Spanish National Accounts. Base 2010

Project

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1. Introduction

The National Statistics Institute (INE) is the body responsible for compiling the Spanish National Accounts (SNA).

The current accounting base of the SNA refers to the year 2008 (SNA-2008), and its estimates are published as of October 2011. SNA-2008 are prepared according to the methodological recommendations of the 1995 European System of National and Regional Accounts (ESA-95) implemented in the European Union, which in the form of a Council Regulation\(^1\) is compulsory for all Member States. SNA-2008 comprises the following operations from the National Statistical Plan:


This methodological framework, ESA-95, establishes a system that meets the needs for homogeneity and accuracy of the national accounts information for the Member States of the European Union, and in general, agrees with the System of National Accounts adopted by the Statistical Commission of the United Nations in 1993 (SCN 1993), for the purpose of the results in all of the United Nations Member States being comparable.

SCN 1993 was updated as a new System of National Accounts (SCN-2008). Said system was adopted by the Statistics Commission of the United Nations in February 2009. The need to revise the European System of Accounts (ESA-95) also arose, in such a way that the new system would constitute a version of SCN-2008, adapted to the structures of the economies of the Member States, and the EU data would be comparable with the data from its main international partners.

As of September 2014, the Regulation\(^2\) establishing the new European System of National and Regional Accounts (ESA-2010) will enter into force, replacing the current ESA-95\(^3\), for the purpose of adapting the national accounts, as much as possible, to the new economic environment, to the advances in methodological research and to user needs.

In general, ESA-2010 is consistent with SCN-2008, with regard to definitions, accounting rules and classifications. However, it incorporates certain differences,

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\(^2\) European Parliament and Council Regulation (EU) No. 549/2013, of 21 May 2013, regarding the European system of national and regional accounts in the European Union must be applied, for the first time, to the data transmitted to the European Commission (Eurostat) as of 1 September 2014.

particularly in its presentation, which is more in line with its specific use for European Union.

The INE will include the new methodology of ESA-2010 in the Spanish National Accounts operations, through an accounting base change operation. The new base 2010 of the Spanish National Accounts (SNA-2010) will include a series of methodological and statistical modifications with regard to the current accounting base 2008. The former fundamentally refer to the integration of the main contents in ESA-2010 into said system.

As is customary in base change operations in the area of the national accounts, statistical changes will arise out of the use and adaptation of new statistical sources (or revisions in those existing) as well as out of the application of new estimation methods and procedures of accounting aggregates.

The document is structured as follows:

Firstly, this specifies the dissemination calendar of the SNA operations throughout the year 2014, both in base 2008 and, as of September, those that will be disseminated in base 2010.

Some of the methodological changes incorporated into the new base 2010 of the SNA are expressed below: Said changes are mainly those derived from the adaptation of the SNA to ESA-2010.

The following section describes the main statistical changes that will be included in SNA-2010.

Lastly, some conclusions are presented.

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### 2. Calendar

The tasks relating to the implementation of the new accounting base of the SNA will still be performed throughout this year, 2014. The first results will be available at the end of the month of September. Nevertheless, until said date, it will be necessary to perform the work aimed at establishing base 2010 of the SNA at the same time as carrying out the estimation tasks corresponding to the publications dependent on the current base, 2008.

In this way, the SNA-2008 publications that are planned for 2014 are as follows (in chronological order):

- Spanish Regional Accounts. First estimate of the year 2013. Publication date: 31 March.

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* As of the date of this document.

Preview estimate of quarterly GDP. First quarter of 2014. Publication date: 30 April.

Quarterly Spanish National Accounts. First quarter of 2014. Publication date: 29 May.


Preview estimate of quarterly GDP. Second quarter of 2014. Publication date: 30 July.


Likewise, the transfer of data within the framework of the first notification of 2014 regarding the Excessive Deficit Procedure \(^5\) will be performed within the framework of the current base 2008 of the SNA.

The consumption indicator for the territorial distribution of VAT referring to 2012, which will be published at the end of July 2014, will also be calculated using base 2008 in the data from SNA operations that enter into its calculation.

