THEORETICAL ASPECTS REGARDING MACROECONOMIC ACCOUNTS -CONTENTS AND STRUCTURE

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Abstract

In this article, the authors are preoccupied with the content and structure of macroeconomic accounts. The national accounts (0-8) are presented with the relevant macroeconomic indicators, along with the related correlation for each account. Although, the signification associated with to the movements from the nine accounts and the individual balance are explained. The measurement of the results and of the economic indicators are based on the definitions associated with the "intern" and "national" notions, which application leads to a growing level of signification and comparability of results.

Key words: accounts, results, analysis, household, data JEL Classification: E00, E01

Introduction

Making the macroeconomic accounts is a basic operation for calculating and macroeconomic analysis which requires clear delimitations between basic concepts and the application of essential principles referred to the System of National Accounts (SNA) that will be further presented.

For emphasizing the production of services and material goods in SNA it is necessary to define the concepts of productions and to establish the principles upon wich transactions are included in calculations regarding production activities. From SNA point of view, the production activity aims to obtain goods and services in order to satisfy the consumption needs of households, exports, and accumulation by using the production factors.

Literature review

Anghelache and Sacală (2016) present the theoretical framework of a macroeconomic analysis model. Anghelache et.al. (2007), Anghelache (2008),

Anghelache, Mitruţ, and Voineagu (2010, 2013) develop on macroeconomic statistics and the system of national accounts. Anghelache (2008) describes the link between external balance and macroeconomic outcomes. Turnovsky (2000), Sargent (1999), Barro (1987), Dornbusch, Fischer and Startz (2007), Smith (1970) researched the macroeconomic issues, Usher (1980) analyzes the measurement of economic growth. Heyne (1991) studies the economic thinking model. Bekerman (1968) is preoccupied with the analysis of national income. Bardsen et.al. approach the use of econometric instruments in macroeconomic modeling. Dobrescu (2013) reviews the macroeconomic model of the Romanian economy. Simpson presents an IT instrument that correlates I/O tables with the national accounts.

Methodology of the research

We consider goods produced just those with a merchandise character that is passed from an economic agent to other through market transactions. This principle that clarifies the concept of "market production" based on conventions is seldom broken.

In this respect we exemplify:

Prices of production factors, comparing with market prices, do not include indirect net taxes (indirect taxes minus exploitation subventions).

- Public services are included in the results of the production activities even if they are not realized through market transactions;

- Capital goods from own productions and the modifications of stocks from previous production period when calculations are made are included in the production activity even if they are not made through market;

- Self-consumption from own production is considered production activity based on the hypothesis that if there were not produced in self-regime it should have been bought;

- Lending properties are included in productive activities; for apartments occupied by owners, even if there is not a clear lending process, it is hypothetically presumed a lending process including it in the calculation of indicators that express the results of the production activities and the hypothetical rent.

Intermediated production or intermediate consumption is the result of production activity from a time period that can be used in the same period for producing new merchandises; the final production representing the part that is not used in the making of new products. If the production from the economy would include the value of goods produced by all economic subjects there should appear a new indicator that would include repeated calculations and this indicator does not express the real size of the result but the value of gross production. So, the global gross production includes the value of the goods included in a period as those consumed for the making of new products.

From arguments that are related to the nature of statistical data sources, in the public sector and in the private organizations without lucrative character, the intermediary consumption is quantified based on the purchase of goods and services made by public institutions. In the final production, we can include all the goods that are not intermediate production even if they are consumed in production by companies. We have as examples the case of using highways or roads as the spendings regarding the training and research started from state initiative. A practical gap is represented by including some goods from state production used for the intermediate consumption, in the final production of the state, gap generated by the possibilities of statistical measurements. This has some negative influence on the macroeconomic aggregate dimensions that are at the core of the analysis of national economy results. The macroeconomic calculations made in SNA, the national economy cannot be viewed as a simple geographical delimitation. This is due because inside geographical borders, activates persons and/or foreign institutions and outside the borders, economic agents of other countries activate.

In the macroeconomic calculations, the national economy is separated based on two criterions: one is valuable for persons that belong to the respective country and the other is referred to institutions. The National Economy represents a) the totality of institutions – institutional units or b) the totality of persons that have the interests center on the economic territory. Based on the two criterions different macroeconomic results are obtained. For example, the incomes resulted by a foreign company in Romania have included in macroeconomic calculations in Romania to which the concept of "intern" corresponds. If we have in mind the second criterion, these incomes are registered as personal incomes in the calculation of the country where the company is incorporated, to this macroeconomic calculation the "national" concept being appropriate.

The results of the economic activities are evaluated to market prices. Because in the practical activity an economic good can be sold on the market at different prices, in order to be evaluated, the market price of this good is determined as the average of effective prices. Not all the goods are made through the market, valuation of those being realized to the indirect costs of the taxes referred to those goods. Similarly, macroeconomic indicators of results are evaluated as market prices as in the prices of inputs. In a macroeconomic analysis that regards the evolution in time, it is necessary to express macroeconomic aggregates of results not only in current prices of each period but also in comparable prices. For the last case, the macroeconomic aggregate of results offers a real image of the value. The real indicator is defined by excluding, from the value expressed in current prices, the influence of modifying prices in the study period.

