Abstract

In this article, the relationship between cost competitiveness and export performance is examined with a view to exploring the usefulness of competitiveness indicators as policy tools. Headline cost competitiveness indicators suggest that much of the ground lost during the boom years has been recovered. This appears to have been to a degree reflected in the resilience featured in Ireland’s export performance during the global downturn. However, the aggregate data can mask significant differences in competitiveness adjustments, exports and employment fortunes across firms and sectors. In particular, indigenous firms carry much greater exposure to the domestic market and the UK market and were quite adversely affected by the sharp depreciation of sterling during the early phase of the crisis. Meanwhile, foreign-owned firms, which account for a very large proportion of total exports, tend to be more acyclical in nature and more geographically diversified, and did much to bolster the aggregate export performance. However, given that the foreign-owned firms are generally less labour intensive, the overall employment performance in the exporting sector was much weaker. Recently, there is tentative evidence to suggest that more aggressive efforts by indigenous firms to contain labour and other costs are being reflected in some recovery in market shares and a stabilisation in employment. At the same time, improvements across a broad range of cost competitiveness measures have helped maintain a robust pipeline of foreign direct investment, auguring well for future export performance and high-skilled employment generation.
1 Introduction

Real effective exchange rates remain central in policy discussions about competitiveness, forming part of the surveillance scoreboard in the new EU Macroeconomic Imbalances Procedure. The ultimate goal of regaining competitiveness is to boost export performance and generate employment. In the case of Ireland, following a substantial deterioration in competitiveness during the boom, cost competitiveness indicators suggest a dramatic improvement in recent years. Also, on the face of it, Irish export performance has been relatively resilient during the recession. However, the empirical link between cost competitiveness and export performance can be quite tenuous. Also, despite the strong headline export performance, industrial employment remains well below pre-crisis levels, which cannot be entirely explained by the depressed domestic market. In this article, the relationship between cost competitiveness and export performance is explored further in order to enhance the understanding of competitiveness indicators as a policy tool.

The cost base impacts on the ability of all firms to compete in international markets but is especially binding for the more labour intensive enterprises. Many indigenous firms are relatively labour intensive and tend to have a heavy dependence on the UK market. Just as the domestic market began to contract, these firms faced further intensification in competitive pressures due to the sharp depreciation of sterling against the euro during the early phase of the global financial crisis. Indeed, the extent of the competitiveness challenges facing firms based in Ireland was quite heterogeneous and depended on the exposure to the domestic market, the vulnerability to euro/sterling exchange rate fluctuations, but also the cyclicity of sectoral demand.

The Irish real effective exchange rates are often used as proxies for price and cost competitiveness development but are subject to important measurement issues (see O’Brien (2010)). These deficiencies, which are especially serious in unit labour cost based competitiveness indicators, are further discussed and some alternative indicators are proposed. The measurement issues are not confined to the competitiveness indicators, as the accounting practices of multinationals can also distort assessments of aggregate export performance. As such, an empirical link at the aggregate level between cost competitiveness and export performance may be undermined by measurement issues, and will also not reveal the very different challenges faced across sectors during the crisis. This argues for a sector-by-sector approach using indicators that adjust as much as possible for the measurement problems identified. In adopting a sectoral approach similar to O’Brien (2011b), this article highlights the sectors where cost competitiveness can play a useful role in explaining export performance and why, despite costs being driven down aggressively in certain labour intensive sectors, employment in the industrial sector has only recently stabilised.

In Section 2, the importance of the UK market to Irish-owned firms is highlighted and an alternative Irish nominal effective exchange is constructed that may more accurately capture the implications of sterling/euro exchange rate fluctuations for employment. Section 3 examines in more depth the measurement issues surrounding the standard measure of cost competitiveness – an index of total economy average unit labour costs relative to those of a large set of trading partners in common currency. Section 4 presents alternative measures of labour cost competitiveness, which attempt to address some of the issues raised in the preceding section. While labour costs are often the largest component of location-sensitive costs, and are normally the focus of cost competitiveness analyses, the scale of the changes in certain other costs suggests a broader assessment of cost competitiveness is necessary. Section 5 examines developments in some other important cost indicators, where sharp falls were recorded over the course of the recession. Section 6 explores the link between cost competitiveness and export performance at a disaggregated level. Section 7 concludes, summarising the main points emerging from the analysis.
2 Standard trade weights in Irish effective exchange rates can greatly underestimate the impact of euro/sterling exchange rate movements

The set of trade weights used to calculate effective exchange rates are important. There are various schemes from simple export weights to more complicated double-weighted schemes in which third market effects are taken into account. The latter option is used in the calculation of the harmonised competitiveness indicators (HCIs), which are essentially effective exchange rates. Ideally, the weights should take account of trade in both goods and in services, especially now that about half of Irish exports are services exports. However, given that there are strong data constraints for services trade and a large set of trading partners is usually incorporated, the weights for the HCIs are based on goods data only.