As of September 2014, all publications of the SNA will refer to base 2010 thereof.

Thus, in the second fortnight of September, the first results in base 2010 will be published:

- Origin and destination tables of base year 2010.

Prior to 1 October, the notification that must be made within the framework of the Excessive Deficit Procedure, as well as the notification that must be made before 22 September within the framework of the Decision on the Resources of the European Communities themselves, according to the Regulation on Gross Domestic Income\(^6\) will be made in the new base 2010.

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\(^5\) It must be performed, in any case, prior to 1 April.

The following publications in base 2010 will be:

- Quarterly Non-financial Accounts for the Institutional Sectors. Accounting series from the first quarter of 2010 to the second quarter of 2014, and retrospective series from the first quarter of 1999 to the last quarter of 2009. Publication date: 16 October.

- Preview estimate of quarterly GDP for the third quarter of 2014. Publication date: 30 October.

- Quarterly accounting series from the first quarter of 2010 to the third quarter of 2014, and retrospective series from the first quarter of 1995 to the last quarter of 2009.

In the month of December 2014, base 2010 of the remaining SNA operations will be published:


### 3. Methodological changes

The methodological changes that will be included in base 2010 of Spanish National Accounts are mainly those derived from the adaptation of the Spanish National and Regional Accounts to the regulations of the new European System of Accounts (ESA-2010) passed by European Parliament and Council Regulation (EU) 549/2013 of 21 May 2013.

The revised European System of Accounts, established by said Regulation, include a methodological part (Annex A) and a programme for data transfer (Annex B) that defines the accounts and tables that all Member States must provide to the European Commission in accordance with the deadlines specified therein. In this way, all Member States of the European Union (EU) have the legal obligation of adapting to ESA-2010 in September 2014, when the programme for data transfer included in this Regulation enters into force. Therefore, as of that date, the national accounts data for all of the EU will be compiled, bearing in mind this new methodology.

ESA-2010 replaces the current 1995 European System of National and Regional Accounts (ESA-95), for the purpose of adapting the national accounts, to a greater extent, to the new economic environment, to the advances in methodological research and to user needs.

In particular, the changes that have occurred in the economies in recent years: the growing role of the information and communications technologies in production processes, the growing importance of intangible assets or the growing

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globalisation of national economic systems, have led to the need for modifications in the way in which macroeconomic statistics are compiled. Said adaptation has taken place, not only on a European level, but also on a worldwide scale.

It is necessary to highlight that ESA-2010 (as in the case of SCN 2008) is harmonised with the concepts and classifications used in many other social and economics statistics (for example, employment statistics, industrial statistics and statistics regarding foreign trade).

DIFFERENCES IN THE ESA-2010 METHODOLOGY WITH REGARD TO THE ESA-95 METHODOLOGY

There are multiple methodological changes in ESA-2010 with regard to ESA-95. This document will refer to the most significant changes.

In this way, the modifications entailed by the introduction of ESA-2010 in the register or assessment of some operations will be commented, bearing in mind their possible incidence in the estimates of Gross Domestic Product (GDP), given the importance that this aggregate has for the analysis and monitoring of economic activity.

Likewise, reference will be made to those principles established in ESA-2010 that imply significant changes that affect the definition of the institutional sectors and subsectors. Said changes mainly refer to the extension of the guidelines over the delimitation of the Public Administrations sector (S.13) and to the greater level of detail in the breakdown considered for the Financial Institutions sector (S.12).

Bearing in mind these considerations, some of the changes entailed in the methodology established in ESA-2010 over the methodology from ESA-95 are as follows:

Recognition of the expenditure on research and development (R&D) as gross capital formation

ESA-95 did not recognise R&D as gross capital formation, despite assuming that it boasted a significant contribution to economic growth. Instead of that, R&D expenditure was registered as intermediate consumption, that is, as if its use in the production process had completely ended at the end of the period.

However, for a long time, experts have considered research and development (R&D) to possess the characteristics of a fixed asset: it has defined property rights, a use that is repeated and ongoing over time, and it produces benefits for the production processes.

