
Unit labour costs: no argument for low wages in eastern and central Europe

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Working Paper 2016.08

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european trade union institute

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Abstract

Calls for higher wages in countries with the lowest labour costs in the EU have been resisted on the grounds that this would harm the competitiveness of exports. Unit labour costs (ULC), which aim to measure the employment cost of a unit of output, are used by the European Commission as a measure of competitiveness and as a guide to policymaking, especially in the advocacy of pay restraint. Examples from Eurozone countries and then from countries of central and eastern Europe illustrate the theoretical and practical problems with this measure. It matches very poorly with export performance, which has been good in many countries with rapidly rising unit labour costs, and with the implications of other plausible competitiveness measures. An introduction of absolute rather than relative cost levels helps reveal that the ULC measure fails to incorporate key determinants of export competitiveness. In low-wage countries, experiencing growth thanks to outsourcing and foreign direct investment by multinational companies, low pay is the cause rather than the consequence of low measured productivity. What may be very similar or even the same work is not only paid less but also appears to produce less than in higher-wage countries, a point that is masked by the way the European Commission uses the ULC measure. The implication is that there is considerable scope for higher wages (continuing the trend of the years leading up to 2008) without harming competitiveness.

Introduction

There are huge disparities in wage levels across the EU. In 2015, using current exchange rates, Bulgaria's average gross pay (the lowest in the EU) was less than 10% of the highest level (in Luxembourg). In many cases, differences in pay may reflect different kinds of work, but gaps remain huge even where work tasks appear to be very similar. A principle of paying the same wage for the same work could therefore be expected to justify significant wage increases in lower-income countries of the EU. Arguments against this from within the European Commission are built on claims that low wages reflect low productivity and should therefore only increase as productivity increases.

A key indicator for expressing this relationship is unit labour costs (ULC), which seem to have become the European Commission's favourite indicator of countries' export competitiveness. They are referred to, seemingly at any available opportunity, accompanied by warnings against allowing wages to rise more rapidly than productivity. This paper argues that such rigid advice is inappropriate for countries where growth has been based on outsourcing and inward investment by multinational companies (MNCs). The important comparison in these cases – the comparative level of wages - is obscured by the methods used to calculate and compare productivity levels and by the uses made of the ULC measure.

This paper covers CEECs (central and eastern European countries), including data on Czechia, Estonia, Hungary, Poland, Romania and Slovakia. The focus is on the 'Visegrad Four', with two rather different cases introduced to provide an additional comparative dimension. A wider context, and a clear link to central European Union policy thinking, is provided by evidence on Germany and also on Ireland and Spain, two Eurozone countries that faced serious economic difficulties, allegedly following unfavourable ULC development.

The first section introduces the ULC measure. The second section sets out the standard argument from EU and ECB (European Central Bank) policymakers. The third section looks in more detail at the limitations of the ULC measure and considers possible alternatives. A fourth section then examines how these indicators fare in explaining foreign trade developments in selected Eurozone countries. The fifth section applies a similar approach to CEECs, noting how the European Commission has used the ULC measure in policy advice. A sixth section introduces differences in absolute labour cost levels which appear enormous. The implications are followed up in the seventh section, which demonstrates how, in a world of outsourcing and foreign direct investment (FDI) by MNCs, workers can appear less productive even if performing the same tasks. The conclusion points to the potential for further significant, but not unlimited, pay increases in CEECs.

1. Introducing unit labour costs

Unit labour costs are a measure of the relationship between labour productivity and labour costs, the second of these being divided by the first to show the cost of labour for producing a unit of output. For policymakers, there is an inherent attractiveness to a simple measure which sets labour costs, made up predominantly of wages, against productivity. This would seem to overcome difficulties in finding a numerical expression for ‘competitiveness’, a term that has caused considerable controversy.

Competitiveness cannot mean simply having lower wages than other countries. It is better defined as the ability to achieve high levels of productivity (Porter 1990; World Economic Forum 2015), enabling a country to pay high wages while still maintaining adequate levels of exports for ensuring external balance. The ULC measure seems to find a balance between the need to export and the desire to support high living standards.

Listed as an indicator of price and cost competitiveness in EU sources, its main use is as an alleged determinant of export competitiveness, for which export prices are an alternative (cf. Durnad and Giorno 1987). Thus in numerous policy documents for EU Member States it is linked to export performance. It even seems to overcome the problem of incorporating non-price elements of competitiveness – broadly understood as product quality – as higher quality should appear in higher product value and hence in higher productivity. This, as will be argued, need not be the case.

In effect, the measure boils down to the share of wages in GDP and the relative price level. It is not used to compare absolute levels – as will be indicated, these are generally similar between countries – but rather to compare changes in a relative level over shorter time periods. Thus if ULC rise in one country relative to another, due to higher wages or to currency revaluation, we could expect a worsening export performance. That would be most plausible if small changes in export prices were important for determining export levels.

This is not the central issue for CEECs. For them, export competitiveness depends on the decisions of MNCs over where to locate activities. They choose CEECs because wages are much lower than in western Europe – so much lower in fact that even apparently significant variations will appear insignificant when set against the gap in absolute labour-cost levels - but workers can still produce products to the quality they require. For reasons explained below, the measured productivity for these activities is lower than when they are undertaken in western Europe; even if, as in many cases may be the case, the work tasks performed are identical. This suggests considerable scope for raising wage levels in CEECs and reducing the enormous levels of divergence across the EU.

The point is that the level to which wages can rise is not set by measured productivity but by the MNCs’ calculation of whether the same quality of

product can be provided at a lower cost elsewhere. That depends on an interplay between the many different factors that comprise the total costs of moving and of production in CEECs, relative to alternative locations; including the requirement that an adequate product quality needs to be achieved. These elements do not enter into the ULC measure, which therefore fails to capture the key determinants of export competitiveness in CEECs. ULC movements are therefore not a valid basis for judging the effects of wage increases on export performance.

In view of the weaknesses of the measure, as set out below, it is perhaps surprising that it has gained such widespread and largely unquestioning acceptance. There are a few persuasive critiques pointing out its general limitations (e.g. Kribb 2016; Felipe and Kumar 2011) and indicating how it fails to explain export performance, and hence competitiveness, in particular cases (e.g. in rather different ways and contexts, Myant *et al.* 2016; Giordano and Zollino 2016). There are also a few studies showing that very different results can follow if capital productivity and capital costs are incorporated alongside labour productivity and labour costs (Collignon 2012). Generally, however, the ULC measure has had a much easier ride than it deserves.

2. The ULC measure and problems of the Eurozone

Taking the ULC measure at face value has fed into the European Commission's analysis of economic difficulties across the EU and hence into their policy recommendations. If wages rise faster than productivity, then prices can be expected to rise and competitiveness to fall, leading to a current account deficit. This will then mean devaluation of the currency. In the specific case of the Eurozone, where devaluations are no longer possible between members, there will be no means to correct the imbalance, which can be expected to continue and grow.

