



# **Towards a Welsh industrial strategy**

A **nef** report commissioned by Wales TUC

**nef** is an independent think-and-do tank that inspires and demonstrates real economic well-being.

We aim to improve quality of life by promoting innovative solutions that challenge mainstream thinking on economic, environmental and social issues. We work in partnership and put people and the planet first.



# Contents

<b>Executive summary</b>	<b>2</b>	<b>Elements of a plan</b>	<b>21</b>
<b>Introduction</b>	<b>5</b>	Supporting existing employment and domestic value-chains	21
<b>The Welsh economy today</b>	<b>6</b>	Upgrading infrastructure	22
The poorest economic region in the UK	6	Diversification of output and ownership	22
A crisis of skills	8	Developing regional and local sources of finance	24
A crisis of investment?	9	Strategic support from the government with broader strategic aims	26
A crisis of productivity?	11	<b>Endnotes</b>	<b>27</b>
The decline of manufacturing, and the balance of trade	12		
The problem of the South-East	15		
Export specialisation	17		
Flows of capital and wealth	17		
Where are we now?	20		

# Executive summary

## In the face of globalisation, prolonged economic crisis and a skewed UK economy, Wales needs to look to itself to mobilise new sources of sustainable industrial investment.

The financial crash of September 2008 drove the UK economy into a deep recession from which it has not subsequently recovered. Both the severity and the length of this recession were a direct result of the model of economic development adopted across the UK in the preceding decades, i.e. growth driven by the accumulation of debt, mobilised by an exceptionally large financial sector, leading to a prolonged period of deindustrialisation.

That model worked well for the richer regions of the UK, and particularly for the richer residents within those regions. But for the majority of the country outside of London and the Greater South-East, it led to a stagnation of real income that was superficially compensated through the accumulation of debt.

Since the crash, the tide of easy credit has receded, revealing the pronounced unevenness of the UK economy. We now live in the most geographically unequal nation in the EU. It contains both the richest region in the Union (in central London) and areas in the Welsh Valleys comparable in income to recent EU accession countries. Those regional inequalities have worsened considerably over the last two decades. For all the recent talk of rebalancing, our financial sector accounts for a rising share of gross domestic product (GDP), our manufacturing output has hit a 20-year low, and our current account deficit has reached record highs.

Wales, like other areas outside of the south-east of England, did not gain much during the boom years, and is now suffering more in the wake of the collapse.

Since the Industrial Revolution, the nation has depended on mobilising external sources of funding in order to deliver growth and development. It successfully attracted a large amount of capital expenditure for nationalised industries post WWII, and drew in impressive volumes of foreign investment during the 1980s. It is now clear, however, that these external sources can no longer be relied on. Foreign direct investment (FDI) in particular has fallen globally since the crash and is, in any case, shifting rapidly away from the developed world and into emerging markets. Wales should not attempt to compete on a cost basis in a shrinking FDI market. It needs a novel approach instead.

Relative to much of England, Wales is comparatively lucky in having a well-established devolved administration with the legal and political authority needed to shape an alternative economic strategy. In the face of a poor macroeconomic outlook and a UK government that is unwilling to intervene effectively, this report outlines the case for a Welsh industrial strategy built on mobilising existing sources of funding.

A Welsh industrial strategy must break with the past and seek to identify the strengths (and weaknesses) of the Welsh economy. It must build on successful initiatives by the Welsh government in the recession, but also on Wales's particular economic geography and industrial structure. Crucially, in order to carry the necessary authority to deliver, the strategy would require a government able to set central priorities for development.

Key recommendations of the report include:

- Supporting infrastructure improvements where needed.
- Supporting a shift into renewable energy production.
- Sustaining local supply chains, relocating production where possible.
- Using novel legal and institutional forms – like co-operatives – to deliver the above.

In addition, an effective industrial strategy would require wide social and political support with clear social goals, sustaining decent, secure work and meeting pressing environmental needs.

# TUAG AT STRATEGAETH DDIWYDIANNOL GYMREIG

Yn wyneb globaleiddio, argyfwng economaidd hir ac economi sgiw y Deyrnas Unedig, mae angen i Gymru edrych ar ei hun i ysgogi ffynonellau newydd o fuddsoddiad diwydiannol cynaliadwy.

## Crynodeb

Arweiniodd y chwalfa ariannol ym Medi 2008 at ddirwasgiad dwfn yn economi'r DU, un nad yw hyd yma wedi llwyddo dod allan ohono. Mae gwreiddiau'r dirwasgiad llym, a'r cwmp economaidd estynedig a ddaeth yn ei sgil, yn perthyn i'r model o ddatblygiad economaidd a fabwysiadwyd ar draws y DU dros y degawdau blaenorol: model yn seiliedig ar dwf sy'n ddiwydiannol ar fynd i ddyled, wedi ei wthio ymlaen gan sector ariannol eithriadol o fawr, a arweiniodd at gyfnod estynedig o ddat-ddiwydiannu.

Fe weithiodd y model hwnnw'n arbennig o dda yn ardaloedd cyfoethocaf y DU, ac i'r trigolion cyfoethocaf o fewn i'r rhanbarthau hynny. Ond i'r mwyafrif o'r wlad tu allan i Lundain a gweddill de-ddwyrain Lloegr, mae incwm pobl wedi yn sefyll yn ei unfan, a gwelwyd cynnydd mewn dyledion.

Ers y chwalfa, mae'r ffyniant honedig yma wedi dod i ben, ac wrth i gredyd hawdd gilio, mae anghysondeb economi'r DU wedi dod yn fwyfwy amlwg. 'Rydym nawr yn byw yn y wlad fwyaf daearyddol anghyfartal yn yr Undeb Ewropeaidd. Mae'n cynnyws y rhanbarth cyfoethocaf yn yr Undeb (yng nghanol Llundain), ynghyd ag ardaloedd yng Nghymoedd De Cymru sy'n cymharu â gwledydd sydd newydd ymuno. Mae'r anghydraddoldebau rhanbarthol hyn wedi dwysáu'n sylweddol dros y ddau ddegawd diwethaf. Er gwaethaf yr holl son am ail-gydbwysu, mae ein sector gyllidol yn cyfrif am gyfran gynyddol o gynnyrch y wlad (GDP), mae'r diwydiant cynhyrchu ar ei isaf ers ugain mlynedd, ac mae'r bwlch yn y cyfrif cyfredol yn fwy nag y bu erioed.

Ni lwyddodd Cymru, fel ardaloedd eraill tu allan i de-ddwyrain Lloegr, i ennill llawer yn ystod y blynyddoedd bras, ac nawr mae'n dioddef yn waeth yn sgil y chwalfa.

Ers y Chwyldro Diwydiannol, mae Cymru wedi dibynnu ar fanteisio ar ffynonellau cyllido allanol er mwyn darparu twf a datblygiad. Llwyddwyd i ddenu buddsoddiad cyfalaf ar gyfer diwydiannau wedi eu gwladoli yn dilyn yr Ail Ryfel Byd, ynghyd â lefel uchel o Fuddsoddiad Uniongyrchol o Dramor (FDI) yn ystod yr 1980au. Serch hynny, mae'n amlwg bellach na ellir dibynnu ar y ffynonellau allanol hyn. Mae FDI yn arbennig wedi disgyn ledled y byd ers y chwalfa; yn ogystal â hyn, mae'n symud i ffwrdd o'r byd datblygedig ac i farchnadoedd newydd. Ni ddylai Cymru geisio cystadlu ar sail cost mewn marchnad FDI sy'n crebachu. Mae yno angen am ymagweddiad flaengar newydd.

O gymharu â llawer o ardaloedd yn Lloegr, mae Cymru'n weddol ffodus, gan fod yma bellach weinyddiaeth ddatganoledig wedi sefydlu ers tro, gyda'r awdurdod cyfreithiol a gwleidyddol i lunio strategaeth economaidd amgen. O gofio'r rhagolygon macro- economaidd gwael a diffyg parodrwydd ar ran Llywodraeth y DU i ymyrryd yn effeithiol, mae'r papur hwn yn amlinellu'r achos dros strategaeth ddiwydiannol Gymreig sy'n seiliedig ar wneud y defnydd gorau o ffynonellau sy'n bodoli eisoes,

Rhaid i strategaeth ddiwydiannol Gymreig dorri'n rhydd o'r gorffennol drwy geisio nodi cryfderau (a gwendidau) presennol economi Cymru. Bydd rhaid iddi adeiladu ar fentrau llwyddiannus gan Lywodraeth Cymru yn ystod y dirwasgiad, yn ogystal â daearyddiaeth economiad a strwythur diwydiannol arbennig Cymru. Er mwyn bod â'r awdurdod angenrheidiol i sicrhau fod y strategaeth yma'n llwyddo, mae yno angen llywodraeth sy'n gallu gosod blaenoriaethau canolog ar gyfer datblygiad

Mae argymhellion allweddol yr adroddiad yn cynnwys:

- Cefnogi gwelliannau i'r isadeiledd lle bo angen hynny
- Cefnogi symudiad tuag at gynhyrchu ynni mewn dull cynaliadwy
- Cynnal cadwyni cyflenwi lleol ac ail-sefydlu'r broses gynhyrchu'n lleol lle bo hynny'n bosibl
- Defnyddio ffurfiau cyfreithiol a sefydliadol newydd – megis mentrau cydweithredol – i ddarparu'r uchod

Yn ogystal â hyn, byddai strategaeth ddiwydiannol effeithiol angen cefnogaeth gymdeithasol a gwleidyddol eang gydag amcanion cymdeithasol eglur, gyda'r nod o sicrhau swyddi diogel gwerth-chweil a chwrdd ag anghenion amgylcheddol cyfredol.



# Introduction

The financial crisis of September 2008 opened up a new period of economic turbulence across the globe. For the UK, the sudden freezing of financial markets following the bankruptcy of US investment bank Lehman Brothers has had immense consequences: both immediately, with the extraordinary magnitude of the banking bailout required (totalling £1.19 trillion), and over the months and years to follow.

In May 2010, the formation of a Coalition government committed to austerity signalled a sharp change in the direction of national economic policy. Under the pretext of repaying the national debt (pushing past 80 per cent of GDP in 2010) and closing the government deficit, the Coalition committed itself to a programme of public spending cuts not seen since the Great Depression of the 1930s.

The failure of that programme is now widely acknowledged. The national debt continues to rise. The deficit is widening. Growth continues to falter. Yet despite the fact that today's stagnant economy is a direct result of its austerity drive (Box 1), the UK government remains committed to forcing cuts through – a process that is now expected to last until around 2017. The macroeconomic situation now confronting the regions and nations of the UK is therefore unlikely to change in the near future.

But since devolution, Scotland, Wales, and Northern Ireland have had some, variable, capacity to act independently and shape their own economic outcomes. Although none of the devolved administrations have access to the tools of macroeconomic management – monetary and fiscal policy is still set in London – since 2006 Wales has had access to a wider range of policy tools. These allow the Welsh government to enact legislation and make policy across a wide range of devolved competencies.

This report outlines how Wales can make better use of the tools it already has to improve its macroeconomic situation. Based on an analysis of Wales's economic position within the UK context, it makes the case for a more activist industrial strategy, focused on delivering the positive social outcome of well-paid, secure, environmentally sustainable work.

We begin with a run-down of where Wales is today, and an explanation for what has gone wrong. In doing so, we explore the financial crash, and the transformation of the UK economy over the last few decades. We show how Wales has fitted into that transformation, and where prevailing approaches to fixing matters fall short. Then, on the basis of this analysis, we offer some suggestions on how reforms can be better implemented.

## Box 1. The failure of austerity

There were sound economic reasons for thinking the austerity plan was never likely to work. John Maynard Keynes helped formulate them in the 1930s, when attempting to understand why the Great Depression was so deep and lasted so long.

His logic boiled down to the fact that – if we take the economy as whole – what one person spends is necessarily always what another earns. So if I cut my spending, you earn less. And this is just what happened in 2008: as banks panicked and restricted lending, households and firms cut back on their spending; as they spent less, others, elsewhere in the economy, necessarily earned less, so the economy shrank.