For identifying macroeconomic indicator results, the are essential element represented by gross investments, final consumption, and amortization.

The final consumption is composed of the value of purchasing made by households and the results of public sector activity that does not represent changes in the dimension of the material patrimony of the sector.

The private consumption includes all the purchases made by the population and private organizations without lucrative character because in the case of the household accumulation is not emphasized nor the goods patrimony. Excepting the construction of houses, purchase of capital goods, are assimilated to the private consumption. The goods manufactured in households represents intermediary consumption.

State consumption is determined by lowering the value of production from the public sector with incomes from the selling of public services and investments from the own activity. The value of the production of the public sector is represented by current spendings with its employees, amortization of capital goods and with intermediate consumption. In the public sector, amortizations are calculated only for constructions, machinery, and cars.

Gross investments sum up the total of the investments realized in the national economy. We can emphasize them as finalized investments as a modification of materials stocks and as investments of capital goods. Investments also include replacement investments, reproduction of capital goods out of order, and investment for development and net investments.

The variation of stocks is determined as the difference between the value of the stocks at the end of the period and the one from the beginning. The stock includes raw materials, materials, and semi-fabricated products. In the SNA, modifying stocks is evaluated at average annual prices.

Economic circuits or economical activities fluxes that appear in a period at a macroeconomic level, is reflected in SNA in an account system.

Macroeconomic accounts are the result of multiple aggregations and synthesizing of information included in the accounts made by economic subjects, economic sectors, and activities. Those are used in macroeconomic calculations and for providing information needed for the production of goods for the national economy, structure, and use of it, formation and repartition of incomes in the society, the use of incomes of the society, etc.

The table of integrated economic accounts is made annually, in current prices, for all 6 institutional sectors.

The main accounts from SNA are:

- 0 Account "Goods and Services Account" is elaborated only at the level of the national economy. It reflects on the left side the provenience and dimension of material goods and services (resources): the value of gross production, goods import, taxes on profit; and on the right side their use: intermediate consumption, final consumption, gross investment, goods export. It is a equilibrated account, does not have a balance because the value of the total production of goods equals with its use, verifying the relation:

PB + Imp + I = C; + CF + Inv.B + Exp

The scheme of the account for goods and services (0 Account) is the following:

	
- Value of production (by economic sectors) –	- Intermediate consume (by economic sectors)
PG	Ci
- Import – Imp	- Final Consumption – CF
- Bet taxes by products and by import – 1	- Gross Investments – Inv. B
	- Export - Exp
Total production of goods = Total utilization of goods	

The account is built by the "intern" concept and must be correlated with the input-output table, which represents, in detail, on sectors, the production of goods and its use. This table is an instrument that allows analyzing profound the production and its use on a large number of sectors, as the links that can be formed between the sectors.

- Account 1 "Production account" is built at each sector level and at the national level and synthesize specific transactions of production activities of intern economic subjects. In the right part of the account we register the value of gross production (by sectors) and in the left, intermediate consumption (meaning the value of the goods – other than the fixed capital – and services made and consumed for producing new material goods and unmaterial ones). The balance of the account represents the gross added value (at the level of one sector), respectively gross intern product (at the national level).

Gross Added Value (VAB) express the final production, the difference between Gross Production (PB) and intermediate consumption (Ci). As a rule, the balance of national accounts appears on the left side and is emphasized in the next account as a resource (in the right). So the production account emphasizes the value of production on sectors or on the national economy and the separation of it in the intermediate consumption and the gross added value or gross intern product.

Account 1 is built on the internal concept. Relations of equilibrium of the production account: VABpp=PB-C, at the level of sectors

PIBpp=PB-C at the level of national economy

- Account 2 "Income creation Account" emphasize for each sector and for all the economy the formation of incomes from economic activity and

patrimony. This account presents, in the right, at resources, the gross intern product (the gross added value at sector level) and subsidies, and in the left the amortization of the fixed capital and indirect taxes. The balance of the account is the net intern product, at the level of the national economy, respectively the net added value at the sector level.

The scheme of the "Income creation Account" (Account 2) is presented as following:

- Amortisation – Am	- Gross added value (by sectors) – VABpp or
- Indirect Tax on products and	- Gross Intern Product (on the national economy) – PIBpp
imports – Iind	- Subsidies - S
- Net Added Value (by sectors) – VANpf or	

- Net Intern Product (by national economy) - PINpf

If in Account 1 values are presented in the market prices, in account 2 by decreasing the net indirect taxes (the difference between paid indirect taxes and collected subsidies) we obtain indicators expressed in income prices.

