

PRODUCTIVITY AT THE PERIPHERY

WHAT CAN WALES DO TO COMPETE?

Julian Hodge Institute of Applied Macroeconomics

Annual Lecture

Nicholas Crafts Professor of Economic History, London School of Economics

Thursday 21st April 2005

The Thistle Hotel, Park Place, Cardiff





Nicholas Crafts is Professor of Economic History at the London School of Economics (LSE). He joined the LSE in 1995 from the University of Warwick, where he was the Professor of Economic

History for seven years. Before that he was a Fellow and Lecturer in Economics in the University College, Oxford from 1977-86, whilst visiting Stanford University, California as Professor of Economics in 1982-83.

Professor Crafts publishes widely in the professional journals such as *The Economic Journal*, *Fiscal Studies* and *The World Economy*. His recent work includes "Globalization and Economic Growth; an Historical Perspective", British Academy Centenary Conference, 2002; "Britain's Relative Economic Performance, 1870-1999", The Institute of Economic Affairs, 2002; and "Can Europe Still Compete?", The Human Resources Forum, 2004. Current research interests are comparative long term economic growth, globalization in historical perspective, productivity performance, and measurement of living standards.

Julian Hodge Institute of Applied Macroeconomics

In May 1999, Cardiff Business School and Julian Hodge Bank announced a major new initiative, the establishment of the Julian Hodge Institute for Applied Macroeconomics. The aim of the institute is to carry out research into the behaviour of the UK economy, and to study in particular its relationship with the other economies of Europe. This research is given added urgency by present discussions on the future of the EU's draft constitution and its economic policies generally. The new institute aims to develop research relevant to this important debate.

The institute's first Director is Professor Patrick Minford, of Cardiff Business School, who is also

the Economic Adviser to Julian Hodge Bank. The institute's staff of researchers are mainly based in the school. Research activity in the area of applied macroeconomics is already considerable; work on a variety of issues related to the topics the new research will study has been published in leading scientific journals and books. The institute draws on the previous work in particular of the Liverpool Research Group in Macroeconomics which Professor Minford founded and which has been based mainly in Cardiff for a number of years, producing forecasts and policy analysis of the UK and other major economies.



1. Introduction

Measured in terms of GDP per person, Wales seems to be slipping back relative to the UK average. Indeed, over the period since 1871 for which such estimates exist, this is the lowest Wales has ever been. Moreover, in the recent past with the 'Celtic Tiger' phase of economic growth in Ireland, Irish GDP has overtaken Wales and by quite some margin.

This raises three questions that will be addressed in this lecture.

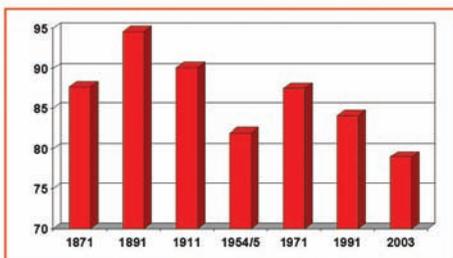
- 1) Is Welsh productivity performance as bad as the headline numbers seem to suggest ?
- 2) What can be done to improve productivity and to achieve the official aspiration that Wales returns to 90 percent of British GDP per person ?
- 3) Does Ireland represent a role model for Wales ?

In outline, the answers that I suggest are as follows. Welsh economic performance is a good deal better than it appears at first sight. Achieving the 90 per cent target is a big challenge but there are policy moves that could make this more feasible. However, imitation of the Irish Celtic Tiger strategy for economic development is not feasible.

2. GDP per Person in Wales in Comparative Perspective

The obvious place to start is by looking at GDP per person in Wales relative to Britain. Estimates for selected years since 1871 are displayed in Figure 1. These show a lower level for Wales in 2003 than any of the earlier years. It can also be seen that an aspiration that Wales reaches 90 per cent of the British GDP per person would be to return to a level last observed in 1911.

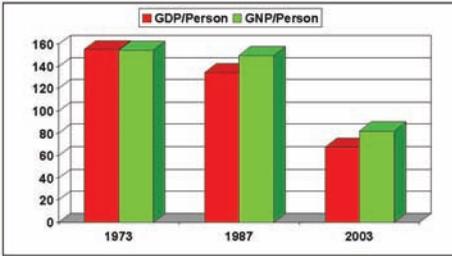
GDP/Person in **Wales** as % Great Britain



Sources: Crafts (2005); Mai (2005)

Figure 2 extends this comparison for the recent past to examine Wales relative to Ireland. This shows that whereas in 1973 and 1987 real GDP per person in Wales was 155.4 and 134.6 per cent of that in Ireland, respectively, it was by 2003 only 67.8 per cent.

