

# 4 CONTRIBUTION OF INSTITUTIONAL SECTORS TO ECONOMIC GROWTH\*

Ion GHIZDEANU\*\*  
Tiuța BRIA\*\*\*

## Abstract

This paper presents the main findings resulted from indicators analysis (gross value added, gross operating surplus, gross national income, etc.) which characterize the institutional sectors – the ones emphasizing the different behaviors and results between the competition and non-competition sectors (households and general government respectively). This analysis is very necessary, because the European Commission, through the specialized directorate - DGECFIN, has included in the forecast framework the indicators regarding incomes and expenditures of institutional sectors (compensation of employees, gross disposable income, gross saving) for member states.

The macroeconomic forecast has not yet used this economic approach. The main inconvenience in estimating institutional sectors accounts forecast refers on one hand to the gap between the statistical and forecasting horizons, the statistical data regarding the institutional sectors are available only after a period of two years since the event has occurred (the data series for Romania end in 2004) and, on the other hand, the aggregates evaluation is only carried out in current prices, increasing thus the relativity of data series by using conventional deflators. Until now they are the first estimates referring to the compensation of employees and the gross disposable income.

**Key words:** institutional sector, households, gross value added, compensation of employees, gross operating surplus, gross national income.

**JEL Classification:** E01, E21, E24

\* This paper is partially based on the study "Overview of the economic results by institutional sectors", NCP, 2007;

\*\* *President of National Commission of Prognosis, Research Professor, Institute for Economic Forecasting, Romanian Academy, Bucharest;*

\*\*\* *National Commission of Prognosis, contact: prognoza@cnp.ro*



## **Introduction**

The macroeconomic forecast is based on emphasizing the potential trends in the behavior of business agents. Beyond the conjuncture evolution and the possible influence of the external aspects, the economy depends on the agents which respond to different challenges. Economic behaviour is relatively stable, but it has also a strong specific character. The national accounting offers the opportunity to emphasize different types of behavior by means of the aggregated activities. This measure has been achieved by **grouping the institutional sectors**, consisting of companies with similar economic behavior.

Grouping the business agents by institutional sectors requires the understanding of both juridical status and main function of the company within the economy and also the nature of its resources, leading to a complete and detailed examination of its accounting.

When the main function of the institutional unit consists in producing goods and services, it is necessary, in order to decide upon the sector belonging, first to distinguish the category of producers that it belongs.

There are three categories of producers within the national accounting: market producers, private producers for own final consumption and public or private non-market producers.

These types of producers are grouped by the following institutional sectors: non-financial corporations, financial corporations, general government, households and non-profit institutions serving households (NPISH). These five sectors represent together the total economy.

However, given certain difficulties, the macroeconomic forecast has not yet used this economy approach. The main inconvenience for the estimation of institutional sectors accounts regards:

- **the gap between the statistical and forecasting horizons**; the statistical data regarding the institutional sectors are only available after a period of two years since the event has occurred; for instance, the data series for Romania end in 2004;
- **the evaluation of aggregates is only operated in current prices**, thus, increasing the relativity of data series by using conventional deflators; e.g., the use of the GDP deflator for calculating the gross disposable income – the most synthetic indicator of the institutional sectors

Having in view that the economic structure by institutional sector is the only way to emphasize the different behaviours and results between the competition and non-competition sectors (households and general government), one of the current preoccupations is to identify the best approach, in the view of achieving a forecast by institutional sectors accounts. From this perspective, it is worth mentioning that the European Commission, by DGECFIN - its specialized directorate - has included in the forecast framework the indicators regarding incomes and expenditures by institutional sectors (compensation of employees, gross disposable income, gross saving) for member states.



The National Commission for Economic Forecasting has made this step, even though macroeconomic forecast by institutional sectors is not yet a compulsory requirement of DGEFIN. The first estimates concern the compensation of employees and the gross national income. The subsequent stage – which might be completed this year – consists of building accounts by institutional sector. According to this objective, the main findings after analyzing the data between 2000-2004, are illustrated in the Table of integrated economic accounts, issued annually by the National Institute of Statistics.

