ARTICLES

Current account imbalances in the euro area: competitiveness or demand shock?

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Growing current account imbalances in the euro area are not driven primarily by differences in export performance across surplus and deficit countries. While current account dynamics are correlated with unit labour costs (ULC) and imports, they are not correlated with exports. Losses in cost competitiveness do not appear to have been the cause of deficits, but rather a symptom of a demand shock leading to price-level drift in the non-tradable sector. A breakdown of ULC patterns based on detailed sectoral data shows that most losses in cost competitiveness may be attributed to rising prices in the non-tradable sector. In most deficit countries, the export sector appears to be able to meet increased foreign demand, especially in case of a symmetrical re-balancing of demand within the euro area that requires countries with surpluses to play their part.

Keywords: current account imbalances, competitiveness, export performance, euro area.

JEL code: F14, F32, F41
Since the advent of the euro, increasing intra-euro area imbalances have co-existed with the euro area running a balanced current account with the rest of the world (see Chart 1). Deepening current account deficits in crisis-stricken countries have dovetailed with widening surpluses in Germany, the Netherlands and Austria. Countries with structural current account deficits (Spain, Greece and Portugal) saw this deficit expand to over 10% of GDP in 2007, while France and Italy moved from a surplus to a deficit, falling to −1.0% and −2.4% respectively in 2007. These persistent current account imbalances may have played a decisive role in the euro area’s current economic crisis (Lane and Milesi-Ferretti, 2011).

Current account deficits and surpluses are not in themselves indicators of economic performance or vulnerability and, for a long time, their gradual build-up in the euro area was ignored (Giavazzi and Spaventa, 2010). Imbalances may be “good” or “bad”, depending on whether they reflect convergence factors, i.e. capital flows within the European Union (EU) from the rich countries to the poorer catching-up countries, or misallocation of capital, for example private-credit booms that are not channelled into productive investment, housing bubbles, etc. While, at the global level, capital does not flow systematically from rich countries to poor countries, it does in the European Union (Blanchard and Giavazzi, 2002), in line with the convergence process generated by the integration of European capital and goods markets. Lane and Pels (2012) confirm that, in the European Union, the introduction of the euro has led to capital flows from rich to poor countries, in which growth expectations were higher. Determinants of intra-euro area current account imbalances are nevertheless difficult to

Chart 1  Current account balances
(euro billions, accumulated surplus/deficit)
identify “robustly”, ex ante as well as ex post (Eichengreen, 2010). In this paper, we seek to identify the sources of imbalances, through the analysis of trade performance and unit labour costs (ULC).

While changes in euro area countries’ current account balances are correlated with variations in ULC and imports, the same is not true for exports. Exports are very weakly correlated with both current account balances and ULC: countries like Spain or Greece, which were in deficit and whose costs deviated from those of Germany, saw their exports of goods and services rise in line with Germany over 1999-2007. Export performance was also satisfactory in countries like Italy and Portugal. This observation is strengthened if the impact of negative specialisations, which are not likely to reflect cost or price competitiveness problems, is removed from their export growth rates.

The breakdown of ULC shows that increases in these costs were almost entirely fuelled by rising value-added prices in the non-tradable service or construction sectors. Most of the increase in ULC was due to price growth in these sectors and the effect is greater in crisis-stricken euro area countries.

Observations on the main correlations, and various factors’ or sectors' contributions to export or ULC developments lead us to attribute the increase in imbalances, and therefore probably the setting-in of certain aspects of the current economic crisis, to an asymmetrical demand shock rather than a competitiveness shock through trade. Driven by anticipations of high returns, capital flowed to the non-tradable sector in the peripheral countries and created a demand shock, which led not only to an increase in ULC (due to increasing prices in the non-tradable sector) but also to the build-up of current account deficits as a result of expanding imports. This demand shock does not appear, in general, to have affected exporting sectors’ ability to serve foreign demand.

The rest of the article is set out as follows: Section 1 examines the relationships between the current account balance, ULC, imports and exports. For the latter, export performance was separated from specialisation effects. Section 2 proposes a breakdown of unit labour costs. The final section concludes by showing that the hypothesis of a demand shock is likely to account for the stylised facts that have been uncovered.
Trade imbalances, competition and export performance

The key role played by imports in the build-up of trade imbalances within the euro area