At this point, it is worth recalling that 88.7 per cent of manufacturing goods exports was accounted for by foreign-owned multinationals in 2009. These firms tend to be highly capital intensive and are concentrated in a small number of sectors. In particular, the broad chemicals sector (mainly pharmaceutical and organic chemicals (active ingredients)) is quite dominant in the Irish manufacturing export sector, accounting for close to 61 per cent of goods value exports in 2011. Also, a significant proportion of the exports of multinationals are intra-firm transactions. Finally, it is also worth noting that the export values are in gross terms and not value added, and that the import intensity of the multinational firms’ exports is often relatively high.

It can be argued that standard Irish effective exchange rates are unduly influenced by the broad chemicals sector, which only accounted for 11.7 per cent of employment in the industrial sector in 2009. One alternative approach to determining the set of trade weights is to focus on Irish-owned firms only. As these firms tend to be labour intensive, the employment implications of shifts in nominal or real exchange rates may be more appropriately captured. As can be observed in Table 1, the UK is typically an important trading partner for indigenous firms, with the weight of the UK rising from 20 per cent under the standard approach to almost 49 per cent for Irish-owned firms. According to the Census of Industrial Production, 46.8 per cent of goods exports from Irish-owned firms were destined for the UK in 2007. When the simple export weights based on Irish-owned firms only are substituted for the standard weights, the impact of the sterling depreciation against the euro emerges strongly (see Chart 1). Indeed, the sterling/euro rate was broadly stable for much of the 2000s, but just as the crisis escalated, the sterling exchange rate depreciated quite significantly, exacerbating the competitiveness deterioration of Irish-owned firms. Although sterling has appreciated against the euro more recently, bringing some welcome relief to indigenous firms in particular, it still remains much weaker than at the onset of the crisis. The nominal effective exchange rate is used for illustration purposes, but clearly using this alternative set of weights will have an equivalent impact on real effective exchange rates. The real effective exchange rates are examined in subsequent sections.

<table>
<thead>
<tr>
<th>Table 1: Irish Trade Weights under selected schemes</th>
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<tbody>
<tr>
<td>Standard double-weighted, goods only (HCIs)</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Irish-owned simple goods and services exports</td>
</tr>
</tbody>
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Note: The trade weights are averages over 2001-2006 while Irish-owned weights are averages over 2002-2007 from Enterprise Ireland. It is worth noting that over 29 per cent of overall services exports were destined for the UK during 2009 and 2010.
Irish headline unit labour cost deflated effective exchange rates contain serious measurement issues

Competitiveness is sometimes narrowly defined in order to make it more amenable to measurement. The standard measure to assess short-term developments in competitiveness is unit labour costs relative to a set of trading partners expressed in common currency. As can be observed from Chart 2, Irish relative unit labour costs increased sharply during 2001 to 2008, increasing by over 42 per cent. These large cumulative increases in unit labour costs were indicative of growing imbalances in the Irish economy. However, due to measurement issues, the relative unit labour costs based indicator needs to be treated with caution. The measurement issues in Irish competitiveness indicators generally are discussed in O’Brien (2010). Some of the more important issues in the interpretation of Irish unit labour cost based competitiveness indicators are discussed in more detail below.

3.1. The Irish economy may have been highly competitive in 1999 and so the deterioration in competitiveness since that reference point may be somewhat overstated

In assessments of cost competitiveness trends in the euro area, the baseline of 1999 is often used as it was the year of the introduction of the euro. In such assessments, there is an almost implicit assumption that each country’s real exchange rate was in equilibrium in 1999. However, it is commonly argued that Ireland was in a highly competitive position at that time. This is partly argued on the basis that during the late 1990s there was wage restraint (in return for cuts to income tax under social partnership) despite rapid gains in productivity and also on the basis of some residual catch-up or convergence. In this respect, the labour cost competitiveness position of the Irish economy may have been unsustainable and some deterioration in competitiveness was inevitable. So, using 1999 as a reference point may put the Irish economy in an unduly poor light. However, this should not be overstated as the Irish current account was close to balance in 1999, which would suggest that the

Sources: ECB SDW, CSO, Enterprise Ireland and authors’ calculations.
real exchange may not have been significantly undervalued. Even allowing for some possible unwinding of an unsustainable position during the early part of the decade, there was a sharp deterioration in competitiveness in subsequent years as pointed out in Cassidy and O’Brien (2005, 2007).