Austerity is precisely the opposite of what governments should do when this kind of recession strikes. When everybody else is cutting their spending, it is clearly foolish for a government to do the same. Far from helping the situation, government cuts exaggerate the multiplier effect described above.

# The Welsh economy today

Using the conventional measure of Gross Value Added (GVA), Wales is the poorest economic region within the UK. GVA attempts to capture the output produced by an economy over a year, or sometimes a shorter time period.

## The poorest economic region in the UK

Table 1 shows the output per capita of each region and nation in the UK. Each figure is shown as the percentage difference above or below the UK average for that year. Most regions and nations outside of London are below the whole-country average, while London is increasingly well above: by 2009, its per capita output was nearly 74 per cent higher than the UK-wide average.

By 2009, Wales's GVA was 27 per cent below the UK average. Other things being equal, we would therefore expect those in Wales to be around a quarter less well-off than those living in the rest of the country, although of course their output is not distributed evenly.

**Table 1. Regional Gross Value Added (GVA) per capita, 1989–2009**

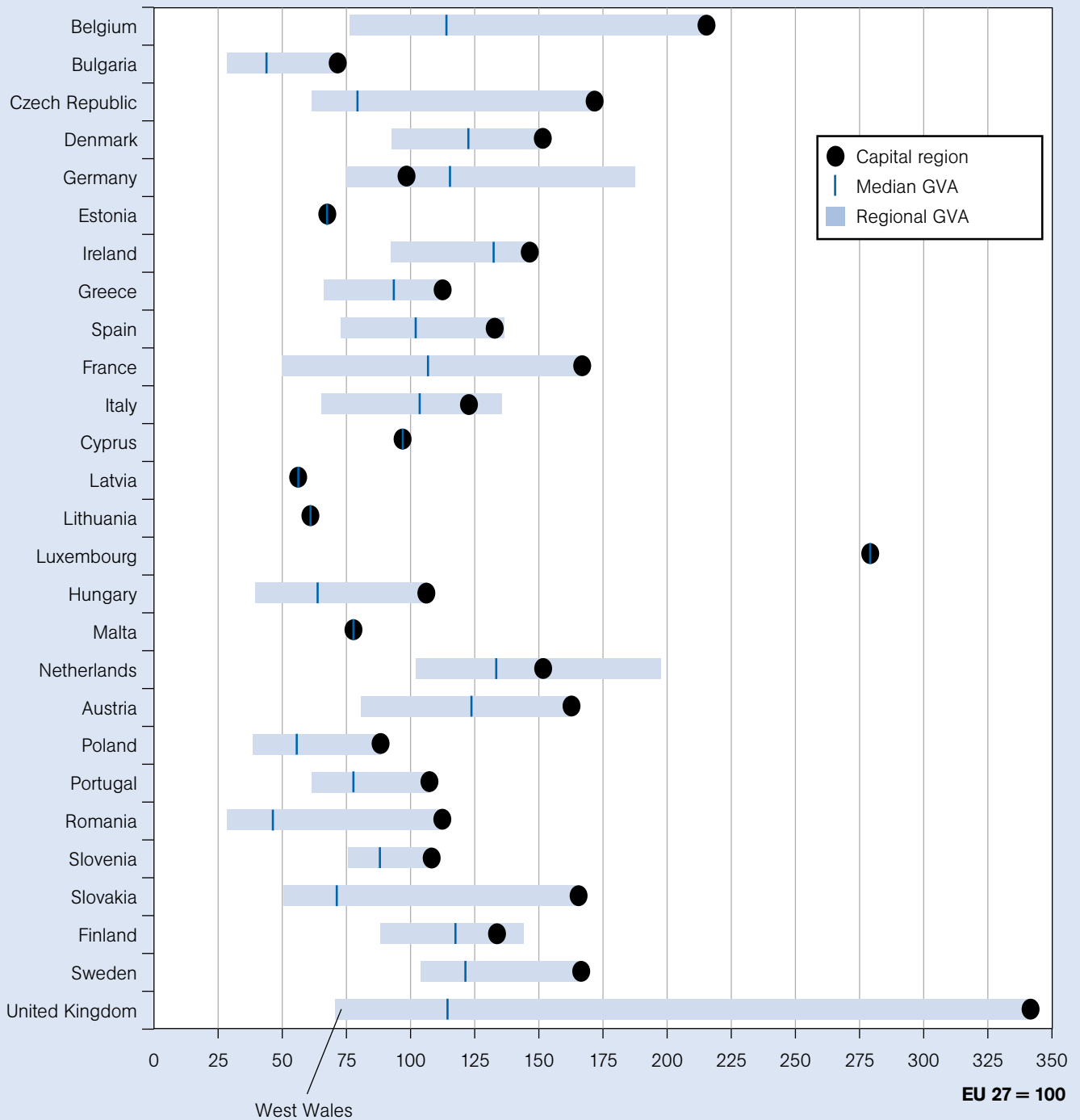
	1989	1999	2009
North East	-18.2	-22.7	-23.5
North West	-10.5	-11.7	-15.6
Yorkshire and the Humber	-12.3	-12.1	-17.4
East Midlands	-7	-9.2	-12.4
West Midlands	-10	-10	-17.0
East of England	-6.6	-3.9	-7.3
London	53.8	60.1	73.9
South East	-1.8	6.1	6.3
South West	-9.9	-8.2	-9.1
Wales	-17.2	-23.3	-26.7
Scotland	-5.9	-5.7	-1.2

Source: ONS. Shown as %age distance from UK for each year.

Compared with London, this figure becomes even more shocking. Per person, Welsh output is only 42 per cent that of the capital's. This distance between two whole economic regions within the UK is exceptional by European standards. Figure 1 shows the distribution of output within each EU member state, shown as the spread between their poorest region and their richest. The UK is clearly the most geographically unequal country in the EU. Central London is the richest single area within the Union and sits at the top of the UK's line, but West Wales, the region at the very bottom of the UK's graph, is poorer than some recent EU accession countries.



**Figure 1. Distribution of output within each EU member state**



**Chasing growth is not enough**

This wealth gap has direct implications for economic policy. If we want to close the gap, policies geared towards growth alone are clearly not enough. We can see this with a simple extrapolation. Even if London were to grow at just 1 per cent a year (way below its average), Figure 1 shows that , Wales would have to grow at 2.5 per cent every year for the next 60 years to catch up. No country, anywhere, has ever achieved this. It is a fantasy scenario.

Growth will not close the gap, unless some system of redistribution – i.e. using the tax system to take wealth and income from the rich, and spread it more evenly throughout the society – is put in place. But in the absence of such a system, growth cannot plausibly make Wales as prosperous, in these terms, as Central London.<sup>1</sup> Even if Wales were to shoot lower, striving instead to become as well-off as the north-west of England, it would need to grow at 2.5 per cent per year for ten years

## Box 2. Agglomeration economies

The economic literature on agglomeration economies suggests that these happen in two different ways: either from 'localisation' economies, where an area can specialise in a particular type of work, or from 'urbanisation' economies, where an area offers a wide variety of different kinds of work. Localisation economies are related to a concentration of industry, where different firms work broadly in the same industry, supporting each other and making use of a deep, but relatively specialised labour market. Urbanisation economies occur in a number of ways, including when firms and people learn from their neighbours, and when transport infrastructure is used more efficiently.

It is important to note that these two types of agglomeration economies oppose each other: one depends on *specialisation*, the other on *diversification*. The literature is so far undecided about which type is better at turning population density into growth.<sup>2</sup> Recent work has, however, suggested that smaller firms favour urbanisation effects, while larger firms benefit from localisation.<sup>3</sup>

(with the North-West holding back at 1 per cent all the while) in order for Wales to achieve its goal. This is less implausible, but still represents a better economic performance over a longer period of time than it has ever managed before.

There are other problems with chasing growth alone, as we shall see. But the central message should be that concentrating, instead, on what works and what can be achieved would be better goals for economic policy.

### Geography matters

Wales's headline GVA figure of -27 per cent of the UK average disguises huge geographical variation across the country. The area around Cardiff, on a GVA measure, is about as well-off as the UK average. Therefore a strategy focused on making this city, and its surrounding area, deliver growth that could flow back across the rest of the country and drive Cardiff ahead would not be unreasonable. Something like this is proposed in the new City Regions initiative. The initiative is built on work in economic geography that has identified 'agglomeration economies' (Box 2) as a critical driver of economic growth. Agglomeration economies are the economies of scale that occur when economic activity locates in the same place.

There is much to recommend in the City Regions report, and its focus on improving connectivity must be welcomed. Increased investment in Wales's transport and communications infrastructure would bring immediate benefits.

### A crisis of skills

Location and agglomeration have an obvious relationship to the labour market, since work must be performed somewhere. As the Welsh government's Economic Research Advisory Panel pointed out in a 2006<sup>4</sup> report, fewer inhabitants of Wales are in work at any point in time than across the rest of the UK. It is this low economic activity rate, it argued, that is causing the economy to lag. Other research has also strongly indicated a pattern of lower productivity levels in Welsh local authority areas that contain a large number of the low-skilled workers.<sup>5</sup> As a result, skills and activity rates have been a recurrent theme in policy, and a consensus has emerged around the need to improve skills and training in order to allow those currently out of work to move into employment.

It is certainly true that improved skills, particularly basic skills, are linked to improved employment prospects and higher pay while in work; modern economies demand highly skilled workers across the board. Plus, the evidence does flag a problem with skills in Wales in general. While the OECD's Programme for International Student Assessment (PISA) reports are not comprehensive studies of education systems as a whole, its 2009 study found that Wales scored below the OECD average for reading, writing, and science, and was the worst performer in the UK.<sup>6</sup> Considered alone, there is therefore little reason to fault the consensus around improving education and training in order to boost skill levels.

## A broader problem

Nonetheless, focusing on this solution in isolation overlooks the broader, macroeconomic picture. While it is desirable that training opportunities are provided, it is not the case that increasing the supply of somewhat more skilled workers will automatically lead to an increased demand for them.

If jobs were hard to find in the most deprived areas of Wales prior to 2008, they are now exceptionally scarce. Assuming more effective training and education can be delivered in the foreseeable future, the resultant marginal improvements in skill levels alone will not be enough to seriously shift the economic situation in such areas.

This situation can be partly improved by connectivity, as the more recent City Regions report has emphasised.<sup>7</sup> Creating the means by which those currently inactive in comparatively isolated areas can access opportunities to work ought to reduce worklessness. But this is still dependent on those opportunities existing in the first place. At present, with around 17 applicants for every entry-level job advertised in the UK, this is not guaranteed.<sup>8</sup> Based on the last set of figures available, while UK-wide unemployment fell slightly, Wales's overall unemployment continued to rise and currently stands at 8.6 per cent – nearly a percentage point higher than the UK's, with 127,000 people out of work.<sup>9</sup>

Thinking of the problem of unemployment and inactivity in Wales as one to be solved by improving the labour supply is to assume that the demand side will look after itself. It is to assume that there will always be, at some point, an investor looking for additional labour. Currently, however, this is not an assumption that can be supported. All traditional sources of investment (and therefore work) are running dry:

- The UK government has made exceptional cuts to its own capital expenditure in the last few years – initially planned at around 50 per cent over the three years to 2012/2013, and only partially reduced since.<sup>10</sup>
- The Welsh government's capital budget in 2014/2015 will be 24 per cent lower in real terms than in 2010-/2011 and 33 per cent lower than in 2009/2010.
- FDI for the UK has fallen by around two-thirds in real terms since its pre-crisis peak – from £91.3 billion in 2007, to £31.9 billion.<sup>11</sup>
- Domestic investment remains £36 billion down on its own peak year of 2008.

## A crisis of investment?

As we can see, the assumption that informs the focus on skills, and on improving the labour force generally, is that capital investment will follow. If Wales can attract investment, the theory runs, jobs and growth will be created. If it is necessary to improve the depth and quality of Wales's labour markets to do so, then this is what should be done: improving transport connections on one side, and improving skills on the other. This assumption, however, reproduces a belief that may have served Wales well in the past but which is unlikely to do so for the future.

