



**Issues Related to the Introduction of ESA 2010 in Europe**

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### 1. Introduction

In 2009 the new System of National Accounts (2008 SNA) was finalised. The European System of National and Regional Accounts 2010 (ESA 2010) is the adaptation of 2008 SNA to the context of the European Union. ESA 2010 is consistent with the 2008 SNA with regard to definitions, accounting rules and classifications. It nevertheless incorporates certain differences, particularly in its presentation, which is more in line with its specific use in the EU. The specific situation refers to the fact that macroeconomic figures in Europe, besides the 'traditional' roles of preparation and evaluation of policy, also play a major role in various "administrative" procedures, e.g. the excessive deficit procedure, the macroeconomic imbalances procedure, the EU budget own resources and the structural funds. ESA 2010 was adopted as a legally binding regulation 549/2013 on 21 May 2013 by the European Parliament and the Council. It comprises binding methodological rules and a compulsory data transmission programme.

In September 2014 the Member states of the European Union will transmit the national accounts data to Eurostat according to ESA 2010. Long before the finalisation of 2008 SNA, the preparation of the implementation of the new ESA already started. After providing a brief overview of the main methodological changes compared to the previous ESA 95 standards (part 2), the paper describes the actions undertaken to facilitate the implementation of ESA 2010 (part 3). A number of specific difficulties are then presented (part 4), before drawing some conclusions (part 5).

### 2. Main methodological changes

Five main methodological changes between ESA 95 and ESA 2010 are presented below. For a full list of changes the reader is referred to the Manual on changes between ESA 95 and ESA 2010 (European Union, 2014a).

#### *Capitalisation of research and development expenditure:*

Research and development (R&D) has long been recognised by economists as having the characteristics of fixed assets: defined ownership rights, long-lasting and repeated uses and benefits in production process. In a modern, more and more digitalised economy, the characteristic of R&D as investment for the future is even more essential.

However, ESA 95 did not recognise R&D as capital formation, despite the fact that it is thought to be a major contribution to future economic growth. Instead, R&D expenditure, whether conducted on own account or purchased, was recorded as intermediate consumption, meaning that it was recorded as "completely used in the production process" at the end of the period. As a result, the balance sheet of the economy was understated, as well as GDP and operating profits. In ESA 2010, outputs of R&D are now capitalised, meaning they are recognised as assets and the acquisition, disposal and depreciation of R&D fixed assets will be treated in the same way as other fixed assets. This is the major improvement introduced by 2008 SNA and ESA 2010. In the conservative world of accounting, it is quite a bold change, coming way ahead of business accounting practices. It will lead to macroeconomic balance sheet data that have better analytical capacity.

The most immediate and visible impact for users will be that the level of GDP will be increased for all countries, by an amount depending on their investment in R&D. According to preliminary estimates the level of GDP will be boosted by 1.9% in Europe (weighted average of Member States)<sup>1</sup>. The impact of this change has been estimated at 2.5% in the United States, due to, relatively, more R&D expenditure in the US. However, the European figure is an average that masks diversity among Member States due to variability in their respective R&D expenditure.

*Military expenditures:*

In ESA 95, military acquisitions of weapon systems and their means of delivery such as military aircrafts or vessels were treated as intermediate consumption regardless of their life length. This treatment does not correspond to the economic reality as weapons and their means of delivery are used for a long period and can even be exported after several years. ESA 2010 treats as gross fixed capital formation all expenditure by the military which meets the definition of being used in production over a period in excess of one year, regardless of the nature of the expenditure or the purpose intended for it, in particular regardless of its destructive potential. The impact of this change for the accounting of destructive weapons and their means of delivery on GDP (equal to consumption of fixed capital of these weapons and means of delivery) obviously differs among countries depending on their military budget; a rough estimate is a weighted average increase of around 0.1% of GDP for the EU as a whole.

*Goods sent abroad for processing:*

The ESA 95 treated goods that are sent abroad for processing and then returned to the country from which they were dispatched as exports for their full value when they leave the first country and in imports when they return to it. In the light of globalisation, the ESA 2010 and the new Balance of Payment Manual (BPM6) use a change of ownership recording which is no more based on physical movement. In fact, the new treatment recognises that the recipient country does not export goods but exports its processing services.

