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The Central Bank's harmonised competitiveness indicators: Users beware*

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Introduction

Paul Krugman (1999) recounts a tale of how harmonisation in map-making displaced valuable knowledge. He refers to this as 'the evolution of ignorance'. While fifteenth-century maps of Africa were quite inaccurate about distances and coastlines, they contained significant information on the interior, such as the locations of Timbuktu and the River Niger. These details were based on second-hand reports of the type 'six days south of the end of the desert you encounter a vast river flowing from east to west'. Over time, as the art of map-making improved and the coastline of Africa was plotted with increasing accuracy, the contents of such reports were no longer accepted as comprising valid data. 'And so', he concludes, 'the crowded if confused continental interior of the old maps became "darkest Africa", an empty space'.

The harmonisation of procedures for the construction of competitiveness indicators across the eurozone leaves us equivalently less well-equipped to interpret short- to medium-term developments

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in the Irish economy. Indeed the consequences may be even more damaging: if reputable institutions are perceived as granting their seal of approval to the harmonised indicators, they will be used by analysts who are unaware of the associated pitfalls to draw misleading conclusions and possibly formulate inappropriate policy prescriptions.

Honohan & Leddin (2006) proclaim that 'wage competitiveness is clearly the key relative price for macroeconomic purposes'. Cost competitiveness indicators are used to address two questions of importance: (i) is the direction of movement stabilising or destabilising, and (ii) how much of the cost adjustment thought to be required to return to balanced growth has occurred by a particular date?

Walsh (2004) exemplifies the use of competitiveness measures. In discussing the transformation of the Irish labour market over the period 1980–2003, he notes that 'in the first half of the 1980s, despite the rising unemployment rate, wage rates rose relative to our trading partners, and Ireland's competitive position deteriorated. The trend was, however, sharply reversed after 1986.' Honohan & Leddin (2006) concur, writing that 'it is clear that an upward trend [a loss of competitiveness] over the previous ten years was interrupted in the mid-1980s for at least a decade. This must have contributed strongly to the employment surge of the Celtic Tiger period.'

The chronological account continues in Honohan (2009): 'But after 2000, wage competitiveness deteriorated. By 2008, hourly wage rates had raced ahead of those in competitor counties, when measured in a common currency, by as much as 36 per cent. Sooner or later, this loss of wage competitiveness was sure to affect employment expansion, but this was masked and delayed by the construction boom.' Similarly, the 2010 Honohan report on the Irish banking crisis notes that 'after 2000, influenced by the strong boom-fuelled labour market, wage competitiveness deteriorated'.

It is notable that all of these analyses employed competitiveness measures that were published at the time either by the Central Bank (in its *Quarterly Bulletin*) or by the Department of Finance (in its annual *Economic Review and Outlook*). Publication of both of these series has now ceased, in favour of a harmonised set of indicators that makes no allowance for the well-known idiosyncrasies of the Irish economy.

The next section of the paper presents these harmonised indicators and reviews their pitfalls – many of which have been pointed out by members of the Central Bank's own research staff. The final section

makes the case for the reinstatement of the now discontinued series, to be supplemented by a series that focuses specifically on Irish developments relative to the UK economy.

The harmonised competitiveness indicators and their defects

The European Central Bank (ECB) website states that the purpose of the harmonised competitiveness indicators (HCIs) is to provide 'consistent and comparable measures of euro area countries' price and cost competitiveness'. The Central Bank of Ireland currently reports five indicators: a nominal HCI and a series of real HCIs variously deflated by consumer prices, producer prices, GDP and (whole-economy) unit labour costs. The first three series are produced at monthly intervals and the final two series appear quarterly.