3.2 Strong sectoral compositional effects mean that headline unit labour costs overstate the underlying improvement in labour cost competitiveness

Headline unit labour cost developments may partly reflect large shifts in the sectoral composition of the economy. This could suggest a marked improvement in competitiveness even in the absence of improvements in competitiveness at the sectoral level. O’Brien (2011b) examined the extent to which structural shifts in the composition of the business sector in the economy may explain recent large movements in aggregate relative unit labour costs. Headline relative unit labour costs in the business sector improved by 14.2 per cent during 2009 and 2010, but when compositional effects at the broad sectoral level are taken into account, the improvement in competitiveness is less pronounced at about 8.4 per cent over the same period. In addition, there were likely strong compositional effects within the manufacturing sector, as the high value-added chemicals sector performed comparatively well during the crisis. Darvas (2012) examined compositional effects for 24 EU countries. In the case of Ireland, the headline relative unit labour cost indicator fell by 18 per cent between the first quarter of 2008 and the final quarter of 2011. When allowances are made for compositional effects, the adjustment was only slightly less pronounced at 14 per cent, suggesting a relatively modest compositional effect. However, the construction, agriculture and real estate sectors are excluded from the business sector in the analysis, with a view to constructing a potentially superior explanatory indicator for export performance. Therefore, the results are not directly comparable to O’Brien (2011b), particularly given that the sharply contracting construction sector is included in the latter.

3.3 Productivity data for the Irish manufacturing sector are highly distorted

Irish manufacturing output and exports are dominated by foreign multinationals, with almost 90 per cent of exports accounted for by non-Irish firms. For example, in 2009, the largely foreign-owned broad chemicals sector contributed over 41 per cent of gross value added of Irish manufacturing and about 57.5 per cent of goods exports (rising to about 61 per cent in 2011). However, the chemicals sector only accounted for 16.7 per cent of total manufacturing employment. The very high levels of recorded productivity in this sector, and a small subset of other sectors, heavily influence productivity and unit labour costs measures for the aggregate manufacturing sector. Indeed, gross value added per employee in the Irish manufacturing sector was well over three times the EU27 average in 2010.

The high productivity in certain sectors suggests the inclusion of returns to valuable patented products, although much of the research and development that generated such products may often be conducted outside of Ireland. As a consequence of the relatively low corporate tax rate, much of the global profits may be assigned to Ireland, with firms using legitimate tax arrangements under standard transfer pricing rules. Given that a significant proportion of manufacturing output does not reflect returns to labour and physical capital in Ireland, the productivity levels are likely inflated and should be interpreted with caution. Furthermore, due to potential changes in accounting practices by multinationals and how the rewards are transmitted to the foreign owners, it is worth keeping in mind that annual growth in manufacturing productivity may also be affected. This caveat applies equally to the internationally traded services sector, with its large offshore financial services sector and influx of internet services firms in recent years.

There have been various attempts to construct measures of productivity adjusted for transfer pricing. Notably, Honohan and Walsh (2002) take four manufacturing sub-sectors and assume that, if there were no transfer pricing, productivity in these sub-sectors would be equal to the EU15 average for comparable industries. The sub-sectors were found to have contributions to manufacturing output that were
out of proportion to their respective employment levels. They found that the labour productivity growth rate for 1995 to 1999 adjusted downwards from 8.6 per cent to 3.8 per cent. More recently, Forfás (2012) performed a similar exercise by substituting in comparable US sectors’ productivity levels for the observed levels of three modern sub-sectors in Irish manufacturing and two sub-sectors in the Irish internationally traded services sector. Using this adjustment, they found that productivity in manufacturing fell from over €70 per hour to about €45 per hour in 2007, still higher than the euro area average. Similarly, for the tradable services sector, productivity fell significantly, from €55 per hour to €40 per hour in 2007, although still higher than the corresponding euro average of €36 per hour. It is worth noting that transfer pricing may impact other sectors, albeit probably to a more limited degree, and so the choice of sub-sectors may be too narrow. Also, the relevant data are only available with a long lag, so the same type of adjustments cannot be undertaken to inform more conjunctural analyses.

3.4 Aggregate unit labour costs more generally have other drawbacks

There are some more generally applicable criticisms of unit labour cost based competitiveness indicators. As argued in Altomonte et al. (2012), ULC-based competitiveness indicators at the aggregate or sectoral level are imperfect measures and, in order to be used effectively in a policy setting, they need to be complemented by firm-level based indicators. In particular, standard ULC-based measures suffer from some potential measurement biases. There may be an aggregation bias as labour productivity in aggregate ULCs may not capture the productivity of the average firm due to improper implicit weighting of firms. There may also be a quality-adjusted bias as shifts in the product mix towards higher quality goods push up the price deflator but there may not have been any adverse impact on underlying competitiveness. Finally, cost competitiveness indicators need to take into account the structural effects of international segmentation of production. This issue is particularly relevant in the highly globalised Irish economy.