In ESA-2010, R&D expenses, whether acquired or produced for the internal use of the unit\(^8\), are treated as an investment in fixed assets, and therefore, the depreciation of said assets is treated as the consumption of fixed capital.

\(^8\) With the exception of R&D purchases by units whose main activity is research and development, in whose case R&D expenditure will continue to bear the consideration of intermediate consumption.
This change will imply an increase in GDP, with regard to that calculated according to the ESA-95 methodology.

**Recognition of military expenditure as gross capital formation**

According to ESA-95, only the acquisition of military structures and equipment considered to have an equivalent civilian use shall be registered as gross capital formation (for example, airfields, roads, hospitals, etc.). As a result, according to this methodology, all armament expenses were registered as intermediate consumption of the Public Administrations sector.

In ESA-2010, the definition of fixed assets in the military area is harmonised with the general definition of fixed assets for the rest of the economic sectors. Thus, the definition of assets of a military nature extends to weapons and support systems, even if they lack an equivalent civilian use. In this way, military armament, armoured vehicles, submarines, military aviation, tanks, missile launchers, etc., all used continuously for more than one year in the production of defence services, are considered to be fixed assets; their purchase is considered to be gross capital formation, and the amortisation thereof over time is accounted for as fixed capital consumption, and therefore, production of the sector. Conversely, single-use articles, such as ammunition, missiles, bombs, etc., are considered to be stock, and not fixed assets.

This change will produce the effect of an increase in GDP, though said effect will not occur in the year of acquisition of the asset, but rather in the following years of the useful life thereof.

**Small tools**

ESA-95 established a monetary threshold (500 ECU at 1995 prices), through which, expenditure on small tools was recognised as gross capital formation.

ESA-2010, however, does not define a fixed expenditure limit for the classification of small tools as intermediate consumption or investment. The criterion for recognising this as expenditure on gross capital formation is the use in production processes for more than one year.

This change may have a small positive or negative impact on GDP.

**Assessment of production for own final use by market producers**

Both ESA-95 and ESA-2010 define production for own final use as those goods or services that an institutional unit preserves, both for its own final consumption or for gross capital formation. Both set out that production for own final use is valued at the basic prices of similar products sold on the market.

In the case that the basic prices of similar products are not available, ESA-1995 recommended that this production be assessed based on costs. However, for this case, ESA-2010 establishes adding a margin (except for non-market producers) for the net operating surplus or net mixed income to the production costs.

Said change may affect GDP, but in any case, it will have a smaller impact.
Assignment of the production of the Central Bank

ESA-1995 and ESA-2010 establish that the production of the Central Bank must be calculated as the sum of the costs of its activity.

In ESA-1995, this production had to be imputed as intermediate consumption by other financial intermediaries (subsectors S.122 and S.123).

In ESA-2010, however, this production has a different destination: only the part that is not directly invoiced commissions or fees shall be assigned as intermediate consumption by other financial intermediaries.

As a result of this accounting change, Gross Domestic Product will increase as much as the commissions and fees charged to non-residents (exports), as well as to resident units for which such payments entail final consumption (Public Administrations, Non-Profit Institutions Serving Households (NPISH) and the Households themselves). It is expected that the impact on GDP will be small.

The triangular merchandise trade (Merchanting)

According to the guidelines set out in ESA-95, this type of operation was not registered as exports and imports of goods, but rather, the difference between the purchase price and the resale price was accounted for as a "merchanting" service.

ESA-2010\(^9\) includes a different processing for these operations, which is consistent with the criterion of the ownership change of the goods. Thus, these operations must be registered as exports and imports of goods in the accounts of the producer and the accounts of the final buyer, respectively, and as the net export of goods (goods "under merchanting") in the accounts of the economy where the seller resides. Nonetheless, this change does not affect GDP.

Goods sent abroad for processing, without a change in ownership

ESA-95 used a gross registration method for this operation. In this way, those goods sent abroad for processing were imputed an ownership change when it did not take place, and they were accounted for as exports, and subsequently, as imports of goods, at a greater value, once they were processed.