For an explanation of the various measures, a footnote within the Central Bank's HCI spreadsheet directs readers to an article entitled 'Measuring Ireland's Price and Labour Cost Competitiveness', published by Central Bank economist Derry O'Brien in the Bank's *Quarterly Bulletin* in 2010. Although the Central Bank website makes no allusion to this, the paper serves as a powerful health warning as to the value of the harmonised indicators. No such guide or alert is provided by the Department of Finance, which includes the series in its 'Budget and Economic Statistics', or the Central Statistics Office (CSO), which includes the HCIs in a number of its publications, including the annual *Measuring Ireland's Progress*.

The *nominal HCI* provides a weighted average of bilateral exchange rates with trading partners and hence isolates the impact of exchange rate developments on competitiveness.

Since a disproportionately high share of Ireland's exports (relative to other eurozone members) are destined for non-euro-area countries, movements in the euro exchange rate weigh more heavily on Ireland's price competitiveness than on that of the other eurozone economies. This measure is therefore clearly of value.

Real HCIs take into account, in addition, price or cost movements relative to trading partners. Consider first the *real HCI deflated by consumer prices*. Since consumer prices include a large number of non-traded goods and services and, as Honohan & Walsh (2002) point out, will be affected by substantial changes in indirect taxes, this measure does not serve as a good indicator of international competitiveness. While recognising this, O'Brien (2010) asserts that it can 'provide a useful and timely first approximation' if wages rise broadly in line with

consumer prices. This implicit assumption of *real wage rigidity* is clearly undesirable however if the purpose of the analysis is to assess the direction and speed of adjustment of real wages in the economy.[1]

The next measure to be considered is the *real HCI deflated by producer prices*. As O'Brien (2010, p. 105) explains, producer prices suffer three drawbacks as a deflator. First, they do not have nearly the same degree of comparability across countries as consumer prices. Second, they do not include services prices, and third – and of asymmetric importance in the Irish case – they are based on gross value of output. This means that they are strongly affected by the price of imported inputs, and 'in the highly specialised Irish economy, a high proportion of intermediate inputs are imports'.

A *real HCI deflated by GDP* is also published. This measure, O'Brien (2010, p. 106) notes, 'can suffer from distortions due to taxes and subsidies, may not be fully comparable across countries and may be too heavily weighted on non-tradable goods and services'. Irish analysts, of course, have long been wary of GDP-based measures, as will be discussed below. GNP measures have also become increasingly distorted. One recent set of distortions related to the 're-domiciling' practices of some global multinational corporations (MNCs) (FitzGerald, 2013). More recently, a revised GNP growth rate of almost 19 per cent was published for 2015. The revisions were driven by the growth of contract manufacturing and the onshoring of intellectual property assets into Ireland (Purdue & Huang, 2016).

The final HCI measure, and the one most deserving of attention, is the *real HCI deflated by (whole-economy) unit labour costs.* A first point to note is that labour costs are based on compensation *per employee* rather than compensation *per hour*. The fall in compensation per employee overstates any competitiveness gains achieved over the austerity period: because of the fall in hours worked, compensation per employee fell much more than compensation per hour (O'Brien & Scally, 2012, Table 2).

Since unit labour cost refers to labour cost *per unit of output*, productivity is a key component of this measure. Much of the rest of the present discussion focuses on this variable. Unit labour costs in manufacturing are considered first, before attention is turned to the 'whole economy' dimension.

[1] Wages may be the key domestically determined variable – as is perhaps implicit in the quote from Honohan & Leddin (2006) above – if output prices are largely determined on world markets. On the latter 'small open economy model', see Honohan (1982).

Measured labour productivity in certain sectors of the Irish economy is extremely high by international standards (see, for example, National Competitiveness Council, 2012). This is because of the unusually strong presence of foreign-owned MNCs in Ireland and their assignment to Ireland of returns on patents derived from research and development largely conducted elsewhere.[2] These returns flow out as repatriated profits, which accounts for the large gap between Irish GDP and GNP.