Under ESA 2010, the value of goods sent abroad for processing will no longer impact both gross imports and gross exports figures. Also, the value of the processing will be re-classified as export/import of services. Thus, in the national accounts and the balance of payments, the level of exports and imports of goods will be reduced while the level of exports and imports of services will

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<sup>1</sup> The impact on GDP growth figures for recent periods will be small.

increase. This is important for international trade analysis. For example, for countries that significantly undertake processing, their goods trade balance will be negatively impacted, while their service trade balance will be positively impacted.

It is important to note that, as the new recording affects symmetrically exports and imports, there is practically no impact on the overall *balance* of external trade of goods *and* services. So there is no impact on GDP. It is premature at this stage to estimate the impact on the levels of EU imports and exports expressed in national accounts and balance of payments.

#### *Pension schemes:*

ESA 95 recognised pension obligations on the balance sheet only for funded schemes; unfunded employer schemes did not lead to recognition of liabilities for the employer. Also no pension entitlement was recognised for households (employees and retirees) in the case of unfunded schemes.

ESA 2010 recognises in its core accounts employment-related pension entitlements, irrespectively of whether the schemes are funded or not. In addition, a supplementary table presents all accrued-to-date pension entitlements in social insurance; including unfunded government pension schemes and social security pensions. The supplementary table will provide a powerful tool for economic analysis of households' pension wealth across countries.

ESA 2010 also changes the recording of lump sum payments that are sometimes received by governments from public corporations in exchange of the taking over of the pension liabilities of these employers. Previously, under ESA 95, such a lump sum was considered revenue of the government, and thus positively impacted its deficit in the year of the transaction. ESA 2010 does not recognise it as revenue, as, in fact, it is compensated by an increase in the pension obligations of the government. This may lead to some correction of the deficit figure for the few Member States that have recently undertaken such transactions.

#### *Non-life insurance:*

ESA 2010 will in particular improve significantly the measure of the contribution of insurance services to GDP. Under the previous system, this contribution was based on the difference between premiums and claims. As the level of claims may be quite volatile (catastrophes are more and more frequent), the result was itself volatile. In ESA 2010, the formula of calculation of the non-life insurance output has been amended in order to smooth the level of this output.

#### *Other changes:*

There will be a number of other changes that could affect GDP or some other important variables, such as general government deficit and debt, due, for example, to some reclassification of units notably following the refinement of the 50% sales to costs criterion for the distinction between market and non-market. Based on first preliminary data, the impact of these changes on the aggregates appear limited. As stated above, a complete list of changes can be found in the Eurostat Manual on the changes between ESA 95 and ESA 2010.

### *A new (ESA 2010) data transmission programme:*

Alongside the methodological rules for the compilation of the national accounts figures, also the transmission programme has been changed in order to allow for more detailed and timely data, e.g. on sector accounts and financial accounts. The ESA 2010 transmission programme is the subject of a specific publication in German, English and French (European Union, 2014c).

## **3. Actions to facilitate the implementation**

To facilitate the implementation of ESA 2010 by EU Member States, different actions have been undertaken by Eurostat: the preparation of practical manuals; the development of a training programme; the development of a coordinated communication strategy; and the role of Eurostat as helpdesk.

### 3.1. Manuals

Eurostat has issued four methodological manuals in order to help Member States in the implementation of ESA 2010: a manual on the changes between ESA 95 and ESA 2010; a manual on goods sent abroad for processing; a manual on measuring research and development; and a handbook on prices and volumes. The manuals were prepared by Eurostat in close cooperation with Member states in task forces and working groups. They have been approved by the managing expert group at EU level: the Group of Directors of Macroeconomic Statistics

The manual on the changes between ESA 95 and ESA 2010 presents each change and, on the basis of numerical examples, describes how the various accounts are affected. The starting point of the manual was the list of 44 issues and 29 clarifications which provided the basis for changes to the 1993 SNA to produce the 2008 SNA. Some changes specific to Europe were also included.

The purpose of the Manual on goods sent abroad for processing is to allow for the implementation of the change of ownership principle in a reliable and comparable way. It sets out the implementation issues facing national accounts and balance of payments compilers and describes the sources and methods that can be used to compile data in line with the new standards. The discussions on this manual have showed that international trade activities by non-resident units registered for VAT should be further investigated.