As Chart 2 shows, between 1999 and 2007, national current account patterns were correlated with cost competitiveness trends. Countries in which current account balances improved in GDP percentage points over the period were also those in which ULC stagnated (Germany, Austria and the Netherlands), while the countries in which current account balances deteriorated were those in which ULC increased significantly (Greece, Spain and Ireland). Portugal was an exception among peripheral countries because its current account was in deficit long before the euro was introduced.\footnote{From 1980 to the mid-1990s, in Portugal, and to a lesser extent Greece, structural trade deficits were offset by significant surpluses in general government current transfers and migrants’ remittances, which accounted for up to 10% of GDP in Portugal and 5% in Greece. The erosion in the general government transfer balance (especially EU structural and cohesion funds, also recorded in the capital account) and private remittances before the advent of the euro generated substantial structural deficits in the current account balance, which amounted to 10% of GDP in Portugal and over 5% in Greece, while the trade deficit remained stable (Charts in Appendix 1).} Despite this correlation the role played by external competitiveness gaps, i.e., the ability to meet demand on international markets, in the build-up of current account imbalances has not been established. In fact, countries whose cost competitiveness deteriorated did not systematically, or even generally, lose export market share compared to countries in surplus. Export developments appear to be largely uncorrelated, though they had the expected signs, with ULC variations and current account balance patterns (correlation of \(-0.05\) and \(0.05\) respectively).

Germany and Austria, atypical because their ULC stagnated, posted average export growth rates similar to those of Greece and Spain, whose ULC rose by over 3% a year on average. Conversely, France saw its ULC increase at a rate close to the euro area average and experienced very weak growth in exports.

Conversely, import growth rates were correlated with current account balance patterns: the coefficient of correlation between annual growth of imports and current account balance variations was a negative \(0.58\). In addition, changes in domestic demand were correlated with both current account and ULC trends (\(-0.69\) and \(0.71\), respectively).
Charts 2  Changes in current account, unit labour costs, exports and imports 1999-2007
(as a %, exports and imports in current euro)

**Current account and unit labour costs**
X axis: unit labour costs (year on year)
Y axis: current account (variation, GDP percentage points)

**Current account and exports**
X axis: exports of goods and services (year on year)
Y axis: current account (variation, GDP percentage points)

**Current account and imports**
X axis: imports of goods and services (year on year)
Y axis: current account (variation, GDP percentage points)

**Domestic demand and imports**
X axis: imports of goods and services (year on year)
Y axis: domestic demand (volumes, year on year)

**Unit labour costs and exports**
X axis: exports of goods and services (year on year)
Y axis: unit labour costs (year on year)

**Unit labour costs and imports**
X axis: imports of goods and services (year on year)
Y axis: unit labour costs (year on year)

Source: Eurostat.
1 2 Export performances of peripheral countries (excluding specialisation effects) are often in line with Germany’s

Exports remained resilient in several countries despite declining competitiveness. This may be because they benefited from favourable positions, i.e. on high-demand product and country markets. In such cases, losses in competitiveness would be hidden.

However, the observation of the weakness of the link between cost competitiveness and exports is strengthened when countries' geographical and sectoral specialisations are taken into consideration. Following Gaulier et al. (2012), we break down export growth based on a weighted variance analysis of elementary trade flows. We derive the following equation:

\[
X_{ijkt} = \alpha_{it} + \beta_{jt} + \gamma_{kt} + \epsilon_{ijkt}
\]

where \(\alpha_{it}, \beta_{jt}\) and \(\gamma_{kt}\) are export, import and product fixed effects that have a time dimension \(t\). \(X_{ijkt}\) is disaggregated export growth.\(^2\)

This model provides a systematic assessment of dynamics specific to each exporter, importer or product. Each countries’ export growth (increase in market share in the chart below) may then be broken down between a “performance” effect that is estimated directly, and geographical and sectoral specialisation effects obtained by cross-checking the specific import and product effects (variable over time) by their weight for the exporting country considered. All things being equal, exporters that are strongly positioned on the most dynamic destination markets or that are specialised in high-growth sectors enjoy higher growth. The “performance” component may be considered to be a country’s market share growth if its specialisation was completely neutral – with specialisation benefits fully offsetting drawbacks.

Chart 3 presents the breakdown of export market share dynamics for euro area countries from 1999 to 2007. Roughly 5,000 categories of products are identified using the 6-digit harmonised system, and geographical coverage is exhaustive. Export performance (excluding specialisation effects) was clearly dismal for France and Finland. Portugal, Italy and Greece were penalised by their sectoral specialisation (textiles, competition from emerging economies) but had country-specific performances close to that of Germany. If the relatively unfavourable specialisation effects are averaged out, Spain’s performance appeared stronger than that of Germany over the period.