4 Narrowing the Focus to Wage Competitiveness

As highlighted in the previous section, productivity data can give a highly distorted picture of returns to Irish factors of production. In light of this, it may be preferable to set aside productivity developments and focus on compensation per hour or per worker as the labour cost competitiveness indicator. It could be argued that, in sectors dominated by multinational firms, compensation levels can be more relevant given that processes and capital intensities can often be standardised across borders within these firms (Gray (2010)). The choice of deflator can also be motivated by data constraints. There are not sufficiently up-to-date data available on value added within Irish manufacturing to make it possible to construct robust unit labour cost indicators at the individual sectoral level, although industrial production series have often been used as proxies. In this regard, as was highlighted in Darvas (2012), there has been a marked divergence between growth in real gross value added and growth in industrial production in recent years, which calls into question the reliability of using sectoral production indices as proxies for value added.

Apart from excluding productivity, there are a number of further notable caveats regarding the relative compensation per employee based competitiveness indicator. Firstly, there are potential compositional effects that may influence the results, particularly for more recent years, as firms may be inclined to hoard more skilled workers in the initial stages of a downturn, which tends to push up average compensation per employee. However, this has not been borne out by the data. Bergin et al. (2012) investigated the potential impact of compositional effects across a wide range of characteristics and found only a very modest net impact over the period 2006 to 2009. Similarly, in a longitudinal study of firm level data, Walsh (2012) found only small compositional effects between 2008 and 2011. Secondly, compensation per hour is a preferable indicator of competitiveness but due to data constraints compensation per employee is often used. It is worth pointing out that, on a per hour basis, wages in Ireland increased by 0.7 per cent in the private sector.
Cost Competitiveness and Export Performance in the Irish Economy during 2009 to 2011, with the decline in wages per employee largely reflecting the fall in hours worked (see Table 2). The limited size of the wage cuts in the private sector seem surprising when set against a backdrop of an unprecedented decline in output. However, there are a number of features that may explain why wages are characterised by downward rigidities, for example, lowering wages weighs on staff morale and gives rise to increased monitoring costs and higher levels of staff turnover among higher productivity workers.

It is also worth emphasising that wage developments may be quite heterogeneous across firm and employee characteristics. For example, to the extent that new entrants or temporary contract workers are being offered less attractive employment conditions than existing permanent contract holders, the average wage change may understate the downward adjustment at the margin. It is also possible that the potentially more intensified wage pressures exerted on smaller firms are not reflected in the aggregate survey data if small firms are not adequately represented. Finally, as noted below, it is also likely that the aggregate averages mask strong divergences across firms depending on export market exposure and vulnerability to cyclical movements in demand. However, from an overall perspective, it appears that Ireland has been regaining labour competitiveness by wage restraint rather than large wage cuts, while at the same time wages in our trading partners have generally continued to rise.

Table 2: Private and public sector wage trends in Ireland, annual change

<table>
<thead>
<tr>
<th>Year</th>
<th>Private sector % change per hour</th>
<th>Private sector % change per employee</th>
<th>Public sector % change per hour</th>
<th>Public sector % change per employee</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>1.0</td>
<td>-2.2</td>
<td>2.9</td>
<td>2.3</td>
</tr>
<tr>
<td>2010</td>
<td>-0.2</td>
<td>-1.2</td>
<td>-3.7</td>
<td>-3.9</td>
</tr>
<tr>
<td>2011</td>
<td>-0.1</td>
<td>-0.2</td>
<td>0.4</td>
<td>-0.9</td>
</tr>
</tbody>
</table>

Source: CSO EHECS. Notes: (1) the public sector pension levy, which was introduced in 2009, is not included as a wage reduction in EHECS; (2) the annual change data for EHECS begin in 2009.
The compensation per employee based indicators for both the whole economy and for the manufacturing sector, presented in Charts 3 and 4, are based on the same methodology used to construct the Harmonised Competitiveness Indicators i.e. double-weighted trade weights are used for a large set of trading partners. Using standard HCI weights, the compensation deflated ‘HCI’ suggests a more serious deterioration during the boom relative to the commonly used unit labour cost deflated HCI. When the weights are based on Irish-owned firms only, the deterioration during the boom was less pronounced but there was a sharper deterioration during the sterling depreciation of 2007-2009. More recently, the improvement in wage competitiveness has been significant, although strong compositional effects in the unit labour cost based indicator exaggerate the improvements in underlying cost competitiveness. Turning to the manufacturing sector, the deterioration in competitiveness was larger and more persistent using the compensation deflated HCI. Due to the relative strength of the high value added chemicals sector, the unit labour cost indicator gives an exaggerated impression of the scale of the improvements in cost competitiveness in recent years. On the other hand, the compensation deflated indicators suggest a further deterioration in 2009 and subsequently a more modest improvement in the past two years. The sharp depreciation of sterling against the euro largely explains the challenging cost competitiveness developments during 2008 and 2009.