## A history of attracting investment

Wales was the first nation in the world to industrialise, building on its natural advantages of cheap coal and ready access to water. From the start, investment in Wales was driven by flows of capital arriving from elsewhere.<sup>12</sup> The steady decline of the staple industries of coal, steel, and iron did not shift this balance. Instead, over the post-war period, Wales became adept at mobilising private and public funds nationally to fund investments. For example, following the nationalisation of steel and coal, Wales won the funding needed to update and modernise its industrial equipment – notably in coal mining where Welsh pits were still, by 1945, notoriously unmechanised. This flow of public capital was a tribute to the ability of Wales's political class to win economic backing from Westminster.

These public sources of funding for industry eventually dried up, most spectacularly with the privatisation and run-down of the nationalised heavy and extractive industries. But when it came to locating new sources for funds, Wales did

better than many other areas also suffering from deindustrialisation. The Welsh Development Agency (WDA), established under a Labour government in 1975 to locate new sources for Welsh economic growth, became expert at locating funds from a new, non-domestic source: not the national political and financial centres, but international flows.

By the late 1980s, Wales was attracting more FDI than any region or nation in the UK. This flowed particularly into light manufacturing. A combination of proximity to markets, cheap labour, and often direct WDA support meant that suppliers looking to establish new plants found Wales offering a 'compelling package' for investment.<sup>13</sup> As a result, employment – particularly in manufacturing – was supported, and by the end of the 1990s Wales had become a model for emulation across Europe.<sup>14</sup>

That said, the jobs created were often relatively low skilled and poorly paid. The plants that opened were generally capital-light and therefore more footloose. Nonetheless, the economic effects of creating additional employment in the face of decline elsewhere were significant. Between 1979 and 1991, Wales attracted 14 per cent of all FDI flowing into the UK – a disproportionately large share, given its population size. Thirty per cent of all Welsh manufacturing employees were working in foreign-owned plants by 1992. The Welsh economy grew faster than any other UK region or nation over this period, averaging a growth rate of 4.5 per cent from 1986 to 1990, compared to a UK growth rate of 3.1 per cent.<sup>15</sup>

### The global shift

However, this comparative success, maintained for over a decade, was highly contingent. During the 1990s, accelerating globalisation entirely transformed the economic landscape Wales had been building on. The steady decline in the cost of transportation and the opening of new markets globally meant that however cheap Welsh labour may have been, it was increasingly possible to find a cheaper source elsewhere. Plus, the opening up of the EU to the East immediately created an opportunity for manufacturers inside the Union looking for cheaper labour.

Whole plants moved from Wales as manufacturers shifted to cheaper locations: 171 plants closed between 1998 and 2008, with job losses amounting to 31,000, concentrated in manufacturing.<sup>16</sup> By 2009, Wales had fallen from the best- to worst-performing region or nation for attracting inward investment.

For the UK as a whole, FDI moved away from manufacturing and into services, concentrating increasingly on skilled labour and markets for innovation. In practice, this drove a geographical shift in investment towards London and the South-East.

Wales still retains a higher output and employment in manufacturing than the UK average. Nonetheless, the speed at which its fortunes changed for the worse illustrates the dangers of relying on external and highly cost-sensitive investments. With limited sunk capital costs, it was easy for large, multinational employers to relocate single plants in a way that single-plant firms could not. Wales was left essentially at the mercy of decisions taken elsewhere, on grounds it could do little (plausibly) to influence.

Moreover, global FDI flows are substantially down on their 2007 peak of \$2 trillion. After a slight recovery in 2011, global FDI fell again by 18 per cent over 2012, to \$1.2 trillion. The decline in developed countries has been particularly severe, with levels now matching those last seen a decade ago. For the first time ever, flows of FDI into less-developed economies exceeded those into the developed world, while data from mergers and acquisitions show investors pulling out of more developed countries.<sup>17</sup> FDI is shifting away from mature economies, like Wales, and into the developing world. Competition for the reduced flows coming into the developed world is therefore intensifying, and the UK as a whole is attracting a smaller share of it.

Under these new circumstances, it would clearly be a mistake for Wales to fixate on winning new flows of overseas financing. Some may of course be attracted, but it is extremely unlikely that anything approaching the 'golden age' of the 1980s and 1990s could (or should) be replicated. Attempts to do so by either cutting labour

costs, or forcing upskilling, are entering a race that Wales cannot win and should not enter.

### **A crisis of productivity?**

The price at which labour is supplied is not the only determinant of its demand. The efficiency with which the labour can be employed is also important. The more productive labour is, the more desirable it will generally be for employers. What's more, growth in productivity over time is the most important factor driving economic growth in a developed country.

The reason for this is simple. Less developed countries have an enormous potential capacity to boost growth by transferring people from low-productivity agriculture to higher-productivity industrial sectors. China, for the last three decades, has done exactly this, with hundreds of millions moving from low-productivity farming into higher-productivity industry. But developed countries like Britain essentially completed this process with the Industrial Revolution. Therefore continued economic growth, as in other developed countries, now depends on rising productivity.

### **British productivity in flux**

Since at least the late nineteenth century, Britain's productivity growth has been low relative to other industrialised countries. Its relative economic decline has, until recently, been a recurrent theme in politics.<sup>18</sup> But in the period since 1979, productivity levels have appeared to recover, and this debate has become more muted.

The reason for this is again linked to deindustrialisation. Although millions of jobs were lost as intense competitive pressure forced the closure of less efficient plants and factories, deindustrialisation actually caused average productivity to rise – because only the more efficient firms and plants were left standing.<sup>19</sup> Labour governments, elected from 1997 onwards, continued this shaking out of industry, with 1.2 million further jobs lost in production industries.

The services industry has proven consistently poor at creating jobs, and therefore has only partially compensated this huge loss of employment in manufacturing. For example, only 60,000 net jobs were created in finance from 1979 to 2007, set against the 4 million lost in manufacturing over the same period. Government spending took up the slack, under both Conservative and Labour administrations, with 57 per cent of new jobs created since 1979 funded by the public sector.<sup>20</sup> From 1989 to 2008, the public sector contributed to 43.2 per cent of GVA growth in Wales, with an exceptional 60.8 per cent contribution in the period 1989–1996.<sup>21</sup>

Historically, service jobs have also been of lower productivity. Recent historical work suggests that the UK has, in particular, been an international laggard in service sector productivity, which helps account for its lagging productivity generally.<sup>22</sup> During the 2000s, however, it appeared that this international productivity gap was closing: UK productivity growth was running ahead of Germany and France, and was second only to the USA. Measured services productivity growth, in particular, appeared to break with its earlier underperformance.<sup>23</sup>

But the crash, and the subsequent years, have reversed this.<sup>24</sup> During the crash itself, as output collapsed by nearly 5 per cent over 2008/2009, measured productivity also collapsed. Less output was being sold, but employment was falling much more slowly, meaning that roughly the same number of workers were seemingly producing much less.

### **Hooked on services**

Following a recession, the usual pattern is for productivity to rebound strongly and recover rapidly to its trend levels.

Instead, UK productivity has fallen year on year. Breaking the figures down, while manufacturing productivity has recovered to its pre-crash levels, service sector productivity remains below its peak.<sup>25</sup> Because services now account for 70 per cent or more of our economy, productivity growth overall is weak or even negative.

This highly unusual pattern is indicative of deeper weaknesses in the whole economy – weaknesses that were masked during the boom years. A dependence on services, once an apparent benefit to the economy as a whole, has now turned into a major drag. Part of the problem is the measure of productivity used. Since GVA measures only output sold, an industry, or even a whole sector, can look highly productive when it is doing little more than capturing value elsewhere.

This UK problem is reproduced in sharper form inside Wales. Measured at the level of GVA per head, Welsh productivity has fallen relative to the UK average by nearly 3 per cent since 1997.<sup>26</sup> Productivity in Wales, on this measure, fell over the same period from half that of London's, to 43 per cent. Underneath the headline Welsh figure, the differences at local levels within Wales can be similarly dramatic. The worst-performing Welsh local authority has a GVA per head of just 53 per cent of the best. Only Cardiff, amongst the local authorities, has a productivity (on this measure) above the UK average; every other Welsh local authority is below.

Of course, if we shift to a different measure of productivity – looking at GVA not per head of population, but per hour actually worked – the gap closes. GVA per capita in Wales is about 75 per cent of that of the UK as a whole; GVA per hour worked in Wales is 84.6 per cent. This is a direct result of the relatively higher inactivity rates in Wales. It is therefore easy to understand why raising activity rates can be seen as the route to improving overall economic performance. Those in work are comparatively productive; therefore, simply raising the numbers in work will lead to productivity improvements.

### **The part-time problem**

Under present circumstances, however, it is not clear that this will follow. The crash led to a very sharp recession, from which recovery has not been forthcoming. But employment, while it has fallen, has not fallen by nearly as much. Instead of an increase in redundancy, there has been an increase in enforced part-time working. Underemployment is now at an unprecedented scale, with an estimated 1.4 million working fewer hours than they would want or need.<sup>27</sup> Having similar numbers of workers employed, but selling less, automatically produces lower reported productivity. Other things being equal, moving larger numbers of the currently inactive into work under these circumstances would not lead to a significant improvement in growth: the additional employees would drag down reported productivity per hour, rather than substantially pushing up output.

This would occur, particularly, if the slide in reported productivity was not just the temporary result of a (prolonged) recession but pointed to deeper economic problems. There are, however, good reasons to suppose both that the recession will be prolonged, and that there are significantly deeper economic problems. These long-term problems at the UK level interact in a very particular way with the UK's regions and nations, including Wales. To see this, we need to understand where the recession came from.

### **The decline of manufacturing, and the balance of trade**

As Box 3 explains, the crash was rooted in major long-term problems. At the heart of the UK's economic problem is a deadlock between debt, trade, and low growth.

#### **Locked into trade deficit**

For nearly three decades the UK has run a deficit in its balance of trade. In every year since 1983, it has bought more goods from abroad than it has sold. Simply put, the decline in manufacturing output has meant the UK has less to sell elsewhere in the world. Like other developed countries, the share of manufacturing in output and – especially – in employment declined, perhaps more sharply in the UK than elsewhere. In 1979, one in four UK jobs was in production industries; today, that figure is closer to one in ten. As manufacturing output fell, so, too, did manufactured exports.

But it is impossible, over time, to buy more from abroad than you are selling abroad. Something must make up the gap in trade. As manufacturing declined, service employment and output grew, until today the service sector accounts for around 70

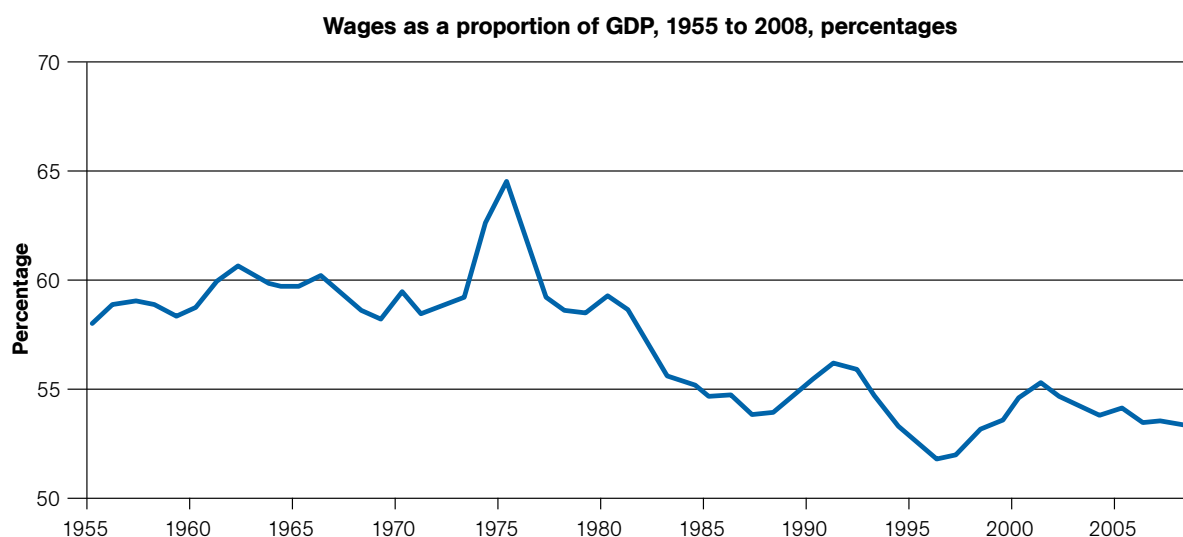


### Box 3. How the crash happened

The financial crisis that delivered the recession did not arrive out of nowhere. It had deep roots, stretching back over decades, directly connected to the state of the wider economy and to government policy. The crisis of the 1970s provoked sharp reactions across the Western world. With the governments of Margaret Thatcher in the UK and Ronald Reagan in the USA in the lead, the decision was taken to deregulate finance. The post-war period had seen substantial legal restrictions on how banks and other large financial concerns could conduct themselves. After the financial crises of the inter-War years, national governments took the decision to restrain finance, fearing further crashes. The movement of capital internationally – often a source of speculation – was restricted, and fixed exchange rates imposed. Thatcher, Reagan, and others tore these regulations up, in the name of freeing up capital and promoting efficiency. Finance, let off its leash, went slowly mad over the succeeding decades: creating new and more exotic “products”, inventing new ways to create and sell debt.

