

# Welsh Economic Performance: A Challenge, not a Mystery

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<http://dx.doi.org/10.18573/j.2016.10057>

This paper sets out some basic facts on recent Welsh relative economic performance and focuses on the key factors shaping that performance.

## Current position

Independent bodies, including the ONS in the UK, and the OECD internationally, assess economic performance by reference to a range of indicators rather than by focusing on a single measure. They also argue that measures of income, rather than output, provide the best overall summary of the economic outcomes as experienced by the resident population. This is particularly the case for a fiscal union, such as the UK, where incomes can be redistributed, in part to take account of the differential economic impacts of operating a unified monetary policy and common exchange rate. The headline indicator of incomes published by Eurostat for the regions of the EU is household income per head. This represents the incomes households have to spend after paying taxes and receiving benefits. The latest data for the subset of regions which lie adjacent to Wales in the ranking of all regions are shown in Table 1. The data are expressed at the purchasing power standard (that is, taking account of differences in the cost of living at national level).

standards in Wales compare relatively favourably with many other European regions.

Disposable income is only one indicator, and as noted above, in order to assess economic performance it is necessary to look at a broader set. The economy in Wales is closely integrated with the rest of the United Kingdom and operates within a largely common institutional context, although since devolution there has of course been increasing divergence in certain policy areas (such as health and education, and to some extent business support).

It therefore makes sense to assess Welsh economic performance in this UK context. Table 2 sets out the latest position on a range of indicators.

The Welsh ranking in the "league table" of twelve UK countries and regions is shown in the table. It would be fair to describe Wales as a lagging region, but not anomalous in any obvious way. Wales does perform particularly badly on the measure of Gross Value Added (GVA) per head (and Welsh performance on productivity and earnings is also relatively weak)<sup>1</sup>.

highest levels of dependents of any UK country or region).

In assessing economic performance, there is a strong case for emphasising labour market outcomes, particularly employment rates, as there is evidence that employment is linked to a range of broader lifetime outcomes, such as health and well-being, and to prospects for children.

The relatively strong Welsh outcome in respect of household wealth probably reflects relatively high levels of home ownership in Wales, itself in turn a reflection of demographic structure. It is hence in part the counterpart of the relatively weak Welsh performance on GVA per head.

It has already been noted that, in common with most UK countries and regions outside the greater South East of England, Welsh performance in terms of household income benefits from transfers under the UK tax and benefits system. But the funding of the public sector also serves to compress performance on indicators of GVA and employment, since it results in higher levels of public services (and associated employment) in areas with higher levels of need. This also produces direct and indirect "multiplier" effects as public services source their inputs and employees spend their incomes. These positive effects may then be offset to some degree by the substitution of private sector activity as a result of input costs, including labour costs, being bid to higher levels than otherwise. The relative magnitude of these positive and negative effects is a matter of some controversy.

If we move from the assessment of current performance as set out in Table 2 to examine trends in some of the key indicators, the performance that is revealed would probably best be described as mixed, but also relatively positive when taken in the round.

In respect of growth in GVA per head, taking the period since devolution in 1999, Figure 1 shows that Wales has almost matched the performance of the UK as a whole, and has the fifth best performance of the twelve UK countries and regions. These data are quite volatile, and so it is important not to over-interpret small differences.

It is notable that this performance on GVA represents a marked improvement

**Table 1: Household income per head, 2012**

Rank from 92	NUTS 1 region	Percent of EU-28
51	Nord - Pas-de-Calais (France)	97
52	West Midlands	97
53	Ireland	96
54	Yorkshire and The Humber	96
55	Wales	96
56	Noord-Nederland	95
57	North East (UK)	95
58	Oost-Nederland	94
59	Denmark	93

Source: Eurostat

It may be surprising that average income per head in Wales is above that in Denmark and parts of the Netherlands. It should be noted immediately that this measure of income does not include state benefits provided in kind. If these were included, they would improve the relative position of Denmark and the Netherlands. Nevertheless, this data indicates that average material living

This poor performance on GVA per head is not surprising, in view of the combination of the skills profile of the population in Wales (which is, however, typical of regions outside the south of England), the economic geography of Wales (with the least opportunity to benefit from "economic mass" of any UK country or region), and Wales's demographic structure (with one of the

on the decade or so before devolution, when the gap in GVA per head between Wales and the UK widened quite sharply. It is therefore not obviously plausible to attribute continued relatively weak performance on this indicator to changes in the Welsh institutional context.

