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REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

on the implementation of Regulation (EC) No 450/2003 of the European Parliament and of the Council concerning the labour cost index (LCI)

1. INTRODUCTION

Regulation (EC) No 450/2003 of the European Parliament and of the Council of 27 February 2003 concerning the labour cost index (LCI)[1] establishes a common framework for Member States to produce comparable LCIs and provide them to the Commission.

The LCI measures quarterly changes in total hourly labour costs borne by employers, making it possible to monitor developments in the cost pressure arising from the production factor 'labour'. It belongs to the family of euro-indicators that provide information on economic developments in the euro area. The Commission (Eurostat) publishes a quarterly news release on the hourly LCI on its website[2], which contains a complete dataset broken down by economic activity and by the components of labour costs (wage and non-wage costs). The website also includes quarter-on-quarter and year-on-year growth rates.

Article 13 of Regulation (EC) No 450/2003 requires the Commission to submit a report to the Parliament and the Council every two years. As back series were analysed in previous reports, this report focuses on the quality of the LCI data received subsequently. It examines the LCI data provided to the Commission for the reference quarters from the third quarter of 2016 (2016Q3) to the first quarter of 2018 (2018Q1).

In July 2003, the Commission adopted Regulation (EC) No 1216/2003[3], setting out in greater detail the procedures that Member States must follow when sending their LCIs to the Commission, the calendar and seasonal adjustments to be made and the content of the national quality reports.

In March 2007, the Commission adopted Regulation (EC) No 224/2007[4], which amended Regulation (EC) No 1216/2003 and extended the scope of the LCI to the economic activities in NACE Rev. 1 sections L, M, N and O. Those sections include mainly non-market services, the dynamics of which may differ from those of market services.

In August 2007, the Commission adopted Regulation (EC) No 973/2007[5], which amended a number of regulations on specific statistical domains, including the LCI, in order to implement the statistical classification of economic activities in NACE Rev. 2.

Annex I to Regulation (EC) No 1216/2003 identifies the following criteria for assessing the quality of the LCI: relevance, accuracy, punctuality of delivery of data, accessibility and clarity, comparability, coherence and completeness. Accessibility and clarity were considered

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1 OJ L 69, 13.3.2003, p. 1.

2 The quarterly news release is published on the dates set in the release calendar; both can be found on Eurostat's website (in English, French and German); http://ec.europa.eu/eurostat

3 Commission Regulation (EC) No 1216/2003 of 7 July 2003 implementing Regulation (EC) No 450/2003 of the European Parliament and of the Council concerning the labour cost index (OJ L 169, 8.7.2003, p. 37).

4 Commission Regulation (EC) No 224/2007 of 1 March 2007 amending Regulation (EC) No 1216/2003 as regards the economic activities covered by the labour cost index (OJ L 64, 2.3.2007, p. 23).

5 Commission Regulation (EC) No 973/2007 of 20 August 2007 amending certain EC Regulations on specific statistical domains implementing the statistical classification of economic activities NACE Revision 2 (OJ L 216, 21.8.2007, p. 10).

satisfactory as was already the case in the previous report[6]. Therefore, we focus in this document on relevance, completeness, punctuality, accuracy, comparability and coherence.

2. GENERAL PROGRESS SINCE THE LAST REPORT

No legislative changes have been made since the publication of the last report.

2.1 Improved standards for data collection

A new version of the Statistical Data and Metadata eXchange (SDMX)[7] data structures has been tested with Member States and implemented in production. It uses internationally agreed code lists that are accessible on the web through a dedicated registry[8]. It also makes it possible to collect new optional variables, such as quarterly labour costs and quarterly number of hours worked. The same SDMX data structures have been implemented to transmit LCI data to the European Central Bank (ECB).

Thanks to SDMX standardisation, a new automatic validation tool (STRUVAL) has been implemented that notifies Member States of any IT issue detected in their LCI transmissions.

These initiatives have helped to simplify the production process and reduce the risk of errors due to wrong coding.

2.2 Re-engineering of IT programmes

The programmes used to validate, aggregate and disseminate LCI data have been entirely re-engineered, making it possible to:

- align internal code lists with SDMX standards;
- ensure consistency between the total and the components – the chained indices for wage and non-wage costs are first unchained, then aggregated into totals and finally chained back to the reference year (indirect aggregation);
- update the list of European aggregates; and
- disseminate new indicators.

