

29<sup>th</sup> August 2014

National Accounts – Base 2011

1995 - 2011

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## **New Series of the Portuguese National Accounts for the period 1995 to 2011**

Statistics Portugal updated the benchmark year of the Portuguese National Accounts. The previous series had 2006 as benchmark. The reference year for the new series is 2011.

The revisions introduced reflect both methodological changes associated to the implementation of the new European System of Accounts 2010 (ESA 2010) and the use of new structural data, notably the 2011 Census.

In consequence, the Gross Domestic Product for 2011 is revised upwards by 2.9% to around 176.2 billion Euro.

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### **A. The base 2011 of the Portuguese National Accounts**

Statistics Portugal is currently releasing the new series of Portuguese National Accounts (PNA), which have 2011 as reference year, for the period 1995 to 2011. This press release aims at explaining the main changes introduced. The next steps on this communication process of the results obtained within this new framework will be the presentation of quarterly results for the period between the 1<sup>st</sup> quarter 1995 to the 2<sup>nd</sup> quarter 2014, foreseen for 8<sup>th</sup> September, and the publication of sector accounts by the end of September. These last accounts will show the changes in the net lending/borrowing of the different institutional sectors, notably in the case of General Government (GG).

The revisions of the PNA stem from, on the one side, the methodological changes associated to the implementation of the new European System of Accounts 2010 – ESA 2010 (comparing with the previous system, the ESA 1995) and, on the other side, from the use of new structural data sources, notably the 2011 Census.

ESA 2010 sets down the harmonized classifications and accounting rules for the production of national accounts data in the EU and data transmission to the European Commission (Eurostat). These revisions became necessary due to the substantial changes on the economies in the last twenty years, in particular the increasing role of ICT in production processes, the growing importance of intangible assets, intellectual property products and services, and the globalization of economic systems.

The application of ESA 2010, as it was the case of its predecessor ESA 1995, is legally binding in the European Union by Regulation (EU) N° 549/2003 of the European Parliament and of the Council from 21<sup>st</sup> March 2013. The deadline for the implementation of ESA 2010 by Member-States is the end of September.

The adaptation of the system of accounts is not taking place only in the European Union, but worldwide. ESA 2010 is coherent with the System of National Accounts (SNA) 2008 from the United Nations, which is being implemented worldwide, replacing the previous SNA 1993.

The change of the benchmark year led to the compilation of Supply and Use Tables (SUT) with a very detailed breakdown (127 industries X 433 products) for the years 2010 and 2011 and the cross-check and reconciliation of the results obtained for the different GDP compilation approaches: demand, production and income. Taking the results for 2010 as reference, PNA were backward revised until 1995. This procedure implied the compilation of simplified SUT, with a smaller breakdown for the period 1995-2009 (38 industries and 38 products), in a reconciliation process of the results obtained for the different GDP compilation approaches.

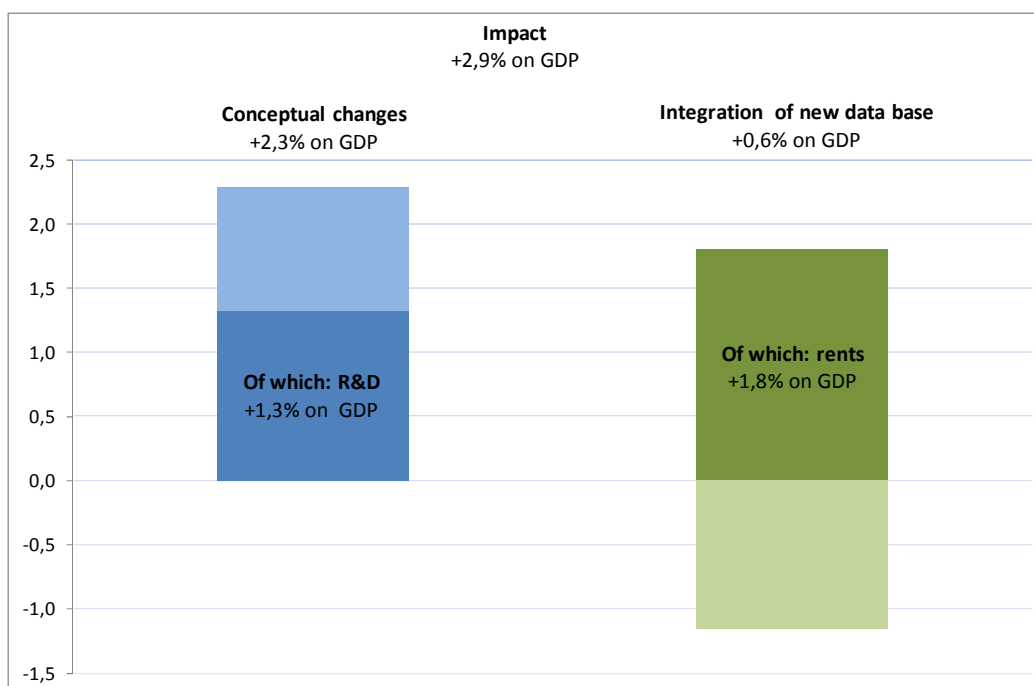
The next section of this press release presents the main factors for the changes introduced in this new accounting base and the last section briefly presents the main results.