At the same time, in the name of promoting flexible labour markets and with the aim of restoring profits, governments acted to weaken legal protections for workers and undermine trade union rights. In the UK, successive Trade Union Acts gave this the force of law. Meanwhile the threat of competition from elsewhere in the world was used to both undermine domestic industry and to keep pressure on wages. The results of this were clear. Figure 2 shows how the economic pie was divided over time, between labour and capital. As the shift from the 1970s developed, labour received a smaller share of the pie – from around 60 per cent of output in the post-war years, to close to 50 per cent (and falling) today.

**Figure 2. Wages as a proportion of GDP, 1955 to 2008, percentages**

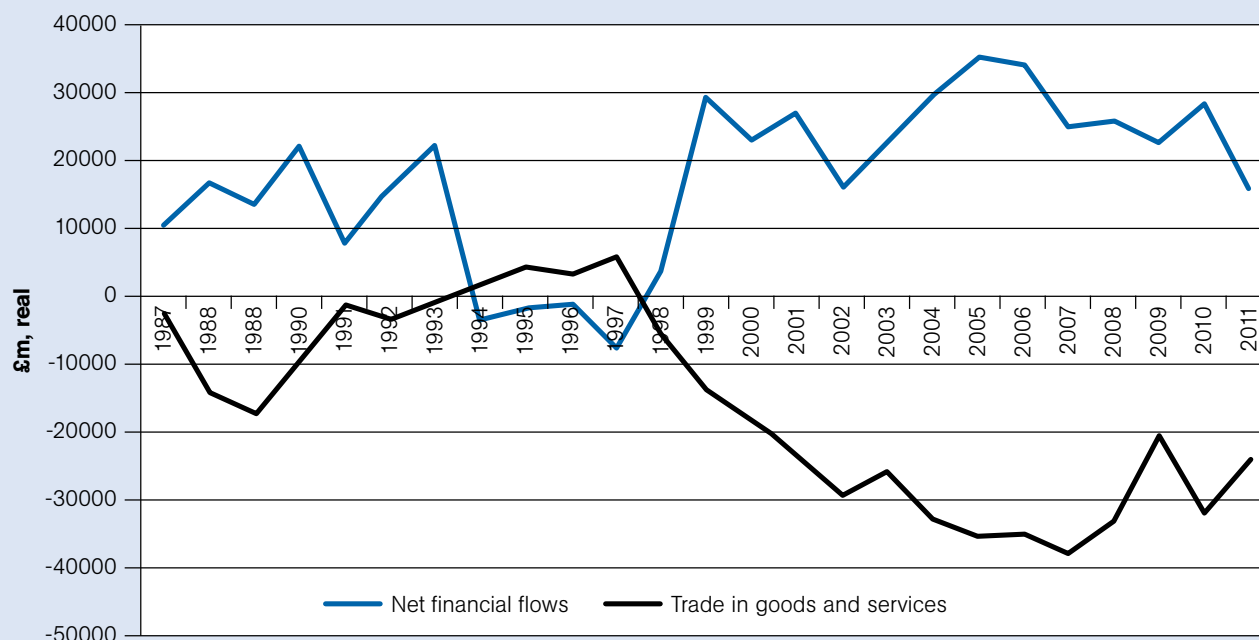


The result was continual pressure on most people's real standard of living. By the early 2000s, this had turned into stagnant or even falling real incomes for many. But there was a problem with this. Falling real incomes would normally mean most had less to spend. If they spent less, however, just as Keynes indicated (Box 1), others would earn less. The economy would be driven into a permanent recession.

The unintentional solution to this, especially in the 2000s, came through the newly liberated financial system. Instead of real earnings, households could borrow. Banks created debt for households on a huge scale. By 2008, British household debt stood at 163 per cent of household's disposable income – the highest in the developed world. That rising debt enabled households to carry on spending, and so keep the economy going. But this, for many, was not a shopping spree: they were running to stay still. With real incomes flat, their debts were piling up with no prospect of repayment.

As the debt bubble expanded, banks loaned to riskier and riskier prospects.<sup>28</sup> As debts grew ahead of incomes, it was inevitable the bubble would burst. Eventually, with the lending to sub-prime mortgages in the USA, these risks become unsustainable. What started as collapse in the USA was transmitted throughout the global financial system and the world economy plunged into recession.

**Figure 3. UK current and financial accounts, 1987–2011**



Source: National Statistics, Pink Book 2012

per cent of GDP. This was assumed to be progress: the economy was becoming ‘post-industrial’, with older, often more unpleasant jobs in industry being replaced by newer, flexible, and more pleasant work.

There was, however, a problem. Services are, in general, not sold internationally. They are ‘non-tradable’, in the jargon. The reason is simple: services are often very directly attached to being performed in particular places at particular times. Your hair has to be cut where you are, because only the extravagantly wealthy could afford to travel elsewhere to get it cut. Only a comparatively small part of services output – often that most attached to the financial sector – can reasonably be sold abroad.

So as the economy shifted from manufacturing to services, the trade gap could not be closed. But those imports still had to be paid for, and if the value of exports was not enough, money had to be found elsewhere.

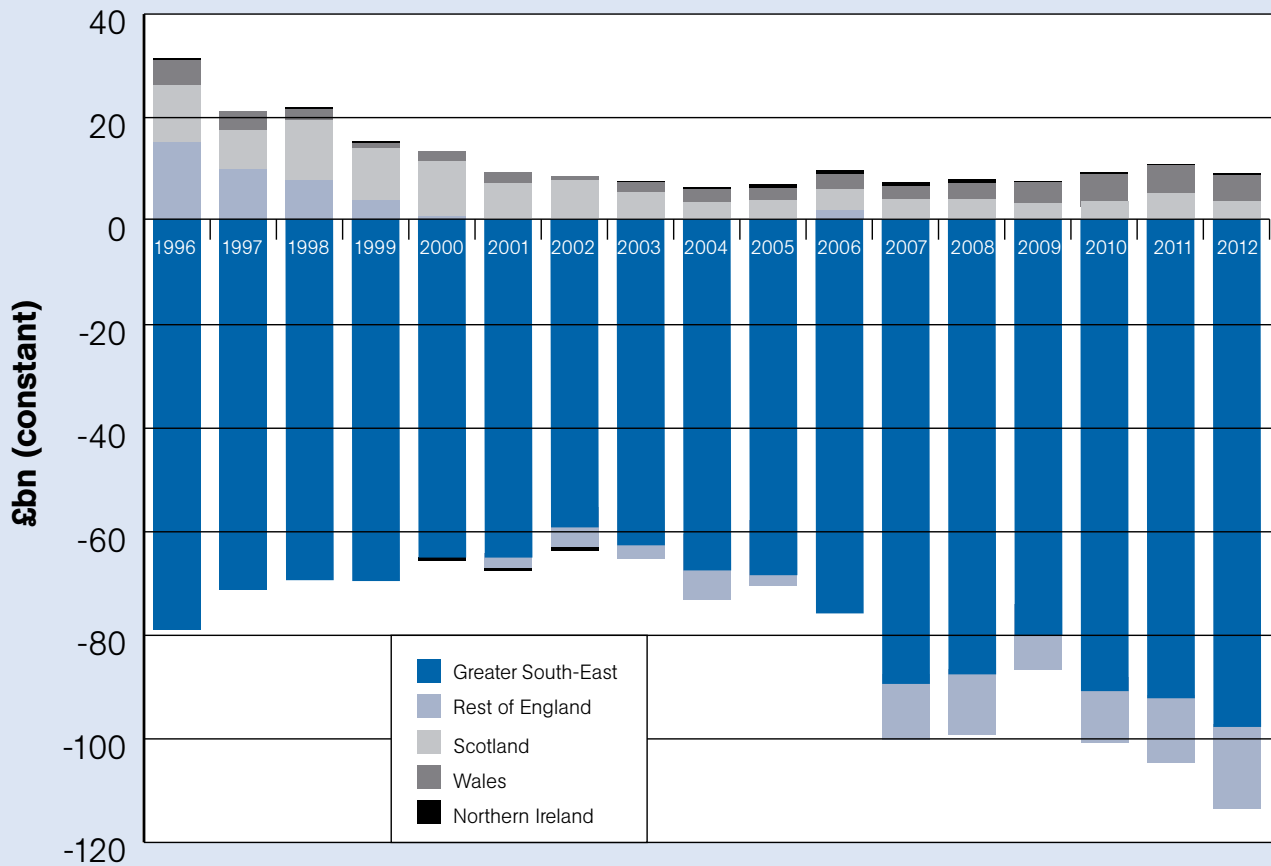
### Propped up by debt

It was found, in effect, through borrowing. The City of London had centuries of experience in money-dealing behind it. During the boom that stretched out over nearly three decades from the end of WWII, it had been kept under unprecedentedly tight control. But as that boom ended, successive governments loosened their ties. The City, and financial services generally, seized the opportunity. London grew to become one of perhaps the three most important centres for financial activity in the world. The size, depth, and sophistication of its markets enabled London’s financial institutions to mobilise money and credit from across the globe.

That sophistication enabled, in effect, the UK’s domestic trade deficit to be covered. Taken collectively, Britain borrowed from abroad to sustain consumption. Figure 3 illustrates this.<sup>29</sup> As the total trade deficit worsens, the financial flows from abroad needed to sustain it increase. This flow of financing from abroad represents an accumulation of liabilities, held by different people in the UK.

Much of that borrowing was made by households. Over the last decade, as real incomes for most stagnated or even fell, many households found themselves on

**Figure 4. UK regional and national contributions to balance of trade, 1996–2012**



Source: HMRC, Regional Trade Statistics 2012

a treadmill of debt. In the face of steadily rising prices, they needed to sustain higher and higher rates of borrowing just to stay in the same place. Debt was cheap and easy to obtain even as the prices of many essentials began to increase. But it is not possible to keep borrowing more than you earn forever; at some point, debts must be repaid. A crash was inevitable. The crunch finally came late in 2008, when, in the aftermath of the crash, banks in a panic turned off the credit taps. Spending by households and firms collapsed, dragging the economy into the sharpest recession since the 1930s.

### The problem of the South-East

That, very broadly, is the picture for the whole UK. Underneath it, however, the different regions and nations had different experiences. Economic growth, over the last few decades – and especially the last ten years – has been led, in effect, by finance. The UK’s chronic international imbalances, and stagnant real incomes, were sustained by its immense financial system. But growth in this fashion has had particular geographic consequences.

Figures for international trade in goods are now available for the separate regions and nations of the UK. Once we move away from the UK-wide view, the problems facing those regions and nations outside of London and the Greater South-East become more apparent. But they are not the problems usually attributed to them; instead, they find themselves on the wrong side of a divide that has privileged the accumulation of financial assets ahead of the creation of sustainable work.