2.3 Hourly labour cost levels

The Commission (Eurostat) has published annual estimates of hourly labour costs with a NACE Rev. 2 breakdown every year since the first release in April 2016. The estimates, which are based on labour cost levels and LCI trends, are produced three months after the end of the reference period. The coverage includes the NACE Rev. 2 sections with the exception of section L (real estate activities). With the new SDMX data structures, Member States that have opted to transmit their national data instead of Eurostat's estimates can collect annual labour cost levels in this standard.

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6 COM(2017) 71.
7 http://sdmx.org/ (available in English only)
8 https://webgate.ec.europa.eu/sdmxregistry/ (available in English only)

3. DATA QUALITY

3.1 Relevance

The 'changes in labour costs per hour worked' indicator is important for analysing short- and medium-term economic developments. The Commission and the ECB use such an index, which shows short-term labour-cost changes, to assess possible inflationary pressure from developments in the labour market. The index has to be calculated shortly after the data become available, for each Member State, the whole European Union (EU) and the euro area. The LCI is also important for social partners involved in wage negotiations and the Commission uses it to monitor short-term developments in labour costs. It is one of the principal European economic indicators[9].

Users have continued to demand information not only on quarterly percentage changes in labour costs, as measured by the LCI, but also, increasingly, on labour costs in absolute terms (euros per hour). Every April, Eurostat publishes estimates of hourly labour costs in euros and in national currencies with a NACE Rev. 2 breakdown. In addition, it has started disseminating the annual growth rate of hourly labour cost levels and the proportion of total labour costs made up of non-wage costs[10].

The Commission has received positive feedback on the publication of these estimates and will continue to produce the annual labour costs with a NACE Rev. 2 breakdown.

3.2 Completeness

In general, the availability and quality of the LCI has continued to improve. Eurostat received calendar-adjusted data and calendar- and seasonally adjusted data from all Member States. All except Denmark and Sweden (which were granted derogations[11]) also delivered non-seasonally adjusted data.

As regards other European Economic Area (EEA) countries[12], Iceland sent LCI data for two quarters (2017Q2 and 2018Q1) of the reference period and labour cost weights for 2017, while Norway sent data for all seven quarters concerned.

Switzerland informed the Commission (Eurostat) that it had decided not to collect quarterly LCI data.

Despite the improved coverage of seasonally adjusted data, it was decided, after careful analysis of data quality and user needs, to keep calendar-adjusted data as headline figures. All data, including seasonally adjusted estimates, are available on the relevant page of the

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[9] Communication of the Commission to the European Parliament and the Council, *Towards improved methodologies for Eurozone statistics and indicators* (COM(2002) 661).

[10] See the dataset *lc_lci_lev* in Eurobase (in English, French and German); http://ec.europa.eu/eurostat/data/database

[11] Under Regulation (EC) No 1216/2003, Denmark, Germany, France and Sweden are not bound to deliver non-seasonally adjusted data.

[12] Regulation (EC) No 450/2003 does not apply to Liechtenstein.

Eurostat database, thus ensuring clarity and coherence with other price statistics (e.g. the harmonised index of consumer prices)[13].

All Member States provided national quality reports for 2016. These have been validated and made available to the public on the Eurostat website[14].

3.3 Punctuality

Member States' punctuality in sending data to the Commission has improved since the previous report as data were transmitted on time by Greece while the transmissions of Croatia recorded a delay of 1 day maximum, over the whole reference period.

Norway transmitted LCI data on time, as did Iceland (for the two quarters in question).

