

Assessing the quality of national and regional accounts data in the context of the ESA 2010 Transmission Programme

Ani Todorova¹, Julio Cabeça², Johannes Wouters³

¹ Eurostat, Luxembourg, Luxembourg; ani.todorova@ec.europa.eu

² Eurostat, Luxembourg, Luxembourg; julio.cabeça@ec.europa.eu

³ Eurostat, Luxembourg, Luxembourg; johannes.wouters@ec.europa.eu

Abstract

Eurostat has been working with the Member States to set up the quality assessment of national and regional accounts data. This assessment is introduced in the context of the legal requirements applied to these data, the existing quality assurance rules already applied as well as some practical constraints. Although showing a work in progress, the paper presents the pragmatic approach aimed for the national and regional accounts. It articulates the particularities in the choice of quality assessment indicators and makes a suggestion on a possible enrichment of the standard for quality reports.

Keywords: national and regional accounts, ESA 2010, quality assessment, assessment indicators.

1. Introduction

Regulation (EU) No 549/2013 of the European Parliament and the Council establishes the European system of accounts 2010 (ESA 2010). Article 4 of this regulation prescribes that the quality of data transmitted under the ESA 2010 Transmission Programme shall be regularly assessed. This article presents the context into which the ESA 2010 quality assessment is set up and underlines the strong link between the ESA 2010 data and existing quality measures which already apply to some of the data. It further presents the process and the approach towards the ESA 2010 quality assessment and pays attention to constraints which define the main features of the quality reporting. Certain attention is also given to explain the choice of quality assessment indicators for ESA 2010.

The paper shows work in progress. Some proposals can still be reconsidered. Nevertheless, substantial experience was accumulated during the discussions of national accountants from Eurostat and the Member States. The aim is to share this experience with a broader community of statisticians.

2. Context in which the ESA 2010 quality assessment is developed

ESA 2010 data are assessed according to the quality criteria established by Art. 12 of Regulation (EC) No 223/2009. These criteria, namely relevance, accuracy and reliability, timeliness and punctuality, accessibility and clarity as well as coherence and comparability, are applied to statistics produced by the European statistical system (ESS). Consequently, the quality assessment of ESA 2010 data follows the common approach and standards adopted by the ESS.

ESA 2010 is an accounting system. As such, it interacts with primary data, other accounting systems and indicators setting targets and monitoring their achievement in strategic policy fields¹. In the context of the quality reporting, the most important are the links between the ESA 2010 data and the gross national income (GNI) used for European Union's own resource purpose, the excessive deficit procedure (EDP), the Principle European Economic Indicators (PEEIs) and the macroeconomic imbalances procedure (MIP). The GNI, EDP, PEEIs and MIP which compilation uses ESA 2010 data are all covered by specific quality measures as presented below.

GNI at market prices is the policy indicator on the basis of which the European Union determines the financing of its expenditure. The GNI concept stems from the ESA definitions. As defined by the current GNI regulation (Council Regulation (EC, Euratom) No 1287/2003), GNI equals the gross domestic product (GDP) minus primary income payable by resident units to non-resident units plus primary income receivable by resident units from the rest of

¹ To make distinction with the quality assessment indicators, the indicators used for specific policy purposes are referred to as policy indicators in this paper.

the world. The specific rules for GNI quality assurance put the focus on the comparability, reliability and exhaustiveness of the GNI data, including on the use of harmonised definitions and accounting rules as well as appropriate sources and compilation methods. The Commission (Eurostat) shall verify the sources and methods used by Member States to calculate GNI and shall take measures aimed at improving the quality with the assistance of a dedicated committee. The verification process for GNI represents a reinforced procedure since it entails very detailed reporting obligation for Member States, information visits by the Commission to Member States and may result in a decision of Eurostat to publish the GNI data under reservation.