GDP/Person (GNP/Person) in **Wales** as % **Ireland** at PPP



Sources: GGDC (2005); Regional Trends; Mal (2005)

Although GDP per person is the usual way to make international comparisons of output levels, it is not the appropriate way to do so in the case of Ireland which has a large presence of multinational companies which engage in transfer pricing to take advantage of Ireland's generous corporate tax regime. A better comparison uses GNP per person in Ireland; on that basis in 2003 Wales was at 81.8 per cent of the Irish level.

The gap in GDP per person between Wales and the UK can be broken down into its proximate sources, as follows:

$$GDP/POP = GDP/HW \times HW/E \times E/WAP \times WAP/POP$$

where HW is hours worked, E is employment, WAP is population of working age, and POP is population in Wales relative to the UK. The most recent year where this equation can be completely quantified is 2001 where the numbers

are as follows:

$$0.787 = 0.930 \times 0.944 \times 0.914 \times 0.980$$

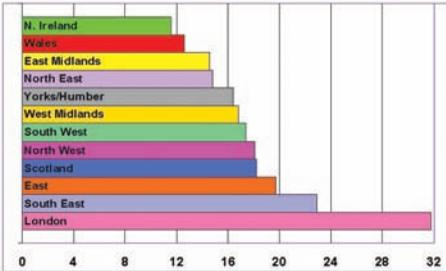
Thus labour productivity measured in terms of GDP per hour worked in Wales was only 7 per cent below the UK level. This is much less than the gap in GDP per person which can be seen to result in considerable part from a shortfall in employment and hours worked and also from slightly unfavourable demographics. Returning to comparisons with Ireland, in 2001 real GDP per hour worked in Wales was 96.6 per cent of Irish real GNP per hour worked.

To a large extent the labour productivity gap with the UK reflects the employment structure in Wales. GDP per job in each sector is typically only slightly less than the UK average but the composition of employment is skewed towards lower value-added jobs in Wales. In particular, more people are employed in the public sector in Wales than the UK as a whole, and many fewer in business and financial services, as Figure 3 reports. If the share of employment in these two sectors in Wales matched the national average, then more than three-quarters of the productivity gap would be removed.

The shortfall in employment has two components. In 2001, Wales had a higher unemployment rate, 6.2 per cent compared with the UK average of 5.0 per cent. Wales also had 27.2 per cent of people of working age classified as economically inactive, more than any other



% Employment in Financial and Business Services 2004



Source: ONS (2004)

region in the UK, for which the national average was 21.4 per cent. It is noticeable that Wales has a relatively high proportion of the economically inactive listed as long-term sick or disabled, especially among males over 50 years old.

The era of renewed globalization since 1971 has seen a surge in real GDP per person in London, the South East and East Anglia relative to the rest of Britain. It is in this context that we should place the relative decline of Wales which has more or less maintained its position compared with the other regions of Britain. Globalization has been tremendously favorable to London as a financial centre, as it was in the decades before World War I when similar trends were apparent. Wales, like all the other regions, has lost ground relative to this greater South East driven by globalizing forces that are beyond the local economy's control. These changes in relativities do not necessarily imply failure.

London as a financial centre enjoys advantages of size, agglomeration benefits, which other cities in Europe let alone the rest of Britain cannot match. A recent report by OXERA into the asset management sector illustrates this very clearly. Core asset management gains substantially from being in London from the size of the labour pool, liquidity of capital markets and the quality of the financial infrastructure while physical proximity to other players maintains instant access to information. Only back office functions are likely to be outsourced to other regions. London has first mover advantages with which Cardiff cannot expect to compete.

3. Equilibrium Regional Disparities

Big cities generally have higher productivity. Empirical evidence shows that a doubling of city size is associated with an increase in labour productivity of 5 to 10 per cent. These productivity advantages result from thick labour markets, knowledge spillovers, proximity to suppliers and customers etc. Moreover, not only own city size but more people in surrounding areas who participate in the city labour market contribute to higher productivity - in Britain population up to 80 minutes away have this effect.