A questionnaire was developed to collect countries' practices and to develop in the near future additional practical recommendations in order to apply the manual's rule – recording the movement of goods by non-resident VAT traders as quasi transit trade – in a comparable way in all Member States.

The manual on measuring research and development in ESA 2010 is based on the work of two Eurostat task forces. It sets out a description of the changes to national accounts of introducing recognition of research and development expenditure as gross fixed capital formation. It provides Member States with the guidance necessary to compile the accounts, in line with Eurostat task forces' recommendations.

The purpose of the handbook on prices and volumes is to update the existing Eurostat handbook on prices and volumes of 2001 to bring it into line with ESA 2010, regarding in particular the measurement of non-market output and of research and development services in volume terms. The new handbook provides a complete discussion of the issues involved in measuring prices and volumes, from the general principles to the deflation of individual goods and services. Research on the issue of explicit quality adjustments in the area of non-market services is being continued, in the context of a small group of EU countries.

Besides the four manuals mentioned above, additional documents have been developed and are available on specific issues like: pensions, regional accounts and quarterly accounts.

### 3.2. Training

The training programme, as requested by Member States, is concentrated on changes between ESA 95 and ESA 2010 and on complex issues required by ESA 2010. Training covers in particular methodological aspects, compilation and recording practices in the national accounts using numerical examples, and issues related to data sources. Trainings are provided by internal experts of Eurostat and external experts specialising on relevant topics of the training programme. The work of the various task forces has been very helpful when delivering the corresponding trainings.

The trainings delivered and/or planned cover the following topics: introduction to ESA 2010 based national accounts; pensions and the related ESA 2010 transmission table; insurance; ESA 2010 and its effects on government finance statistics and the excessive deficit procedure; the ESA 2010 transmission programme and the implementation of SDMX; goods sent abroad for processing; FISIM; indicators of the macroeconomic imbalances procedure.

### 3.3. Communication

Given the widespread use of National Accounts data for analytical, political and administrative purposes in the EU, the introduction of ESA 2010 requires not only a coordinated approach for the implementation of the ESA 2010 by Member States, but also calls for a targeted communication strategy to guide users at all levels in the Member States and in the EU bodies with regard to methodological changes and their impact, data availability and timetables.

In close co-operation with the Member States Eurostat organised a first technical press briefing on 16 January 2014 in Brussels for users at large. In this press briefing also the probable impact of the methodological changes of ESA 2010 on national accounts data was communicated. The documents of this technical press briefing can be found on the dedicated ESA 2010 website of Eurostat.

This website was launched on 2 July 2013 with basic information (major methodological changes, timetable and transmission programme, frequently asked questions) and is progressively complemented by additional documents such as manuals and links to websites of European countries dedicated to ESA 2010 and links to countries that already introduced the 2008 SNA (United States, Australia) and finally to international organisations.

The publication of the ESA 2010 Bluebook methodology provides users and national accounts compilers with a user friendly version of ESA 2010. It comprises a foreword, a list of abbreviations and acronyms and an index (not available in the text of the regulation). This Bluebook is now available in English, German and French but will ultimately become available in all 23 EU official languages.

A high level National Accounts Conference in order to mark the adaption and publication of ESA 2010 has been held in Luxembourg on 12-13 June 2014 in Luxembourg. In the presence of the EU Commissioner concerned, a Minister of Finance, a Member of the European Parliament and a former Minister of Labour and Social policies, some 200 participants including users and experts from EU and non EU countries discussed the new standards and explored the future of national accounts.

Eurostat has launched a new National Accounts Journal as a forum for disseminating scholarly/scientific articles, both of methodological and applied nature, on National Accounts and Macroeconomic statistics. The name of the new magazine is EURONA and the first copy was disseminated during the National Accounts Conference mentioned above. EURONA is available on the Eurostat website.

The next important step in the communication will be a press briefing in October 2014 on the actual results as transmitted by the Member States to Eurostat. Then it will become clear what the overall changes will be. Besides the introduction of ESA 2010, most countries make use of this opportunity to introduce new or changed sources and/or methods. In some cases, this benchmark revision may lead to significant changes in the level of the aggregates.

Finally a combined ECB/Eurostat Conference on the new standards is planned for 14 November 2014. This Conference will be largely focused on Balance of Payments issues.