Parts of this sad story can be seen in Figure 4. The trade deficit in goods is generated very largely in the Greater South-East, with Wales (like Scotland and Northern Ireland) running a surplus on its recorded balance of trade of around £5.1 billion, somewhat ahead of Scotland on £3.6 billion.<sup>30</sup> The difficulty, however, is that the figures for regional trade from Her Majesty's Revenue and Customs (HMRC) do not record final destinations of imported goods, and so although goods may arrive in the South-East, it is not immediately clear that they necessarily end up there. In other words, wholesalers and importers based around the major ports of the south-east of England could be buying imported goods and then selling them on to other nations and regions in the UK. Similarly, while exports are adjusted to allow for companies with multiple branches – since the location of the head office recording an export can differ from its actual origin – imports are not adjusted.<sup>31</sup> Figure 4, in other words, is likely to be exaggerated. Without proper inter-regional trade figures, it is difficult to establish by how much. It is for this reason that the figures, though striking, should be approached with a little caution.

Nonetheless, it indicates a clear geographical bias in the balance of trade. Wales's own export performance, after a year-on-year decline from the mid-1990s to the turn of the century, has been impressive relative to English regions and other nations. Wales's larger reliance on manufacturing, and the clustering of a few heavy export industries, help account for this.

### Trading in services

The national trade deficit in goods is, of course, partially compensated for by the trade in services. Britain is a leading exporter of knowledge-intensive services, and runs a persistent surplus in the trade, which amounted to £70.19 billion for 2012. But this does not compensate for the £106.34 billion deficit in the goods trade, leaving £36.15 billion to be financed effectively by borrowing.<sup>32</sup> Nonetheless, if (for example) an immense deficit in services trade were to be generated in Wales, and a huge surplus generated in the Greater South-East, this would overcome the imbalance in the export of goods. Unfortunately, we do not yet have complete regional figures for trade in services. Figures for imports by region and nations are entirely absent. But on the basis of the Bank for International Settlements (BIS) reports to the OECD, London has approximately 40 per cent of the export trade in services, with the other regions of the South-East bringing the figure to approximately 70 per cent.<sup>33</sup> This is slightly larger than their contribution to the national GVA, and matches the presence of London as a major hub for international business.

It is possible that services imports from abroad are spread slightly more equally across the regions and nations, since London and the Greater South-East can be expected to import less, and areas lacking major financial and business services hubs could plausibly be expected to import somewhat more as a result – although it is more likely they would simply purchase from the Greater South-East. The difference is likely to be small in practice. Using 2011 figures (the latest for which regional trade is available), we can show that, if the Greater South-East's share of total UK services imports for the year is anything more than 54 per cent, the rest of the country has to run a surplus, given the national totals for trade.<sup>34</sup> This is an implausibly low figure, given the Greater South-East's dominance of the export trade and its substantial contribution to the services sector's national output. We would expect it to be far closer to the 70 per cent figure for exports, with this implying that the current account for the rest of the UK, outside of the Greater South-East, shows a significant total trade surplus of £19.1 billion. This is likely to be an overestimate: if proper allowance could be made for inter-regional trade, it is likely that this figure would be significantly reduced, with the rest of the country consuming goods and services whose initial entry points to the UK are located in the Greater South-East.

### A positive contribution to the UK current account

Welsh service imports are unlikely to be a significant negative impact on that small rest-of-UK current account surplus. Wales does not have a large, internationally traded financial and business services industry: major financial

and business services firms that locate in Wales are more likely to be looking for backroom functions. Most of the services produced in Wales are sold and consumed within Wales, close to where they originate. On a similar basis, however, it is unlikely that Wales produces an enormous demand for services from abroad: lacking a large financial and business services centre, most demand for services will be for those that can be provided locally. Even trade across the border with England, although certainly possible with Bristol and the North-West within easy travelling distance, is likely to be fairly limited. We can be pretty confident in assuming that Wales's comparatively large surplus in goods traded internationally is not overwhelmed by a larger deficit in services.

Wales, therefore, holds a substantial trade surplus in goods, and we can presume that, even if it does hold a deficit in services, this deficit is not enough to overwhelm the surplus in goods. Its contribution to the UK's current account, therefore, is positive, by somewhat reducing the need for the UK to rely on financing from abroad.

### **Export specialisation**

There is a strong relationship between internationalisation and productivity improvements. Exporters, subjected to the pressures of international competition, tend as a result to be the most innovative and most productive firms. Evidence for Wales has tended to confirm this relationship, with research showing a strong, positive correlation between a firm exporting at all, and increased output.<sup>35</sup>

A steady decline in exports amongst relatively light manufactured goods, like recording equipment and clothing, has been compensated for by rising exports of heavy engineering and manufactured products – power-generating equipment and iron and steel particularly. Petroleum exports, as expected, have maintained their value over time.

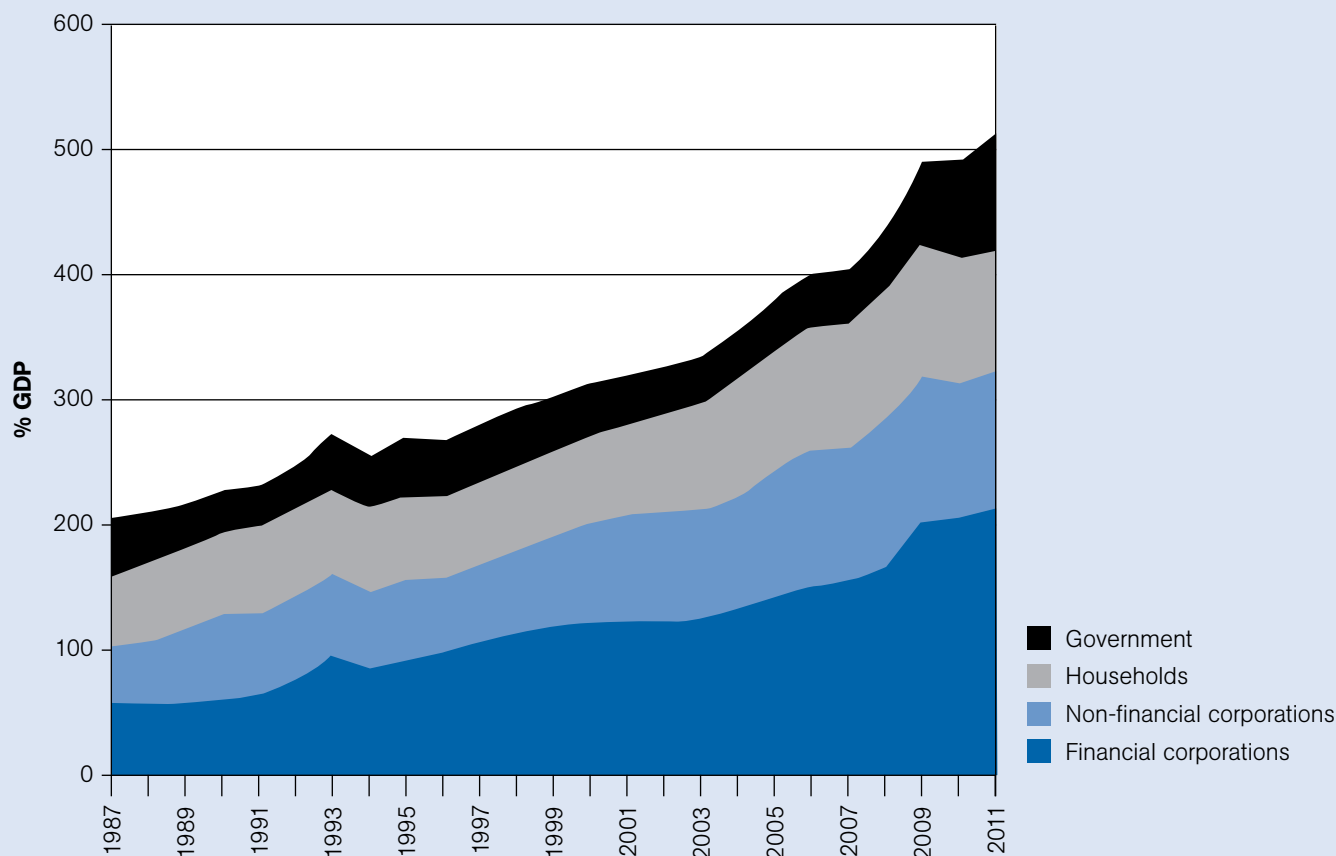
There are clear dangers in this. The implication is that, at least by value of traded exports, the Welsh economy is becoming less, rather than more, diversified over time. A less diversified economy is, all other things being equal, more vulnerable to external shocks. There are well-known virtues in the specialisation of trade; one of the very first formal arguments in economics is precisely the claim that countries when trading should always look to specialise.<sup>36</sup> But for a small economy like Wales, subjected to macroeconomic shocks and deprived of its own tools of macroeconomic management, there is a clear argument for maintaining a well-diversified domestic sector.<sup>37</sup> Wales still suffers from an earlier prior dependence on a limited set of heavy and extractive industries – the 'fatal nexus', in Ross McKibbin's phrase, of coal, steel, and iron.<sup>38</sup> The dependency now is far weaker, but an over-reliance on a few major exporters cannot be recommended as a robust strategy for the future.

Moreover, these exporters are owned elsewhere than Wales. This does have advantages, since foreign-owned multinationals tend to be more productive (and better paid) than British-owned firms.<sup>39</sup> But there are clear risks involved, arising again from the vulnerability of the domestic economy to decisions taken elsewhere and on grounds that need not include the domestic social good. One study by Cardiff Business School that the domestic impact of outsourcing is dramatically worse when the outsourcing company is owned elsewhere. Wales, in this case, would lose out on the potential savings made in offshoring, and receive only the loss in jobs.<sup>40</sup>

### **Flows of capital and wealth**

Wales's slight positive impact on the current account is, in practice, more than compensated for by the flows of transfer payments from the rest of the country. Wales raises, in taxes, some £17.6 billion, but spends some £30.1 billion.<sup>41</sup> The deficit here, in the absence of borrowing powers on the part of Welsh authorities, is made good by transfers from the rest of the UK. It is these transfers that provoke complaints that London and the South-East are subsidising the rest of the UK.

**Figure 5. UK debt liabilities, by sector, 1987–2011**



Source: National Statistics, Blue Book 2012; nef calculations

But as we have attempted to show, the picture is more complicated. The largest current account deficit appears in the Greater South-East, but the whole UK must finance it. Allowing for intra-regional trade, it is at least probable that the rest of the UK earns a small surplus. That need for financing emerges, over time, as the creation of liabilities held against the UK as the debts pile up.