## **B. Main changes**

As already mentioned, the revisions in the PNA stem from, on the one side, the methodological changes associated to the implementation of the new European System of Accounts 2010 – ESA 2010 (comparing with the previous system, the ESA 1995) and, on the other side, the use of new structural data sources, notably the 2011 Census.

The following picture shows the impacts of the changes, methodological and stemming from the use of new structural data, identifying those with the most significant impact on GDP for 2011, the last available year of the previous series. It should be mentioned that data for 2011 had a provisional nature in the previous 2006 base.

**Picture 1 – Revision of GDP between accounting bases – 2011 (%)**



### B.1. Methodological changes

Comparing with ESA 1995, ESA 2010 introduced several relevant methodological changes in the National Accounts. Additional methodological changes were also introduced aiming at increasing the comparability of National Accounts data in the European Union, in the framework of the Gross National Income Regulation.

Amongst the several changes, taking into consideration their impact on GDP, the five following should be mentioned<sup>1</sup>:

- Recording of research and development (R&D) expenditure as investment
- New rules for the sector classification of units
- New rules for the recording of Special Purpose Entities (SPE)
- Recording of military expenditure as investment
- New rules for the recording of processing

<sup>1</sup> Detailed information on these changes is available in the Portuguese version of this Press Release or in Eurostat's dedicated website on ESA 2010: [http://epp.eurostat.ec.europa.eu/portal/page/portal/esa\\_2010/introduction](http://epp.eurostat.ec.europa.eu/portal/page/portal/esa_2010/introduction).

## **B.2. Use of new structural data sources**

The change of the benchmark year allowed for the use of a significant set of new structural data notably the results from: the 2011 Census, the 2009 Agriculture Census, the 2010/2011 Household Budget Survey and the 2013 International Tourism Expenditure Survey.

It should also be mentioned the use of revised data from the Balance of Payments (BoP) due to the implementation of the 6<sup>th</sup> version of the respective methodological manual and to the introduction of a new system of data collection by Banco de Portugal. For more information on these changes, please see Banco de Portugal website.

### **a) General Censuses on Population and Housing – Census 2011**

The results from the Census 2011 are reflected in the National Accounts in two ways: *via* employment; and *via* housing rents, notably the component of imputed rents.

At the level of employment, the annual data for the period between Census (2001 and 2011) was recalibrated with data from the 2011 Census, leading to the revision of total employment as well as its geographical breakdown and by activities.

At the level of housing rents, imputed rents on owner occupied dwellings are calculated with data from the Census on actual rents with similar characteristics, using an econometric model of hedonic regression. The values obtained in the 2011 base of PNA, using data from the 2011 Census, led to the upwards revision by 25.8% of the estimate on housing rents comparing with the estimate integrated in the previous 2006 base, attaining 14.9 billion Euros in 2011.

### **b) Census on Agriculture 2009**

The 2011 Census on Agriculture is the main reference for the estimation of the economic activity for a significant set of agricultural products. The values resulting from the integration of the 2009 General Census on Agriculture led to the downwards revision of these activities, with negative impact on GDP and with implication on its geographical breakdown.

### **c) Household Budget Survey 2010/2011**

This survey is conducted approximately every five years. The availability of data from the 2010/2011 survey was helpful in obtaining relatively detailed and updated structures for the final consumption of resident households.