## **1. Output and gross value added by institutional sectors**

Between 2000-2004, the competitive sectors of non-financial corporations have increased (from 63.3% to 65.6%) and the sector of households decreased (from 24.9% to 23.2%), according to the improvement of market economy performance.

It is worth mentioning that the contribution of households to gross value added in economy was mostly influenced by the evolution of agriculture. In the years with outstanding results in agriculture (e.g. in 2004, when the agriculture has achieved a real record), the share of households has increased from 21.8% in 2003 to 23.2% in 2004.

### **Output structure by institutional sectors**

	<b>Non-financial corporations</b>	<b>Households</b>	<b>Financial corporations</b>	<b>General government</b>	<b>NPISH</b>
<b>2000</b>	63.3	24.9	2.1	8.8	0.8
<b>2001</b>	64.0	24.8	2.3	8.2	0.7
<b>2002</b>	65.9	23.4	1.7	8.4	0.7
<b>2003</b>	65.5	21.8	1.5	10.5	0.7
<b>2004</b>	65.6	23.2	1.7	8.7	0.9

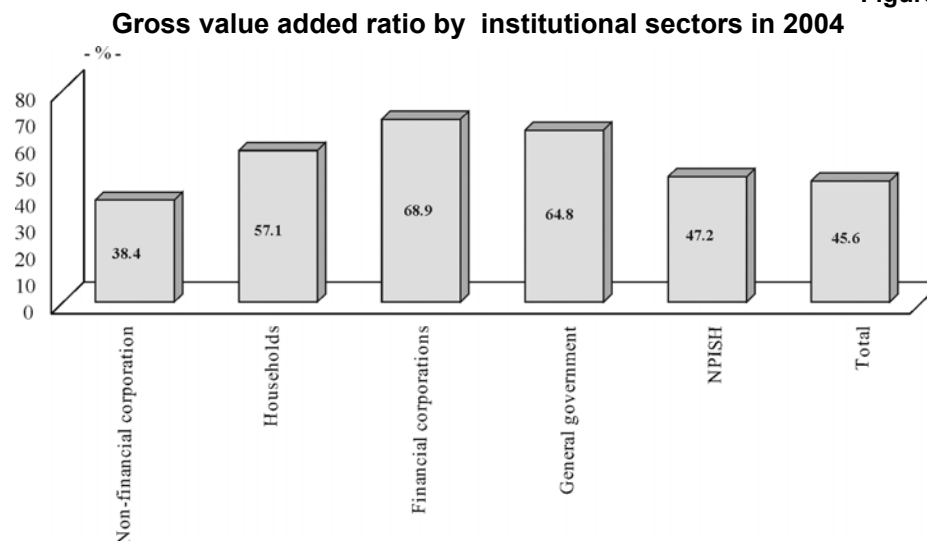
The distribution of the activities by sectors is concentrated in proportion of two thirds within non-financial corporations, the rest belonging to the other four institutional sectors.

Regarding the **structure of the gross value added by institutional sectors**, more than a half is the result of non-financial corporations. Households represent a significant share, of about 30%, followed by general government which has 10-15% of the national gross value added, the rest of around 3% being represented by the financial corporations and less than 1% by non-profit institutions serving households.

The gap between the share of the non-financial corporations in the total volume of activity (total output) and the gross value added are due to a gross value added rate (below 40%), lower than the average on economy (about 45%) and also inferior to other sectors as: non-financial corporations (over 65%) or general government (more than 50%).



Figure 1



The analysis of the gross value added structure by institutional sectors after 2000 shows that no spectacular changes have occurred, the shares of the five institutional sectors oscillating every year by  $\pm 1$  or 2%. It is to remark the growth of the general government in 2003, despite an 8.5% increase in the expenditure for collective consumption, as against 2002.