\(^2\) We use a measure that has the statistical properties of a logarithm change but allows us to take into account entry and exit (on product or country markets), i.e. the extensive margin of trade (Gaulier et al., 2012).
Among deficit countries, only France’s export performance appeared to be lacklustre, which may reflect losses in cost or non-cost competitiveness. Our statistical analysis ascribes the bulk of Portugal and Italy’s market share losses to negative specialisation. While this negative specialisation limits exports and, therefore, makes it more difficult to re-balance the trade account for a given domestic demand growth rate, the export performances specific to these countries does not appear to reflect losses in competitiveness.

It is possible to refine the breakdown in order to isolate the quantity effect from the price effect by using unit values as price indicators (see table in Appendix 1). Most of the heterogeneity in adjusted export growth may be traced to volumes, as price trends varied very little across the “core” countries (Germany, France, Belgium, Austria and the Netherlands). The slight increases in unit values in countries like Italy and Spain could, in addition, have resulted from improvements in quality rather than a lack of price competitiveness; such a change would be consistent with the good performances in value.

Even when both goods and services are considered (which is not the case in our breakdown, due to a lack of sufficiently detailed data for services),

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3 Multinational companies’ strategies may have played a role in the collapse of France’s export market share. To ensure their access to global markets, French multinationals appear to have given precedence to (horizontal) foreign direct investment (FDI) over exports. It is difficult to assess to what extent these choices were determined by their firms’ low cost competitiveness in France. In France’s current account, FDI income partially offset the drop in net export revenues and thus tempered the deterioration in the net external position.

4 At this stage, our analysis does not yield any information on determinants of competitiveness: it is possible for a country to offset losses in cost competitiveness with gains in non-cost competitiveness to obtain a positive performance (excluding specialisation). But sooner or later, losses in cost competitiveness undermine capacity to invest in “non-price” competitiveness factors (innovation, etc.), with the result that both types of competitiveness are linked.
the exporting sectors of deficit countries are often deemed too small in size to contribute significantly to growth. Our analysis does not yield any information on equilibrium levels of exports, and therefore the possibly “hidden” poor performance of countries situated below these equilibrium levels. If Germany is used as the reference in terms of the size of the exporting sector in the economy, then many euro area countries may be considered insufficiently open. However, it must be noted that the share of exports (goods and services) in euro area countries' GDP was fairly similar in 1999 (30%, 31%, 32% and 34% for Italy, Spain, France and Germany respectively) and that its divergence up to 2007 was chiefly due to the exceptional rise in this ratio for Germany. Notably because GDP rose only slightly, Germany had an export share of 58% in 2007, which was probably unprecedented for a large advanced economy. Deficit countries all saw their exports increase more rapidly than GDP. In the larger countries, export rates were equivalent to or above that of Germany in 1999 or before reunification.

13 Along with imports, exports have also helped to re-balance current account positions since 2008

Since intra-euro area imbalances peaked, current account balances have partially readjusted through a limited decrease in surpluses and deficits. Current accounts improved by roughly 5% of GDP in Ireland, Spain, Greece and Portugal between 2008 and 2011 (see Chart 4). Initially, this adjustment resulted from the collapse in trade following the 2008-2009 financial crisis: the base effects led to a decrease in both surpluses and deficits following proportional decreases in exports and imports. In addition, Spain, Greece, and Ireland to a lesser extent, also adjusted their current accounts through a significant decline in their imports as a result of shrinking domestic demand. Fiscal consolidation plans played an important role in many countries. In 2011, further adjustment through imports was strengthened by good export performances in Spain and Portugal. The close to 13% growth rates of exports of goods and services recorded in these countries in 2011 were linked to above-average growth in exports of goods, especially to countries outside the European Union. Greece also posted a strong 18.4% increase in exports of goods. However, its exports of services, which represent the bulk of its trade and made up 13% of GDP, compared with 9% for goods, remained subdued.\(^5\) Ireland was an exception because, when foreign trade collapsed, its exports were more resilient than those of the rest of the world, thanks in particular to its specialisation in pharmaceutical products. Since then, however, Ireland’s export growth has been relatively weak.

\(^5\) The poor performance of the tourism sector in Greece, which is export-oriented, may stem from competitiveness problems that cannot be traced to costs.
Overall, Chart 4 confirms that rising exports and declining imports jointly contributed to the adjustment of current accounts since 2008. The lower right-hand section of Chart 4 shows that ULC increases were significantly...
higher in countries with surpluses and that costs virtually stalled (Portugal) or decreased (Spain and Ireland) in deficit countries. Growth in exports has therefore been negatively correlated with ULC increases since the crisis, as shown in the recent study by Darvas (2012).