#### **d) Balance of Payments**

In parallel with the implementation of new methodological standards in the National Accounts with the adoption of ESA 2010, also at the level of the Balance of Payments relevant changes are taking place with the implementation of the 6<sup>o</sup> version of the respective methodological manual (BPM6). In general terms, the main changes are related with globalization (international trade and cross-border enterprises) and financial innovation, being compatible with the SNA 2008 and, consequently, with ESA 2010 in broad terms. In addition, Banco de Portugal implemented a new system of data collection for the compilation of BoP statistics, based on a survey to corporations with economic relations with the rest of the world.

These changes led to revisions in the flows of international trade on services, which were incorporated in this new accounting base of the PNA.

#### **e) International Tourism Expenditure Survey 2013**

The 2013 survey allowed for the more updated knowledge on the expenditure of non residents (tourists) in the Portuguese territory and of the residents outside the territory.

The information from this survey was complemented with data on the use of credit cards, with additional data on the breakdown of that expenditure, particularly in the case of non residents.

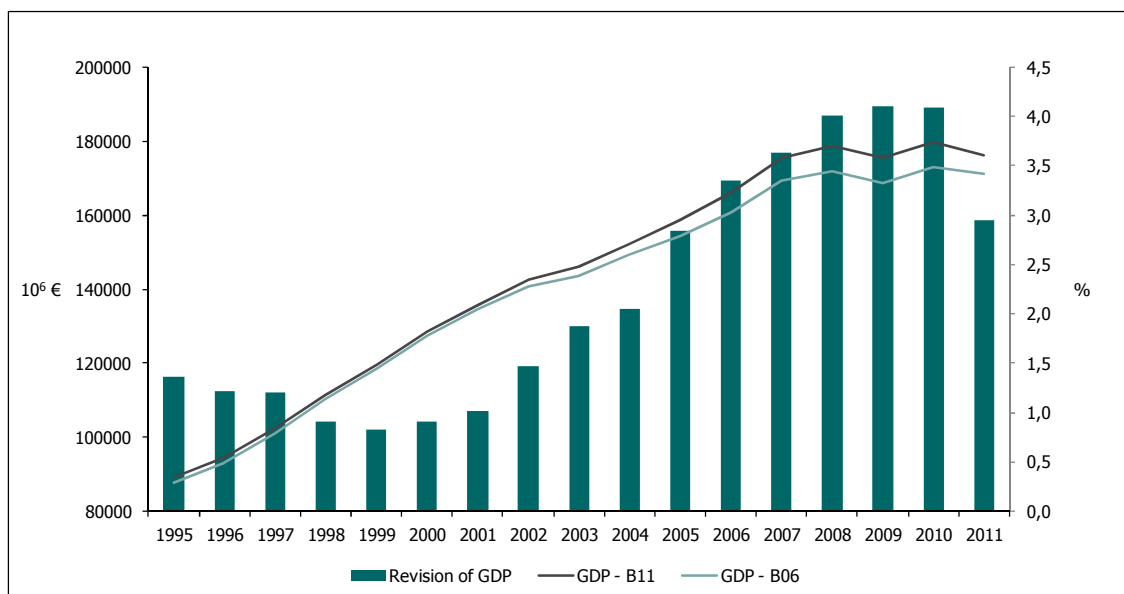
### **C. Main results**

#### **New National Accounts benchmark led to the reassessment of the GDP in +2.9%, at 176.2 billion Euros.**

In new accounting base 2011, the GDP of the reference year (2011) was 176.2 billion Euros, 2.9% higher than the value calculated in the previous benchmark (2006). On average, the GDP reassessment for the period 1995-2011 was +2.2%. However, as can be seen in figure 2, there is a different magnitude of revisions before and after 2001, as the average revision prior to 2001 is +1.0%, and +3.1% after 2001. The reassessment of housing rents, incorporating the results of the 2011 Census, was residual for the 1995-2001 period, but significant for the 2001-2011 period, where it represented, on average, 1.1% of GDP.