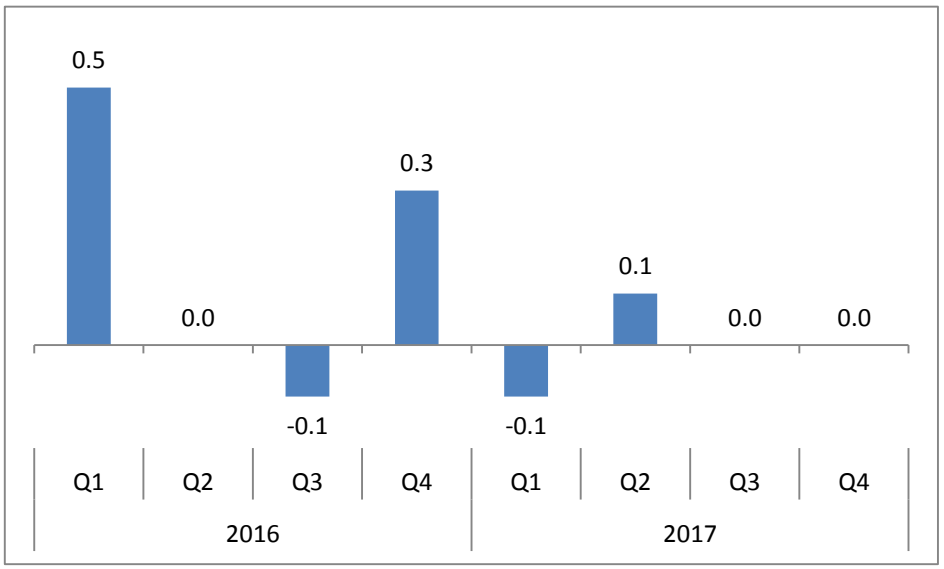
3.4 Accuracy

The LCI is the product of a number of variables (e.g. labour costs and hours worked), which may be taken from several sources. This means that revisions may occur at any time, affecting the last quarter, several quarters or whole years of data. If adjustments to data relate to the reference year, the whole series has to be revised.

Revisions of the EU headline figure[15] (year-on-year growth rate) have exceeded 0.2 percentage points (pp) twice (upwards in both cases) since the first quarter of 2016 (see Figure 1). This was caused by major revisions being recorded in the United Kingdom during the transmission of March 2018. At that point, the UK started to calendar-adjust more series impacting the B to S aggregate, which was therefore substantially revised. Only two other countries (Germany and the Netherlands) recorded noticeable revisions; these were appropriately documented.

[13] http://ec.europa.eu/eurostat (available in English only)
[14] http://ec.europa.eu/eurostat/cache/metadata/EN/lci_esqrs.htm (available in English only)
[15] EU-27 up to and including 2013Q2; since then, EU-28.

Figure 1: Changes to data between the first figure published and the 2018Q1 release for EU-28 NACE Rev. 2 sections B to S (aggregate in percentage points)



Since the previous report, no large revision has been recorded in the LCI data transmitted by Greece, a result of the cooperation between ELSTAT and the Commission (Eurostat) in improving the country's LCI methodology.

3.5 Comparability

Comparability between countries is ensured by the detailed common definitions and methodology laid down in the LCI legislation. Member States fulfil the EU requirements with the data sources available at national level. Most use surveys or a combination of surveys and administrative data; two rely exclusively on administrative sources.

In order to publish LCI data that are comparable over time, it is useful to correct for calendar and seasonal effects. The headline figures are adjusted for calendar effects and seasonality is offset by comparing the same quarters over two consecutive years.

Under Article 1 of Regulation (EC) No 1216/2003, LCI figures must be provided in non-seasonally adjusted, calendar-adjusted, and calendar- and seasonally adjusted form.

Regulation (EC) No 450/2003 does not stipulate whether calendar and seasonal adjustments are to be made using the direct or the indirect approach. Indirect adjustment involves adjusting the basic series and then using them to construct higher-level aggregates. Direct adjustment entails individual adjustment of every single series, including higher-level aggregates.

In the case of LCIs, Eurostat recommends using the indirect approach in order to avoid inconsistencies between total labour costs and components. Such inconsistencies are easily detected by users and may raise doubts as to the overall quality of the LCI.

Using the new IT programmes (see section 2.2), Eurostat's policy is systematically to detect inconsistencies of 0.1 pp or more (after rounding) between totals and components, and to report them to the country concerned in a validation report. The total LCI is then recalculated on the basis of the wage and non-wage components (indirect approach).

Indices are thus calculated using a harmonised approach for all Member States, so as to ensure greater comparability.

3.6 Coherence with national accounts figures

One of the areas that continue to receive attention is the coherence of the LCI with other statistics on labour costs, in particular the quarterly national accounts (NA) data.