The statistical breakdown of growth in exports of goods for the period from the second quarter of 2008 to the second quarter of 2011 confirms this trend (see Chart 5). Greece, the Netherlands, Portugal, Spain and Austria posted better performances (excluding specialisation) than the other euro area countries. Ireland enjoyed positive sectoral specialisation, which turned out to be particularly advantageous during the crisis. The geographical specialisation on the European markets has been detrimental to all euro area countries since 2008 due to the weak demand for imports from euro area countries. Greece, which retained a favourable geographical specialisation before the crisis (notably due to its specialisation on peripheral countries) is now as at much or more of a disadvantage as its euro area partners. It nevertheless continued to enjoy a positive sectoral specialisation thanks in particular to agricultural and agri-food products whose global demand did not flag during the crisis. As the sectoral specialisation effect did not offset the geographical specialisation effect, Greece posted a very high performance (excluding specialisation) and gained market shares in its good export markets. It is probably too early to say if this performance was

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**Chart 5  Shift-share analysis of export performance Q2 2008-Q2 2011**

*(average annual growth rate as a %)*

![Chart 5](chart.png)

*Source: Banque de France calculations and World Bank (see Gaulier et al. 2012) based on ITC data, Geneva.*

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6 Decreasing unit labour costs in Ireland may also be due to composition effects (see Irish Central Bank Quarterly Bulletin, Q1 2011 and Darvas, 2012).
a result of a downward trend in Greece’s export prices or of firm-driven efforts to focus on exports given the fall-off in Greek domestic demand.\footnote{It must however be pointed out that Greece’s product export base is weak and current difficulties in the tourism sector (which cannot really be ascribed to losses in competitiveness) have naturally undercast performance (excluding specialisation effects) for the economy as a whole, i.e. goods as well as services, not estimated here.}

The data presented in this section tends to favour a view of gaps in domestic demand dynamics, and therefore, imports, as the driver of widening current account imbalances between 1999 and 2007. The gradual narrowing of these gaps coincided with a downward trend in domestic demand that was particularly marked in deficit countries affected by the global recession and the subsequent euro area crisis. There is no indication that exports played an important role: despite losses in cost competitiveness, periphery countries maintained their market share fairly well. If one takes into account the structural handicaps arising from their geographical (exposure to the European market) and sectoral specialisation (weight of sectors competing with emerging economies), they often managed to achieve export performances (excluding specialisation effects) that were similar to that of Germany. The recovery of exports of goods in Spain, Portugal and Greece in 2011 suggests that sectors producing tradable goods did not lose competitiveness as imbalances deepened.

2| Analysis of trends in euro area unit labour costs

How do we reconcile satisfactory export performances in countries on the periphery of the euro area with the losses in these countries’ cost competitiveness? Using detailed sectoral data covering the 1999-2007 period and a breakdown of ULC as the product of the share of wages in value-added and value-added prices, we assess several hypotheses. Firms may choose not to, or may be unable to, pass wage increases through to their prices by modifying the distribution of value-added (the share of wages in value-added is also the complement to 1 of the gross profit margin) to their disadvantage. This breakdown will be examined at the sectoral level by identifying the sectors according to their degree of exposure to international competition. It will therefore be possible to assess to what extent the tradable sector in deficit countries has managed to preserve its price competitiveness. The role played by changes in sectoral structure in competitiveness trends in the economy as a whole will be considered in Appendix 2. Losses in aggregate competitiveness may in fact coexist with maintained sector-specific competitiveness in the case of negative structural effects.

ULC are often expressed as a ratio of nominal wages and labour productivity. Following Felipe and Kumar (2011), we examine another
algebraic decomposition, which allows us to make the distinction between cost competitiveness and price competitiveness: ULC are expressed as a product of the share of total labour compensation in value-added and value-added prices.

\[ \text{CUT} = \sum w_i \cdot P_{VA_i} \]

(1)

where \( w_i \) is total labour compensation in sector \( i \) and \( VA_i \) is nominal value-added. Variations in ULC are a result of two mechanisms: on the one hand, changes in the distribution of value-added between labour and capital, and on the other, changes in price competitiveness (price of value-added).

Table 1 represents average growth rates of ULC between 1999 and 2007 by main sector of activity and each component of ULC using the EU KLEMS data base. The EU KLEMS data base records all data for the 1999-2007 period for 62 sectors of activity in 11 euro area countries. We assimilate the manufacturing sector to the tradable sector and the rest of the economy to the non-tradable sector.

