



UNIT LABOUR COSTS

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Continued from No. 1/2005

4. Unit labour costs in international institutions

Most international institutions use the same methodology for calculating unit labour costs (ULC), i.e. ULC are calculated as a ratio of compensations per employee at current prices and labour productivity at constant prices. Eurostat uses a different approach, putting into the ratio compensations per employee at current prices and labour productivity at current prices. h.

European Commission

The ULC indicator is a permanent feature also in the standard database of the European Commission, which uses it in its macroeconomic analyses and predictions for the purpose of monitoring the state and conditions of future development in the economies of EU countries, or the Economic and Monetary Union.

Development of ULC is assessed in a statistical annex to the publication *European Economy*, published twice a year, on a summary basis for the fourteen original EU member states (excluding Luxembourg). The assessment is based on the data in national currencies, published as indices according to the 1995 basis. The annex also gives year-on-year percentage changes in ULC for individual member as well as candidate countries in their national currencies.

In calculations data on individual items of ULC are used from the AMECO macroeconomic working database, where the main data source is Eurostat, or is supplemented by other suitable sources. In definitions of employees, employment and compensations the AMECO database is based on ESA 95 methodology and data is re-calculated to full-time equivalents; at present in the EU for Spain, France, Italy, Holland and Austria.

Organisation for Economic Cooperation and Development

The Organisation for Economic Cooperation and Development publishes monthly the OECD Main Economic Indicators, where the periodicity of publishing

the ULC for the individual EU member states varies (most countries have quarterly periodicity, only Germany publishes them monthly). ULC are given in this publication in the national currency of the respective country as the base index (most countries' have the base year set at 2000).

Various OECD member countries use a number of variables for the ULC calculation:

- compensations – data for employees is based on national accounts to which is added an approximate estimate of work incomes of the self-employed. According to OECD the advantage of using national accounts is that the definition of compensations in them is the most comprehensive – including gross wages and salaries of employees, as well as contributions for employees paid by employers. However, national accounts relate only to the compensations of employees and do not include compensations of the self-employed, which therefore need to be estimated,
- output – is defined as the gross value added or as GDP, or the industrial production index,
- employment – estimates of employment are related to the average number of persons with one or several paid jobs.

The variables are ascertained from the corporate statistics, from household statistics and from administrative sources, where most OECD member states use, in the case of wage statistics, all three sources.

Eurostat

The whole Eurostat methodology structure is in accordance with ESA 95, where ULC are defined as a share of compensations per employee at current prices and labour productivity at current prices.

In the summary overview for the eurozone data on compensations of employees and GDP are calculated in euro (ECU prior to 1999) through the conversion from national currencies, using average annual exchange rates for the euro.

European Central Bank

The European Central Bank monitors ULC development, publishing analyses in its monthly bulletin, as well as in the Convergence Reports. In the monthly bulletin it publishes data for the eurozone as a whole,



where this data represents seasonally adjusted year-on-year percentage changes in the yearly and also quarterly values of ULC. Development also in other EU member states is calculated the same way, on the individual basis, where however the database for individual countries is not complete and these values are not seasonally adjusted.

In order to ensure the comparability of ULC outputs in the framework of the eurozone, the European Central Bank in its calculation works from ESA 95 methodology (for GDP and compensations per employee), where the data source is Eurostat and ECB estimates in the field of employment.

A convergence report evaluates ULC for each

country separately, in its national currency, and records year-on-year percentage changes of annual data.

Evaluation of the SR and selected EU member states in the ECB Convergence Report using the ULC indicator

In its calculation of ULC the Convergence Report for 2004 is based on ESA 95 methodology and in exceptional cases uses available national data closest approximating to the national accounts methodology. The data source is stated as Eurostat (in the case of Slovakia, Hungary and Poland) or as national data (in the case of the Czech Republic).

The rate of growth in compensations per employee in the case of Slovakia is evaluated by the ECB in its Convergence Report as significantly variable, but much higher than the rate of growth of labour productivity, which consequently leads to relatively high ULC growth*.