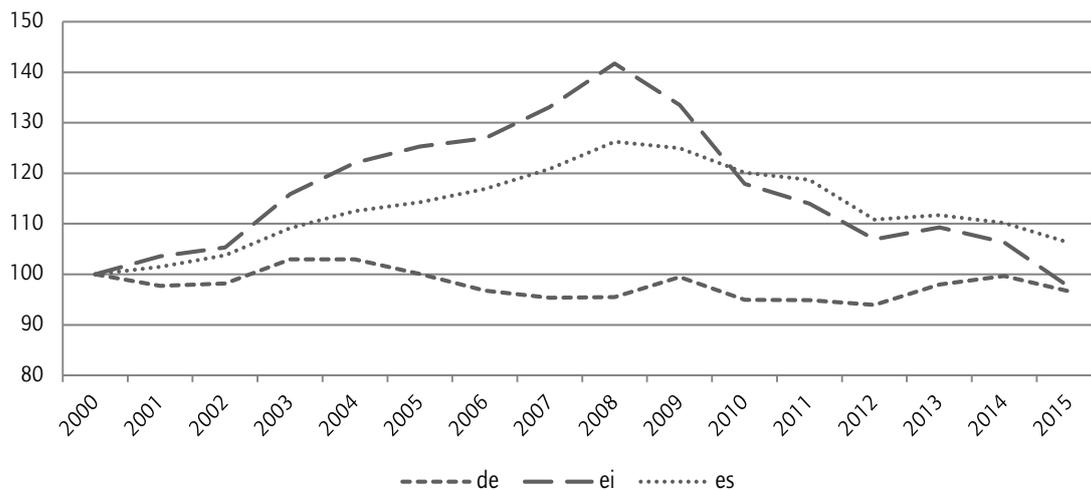
Such a story is often told to explain the root causes of the Eurozone crisis. Those countries allowing wages to rise ahead of productivity, so it is argued, built up external debt while those that exercised wage restraint became creditors. The imbalance should then be corrected by cutting wages in the 'deficit' countries, those suffering from persistent current account deficits. This argument can be found in European Commission policy statements and was also developed by ECB President Mario Draghi (Draghi 2013), convincing politicians who had hitherto been cautious about believing the austerity message.

Figure 1 illustrates the argument, bringing it up to 2015 and showing unit labour costs for the whole economy in three countries (Germany, Ireland and Spain) relative to the levels of 2000. Thus there is no comparison of absolute levels. The comparison is of changes from a fixed starting point, reflecting an assumption that negative trends were somehow a consequence of the functioning of the Eurozone.

The ULC measure used in this paper is an index, with the result for 2000 set as 100 and with movements set against the average for 37 industrial countries. Alternative groupings are available, such as the EU alone, without significant differences in their implications. A wider grouping is appropriate, as all EU Member States

traded outside as well as within that trading bloc. The methodology, developed by the European Commission's DG ECFIN, is explained in their publications (European Commission 2016b). The results therefore show changes in relative levels, intended to indicate competitiveness relative to those other countries.

Figure 1 The development of unit labour costs in Germany, Ireland and Spain, 2000 to 2015



Source: Calculated from European Commission, 2016b, various tables.
 Note: Figures are relative to 37 industrial economies, 2000=100

The biggest increase was in Ireland, followed by Spain, while Germany showed remarkable stability. After the crisis of 2008, the level fell very rapidly in Ireland and almost as rapidly in Spain. In the terms of the European Commission's approach, it would seem those two countries were getting back on track and we could expect improved foreign trade performance in the following years. Some broad trends are consistent with this approach. Ireland averaged a current account deficit of 2.1% of GDP 2000-2008 and a surplus of 0.5% of GDP 2009-2015. Spain averaged deficits of 6.4% of GDP and 1.1% of GDP in the two periods and Germany experienced surpluses of 3.1% and 6.7% of GDP in the two periods. There is no exact relationship over shorter time periods, but these data from this small group of countries are not out of line with the claims made by Draghi and others.

However, this is a long way from proving that ULC movements are an explanation for the origins of the Eurozone's difficulties. The starting point for seeking those explanations should be the easy credit that led to higher spending in a number of countries, by no means only Eurozone members and therefore not a specific consequence of the working of that currency system. This led to higher demand and hence current account deficits. The timing is clear: credits came in before wages increased and current account deficits grew as a result of higher domestic demand (cf. Gabrisch and Staehr 2015). Prices, wages and ULC were then all influenced by the increased demand levels, which in turn led to worsened current account positions. Thus ULC were not the primary cause of current account difficulties. As the next section shows, there are clear reasons why the measure may have only a weak relationship to export competitiveness.

3. Weaknesses of the ULC measure as a competitiveness indicator

Some difficulties with the ULC measure, of varying degrees of importance for the cases looked at below and each pointing to different possible alternative or supplementary measures, are set out in this section.

A first difficulty which leads to a degree of imprecision is that ULC are calculated from GDP by a method that is approximate from the start. It takes nominal labour costs per employee and divides this by real value added per worker; meaning all labour, including the self-employed. The figure will therefore rise if employees undertake work previously performed by self-employed workers. This could be expected with a structural change away from self-employment, for example in agriculture, towards regularised employment, for example in industry or services. Such changes did take place in the countries considered here, but were not as important as the factors referred to below.

A more important problem is that an economy-wide ULC measure cannot be a direct measure of competitiveness when most economic activity is not traded. This obviously applies to public services and the bulk of construction and private service provision. Thus one cause of falling ULC after 2008 in Ireland was public sector pay reductions, which were more than enough to counterbalance developments in export-oriented activities where pay levels frequently rose. It would therefore be more logical to use a ULC measure for traded activities alone. Unfortunately, such a measure is not available. The European Commission's data does include an approximation to ULC in manufacturing (a sector significantly involved in international trade) in the form of unit wage costs (UWCM) for organisations with 10 or more employees.

An alternative measure closer to a direct indicator of competitiveness could be the export price index, also provided by DG ECFIN. This has long been recognised in OECD and other publications as a good candidate for an indicator of export competitiveness, alongside a recognition that no simple measure is free from all theoretical and practical drawbacks (cf. Durand and Giorno 1987). Indeed, there are some comparability and measurement problems with the export price index; but some similar problems to those described in the manuals produced by internal economic agencies (IMF *et al.* 2009; OECD 2001) also arise with measuring productivity and hence with ULC. Allowing for measurement difficulties to lead to imprecision, we could still expect changes in ULC to be reflected in changes in export prices if they are to be considered a meaningful approximation to an indicator of competitiveness.

A further problem that ensures a lack of correspondence between ULC and export prices is that the value of the former actually differs considerably between sectors, depending on the share of labour in value added. It is particularly high in construction and particularly low in some capital- and material-intensive raw-material extraction activities, notably oil and gas. Thus a sectoral shift can alter the aggregate ULC measure. This is relevant to cases that have been used as examples in EU policymaking. Thus Germany was praised in the years up to the 2008 crisis

for wage restraint that apparently boosted competitiveness. In fact, the strictest wage restraint was in public sector activities and not in manufacturing industry; so the stability of ULC was not due primarily to the activities most relevant to export competitiveness.

Even more striking examples are those countries that experienced sharp declines in construction activity, such as Ireland after 2008. Its falling ULC, shown in Figure 1, were taken as a sign of improved competitiveness that could contribute to economic recovery. Calculations show that this was not the case. The fall in ULC level was due in large part to the declining share of construction (McDonnell and O'Farrell 2016: 76), and a subsequent recovery in exports came in sectors with high and even rising wages and increasing prices (cf. ETUI and ETUC 2014: 17). Thus there was no causal link between the measure of ULC and export competitiveness.

