutional sectors:

- a. the non-financial economic agents' sector, which carry out activities in order to obtain profit;

- b. the financial institutions sector, which are public financial, credit and insurance entities;

- c. the public sector, which comprises public institutions, beneficiaries of income, goods consumers and public goods producers;

- d. the private non-profit institutions sector are social organizations and private institutions serving households;

- e. the household sector (household), which also includes individual businesses. Households achieve final consumption, providing primary resources, thus beneficiaries and incomes consumers.

The National Accounts System of is made up of a multitude of charts to which some refer to the production, distribution, consumption and goods accumulation, by categories of entities and as a whole.

It is known that each economic operation involves a money transfer between the producing and the consuming entities. The sum of the economic operations or the economic flows carried out over a period of one year constitute the annual economic circuit. In relation to its entirety, the National Accounts System comprises four types of accounts: the production accounts, the consumption accounts, the accumulation accounts and the abroad relations accounts.

The System of National Accounts is represented in the form of a matrix in which the credit of each account is represented on a line, respectively the debit of the account on a column. The simplified matrix separates the four accounts in the following way:

- the production accounts are divided into sub-accounts of goods and activities. The goods include the material and non-material goods distributed by types of consumers: productive entities, households, gross capital formation, export. The sub-accounts activities are those that highlight the value of the goods structured by sectors and branches which produce goods;

- the consumer accounts are distinguished from expenditure sub-accounts and income sub-accounts. The expenditure sub-accounts are structured by categories of expenditure and by the sectors they perform. Similarly, the income sub-accounts are highlighted by income categories as well as by the sectors that made them;

- the accumulation accounts present the transactions of the institutional sectors with capital or fixed funds, meaning financing of gross investments and expenses for the variation of stocks made by different sectors, as well as for the financial capital used for the purchase of land and non-material funds, by the transfer and by the consumption of the fixed capital;

- the abroad relations account, which reflects the current operations regarding imports and exports of goods, current transfers and capital transactions abroad.

Within the National Accounts System, we can distinguish the overall economic picture and the input-output chart (balance of branch connections), the table of financial operations.

In the overall economic picture, we find the resources and their use, grouped on the operations accounts and on the accounts of the institutional sectors. Thus, the overall economic picture contains all the elements of the national accounts with the presentation of the process of formation, distribution and redistribution of the economic results.

The input-output table presents the flow of goods and services produced and used by the resident entities including those exchanged with the rest of the world during one year with the presentation of the structure of the production cost for each branch of the economy.

Within this we can find the goods and services accounts, the production account and the operating account on a branch but also on the economy as a whole. It can be said that by using this chart we can perform a macroeconomic analysis of the production processes, distribution and the use of the gross domestic product or of the national income. Therefore, the model of the balance connections, as Constantin Anghelache states, offers a: "the analysis of all sectors which offers a study of the economy as a single system that quantitatively characterizes all activities at the macroeconomically, which allows a wide view of the economic mechanism regarded as a unitary system of interdependent elements" (Anghelache, 1996, p. 37). The model is composed of four charts:

- the national economy relations chart, which reflects the structure of the national economy, the internal production and the imports;

- the primary entries chart, which reflects the value added at a branch and the contribution of each branch to the realization of the gross internal product;

- the intermediate consumption chart, whose lines express the resources consumption for each branch of the national economy, and on columns the beneficiary productive branches;

- the final usage chart, which reflects the final consumption, both public and private, the gross capital formation and the exports, by each branch of origin.

The financial operations chart presents the external claims, debts and finances by types of users and by categories of providers of financial resources. Also, the chart presents, in the final part, the balance of receivables and debts, which characterizes the country as debtors or creditor in relation to the rest of the world.

## 5. Conclusions

National accounting, through its fundamental element the National Accounts System, makes a great contribution to the macroeconomic informational system, realizing an extension of the accounting knowledge from the microeconomic to the macroeconomic level. The information provided are used for calculations, macroeconomic statistical analyses, widely used in world statistics, which imposes the standardized character of national accounting.

Although information is sometimes provided with a delay and despite the fact that it uses subjects such as statistics and macroeconomic analysis, national accounting does not have the capacity to individually quantify the effect of administrative measures in the economy, it is still a powerful tool used in the development of appropriate planning, economic policies and macroeconomic forecasts.

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