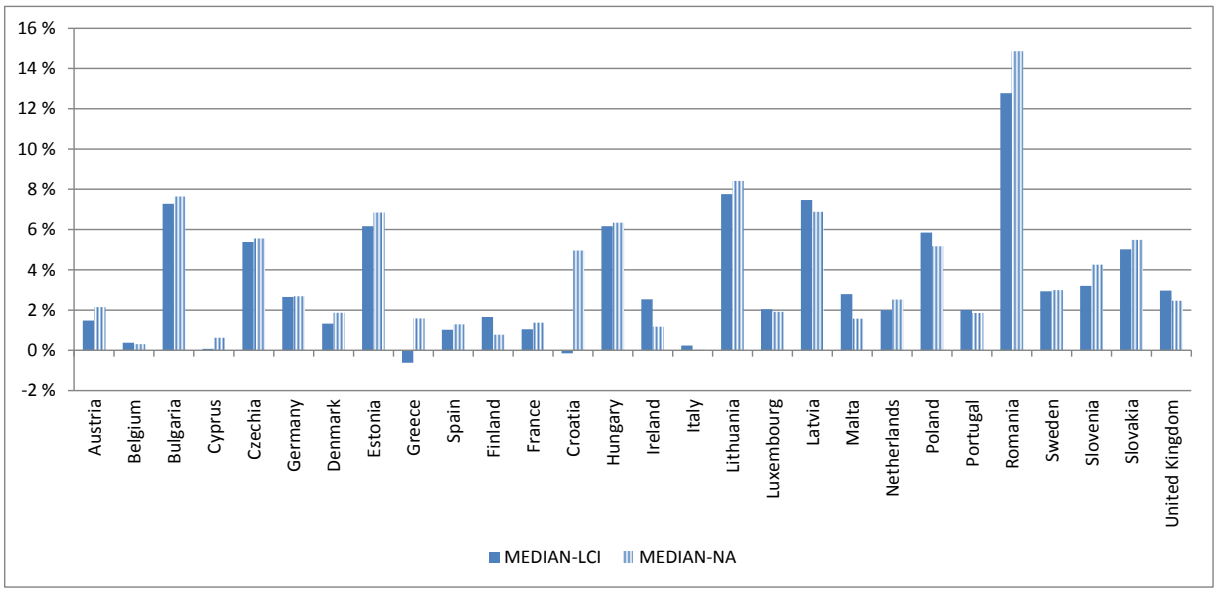
For the annual quality report, Member States are asked to compare the growth rate of the LCI with that of employees' hourly compensation, as found in the national accounts (ESA 2010 definition[16]). It is not realistic to expect the figures to be exactly the same. Even if the definitions of labour cost are almost identical, statistical treatments and sources may differ. In both cases, it is very difficult to collect data on hours worked. Despite the methodological differences, it is informative to analyse the extent of discrepancies between the two datasets. If these are above a given threshold, this may indicate quality issues in one or other.

Eurostat carried out a quality exercise for NACE Rev. 2 sections B to S aggregates for each Member State. For this comparison, we used non-seasonally adjusted LCI data, except for Denmark and Sweden, for which calendar-adjusted data were available. The median annual growth rate of the LCI was compared with that of the hourly compensation of employees over 10 quarters. Variations of more than 1 pp were considered to warrant further analysis. This was the case for Croatia (5.1 pp), Greece (2.2 pp), Romania (2.1 pp), Ireland (1.4 pp), Malta (1.2 pp) and Slovenia (1.1 pp) (see Figure 2).

The results of the analysis will be followed up with those Member States, in particular with respect to data on hours worked.

[16] Regulation (EU) No 549/2013 of the European Parliament and of the Council of 21 May 2013 on the European system of national and regional accounts in the European Union (OJ L 174, 26.6.2013, p. 1).

Figure 2: Median annual growth rates of the LCI vs. hourly compensation of employees (NA) – reference period 2015Q4-2018Q1*



* Except Belgium and Ireland: 2015Q4-2017Q4. NA data for 2018Q1 were not available at the time of drafting.

In addition to the median, we compared the standard deviation of the annual growth rates of the LCI and NA series, as an indicator of volatility. The standard deviation of the LCI series was more than 2 pp above that of the NA in one case only: Sweden, with deviations of 2.8 % and 0.6 % respectively. Sweden will investigate the causes of this difference and inform Eurostat of its findings.

4. CONCLUSIONS

Overall, the quality of the Member States' LCIs and the EU aggregates has continued to improve since the previous report in 2017 – in particular as regards the punctuality of Member States' transmissions, which is now almost completely satisfactory.

The Member States' quality reports have been processed using the latest version of the European statistical system metadata handler and made available to all users.

The use of SDMX standards has been extended and the latest improvements in SDMX format implemented. The complete re-engineering of IT programmes made it possible to:

- ✓ improve the reliability of the production chain;
- ✓ ensure consistency between totals and components by design; and
- ✓ produce new indicators such as annual growth rates and the size of the non-wage component.

In 2017, the Commission (Eurostat) started to publish annual estimates of hourly labour costs by NACE Rev. 2 section, on the basis of labour cost survey levels and LCI trends. It has received positive feedback from users, some of whom used the data to monitor wage developments in Europe and their impact on economic convergence.

The Commission will continue to monitor compliance and data quality on a regular basis, using the data delivered and other national documentation, including quality reports. Where there is little or no improvement, it will follow up closely with the competent national statistical authorities.