

Summary of the Esa2010 revision of National Accounts

Year 2011

In conjunction with the introduction of the new European system of national and regional accounts (Esa2010) Manual, Italy as other Eu Member States proceeded to develop a comprehensive revision of the estimate of national accounts. The transition to a new version of accounting rules is also the most suitable time to introduce new methods of measurement and new data sources that have become available in recent years. This results in a significant change to the calculation of the main national account aggregates, most notably gross domestic product (Gdp).

Herein is the first presentation of the results of the new estimate of national accounts for 2011. These changes, whether of a methodological nature or arising from new basic information, have given rise to a new estimate for 2011, defined as benchmark estimate; this year was chosen since it represents the most recent period with the richest set of up to date information available. Therefore, the values of all items detailed in the accounts have been redefined for 2011.

How Gdp changes

As a result of the comprehensive revision, the new estimates of key macroeconomic variables at current prices show the following changes (Table 1):

- Italy's gross domestic product for 2011 is now estimated at 1,639 billion euros, compared with the estimate of 1,580 billions in Esa95, with a total upward revision of 3.7%.
- With regard to the aggregates that contribute to the formation of Gdp, the expenditure for final consumption is increased by 3.1% (with household expenditure increasing by 4%), gross fixed capital formation by 6.9%, while imports and exports of goods and services have been revised downwards by 2% and 2.9% respectively.

TABLE 1. RESOURCES AND USES ACCOUNT

Year 2011, billions of euros at current prices and percentages

	Esa2010 estimates (September 2014)	Esa95 estimates (March 2014)	Revisions * (%)
Gross domestic product at market prices	1,638.9	1,579.9	3.7%
Imports of goods and services (Fob)	467.9	477.7	-2.0%
Final national consumption expenditure	1,329.5	1,289.6	3.1%
- Resident households final consumption expenditure	999.8	961.5	4.0%
- Npish final consumption expenditure	8.8	6.5	35.7%
- General government final consumption expenditure	320.9	321.6	-0.2%
Gross capital formation	335.1	312.4	7.2%
- Gross fixed capital formation	321.8	301.2	6.9%
- Changes in inventories and acquisitions less disposals of valuables	13.2	11.3	17.5%
Exports of goods and services (Fob)	442.2	455.6	-2.9%

*The values of aggregates are expressed in billions of euros; percentage revisions are calculated on the original data in millions of euros.

Changes by type of revision

The revision of economic aggregates can be decomposed in three main components (Table 2):

- Changes due to methodological innovations introduced by Esa2010 contributed 1.6 percentage points (24.6 billion euros) to the revaluation of the nominal Gdp in 2011; the main share (1.3 percentage points) is connected to the capitalisation of research and development expenditure.
- Changes related to the overcoming of European reservations on the implementation of Esa95 (including the inclusion of some illegal activities, which contributed 1.0 percentage points to the revaluation of the Gdp), have determined an overall upward revision of 0.8 percentage points.
- The remaining share of the revaluation comes from the combination of several effects related to innovations in national sources and methodologies, which contributed 1.3 percentage points to the overall revision.

TABLE 2. RESOURCES AND USES ACCOUNT: REVISIONS BY TYPOLOGY

Year 2011, percentage values

	Relative revisions	of which (in percentage points):		
		Esa2010	Reservations	Other (sources and methods)
Gross domestic product at market prices	3.7%	1.6	0.8	1.3
Imports of goods and services (Fob)	-2.0%	-2.5	0.2	0.3
Final national consumption expenditure	3.1%	0.0	1.2	1.9
- Resident households final consumption expenditure	4.0%	0.0	1.6	2.4
- Npish final consumption expenditure	35.7%	-1.9	0.0	37.6
- General government final consumption expenditure	-0.2%	-0.4	0.0	0.2
Gross capital formation	7.2%	8.6	-0.6	-0.8
- Gross fixed capital formation	6.9%	8.9	0.0	-2.0
- Changes in inventories and acquisitions less disposals of Valuables	17.5%	0.0	-17.6	35.1
Exports of goods and services (Fob)	-2.9%	-2.8	0.0	-0.1

Changes resulting from the transition from Esa95 to Esa2010

With regard to the transition to the new methodological guidelines set by international standards, the main changes relate to: capitalisation of Research and Development (R&D) expenditure; the reclassification of weapons systems expenditure from intermediate consumption to general government gross fixed capital formation; the new definition of foreign trade according to the transfer of ownership principle; the introduction of new and clearer criteria for the classification of units in the general government. In addition, there are other changes with lesser impact. Changes to the methods, sources and measurement approach used to implement them and the quantitative effect on the 2011 accounts are briefly summarised below.