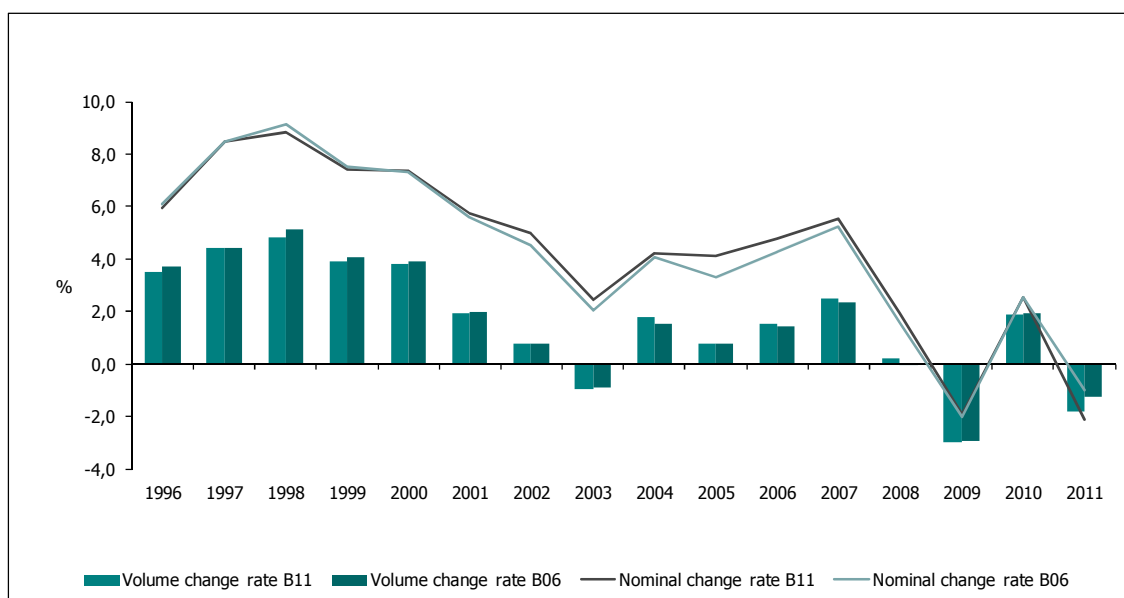
The impact of R&D expenditure in the GDP increased throughout the series, accounting for, on average, 0.5% of the GDP in the 1995-2001 period and 0.9% after 2001.

**Picture 2 – Gross Domestic Product – Base 2011 and Base 2006**



Despite the reassessment of the GDP level, its evolution did not suffer substantial revisions, in particular regarding volume changes.

**Picture 3 – Change rates of Gross Domestic Product – Base 2011 and Base 2006**



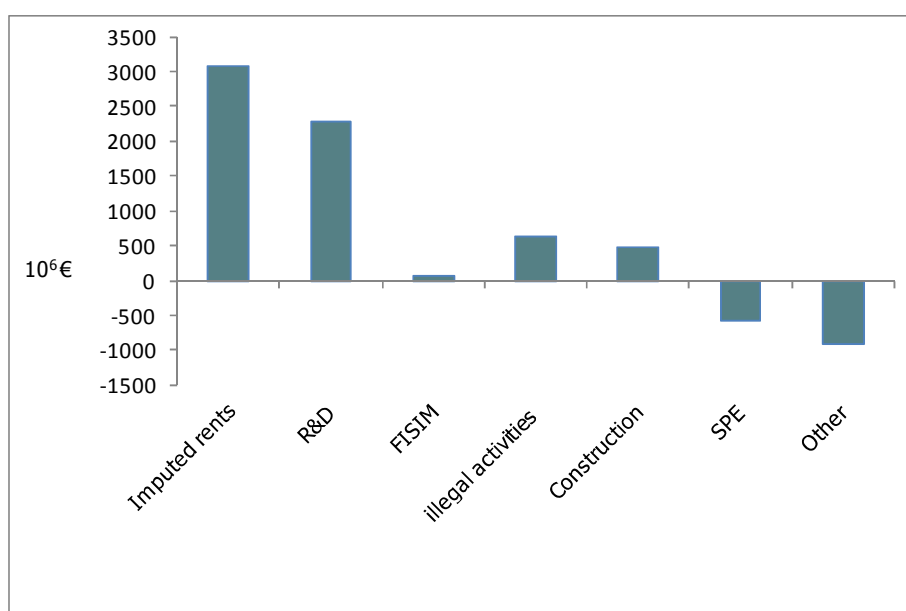
The reassessment of the GDP level in +5040 M€ in 2011 was determined by a series of changes with different impact magnitudes, with increases and decreases.