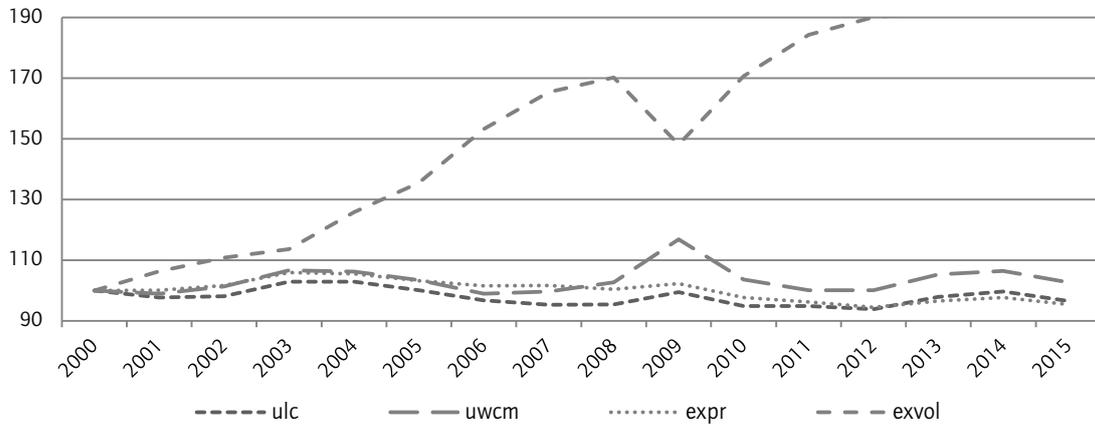
Nor was this an exceptional outcome. The austerity measures imposed across much of the European Union from 2009 led to substantial improvements in current account balances. However, the main reason was reduced domestic demand leading to lower imports. Export performances, which should have improved as a result of reduced ULC if costs were the principal determinant, were far more erratic, with no obvious link to ULC or wage developments. Cases of rising exports often came with higher prices for exported products because recovery was built on higher-quality products (ETUI and ETUC 2014: 17; 2015: 10; 2016: 11; Myant *et al.* 2016).

4. The explanatory power of ULC for Eurozone countries

These problems with the ULC measure imply that it should be used with great caution. Even a current account improvement – a likely result of depressed demand when wages are reduced – need be no indicator of improved cost competitiveness. Its relevance should be checked by comparison with export performance. Its effects should be checked for consistency or variation against other possible indicators of competitiveness. This should not be confined only to a few countries that might fit with predictions. Nor should comparisons be confined to Eurozone countries, as if they had some kind of unique experience. As will be demonstrated, some other countries also experienced very similar ULC movements but very different foreign trade experiences.

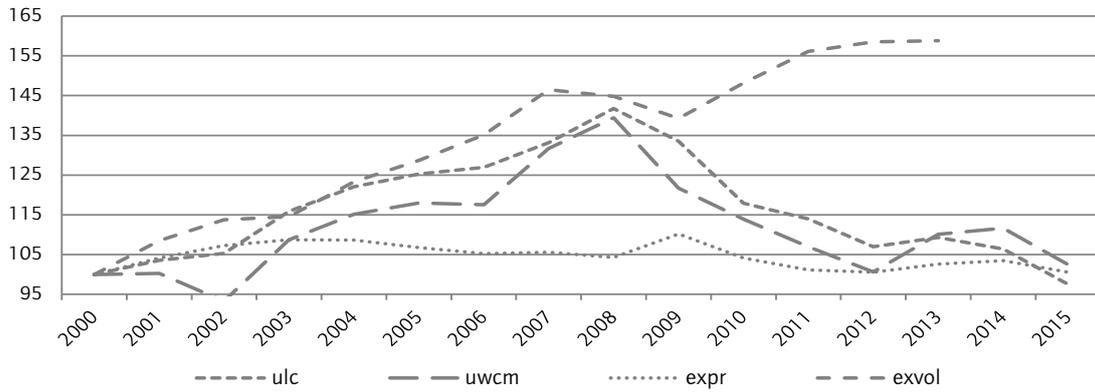
Nevertheless, the starting point here builds from the comparisons that should be the most favourable to the European Commission's position. This means following Germany, Ireland and Spain during the period from 2000 to 2015, as set out in Figures 2 to 4.

Figure 2 Competitiveness indicators set against export performance, Germany 2000-2015



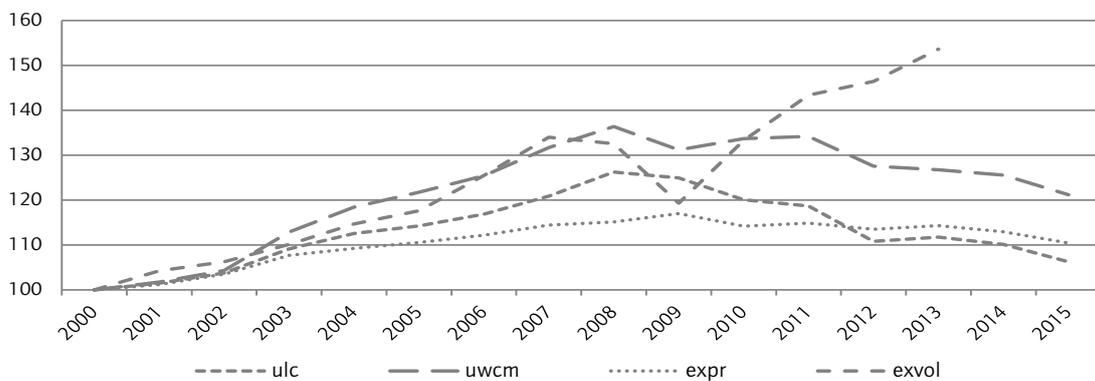
Source: calculated from data in European Commission 2016b, and Eurostat, nama_gdp_k.
 Notes: index numbers from 2000-100, compared against figures from 37 industrialised countries.
 ulc= unit labour costs, uwcm = unit wage costs in manufacturing, expr = export prices, exvol = export volumes

Figure 3 Competitiveness indicators set against export performance, Ireland 2000-2015



Sources and notes: as Figure 2.

Figure 4 Competitiveness indicators set against export performance, Spain 2000-2015



Sources and notes: as Figure 2.

In all of these cases exports increased, both up to 2008 and after the crisis of that year. Germany was the fastest, and in the first period that is in line with its restraint in ULC and the other competitiveness indicators. However, exports also increased in the other two countries up to 2008, despite rising ULC levels, and then grew no more rapidly than Germany's after the crisis, despite falling ULC levels. Moreover, there is little consistency in how the three competitiveness indicators moved. In Germany they moved rather little and therefore remained close together. The other countries show less consistency and it is unclear which should be considered the most meaningful.

A statistical test using the data from Figures 2 to 4, setting ULC levels against exports for individual countries, would show very little. For Ireland and Spain the relationship would appear positive, suggesting that higher ULC could be a cause of higher exports. It is more likely that both were growing because of different causal factors. There might, however, be a meaningful relationship between short-term changes in the indicators and changes in export volumes.

Table 1 shows the R^2 terms from simple regressions setting annual changes in export volumes against annual changes in the competitiveness indicators for these three countries. A figure of unity would mean that variations in the latter can explain all variations in the former, albeit with no certainty that this points to a causal relationship. A figure of zero means absolutely no relationship at all. Results for Ireland and Spain are all close enough to zero to be ignored. Only for the case of Germany is there a significant relationship and in the direction that would be predicted: higher ULC, UWCM and export prices are all associated with lower export volumes. This is a rather exceptional result. However, the other countries' divergences from the European Commission's expected relationships are explicable in the light of the preceding explanation of the weaknesses of the ULC measure.

Table 1 R^2 terms derived from simple regressions of annual changes in export volume against annual changes in ULC, UWCM and export prices; Germany, Spain and Ireland, 2000-2013

	ULC	UWCM	Export prices
Germany	0.58	0.87	0.38
Ireland	0.00	0.01	0.10
Spain	0.01	0.15	0.10

Source of data and notes: as Figure 2.