ESA-2010\(^10\), however does not impute said change in ownership. Therefore, according to the new system, such exports and subsequent imports of goods must not be registered, but rather, only the transformation service should be accounted for as an import (and export from the country of the transformer), by the value thereof. As a result, and with regard to the previous accounting system, on the one hand, this recognises a new processing service (service for manufacturing physical inputs owned by other), whereas, on the other hand, this type of goods sent abroad, and which return after processing, shall not be accounted for in the import and export figures.

Delimitation of the Public Administration sector (S.13)


It is necessary to note that, in the new system, ESA-2010, there is a more extensive and comprehensive treatment of matters relating to the public sector. This fact is explained by the growing political demand for accurate figures regarding the Public Administrations, and the accumulated experience in the application of ESA-95 for obtaining reliable estimates.

In this sense, ESA-2010 expands the guidelines on the delimitation of the institutional sector of the Public Administrations.

In accordance with ESA-95, an entity is classified in the Public Administration sector if it is not a separate institutional unit of the public administration, or if it is an institutional unit controlled by the public administrations and it is a non-market producer. A non-market producer offers all or most of its production free-of-charge or at economically insignificant prices. By agreement, the "50% rule" is used to define when production is sold at economically significant prices: this rule entails that sales cover more than 50% of production costs.

In ESA-2010, in addition to applying the 50% rule of sales over costs, some additional qualitative criteria are considered that ensure that the unit truly operates in market conditions.

Likewise, the new system modifies the calculation of the sales/costs ratio used to apply the "50% rule". In particular, it is necessary to highlight that the cost of capital (net financial costs) must be included as a production cost.

The inclusion of net financial expenses in the denominator of the "50% rule" may possibly produce a modification in the number of units classified in the Public Administrations sector, which will introduce certain changes in the measurement of the public deficit and debt, of added value and of GDP.

In this sense, it is appropriate to highlight that the General Intervention Board of the State Administration (IGAE), is the body in charge of compiling the non-financial accounts of the Public Administrations Sector, according to what is explicitly included in the National Statistical Plan.

In addition, the IGAE, the Bank of Spain and the INE work closely on the framework of the Technical Committee of National Accounts, so as to guarantee the correct application of the ESA-2010 methodology to those issues relating to the accounts of this institutional sector.

**Sub-sectors of the Financial Institution Sector (S.12)**

ESA-2010 establishes a greater breakdown by sub-sector of the Financial Institutions sector. The availability of greater detail in the information will allow a more comprehensive analysis of the sector and will provide more consistency with the financial statistical systems of the European Central Bank (ECB) and the International Monetary Fund (IMF).
The breakdown into five sub-sectors of ESA-95 will extend to ten in the new system\textsuperscript{11}, and includes a new sub-sector, Financial Institutions of a limited scope and moneylenders (S.127), in which the "holding" companies are classified.

In ESA-95, "holding" companies were defined as institutional units that controlled a group of affiliates, and were classified in the sector corresponding to the main activity of the group.

In ESA-2010, however, in line with the International System of Industrial Classification (ISIC), and with the Classification of Economic Activities in force (NACE Rev. 2/CNAE 2009), a "holding" company is defined as an institutional unit with assets of a group of affiliates whose main activity is that of being the owner of the group, but which does not participate in the control and the management of the activity of its affiliates. These companies are classified in sub-sector S.127 of the Financial Institutions Sector.

In this way, it is possible to produce a reclassification of units that will imply a transfer from the non-financial sector to the financial institutions sector. This change will not affect the aggregated measurements of the economy (including GDP), but will have a significant effect on the sectoral distribution (financial/non-financial) of these magnitudes.

INCORPORATION OF ESTIMATES ON ILLEGAL ACTIVITIES

The new base 2010 will include estimates of illegal activities in the Spanish national and regional accounts.

ESA-95 already set out that illegal activities (for example, prostitution and drug trafficking) should be included within the production boundaries of the national accounts. Nevertheless, it was agreed by Eurostat and the Member States of the European Union that the sources and methods to deal with these estimates needed to be analysed thoroughly in order to guarantee their correct inclusion in national accounts. In this sense, a working group was created with the support of the GNP Committee\textsuperscript{12}, who presented their conclusions in 2002, and in the GNP Committee meetings between 2010 and 2012 this issue was repeatedly dealt with.