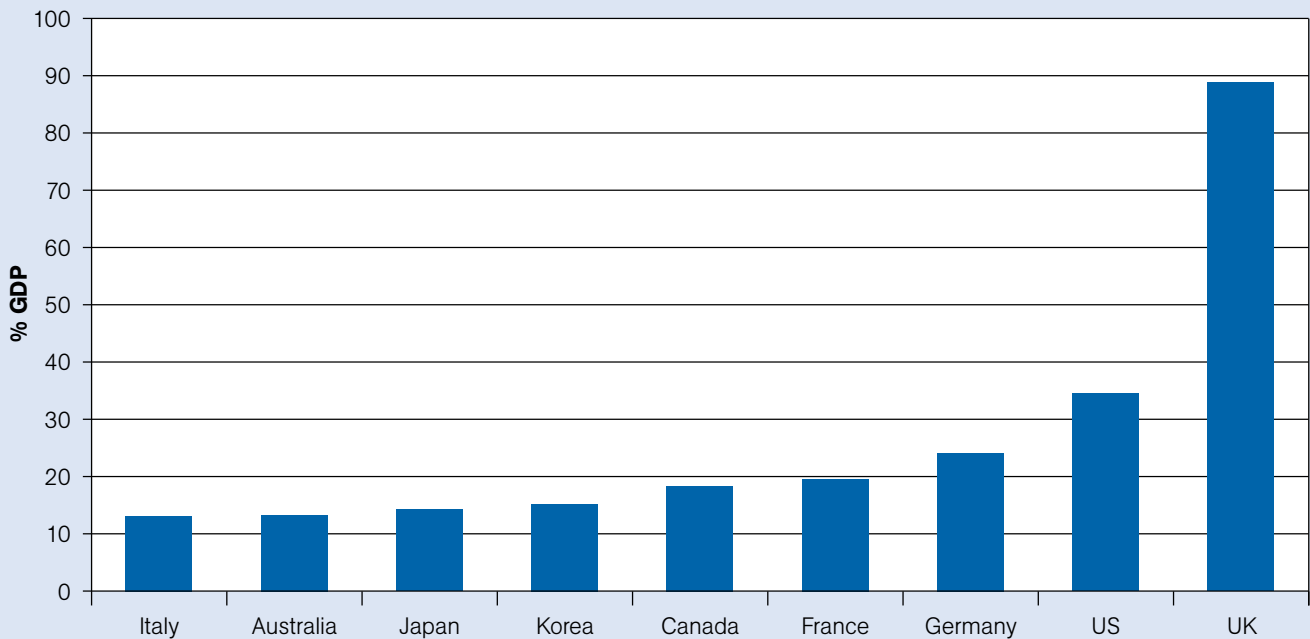
### The finance bubble

Figure 5 shows the enormous expansion of the UK's total financial liabilities, divided between the debts of the four main macroeconomic sectors: government, households, non-financial corporations, and financial corporations – banks and other financial institutions. Although debts of households and non-financial corporations have also risen over time, it is the expansion of financial corporations' liabilities that is really outstanding. This is both a consequence of, and a support for, the expansion of indebtedness elsewhere in the economy. As UK financial institutions grew in size and sophistication, they were able to expand their loans into other sectors, and between each other. Plus, they were able to expand their activities abroad, taking advantage of the immense growth in international financial transactions over the period.

The consequences of this were two-fold. First, the expansion of financial markets had limited impact on the accumulation of real assets, outside of property. Capital investment, persistently low in the UK relative to comparable countries, remained low throughout this period – and, since the crash, has fallen still lower. Returns, during the boom years, from financial assets were consistently higher than elsewhere, and often appeared to be of lower risk. Second, this growth of financial liabilities ran – as we have seen – into the difficulties that any such expansion must face: of stepping beyond the safety zone into more and more risky territory. When those risks became manifest, in 2007/2008, culminating in the crash of September 2008, banks failed and were bailed out.



**Figure 6. Support pledged to banking sector, 2009**



The sheer size of the UK's financial system, relative to the rest of the economy meant that the costs of this operation were enormous. Total support offered by the UK, in 2009, to its financial system, was larger than any other comparable developed economy, as the International Monetary Fund (IMF) figures show (Figure 6). The recession it precipitated immediately forced up the government's own deficit, contributing to the rapid growth of the public debt, from about 40 per cent on average during the 2000's boom to just over 80 per cent today.

#### **Regional economies: picking up the tab**

This had particular regional consequences. With capital flows into investment across the country remaining low – outside of property, of course – regional economies had come to lean heavily, and to an unprecedented extent, on what were in effect transfer payments from the seemingly more prosperous regions. Instead of receiving *investment* from the bubble economy, they received *payments*. Jobs were created, and the unemployed supported, through the provision of public funding. But as that public funding has been clawed back as a consequence of the bubble bursting, these regions have suffered the most.

The immense financial system, in other words, was a huge burden on the rest of the country. Researchers at the Centre for Research on Socio-cultural Change (CRESC) in the University of Manchester have calculated that the UK financial system, during the boom years of 2002–2007, paid out just over £200 billion in taxes. This is substantial, although nowhere near as large as the scale of its operations might suggest. But the sum is in any case then dwarfed by the scale of the bailout demanded after the bubble burst. The immediate costs of the clean-up for the UK were £289 billion; the country's total liability, from IMF figures, is an astonishing £1.19 trillion, all of which is a potential cost for the future.<sup>42</sup> As an extra twist, the spread of financialisation – the techniques and practices of financial management developed in and around the City – can further deprive regions and nations of resources. Large accountancy firms and specialist project managers, ubiquitous on major Public Private Partnerships and Private Finance Initiative (PPP/PFI) projects, can extract a substantial amount of value from even relatively small, local projects and remove it from a locality.

That burden of finance is now being felt most severely in the peripheral regions or nations, and arguably most heavily in Wales. Wales's post-war success in attracting capital investment, first from national, and then from international sources

through FDI, appeared to break down at the start of the 2000s. It was not able to effectively replace this with investment sourced from the expansion of finance in the Greater South-East. Consistent figures for capital investment are not available, but the experimental series produced by the Office for National Statistics found a clear decline in private sector capital investment from £6.71 billion in 1998, to £5.73 billion in 2000 – a real-term fall of 29 per cent.<sup>43</sup> It is, of course, difficult to extrapolate from such few data points. But the aggregate figure here would tie in with the more qualitative and discrete evidence from elsewhere.<sup>44</sup> Wales's continuing relative success in exporting did not translate directly into increased domestic capacity to invest; and with non-domestic firms amongst the biggest exporters, much of the surplus generated would flow to non-domestic sources. When the crash came, Wales was left with a lose-lose situation: it had not benefited fully from the prosperity of the boom years, but it was now, like the rest of the UK, expected to pay for the consequences of the collapse.

### **Where are we now?**

The message should be clear. Wales finds itself a difficult, and probably worsening, economic situation largely as a result of factors beyond its control. Domestically, it suffers from many of the features common to deindustrialised regions and nations across Europe: weak skills, low activity rates, lack of opportunity. It is also trapped on the wrong side of a national settlement that both deprives it of access to macroeconomic tools and forces it to accept a finance-led economy that has never truly worked to its benefit.

This forces a different kind of strategy on any Welsh government looking to promote sustainable, decent work. Wales can no longer rely so heavily on a strategy to attract investment, and so create jobs, from sources outside of its own borders. It must instead look to its own resources. It must think more creatively about how to mobilise them.

# Elements of a plan

Wales has key manufacturing centres in two of the UK's strongest export sectors – automotive and aerospace.<sup>45</sup> These, plus other substantial manufacturing concerns, have helped sustain Welsh goods exports throughout the last decade. In addition, however, major multinationals like Tata Steel have enormous local and regional impacts on the country. Tata directly employs around 8,000 people in Wales, with a further 10,000 indirectly employed in its supply chains. Its estimated total impact on Welsh GVA is £3.6 billion.<sup>46</sup>

## Supporting existing employment and domestic value-chains

Welsh employers tend, in general, to be somewhat larger than the UK average. Partly in response to this, the Welsh government has identified a number of 'anchor companies', highly influential in the regions of Wales and across the whole country, with whom it seeks to develop strategic relationships. Given the huge impact such firms can have on a relatively small economy, these relationships can be vital in supporting employment and preventing supply chains from fragmenting. At Ford for instance, unions, management and government have developed a strong working relationship over the last decade. This has helped win continued investment from the US parent company to Ford's plants in Wales.<sup>47</sup> By supporting the employment of skilled, comparatively well-paid work at large anchor companies like this, many thousands more jobs can be sustained.

More direct employment support has been available through a number of schemes. The Welsh government's ReAct II initiative was launched in the immediate aftermath of the crash and recession. Before this, the original ReAct scheme had used part-funding from the European Union to assist newly unemployed individuals looking to retrain. However, in 2008, the emergency Economic Summits chaired by the First Minister and actively contributed to by unions and business led to the creation of ReAct II. The enhanced scheme provides grant support to employers taking on the recently unemployed, with funding provided to support the new employees' wages for four months (up to £2,080), and pay for training over a six-month period. Nearly 16,000 people have entered the scheme since it began, with 11,000 subsequently leaving, at a cost of £24 million.

More innovative was the ProAct initiative, also launched in October 2008. ProAct provided funding for businesses that had imposed short-term working, in the expectation that, once economic conditions improved, they would benefit from the retention of skilled workers and their on-the-job knowledge.<sup>48</sup> It offered support for training along with a wage subsidy for up to 12 months while training was in progress. The aim was to both to support employment, and retain and improve human capital within firms. Critically, this focus on training meant that workers remained engaged with the workplace rather than simply waiting without opportunities for development: 10,675 employees were supported under the programme, at a cost of £27 million.

Because of the programme's tight focus, ProAct was reckoned (by our interviewees) to have worked well. A replacement programme, ProAct Skills Growth Wales, moves away from that clear aim, and is more of a general fund for

the provision of training, dependent on applicant firms being assessed as liable to grow. Whilst being welcome, there is a concern that external pressure to expand the programme will once again lead to diminished outcomes on jobs and growth.

The critical point here is that by supporting work in key industries and locations, it is possible to not just sustain jobs throughout the country, but to prevent (perhaps irreparable) damage being done to supply chains across Wales. The whittling away of industry, over what is now several decades, has eaten away at the ecology of suppliers that large industrial employers previously sustained. Further plant closures, job losses, and redundancies could push that ecology beyond the point of no return. The anchor company strategy has helped identify the importance of key employers, while any new infrastructure projects should, as part of their procurement, seek to identify and support local supply chains where possible.

### **Upgrading infrastructure**

As we have seen, capital expenditure including infrastructure spending, was subjected to sharp cuts in the UK Coalition government's first, 'emergency', Budget of June 2010. Since then, the cuts have eased off slightly. But projected infrastructure spending is still subject to enormous pressures, and a growing proportion of it is now expected to come from uncertain private sources – private financing rising from two-thirds of funding in 2010 to three-quarters by 2015. Only 1 billion of the 21 billion private funding announced in the 2011 National Infrastructure Plan has been raised so far, however.<sup>49</sup> Moreover, the balance of funding in the Plan favoured projects in the south-east of England ahead of the rest of the UK.

But as the City Regions commission and others have recognised, Wales is in particular need of infrastructure improvements, as part of a drive to improve connectivity and widen labour markets. Given constraints on financing, alternative sources of funding will need to be found even to ensure existing schemes are introduced. The UK government has said that it will look to support an M4 relief road, and the electrification of the Swansea–London line is due for completion in 2018. However, electrification of the Valleys lines has been delayed, and may not be finished before 2024. Given the pressing need to improve labour market access for these areas, this delay will materially impact job prospects and hopes for a recovery. A Welsh government with more effective powers to mobilise capital spending, whether directly through its own borrowing or indirectly through leveraging alternative sources, could act to expedite completion of the project. Although Wales is likely, given its geography, to retain its slightly higher rates of private car use,<sup>50</sup> it is advisable where possible to implement public transport and low-carbon schemes – not just because of the pressing environmental need, but also to build in to new projects a security against future, higher, non-renewable fuel costs.

### **Diversification of output and ownership**

Wales, as we have seen, has a number of large companies that sustain a significant amount of employment (directly and indirectly) and contribute substantially to its total output. Nurturing strong relationships with these anchor employers is a good move for the Welsh government. Nonetheless, an excessive reliance on these few highly influential employers exposes much the economy to shocks that can emerge elsewhere in the world and about which the devolved government can do little. If a robust economy is to be developed, it is sensible to diversify the range of economic activities undertaken across Wales. This requires, however, a realistic sense of where the future opportunities for Wales will lie.

Karel Williams has usefully spoken of a 'foundational economy' – the 10 per cent or more of a local economy that is directly dependent on local spending, and provides the services necessary to enable any locality to function.<sup>51</sup> This includes activities in both the public and private sector, such as food retail and cleaning services. Williams estimates that around 125,000 people are employed in these 'mundane' but vital activities across Wales, with a further 35 per cent employed in medical and educational sectors.

The decline of industry, with now only a bare 10 per cent of Welsh workers employed in production activity, has left behind major parts of the economy that are comparatively small-scale, localised, and often service-led. This need not be

treated simply as a problem, however, and the potential in these sectors to provide for improvements in skills has already been identified by policymakers. But an even more imaginative approach could also look to broaden the range of activities currently being performed within the foundational economy.

Of these, food and energy offer perhaps the most immediate prospects for success. Both have become steadily internationalised over the last few decades; supply chains now stretch great distances in food production while ownership of power generation and utility ownership has been steadily dispersing across the globe. The global economic effects of this have been ambiguous at best. What is unarguable, however, is the environmental costs of internationalisation in these sectors, and – in the Welsh context – the detrimental effect it has on the balance of trade.