For Ireland, the remarkable feature is the stability of export prices while ULC and UWCM rose and fell. Ireland's expanding export sector was high-wage computer services, which plays little part in these ULC measures. Decline in ULC comes from lower public sector pay and sectoral shifts away from construction (ETUI and ETUC 2014: 17).

For Spain, the fall in ULC is significantly greater than the fall in UWCM. This reflects the demise of the construction sector while manufacturing pay continued to rise through and after the crisis. Export prices are at best weakly linked to these movements, with little difference between the 2013 and 2007 levels. Their previous rise may have come with a trend towards exports of higher-quality goods, a recognised source of apparent anomalies from the use of this indicator (Durand and Giorno 1987). As indicated below, quality differences are very difficult to take into account.

These are not exceptional results. ULC for the whole economy are subject to short- and medium-term fluctuations that need make no difference to trade performance. This is not surprising as they incorporate the changes in sectoral structures and sectoral pay levels referred to above, which were important in Ireland and Spain but not in Germany. Wage costs in manufacturing often increase less rapidly than ULC for the whole economy. This is again not surprising as there is less scope for productivity increases in public sector activities.

Export prices generally, but not always, increase the least and remain the most stable. This could be explained by the continual increases in productivity, by the small share of wages in export prices (many of the products are capital- and material- intensive) and by the flexibility accorded by often substantial profit margins. When export prices do rise this may reflect a shift towards higher-quality, and hence higher-priced, products.

5. ULC and export performance in CEECs

Figures 5 to 10 show the same comparisons for six CEECs, using the longest time period possible from European Commission and Eurostat data. The year 2000 has no particular significance for these countries, but is still used as the reference year for indexation.

When compared to the three Eurozone countries used as examples above, there is a striking similarity in the growth of exports irrespective of ULC movements.¹ In all cases apart from Estonia, up until the crisis this growth is significantly more rapid than in Germany (and Estonia quickly made up ground in the following years). The implication is that low ULC growth in Germany did not lead to a better export performance than in these countries where ULC grew more rapidly.

Comparing the CEECs' experiences, the consistency of growth in real exports is accompanied by diversity in the behaviour of the other indicators. There is a

1. The measure used here is gross exports. In view of the importance of outsourcing and integrated production networks, the domestic value added component of exports would also be useful as a measure that excludes imported materials and components from export figures. This is calculated by the OECD (2015) but unfortunately with results only up to 2011. For the period 2000-2011 most of the countries considered here showed a fall in this indicator, with the largest falls in Poland, Czechia and Germany (by 8.4, 6.6 and 5.3 percentage points respectively). The implication is that, over this period at least, the gross export figure generally exaggerates the export success; to different degrees depending on the country, but by an amount that is still significantly less than the recorded growth in exports.

common faltering during the crisis of 2008-9 followed by a resumption of export growth, with the volume returning towards or past the previous trend line by 2013.

The considerable variation in the other indicators that might relate to export performance suggests the likelihood of a common, alternative explanation for export growth. The obvious candidate is the effect of inward FDI by MNCs, as recognised in studies of CEEC economic development in this period (cf. Myant and Drahokoupil 2011: 278-289).

As comparative data show, this growth was remarkably rapid in CEECs and associated with the expansion of both outsourcing activity and manufacture of finished products, especially motor vehicles. By 2011, foreign affiliates accounted for almost 80% of manufacturing production in Slovakia, close to 70% in Hungary, 67% in Czechia, 60% in Romania, 55% in Estonia and 44% in Poland (Hunya 2015: 64). These activities were strongly export-oriented; in Czechia, for example, exports accounted for 79% of the value of manufacturing output (<https://www.czso.cz/csu/czso/statisticka-rocenka-ceske-republiky-2013-pxygncc90n>). The attraction of this kind of activity was the low relative labour costs; the element that, for reasons explained below, is obscured by the ULC indicator.

If there is any obvious link between exports and ULC it is that both have increased together. There is no sign of the relationship that could be expected from the European Commission's assumption that competitiveness depends on holding ULC down. It looks more like FDI leading both to rising exports and to rising wages.

Following the approach used above for the Eurozone countries, Table 2 sets out the results of simple regressions between annual export growth and annual changes in the three possible indicators, showing R^2 terms. The figures shown are all too close to zero to suggest anything significant, and of those above 0.1 (itself an insignificant figure), four out of the six suggest a positive relationship. In other words, an increase in export prices or in cost measures is associated with increasing, not decreasing, exports. It is possible to find a few individual cases and years where one or other of these cost indicators and export volumes move in line, but these statistical tests suggest that they should be seen as the exception rather than the rule.

Table 2 R^2 terms derived from simple regressions of annual changes in export volume against annual changes in ULC, UWCM and export prices, six CEECs, 1994 to 2013

	ULC	UWCM	Export prices
Czechia	0.01	0.09	0.01
Estonia	0.10	0.10	0.06
Hungary	0.10	0.03	0.18
Poland	0.14	0.09	0.11
Romania	0.00	0.02	0.15
Slovakia	0.03	0.06	0.04

Source: as Figures 5 to 10.

As with Ireland and Spain, ULC development shows considerable variation between countries, frequently increasing up to 2008 and then stabilising or falling slightly. In fact, some CEECs look remarkably similar to strongly criticised Eurozone members. The increases in ULC in Czechia, Estonia, Hungary, Romania and especially Slovakia would seem to have put them into a worse position than Ireland or Spain and well into the category of impending disaster experienced by some of the 'deficit' countries of the Eurozone. However, despite some significant current account deficits, they were more likely to revalue than to devalue their currencies. They still achieved rapid real export growth.

Indeed, alongside rising pay levels in public and private sectors, a major source of increasing ULC values was currency movements, generally upwards prior to 2009 and then more stable. Both of these earlier developments caused some concern to policymakers, worried that international competitiveness could be harmed. Fortunately, that did not dominate policies - at least in the countries mentioned above - and ULC were allowed to rise. This meant that more of the benefits of export growth went into higher domestic incomes and less into lower prices for foreign consumers or higher profits for multinational companies.

Various European Commission publications make reference to ULC or to labour cost developments within CEECs, but in an extraordinarily selective and one-sided fashion, looking only for a causal relationship running from ULC to export performance. Examples can be taken from the European Commission's reviews of individual country performances relative to their 'Country-Specific Recommendations for 2015' (European Commission 2016a). No reference is made in this report to the relationship between productivity and wages in cases where ULC seem the most obviously irrelevant to performance; that being all except three of the countries used here as examples. Even where ULC are portrayed as relevant, the wording is cautiously ambiguous, perhaps indicative of an awareness of the absence of any real evidence to support claims.

For Estonia there is a warning of growth in nominal ULC above the European Commission's indicative ceiling: 'Strong wage growth may come at the cost of reduced external competitiveness' (European Commission 2016a, Estonia: 4). It cannot be said that it has done so, as exports were increasing remarkably satisfactorily at the time.