Within manufacturing, the broad chemicals sector stands out in productivity terms. In 2009, for example, the sector contributed around 41 per cent of Irish manufacturing gross value added and 58 per cent of merchandise exports while comprising less than 17 per cent of manufacturing employment. Furthermore, MNC accounting and financial practices can affect measured annual productivity growth as well as productivity levels (O'Brien & Scally, 2012). O'Brien (2010) concludes that:

> Developments in the chemicals sector, in particular, have tended to drive up measures of productivity growth and push down unit wage costs to such an extent as to reduce the relevance of output-weighted measures given the relatively small weight of the chemicals sector in manufacturing employment.

In order to overcome this very significant drawback, O'Brien continues, the chemicals sector could be excluded, or sectors could be weighted either by wage share or employment share.[3] These are some of the measures that the Central Bank has now discarded in favour of the harmonised measures implicitly criticised by its own analysts.

Using *whole economy* rather than solely *manufacturing* unit labour costs muddies the waters still further. As O'Brien & Scally (2012, p. 90) note, the caveat concerning chemicals-sector productivity 'applies equally to the internationally traded services sector, with its large offshore financial services sector and influx of internet services firms in recent years'.

[2] As Desai et al. (2006) point out, 'OECD governments require firms to use transfer prices that would be paid by unrelated parties, but enforcement is difficult, particularly when pricing issues concern differentiated or proprietary items such as patent rights. Given the looseness of the resulting legal restrictions, it is entirely possible for firms to adjust transfer prices in a tax-sensitive fashion without violating any laws.'

[3] NESC (2005, p. 21) employs the first two of these proposed measures, as published by the Central Bank at the time.

There are two further problems with the whole-economy measure besides those to which O'Brien (2010) and O'Brien & Scally (2012) direct attention. Besides the obvious distortion that can come from secular shifts in sectoral composition, further distortions can be caused by cyclical shifts – which can be particularly pronounced in Ireland. An example of such a cyclical shift is that construction halved as a share of business-sector employment in Ireland between 2007 and 2014 while remaining constant across the EU15 (Barry & Bergin, 2016).

The Central Bank (2012, p. 24) notes that the whole-economy productivity figures for 2011 improved partly because of 'a sharp fall in activity in lower productivity sectors such as construction and services'. Since the improvement in measured competitiveness was partly a consequence of the collapse of construction, it would clearly be misleading to interpret this component as a driver of the subsequent recovery.

A second issue has to do with export weights. O'Brien (2010) notes that because of data constraints pertaining to services transactions and prices, 'the weights for the HCIs are based on bilateral *manufacturing* trade flows', as is standard practice.[4] This again proves particularly distortionary for Ireland, however, because services comprise an unusually high proportion of Irish exports (almost twice the EU15 share over recent years) and because service export destinations differ markedly from those for manufactured exports. For example, a quarter of Irish manufactured exports go to the US compared to only one-tenth of services exports, while, compared to manufactures, a much higher proportion of services exports go to locations beyond the EU and North America (Barry & Bergin, 2016).

An example of how the Central Bank's harmonised indicators have been used in comparative macroeconomic analysis is provided by Whelan (2014). Using the bank's 'whole-economy unit labour cost' indicator, he finds Irish competitiveness to have improved far more dramatically than in the cases of Greece, Spain or Portugal over the period 2008–12. Consequently, he is led to ascribe Ireland's relatively rapid recovery to the flexibility of the economy and what he assumes to be the associated strong improvement in international competitiveness.

[4] A 'double weighting' scheme is used, whereby the UK in particular is accorded a higher weight (18.3 per cent in the early 2000s) than its simple export weight (which was around 14 per cent at the time). This is to take into account the importance of the UK as a competitor for Irish firms on both domestic and third-country markets.

Whelan's indicator (using updated data) shows a competitiveness improvement of almost 24 per cent over this short period. The improvement shown by a less problematic measure such as 'relative hourly earnings in a common currency', by contrast, is far less: at around 9 per cent. This suggests that one needs to look elsewhere for an explanation of the relative strength and timing of the Irish recovery. Barry & Bergin (2016) show that other elements of the explanation include Ireland's export orientation, the sectoral structure of its exports and the relative buoyancy of its major export destinations over the recovery period.