Capitalisation of Research and Development (R&D) expenditure

The change in accounting method has a positive impact on aggregate demand and Gdp for the portion of R&D expenditure incurred by market producers and on output for their own final use (12.4 billion euros, which contribute 0.8 percentage points to the revision of the Gdp). For the component relating to general government and Npish expenditure, the effect on value added equals the depreciation flow of R&D capital stock and is 8.1 billion euros (0.5 percentage points) (Table 3).

TABLE 3. GROSS FIXED CAPITAL FORMATION IN R&D BY SOURCE AND INSTITUTIONAL SECTOR

Year 2011, billions of euros at current prices and percentage values

	Market producers	General government and Npish	Total	Impact on Gdp in percentage points
Output for own final use	10.7	7.6	18.3	1.2
Services purchased from third parties	1.7	0.5	2.2	0.1
Total	12.4	8.1	20.5	1.3

Capitalisation of weapon system expenditure

The impact of this change is limited since the expenditure for weapons systems was already included in general government final consumption expenditure and, therefore, in Gdp. Also in this case as for R&D, it produces a differential effect due to the fact that the introduction in the accounts of a physical capital in weapons implies the recognition of a depreciation flow that generates a positive effect on the value added for the non-market sector. For 2011, investment expenditure on armaments was 4.7 billion euros, while the effect on value added due to the corresponding depreciation of physical capital was 3.5 billion euros, with a 0.2 percentage points contribution to the revision of Gdp.

New definitions of foreign trade of goods and services

When recording the foreign trade of goods, the registration criterion is now the transfer of asset ownership instead of the physical movement across borders. This change affects the recording of two phenomena: the goods sent abroad for processing (only the net flow of services is now recorded) and the international trade of goods that do not cross the border of the merchant's country of residence (merchanting). In principle, this reclassification does not change the net balance of foreign trade flows, but only affects the levels of the two currents of trade (goods and services) (Table 4).

Finally, based on ESA 2010, the Financial Intermediation Services Indirectly Measured (Fisim) to non-resident financial intermediaries (one billion euros in 2011) were reclassified from service exports to investment income received; this reclassification has a negative impact on Gdp but none on gross national income (Gni).

TABLE 4. FOREIGN TRADE: CHANGES DUE TO THE ADOPTION OF ESA2010

Year 2011, billions of euros at current prices and percentage values

	Processing	Merchanting	Financial intermediation services indirectly measured	Absolute revision	Percentage revision
Exports of goods and services	-11.7	0.0	-1.0	-12.7	-2.8%
Exports of goods	-14.5	1.6	0.0	-12.9	-3.4%
Exports of services	2.8	-1.6	-1.0	0.2	0.2%
Imports of goods and services	-11.7	0.0	0.0	-11.7	-2.5%
Imports of goods	-13.9	0.0	0.0	-13.9	-3.5%
Imports of services	2.1	0.0	0.0	2.1	2.5%

Additional changes related to Esa2010

Among other methodological adjustments introduced by Esa2010, there is the redefinition of the criteria for the inclusion of institutional units in general government (the so-called S13 institutional sector). All in all, the redefinition of the boundaries of this sector has had a very limited impact on the overall deficit.

Esa2010 requires that output for own final use by market producers is valued at production costs plus a mark-up for net operating surplus or mixed income. For 2011, the adjustment of estimates due to this change resulted in an upward revision of Gdp by 1.7 billion euros, of which 0.7 billions from own-account production of tangible fixed assets, 0.7 billions from self-produced software and databases, and 0.3 billions from maintenance carried out by households on their own home.