### 3.4. Helpdesk

During the final stage of the preparation for the ESA 2010 implementation, Eurostat played more and more the role of helpdesk to provide replies on specific issues encountered by Member States. In most cases, clarifications could be provided at short notice but in some cases more time and/or bilateral meetings were needed.

## 4. Specific difficulties

The real 'proof of the pudding' is of course the transmission of the data according to ESA 2010 to Eurostat in September 2014. Following their own release calendar, some countries already published ESA 2010 figures in March, May and June 2014 and other will release the new data in September. On top of that, some countries chose to publish first results in an early stage, to prepare users on the coming events. Based on the experiences thus far, below a number of specific aspects/difficulties can be mentioned.

#### 4.1. Substantial changes in some countries

After implementing the new guidelines, Dutch GDP for the reporting year 2010 appeared to be 44.7 billion euros (7.6 percent) higher than before this revision. The Netherlands, like most other Member States, also executed a benchmark revision. Current sources and methods were evaluated and new sources were introduced. The increase of GDP was for 1.7 percentage points due to the new international guidelines and for 5.9 percentage points to the source revision. On top of this, GNI was adjusted upwards by 10.0 percent. Adjustments of this magnitude need special attention concerning the communication, especially towards some 'heavy users' of national accounts figures like the Ministry of Finance, Ministry of Economic Affairs, CPB Netherlands Bureau for Economic Policy Analysis<sup>2</sup> and the Dutch Central Bank.

In September 2014 Statistics Netherlands will send the new figures to Eurostat. It was decided to disseminate the changes of a limited number of macro-economic aggregates via a short press release already on 6 March 2014. The four 'heavy users' mentioned above were informed in a meeting three days before. In this meeting the different changes and technical aspects were elaborated on. The four organisations appeared to be very satisfied with this procedure. In this way, the senior management and the responsible ministers could be informed in advance<sup>3</sup>. This precluded surprises at the day of the press release (and the subsequent questions of journalists). The press release itself got quite some attention in the press. For background information and figures related to the revision, in the press release reference was made to a more extended publication on the national accounts revision. Journalists asking additional information could also be referred to the website of Eurostat on ESA 2010.

#### 4.2. Implementing the distinction between Head Offices and Holding Companies in National Accounts

A new issue of ESA 2010 is the distinction between head offices and holding companies.

- A holding company (HC) is described as a unit that holds the assets of subsidiary corporations but does not undertake any management activities.
- The activities of a head office (HO) include the overseeing and managing of other units of the enterprise and managing the day-to-day operations of their related units.

Several countries expressed problems in identifying and classifying holding companies and head offices. This is an important issue as the classification of these units, usually being important receivers and payers of property income, may have a significant impact on the allocation of primary income in the non-financial sector accounts. In particular in this respect, it was important to develop recommendations for an internationally comparable treatment of these units. This work was done under the umbrella of the Inter Secretariat Working Group on National Accounts (ISWGNA). A Task Force, initiated and prepared by the ECB, Eurostat and the OECD, met in 2013 in Frankfurt am Main. Their detailed conclusions are available following this link:

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<sup>2</sup> CPB is, amongst others, responsible for the economic forecasts for the Netherlands.

<sup>3</sup> Moreover, this procedure was already followed in previous cases.



### *The identification of Head Offices and Holding Companies*

The statistical analysis of HOs and HCs and their delineation starts after the examination of their institutional independence, which was the first issue tackled by task force. Both types of units are often referred to as holding companies, because both of them have relations to other entities, their subsidiaries.

Starting from this characteristic, information on the structure of the balance sheet is one potential identifier of the relevant group of head offices *and* holding companies. National experts proposed thresholds of - at least - 50% for the share of equity vis-à-vis subsidiaries within the balance sheet total to distinguish HOs or HCs from other institutional units.

It was agreed that:

- An entity having at least 50% of its assets consisting of equity vis-à-vis its subsidiaries can be considered as a practical indicator for the identification of such entities.

Where balance sheet data is not available other supporting information has to be analysed. The information on the relation to an enterprise group (control and ultimate parent, affiliates) in conjunction with small turnover may be one possibility for identifying HOs and HCs.