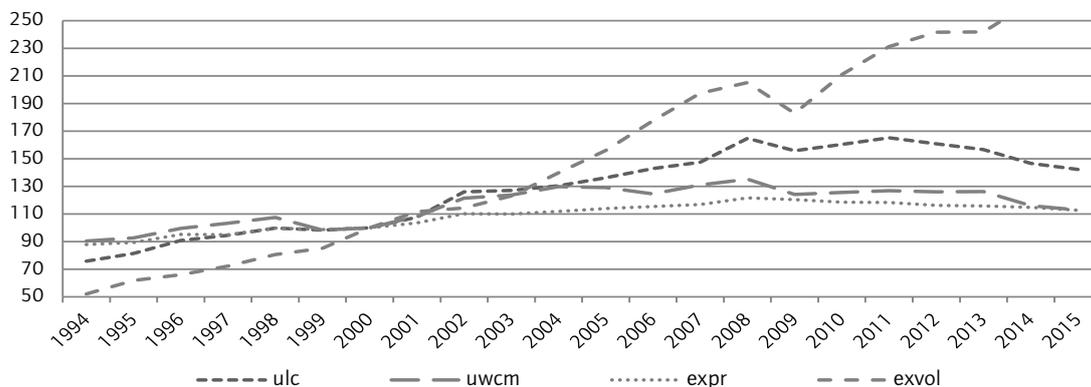
Romania is praised for improved cost competitiveness between 2009 and 2012, with the assurance, based on no particular evidence, that 'some of the recent trade dynamism can be linked to this favourable cost development' (European Commission, 2016a, Romania: 20). This is followed by a warning that subsequently increasing costs may lead to reduced profits for exporting firms. That is indeed a possible result of increasing wages, but links to actual trade performance are not demonstrated.

Poland is said to 'have benefited strongly from its cost competitiveness' over the preceding 15 years (European Commission 2016a, Poland: 6). The report goes on to claim that 'the growth of Polish exports can mainly be attributed to declining real labour costs' (European Commission 2016a, Poland: 6) when 'compared to its main trading partners'.

It is true, and demonstrated in Figure 8, that ULC show no consistent growth in Poland from 2000 onwards. The causes should be sought in exchange rate and wage developments, including, in the years after 2000, the move towards a more casualised and precarious work force (cf. Maciejewska *et al.* 2016). Increasing export prices – shown in Figure 8 and not unique to Poland – point either to higher product quality or higher product demand, meaning that wage restraint simply increased profits. It certainly seems that Poland’s export performance was remarkably similar to that of some of the countries that the European Commission chooses as comparators and that did not show the same allegedly positive ULC development, notably Czechia and Hungary. Drawing a link between ULC and exports is therefore not justified once comparisons are made between countries.

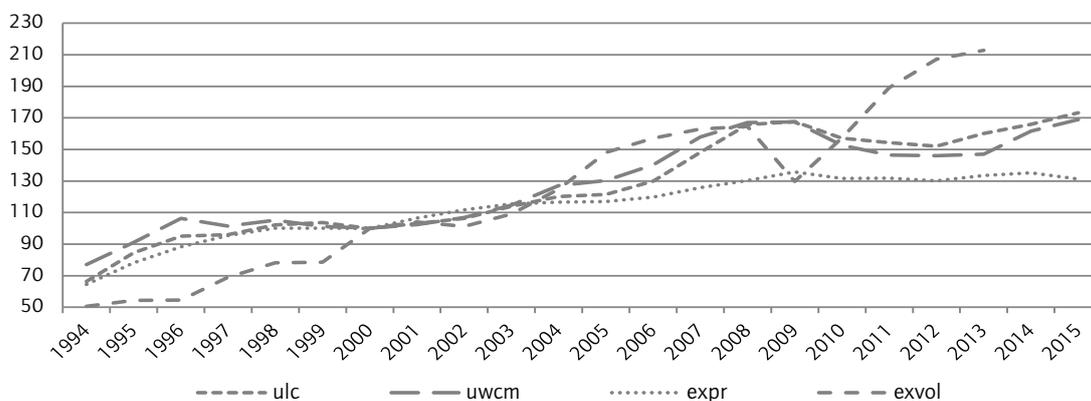
The conclusion thus far is therefore that the European Commission’s assumption that ULC somehow determine export performance – the assumption it has used to justify advocating wage restraint – lacks credibility. The next section goes further into explaining why and finding what relationship there is between costs and competitiveness. That requires a presentation of absolute cost levels rather than just changes relative to a starting point in 2000.

Figure 5 Competitiveness indicators set against export performance, Czechia 1994-2015



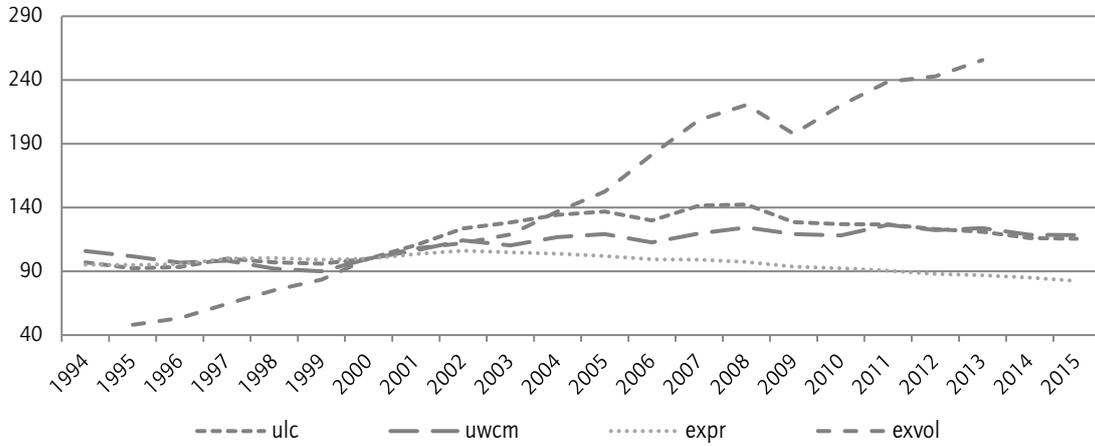
Sources and notes: as Figure 2.

Figure 6 Competitiveness indicators set against export performance, Estonia 1994-2015



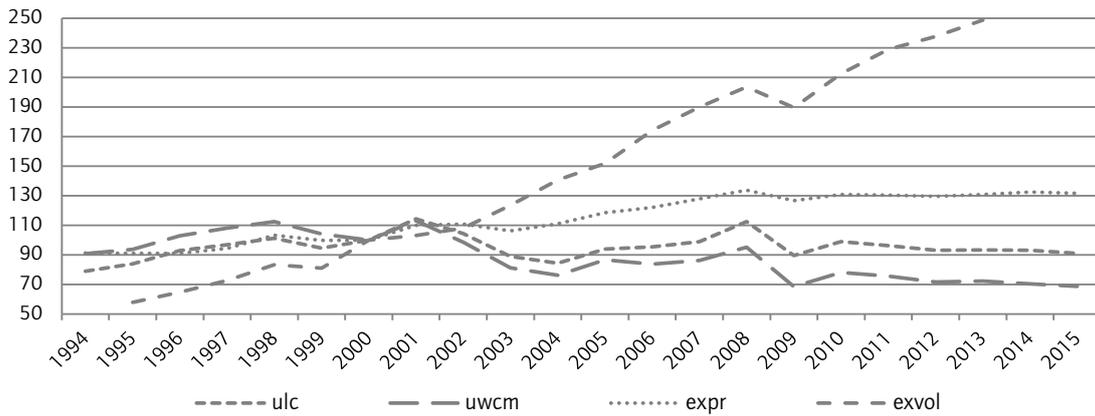
Sources and notes: as Figure 2.