EDP is another example for specific quality requirements. The EDP indicators defined in Protocol 12 of the Treaty on the Functioning of the European Union are the ratio of the planned or actual government deficit to GDP at market prices and the ratio of government debt to GDP at market prices. As prescribed in the same protocol, the ESA definitions are applied. EDP has stringent rules for quality assessment established by Council Regulation (EC) No 479/2009. These rules focus on the compliance with accounting rules, completeness, reliability, timeliness, and consistency of statistical data on government debt and deficit and on the underlying government sector accounts compiled according to the ESA methodology. Similarly to the GNI verification, there are more detailed reporting requirements for Member States, a permanent dialogue between the Commission (Eurostat) and the Member States, including dialogue and methodological visits, consultation with a specific committee as well as the opportunity of expressing a reservation on the quality of the data reported by the Member States.

PEEIs provide general economic information on the European Union, the euro area and Member States. According to the Communication of the Commission to the European Parliament and the Council on the Eurozone statistics (COM(2002) 661 final), the quality objectives for the PEEIs comprise the complete statistical coverage, consistency between the different sets of data, the transparency of the methods applied, sound monitoring and detailed explanations of data revisions, and the accessibility of statistical information. The progress on these objectives is monitored annually by the Economic and Financial Committee (EFC) and

then to the Economic and Financial Affairs Council (ECOFIN) to whom Eurostat, in cooperation with the European Central Bank, presents status reports.

Finally, MIP sets up a scoreboard of lead and auxiliary indicators often derived from the ESA 2010 data. According to Regulation (EU) No 1176/2011, this scoreboard is regularly reviewed and the MIP indicators are updated with new information on an annual basis. A Commission proposal for Regulation on the provision and quality of statistics for the macroeconomic imbalances procedure aiming a robust quality monitoring system is forwarded for consideration by legislators. Meanwhile, a three level system for quality reporting is being built up together with the Committee on Monetary, Financial and Balance of payments statistics (CMFB). The first, highest level report is produced annually for the MIP indicators. The second level reports represent the Eurostat (or the European Central Bank) assessment reports for the concerned statistical domains. The third level reports are the reports by Member States on the data transmitted to Eurostat (or to the ECB). In cases if such reports are not established, their templates are developed with the assistance of the CMFB. This current approach for quality assurance of the MIP indicators builds on the requirements of Art. 12 of Regulation (EC) No 223/2005. The future ESA 2010 quality reports would be embedded into this three level system.

This overview shows that, prior to the introduction of the quality assessment according to the Regulation (EU) No 549/2013, some of the ESA 2010 data are already covered by quality assurance measures. The quality criteria applied to the policy indicators and their underlying data have the same definitions as the ones defined in Regulation (EC) No 223/2009.

Moreover, one or more layers of additional quality checks apply to the policy indicators, beyond the ones envisaged for ESA 2010. These supplementary checks take into account the multiple, diverse and heterogeneous data sources and complex compilation methods inherent to the accounting systems and policy indicators. The links between the ESA 2010 data and GNI, EDP, PEEIs and MIP are therefore important in order that the quality assessment in the context of Regulation (EU) No 549/2013 pays attention to the existing requirements and information while avoiding unnecessary overlaps.

3. Implementation approach and assessment indicators for ESA 2010

3.1. The process

Discussions on how to set up the quality assessment for the ESA 2010 data started in May 2015 with the choice of the ESS standard for quality reports structure (ESQRS) as a basis. The discussion then focused on the ESA 2010 assessment indicators. The specific provision of Article 4 of Regulation (EU) No 549/2013 regarding the quality assessment prescribes that the assessment indicators shall be defined in the Commission implementing act on the modalities of quality reporting. After a review of the relevance of the ESQRS indicators to the national accounts, 36 indicators were initially selected as potential candidates. They were assessed in terms of ambiguity and complexity of implementation. Then, the ESA 2010 tables and variables to which the assessment indicators shall apply were identified. Templates of the quality reports illustrated how these indicators could be applied practically to the tables and the variables. Another review process followed to delineate the information already made available to Eurostat through the quality assessment of policy indicators and the information yet to be collected through the ESA 2010 country reports. Certain overlap however could not be avoided for justified reasons (e.g. on the revision rates of GDP due to user interest). Simplification measures were considered to allow for a gradual implementation of the reporting requirements for Member States during the period until 2020, the year in which the derogations to the ESA 2010 reporting requirements will expire. Finally, the use of metadata was considered as a possibility to complement the quality information. As a result, one year after the start of the exercise, the list of ESA 2010 assessment indicators was streamlined to 12 quantitative and 3 qualitative indicators. This list is yet to be discussed before putting forward the proposal for the Commission implementing regulation.