**The structure of the gross value added by institutional sectors**

- % -

	Non-financial corporations	Households	Financial corporations	General government	NPISH
<b>2000</b>	55.4	31.6	3.2	10.1	0.9
<b>2001</b>	54.8	32.9	3.9	9.5	0.6
<b>2002</b>	57.1	30.3	2.6	10.5	0.7
<b>2003</b>	55.8	27.6	2.1	15.1	0.7
<b>2004</b>	55.2	29.0	2.5	12.3	0.9

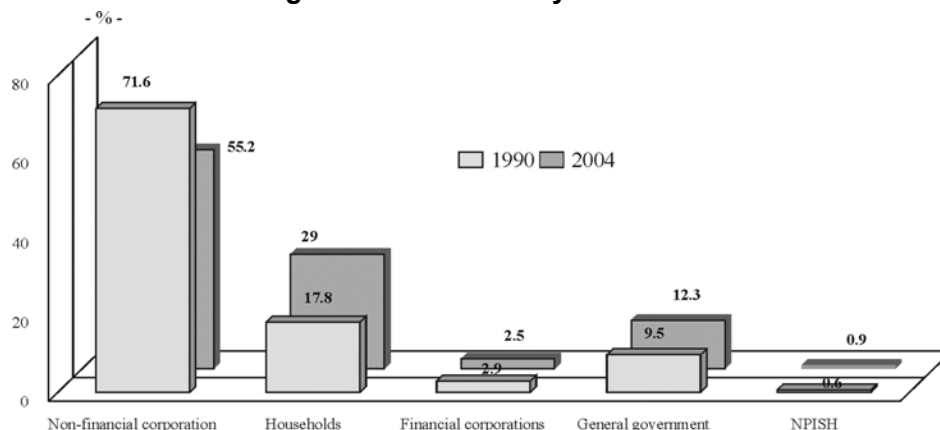
Nevertheless, comparing the structure of the gross value added by institutional sectors of the early 1990's to the current values, it is worth to underline some substantial changes, as:

- The non-financial corporations have recorded a much more significant share, both in the total output (80%) and also in the gross value added (71%). These shares have reduced year by year, registering at this moment, about 65% of the output and 55% of the gross value added;
- At the beginning of the 1990's, the households represented about 18% of the national gross value added, while currently, its level is around 30%;

- For the other three institutional sectors (financial corporations, general government and non-profit institutions serving households) the differences are not significant, taking into account their weight in the total gross value added.

Figure 2

**Structure of gross value added by institutional sectors**



**The sector of non-financial corporations** includes the legal person units which are market producers and whose main activity consists in producing non-financial goods and services and also the autonomous companies, non-financial corporate and the quasi corporate enterprises. The evolution between 2000-2004, shows that the gross value added share of this sector has not significantly changed, being around 55%, except for 2002, when it has reached 57%.

- % -

	2000	2001	2002	2003	2004
Share of the sector in total GVA	55.4	54.8	57.1	55.8	55.2
Gross value added rate	40.5	39.2	40.0	39.1	38.4

**Household sector** (which includes individuals or groups of individuals, both in their quality of consumer and eventually of entrepreneurs, producers of market goods or financial and non-financial services) has slightly diminished its share within the gross value added in economy, from 31.6% in 2000 to 29% in 2004, with a maximum level in 2001.

- % -

	2000	2001	2002	2003	2004
Share of the sector in total GVA	31.6	32.9	30.3	27.6	29.0
Gross value added rate	58.7	60.9	59.8	58.2	57.1

The gross value added rate is beyond the national average, following a descending trend in the last few years.



### Contribution of Institutional Sectors to Economic Growth

**The sector of financial corporations** – grouping corporations or quasi corporations whose main function is to provide financial intermediation services and/or exercising auxiliary financial activities – has a relative low share with a minor slow-down trend.

- % -

	2000	2001	2002	2003	2004
Share of the sector in total GVA	3.2	3.9	2.6	2.1	2.5
Gross value added rate	69.7	78.4	70.9	63.8	68.9

Although decreasing, the gross value added rate remains the highest, as compared to the other institutional sectors.

General government – including the institutional units non-market producers, the output of which is directed to the individual and collective consumption – has a significant share in the national gross value added and has also a high gross value added rate.