The upper section of Table 1 shows that changes in ULC vary widely across sectors: the average growth rate of ULC is lower in the manufacturing sector than in the rest of the economy. This is particularly true in Germany, France, Ireland and Portugal. This difference is partly linked to the sharp rise in ULC in the construction sector in Spain, Ireland, Portugal and France (but not in Germany). Germany nevertheless retains an advantage in terms of cost competitiveness when it is measured solely in the manufacturing sector.

However, these differences in cost competitiveness do not automatically give rise to differences in price competitiveness. Between 1999 and 2007, value-added prices in the manufacturing sector fell in Ireland and France but increased slightly in Germany and Portugal. In the first two countries, companies in the tradable sector lowered their profit margins despite rising relative labour costs in order to better compete on international markets. Therefore, France, the Netherlands and Portugal did not record losses in price competitiveness in the manufacturing sector in comparison to Germany, whereas Italy and Spain did. Divergences in price competitiveness in the manufacturing sectors are therefore smaller than gaps in cost competitiveness. In the medium to long term, the lowering of profit margins may nonetheless affect companies’ ability to invest in non-price competitiveness (R&D, quality, foreign market penetration, etc.) and, ultimately, reduce the size of the export sector as a result of firms exiting the sector. However, with the possible exception of France,

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8 For an overall view of methodology and development of the KLEMS data base, see O’Mahony and Timmer (2009) and www.euklems.net.

9 This is obviously a rudimentary classification: some segments of the services sector, for example those linked to tourism and international transport, are also part of the tradable sector in certain countries, while some manufacturing industries serve domestic demand and are shielded from foreign competition.
Table 1  Unit labour costs, value-added prices and share of wages 1999-2007  
(average annual growth rate as a %)

<table>
<thead>
<tr>
<th>Table 1 Unit labour costs</th>
<th>Germany</th>
<th>France</th>
<th>Italy</th>
<th>Spain</th>
<th>Ireland</th>
<th>Greece</th>
<th>Portugal</th>
</tr>
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<td>-0.2</td>
<td>2.0</td>
<td>2.5</td>
<td>2.9</td>
<td>3.8</td>
<td>3.8</td>
<td>2.9</td>
</tr>
<tr>
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<td>-1.2</td>
<td>0.3</td>
<td>2.3</td>
<td>2.4</td>
<td>-1.8</td>
<td>3.9</td>
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</tr>
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<td>3.1</td>
<td>2.1</td>
<td>1.0</td>
<td>8.3</td>
<td>9.1</td>
<td>3.1</td>
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<tr>
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<td>-0.1</td>
<td>2.8</td>
<td>3.7</td>
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<tr>
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<td>-0.2</td>
<td>-1.5</td>
<td>-0.3</td>
<td>4.8</td>
<td>-1.5</td>
</tr>
<tr>
<td>Construction</td>
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<td>4.4</td>
<td>3.0</td>
<td>5.3</td>
<td>9.0</td>
<td>4.6</td>
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<td>3.8</td>
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<td>Electricity, gas and water supply</td>
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<td>0.5</td>
<td>3.0</td>
<td>1.2</td>
<td>3.9</td>
<td>3.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Construction</td>
<td>1.9</td>
<td>4.8</td>
<td>4.0</td>
<td>7.7</td>
<td>9.3</td>
<td>2.8</td>
<td>4.5</td>
</tr>
<tr>
<td>Wholesale and retail trade</td>
<td>0.0</td>
<td>1.6</td>
<td>1.4</td>
<td>3.3</td>
<td>6.1</td>
<td>2.9</td>
<td>2.8</td>
</tr>
<tr>
<td>Hotels and restaurants</td>
<td>2.0</td>
<td>3.4</td>
<td>3.4</td>
<td>5.2</td>
<td>3.3</td>
<td>6.5</td>
<td>5.2</td>
</tr>
<tr>
<td>Transport, storage and communication</td>
<td>-0.2</td>
<td>0.4</td>
<td>0.7</td>
<td>2.4</td>
<td>3.7</td>
<td>0.8</td>
<td>0.5</td>
</tr>
<tr>
<td>Finance, insurance, real estate and business services</td>
<td>0.7</td>
<td>2.8</td>
<td>3.3</td>
<td>4.0</td>
<td>4.2</td>
<td>3.1</td>
<td>2.4</td>
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<td>Personal services</td>
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<td>3.0</td>
<td>3.7</td>
<td>6.9</td>
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<td>4.8</td>
</tr>
</tbody>
</table>

[a) 1999-2006.  
Source: EU KLEMS.

euro area countries that are currently in deficit were able to overcome this handicap.