The introduction of the illegal economy into national accounts has been one of the "cross-sectional reserves"\textsuperscript{13} that the European Commission notified the Member States of in 2012, within the context of the Eurostat audit of the use of Gross National Income (GNI) data.

\textsuperscript{11} Central Bank (S. 121), Deposit companies, except the Central Bank (S. 122), Monetary market funds (S.123), Non-monetary investment funds (S.124), Other financial intermediaries, except insurance companies and pension funds (S.125), Financial auxiliaries (S.126), Financial institutions of a limited scope and moneylenders (S.127), Insurance companies (S.128) and Pension funds (S.129).

\textsuperscript{12} Currently, the Gross National Income Committee (GNI Committee), cooperation forum between the Member States and the European Commission for verification and improvements of the work performed on the GNI.

\textsuperscript{13} The Commission reserves its position with regard to the accuracy of the GNI data used within the framework of the calculation of the EU resources for the 2002-2010 period, as per this matter affecting all of the Member States. The countries must transmit the changes in the GNI resulting from the notified points of action prior to the end of September 2014.
Domestic Income (GDI) within the framework of the resources of the European Union itself.

ESA-2010 also presents the inclusion of illegal activities within the boundaries of production. Among the reasons for including illegal activities in the national accounts is the total consistency of the system, or the comparability among countries (a certain activity, such as prostitution, may be legal in one country and illegal in another).

However, due to the nature of an illegal activity, the estimation thereof presents significant difficulties. In this way, the national accounts must face three main challenges at the time of undertaking their measurement: the availability of reliable information sources, the use of good estimation methods, for the purpose of achieving precise estimates and the risk of a dual accounting of production, expenditure and income, on adding explicit estimates of illegal activities.

The corresponding experience of other European countries that have carried out studies or that have already integrated estimates of illegal activities in their national accounts, shows that the results may vary, depending on the focus used and the assumptions made. Eurostat has prepared a guide of methodological recommendations, based on the best practices for measuring and estimating illegal activities as carried out by some of these countries. The National Statistics Institute (INE) is using these recommendations as a basis for performing estimates of the most significant illegal activities in Spain: prostitution, drug trafficking, tobacco smuggling and illegal gambling.

It is expected that the measurement of GDP will increase with this change.

4. Statistical changes.

As is customary in base change operations in the area of the national accounts, statistical changes will arise out of the use and adaptation of new statistical sources (or revisions in those existing) as well as out of the application of new estimation methods and procedures of accounting aggregates.

In particular, those changes that the new base 2010 of the national and regional accounts of Spain will introduced, and which correspond to the incorporation of new sources of statistical information, refer to two fundamental aspects:

Incorporation of the information derived from the new 2011 Population and Housing Census

This statistical change is especially relevant, as it affects multiple operations of the national accounts, both directly, in those in which the Population and Housing Census is used as a basic source (production of dwelling rental services), and indirectly, through its impact on those surveys targeting households (Economically Active Population Survey or Household Budget Survey).
With regard to the production of dwelling rental services, ESA-2010\textsuperscript{14} establishes that, in the rental services of dwellings that are occupied by their owners, the production of said services is measured by the estimated value of the rent that a tenant would pay for the same accommodation, bearing in mind the location, area installations, etc. as well as the size and quality of the dwelling itself. The system also sets out that the stratification method is used, in order to estimate the value of the rental services of those dwellings that are occupied by their owners. The housing base will be stratified, according to the location, type of rent, and other factors that have an influence on rent. The average rent that will be applied to each stratum is the private market rent to be paid for the right to use an unfurnished dwelling of those characteristics. The stratification method will be used to elevate the total rented dwellings.

Thus, the incorporation of the 2011 Census in base 2010 of the Spanish National Accounts as a source of information for the housing base will imply a change, whose sign it is not possible to foresee for the moment, in the estimation of those operations relating to the dwelling rental production services, with regard to those registered in the current base 2008: production, added value, household final consumption expenditure, and therefore, GDP.