Using information from the Bank’s Business Sentiment Survey, Chart 5 gives an indication of the scope of cuts to compensation across indigenous firms and foreign multinationals. As the global downturn intensified in 2009, both indigenous firms and multinationals reduced hourly rates and/ or bonuses. However, the labour cost reductions appear to have been more widespread among indigenous firms, with over 81 per cent of respondents reporting a salary cut compared to 60 per cent of multinationals. Indigenous firms were also more aggressive in making cuts to hourly pay – of the 81 per cent of firms that pointed to a cut, 39 per cent cut both the hourly rate and bonuses compared to just 9 per cent of foreign multinationals. By 2011 this trend was still apparent but the difference in this respect between the indigenous and foreign
multinationals had narrowed somewhat. By 2011, about 51 per cent of indigenous firms indicated that they were cutting wages while just 25 per cent of multinationals pointed to a cut in compensation. Interestingly, almost 38 per cent of multinationals indicated that they had increased hourly wage rates in 2011 and, indeed, there is anecdotal evidence of multinational firms facing shortages of high skilled labour in recent years, particularly in IT services. This may also help to account for some of the apparent downward rigidity in the aggregate data.

Given the heterogeneity of the multinational presence across sectors, it may be useful to examine cost competitiveness developments using sub-sectoral level compensation per employee series. This would also allow for the use of more suitable sector-specific trade weights as aggregate trade weights are dominated by multinational trade, which is often intra-firm trade. Also, given that Irish industry is dominated by high value added and relatively low labour intensity foreign multinationals, it may help to explore which cost competitiveness indicators may be most useful when the link with export performance is explored later. In particular, cost competitiveness indicators may play a more prominent role in more labour intensive sectors and sectors where the value-added and exports data are not so distorted. By adopting a sector level approach, sector-specific issues and emerging challenges may also be more readily identifiable.

The focus of this analysis is the manufacturing sector. This is largely due to data constraints and the difficulty of disentangling domestic oriented and export oriented production and employment in the services sector. The measurement issues identified above are not just confined to the goods side, and in certain internationally traded services sectors much of the returns are due to intangibles developed abroad. Specifically, the influx and rapid expansion of internet services firms based in Ireland has heavily impacted services exports, but many of these businesses were developed elsewhere and had already established leading market brands. There are also certain business-related services exports, such as merchanting, where the products do not enter or leave this jurisdiction, complicating the analysis further by artificially boosting trade flows.

The compensation deflated competitiveness indicators for four sub-sectors within manufacturing reveal strong divergences, particularly between indigenous or traditional sub-sectors and multinational dominated sub-sectors. The impact of the sterling depreciation is more apparent for more indigenous sectors, such as the food sector. It is also notable that the more indigenous sectors have cut labour costs more aggressively relative to the costs in the corresponding sectors in our main trading partners since 2009. By contrast, labour costs in the electrical and optical equipment sector have increased on a relative basis, while relative costs in the chemicals sector were broadly stable during 2008-2010 before falling in 2011. The usefulness of these indicators in explaining export performance is investigated further in Section 6.

There are alternative avenues to examining labour cost competitiveness developments that adjust for the undue influence of the multinational sector on aggregate unit labour costs in the Irish manufacturing sector. Cerra et al. (2002) present a relative unit labour costs measure based on employment weights rather than output weights. Up to recently, the Central Bank Quarterly Bulletins contained an absolute measure of unit labour costs based on wage share weights and also an absolute measure that excluded the high value added chemicals sector. Finally, Casey (2012) constructs unit labour cost deflated indicators for the traditional and modern sectors and, interestingly, finds that much of the recent improvement for the traditional sector owes to falling labour costs.
5. Sharp falls in other costs have significantly boosted overall cost competitiveness

Labour costs are generally the most important location sensitive cost but labour cost competitiveness indicators should only form one element of the analysis of competitiveness. Other cost indicators can usefully supplement the analysis and a wide range of developments in other costs are detailed in National Competitiveness Council annual reports. In this section, some other important costs are briefly considered. These costs merit discussion given that the scale of the downward adjustments in these areas will likely also have impacted significantly on competitiveness and sectoral export performances. There are also important developments in structural and technological competitiveness during the recession but these are beyond the scope of this article. On this point, the dividends from reforms in the latter aspects of competitiveness will likely only be realised over a longer term horizon, with cost competitiveness playing an important role over the short-term.