3.2. Main features of the quality reporting for ESA 2010

ESA 2010 data represent a vastness of statistical information. Notwithstanding the fact that the user interest in the quality of these data is wide, it is necessary if not unavoidable to design the quality reporting in such a manner that it fits the purpose, focuses on the key national accounts variables and remains cost-efficient.

The quality reporting cycle for ESA 2010 is foreseen to be annual as for all other statistical domains. The opportunity of introducing modules on a multiannual basis was explored but abandoned in favour of the streamlined exercise. The countries' reports on the data transmitted within the ESA 2010 Transmission Programme would be drawn from a producer perspective. These reports are not considered for publication although Eurostat encourages the dissemination of metadata type information embedded into the reports. The Eurostat's assessment report would be compiled from a user point of view and become public to satisfy the general interest in data quality.

As mentioned above, because of the complexity of introducing the ESA 2010 methodology many Member States (all but one) have derogations for some of the reporting obligations. So, a gradual implementation of the quality reporting obligations would make it possible for Member States to give priority to the work on derogations. As a result, the current schedule of implementation uses a three step approach: eventual start of the quality exercise by applying the majority of assessment indicators in 2017, extension with few additional indicators in 2019 and adding the last set of indicators and completion of the exercise in 2021.

To keep the workload associated with the ESA 2010 quality exercise reasonable, the reuse of already available information is agreed as a principle. As elaborated in section 2, Member States are already providing a significant amount of information on the quality of ESA 2010 data for the purposes of the assessment of the GNI, EDP, PEEIs and MIP. This information shall be reused. It is an objective of Eurostat that the ESA 2010 quality assessment is consistent with the quality assessment of the policy indicators for the compilation of which the ESA 2010 data are used.

The close link between quality information and metadata has been articulated during the work on the assessment indicators. As a simplification measure, metadata type information is considered for few quality aspects instead of quantitative assessment indicators. Yet, there is a need for discussion on the ESA 2010 approach towards the ESS requirements on the metadata, also in the light of the recent decision of the ESS Committee for introduction of the Single Integrated Metadata Structure (SIMS) in all statistical domains by 2018.

Overall, the current approach towards the ESA 2010 quality assessment ensures that all quality criteria specified in Art. 12 of Regulation (EC) No 223/2009 are respected, that a suitable set of assessment indicators is applied to all tables of the ESA 2010 Transmission Programme and their key variables and that the reporting requirements for Member States are balanced.

3.3. Assessment indicators

Reflection on the assessment indicators is central in the discussion on the ESA 2010 quality assessment. The reason is that these indicators not only define the focus of the analysis during the assessment but also shape the information which will be delivered to the users.

Specifically for ESA 2010, Regulation (EU) No 549/2013 demands that the assessment indicators are established in the Commission implementing act. This requirement ensures a legal stability of the quality assessment process but does not allow for flexibility or a “test and correct” approach.

The list of suggested ESQRS indicators was a suitable basis to start for ESA 2010. Many assessment indicators included in the ESQRS were discarded early in the discussion process as being applicable only to the primary data. Other ESQRS indicators, even if applicable to the national accounts, were later dropped to make the quality exercise fit for the purpose and take account of the existing quality assessment of GNI, EDP, PEEIs and MIP.