Changes due to work on EU reservations

While redefining the benchmark, there have been some adjustments and changes in methodology aimed at overcoming reservations set by Eurostat about the sources and methods used by Italy as well as by other Eu countries to calculate the Gross National Income (Gni, the "twin" aggregate of the Gdp used to define one of the countries' contributions to European community resources) in a reliable and comparable way at Eu level.

Among the changes introduced to address the reservations, the ones with an impact on Gdp level in 2011 are the inclusion of illegal activities in national accounts (see below), the accounting of capital gains and losses deriving from the change in price of goods held by companies as stocks of finished goods, work in process and raw materials (with an impact of -0.13 percentage points on Gdp), and the reallocation from final consumption to intermediate consumption of certain maintenance and repair costs (-0.07 percentage points).

The inclusion of illegal activities in all European countries

The inclusion of illegal activities (in particular, the production and marketing of drugs, alcohol and tobacco smuggling, and prostitution) in national accounts estimates is a decision that was taken at the European level implementing, with a common method for all Member States, the principle already defined in the Esa95. According to such principle, the measures that express the income of a nation must be comprehensive and, therefore, take into account activities that are prohibited by the national laws, but are based on voluntary exchange among economic subjects.

For 2011, the main contributions to the value added of illegal activities derives from the marketing of illegal drugs, estimated in 10.5 billion euros, and from prostitution (3.5 billion euros). Conversely, the value added of tobacco smuggling is small (0.3 billion euros).

The value added deriving from illegal activities corresponds to a production value of approximately 16 billion euros and intermediate costs amounting to 1.7 billion euros that, in turn, generate a value added of 1.2 billion euros related to the legal production of goods and services induced by illegal activities. Therefore, the estimate of illegal activities, including induced activities, involves an integration of total value added by 15.5 billion euros (0.9% of the new level of Gdp).

The updating of estimates resulting from new information sources and revisions to national methodologies

Over the last two years, with the preparation of the transition to the new Esa, the whole Italian national accounts compilation process underwent a comprehensive review. A number of changes aimed at improving both the sources of information and some calculation methods have been implemented, concerning in particular new estimate methods for the unobserved economy, the labour input and value added.

Information sources

As far as data sources are concerned, results from the 2010-2011 censuses including the Population and Housing Census, the Agriculture Census, the Industries and Services Census, the Non-Profit Institutions Census contributed to the revision; new information coming from surveys not used before were used as well. However, the most important contribution comes from new information bases created through the integration of administrative sources and survey data, which allow, among other things, an extensive use of data relating to individual companies and workers. These are one of the key elements in designing some basic mechanisms for the compilation of national accounts: the labour input estimation procedure (e.g. employees and hours worked), the process used to calculate the value added of production sectors and the corrections of value added under-reporting by small and medium-small enterprises, which is one of the essential elements for measuring the non-observed economy.

Finally, the new national accounts have embodied the new flows with the rest of the world recorded in the Balance of Payments (compiled according to the updated version of the Balance of Payments Manual).

The new estimate of the non-observed economy

For some time now the underground economy has been included in the measurement of Italy's Gdp, but the revision of accounts has provided the opportunity to review and improve the estimation methods.

A first element of the redefinition is the quantification of undeclared labour input, based on the new model for the estimation of employment that will be described below. Other important advances include the procedures for correcting the under-reporting of business activities (e.g. false statements that tend to hide part of the income generated from the production unit). Further progress in the measurement of non-observed economy components relates to the estimate of the compensation of employees for undeclared work.

Overall, the new estimate of the underground economy, derived from the method implemented during the revision of national accounts, leads to a value of about 187 billion euros, which in 2011 accounts for 11.5% of Gdp; when the illegal activities component is added to this, the share of the non-observed economy is 12.4% of Gdp.

Redefining the estimates of labour input

The new method for the estimation of labour input is based on the integration, at the micro-data level, of all administrative sources that contain information on the work performed by each worker and their direct linkage with the very rich and detailed information collected from individuals through the Labour Force Survey (hereinafter referred to as LF).

