

Item 3.2: LCS/LCI consistency

By Hege S. Hauglund and Uwe Pedersen,
Statistics Denmark

Workshop on Labour Costs, Rome, 5-6 May
2015



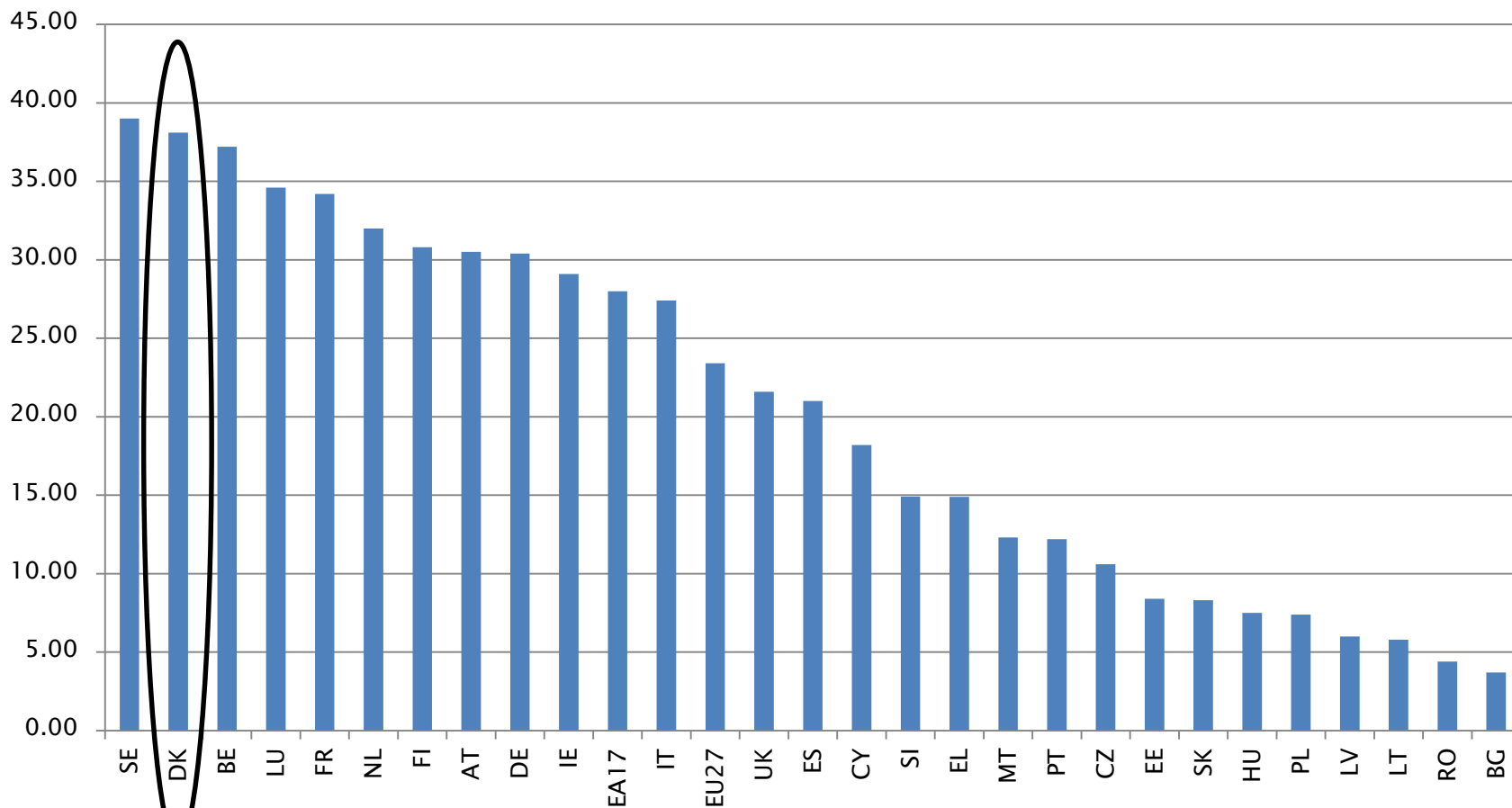
Background

- For the year 2012 and onwards, annual labour cost levels have been estimated by Eurostat by extrapolating the latest LCS with the LCI.
- Change to new LCS basis from 2008 to 2012 resulted in revisions of previous published levels.
- For 2012 the Danish hourly labour costs for the whole economy was:
- €38.1 - published in March 2013 with LCS 2008 as benchmark year.