Figure 7 Competitiveness indicators set against export performance, Hungary 1994-2015



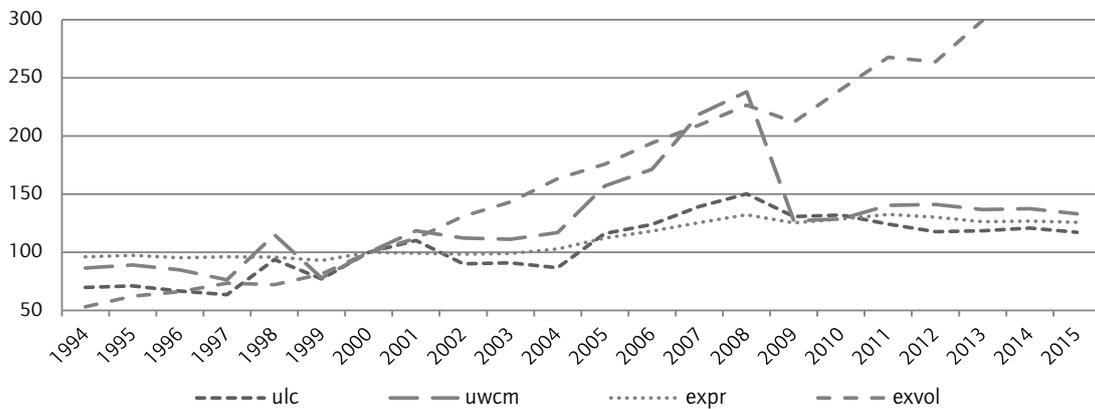
Sources and notes: as Figure 2.

Figure 8 Competitiveness indicators set against export performance, Poland 1994-2015



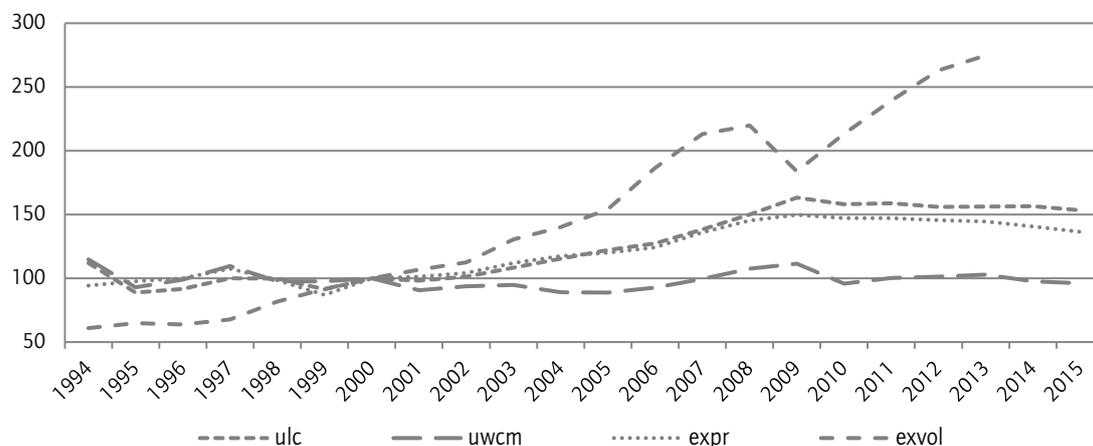
Sources and notes: as Figure 2.

Figure 9 Competitiveness indicators set against export performance, Romania 1994-2015



Sources and notes: as Figure 2.

Figure 10 Competitiveness indicators set against export performance, Slovakia 1994-2015



Sources and notes: as Figure 2.

6. Comparing absolute cost levels

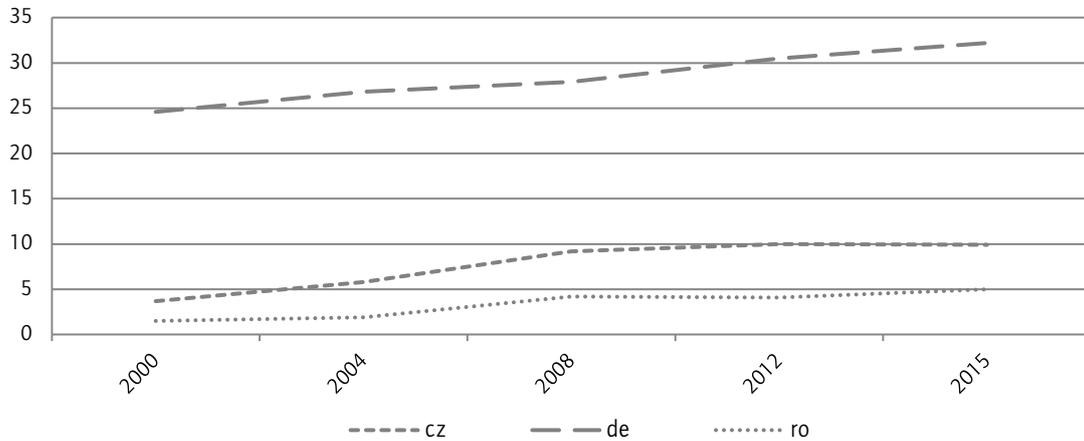
The analysis so far has used the data favoured by the European Commission, following changes over time in ULC relative to trading partners and from a set starting point. In this section the focus switches to absolute levels of labour costs, set out in Table 3, measured in euros at current exchange rates. These will be the figures that firms contemplating outsourcing production will see and which therefore influence their decisions. The differences between countries and the changes over time are enormous. When presented as a graph (Figure 11), the extent and potential significance of the gaps between countries becomes even clearer.

Table 3 Average hourly labour costs, euros

	2000	2004	2008	2012	2015
Czechia	3.7	5.8	9.2	10.0	9.9
Germany	24.6	26.8	27.9	30.5	32.2
Estonia	2.9	4.3	7.8	8.6	10.3
Ireland	19.7	25.5	28.9	29.8	30.0
Spain	14.3	16.5	19.4	21.1	21.2
Hungary	3.6	5.9	7.8	7.4	7.5
Poland	4.2	4.7	7.6	7.9	8.6
Romania	1.5	1.9	4.2	4.1	5.0
Slovakia	2.8	4.1	7.3	8.9	10.0

Source: Eurostat, tps00173

Figure 11 Labour cost levels, Germany, Czechia, Romania, 2000-2015



Source: derived from data in Eurostat, tps00173..

These differences in labour costs are similar to differences in measured productivity levels recorded by Eurostat, albeit with some fluctuations and variations between years. For 2013 the Czech and Romanian levels of GDP per person in employment were 37% and 18% of the German level, respectively (calculated from Eurostat, nama_aux_gph).

The average cost of producing one unit of output therefore does not vary much between countries. However, these differences in productivity levels should not be taken at face value. Indeed, the misleading impression given by comparisons using current exchange rates is well known, leading to the calculations using purchasing power parities to take account of the enormous differences in price levels that exist in the world.

Without this correction, the implication of comparative productivity levels being similar to comparative wage levels is that a worker in Germany was almost seven times as productive as a Czech worker in 2000, falling to around three times as productive in 2015. Similarly, a German worker was sixteen times as productive as a Romanian worker in 2000, falling to somewhat over six times as productive in 2015. Neither the gaps nor the changes over such a short period seem plausible.

It seems unlikely that a bus driver in Germany drove sixteen times as many passengers as a Romanian counterpart in 2000 and then six times as many in 2015, or that a teacher was teaching sixteen times as many students, or bar staff serving sixteen times as many customers with the same products. A small productivity gap is plausible, but this scale seems difficult to reconcile with the inherent similarity of tasks undertaken. An element of catching up is also plausible, but the extent of change over such a short period implied by these figures would seem to confirm the misleading nature of results using current exchange rates for comparisons.