Many commentators have noted that over a similar period, Welsh performance relative to the rest of the EU on the conceptually equivalent indicator of GDP per head has been less satisfactory. However, as demonstrated by Figure 2 (which provides data for the longest available period), the adverse Welsh performance has been driven entirely by a deterioration in the performance of the UK as a whole since around 2005 – a deterioration itself driven by a faster increase in the UK’s relative cost of living as measured by the PPS (“purchasing power standard”). In fact, West Wales and the Valleys, the part of Wales in receipt of the highest level of EU support, has narrowed the gap with the UK as a whole over the period.

Welsh performance on household incomes over the period since devolution has been even better than on GVA/GDP, as shown in Figure 3, with Wales outperforming the UK as a whole, and being the second best performing region. This again probably reflects relative labour market improvements in Wales.

Migration flows in part respond to perceptions of economic opportunity. Wales has experienced net in-migration over the medium term. Migration flows are overwhelmingly with England. Taking the average for recent years, while Wales has had a small annual net loss of those aged 25-44, it has had gains in all other age groups. Contrary to common perceptions, the net effect of migration over recent years has been to increase, rather than reduce, the number of young people in Wales, since the numbers entering aged under 16 have exceeded the losses in older age groups. The high representation of the young in Welsh net in-migration is also seen in international in-migration to the UK, but in general the demographic structure of “internal” and “international” migration differs (with, for example, much lower representation of older age groups in international migration).

Commuting flows also reflect economic opportunities, and here there is a net flow to England. Over recent years, the daily outflow has been around 86,000 and the inflow around 45,000. This results in gross total flow of about 130,000, which compares with a figure of around 1.3 million people who work in Wales. Over the longer term, both outflows and inflows have gradually increased.

The scale of the flow is one manifestation of the close integration of economies on each side of the border - particularly as the actual flow is only a fraction of the potential flow.

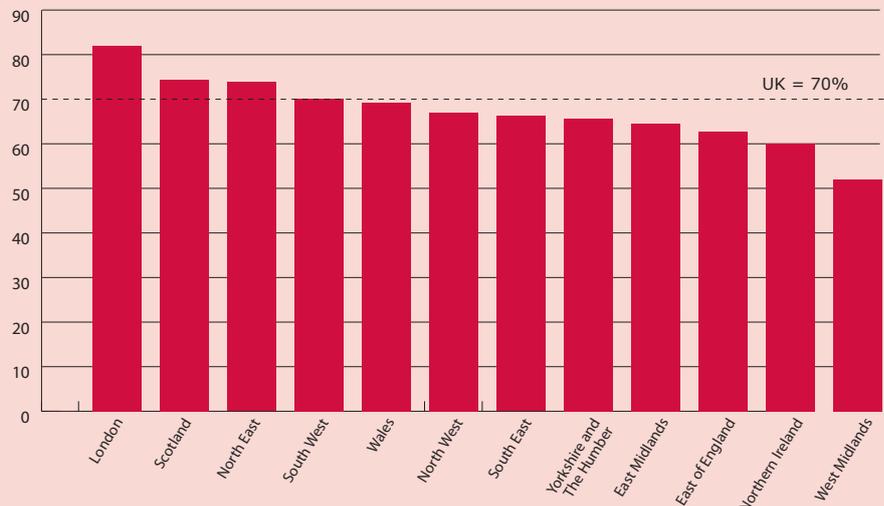
**Table 2: Welsh Economic Performance: Rank amongst UK countries/regions – latest data**

Measure	Rank/12	Below Wales	Date
Gross Value Added per Capita	12	None	2014
Gross Disposable Household Income per Capita	=8	Yorkshire & the Humber Northern Ireland North East = North West	2013
Gross Value Added per Hour Worked (Productivity)	11	Northern Ireland	2013
Employment rate	9	North West North East Northern Ireland	Average over 12 months to Dec 14
Full time employee earnings (median)	11	Northern Ireland	2014
Poverty (all ages)	=10	London = West Midlands	2011/12-2012/13
Wealth per household (median) <sup>1</sup>	5	East Midlands North West Yorkshire & the Humber West Midlands North East Scotland	2012/14

<sup>1</sup>Excludes Northern Ireland

Source: Welsh Government, ONS.