Divergences between value-added price trends in Germany and those in deficit countries were significantly greater in the non-tradable sectors.
For example, increases in value-added prices ranged from 2.8% in Greece, to 7.7% in Spain, and 9.3% in Ireland in the construction sector, and from 3.0% in Italy to 6.9% in Ireland in the collective, social and personal services sectors.

The share of wages in total value-added remained stable in most countries between 1999 and 2007, with the exception of Germany and Spain, where it dropped by an annual average of 0.9%. In the German manufacturing sector, the share of wages decreased by a more marked 1.7% per year. As German companies did not fully pass the impact of wage moderation through to their prices, the subdued wage growth led to an unprecedented transfer of value-added to German shareholders (Askenazy et al., 2011).

From equation (1), we can calculate the contribution of both components of ULC at sector level to growth in aggregate ULC. Chart 6 shows that the bulk of the rise in unit labour costs can be traced to price changes in the non-tradable sector, with this impact being stronger in the euro area countries in crisis. The negative contribution made by the wage component in the manufacturing sector corresponds to the decrease in the share of the manufacturing industry in value-added in most countries, as the share of wages in this sector is higher than in the rest of the economy.


10 In the case of Greece, the contribution of the exchange rate corresponds to the depreciation of the drachma vis-à-vis the euro from 1999 to 2001.
The Balassa-Samuelson effect could account for sharper growth in wages and prices in periphery countries as these countries may be considered catching-up countries. Low-income countries gradually move toward the productivity levels of more advanced economies but only in the competitive sector, which pushes inflation up in the economy as a whole due to the equalisation of wages across sectors. However, between 1999 and 2007, the countries on the periphery registered relatively low productivity (apparent labour productivity and total factor productivity) gains in the manufacturing sector\(^1\) and the difference between the gains in this sector and those in services was smaller than in Germany (EU KLEMS data).

Another source of potential bias in global unit labour cost dynamics are the structural effects that are liable to appear due to the reallocation, over time, of factors of production across the various sectors. Recent evidence based on an analysis of individual company data shows that the inter-firm component has the greatest impact on changes in real unit labour costs (Rodríguez et al., 2012). Our data enable us to make a distinction between inter-sectoral and intra-sectoral components of growth of unit labour costs, not only in growth in the share of wages in value-added but also in the price deflator. Our calculations, which we detail in Appendix 2, show that changes in economies’ sectoral structure played a limited role in changes in ULC.

3| Summary and conclusion

As we look to the future architecture and management of the euro area, it is essential to properly understand the origin of the current account imbalances that have followed the euro’s inception. The new surveillance mechanism aims at complementing the monitoring of budget deficit rules by the European Commission by an additional monitoring of external balances and international competitiveness. To identify “good” or “bad” current account imbalances, it is necessary to have additional information that makes it possible to assess potential risks. By looking solely at current accounts, we disregard the respective contributions of exports and imports, which could provide useful information on the causes of imbalances. In addition, the significant contribution of price deflators in the non-tradable sector to the growth of aggregate ULC since the advent of the euro requires us to be prudent when using unit labour costs as an indicator of trade performance. Firstly, growth in aggregate ULC may mask divergences between the tradable and non-tradable sectors. Secondly, the

\(^1\) Ireland is an exception to the rule: apparent labour productivity has risen sharply in the manufacturing sector while, at the same time, total factor productivity has stalled. This gap is due to a substantial accumulation of capital, especially in the multinational firms doing business in the country.
relationship between companies’ ULC and their export performance may be weakened by not fully passing on costs to prices and by non-price competitiveness effects.

Our analysis underscores that in the period spanning the introduction of the euro up to the 2008-2009 crisis, as well as more recently, export performances of countries on the periphery of the euro area have not necessarily been weaker than those of countries with a surplus. Up to the crisis, the peripheral countries accumulated current account deficits mainly because of relatively dynamic domestic demand. Exports grew often despite unfavourable ULC indicators. We show that increases in ULC are chiefly driven by rising value-added prices in the sectors that are most sheltered from international competition, primarily construction, and that these stepped-up prices affect tradable sectors only indirectly.

The overriding role played by price increases in the non-tradable sector in the emergence of gaps between ULCs of deficit countries and Germany appears to us to be the “signature” of a demand shock rather than a competitiveness shock in the tradable sector.

In the context of euro area financial integration, inflows of domestic, and especially, foreign capital to the non-tradable sectors of periphery countries both boosted demand for imports and fuelled increases in prices of goods and services, primarily non-tradable goods and services. Hence the correlation observed between current account and ULC developments.