Suppose that one city in a country, let us call it one big city, has some big productivity advantage, which it largely gets from exporting to the rest of the World, in an activity with



Jonathan Hodge, Executive Deputy Chairman of Julian Hodge Bank, Professor Hadyn Ellis, Deputy Vice-Chancellor Cardiff University, Nicholas Crafts, Professor Roger Mansfield, Director of Cardiff Business School, Professor Patrick Minford, Cardiff Business School.

which the rest of the economy cannot compete, probably using skilled labour. Money wages are higher than elsewhere in the economy. Population is mobile at least to some extent and of course urban land is rather scarce. People are attracted to this city and respond both by commuting and by moving there. But of course real estate is relatively hard to increase in supply and the urban cost of living and, in particular, house prices rise.

In such a case, the set of correlations that will result is displayed in Figure 4. The favoured city will draw in more people with high earning power, the density of population and house prices go up relative to elsewhere, and real GDP per

Correlations When One City has Higher Productivity

	Y/L	Skills	W	Density	HP
Y/L	1	+	+	+	+
Skills		1	+	+	+
W			1	+	+
Density				1	+
HP					1

Source: Rice & Venables (2003)

person will be higher. However, in equilibrium, as long as labour is free to move, real wages will be no different between locations, higher money wages in the big city will be offset by the cost of



living and this equality will be sustained by migration and commuting.

Broadly speaking, this seems to be a close approximation to what happens in the UK for the economically active. Recent work suggests that tendencies to regional convergence of real earnings are quite strong, and although nominal earnings per worker in Wales are only about 86 per cent of the UK average, once differences in education, gender, experience and the cost of living (itself about half the difference) are controlled for the apparent regional gap evaporates.

So regional productivity and money income differences should not be interpreted as equivalent to gaps in real earnings or economic well-being nor necessarily as a reflection of market failures. The only way to eliminate the regional disparity in this model would be to close the productivity gap.

If however the one region has a unique non-replicable productivity advantage coming from agglomeration, then the productivity gap cannot be closed. It seems to me that the implication would be to let the favoured city get bigger. Indeed, Welsh nationalists might propose the abolition of the green belt in Southern England. This would have essentially the same effect as London becoming a much bigger city, thus raising productivity. The implications for living standards in Wales would be favourable as

the new labour market equilibrium would have higher real wages.

4. Lessons from Ireland ?

It is sometimes suggested that Wales is handicapped by its peripherality. Yet at least as it is conventionally measured, Ireland is even more peripheral within Europe. The relevant measure is 'market potential' which takes into account proximity to GDP in the home and surrounding regions. In recent years, market potential for Wales has been only just over 50 per cent of that in London and South East but Ireland has been lower still at about 30 per cent. Given Ireland's rapid economic growth in recent years, seeking an alibi for Welsh economic problems in peripherality may not be very convincing.

Growth Rates Compared: Ireland vs Wales
(% per year)

	GDP/Head		GDP/Worker		GNI/Head	Consumption
	I	W	I	W	I	I
1973-87	2.5	1.5	3.2	2.2	1.7	1.1
1987-2003	6.0	1.6	3.5	0.8	4.9	4.1

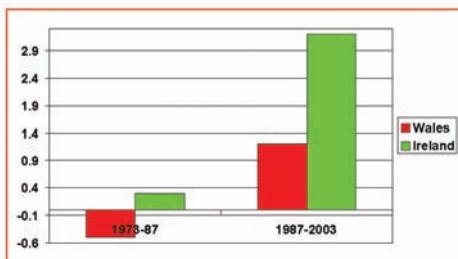
Source: GGDC (2005); CSO Ireland (2004); Mail (2005); Regional Trends.

Some comparative data on economic growth in Wales and in Ireland are shown in Figure 5. These

relate to the period since the end of the Golden Age of European economic growth with a division at 1987 which is generally regarded as the point at which Ireland embarked upon its Celtic Tiger phase of economic growth. It is important to understand the reasons for the difference in the experience of economic growth since 1987.

After 1987, the growth rate of real GDP per person in Ireland accelerated from 2.5 to 6.0 per cent a year, while in Wales there was only a marginal increase from 1.5 to 1.6 per cent. Since 1987, GNP per head in Ireland has grown a bit less rapidly at 4.9 per cent and personal consumption, 'only' at 4.1 per cent. It is interesting to note that labour productivity growth in Ireland, measured in terms of real GDP per worker, showed only a modest increase after 1987 from 3.2 to 3.5 per cent. This reveals that Celtic Tiger growth has come in large part from faster employment growth, as Figure 6 confirms.

Employment Growth (% per year)



Sources: GGDC (2005); Regional Trends.

Employment growth in Ireland from 1987 to 2003 averaged 3.2 per cent per year compared with only 0.3 per cent from 1973 to 1987, and far outstripped employment growth in Wales. This has come from greater female labour force participation, a reversal of migration flows but especially from a big fall in unemployment. Irish unemployment in the mid 1980's was 17 per cent of the labour force and is now 4.5 per cent.

