European
Commission

Labour Costs Workshop Rome
5-6 May 2015

Agenda Item 4.2
Extending the data collection of the
Labour Cost Index

Cristina.Lopez-Vilaplana@ec.europa.eu

Main items:

I. Background

II. Quality Concerns on the Labour Cost Index

III. Towards sharing the underlying data to calculate the labour cost index: opening the black box

European Commission

I. Background-1: State of play

2014 EC report to EP and the Council on LCI:

- Increasing relevance
  - Macroeconomic monitoring: EC + ECB (inflation / deflation risks)=> PEEI
  - Wage negotiations: social partners
  - Indexation of contracts (e.g. Airbus, Mitsubishi, etc.)

- Improvements in timeliness and completeness

- *BUT further quality improvements still needed:*
  - Consistency between NACE aggregates and components
  - Plausibility of changes in #of hours worked(not collected now)

European Commission

I. Background-2: Definition-Calculation

Regulation 1216/2003:

LCI:

$$\text{LCI}_{tj(k)} = \frac{\sum_i (w_i^{tj}/\omega_i^k) W_i^k}{\sum_i W_i^k}$$

where 1 ≤ t ≤ 4.

w_i^{tj} *= labour costs per hour worked of employees in NACE Rev. 2 section i in quarter t in year j*

ω_i^k *= labour costs per hour worked of employees in NACE Rev. 2 section i in year k*

h_i^k *= hours worked by employees in NACE Rev. 2 section i in year*

W_i^k $= \omega_i^k * h_i^k$ *= labour costs of employees in NACE Rev. 2 section i in year k.*

Weights: $\dfrac{W_i^k}{\sum_i W_i^k}$

European Commission

I. Background-3: Data requirements (Reg.450/2003)

- ***LCI by economic activity*** *(NACE Rev. 2 sections) split into* **wage / non-wage** *costs:*

    (a) total labour costs;

    (b) wages & salaries (D.11);

    (c) employers' social contributions + taxes paid -subsidies received by the employer (D.12 +D.4 - D.5)

- ***LCI for wages & salaries excluding bonuses*** *(D.11112): by economic activity (NACE Rev.2 sections)*

- ***Weights:*** *used to calculate the index*

- ***Index:*** *(a) NSA, (b) WDA, (c) SA*

European Commission

II. Quality Concerns-1: Total/Components inconsistencies

- Either TOT **<** OTH and TOT **<** WAG
  or TOT **>** OTH and TOT **>** WAG

21 countries with inconsistencies in at least 1 of the NSA/WDA/SA series (between 2013Q3 to 2014Q3)

- *NSA: critical* ➤ *issue in underlying data*
- *WDA: highly visible in Eurostat's news release* ➤ *policy of publishing the total index only*
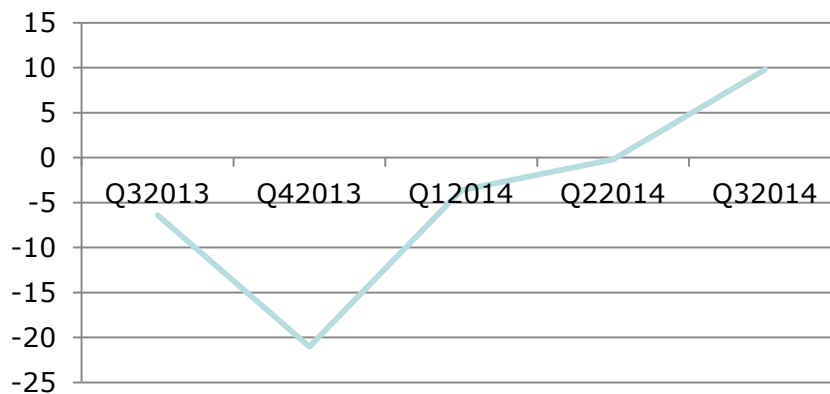- *SA: impacted by the choice of method (direct vs indirect method)*

6

Inconsistencies in 2014q3

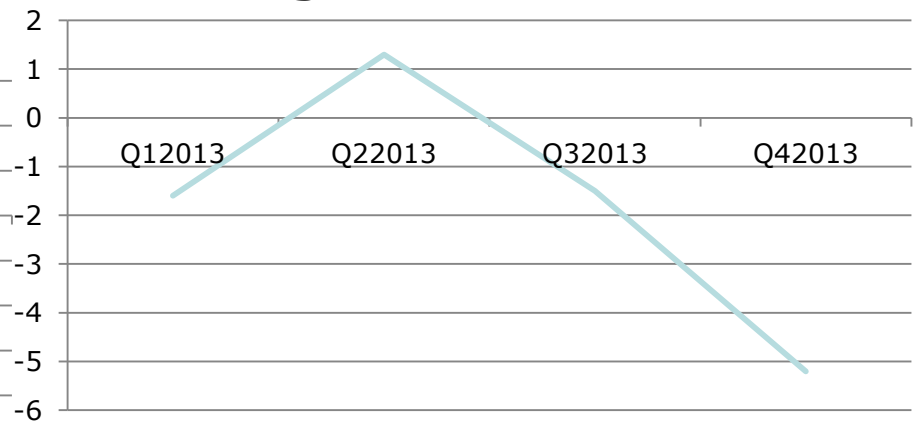| 2014q3	NSA	WDA	SA
Croatia	-	nd	Nd
Czech Republic	-	BS, BN, BE, F*, GN, OS,	BS, BN, BE, F, OS
Finland	-	-	BE, GN
Greece	BS, F	BS*, BN, BE*, F, OS	BN, BE, F, GN, OS
Hungary	-	BS, BN*, GN*	F
Luxembourg	F, OS	BS, BN, BE, F	F, OS
The Netherlands	GN	GN*	GN
Slovenia	-	-	F
Slovakia	-	F	BS, BN, F
Turkey	-	-	BE