In the tradable sector, the domestic demand shock had very little direct impact on volumes and prices, because the latter are primarily responsive to external demand and exogenous international prices. In contrast, supply of non-tradable goods and services is relatively rigid, such that the rise in demand leads to a combined increase in volumes (the real estate construction boom) and prices (the housing bubble). Exporting firms in periphery countries were nonetheless indirectly affected by increases in prices of non-tradable goods via climbing wage costs on tighter labour markets, and escalating input (services or real estate) prices. It must be noted, however, that German companies with whom they were in competition did not fully pass on to their customers cost competitiveness gains stemming from exceptional wage moderation in a context of depressed domestic demand. In addition, falling interest rates led to reduced capital costs for companies across all sectors. Ultimately, periphery countries did not experience a failure of their export sectors.

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12 In addition, the large exporters are often foreign firms that set their prices with very little consideration for local demand. Investment decisions should take cost competitiveness into account, but within the euro area, these (level) comparisons remain favourable to most periphery countries.

13 Given the size of investment flows towards the non-exporting sector, export sectors in these countries should have outperformed to be able to balance supply and demand. This was in a context of fierce international competition, especially in the industries in which these countries specialise, and while having to overcome the handicap of a relatively weak demand from the rest of the euro area.
In a monetary union, with no exchange rate risk, it is natural for capital to flow into certain countries when production and price trajectories are expected to be more favourable in these countries than in the rest of the euro area, and lending conditions converge (virtual disappearance of risk premiums in periphery countries).\textsuperscript{14} The resulting current account deficits and their counterpart debt accumulated by the private or public sector, may be easily classed as “bad deficits”. The sectoral allocation of abundant savings, domestic and primarily foreign, has not made it possible to fulfil expectations of a real catch-up in the periphery countries. While expected capital gains materialised, they did not last long and led to substantial debts, which were not backed by productive assets. Creditors and debtors, often in the banking sector, share responsibility for inappropriate investments. Existing government regulations have been deficient or have proven incapable of correcting unsustainable trajectories.

The partial re-balancing of current accounts since 2008 mainly reflects contracting demand (and imports) in deficit countries in which private and public economic agents are seeking to deleverage. Current account deficits also shrank in 2011 as exports of goods outside the European Union from Spain, Portugal and Greece grew faster than in the rest of the euro area. Recent performance by exporters in these countries confirms that cost competitiveness in the tradable goods sector is not a major obstacle for euro area deficit countries and that the export sector is capable of meeting stronger foreign demand, especially in the context of a symmetrical re-balancing of demand within the euro area that requires countries with surpluses to play their part.\textsuperscript{15}

\textsuperscript{14} Foreign investors could expect real gains that were even larger because inflation remained moderate in the countries in the north of the euro area.

\textsuperscript{15} While the rise in exports does not appear to depend on the return of cost competitiveness, it would certainly benefit from a drop in ULC brought about by productivity gains. In addition, while wage decreases, by suppressing domestic demand, may go a long way towards re-balancing the current accounts of crisis-stricken euro area countries, this would be at a high economic and social cost.
Appendix 1

Additional charts and tables

### Breakdown of current account balances 1980-2010

(As a %)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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</tr>
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<tbody>
<tr>
<td>General government transfers</td>
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<td>0</td>
<td>0</td>
<td>-0.6</td>
<td>-0.5</td>
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<tr>
<td>Compensation of employees and other transfers</td>
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<td>0</td>
<td>0</td>
<td>-0.8</td>
<td>-0.7</td>
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<tr>
<td>Trade in goods and services</td>
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<td>-0.2</td>
<td>-0.1</td>
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<td>Investment income</td>
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<tr>
<td>Remittances</td>
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<tr>
<td>Capital account</td>
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<td>Current account</td>
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<td>0.0</td>
</tr>
</tbody>
</table>

Source: IMF

### Breakdown of gains in export market share 1999-2007

(Annual average growth rate as a %)

<table>
<thead>
<tr>
<th>1999-2007</th>
<th>Breakdown of gains in export market share</th>
<th>Price (unit value)/volumes breakdown of “performance”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gains in global market share (current dollars)</td>
<td>Price (unit value)/volumes breakdown of “performance”</td>
<td></td>
</tr>
<tr>
<td>“Performance”</td>
<td>Geographical effect</td>
<td>Sectoral effect</td>
</tr>
<tr>
<td>France</td>
<td>-3.6</td>
<td>-3.6</td>
</tr>
<tr>
<td>Portugal</td>
<td>-2.4</td>
<td>-0.2</td>
</tr>
<tr>
<td>Ireland</td>
<td>-2.2</td>
<td>-1.5</td>
</tr>
<tr>
<td>Italy</td>
<td>-1.7</td>
<td>-0.8</td>
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<tr>
<td>Netherlands</td>
<td>-1.0</td>
<td>-1.0</td>
</tr>
<tr>
<td>Finland</td>
<td>-0.8</td>
<td>-3.0</td>
</tr>
<tr>
<td>Spain</td>
<td>-0.8</td>
<td>0.2</td>
</tr>
<tr>
<td>Belgium</td>
<td>-0.3</td>
<td>-0.5</td>
</tr>
<tr>
<td>Germany</td>
<td>-0.2</td>
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<tr>
<td>Greece</td>
<td>-0.2</td>
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</tr>
<tr>
<td>Austria</td>
<td>1.3</td>
<td>1.5</td>
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</tbody>
</table>
Appendix 2