5.1 Energy Costs

Energy costs can comprise a large share of direct non-wage costs for some firms, particularly those operating in the food, ICT and chemicals sectors. Heavy dependence on fossil fuels, however, with approximately 90 per cent of total energy imported to the country, means that a substantial proportion of energy costs are outside domestic control. In particular, 78 per cent of electricity generated in Ireland comes from fossil fuels, most of which come from external sources. This reliance is relatively high by EU standards, where the average dependence on fossil fuels for electricity generation is approximately 40 per cent.

While international energy price developments are an important factor in determining our energy cost competitiveness, they are not the only constituent. Currency fluctuations, energy infrastructure investment costs, the fuel mix, taxes and shipping costs are some of the other components. Electricity price comparisons for businesses over the course of the recession indicate that, while considerably higher than the EU average in 2007, prices in Ireland were broadly comparable to the EU average by 2010. An increase in electricity prices in the second half of 2011, however, means that electricity prices in Ireland are again above the EU average. Table 3 presents a breakdown of recent developments in electricity prices as presented in a recent Sustainable Energy Authority of Ireland (SEAI) report, based on data from Eurostat.

It is evident that electricity prices for smaller businesses, following recent increases, are now higher than the EU average, while prices for larger users still compare favourably. An important consideration, however, is that while electricity prices for large industrial users were close to the EU average in the second half of 2011, this is affected by a rebate for large users (Bands ID and IE), which will phased out on a gradual basis from autumn 2012. Prices are set to increase further, worsening Ireland’s competitiveness position from an energy cost perspective.

With over 60 per of electricity in Ireland generated from gas, international market trends have a significant impact on the energy bills of businesses operating in Ireland. Table 4 presents a comparison of Irish gas prices for various business users relative to the EU. A similar picture emerges with recent large increases in gas prices for smaller business users, while larger users have experienced declines and remain competitive relative to the EU average.

5.2 Business-to-Business Services Prices

Prices paid for professional and other business services can impact on a firm’s cost base and ability to compete in international markets. An experimental index from the CSO on business-to-business services prices indicates that prices declined quite sharply from early 2008. This downward trajectory in prices continued until 2010, whereafter they remained relatively stable up to the end of
2011. It is worth emphasising that although Irish business-to-business services prices may have returned to near 2006 levels, services producer prices pertaining in Ireland in 2006 may have been high compared to the euro area. The Irish economy recorded robust growth for much of the decade up to 2006, and this applied upward pressure on prices in the more sheltered sectors of the economy and on prices more generally. The index of services producer prices is broken down in to a range of sub-sectors in Chart 7. The largest cumulative declines came from the employment activities sector, the architecture and engineering sector and advertising sectors, as demand declined significantly for these services over the course of the recession. The large upward rise in the air transport category is likely to have reflected an upward shift in oil prices over this period.

5.3 Commercial Property Prices and Rents

As has been well documented, the commercial property market in Ireland has experienced a substantial downward shift in prices and rents. According to the SCSI/IPD Property Index, capital and rental values fell by a cumulative 65 per cent and 47 per cent between their respective peaks and the final quarter of 2011. Both are important considerations in cost competitiveness for business operating in Ireland and for attracting future foreign investment. Indeed, there is recent anecdotal evidence suggesting that the pipeline for foreign direct investment projects has remained robust, in no small part, to opportunities offered by a more competitive commercial property environment.

5.4 A Business Perspective – Some Firm Level Survey Data

Using the Bank’s bi-annual Business Sentiment Survey of firms operating in Ireland – both foreign multinational and indigenous – it is possible to track developments across broad range of indicators relevant to cost competitiveness. Chart 8 illustrates businesses’ level of satisfaction with a range of cost-based issues over the course of the recession. Consistent with weakened domestic demand and a weaker jobs market, labour costs were cited as less of an issue in late 2011 compared with 2007. Energy costs were also cited as less of a problem now compared with 2007 - when

<table>
<thead>
<tr>
<th>Annual Consumption (MWh)</th>
<th>Price (c/kWh)</th>
<th>% change since H1 2011</th>
<th>Relative to EU average H2 2011</th>
<th>Band share of market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Band IA</td>
<td>&lt; 20</td>
<td>19.83</td>
<td>+7.5%</td>
<td>111%</td>
</tr>
<tr>
<td>Band IB</td>
<td>20 &lt; 500</td>
<td>15.06</td>
<td>+12.2%</td>
<td>114%</td>
</tr>
<tr>
<td>Band IC</td>
<td>500 &lt; 2,000</td>
<td>12.94</td>
<td>+12%</td>
<td>116%</td>
</tr>
<tr>
<td>Band ID</td>
<td>2,000 &lt; 20,000</td>
<td>9.77</td>
<td>+11.9%</td>
<td>100%</td>
</tr>
<tr>
<td>Band IE</td>
<td>20,000 &lt; 70,000</td>
<td>8.56</td>
<td>+11.3%</td>
<td>94%</td>
</tr>
</tbody>
</table>

Source: SEAI, Eurostat.
crude oil and electricity prices spiked. Local authority rates and insurance costs, however, evolved into the most pressing concerns. The ‘other costs’ component is likely to encompass a number of issues including rent, where businesses faced uncertainty concerning upward only rent reviews in late 2011.