Some surveys targeting households constitute the basic source used in the estimations of main aggregates in the national accounts system. This is the case of the Economically Active Population Survey (EAPS), with regard to the employment variable, as well as the Household Budget Survey (HBS), in reference to the household final consumption expenditure.

The information on population figures, the structure thereof by age, and following demographic characteristics and composition of households, is essential in these surveys, as it is used to elevate the data obtained to the whole of the population.

Thus, the incorporation of the new population and housing series of residents in Spain, derived from the 2011 Population and Housing Census, sets a population base change thereof, and with it, an updating of its results.

In the case of the EAPS, the data for the first quarter of 2014 and the retrospective series\textsuperscript{15} will be published on 29 April. At the end of July 2013, the HBS published the results corresponding to the year 2012, using the new figures derived from the 2011 Census\textsuperscript{16}.

The new base 2010 of the Spanish National and Regional Accounts will include the revised results of these surveys. The effect of the integration of this new information on the accounting aggregates, and in particular on GDP, will depend as much on the magnitude of the revisions of the aforementioned sources, as on the sensitivity of this aggregate to the variables of the variables estimated using said surveys.

\textsuperscript{14} ESA-95 included similar recommendations.

\textsuperscript{15} At least until the first quarter of 2002.

\textsuperscript{16} The complete, revised and comparable 2006-2012 series will be available at the end of the first quarter of 2014.
Incorporation of the methodology changes and of the information system of the Balance of Payments statistics in 2014

In 2014, the Balance of Payments statistics will adapt their methodology to the sixth edition of the Manual of the Balance of Payments and International Investment Position (MBP6) of the IMF\textsuperscript{17}. Likewise, and as a result of the modification of the regulation of trans-border payments, which has made it impossible to maintain the traditional system for the declaration of foreign transactions to the Bank of Spain, in 2014, a significant change will also take place in the sources of information used to compile the Balance of Payments, and those headings in the International Investment Position, which in the absence of sources directly providing stocks, were still calculated by the accumulation of flows.

The changes in the Balance of Payments statistics will be incorporated in base 2010 of the Spanish National and Regional Accounts.

In this sense, a working group has been created, made up of experts from the Bank of Spain and the INE, to act in close collaboration in these change processes, and to guarantee the necessary consistency among the accounts from the Rest of the World of the National Accounts and the Balance of Payments.

The incorporation of the changes into the methodology, and of the information system of the Balance of Payments Statistics, will have an impact on the imports and exports of services, and therefore, on GDP, as well as on the rest of the operations comprising the accounts of the Rest of the World and those of the total for the National Economy.

Though it is expected that the effect of this change will be significant, with the information currently available, it is not possible to provide a preview of the sign and magnitude of the impact thereof on GDP.

On the other hand, as is customary in base changes in national accounts, new base 2010 produces revisions of the estimation of given accounting aggregates, which have the purpose of improving the quality of the data estimated in the economic accounts. Some examples are the estimation of software production for own final use of the Public Administrations Sector or the performance of a thorough study of the units that will be part of the Non-Profit Institutions Serving Households (NPISH) Sector. The possible impact of these revisions on GDP is currently unknown.

\textsuperscript{17} Both the European Commission (EC) and the ECB have performed updates, as a result of its information requirements, in such a way that, this year, they will begin to apply EC Regulation 515/2012 and ECB Orientation 2011/23.
5. Conclusions

As of September 2014, the European Parliament and Council Regulation\(^\text{18}\) established by the new European System of National and Regional Accounts (ESA-2010) enters into force.

The INE will incorporate the new ESA-2010 methodology in the operations of the System of National Accounts, through an accounting base change operation. Thus, the new base 2010 of the Spanish national accounts will include methodological and statistical modifications, with regard to the current 2008 accounting base. The former mainly refer to the integration of the main content in ESA-2010 into said system, whereas the statistical changes will be based on the use of new sources of information and on the application of new estimation methods.

These changes will determine a variation in the level of the main aggregates, and specifically, in GDP. For the moment, however, it is not possible to ascertain the magnitude that the aggregated effect might have on all of them (methodological changes and statistical changes), due to the fact that some may be compensated, to a certain extent, with others of the opposite sign.