Hourly labour costs as published in March 2013

Hourly labour costs for the whole economy in €, 2012



Background

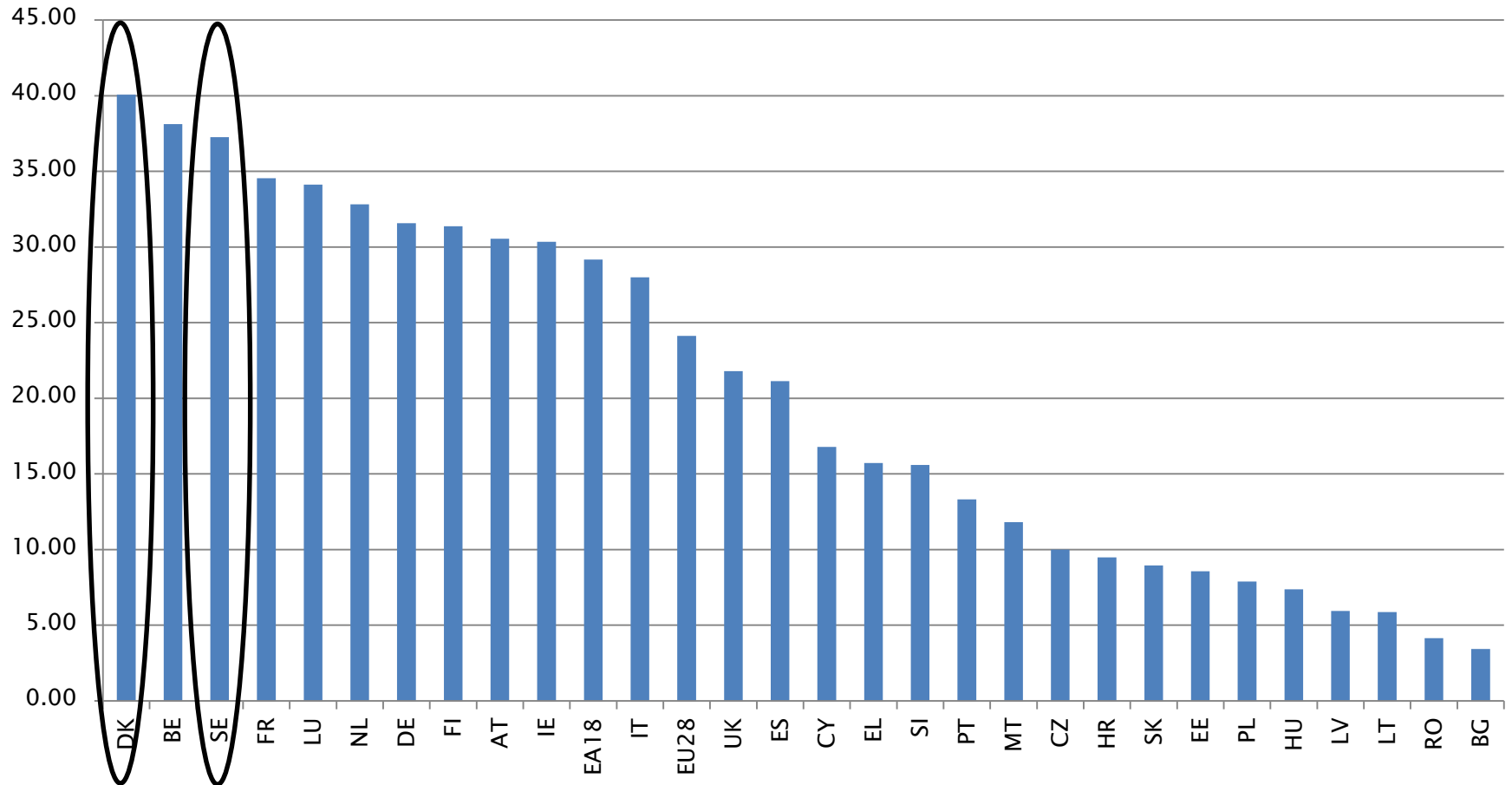
- For the year 2012 and onwards, annual labour cost levels have been estimated by Eurostat by extrapolating the latest LCS with the LCI.
- Change to new LCS basis from 2008 to 2012 resulted in revisions of previous published levels.
- For 2012 the Danish hourly labour costs for the whole economy was:
 - €38.1 - published in March 2013 with LCS 2008 as benchmark year.
 - €40.1 – LCS 2012 results.A difference of €2 or 5%.



After the revision...