The use of purchasing power parities (PPP) for GDP comparisons between countries leads to more plausible results. World Bank data for per capita GDP in 2014 raises Czechia and Romania respectively to 67% and 44% of the German

level, up from 61% and 22% in 2000 (<http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD?page=3>). These are still substantial gaps calculated with the help of various assumptions. Thus in international comparisons teachers are indeed assumed to be more productive in Germany without any precise output measure to support the assumption. If taken seriously, these figures still suggest that a firm that outsources production uses substantially less productive workers.

However, there is no reason to assume that the gap revealed by PPP calculations is not also an exaggeration. Moreover, it was not, and is not, the comparison of levels by purchasing power equivalents that feeds into policymaking or into business decisions. All the concern has been with inflation and currency revaluation potentially threatening competitiveness and the key measure of changes in ULC.

The nature of particular jobs and of productive activities can vary between countries. The job of a bus driver, a teacher or a worker on a motor-vehicle assembly line need not be exactly the same across all workplaces. They may work with different equipment, at different speeds and with different skill levels. However, the important point here is that even if the work done is identical, there can be much higher recorded productivity in some countries than others. Arguably, the same work should be valued the same wherever it is performed, so that productivity per worker would also be the same everywhere. Instead, the reality of the methodology for making international comparisons is that productivity, even if it represents exactly the same activity, can be measured as lower in one country because costs are lower; in other words, because wages are lower. This therefore obscures the benefits of outsourcing, undermining the usefulness of the ULC measure as an indicator of competitiveness.

Part of this argument should be self-evident, as public services that are provided without charge are incorporated into GDP measures on a cost rather than an output basis. There are efforts to find more sophisticated ways of incorporating changes in public spending into national income measures and to find ways to indicate changes in output that do not simply reflect changes in public spending, but the basis remains a derivative of the cost of provision.

Productivity also follows wages in many cases in the production of traded manufactured goods. This requires a more complex explanation.

7. The effect of multinational companies and their value chains

The assumptions behind reliance on ULC for measuring competitiveness of manufacturing activities are obvious and familiar. If the price of a product rises it will not be competitive when set against others and sales will fall. The assumption behind following short-term variations in ULC is that an increase in ULC will lead to lower exports and possibly higher imports as customers switch to alternative providers. This misses the reality of international economic relations in the modern era which are dominated by MNCs, shifting where they undertake activities and controlling value chains across countries.

The incorporation of CEECs into value chains has taken essentially three forms, albeit with overlaps between them. The first is sale by domestic producers of raw materials and semi-manufactures. Much of this does compete with other producers and higher wages could be expected to reduce competitiveness, although the effect may be pretty small as wages are often a very small element in total costs. The second is the outsourcing of particular production (and other) activities to firms in another country. The third is FDI to buy an existing facility or to set up a new one in another country. These last two bring with them a different (and new) logic when compared with traditional theories of international trade.

The important decision is not that of customers switching from one supplier to another. The subsidiaries of Volkswagen in CEECs do not compete for markets with each other or with the parent company in Germany. The important issue is rather one of an MNC deciding where to locate which part of its value chain. Its decision will be based on the lowest cost compatible with the required quality. That need not imply the same technology of production, although that often is the case; it is the final product quality that matters. The attraction of CEECs is clear. They offer substantially lower production costs for the same product that could be, or previously was, made in a higher-wage country. However, the crucial point for relative ULC is that the value of that product will now appear in the new country's national income statistics as being lower than it was in the original country.

This is an inevitable result of how productivity in real terms is measured. Classification systems have great difficulty coping with changes in products, which may or may not be genuine improvements justifying a higher price, and have no mechanisms for taking account of completely new products (cf. IMF *et al.* 2009; Lowe 1996; OECD 2001). As a result, they are often dependent on accepting costs of production as the only available indicator.

Thus, for example, if a German motor-vehicle manufacturer transfers production of a car seat to a separate firm, or to its own subsidiary in Romania, the new product will appear in Romanian GDP figures based on its production cost. That is either because such a product was never made there before as an identifiably distinct product or because it was, but at a Romanian price. The important point is that the car seat, when made in Germany, contributed to German GDP in line with German labour costs, but it now appears in Romania at Romanian labour costs. That means, as indicated in Table 3, at 6% of the German level in 2000, or 16% of the German level in 2015.

Arguably, the real productivity of the Romanian workers should be measured as the same as that of the German workers they have replaced. In practice it appears to be much lower even if they are making the same thing with the same technology. There may be some differences here, as the low cost of labour may mean that it is not worth mechanising as many tasks, but the main production activities within MNCs are often very similar between countries. It is something similar with the bus driver, the teacher and the bar staff, except that with outsourced manufacturing activities, in view of rigorous standards required by MNCs, there should be even less likelihood of a divergence in product quality.

Thus, in the host country for outsourced activities, the nominal ULC is derived from pre-existing domestic price and wage levels. The MNC has calculated that it can get the required product quality by using comparatively very cheap labour. It will not make changes to production in response to marginal changes in wages. Once a location has been chosen, there are significant costs of moving. Wages can therefore often increase a long way – as indeed they already have both in nominal and in real terms in the countries considered here - before it becomes more advantageous to take production back home.

The costs of moving are smaller if simpler tasks are outsourced to firms in the host country. They are larger when an MNC undertakes FDI, makes substantial investment in plant and machinery, and recruits and trains a labour force. Such investment is undertaken on the basis of long-term plans which will not be altered in a hurry. Production is therefore minimally affected by short-term changes in relative ULC levels and resilient to considerable secular upwards movement in wage levels. This, unlike the European Commission's approach, is fully consistent with the developments shown in Figures 5 to 10.

The third form of incorporation into global value chains (GVCs) - FDI into production of complete products by MNCs - can be illustrated by a prominent example: the Škoda car manufacturer in Czechia. This is a wholly owned subsidiary of VW Finance of Luxembourg. It pays wages at around one third of the German level, in line with the Czech-German comparison in general, with both vehicle manufacturers paying above the average for manufacturing industry in their respective countries.

It is not possible to make an exact comparison of labour productivity levels between parts of the same MNC. Value added figures reflect both pay levels and internal pricing strategies of the MNC. A possible indicator of real productivity is vehicle output per employee and this in Škoda is well above the VW average: 26.8 per employee in 2015, against 17.2 for VW worldwide and 10.94 for Germany in 2014 (calculated from Škoda 2016; Volkswagen 2015).

This could to some extent reflect different activities, but Škoda is by no means a mere assembly operation. It uses parts made elsewhere but also produces components for other parts of the Volkswagen group, notably 254,524 engines and 688,425 gear boxes in 2005 (Škoda 2016: 20). It is not the main development centre for the group, but it does have research and development (R&D) for the development of its own models; an activity that makes sense for Volkswagen because pay for researchers, as for other employees, is lower than in Germany. The impression of Škoda being more than twice as productive as the group's German plants may be deceptive, but there is no support here for its employees being less productive than their German counterparts.