If from the elements of the right (PIBpp+Subsidies) we exclude amortization and indirect taxes, we obtain the account balance for creating incomes: $PINpf=PIBpp+S_{-}(Am+Lind)=PIBpp_Am_Linet in$

PINpf=PIBpp+S-(Am+Iind)=PIBpp-Am-Inet in

- Account 3 "Account for incomes distribution" emphasize the primary distribution of incomes. Along the incomes of factors, collected from abroad, and the ones from inside, it synthesize also the ones paid to foreigners. In the right, it presents, at resources, the Net Internal Product (at factors prices) and the incomes of factors collected from abroad and in the left at used, the incomes from factors paid abroad. The account balance represent the Net National Product (national income), making the transition between intern concept (domestic) to the national one. The national concept takes into consideration incomes from the activity and properties that belong to residents, even if they come from the interior or abroad.

The scheme of Account 3 "Account for incomes distribution" is the following:

- Incomes of production factors paid abroad - VFPS	-Net intern Product (on national economy) – PINpf - Incomes of production factors collected from abroad - VFIS

- National Income - VN

National Income is obtained by adding to PIN expressed in the factors prices, the income balance of production factors reported to abroad (SVFS), meaning the difference between incomes from collected factors and paid as following:

VN=PNNpf=PINpf+SVSF=PINpf+(SVIS-SVPS)

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- Account 4 "Account for redistribution of incomes" emphasize the migration from national income (Account 3 balance) to available national income that corrects itself with the balance of incomes and payments reported with abroad. Account 4 takes into consideration all the secondary transfers, so the secondary repartition of the redistribution of incomes. It presents on the right side the Net Added Value (National Net Product at the macro level) at the prices of factors and transfers from abroad. In the left are represented the current transfers with abroad. The Account Balance is represented by the available income.

The scheme of Account 4 "Account for redistribution of incomes":

- Current transfers paid to other countries – TCPS	- National Income – VN - Current transfers collected from other countries - TCIS
- Available National Income - VND	

So the available national income, that is the balance of the Account 4, is calculated as following:

VND=VN+(TCIS-TCPS)=VN+STCS;

Where STCS=the balance of current transfers related to abroad.

- Account 5 "Account for use of incomes" emphasize the use inside the country of the components of the available national income (National Income corrected with the balance of current transfers with abroad), for private consume and public consume (both forming the final consumption of the society). Alongside final consumption, available net income can be used for savings (Account 5 Balance).

Private consumption (Cp) express spendings made by the population for the acquisition of goods and services needed to satisfying its own needs.

Public consumption (CPL) express the spendings made by public institutions for materials, energy, fuel, amortization, and other consumption needed to offer public services to the population.

Account 5 have the right to resources, the balance of Account 4, meaning the available income and in the left presents the final consumption (public and Private). The balance of the account is represented by net savings, the main source of investments financing (alongside amortization). If at net savings we add fix capital consumption (amortization), we obtain gross savings.

The scheme of Account 5 "Account for use of incomes"

- Final consumption – CF - Private consumption – CP - Public Consumption – CPL	- Available National Income - VND
- Net Savings - E	

The account balance is calculated as follow:

E=VND-CF=VND-(Cp+CPL)

- Account 6 "Account of patrimony modification" represents in the right the financing sources for forming the patrimony: net savings, amortization, patrimony transfers from abroad, and to the left using the gross intern investments, patrimony transfers to abroad. The balance of the account is the balance of financing (Excedent or deficit).

The scheme of Account 6:

- Gross investments – Inv.b - Patrimony transfers to other countries –	- Gross Savings – EB - Net Savings – E
TPRS	- Amortisation – Am
- Financing Balance - SF	- Patrimony transfers to other countries - TPSR

The balance of financing is calculated:

- Account 7 "Account of financing and modification of patrimony" has in the right the modification of the commitments and the financing balance, and in the left the modification of the receivables. It equals by statistic difference that comes from the use of different data sources in building the accounts.

- Account 8 "Account of the foreign and the rest of the world" includes all the transactions that take place between economic agents from inside and outside. This account presents the current transactions related to imports and exports of goods but also the current transfers and capital transactions with abroad.

It is built at the level of all the economy and synthesize in the right the selling of goods and export services, incomes collected from abroad, from economic activity and properties, current transfers and patrimony collected and the modification of commitments. On the left, we find the purchased goods and services from import, incomes from economic activity and from leasing properties to foreign, current transfers and patrimony transfers and modification of receivables. The account equals through statistical difference.

SF=(EB-Inv.b) + (TPSR-TPRS)

The scheme of Account 8:	
- Purchase of goods (Import)	- Selling of goods (Export)
- Incomes from economic activity from	- Incomes from the economic activity and
patrimony paid abroad	from patrimony activity collected from
- Current transfers to abroad	abroad
- Capital transfers to abroad	- Current transfers from abroad
- Modification of receivables	- Capital transfer from abroad
	- Modification of receivables

Conclusions

Macroeconomic accounts are determined through multiples aggregations and shyntetisation of information included in the accounts made on economic subjects, economic sectors, and industries of national level. With data from SCN, one can identify macroeconomic indicators or aggregates at the macro level with the role of presenting and exemplify quantitatively, the economic performances as a united all.

The analysis of indicators enables to emphasize the evolution of the results at macroeconomic level as the evaluation, through different methods, especially through statistics and econometrics ones, of the causes that determined some dynamics. Also, the analyze instruments enable also the prediction mechanism to take place.

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