The following positive impacts should be highlighted:

- a) Imputed rents are the largest positive impact, with a 3083 M€ reassessment. On average for the 1995-2011 period, this aggregate accounted for 33% of the GDP revision.
- b) The second largest impact comes from capitalization of R&D expenditure (2270 M€). Between 1995 and 2011, the value oscillated between 320M€ (1995) and 2270 M€ (2011), accounting for 0.4% and 1.3% of the GDP, respectively.
- c) The explicit inclusion of illegal activities, estimated at 629M€.
- d) The inclusion, in the goods and services account, of the construction activity outside the economic territory carried out by resident companies (exports), as well as the construction activity in the Portuguese economic territory carried out by non-resident companies (imports), which had a net export value of 469 M€ in 2011. This inclusion has almost no effect in the gross national income, due to the fact that external construction activities were accounted for in the revenue account on the previous series and in the goods and services account in the new base 2011, leading to a convergence of recording between National Accounts and Balance of Payments.

On the other hand, changes in calculation methods for Special Purpose Entities had a negative impact of 670 M€ in the GDP, in particular in the autonomous region of Madeira. Finally, the compilation of 2011 accounts, with the inclusion of more thorough and robust data at the highest level of detail (127 industries and 433 products) led to a lowering comparing with the provisional results of the previous benchmark 2006 series.

**Picture 4 – Main contributions for the GDP revision in 2011**



## Comparison of GDP structures in benchmark 2011 and 2006

The changes introduced with the new accounting base 2011 did not produce significant revisions in the GDP structure on the expenditure side, as shown in the following table. The relative weight of the final consumption expenditure in the GDP decreased slightly (about 0,5 p.p.) on the base 2011, which was due only to the decrease of final consumption of households and Non Profit Institution Serving Households, since the relative weight of public consumption (final consumption expenditures of General Government) did not change. However, the growth tendency of the total final consumption already seen in the previous benchmark remained unchanged, moving from about 82.2% of the GDP in 1995 to 85.7% in 2011 in the new accounting base.

**Table 1 – Structure of Gross Domestic Product – demand side**

GDP - components (expenditure side)	Structure of GDP - B06 (%)				Structure of GDP - B11(%)			
	1995	2000	2005	2011	1995	2000	2005	2011
<b>Final consumption expenditure</b>	<b>82.7</b>	<b>82.6</b>	<b>85.9</b>	<b>85.9</b>	<b>82.2</b>	<b>82.3</b>	<b>85.4</b>	<b>85.7</b>
- Final consumption expenditure of households and NPISH	65.2	63.6	64.7	66.0	64.6	63.3	64.4	65.8
- Final consumption expenditure of general government	17.5	19.0	21.1	19.9	17.6	19.0	21.1	19.9
<b>Gross capital formation</b>	<b>24.0</b>	<b>28.4</b>	<b>23.5</b>	<b>18.4</b>	<b>24.2</b>	<b>28.8</b>	<b>23.7</b>	<b>18.6</b>
- Gross fixed capital formation	23.1	27.7	23.0	18.0	23.3	28.0	23.1	18.4
- Changes in inventories and Acquisitions less disposals of valuables	0.9	0.8	0.6	0.4	0.9	0.8	0.6	0.2
<b>Exports of goods and services</b>	<b>27.2</b>	<b>28.9</b>	<b>27.7</b>	<b>35.7</b>	<b>26.8</b>	<b>28.2</b>	<b>26.7</b>	<b>34.3</b>
- Exports of goods (FOB) (1)	21.6	22.7	21.2	26.4	20.3	21.8	20.3	25.2
- Exports of services	5.6	6.2	6.4	9.3	6.4	6.4	6.5	9.0
<b>Imports of goods and services</b>	<b>-33.9</b>	<b>-39.9</b>	<b>-37.1</b>	<b>-40.1</b>	<b>-33.1</b>	<b>-39.2</b>	<b>-35.8</b>	<b>-38.6</b>
- Imports of goods (FOB) (1)	-28.7	-34.9	-32.3	-34.1	-28.2	-34.6	-31.7	-33.1
- Imports of services	-5.2	-5.0	-4.7	-6.0	-5.0	-4.6	-4.2	-5.5

(1) FOB – Free on Board.