What, then, makes the difference to lead to such substantially lower wages for workers doing essentially the same work? There are three explanations, all of which can apply:

1. The most obvious is higher profit levels. These vary between years. In 2015 they were 10.9% of turnover before tax while total labour costs were 6.6% of turnover, or 6.4% if remuneration for so-called key management is excluded (calculated from Škoda 2016: 99 and 104). For the Volkswagen group as a whole, profits gave a 7.3% return on sales (Volkswagen 2015).
2. The second explanation is the nature of pricing within an MNC, an area in which detail is necessarily sparse. Parts made by Škoda and then used elsewhere in the VW group, recorded as 7.5% of sales in 2015 (Škoda 2016: 93), may be transferred at prices which reflect Czech wage levels, leaving the resulting higher profit to be enjoyed elsewhere.
3. The third is the choice of production location for different vehicles within the Volkswagen group. As a general rule, bigger and more expensive vehicles yield bigger profits. They require more material to produce, but the price difference is higher than would be justified by the quantity of material needed for production. They contain some different parts, but much of the production process is very similar to that for smaller vehicles. Indeed, the same assembly lines and the same assembly-line workers can be switched between models with little difficulty. In view of the higher margins on more expensive cars, it makes most sense to produce them where wages are already highest. Cheaper, smaller cars are made where wages are lowest, even if most of the work undertaken by employees is very similar to that for more expensive models.

Škoda is biased towards producing cheaper cars with lower prices per kilogram. Data from companies' annual reports show that the average price per vehicle in 2015 was 20% below the world average for the group and 70% below the average price of a VW car sold in Germany. The Škoda model range has gradually moved up towards higher priced vehicles. Moving fully to the same mix and the same prices as vehicles sold in Germany would imply a very substantial increase in recorded productivity.

Concluding points

1. To reiterate, ULC are a very poor measure of competitiveness. They are referred to with reverence by European Commission publications, but the faith placed in them is not backed up with evidence or analysis of their supposed significance. In fact, evidence confirms that they are of little value in explaining export performance.
2. The ULC measure is particularly inappropriate for CEECs. Understanding export performance requires an understanding of the nature of international economic relations in the modern world and of the behaviour of MNCs. The nature of outsourcing and the transfer of production between countries, as well as recent experience, shows that there was considerable scope for wage increases in the years up to 2008. There is no reason to suppose that this scope has been exhausted. There is no validity to the argument that wages should rise only in line with productivity, because, in a world of FDI and outsourcing, productivity is measured as low because and where wages are low, even if tasks performed are the same as those in higher wage countries.
3. There is probably scope for raising wages substantially closer to western European levels, but there would be a point at which wage rises become economically harmful. A point would come when an MNC would judge it more profitable permanently to move production elsewhere. That would depend on the availability of a suitable alternative location where workers can provide the necessary quality of product at lower cost. With economic development progressing elsewhere in the world, we can assume that that point will at some time be reached for the activities paying low wages in CEECs. The only lasting protection for employment and wage levels is therefore to move into higher value-added activities, taking on more sophisticated parts of value chains. That would protect employment levels and create scope for higher wages and hence higher recorded productivity levels.
4. Higher wages are not only a result of this process of development but also a factor that can reinforce it, helping to retain the most skilled labour and encourage the location of higher value-added activities in CEECs. However, a high-wage strategy would need more than high wages alone. It would need to be combined with other measures to develop higher levels of technology and innovation. A serious discussion of how that could be done is beyond the scope of this paper.

References

- Collignon S. (2012) Macroeconomic imbalances and comparative advantages in the Euro area, Brussels, ETUI.
- Draghi M. (2013) Euro area economic situation and the foundations of growth, European Central Bank. <https://www.ecb.europa.eu/press/key/date/2013/html/sp130315.en.html>
- Durand M. and Giorno C. (1987) Indicators of international competitiveness: conceptual aspects and evaluation, *OECD Journal: Economic Studies*, 9, 147-182.
- European Commission (2016a) Commission staff working documents - Country reports 2015 (Estonia, Poland, Romania). http://ec.europa.eu/europe2020/making-it-happen/country-specific-recommendations/2015/index_en.htm
- European Commission (2016b) Price and cost competitiveness: quarterly data on price and cost competitiveness of the European Union and its Member States. http://ec.europa.eu/economy_finance/publications/pcqr/2015/pdf/pccr415_en.pdf
- ETUI and ETUC (2014) Benchmarking working Europe 2014, Brussels, ETUI.
- ETUI and ETUC (2015) Benchmarking working Europe 2015, Brussels, ETUI.
- ETUI and ETUC (2016) Benchmarking working Europe 2016, Brussels, ETUI.
- Felipe J. and Kumar U. (2011) Unit labor costs in the Eurozone: the competitiveness debate again, Working Paper No. 651, Annandale-on-Hudson, Levy Economics Institute.
- Gabrisch H. and Staehr K. (2015) The Euro Plus Pact: competitiveness and external capital flows in the EU countries, *JCMS: Journal of Common Market Studies*, 53 (3), 558-576.
- Giordano C. and Zollino F. (2016) Shedding light on price- and non-price-competitiveness: determinants of foreign trade in the four largest euro-area countries, *Review of International Economics*. doi: 10.1111/roie.12225.
- Hunya G. (2015) Mapping flows and patterns of foreign direct investment in central and eastern Europe, Greece and Portugal during the crisis, in Galgóczi B., Drahokoupil J. and Bernaciak M. (eds.) *Foreign investment in eastern and southern Europe after 2008: still a lever of growth?*, Brussels, ETUI.
- IMF et al. (2009) *Export and import price manual: theory and practice*, Washington DC, International Monetary Fund. <https://www.imf.org/external/np/sta/xipim/pdf/xipim.pdf>
- Knibb M. (2016) A critique of nominal and real macro unit labour costs as an indicator of competitiveness, *World Economic Association Newsletter*, 5 (3), 5-7. <https://www.worldeconomicassociation.org/newsletterarticles/ulc/>
- Lowe R. (1996) Handling quality changes in the Canadian national accounts price deflators, in OECD (ed.) *Industry productivity: international comparison and measurement issues*, Paris, Organisation for Economic Co-operation and Development, 143-158. <http://www.oecd.org/industry/ind/1825807.pdf>
- Maciejewska M., Mrozowicki A. and Piasna A. (2016) The silent and crawling crisis: international competition, labour market reforms and precarious jobs in Poland, in Myant M., Theodoropoulou S. and Piasna A. (eds.) *Unemployment, internal devaluation and labour market regulation in Europe*, Brussels, ETUI, 229-254.
- McDonnell T. and O'Farrell R. (2016) Fall of the Irish house of cards, in Myant M., Theodoropoulou S. and Piasna A. (eds.) *Unemployment, internal devaluation and labour market regulation in Europe*, Brussels, ETUI, 59-82.
- Myant M. and Drahokoupil J. (2011) *Transition economies: political economy in Russia, Eastern Europe, and Central Asia*, Hoboken, Wiley.

- Myant M., Theodoropoulou S. and Piasna A. (2016) Introduction, in Myant M., Theodoropoulou S. and Piasna A. (eds.) Unemployment, internal devaluation and labour market regulation in Europe, Brussels, ETUI, 7-23.
- OECD (2001) Measuring productivity: measurement of aggregate and industry-level productivity growth - OECD manual, Paris, Organisation for Economic Co-operation and Development.
- OECD (2015) Measuring trade in value added: an OECD-WTO joint initiative. <http://www.oecd.org/sti/ind/measuringtradeinvalue-addedanoecd-wtojointinitiative.htm>
- Porter M.E. (1990) The competitive advantage of nations, London, Macmillan.
- Škoda (2016) Výroční zpráva 2015, Mladá Boleslav, Škoda auto a.s.
- Volkswagen (2015) Volkswagen Group – Annual report 2014. <http://annualreport2014.volkswagenag.com/additional-information/key-figures.html>
- World Economic Forum (2015) Global Competitiveness Report. <http://reports.weforum.org/global-competitiveness-report-2015-2016/methodology/>

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