LCS 2012 results

Hourly labour costs for the whole economy in €, 2012



Increasing interest in labour costs both internationally and domestically

- Increased interest in Eurostat's news release on annual levels of labour cost.
- Demand for further NACE breakdowns in the publication.
- More attention on labour costs in Denmark.
- International labour costs (based on the LCI) published in a quarterly news release by Statistics Denmark.
- Reactions by users on the differences in the labour costs published by Eurostat and those published nationally.
- To be better able to answer questions from users and for own clarification - need to look more into what is causing the difference in growth rates.



How to find out what factors are causing the differences in growth rates?

- An analysis has been started to find the causes behind the different growth rates in the LCS and LCI.
- As wages and salaries make out the largest part of the labour costs in Denmark, the analysis is performed on the annual structure of earnings survey (SES) and the index of average earnings (IAE).
- Focus on the private sector only.



A short description of the SES and IAE

Structure of Earnings Survey:

- A full scale census of all enterprises in NACE sections B-S with more than 9 full-time employees. Approx. 16,000 enterprises.
- Carried out annually and covers all 12 months.
- Shows the level of earnings per hours worked.
- Main data behind the 4-yearly LCS.

Index of Average Earnings

- Sample survey covering about 4000-5000 enterprises in the private sector.
- Only data from the middle month of the quarter compiled (i.e. February, May, August and June).
- Used to measure developments in hourly earnings (wages and salaries, plus payments to pension schemes) per "hours" worked.
- Adjusted for structural changes, e.g. movements of employees to and from an enterprise.
- Main data behind the LCI.



Annual changes in earnings in the SES and IAE 2010-2013

	Structure of earnings survey (SES)				Index of Average Earnings (IAE)			
	2010	2011	2012	2013	2010	2011	2012	2013
TOT Industry, total	2.4	3.3	3.0	1.1	2.3	1.8	1.5	1.2
C Manufacturing	3.6	2.1	2.6	2.2	2.5	2.3	1.8	1.6
F Construction	0.1	2.3	3.4	0.5	1.6	0.7	1.2	0.6
G Wholesale and retail trade	2.6	3.1	3.7	1.1	1.5	1.7	1.2	0.7
H Transportation	1.1	5.0	2.3	0.2	2.3	2.4	1.7	1.1
K Financial and insurance	6.0	2.5	2.7	2.8	4.2	3.2	1.7	1.6
M Knowledge-based services	3.3	2.7	3.4	0.9	2.2	2.1	2.0	1.3



How the analysis is performed

- Need to look at enterprises where data is available from both the SES and IAE to identify the variables or structural elements causing the difference in growth rates.
- 930 enterprises form the foundation for the analysis.
- Period looked at: 2011-2012 (change between them).



Annual changes in earnings in the SES and IAE, 2012 – same 930 enterprises

	Structure of earnings survey (SES)	Index of Average Earnings (IAE)
TOT Industry, total	2.2	1.8
C Manufacturing	0.9	1.3
F Construction	2.2	2
G Wholesale and retail trade	2	1.3



Possible factors explaining the differences

- Hours worked in SES more sensitive to changes in absence due to e.g. illness or holiday.
- Structural changes, and especially movements of labour, seem to have a greater impact on the change in the level of the SES compared to the IAE where they are more gradually absorbed.
- Difference in coverage (12 vs. 4 months) makes the SES more vulnerable to changes taking place in seasons not covered by the index (e.g. employment during summer or christmas holidays).



Some examples of enterprises with different growth rates in the SES and IAE

A high-technology firm of more than 1000 employees gradually dismiss more than 50 workers, many of which are high-paid. Annual growth in hourly earnings is 1.4 % in the SES and 4 % in the IAE.

An enterprise in the wholesale industry with approx. 100 employees sees 15 low-paid workers leave in 2011. Annual growth in hourly earnings is 4 % in the SES and -1.7 % in the IAE.



Preliminary conclusions

- Even with the same set of enterprises the two statistics produce different results.
- Differences not only on aggregate levels of economic activities and size groups, but also within the same enterprise.
- There are various factors causing them to differ. Structural changes in employment likely to be the most important one.
- The SES and IAE serve different purposes – this is reflected in the way they are produced.



For discussion

- What is the experience of other member countries regarding growth rates in labour costs in the LCS and LCI?
- Should the goal be to make the two statistics coherent, or to make sure they meet their national or fundamental objectives?
- Does the LCI qualify as an estimator of annual levels of labour cost for up to five years after the last benchmark?