In the Czech Republic the growth in compensations per employee exceeded the growth in labour productivity throughout the period 1996 – 2003, which led to a relatively high growth in ULC, especially in the public and non-tradable sectors.

As regards Hungary, in 1996 to 1999 ULC recorded a declining trend that was caused primarily by a slowdown in the growth of compensations per employee, but in 2000 ULC grew and likewise compensations per employee increased signifi-

*In our opinion this fact could be connected with high inflation, caused mainly through the deregulation of prices, which was subsequently reflected also in the development of wages. In the future the development of compensations should not be longer affected by this factor in any significant way.

Development of ULC in selected countries*

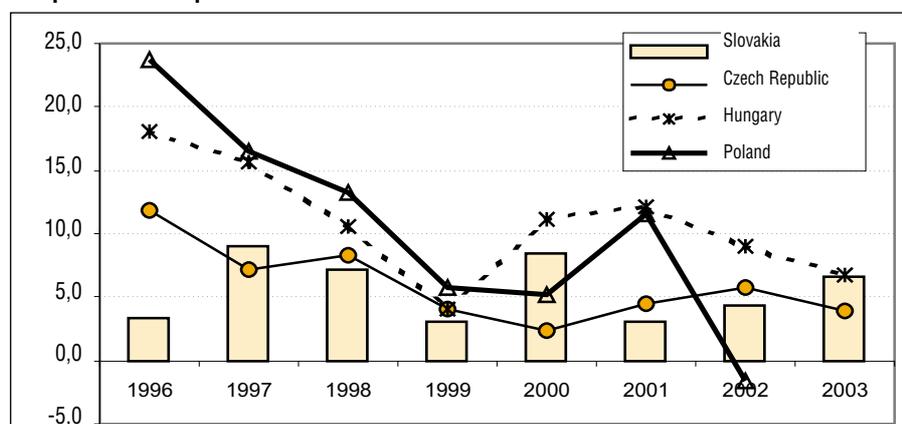
(y/y change in %)

	1996	1997	1998	1999	2000	2001	2002	2003
Slovakia								
Real GDP growth	6.1	4.6	4.2	1.5	2.0	3.8	4.4	4.2
ULC, whole economy	3.3	9.0	7.2	3.1	8.5	3.0	4.4	6.6
Compensations per employee	7.2	15.4	12.2	7.5	12.8	6.3	10.1	8.6
Labour productivity, whole economy	3.7	5.9	4.7	4.3	3.9	3.2	5.5	1.9
Czech Republic								
Real GDP growth	4.3	-0.8	-1.0	0.5	3.3	2.6	1.5	3.1
ULC, whole economy	11.9	7.2	8.3	4.0	2.3	4.5	5.8	3.9
Compensations per employee	16.5	7.3	8.6	6.7	6.4	7.8	6.7	7.8
Labour productivity, whole economy	4.1	0.0	0.4	2.6	4.0	3.2	0.9	3.8
Hungary								
Real GDP growth	1.3	4.6	4.9	4.2	5.2	3.8	3.5	3.0
ULC, whole economy	18.0	15.7	10.6	4.0	11.2	12.1	9.0	6.8
Compensations per employee	20.2	20.8	13.9	5.0	15.8	15.9	12.0	7.3
Labour productivity, whole economy	1.8	4.4	3.0	0.9	4.2	3.4	2.8	0.5
Poland								
Real GDP growth	6.0	6.8	4.8	4.1	4.0	1.0	1.4	3.8
ULC, whole economy	23.7	16.5	13.2	5.8	5.2	11.5	-1.6	-
Compensations per employee	28.6	21.0	16.0	13.2	11.9	13.3	2.0	-
Labour productivity, whole economy	4.0	3.9	2.4	7.0	6.4	1.7	3.7	-

Source: ECB, Convergence Report 2004

* ULC=compensations per employee at current prices / labour productivity at constant prices

Graph 11 Development of ULC in selected countries



Source: ECB, Convergence Report 2004 (table, graph)



cantly. High growth in wages in recent years has been caused mainly by the growth in minimum wages and also by an expansive wage policy of the public sector, which has had an impact on wage formation in the private sector. Moreover, the increase in labour productivity has substantially, especially due to cyclical reasons, slowed down.