The method enables to measure separately various types of work by identifying the boundary between declared and undeclared work. In particular, the work positions recorded in the archives and administrative sources on companies and institutions (adequately validated) provide a measure of actual declared positions. Undeclared employment is identified for all positions for which the presence of a working activity in the LF does not correspond to any form of tax or contribution payment recorded at the individual level in the set of administrative sources treated statistically. Undeclared employment regards working activity performed both as an employee and as a self-employed.

Recalculation of the value added of the productive sectors

The availability of a new census-type annual database containing individual information for all active companies greatly reduces the size of the overall estimation error in the measurement of the value added generated by market producers .

According to the method adopted in the previous version of the national accounts, the level of value added (as well as the level of other macroeconomic aggregates) by sector of economic activity was obtained by attributing an average unit value to all employees who contributed to productive activity. In turn, for the majority of the economic sectors, the new method uses an additive approach that distinguishes the observed part of the economy from the non-observed economy.

Activities of regular enterprises, that is activities on which tax and social security obligations are regularly fulfilled, are estimated based on the financial results of the units for which there is direct observation, through a complex process of integration and control of all available sources. Three indirectly estimated components are added to declared value added: the value added deliberately concealed to the tax authorities by regular enterprises (measured via, the correction of under-declaration), the value added generated through the use of undeclared dependent and autonomous employment, and that of illegal activities.

The revision of general government accounts

Also in the case of general government accounts, the revision process has combined changes due to the transition from Esa95 to Esa2010 and those resulting from the introduction of improvements in measurement methods and the availability of new sources.

The methodological changes have primarily redefined the boundaries of the general government sector (S13) through a more detailed definition of the public control concept and the precise identification of conditions defining the status of competition in which the units operate. This resulted in the inclusion in the sector of units producing almost exclusively for the public authority that controls them.

Moreover, the availability of new information has led to the identification of new actors mainly at local level, some of which have been included in S13 list. The redefinition of the sector classification has a limited impact on the overall deficit.

Based on Esa2010, some items which were previously recorded as a reduction of taxes and social contributions (because they generate tax or contribution credits), have been reclassified as expenditures. The impact relative to 2011 is substantially nil.

Some flows that were previously excluded from the circuit of general government accounts, such as those related to some components of the electricity tariff and to Vat paid to the Eu as the third resource, have been reclassified as taxes. While these changes leave the net balances unchanged, they lead to an increase in the absolute level of receipts and expenditures.

Finally, the definition of net lending/net borrowing with reference to the Maastricht criterion notification is now aligned to the one used for the compilation of national accounts according to Esa. The interest flows arising from transactions in derivative financial instruments are now considered financial transactions and their effects are no longer accounted for in interest paid. For 2011, the impact of this change on the deficit is positive for 1.8 billion euros.

The set of changes in the general government accounts combined with the Gdp level increase is reflected in the main public finance parameters. In particular, the ratio of deficit to Gdp is now estimated at 3.5%, with an improvement of 0.2 percentage points compared to the previous estimates for 2011; the primary balance remains unchanged at 1.2% of Gdp and the tax burden as a percentage of Gdp is reduced by 0.9 percentage points.

TABLE 5. MAIN AGGREGATES OF THE GENERAL GOVERNMENT

Year 2011, billions of euros at current prices and percentages of GDP

Aggregates	Esa2010 estimates (September 2014)*	Esa95 estimates (March 2014)	Revision in absolute value
Current balance	-5.8	-21.1	15.3
Capital account balance	-51.0	-38.0	-13.0
Net borrowing/net lending	-56.8	-59.1	2.3
Net borrowing-net lending/Gdp (%)	-3.5	-3.7	0.2
Primary balance	19.6	19.3	0.3
Primary balance/Gdp (%)	1.2	1.2	0.0
Tax burden (%)	41.6	42.5	-0.9

*Preliminary data.

Upcoming deadlines

The presentation of accounts according to Esa2010 has progressed with the dissemination of the 2009-2013 annual estimates of main accounts aggregates, expressed in current and volume terms, on 22 September. The annual time series from 1995 to 2013 will be made available on 3 October.