**Figure 1: Increase in GVA per head growth, 1999-2014 %**



Source: ONS

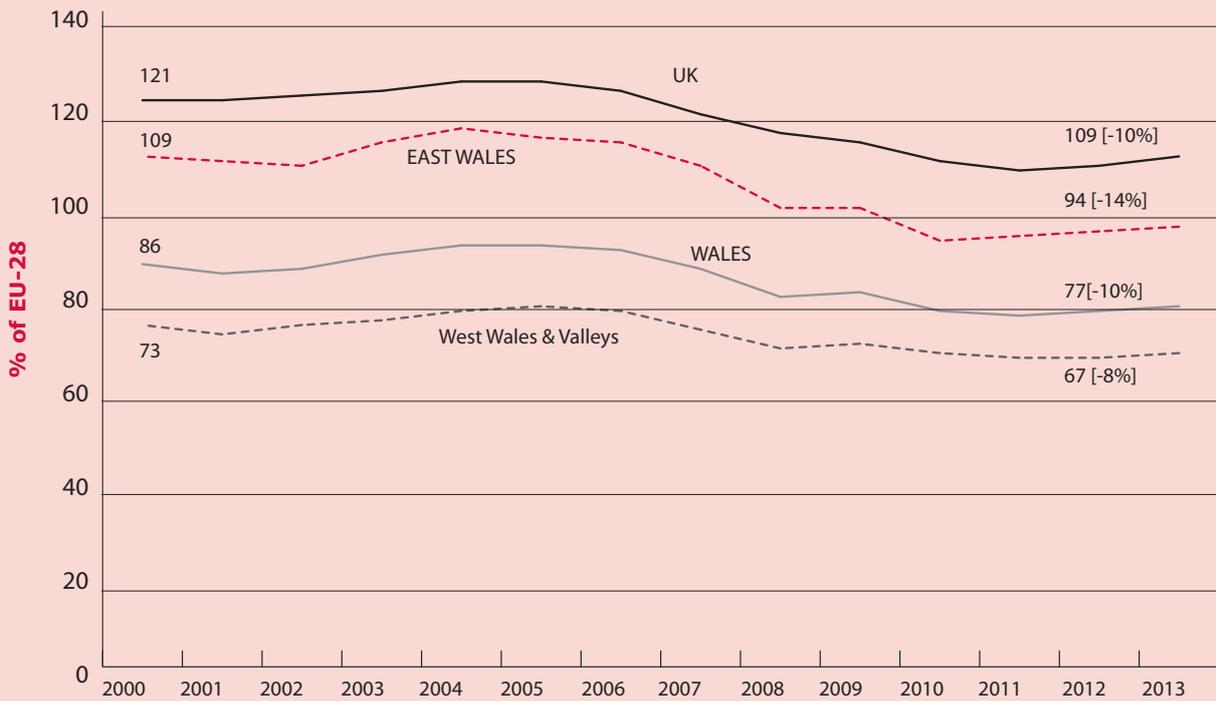
**Factors shaping Welsh relative performance**

The close integration of the economy in Wales with the rest of the UK, together with the largely common institutional setting, suggests that in order to understand Welsh economic performance it is probably best to start with factors and processes that operate in a common way across the UK. Economic statistics for Wales are likely to be, at least in part, artefacts of where the boundary has

been drawn rather than a reflection of differences in economic processes.