The reasons for this much lower unemployment are partly to be found in a successful social partnership agreement with the trade unions in which wage restraint has been rewarded by tax cuts and partly in terms of a significant improvement in the education of the labour force which has raised earning power and made remaining on benefits much less attractive. In 1972, 50 per cent of the Irish labour force had only primary level education while 9 per cent had tertiary level but by 2002 these percentages had changed to 8 and 35, respectively.

Productivity growth has remained strong in Ireland since 1987 at 3.5 per cent per year which compares very favourably with 0.6 per cent in Wales in the same period. This can be explained in terms of a successful catch-up from a starting point where GNP per hour worked was only 71 per cent of the UK level at the outset. The relatively low starting point explains the point made earlier, namely, that even in 2001 the labour productivity gap between Wales and Ireland was only 3.4 per cent.



A major driver of productivity advance has been foreign direct investment (FDI) which has centred on manufacturing for export based on clusters in pharmaceuticals, optical instruments, and most notably, information and communication technologies (ICT). During the 1990s, labour productivity growth was dominated by ICT. The FDI stock per person in Ireland is about four times that in the UK. Ireland established a new comparative advantage in international trade and export platform FDI happened to land a sector capable of very fast productivity growth. Accordingly, the Greater Dublin area developed a counterpart to the strength of London in financial services. FDI was attracted by a pro-active industrial policy driven by the Industrial Development Agency and sustained by an expansion of college education to improve the technical skills of the labour force. But without any doubt the major reason for FDI has been a very generous tax regime. Econometric estimates suggest that if Ireland had had the same corporate tax rate as the next most lightly taxed country in the EU its FDI stock would be about 75% lower. It should not, however, be supposed that Irish growth was much enhanced by EU Structural Funds – they contributed only 0.5 percentage points to the growth rate in the 1990s.

Unfortunately, however attractive this story is, it is not feasible for Wales to replicate what Ireland did in terms of replaying the ICT revolution. ICT production is located in successful clusters in other countries where there are external

economies of scale. In so far as FDI in this sector is footloose, it will be attracted to regions like the EU accession countries with very low wage costs and corporate taxes.

The opportunity might have been there 30 years ago for an independent Wales which could perhaps have pre-empted the Irish success story if it had aggressively pursued FDI in the electronics sector with a zero profits tax. Whether industrial policy would actually have been framed that way in an independent Wales of 30 years ago must, however, be doubtful. An 'Old Labour' strategy of protectionism and subsidies to the old industrial base seems more likely to be what independence would have actually delivered.

Finally, with respect to Ireland, it is worth noting that the grass over there is not quite as green as the Celtic Tiger hype seems to suggest. Ireland is a very open economy and many of the gains from Irish productivity growth have accrued to consumers over the rest of the world through cheaper exports. Ireland has a massive current account surplus with exports 22% above imports. This means that national income has grown a lot less rapidly than gross domestic product. As noted earlier, real personal consumption grew at 4.1 per cent between 1987 and 2003, almost 2 percentage points per year less than real GDP per person.

When the level of real personal consumption in Ireland and Wales is compared, contrary to

popular belief, Wales was still 3.5 per cent ahead in the most recent year (2003) for which I could find the requisite data. Wales compares so much more favourably on this measure compared with GDP per person for three reasons. There is a big gap between GNP and GDP in Ireland. Exports greatly exceed imports in Ireland. Repatriated profits and the export surplus are not available for the Irish to consume. Finally, the price level is higher in Ireland.

5. What Can Wales Do to Compete ?

I shall interpret this question in terms of looking at how Wales might achieve its policy aspiration of a level of GDP per person of 90 per cent of the British average, i.e., a return to 1911! Moreover, I shall assume that neither the South East or Ireland is a role model in terms of re-creating 'Greater London' or 'Greater Dublin' in the Principality.

What would have to happen if **Wales** were to reach 90% UK GDP/Head?

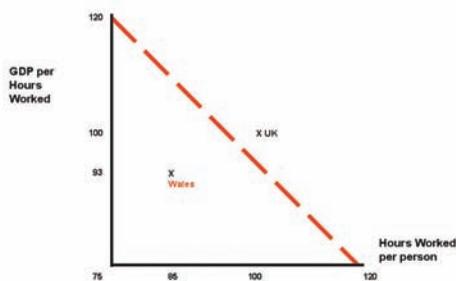


Figure 7 summarizes the current position. On the vertical axis, GDP per hour worked in Wales is at 93% of the UK level and on the horizontal axis Wales is at 85% of hours worked per person in the UK. In order to get to 90% of the UK level, represented by the dotted line, moves in a north-easterly direction are required. My guess is that the scope for moving horizontally is much bigger than for moving vertically. Bearing in mind that Wales has no big city and limited scope to expand high-value-added services relative to other regions, it is likely to be quite difficult to reduce the labour productivity gap with the UK.