### **A renewable power push**

Consider the case of power generation. At present, Wales is a net exporter of electricity into the rest of the UK. The fraction of Welsh-generated electricity consumed elsewhere has been volatile over the last few years, largely in response to fluctuating demand from England, but has been as high as 24.5 per cent in 2010 with a record low of 13.4 per cent in 2011.<sup>52</sup> Despite this recent dip, demand for electricity will undoubtedly remain substantial from England for the foreseeable future, and is in fact likely to increase as its current generation of power stations reaches the end of their useful life.

With its ready access to water and rural areas with substantial wind resources, Wales is very well placed to act as a provider of renewable electricity for the rest of the UK. However, it currently lags behind Scotland – where the government has been a consistent supporter of renewable power – and England. While Scottish renewable generation capacity increased 69 per cent in the period 2008–2011, and English 66 per cent over the same time period, Welsh capacity grew only 40 per cent.<sup>53</sup> There is a potential opportunity here both to create secure employment (particularly in rural areas with weak labour markets), to tackle environmental concerns, and to, as we shall see, start channelling flows of revenue back to local communities.

There are at present over 60 small-scale hydroelectric schemes planned for operation in Wales, making use of local water resources. The Green Valleys Community Interest Company has over 60 micro-hydroelectric schemes planned for the Brecon Beacons, with ambitious plans to supply 20 per cent of the area's electricity by 2013, and to be entirely carbon-neutral by 2020.<sup>54</sup> Meanwhile, the costs of installing and operating windfarms has fallen some 38 per cent in the last four years, making them easier and cheaper to install on a relatively small scale.<sup>55</sup> There is a clear economic opportunity for Wales in renewables.

### **Relocalising food production**

Food is a more complex case. Currently, 1.5 per cent of the Welsh workforce is employed in basic food production – somewhat above the UK average.<sup>56</sup> Food production, if expanded, offers substantial employment opportunities with some potential for the upskilling of work. Better support for local supply chains within the industry could help meet both a need to reduce the carbon miles embedded in the Welsh food supply, and address concerns relating to the quality of remotely sourced produce – such as the recent outcry around unlabelled horsemeat. (There is, moreover, a wider issue surrounding the skewed balance of trade resulting from the rising volume of food imports. As previously stressed, the existence of a chronic trade deficit creates, in turn, a chronic dependence on debt financing, as mobilised through the UK's exceptionally large financial system.)

Relocalising food supply chains and creating closer employment opportunities would depend not so much on shifting the purchasing habits of consumers, as shifting the purchasing habits of major food retailers. A move away from a business model focused on cost-minimisation across the supply chain could involve government support for the creation of new suppliers and business support, or the encouragement of mergers and greater horizontal integration amongst suppliers in the industry.<sup>57</sup>

## Rethinking ownership structures

For these and other interventions to be effective on a local level, it may well be necessary to think more creatively about the forms of ownership and business models being promoted. A conventional, profit-led private firm may be the most suitable form of business in many cases, but where wider social goals are expected to be met, changing ownership structures and broadening enterprises' aims may be more appropriate.

Community and co-operative ownership can be highly effective, particularly in promoting the rapid diffusion of renewable energy production. Co-operatively owned windfarms already operate in the UK, with Baywind in Cumbria the first to be established in 1997. The farm has 1,350 shareholders, each of whom receives a dividend based on revenues generated by six, Danish-built turbines. Because the scheme was co-operatively owned in the locality, the benefits of its operation flowed immediately back to local residents in the form of dividend payments. This helped overcome objections to the scheme in what could otherwise be a fraught planning process.<sup>58</sup> Baywind has now taken a lead in assisting other co-operative generation schemes across the UK.

Denmark has been operating co-operatively owned renewable generators since the late 1970s. Its 'wind guilds' operate on a co-operative basis, where in return for an initial – usually small – equity investment, shareholders receive a portion of profits generated by the scheme. There are now over 100,000 households who are members of guilds, and around 20 per cent of all Denmark's electricity is generated through wind power. Again, the presence of tangible local benefits has been critical in overcoming opposition to the creation of new renewable energy schemes.

Wales has a long co-operative tradition, and new legal forms have helped reduce the barriers to establishing local co-operatives.<sup>59</sup> Community interest companies, where clear social goals need to be set, are one option, although they have suffered somewhat from high set-up costs.<sup>60</sup> Baywind established itself as an Industrial and Provident Society, allowing profits to be shared amongst its members. On a bigger scale, Welsh Water supplies most of Wales and parts of the west of England with fresh- and waste-water services. After falling into financial difficulties in the early 2000s, it was taken into co-operative ownership through Glas Cymru, a company limited by guarantee. Glas has no shareholders, instead distributing all financial surpluses made from Welsh Water's operations either back to customers or reinvesting into the company. As a successful example of co-operative utility ownership, there are no reasons in principle why the good experience of Welsh Water could not transfer into other public utilities, including renewable power generation.

Co-operative models of ownership can, of course, be used more generally. Community land trusts have elsewhere become an increasingly popular means of reducing the land cost for house building, by taking plots of land into community ownership and allowing those seeking to build housing to pay smaller rents. An example of particular interest is the experience of Emilia-Romagna, a region in northern Italy. Facing sharp deindustrialisation and a tight fiscal squeeze in the early 1980s, its administration looked to novel ways to fund both business growth and maintain public services. Building on a solid base of small and artisanal manufacturing, the regional administration encouraged the establishment of co-operatives amongst small manufacturers, enabling them to access economies of scale and cheaper financing. It also encouraged the creation of support networks of secondary services, again aiming to reduce the cost to businesses. Six in ten residents of Bologna, Emilia-Romagna's principal city, are now members of a co-operative, while one in ten residents work in one. Imola, a town of 100,000, has 115 co-operatives that account for 60 per cent of economic output. Just over half of its residents actively invest capital into these firms.<sup>61</sup> The regional government was central in establishing a dialogue between businesses, residents, and trade unions in developing a co-operative vision for Emilia-Romagna.

## Developing regional and local sources of finance

At the heart of Wales's economic problem is its inability to effectively mobilise external sources of finance for investment, as it has in the past. This has, we



argue, helped drive a probable decline in internal investment and left Wales on the wrong side of the UK's finance-led economy: receiving transfer payments from tax revenues generated from the south-east of England, trapped inside a heavy UK current account deficit, but also expected help pay for the costs of the collapse of the bubble. FDI flows, meanwhile, are highly unlikely to recover to the levels seen in the 1980s. Furthermore, with credit markets remaining tight for the foreseeable future, conventional sources of finance for businesses are liable to remain both hard to come by and unreasonably expensive, particularly for smaller enterprises.

Breaking out of the external financing trap requires that the investment needed for jobs and economic renewal is generated from sources not plugged into the financial bubble economy. This means that local and regional sources of finance need to be established. The most obvious single source for this ought to be the Welsh government, which (in theory) possesses its own powers to borrow. In practice, however, these powers have been annulled by a prior decision of HM Treasury that funding for the Welsh government from Westminster will be reduced by whatever amount it chooses to borrow – effectively the borrowing powers useless.<sup>62</sup>

### **Effecting borrowing power**

Wales is the only nation in the UK without the real powers to borrow: the Scottish government can borrow, as can the Northern Ireland Assembly and local authorities. We therefore support calls, raised in the Holtham Commission and elsewhere, to allow effective borrowing powers for the Welsh government. Similarly, allowing some tax-varying powers, within the devolved settlement, would allow the Welsh government access to new revenue streams, and create greater flexibility in setting its own priorities for spending.

Alongside public finance, however, is the greater need to find new sources of private financing from outside the centralised bubble of finance. The UK economy is weak in this regard, relative to other European countries, having a highly centralised banking system dominated by a few major banks, and a London Stock Exchange that is distant from the localities and in any case only suitable for very major investments. Eighty-two per cent of UK bank deposits are held in commercial banks, compared to just 36 per cent in Germany and 45 per cent in France.<sup>63</sup>

### **Mobilising credit**

However, the Welsh government does have the capacity to shift this. There are a number of different institutions that, if established and supported within Wales, could help mobilise credit for investment in socially useful projects. Finance Wales already acts as a venture capital fund for Wales, providing development capital for high-potential small and medium enterprises (SMEs), and with smaller amounts available as microloans. Its £150 million JEREMIE Fund, part-funded with £75 million of European money, has invested £80 million in 390 companies, while the new £40 million Wales SME Fund aims to provide investment to those SMEs not meeting the European Union's strict funding criteria.<sup>64</sup>

However, venture capital funding suitable for some forms of business, but not all. A realistic industrial strategy for Wales would, as we have suggested, learn to accommodate different structures for organising economic activity. The need to generate financing for businesses with a wider social focus is also pressing. Banking co-operatives, credit unions, public savings banks, and various forms of mutual ownership all offer diverse ways to both mobilise local savings and provide credit on terms that can be better tailored to the needs of social enterprises and co-operatives. Instead of only maximising returns to shareholders, as with commercial lending banks, all four of these types of 'stakeholder bank' seek to 'deliver a range of broader benefits to stakeholders' while maintaining financial sustainability and security.<sup>65</sup>

### **New forms of banking**

As well as gaining initial seed funding from public sources, deposits could be found by mobilising the savings of older people, or perhaps from amongst the substantial number of older, often better-off workers now moving into Wales.<sup>66</sup> Government guarantees would help provide assurances to savers, while the security of return

and social benefits would act as an incentive to save. Stakeholder banks typically offer better returns over the longer-term to their stakeholders,<sup>67</sup> and the need to meet broad social goals, combined with the absence of profit-maximisation, helps make them generally better at making longer-term loans. German Sparkassen, for example, a type of state-owned public lending bank, make 45 per cent of long-term loans to domestic enterprises, compared to only 20 per cent from commercial banks.<sup>68</sup> By sitting closer to local and regional businesses, smaller, local banks can maintain the in-depth knowledge of local conditions and strong working relationships that the larger, commercial banks have often lost access to.<sup>69</sup>

Legal structures potentially already exist to enable local co-operatives, credit unions, and other stakeholder banks to be established, depending on need. A number of building societies have survived demutualisation in the 1980s, while credit unions are growing in number. Government support for establishing new forms of local and regional stakeholder banks in Wales could provide a relatively cheap and effective means of mobilising local sources of capital for investment. This could sit alongside a Welsh Investment Bank for bigger projects requiring longer-term loans, perhaps created as a Self-Financing Public Corporation, allowing it to raise funds independently of the main government balance sheet.<sup>70</sup>

### **Strategic support from the government with broader strategic aims**

Like other UK regions outside of London's immediate orbit, Wales faces the challenges of deindustrialisation, low rates of economic activity, and persistently low growth. The pattern of development actively promoted over the last decade by national and often local governments, in which the backwash from a London-centred financial bubble would create jobs and growth, was problematic all along. It is now almost certainly unsustainable. The prospects of winning fresh FDI funding, at least at significant scale, are low. Wales has little choice but to look to its own resources.

It is more fortunate than other peripheral regions and nations in having its own administration with both sufficient powers and a clear role in wider civil society. The response of the Welsh government to the recession after 2008, in creating schemes like ProAct, was to use its powers and role creatively, in response to an emergency. However, recovery has not been forthcoming and the economic picture remains bleak. It will be necessary for the government to continue to play a similar function, building on the existing strengths of partnership working Wales, in developing an effective strategy for the Welsh economy.

This is a bigger challenge than can be addressed by piecemeal or ad hoc interventions – however successful they may be in isolation. Because the crisis is systemic, we cannot treat the current economic malaise as if it were a 'normal' recession, with business as usual returning shortly. Business as usual is no longer an option. Instead, a clear sense of economic direction, with a view to changing the Welsh economy over the longer-term, will now be needed. This means developing an industrial strategy.