The dependency of Welsh economic outcomes on the wider UK context is apparent in a range of statistics. One example is the business birth rate (see Figure 4). Failure to take account of this could lead to a misunderstanding of the impact of Welsh policy interventions, as shifts in variables at the Welsh level are often driven by UK-level factors.

Figure 2: GDP per head at PPS relative to EU-28



Source: Eurostat

Figure 3: Increase in gross household disposable income, 1999-2013, %



Source: ONS

This is not to suggest that Welsh government policies have little impact. Rather it is to point out that the important policy levers that the Welsh Government holds, over education, health and transport, are likely to have effects only over the medium to long term. Over this period, they will shape the fundamental

socio-economic profile of Wales, rather than the processes by which this profile is translated into economic outcomes.

The importance of one aspect of Wales's socio-economic profile can be illustrated by data on employment rates by qualification level, as shown in Figure

5. This shows that qualification level is a bigger influence on the employment rate than location – both within Wales, and across England and Wales as a whole. The selected subset of Welsh local authorities represents the full range, from those with the lowest employment rates to those with the highest<sup>2</sup>.

**Figure 4: VAT/PAYE Registered Enterprise Births, Births per 10,000 population aged 16-64**



Source: Welsh Government

The spatial variation seen within categories of qualification across Wales reflects the position across the UK as whole. There is very little spatial variation for those with higher qualification levels, not least because such people do, of course, tend to be mobile. There is more spatial variation for low qualification levels, with the general pattern being that employment rates tend to be highest where the proportion of the population with low qualifications tends to be low, and particularly in rural areas.

Data on pay by qualification also shows limited spatial variation across most UK countries and regions (see Figure 6). The higher pay levels within qualification category for the UK as a whole are driven by the results for London and the wider South East (not included to preserve legibility). The factors driving the residual spatial variation would be expected to be similar to those shaping regional productivity performance, discussed below.

A review of the evidence on the drivers of regional economic growth across developed countries has recently been undertaken by the OECD (2012). This study drew out two factors as being of pre-eminent importance.

First, the study found that human capital (particularly low skills) was important everywhere: "For all types of region, human capital appears to be critical, though its relative importance varies according to the level of development. Overall, reducing the proportion of people in a region with very low skills seems to matter more than increasing the share with very high skill levels." In other words, skills are a key factor not just in the economic outcomes facing individuals, but also in the economic performance of the region in which they live.

Second, connective infrastructure was found to be important for lagging regions (though less so for the best performing regions): "In sum, the differences between fast- and slow-growing regions vary significantly across levels of development. Among the less developed regions, those growing faster than the national average appear to have more infrastructure, better human capital and higher density of activity relative to the underperforming group. As regions move into higher levels of development, infrastructure investment becomes relatively more significant, as does labour force activation. [However] in the most advanced regions, infrastructure density is not a key factor.....Advanced regions would tend, on the whole, to have good connective infrastructure already."

A factor potentially of particular significance for Wales is "density of activity". There is an extensive body of evidence demonstrating the economic advantages of a particular form of density – economic mass, or "agglomeration". This has been summarised in a recent review for the UK Department for Transport (Venables et al., 2014):

"Studies consistently find a positive relationship [between economic mass and productivity]. Furthermore, the relationship is quantitatively important.....An authoritative survey of the literature finds that 'In sum, doubling city size seems to increase productivity by an amount that ranges from roughly 3-8%' (Rosenthal and Strange, 2004, p2133). This means that the elasticity of productivity with respect to city size is in the range 0.05- 0.11..... suggesting that productivity in a city of 5 million is between 12% and 26% higher than in a city of ½ million."

There is considerable debate about the

relative importance of different factors in producing the productivity benefits associated with economic mass, and the relevance of factors is likely to vary across industries, but the fact that such benefits exist is not in any real doubt.

In respect of qualifications, Wales shares in the long established UK's problem of a "long tail" of low skills. However, within the UK, Welsh performance is quite typical of regions outside the south of England – see Figure 7.