It is true that Wales has an education shortfall; 17.1 per cent of working age population have no qualifications and only 46.6 per cent have A levels or better compared with the UK average of 15.0 and 48.4 per cent, respectively. This suggests that raising the human capital of the labour force by continued emphasis on improving education and training is a worthwhile policy in particular because this can be expected to reduce unemployment and economic inactivity, as the Irish example underlines.

Indeed, the most obvious margin on which policy should operate seems to me to be the very high economic inactivity rate. Clearly, there are problems arising from industrial decline, especially of coal mining. It is very difficult perhaps to think that some of those miners will ever work again. However, it is quite important



not to accept the 'doctors' view' of the labour market, namely, that there is no chance of ever re-absorbing displaced workers. The lessons from labour market policy are that it is better to address the issues of hidden unemployment and the shadow economy through tightening benefit conditionality and providing active help in finding work than passively to accept inactivity.

6. Conclusions

Wales does not have a much more severe productivity problem than the UK generally. The gap in output per hour worked in Wales is fairly small compared with the UK and probably quite difficult to bridge given structural differences. It is doubtful that there is any big disparity in real incomes of those in work.

The most important problem that Wales needs urgently to address is its high rate of economic inactivity. Increasing hours worked is the most promising way to reduce the gap in real GDP per person with the rest of the UK. Insofar as low participation in the labour market reflects distortions resulting from welfare benefits this is a cause for concern.

Finally, the Irish Celtic Tiger is not a role model that can be followed, although it certainly would be interesting to observe the impact of the introduction of a zero rate of corporate tax in an independent Wales. However, this should not be too dispiriting. The phase of rapid catch-up growth

in Ireland is now over and Irish living standards are not very different from those in Wales.

References

Central Statistical Office, Regional Trends, various issues.

Central Statistical Office of Ireland (2004), National Income and Expenditure

Crafts, N. (2005), "Regional GDP in Britain, 1871-1911: Some Estimates", Scottish Journal of Political Economy, 52, 54-64.

Groningen Growth and Development Centre (2005), Total Economy Database.

Mai, N. (2005), "Regional Economic Indicators", Economic Trends, 615, 26-35.

Office for National Statistics (2004), Labour Market Trends.

Rice, P. and Venables, A. J. (2003), "Equilibrium Regional Disparities: Theory and British Evidence", Regional Studies, 37, 675-686.



A history of past lectures

The first Julian Hodge Institute of Applied Macroeconomics Lecture was delivered in 2000. Since this time, the lecture series held in Cardiff has included some of the world's leading economists.

- 2000 - Sir Alan Walters - former Chief Economic Adviser to Mrs (now Lady) Margaret Thatcher.
- 2001 - Professor Otmar Issing - Board Member and Chief Economist, European Central Bank.
- 2002 - Sir Alan Budd - Member of the Bank of England's Monetary Policy Committee and Chief Economic Adviser to the Treasury from 1991-1997.
- 2003 - Professor Bennett T. McCallum - H.J. Heinz Professor of Economics in the Graduate School of Industrial Administration at Carnegie Mellon University.
- 2004 - Danny Quah - Professor of Economics at the London School of Economics and Political Science (LSE).

Before this, a series of lectures associated with Sir Julian Hodge commenced in 1970 entitled The Jane Hodge Memorial Lectures.

- 1970 - The Rt. Hon. Sir Leslie O'Brien GBE, Governor of the Bank of England.
- 1971 - M. Pierre-Paul Schweitzer, Managing Director of the International Monetary Fund (IMF).
- 1973 - David Rockefeller LLD, PhD, Chairman, Chase Manhattan Bank.
- 1973 - H.R.H. The Prince Philip Duke of Edinburgh.
- 1976 - His Excellency Sheikh Ahmed Zaki Yamani.
- 1984 - Robin Leigh Pemberton, Governor of the Bank of England.
- 1990 - Sir George Blunden, Deputy Governor of the Bank of England.

The Julian Hodge Institute of Applied Macroeconomics, therefore, carries on the very proud tradition of promoting debate and understanding of present day economic issues.