- % -

	2000	2001	2002	2003	2004
Share of the sector in total GVA	10.1	9.5	10.5	15.1	12.3
Gross value added rate	52.9	53	58	66.4	64.8

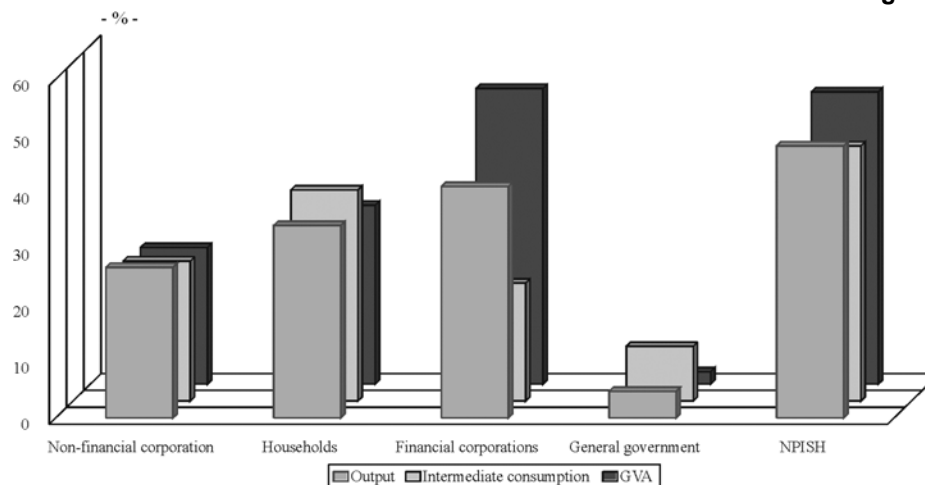
**The non-profit institutions serving households**, which include the residential institutional units producing mainly non-market services for households, produce less than 1% of the national gross value added.

- % -

	2000	2001	2002	2003	2004
Share of the sector in total GVA	0.9	0.6	0.7	0.7	0.9
Gross value added rate	50.8	40.2	41.9	46.1	47.2

In 2004, the elements of production account by institutional sectors had the following evolution (nominal growths):

Figure 3



The most spectacular growth, over 50% has been recorded by the financial corporations and NPISH. General government had the lowest increase. It is worth mentioning that in case of some sectors (non-financial corporations, households and general government) the intermediate consumption has exceeded both the output and gross value added.

## **2. Overview of institutional sectors based on the generation of income account**

The **generation of income account** measures the GVA capacity to cover the remuneration to employees, the other net taxes relative to production and the gross operating surplus.

In the whole economy, the gross operating surplus rate had an ascending evolution after 2000, increasing from 50.1% in 2000 to 59.1% in 2004. The share of the remuneration to employees in the gross value added has decreased from 46.1% in 2000 to 41.5% in 2004.

By institutional sectors (See Table) it is to notice the remarkable progress made by the gross operating surplus rate in 2002, in the sector of non-financial corporations.

### **Gross operating surplus rate by institutional sectors**

- % -

	<b>Non-financial corporations</b>	<b>Households</b>	<b>Financial corporations</b>	<b>General government</b>	<b>NPISH</b>
<b>2000</b>	35.1	94.5	34.3	8.7	5.0
<b>2001</b>	37.7	97.0	64.4	14.4	24.8
<b>2002</b>	44.7	94.6	57.0	12.2	6.0
<b>2003</b>	47.5	89.8	45.1	38.5	-0.4
<b>2004</b>	49.2	93.2	51.0	26.4	39.3

In the sector of households, the remuneration to employees has not a significant share in the gross value added, namely 5-10%, leading to a high gross operating surplus rate. During the analysed period, the evolution of the gross operating surplus rate was uneven.

As regards the financial corporations, the gross operating surplus rate was contradictory from one year to another, influencing the gross value added of this sector (from a 32% growth in 2001, to a 7.6% decrease in 2003) but also the increase in wages in this sector, by different annual rates (evolution reflected by the share of remuneration to employees within the gross value added of this sector).

## **3. Granting and operating the incomes of institutional sectors**

The **Gross National Income (GNI)** is an important indicator in the assessment process, which regards the contribution of the member states, including Romania, to



### **Contribution of Institutional Sectors to Economic Growth**

the budget of the European Communities. GNI measures the national income acquired through economic activities that are created by domestic sources (the gross domestic product) and external sources (the net balance of the primary incomes in relation with the foreign countries from the following categories: remuneration to employees, dividends, interests, reinvested profit).