Throughout the series of National Accounts, the gross fixed capital formation has been losing relevance in the GDP, going from 23.3% in the first year of the series to 18.4% in 2011. Nevertheless, in the new 2011 benchmark, the relative weight of this GDP aggregate, on annual average for 1995-2011, is 0.3 p.p. higher than in the 2006 benchmark, which is explained by the already mentioned capitalization of R&D expenditure.

The external demand components – imports and exports – present the most significant changes in their relative weight in the GDP. In the new 2011 benchmark, the exports of goods and services decreased their relative weight in about 0.9 p.p. on average for 1995-2011, going from 35.7% of the GDP in the 2006 benchmark to 34.3% in the new benchmark. However, the general tendency across the period remains, showing a significant increase of the relative importance of the exports in GDP that moved from 26.8% in the beginning of the series to 34.3% in 2011. The imports show a similar evolution but with different magnitude. The weight of this aggregate in the GDP decreased, on average between the two accounting bases, 1 p.p., while in 2011 the reduction was 1.4 p.p.. In the complete series, the weight of the aggregate in the GDP, to which it has a negative contribution, went from 33.1% in 1995 to 38.6% in the last year. It should be mentioned that the revisions mainly resulted from the change in the recording of processing.



**Table 2 – Structure of Gross Domestic Product – production side**

GDP - components (production side)	Structure of GDP - B06 (%)				Structure of GDP - B11(%)			
	1995	2000	2005	2011	1995	2000	2005	2011
<b>Gross Value Added</b>	<b>88,0</b>	<b>87,6</b>	<b>86,5</b>	<b>87,3</b>	<b>88,1</b>	<b>87,6</b>	<b>86,7</b>	<b>87,6</b>
Agriculture, forestry and fishing	4,9	3,2	2,4	1,9	4,8	3,1	2,3	1,8
Industry and energy	19,2	17,8	15,6	15,9	19,1	17,8	15,4	14,5
Construction	6,2	7,2	6,5	5,1	5,7	6,7	6,0	4,8
Wholesale and retail trade, repair of motor vehicles and motorcycles	16,7	16,3	15,9	16,6	16,5	16,0	15,2	16,3
Accommodation and food service activities	3,5	3,9	4,1	4,5	3,4	3,9	4,1	4,3
Information and communication	3,0	3,1	3,3	3,3	3,0	3,1	3,4	3,2
Financial and insurance activities	5,1	4,9	5,4	5,9	5,4	5,1	5,7	6,1
Real estate activities	6,6	6,8	6,9	7,7	6,8	6,7	7,5	9,4
Professional, scientific and technical activities;	4,8	5,1	5,2	5,8	5,0	5,5	5,6	6,1
Public administration, human health and education	16,4	17,3	19,1	18,1	16,7	17,7	19,4	18,4
Other services	1,7	1,9	2,1	2,5	1,8	2,0	2,1	2,5
<b>Taxes less subsidies on products</b>	<b>12,0</b>	<b>12,4</b>	<b>13,5</b>	<b>12,7</b>	<b>11,9</b>	<b>12,4</b>	<b>13,3</b>	<b>12,4</b>

On the production side, it should be highlighted the increase in the GDP relative weight of Real estate activities and Other services provided to corporations. In fact, comparing with the 2006 benchmark, the relative GDP weight of Real estate activities increased 0.5 p.p., on average, with the most significant increase taking place in 2010 (+1.9 p.p.) due to the revaluation of imputed rents on housing. Regarding Other services provided to corporations, the increase between accounting bases was not that significant, increasing about 0.4 p.p. on average. Also in Public administration, health care services and education there was an increase in the GDP relative weight of about 0.3 p.p. annual average. With an average increase of 0.2 p.p., the Financial activities and insurance closes the set of economic activities which gained weight in the GDP structure in the new 2011 benchmark. On the contrary, the remaining activities decreased their importance. This decrease did not result from the absolute reduction of the numerator – the Gross Value Added by industries – but mostly from the increase in the denominator – the GDP. The main exception was Industry activities, which suffered the biggest downwards revisions in 2011, not resulting from the implementation of the new methodological approach, but from the use of more robust information sources and a more detailed compilation process of the annual national accounts. It should be reminded that the information previously available for 2011, in the 2006 benchmark, was provisional. Finally, it should be mentioned that the weight on GDP of taxes less subsidies on products decreased, on average, 0.2 p.p. in the period, mainly has a direct consequence of the upwards revision of GDP.