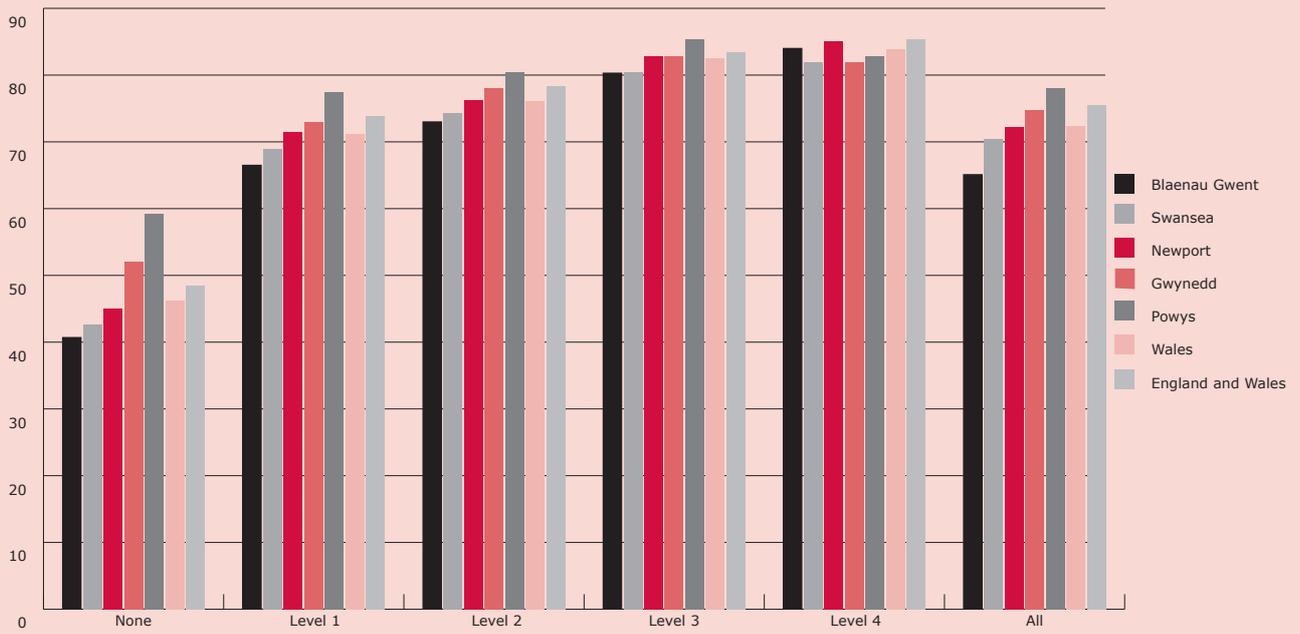
Furthermore, Wales appears to be the region of the UK with the least scope to exploit the benefits of economic mass through gaining the economies of agglomeration. Measuring economic mass is not straightforward, but the ONS produces a very imperfect proxy based on the share of the population within larger settlements (defined as population over 125,000). The data for the regions of GB, excluding the Greater South East, which is arguably a special case because of the dominance of London, is shown in Figure 8.

Econometric modelling undertaken for the Welsh Government has provided more rigorous confirmation of the importance of both skills and economic mass in explaining Welsh performance on productivity<sup>3</sup> measured at firm level. Key results are highlighted in Table 3. The factors included in the table accounted for the large majority of the gap in productivity between Wales and other parts of the UK.

The study found that improving skills (especially at the lower end), increasing population density and reducing travel time to large English conurbations would all be associated with increased productivity. Unsurprisingly, productivity was also associated with capital intensity, though since productivity is measured in respect of gross value added this could be, in whole or in part, an artefact of industrial structure since, other things equal, more capital intensive businesses will need to add more value to replace their capital stock. A higher ratio of full-time to part-time employment was also associated with higher productivity. (The inclusion of this variable was to correct for the fact that data on hours worked was not available at the level of the firm, so this result is both unsurprising and uninformative.)