### *The distinction between Head Offices and Holding Companies*

From a conceptual point of view the distinction between HOs and HCs is clear. However, the international discussion on rules for distinguishing between HOs and HCs showed that information on variables like management control or auxiliary units are available for large units or large groups only. For units where such information is not available, or only available at great cost in practice, the distinction between HOs and HCs should be based on the employment criterion:

- HOs are actively engaged in production. They may have noticeably fewer employees, and more at a senior level, than its subsidiaries. But having zero employment is a clear indication of not being a HO.
- On the other hand, HCs simply holding assets may do this with very few or without any employed personnel. In this respect, it should be noted that the Task Force agreed that a HC without employees will not pass the institutional unit test when it is fully owned by a single resident unit.

A one dimensional application of the employment criterion, classifying all units with employment as head offices, will not lead to perfect results. Requirements set out by national legislation in relation to the institutional set-up of such units may result in some employment recorded in registers. Therefore, the following practical rule should be applied:

- Employment thresholds for the delineation between HOs and HCs should be determined taking into account national circumstances. In particular, national legislative requirements for the number of employees of HCs should be taken into account. As a general indication, employment of three or more persons, or employment exceeding the national legal minimum employment, is a first indicator for a unit being a HO.

Other criteria may refine the delineation process. Finally, it should be noted that the application of these practical criteria wouldn't cover 100% of all cases. Some HOs or HC may show different characteristics and therefore need an individual analysis. In this respect, costs and benefits should be appropriately balanced and transparency should be enhanced by the provision of adequate metadata.

#### 4.3. The capitalisation of R&D expenditure in national accounts – the issue of service life

The issue of service life has proved particularly difficult, given that intellectual property has the attributes of a capital good apart from physical presence: it lasts a long time, can be owned, and will provide expected future benefits, which determine the current value of the intellectual property. It depreciates in value, but only through obsolescence, not wear and tear. Therefore, the issue of service life was a problem for which many countries in Europe had no solution. A questionnaire on this issue was sent out to European countries and only one country, the Netherlands, was able to provide first estimates. These estimates were based on patent data.

In order to solve this last outstanding implementation issue, the task force agreed to provide the following (pragmatic) fall-back position: In case, no information on service life is available to statisticians a service life of ten years should be applied. The application of this recommendation should ensure the reliability and comparability of the estimates where no specific information is available.

However, the countries are invited to do more: The service life of R&D products should be determined according to evidence from the activities where they are most used as capital assets. Where this evidence is not readily available in a Member State, evidence from other Member States with similar industries and R&D products may be used. Where no equivalent Member State and activity can be identified, then general European practice can be followed. Only as a last resort, where no reliable evidence is available for the activity in which the R&D product is used, a service life of 10 years is as acceptable until further reliable information becomes available.

#### 4.4. The issue of illegal activities

Illegal activities have been a requirement for inclusion in National Accounts since the ESA 95 was implemented in 1999. So there is nothing new coming with ESA 2010 or 2008 SNA in this domain. The rules of ESA 2010 on illegal activities are the same as in 2008 SNA.

Headlines like 'Sex, drugs and GDP' (The Economist, 31 May 2014), referring to the inclusion of illegal activities in the GDP calculations by some countries, demonstrate the particular relevance of a clear communication of major revisions in national accounts.

Eurostat developed communication elements, like a paragraph in the frequently asked questions (FAQ) in the ESA 2010 dedicated section of the Eurostat website and circulated a note on the implementation of ESA 2010 to Member States in order facilitate a harmonised communication on illegal activities.

## **5. Conclusions**

In this paper we have presented the main aspects related to the introduction of major new standards like ESA 2010 and the actions taken to prepare their implementation in the particular context of an organisation like the EU. These actions cover the preparation of practical manuals, training courses and an extensive and co-ordinated communication strategy.

Some particular difficulties have also been mentioned: communication of substantial changes and of illegal activities, the treatment of head offices and holding companies and the service life of Intellectual Property Products (IPPs).

Work is being continued in a co-operative manner at international level within the Inter-Secretariat Working Group on National Accounts (ISWGNA) and the Advisory Expert Group on a number of implementation issues related to the new standards. Two elements have appeared to be of particular importance in the EU: advanced planning and extensive discussions with the Member States during the preparation phase. This extends to the follow-up of any issues emerging in September 2014 when EU countries will send their actual ESA 2010 data to Eurostat for the first time.

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