From the institutional point of view, the national gross income, as well as the gross disposable income, has other relevance besides operating as national indicator. Regarded as flow terms, these indicators demonstrate the manner in which the production factors are rewarded for their contribution to the gross value added. In this respect, the gross national income represents the results obtained by each institutional sector from their own profitable activity (the gross exploitation surplus), from property and from labor. Thus, the non-financial companies sector has a gross national income inferior than the real gross value added, while the households sector is in the opposite situation, mainly as a result of the remuneration to the employees.

#### **Gross national income structure by institutional sectors**

- % -

	Non-financial corporations	Households	Financial corporations	General government	NPISH
2000	10.4	76.4	0.6	12.4	0.2
2001	13.2	75.8	1.2	9.6	0.3
2002	19.0	68.8	1.0	11.1	0.1
2003	18.9	62.5	2.5	16.1	0.0
2004	19.1	64.4	2.9	13.3	0.3

The increase over time of the non-financial companies' share in the gross national income is the effect of the profitability status improvement. The competitiveness and development requirements for business led to an increased GVA allocation towards investments or, in other words, the salary earnings increase, as against the labor productivity.

**The gross disposable income (GDI)** measures the created value at the nations' disposal intended for final consumption and gross saving. By institutional sectors, the structure of the gross disposable income reveals the same features, as in the case of the gross national income.

#### **The structure of the gross disposable income by institutional sectors**

- % -

	Non-financial corporations	Households	Financial corporations	General government	NPISH
2000	8.1	71.8	0.7	21.2	-1.9
2001	16.0	67.6	0.9	17.2	-1.8
2002	20.1	64.2	0.8	16.5	-1.7
2003	16.3	57.3	2.9	21.7	1.7
2004	14.2	62.0	3.1	18.9	1.8

**The gross saving (GS)** represents the component from the gross disposable income that does not comprise the expenditures for the final consumption.





**The structure of the gross saving by institutional sectors**

- % -

	Non-financial corporations	Households	Financial corporations	General government	NPISH
2000	53.7	26.2	4.6	35.6	-20.1
2001	96.9	1.5	5.6	14.3	-18.3
2002	102.4	-2.8	4.0	10.8	-14.3
2003	98.1	-34.9	17.6	15.6	3.6
2004	78.8	-17.8	16.9	18.8	3.3

The saving of a sector represents the difference between incomes and expenditures for consumption. From the above-mentioned table it results that, besides the non-financial corporations sector, which has a particular status because of the lack of the final consumption and thus, the value of gross saving the same with the gross disposable income, the final consumption by financial corporations and general governments sectors was lower than the disposable income.

**Net lending (+) or net borrowing (-)** represents the net value of the disposable resources from an institutional sector used in another institutional sector, if the value is positive, or the value needed for the sector to cover its investments, if the value is negative.

**Net lending (+) / net borrowing (-) of the economy**

- % of GDP -

	Non-financial corporations	Households	Financial corporations	General government	NPISH
2000	-7.8	5.0	-0.8	2.8	-3.2
2001	-20.7	19.2	0.0	-0.9	-3.0
2002	3.5	0.2	0.0	-2.0	-2.8
2003	-6.1	0.9	2.3	-1.9	0.5
2004	-5.8	0.2	2.5	-1.6	0.6

The above-mentioned table emphasizes that the lending of households was available over the whole period, while the one corresponding to financial corporations was available only during 2001-2004. In comparison with the other sectors, the non-financial corporation sector has showed a high borrowing over all these years, except for 2002.

**Bibliography**

- Dobrescu, Emilian – *Macromodels of the Romanian Market Economy*, Editura economică, București, 2006;
- Ivan-Ungureanu, Clementina: *Contabilitatea națională – concepte, metodologii și aplicații*, Casa de editură IRECSON, București, 2003;
- Michael, Burda; Charles, Wyplosz: *Macroeconomie – Perspectiva europeană*, Editura All Beck, București 2002;
- National Institute of Statistics – Romania: *National Accounts*, 1990-2007;
- European Commission: “Economic Forecast”, Spring 2007.