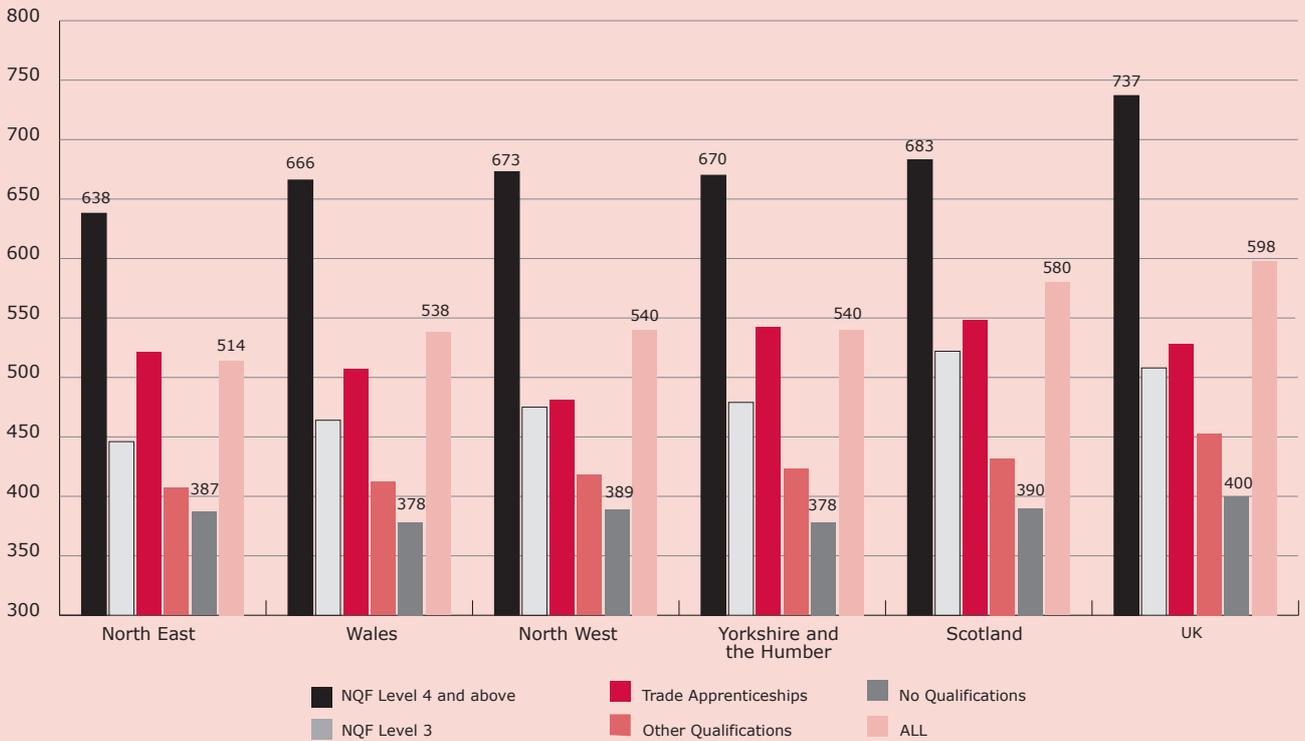
It should be noted these factors explain relative differences in productivity, not changes in productivity over time as reflected in economic growth. So for example, while productivity is higher in Cardiff and the Vale than in Gwynedd, the increase in GVA since devolution has been higher in Gwynedd than in Cardiff and the Vale. (A policy to increase effective economic mass, through for example transport improvements, would, however, be expected to produce a transitional impact on growth. This would

Figure 5: Employment rates by highest qualification, representative Welsh LAs (2011)