6 Cost competitiveness developments and recent headline exports performance

Ca’Zorzi and Schnatz (2007) show that cost competitiveness indicators can be useful in forecasting trade flows for the euro area. Moreover, competitiveness indicators are generally included as explanatory variables in macro model trade equations. However, in the case of Ireland, there is a tenuous relationship between competitiveness indicators and headline export performance. As explained in Section 3, recent movements in aggregate unit labour cost deflated competitiveness indicators are partly driven by compositional effects. Even if allowances are made for compositional effects, the data in levels and growth rates within certain high-tech sectors can be highly distorted due to transfer pricing. It is also worth pointing out that labour cost competitiveness indicators may be inadequate when there are sharp relative movements in other cost aspects of competitiveness such as energy costs or property costs. This would suggest that the construction of broader composite cost indicators may be worthwhile.

There are clearly important factors over and above cost competitiveness considerations that explain the short-run movements in recent overall market share performance (see Chart 9). As has been highlighted in previous Quarterly Bulletins, there have been strong product effects in recent years. Irish export performance was relatively resilient in 2009 due to the broadly acyclical chemicals sector. This effect subsequently unwound in 2010 and contributed to a reversal of the previous
year’s market share gain. It is worth mentioning that the buoyancy of internet services exports also helped to bolster Irish headline export performance during the crisis. Due to the high concentration of the Irish exporting industry, and particularly in industries that were less affected by the global downturn, standard world aggregate import demand indicators used in modelling trade proved insufficient alongside competitiveness indicators in explaining export performance. One approach to addressing this issue and productivity data related issues, is to use the compensation deflated ‘HCI’ developed in Section 4.

Two manufacturing sub-sectors are examined in detail here. Broadly speaking, these two sub-sectors were selected to represent the opposite ends of the spectrum in terms of labour intensity. The food sector comprises a large proportion of total industrial employment at 17.3 per cent in 2009 while contributing a markedly lower 13.6 per cent to total value added in industry (the value added contribution would be significantly lower but for the presence of high value added multinationals exporting food preparations (SITC Division 09)). The broad chemicals sector, on the other hand, has markedly lower labour intensity, accounting for almost 40 per cent of gross value added but about 11.7 per cent of total employment in 2009.

For the food sector, it can be observed in Chart 10 below that the compensation per employee indicator correlates reasonably well with the market share of Irish food, particularly for recent years. The cost competitiveness of the Irish food sector deteriorated significantly between 2000 and 2003 and then appeared to improve prior the crisis. Overall though, the competitiveness position has deteriorated vis-à-vis 2000, which contributed to a large fall in market share. The sharp depreciation of sterling beginning at the onset of the financial crisis in mid-2007 and on into early 2009, produced a sharp deterioration in Irish cost competitiveness relative to the UK, which was reflected in a further large decline in export market shares. Subsequently, as the cost base in Ireland reacted to significant downward pressures, the fall in market share was arrested in 2010 before recovering somewhat last year. The appreciation of sterling in recent months should add further momentum to a recovery in market shares.

Other sectors heavily reliant on the UK market also faced similar challenges and needed...
to drive down costs with greater urgency. While facing intensified competition from UK producers in the UK and Irish markets and also in third markets, these Irish firms would also have had to contend with depressed domestic demand, particularly if operating in more cyclically sensitive product markets. At the same time, these firms faced the additional challenge of tighter credit constraints. To the extent that these exporters were more labour intensive and more likely to have been indigenous – thus characterised by stronger links with the domestic economy – significant downward pressure was exerted on industrial employment. Indeed, although goods exports have already surpassed pre-crisis levels, albeit marginally, industrial employment is about 20 per cent lower than the levels pertaining in 2007. With the competitiveness losses largely reversed, there are tentative signs of stronger export market share performance and this has been reflected in a stabilisation in employment levels. Further measures to boost competitiveness are necessary if pre-crisis levels of industrial employment are to be realised, although conditions in the sub-sectors of industry supplying produce to the domestic construction sector will remain challenging. It is also worth noting that firms heavily dependent on the UK market remain vulnerable to a sharp depreciation of sterling against the euro.

Meanwhile, in the chemicals sector, the relationship between the compensation-deflated competitiveness indicator and export market share performance is rather tenuous (see Chart 11). This is not to say that labour costs are not important for this sector in terms of assessing the attractiveness of Ireland as a location for chemicals related foreign direct investment. It is more likely a reflection of the distortional effect of multinational accounting practices and international segmentation on the sector’s gross exports data. Due to its acyclical nature, the chemicals sector has continued to perform strongly during the global financial crisis and now accounts for over 60 per cent of Irish goods exports. Thus, this relatively low employment sector explains to a large degree the relative resilience of headline industrial exports during 2009, while the challenges faced by the more labour intensive sectors were more acute.