II. Quality Concerns-2: Erratic movements

- Unexplained big jumps or unexpected evolution of the series *(e.g. increase in the labour costs in a sector particularly hit by the crisis).*

NACE section F 'Construction'- Greece

NACE sections BN - Portugal

- *Not exceptional cases*

European Commission

II. Quality Concerns-3:
No information on hours worked / total labour costs

(Simplified) production process

1. Collecting the micro data for the total labour costs (lc) and hours worked (h), for each NACE section, through different data sources (administrative and survey data, imputation)

2. Grossing-up microdata to the NACE section i level => LC_i and H_i

3. Calculating the LC_i / H_i ratios

4. For WDA and SA figures, adjust the LC_i / H_i ratio

5. Calculating the (Laspeyres) quarterly index for NACE aggregates / total economy based upon a fixed structure of labour costs ('weights') by NACE industry as recorded in the previous year ('base year')

6. Chain linking the quarterly index with the annual indices (calculated as simple averages of the quarterly indices) back to the reference year

European Commission

II. Quality Concerns-3 (cont.):

No information on hours worked / total labour costs

- **LCI= final product**.
  - Eurostat only receives the chain-linked indices by NACE section + NACE aggregates
  - **Black box** with the lack of information on:
    - the intermediate calculations and
    - how to interpret changes in the index

- ***We comment on LCI variations*** *… (increase/ decrease/no change)*

- *… **but** we are unable to trace them back to changes in hours worked and/or the total labour costs*

European Commission

II. Quality Concerns-3 (cont.): No information on hours worked / total labour costs

		The Labour Cost Index		
		does not change	increases	decreases
Labour cost and hours worked	No change	√	-	-
	Both LC and H increase	√	√	√
	Both LC and H decrease	√	√	√
	LC increases/H decreases	-	√	-
	LC decreases/H increases	-	-	√

Same LCI change for different labour market developments:

➡ *not sufficient for economic analysis*

➡ *not sufficient for quality checks*

European Commission

II. Quality Concerns-3 (cont.)

No information on hours worked / total labour costs

- ***No underlying data available*** ➡ ***Out of the scope of our quality checks****: unable to disentangle the impact of the real evolution of the economy from inconsistencies or other mistakes and revisions.*

- **Non-negligible risk of not identifying a mistake** *in the underlying series* ➡ *could be propagated during several quarters.*

- ***Limits the analytical use of LCI data*** *(e.g. for Eurostat, economists,..)*

European Commission

III. Sharing the underlying data - opening the black box (1)

Current transmission

- *Quarterly delivery of the **quarterly** LC/H indices by NACE Rev.2 section and aggregates + wage/non-wage split.*

- *Annual delivery of the **annual** total LC in national currency (weights) by NACE Rev.2 section and aggregates + wage/non-wage split.*

- *But unexploited source data available in most MS-for further quality checks on the LCI*

European Commission

III. ...opening the black box (2)

New transmission

- *Quarterly* *delivery at t + 70 of*

  - the NSA/SA/WDA chain-linked indices for the quarterly labour cost per hour worked by NACE section and for NACE aggregates + wage/non-wage split (current situation)

  - the NSA number of the quarterly hours worked (H) by NACE Section and for NACE aggregates

  - the NSA value of the quarterly total labour costs (LC) by NACE Section and for NACE aggregates + wage/non-wage split

  - The NSA/SA/WDA value of the quarterly total labour costs per hour worked (LC/H) by NACE Section and for NACE aggregates + wage/non-wage components

European Commission

III. ...opening the black box (3)

New transmission

- ***Annual** delivery of the **annual** total labour costs in national currency (weights) by NACE Rev.2 section and aggregates + wage/non-wage costs split.*

Improvements:

- *Eurostat's analysis on evolution of the LC and H*
  - to perform better quality checks to ensure a higher level of quality of the Labour Cost Index
  - to comment on developments in both labour market 'volumes' (hours worked) and 'prices' (hourly labour costs)

European Commission

III. ...opening the black box (4)

New transmission

- *If some **sources** are **missing** ➤ deliver the missing quarterly LC and H with **1 quarter lag** compared with the LCI (i.e. t+161 days).*

- *After a **testing period** ➤ it might be envisaged to replace the annual weights by the annual sum of the quarterly total labour costs (LC) ➤ the transmission of annual weights would no longer be needed.*

European Commission

The participants to the workshop are invited to:

➤ *raise other quality concerns on the Labour Cost Index;*

➤ *assess the feasibility of the implementation of the transmission of full quarterly LCI data (including the possibility of 1 quarter lag for some variables);*

European Commission

Thank you for your attention!

Cristina.Lopez-Vilaplana@ec.europa.eu