The limited role played by changes in the sectoral structure of economies in unit labour cost (ULC) developments

Intra-sectoral and inter-sectoral aspects of growth of each component of the equation (1) are broken down as follows:

\[
\text{CUT} = \frac{\sum w_i}{\sum VA_i} P_{VA} (1)
\]

\[
\Delta \frac{\sum w_i}{\sum VA_i} = \sum_i \frac{w_i}{VA_i} \cdot \frac{VA_{it-1}}{VA_i} + \sum_i \frac{VA_i}{VA_{it-1}} \cdot w_i (2)
\]

\[
\Delta \ln P_{VA} = \sum_i \frac{1}{2} \left( \frac{VA_{it-1}}{\sum VA_{it-1}} + \frac{VA_i}{\sum VA_i} \right) (\ln P_u - \ln P_{it-1}) (3)
\]

Equation (2) breaks down changes in the share of wages in value-added for the economy as a whole into two terms: the first measures growth in the share of wages within these sectors (i), with the sectoral distribution of past value-added (t–1), and the second measures the contribution of inter-sectoral reallocation. Equation (3) breaks down growth in the value-added price index by using a Törnqvist price index in which growth rates of sectoral prices (logarithm changes approximate growth rates) are added up with weights that take into account sector size at the present and past date. In order to differentiate between inter-sectoral and intra-sectoral components of growth of value-added deflators, we create a price growth series using the equation (3) by keeping shares of sectors in value-added at their 1999 levels; we thus obtain the intra-sectoral component of price growth. The difference between this new series and that of the value-added deflator \( \Delta P_{VA} \) is the inter-sectoral component of the value-added price increase.

Chart A presents this breakdown of increases in ULC. Value-added price increases within sectors are the most important factor in growth in ULC and differences in aggregate ULC, given that periphery countries recorded a higher growth rate of value-added prices. The inter-sectoral aspect plays a secondary role in increases in value-added prices, except in Ireland where it contributes up to 0.5 percentage point per year to increases in ULC.

In Germany, Austria and Spain, the decreasing share of wages plays an important role within sectors. In the first two countries, this intra-sectoral decrease in the share of wages was deepened by a negative inter-sectoral component (favouring sectors where the share of wages is smaller). Conversely, in France, Italy, Portugal and Greece, the increasing share of wages within sectors was mitigated by negative structural effects, which
are partly due to the shrinking share of the manufacturing industry, in which the share of wages in value-added is greater on average than in the rest of the economy.

Intra-sectoral and inter-sectoral components both contribute significantly to changes in the share of wages in aggregate value-added. Overall, increases in the share of wages are nonetheless a minor factor in the rise of aggregate unit labour costs, which result mainly from increasing value-added price indices within sectors.

The components of increases in unit labour costs in the manufacturing sector are more balanced (see Chart B). The share of wages contributes negatively to increases in unit labour costs in the manufacturing industry in surplus countries. This contribution is somewhat offset by price increases, which indicates that companies have not passed their cost gains through to prices. In the Netherlands, the decreasing share of wages in the manufacturing industry is a result of structural effects, unlike in Germany and Austria where the intra-sectoral component dominates. However, in deficit countries, apart from Spain, the increase in the share of wages within these sub-sectors of the manufacturing industry was partly offset by negative structural effects. In Spain, Italy, Portugal and, to a lesser extent, Greece, value-added prices increase within sectors.3

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1 The intra-sectoral component is liable to mask structure effects across firms within sectors, with, for example, a greater proportion of firms within each industry with a large share of wages in value-added (Rodríguez et al., 2012).

2 For an overall view of methodology and development of the KLEMS data base, see O’Mahony and Timmer (2009) and www.euklems.net

3 This increase is in line with the one observed for the price component of the export performance of these countries as presented in the first section and shown in the table in Appendix 1.
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