In Poland compensations per employee continued to grow at double-digit rates throughout the monitored period up until 2002, when this growth fell to 2%, foreshadowing a decline in ULC in 2002.

5. ULC monitoring in neighbouring countries

Poland

The National Bank of Poland calculates ULC for the whole economy and ULC in manufacturing, where the calculation procedure is the same for both the indicators. Data for the ULC calculation for the whole economy, as well as that in manufacturing, is drawn from the Statistical Year-Book of Poland and in the case of the definitions for GDP, employment and compensations is founded on the ESA 95 national accounts methodology.

The ULC index is defined as the change in the ratio of total compensation costs and the number of employees and labour productivity for the whole economy (own calculation of the National Bank of Poland). Compensations per employee index is calculated as the change in the ratio of total compensations and the number of employees. The labour productivity index is defined as the change in the rate of GDP at constant prices and the total employment.

Hungary

The National Bank of Hungary publishes only ULC in manufacturing. ULC index in manufacturing is calculated as a ratio of wage cost index in manufacturing to the labour productivity index in manufacturing.

Wage costs are based on the average gross monthly wages of full-time employment. The source for this data is the Statistical Office. The National Bank of Hungary adds to the wage costs also fixed costs (e.g. contributions for health insurance) and proportional labour costs (e.g. contributions for social insurance). Data sources on the value added are national accounts statistics, while data on employment come from the labour force surveys.

Czech Republic

Unit labour costs are reported according to the national methodology, based on ECB methodology, i.e. ULC at the macroeconomic level are calculated as

a share of compensations per employee to real labour productivity (GDP at constant prices to total employment), where modified data are used for calculating employment.

While compensations and GDP are taken from the national accounts in ESA 95 methodology, the data source for employment is modified data from the labour force surveys (adjusted of foreigners working in the Czech Republic and recalculated to full-time employment). Modified data on employment are obtained by the Czech National Bank from the Czech Statistical Office.

The transition to ECB methodology, using fully the data basis of national accounts, is expected by CNB to take place after the completion of experimental monitoring of employment according to ESA 95 methodology by the Czech Statistical Office.

With regard to the time lag between processing of inflation reports and publishing of quarterly outputs from national accounts in its assessment of the real economy in inflation reports, the CNB uses ULC indicators for selected industries, using input data according to their current availability (e.g. ULC in manufacturing for enterprises with 20 or more employees from monthly surveys for selected industries, and similar).

Conclusion

On the basis of the methods presented for calculating ULC in various international institutions as well as neighbouring countries we can derive the following conclusions:

- The prevailing method for calculating ULC at the macroeconomic level is the ratio of compensations per employee at current prices to labour productivity at constant prices.
- From the aspect of homogeneity of source data, the most suitable way may be considered that of using input data from the ESA 95 national accounts. The above mentioned methodology for ULC calculation is used by the European Commission, European Central Bank and OECD, where in the case that data are not available, alternative data in national methodologies are used. Eurostat is also oriented on the data basis of national accounts, the ULC is however calculated as a ratio of compensations per employee at current prices to the labour productivity, also at current prices.
- Unit labour costs stated for the SR, published by international institutions, may be various and in compatible with ULC values calculated by the NBS, due to data adjusting (of seasonal, exchange influences, etc.), aggregations to territorial and economic units, etc.



• Methodological differences in ULC calculations in neighbouring countries (the Czech Republic, Hungary, Poland) do not, as yet, provide space for the direct comparison of the development of their economies via the ULC indicator, this does not apply to data from international databases, which are more or less comparable.

• With regard to the fact that the Statistical Office of the SR has since the 1st quarter of this year been publishing all input data necessary for calculation of ULC in the national accounts methodology, the NBS, as well as the majority of foreign institutions, including the ECB, has also begun to report ULC in the same methodology.

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