The drop in overall goods market share from 0.76 per cent in 2010 to 0.70 per cent in 2011 is likely mainly a reflection of some emerging weakness in the market share performance of the Irish chemicals sector, with the share of chemicals in world exports also declining. In an industry with volatile outturns, this may reflect product effects with highly valuable patents expiring. In this regard, the overall market share decline may mask an improved underlying export performance in more labour intensive sectors, which were benefitting from substantial downward adjustments in the cost base.

Overall, it is very challenging to assess whether the Irish economy has fully recovered its labour cost competitiveness position. The range of published estimates for the Irish equilibrium exchange rate estimates is wide and it is generally acknowledged that these estimates are surrounded by a high degree of uncertainty. Price and wage level comparisons are crude and subject to many caveats. That said, broadly speaking, it appears that the more sheltered sectors of the economy have higher wage levels compared to euro area averages, while sectors more open to international competition have relatively lower compensation levels. The current account has already moved into surplus, and while this can partly reflect the competitiveness performance...
of the economy, it is worth emphasising that imports are held back by depressed domestic demand. Ultimately, a sector-by-sector analysis of market share performance and employment generation, with pre-crisis levels serving as the benchmark, may be more instructive. Taking the important food sector for illustrative purposes, the analysis presented above indicates significant efforts to recover market share but the latter are still off pre-crisis levels. It also highlights the vulnerability of indigenous firms to volatility in the exchange rate movements with our main trading partner.

7 Summing up

This article examines the main cost competitiveness developments in the Irish economy during the recession, with particular focus on relative labour costs. The explanatory power of labour cost based competitiveness indicators is explored. A range of serious deficiencies of aggregate measures of labour cost competitiveness is highlighted and a case is made for adopting a sector-by-sector approach. Also, the scale of the adjustment in other costs argues for a broader measure of cost competitiveness. The headline exports performance can sometimes be misleading in the sense that the productivity and exports data can be distorted by the accounting practices of multinationals.

The main conclusions of the analysis are as follows

• Standard aggregate trade weights can mask the importance of the UK as a trading partner and the impact of fluctuations in the euro/sterling exchange rate. Almost a half of the exports from Irish-owned firms are destined for the UK. The sharp depreciation of sterling against the euro intensified pressures on Irish firms, already faced with a depressed domestic market. Also, these firms are generally more labour intensive and more embedded in the local economy and so the ramifications for employment were more significant;

• Headline average wage adjustment suggests significant downward rigidity. However, there is significant heterogeneity in wage developments across firm and employee characteristics. For example, more labour intensive internationally traded sectors, such as the food sector, have been forced to make more severe adjustments in labour costs;

• While labour costs feature prominently in assessments of cost competitiveness, the scale of the adjustment in other cost indicators is such that a broader consideration of costs is more meaningful in explaining recent export performance. In particular, sharp falls in property costs and business-to-business services prices have benefitted indigenous firms while at the same time enhancing the attractiveness of Ireland as a location for foreign direct investment;

• The link between labour cost competitiveness and export performance can be quite tenuous for certain high-tech sectors. Given the dominance of these sectors in gross exports, these indicators tend to have weak explanatory power also at the aggregate level. However, for more labour intensive sectors, labour cost competitiveness indicators can be useful in explaining export performance. For example, compensation-based competitiveness indicators for the food sector, albeit subject to some caveats, appear to correlate well with export market share performance in recent years;

• Due to a largely acyclical nature, the broad chemicals sector has continued to perform strongly during the global financial crisis and now accounts for close to 60 per cent of Irish goods exports. Meanwhile, the influx and rapid expansion of internet services firms based in Ireland has boosted services exports performance. The strong performance of the chemicals and IT services sectors explains to a large degree the resilience of Irish headline exports in recent years;
At the same time, the challenges faced by indigenous sectors have been more acute. As these firms tend to be more labour intensive, the strong headline export performance has not translated into a corresponding recovery in employment in the traded sectors. Yet, there are tentative signs that the efforts to contain labour and other costs in more indigenous sectors are being reflected in market share gains, and given their relatively high labour intensity, this should pay dividends in terms of generating employment. Indeed, according to the latest PMIs, industrial employment expanded in June for the third consecutive month and was the sharpest increase in the index since 1999. The recent appreciation of sterling may bring some solace and add further to the momentum in recovering market share although these firms remain heavily dependent on the UK market and vulnerable to future adverse euro/sterling exchange rate movements.
References


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