Discussion

The distortions embedded in the HCIs have been well known to careful analysts for years. Honohan & Walsh (2002) argued, for example, that 'wage rates are a preferable measure to either consumer prices – affected by [factors] not directly relevant to international competitiveness – or to unit labour costs – dramatically influenced by the shift in sectoral composition to low labour-share sectors'.

Their preferred indicator is (the inverse of) Irish hourly manufacturing earnings relative to a weighted average in its main trading partners, all expressed in a common currency. The series they employed was published at the time by the Department of Finance. A largely similar series was published by the Central Bank. As O'Brien (2010) notes, these series 'have some appeal as the potentially large distortions introduced by productivity adjustments in the case of unit labour cost based measures are avoided'.

Annual data on compensation per employee – for EU countries and for the US and Japan – are published in the AMECO database produced by DG ECFIN. In the absence of useful ready-made indicators, these data – which, though unweighted, measured per employee rather than per hour, and recorded in local currencies, are not distorted by productivity adjustments – are frequently used by the National Economic and Social Council (NESC); see, for example, NESC (2013, p. 18).

It is accepted that these preferred series are not perfect. The 'relative hourly earnings' measure excludes elements such as 'employers' social security contributions and other labour taxes, which can comprise a significant proportion of labour costs and vary significantly across countries' (O'Brien, 2010). These are included in the unit labour cost measure. Yet the flaws in the latter are so

significant as – in O'Brien's diplomatic phrasing – 'to reduce their relevance'.

The production of HCIs is part of a collaborative project between the ECB and the national central banks of the euro area. The CSO found itself undeservedly ridiculed when the revised national accounts figures for 2015 revealed a real GDP growth rate of 26 per cent. The Central Bank seems content to give its imprimatur to similarly implausible harmonisation-induced outcomes. Part of its contribution to the collaborative project should surely be to point out that the returns to harmonisation turn negative beyond a certain point. The CSO is operating at the international best-practice frontier in dealing with the challenges of codifying statistically the consequences of accounting, tax and related location strategies of global MNCs. This was reflected in its release in July 2017 of a new 'modified Gross National Income' series that strips out from GNI the factor income of re-domiciled companies and depreciation on aircraft leasing and R&D-related intellectual property imports.[5] The Central Bank should surely be aiming to position itself at this same best-practice frontier.

At the practical level, the paper has made a case for the reinstatement of, at the very least, the 'relative hourly earnings in manufacturing' series. This series, though available only at an annual level, was extensively and insightfully used by Irish macroeconomists. Other series, also now discontinued, attempted to take relative cross-country productivity movements into account while stripping out sectors (such as chemicals) in which measured productivity was thought to be highly distorted. As the sectoral structure of all economies changes over time, and as one cannot predict in which sectors such distortions are likely to arise in the future, any of these other series – if they were to be reinstated – would require careful monitoring. The sectors to be excluded would perhaps need to be changed from time to time.

As these series use no proprietary bank data, their production may more appropriately fall within the remit of the CSO or the National Competitiveness Council. There is a strong case to be made that reporting of the HCIs by any official body should come with an appropriate health warning.

Given the UK's planned withdrawal from the EU, publication and monitoring of one further series should also be prioritised. Irish

[5] These adjustments reduced the value of measured GNI by almost 20 per cent; see Central Statistics Office (2017), Annex 1.

indigenous industry, as is well known, is highly labour intensive and cost sensitive relative to the rest of industry, and – being heavily weighted towards the home and UK markets – is particularly vulnerable to fluctuations in the value of sterling. A common-currency 'relative hourly earnings series' comparing Ireland and the UK would be of great value and very easy to produce.

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