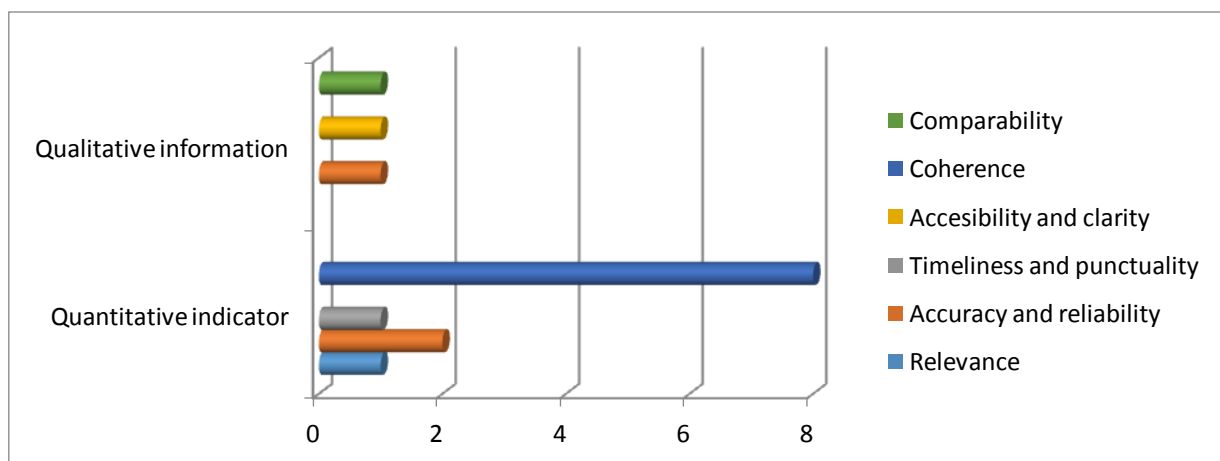


Fig. 1 Distribution of assessment indicators per quality criteria in the country reports

Figure 1 shows the state-of-play of the proposed assessment indicators for the ESA 2010 country reports and the strong emphasis on the coherence analysis of the accounts. Although the ESQRS helped to choose the indicators, the suggestions of the standard were rather poor to reflect the integral nature of the system of national and regional accounts. Eight coherence assessment indicators, namely internal between the tables, annual data and sum of quarters, totals and sum of components, main aggregates and non-financial sector accounts, main aggregates and regional accounts, main aggregates and supply and use and input-output tables, main aggregates and government finance statistics as well as non-financial sector accounts and government finance statistics are defined for the most frequently used national accounts variables. It would be appropriate to consider if the ESQRS can be enriched in the future to offer more suggestions for coherence analysis to the accounting systems.

After coherence, the assessment gives attention to the reliability and accuracy of data. It is known that the user interest in data revisions is strong and that the interpretation of the revisions is a challenge. Eurostat disseminates via news releases quarterly information on the seasonally and calendar adjusted GDP growth rate, seasonally adjusted employment growth rate, seasonally adjusted households saving rate and seasonally adjusted business investment rate. The revision rates of these variables would be presented in the country and Eurostat's reports. The revisions of seventeen annual variables across the whole ESA 2010 would be monitored as well.

It is foreseen that the Eurostat's assessment report would use the same assessment indicators. This report would contain quality information about the data transmitted by Member States and the European aggregates published by Eurostat. In this sense, the overall assessment will be richer in information than the country reports. This is possible because it will draw from the country reports, the information made available through the quality assessment of GNI, EDP, PEEIs and MIP and further data analysis when available. The Eurostat's report will thus reach one of the ultimate aims of the quality exercise, namely to transparently communicate to the users on the quality of the ESA 2010 data.

4. Conclusions

This paper shares the experience with the first introduction of the ESS quality reporting requirements in national accounts. There is an ongoing discussion between Eurostat and the Member States on how to design the ESA 2010 quality exercise. On the one hand side, there is a tradition of robustly assessing the GNI, EDP, PPEIs and MIP to which the national accounts provide underlying data. On the other hand side, the legal requirements applied to the ESA 2010 require that the ESS quality criteria and quality assessment are implemented for national and regional accounts. It is important, therefore, to pay attention to the existing requirements and information and avoid unnecessary overlaps. Besides, the vastness of the ESA 2010 data and the existence of temporary reporting derogations add more constraints on how to implement the ESS standard for quality reports for national and regional accounts. In a collaborative effort, Eurostat and the Member States have been discussing the list of assessment indicators for ESA 2010. The paper sheds a light on how the choice of the assessment indicators has evolved during a year of discussions. The most recent proposal covers all quality criteria defined in Regulation (EC) No 223/2009, puts an emphasis on the assessment of the coherence of the accounts and gives fair information about the reliability of key variables through information on data revisions. The work on the assessment indicators has also pointed out that the ESQRS standard can be eventually extended to offer more tools for coherence analysis of the accounting systems.