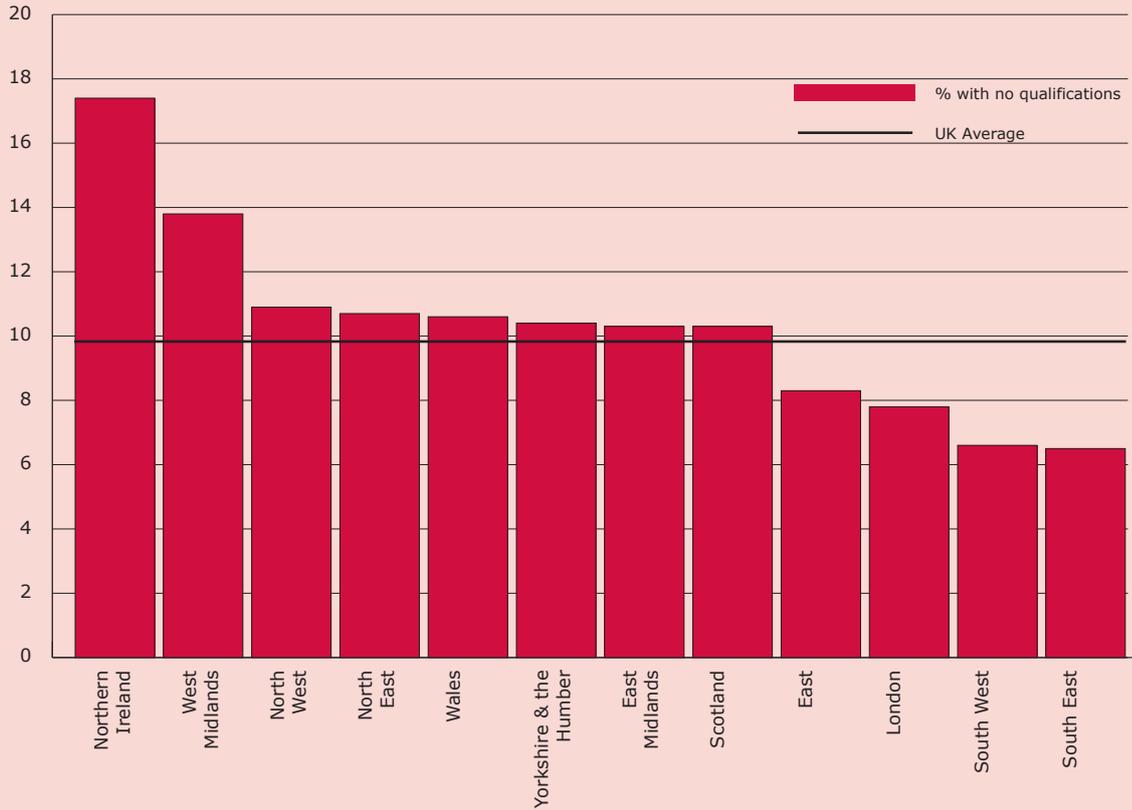
Source: Census

Figure 6: Mean weekly earnings (full-time), year ending June 2015, ranked by all qualifications, (£)



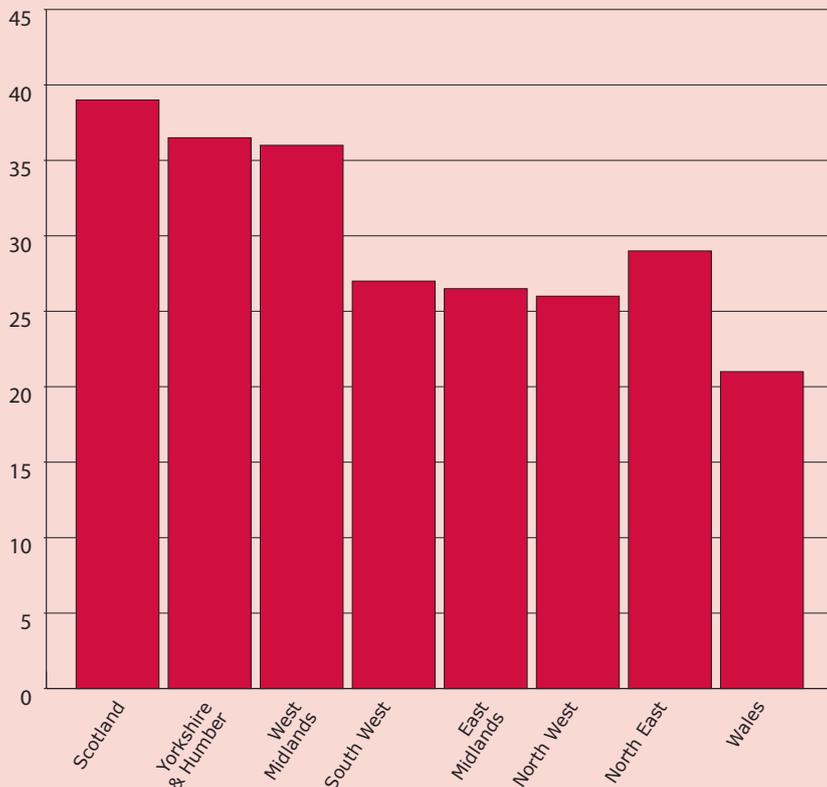
Source: Annual Population Survey

**Figure 7: Percentage of 16-64 year olds with no qualifications, 2014**



Source: BIS

**Figure 8: Percentage of population in settlements over 125,000**



Source: ONS

**Table 3: Effect of different factors on the productivity of the average firm**

A 10% increase in capital stock	+2.9%
A 10% increase in the ration of full-time to part-time employment	+3.4%
A 10% increase in % of local labour force with NVQ 2-3	+1.6%
A 10% increase in % of local labour force with NVQ 4+	+1.2%
A 10% increase in the average travel time to London and the 4 next largest cities	-0.7%
A 100% increase in population density	+1.3%

result in a higher relative productivity level once the policy had taken full effect.)

Broadly, these findings could also be interpreted as consistent with the view that, given qualification levels and Welsh economic geography, people in Wales are about as likely to be in employment, and are paid about as much, as people in the rest of the UK. The potential for improvement in these indicators over the short to medium term would seem to be limited - perhaps at around a couple of percentage points, at most.

In addition to skills and economic mass, a range of other influences have been suggested as contributing to differences in economic performance at the regional level – candidates frequently suggested include innovation, entrepreneurship, the provision of finance and/or lack of local ownership. However, the OECD review and other studies indicate that the evidence about the importance of such factors at the regional level is at best incomplete.

For example, in the case of innovation, the OECD finds that in general the absorption and application of new ideas is more important for regional development than is their creation. And in any case, data from multiple years of the Community Innovation Survey suggests that Wales performs consistently well relative to other UK countries and regions in terms of introducing innovative products and processes.

Differences in business structure between Wales and the rest of the UK are sometimes identified as a source of weakness. While it is true that a range of sources suggest that Wales has a smaller proportion of large companies’ headquarters than most other UK countries and regions, and that Wales remains somewhat more dependent on manufacturing than some other regions, it is easy to exaggerate the differences. For example, the distribution of employees across enterprise size-bands is very similar when Wales is compared with the UK as a whole, and the role of manufacturing in the Welsh economic is similar to its role in the East Midlands.

This is not meant to suggest that such factors do not matter at all. Rather, the key point is that Welsh relative economic performance, when seen in the UK context, is largely explicable in terms of some of Wales’s major structural features (particularly in respect of skills, economic mass and demography) where there is a large body of evidence demonstrating strong causal relationships with key economic outcomes.

In terms of the trends since devolution on these key economic outcomes, the story is broadly positive. It would be unrealistic to expect step changes in them without equivalent movements in the structural features identified above.

This is an argument for realism, not an expression of complacency. Spending on effective policies to improve skills and infrastructure will not transform economic outcomes overnight. But there is solid evidence that such policies will deliver over the long term. And the evidence shows that the benefits will take the form not just of higher levels of economic prosperity but also of improved health and greater well-being. Focussing on lower skill levels, in particular, will also help combat disadvantage and promote social cohesion.

**Notes**

1. GVA, which is conceptually equivalent to GDP, measures the total value of output produced in an area. It is measured gross, which means that no allowance is made for the replacement of capital (the extent of which will vary with, amongst other things, industrial structure), and the incomes generated are of course not necessarily received by the residents of the area in question.
2. Note that these results are based on a very restricted disaggregation of qualifications and therefore probably understate their role.
3. Understanding productivity variations between Wales and the rest of the UK. Report to the Economic Research Advisory Panel, Welsh Assembly Government. University of the West of England, Bristol and the University of Bath. Update in progress.

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