Doing so will require a clear understanding of the sharp challenges Wales now faces. Some of these are historic – most obviously, the continuing legacy of deindustrialisation. Others are new – the collapse of the financial bubble and the end of finance-led, London-centred growth. Navigating between them will require a clear sense of strategic direction. This is precisely why an industrial strategy rooted in the particular experience and setting of Wales is so necessary.

# Endnotes

- 1 This is not the same as saying everyone in London is rich; the proceeds of its reported output are not distributed evenly, and London is now the most unequal city in the OECD group of developed countries.
- 2 Glaeser, E. (2002). 'The new economics of urban and regional growth', in Clark, G.L., Feldman, M.P., and Gertler, M.S. (eds.), *The Oxford Handbook of Economic Geography*. Oxford: Oxford University, p. 92.
- 3 Brown, W.M., Rigby, D.L. (2011). *Urban productivity: who benefits from agglomeration economies?* Economic Analysis Research Paper, Statistics Canada. Retrieved from <http://www.statcan.gc.ca/pub/11f0027m/11f0027m2013084-eng.htm>
- 4 Welsh Assembly Government Economic Research Advisory Panel. (2006). *Economic Futures for Wales.*, p.36. Retrieved from <http://wales.gov.uk/about/aboutresearch/econoresearch/completed/futures/?lang=en>
- 5 Hudson, J. (2008). *Extending the research on productivity variations between Wales and the UK*. Report to the Welsh Assembly Government. Retrieved from <http://wales.gov.uk/docs/dfm/research/090914productivityvariationsen.pdf>
- 6 Organisation for Economic Co-operation and Development. (2009). *Programme for International Student Assessment*. Geneva:OECD.
- 7 Welsh Government. (2012). *City Regions final report*, p.40. Retrieved from <http://wales.gov.uk/docs/det/publications/12076cityregionsrpten.pdf>
- 8 Adzuna. (2013). *UK Market Employment Report*. March 2013. Retrieved from <http://www.adzuna.co.uk/blog/2013/03/11/adzunas-employment-market-report-february-2013/>
- 9 BBC News. (2013). 'Unemployment in Wales rises by 6,000 to 127,000 – ONS'. 20 February. Retrieved from <http://www.bbc.co.uk/news/uk-wales-politics-21518010>
- 10 HM Treasury. (2010). Budget June 2010. London: HMSO.
- 11 National Statistics. (2013). Foreign Direct Investment (MA4), 2011. 7 February 2013.
- 12 Matthias, P. (1969). *The First Industrial Nation*, London: Methuen, p.122
- 13 Welsh Affairs Select Committee, *Eighth Report – Inward Investment in Wales*, (2013). Retrieved from <http://www.publications.parliament.uk/pa/cm201012/cmselect/cmwelaf/854/85405.html>
- 14 Interview with Kevin Morgan, April 2013
- 15 Welsh Affairs Select Committee, *Eighth Report – Inward Investment in Wales*, (2013). Retrieved from <http://www.publications.parliament.uk/pa/cm201012/cmselect/cmwelaf/854/85405.html>
- 16 Welsh Affairs Select Committee, *Eighth Report – Inward Investment in Wales*, (2013). Retrieved from <http://www.publications.parliament.uk/pa/cm201012/cmselect/cmwelaf/854/85405.html>
- 17 UN Conference on Trade and Development. (2013). *Global Investment Trends Monitor 11*, 23 January 2013. Retrieved from [http://unctad.org/en/PublicationsLibrary/webdiaeia2013d1\\_en.pdf](http://unctad.org/en/PublicationsLibrary/webdiaeia2013d1_en.pdf)
- 18 Tomlinson, J. (1996). Inventing 'decline': the falling behind of the British economy in the post-war years. *Economic History Review* 49:4.
- 19 Barnes, M. and Haskell, J. (2000). Productivity, competition and downsizing. Paper prepared following HM Treasury Growth Seminar, London. Retrieved from <https://financialsanctions.hm-treasury.gov.uk/d/254.pdf>
- 20 Froud, J., Johal, S., Law, J., Leaver, A., Williams, K. (January 2011). Rebalancing the economy (or the buyer's remorse). CRESC Working Paper Series nNo. 87, Manchester: Centre for Research on Socio-Cultural Change.
- 21 *Ibid.*, p.15.
- 22 Broadberry, S.N. (1997). *The productivity race: British manufacturing in international perspective, 1850–1990*, Cambridge: Cambridge University Press.
- 23 Corry, D., Valero, A., and Van Reenan, J. (2011). *UK economic performance since 1997: growth, productivity, and jobs*. London: Centre for Economic Performance.
- 24 Measured on an output per hour basis. The most recent data points to an absolute decline in productivity over the third quarter of 2012 of 0.2 per cent, with productivity down 2.4 per cent compared to the third quarter of 2011. Office for National Statistics. (2012). Labour productivity Q3 2012. *Statistical Bulletin*
- 25 Over 1997–2007, services productivity rose by 2.3% per year. Since 2008, it has risen by only 0.8%. Hughes, A. and Saleheen, J. (2012). UK labour productivity since the onset of the crisis – an international and historical perspective. *Bank of England Quarterly Bulletin* Q2:2012. The last set of ONS data suggests that the disparity between manufacturing and services productivity may be closing, with sharp declines in manufacturing output per hour over the second and third quarters of last year.
- 26 StatsWales website, Gross Value Added by component, 1997-2011
- 27 Simpson, S. (2012). Underemployment on the rise. *BBC News* 16 May 2012. Retrieved from <http://www.bbc.co.uk/news/business-18091667>
- 28 This is the explanation the economist Hyman Minsky gave for the inherent riskiness for bubbles in his Financial Instability Hypothesis. Minsky, H.P. (1992). *The financial instability hypothesis*. Jerome Levy Economics Institute of Bard College working paper 74. Retrieved from <http://www.levyinstitute.org/pubs/wp74.pdf>
- 29 The figures here exclude the net payments made to the EU and its predecessors over this time, which drag the overall balance of trade (the red line) into deficit for every single year since 1983. The inverse relationship between the trade in goods and services, and net financial flows into and out of the economy, should be clearer as a result.
- 30 We have defined the Greater South-East, as is typical, as the NUTS2 regions of London, the South-East and East of England: the large area, in other words, in the south-east of England encompassing London and surrounding counties.
- 31 HM Customs and Excise. (2000). *United Kingdom Regional Trade in Goods Statistics*. London: HMSO, p.53

- 32 Office of National Statistics ((2012) Balance of payments – fourth quarter and annual, 2012. London: ONS.
- 33 Department of Business, Innovation and Skills. (2009). *Regional service exports and business registers (UK)*. Presentation to OECD Working Party on Trade in Goods and Services. London: DBIS.
- 34 This follows from the accounting necessity that all imports bought inside the UK must be bought inside a UK region, and all exports sold from the UK must be sold from a UK region. Given that we know the totals for imports and exports on both goods and services, we can work backwards from these totals to see how the shift in the balance of services imports affects the distribution of regional trade surpluses.
- 35 Robinson, C., Carey, J., Blackaby, D. (2012). *Firm performance in Wales: an analysis of productivity using company accounts*. Wales Institute of Social and Economic Research, Data and Methods, working paper WISERD/WPS/007. Retrieved from <http://www.wiserd.ac.uk/research/publications/wiserd-publication-series/wiserd-working-paper-series/>
- 36 David Ricardo's theory of comparative advantage. This only holds, in practice, under very tight conditions – particularly including the absence of free movement of capital.
- 37 Jansen, M., Lennon, C., Piermartini, R. (2009). *Exposure to country-specific income shocks and income volatility*. World Trade Organisation Economics Research and Statistics Division, Staff working paper ERSD-2009-04. Geneva:WTO.
- 38 McKibbin, R. (2000). *Classes and Cultures: England, 1918-1951*, Oxford: Oxford University Press, p.112.
- 39 See evidence in Hudson, J. (2008). *Extending the research on productivity variations between Wales and the UK*. Report to the Welsh Assembly Government. Retrieved from <http://wales.gov.uk/docs/dfm/research/090914productivityvariationsen.pdf>
- 40 Bussell, S. (2006). Offshoring processes: understanding the impacts of the global trade in services for Wales and the UK. *Welsh Economic Review* 18:2.
- 41 2010-11 figures cited in Commission on Devolution in Wales. (2012). *Empowerment and Responsibility: financial powers to strengthen Wales*. Cardiff: HMSO, p.27.
- 42 Centre for Research on Socio-cultural Change. (2009). *An Alternative Report on Banking Reform*, CRESC: Manchester p.6.
- 43 Office for National Statistics. (2003). *Regional and sub-regional gross fixed capital formation*, Table 1.
- 44 Interview with Martin Mansfield, April 2013.
- 45 PriceWaterhouseCoopers (2009), *UK Manufacturing: reports of its death are greatly exaggerated*, April 2009. London: PriceWaterhouseCoopers, p.24.
- 46 Pinto, V. and Jones, C. (2012). The economic impact of Tata Steel in Wales. *Welsh Economic Review* 23.
- 47 Interview with Martin Mansfield, April 2013
- 48 The classic reference for the effects of learning-by-doing on growth is Romer, P.M. (1986). Increasing returns and long-run growth. *Journal of Political Economy* 94(5): 1002-1037.
- 49 Jowitt, J. (2013). Many infrastructure projects unlikely to be completed during this Parliament. *The Guardian*. 18 March 2013. Retrieved from <http://www.guardian.co.uk/uk/2013/mar/18/infrastructure-projects-completed-parliament-budget>
- 50 Interview with Kevin Morgan, April 2013
- 51 Williams, K. (2012). How Wales can win: a new political imaginary. Speech to Cardiff School of Planning and Geography, February 2013.
- 52 DECC. (2012). Energy Trends, December 2012. London: Department for Energy and Climate Change, p.50.
- 53 DECC. (2012). Energy Trends, December 2012. London: Department for Energy and Climate Change, Table A2.
- 54 Miles, P. (2010). Communities use hydro power to fund green renewal. *The Ecologist*. 8 April 2010. Retrieved from [http://www.theecologist.org/how\\_to\\_make\\_a\\_difference/climate\\_change\\_and\\_energy/457312/communities\\_using\\_hydro\\_power\\_to\\_fund\\_green\\_renewal.html](http://www.theecologist.org/how_to_make_a_difference/climate_change_and_energy/457312/communities_using_hydro_power_to_fund_green_renewal.html)
- 55 Downing, L. (2012). Wind farm operating costs fall 38% in four years, BNEF says. *Bloomberg*. 1 November 2012. Retrieved from <http://www.bloomberg.com/news/2012-11-01/wind-farm-operating-costs-fall-38-in-four-years-bnef-says-1-.html>
- 56 Williams, K. (2012). How Wales can win: a new political imaginary. Speech to Cardiff School of Planning and Geography, February 2013.
- 57 See, for example, the recommendations in Bowman, A., et al. (2012). *Bringing Home the Bacon: from trader mentalities to industrial strategy*, CRESC Public Interest Report, Manchester: Centre for Research in Socio-cultural Change.
- 58 NESTA. (2007). *The Disrupters: lessons for low-carbon innovation from the new wave of environmental pioneers*. London: NESTA
- 59 As the Welsh TUC's own experience with the Welsh Co-operative Centre, established in 1982, demonstrates.
- 60 Lewis, M, and Conaty, P. (2012). *The Resilience Imperative: co-operative transitions to a steady-state economy*, Gabriola Island: New Society Publishers, p.199.
- 61 *Ibid.*, pp.251-252
- 62 Interview with Jeff Andrews, April 2013
- 63 Prieg, L. and Greenham, T. (2012). *Stakeholder Banks: benefits of banking diversity*, London: **nef**.
- 64 Finance Wales. (2012). £40m Welsh SME investment fund open for business. Press release, 27 March 2012. Retrieved from [http://www.financewales.com/news\\_and\\_media/press\\_releases/%C2%A340million\\_wales\\_sme\\_fund.aspx](http://www.financewales.com/news_and_media/press_releases/%C2%A340million_wales_sme_fund.aspx)
- 65 Prieg, L. and Greenham, T. (2012), *Stakeholder Banks: benefits of banking diversity*, London: **nef**, p.8.
- 66 Detailed in interview with Jonathan Price, April 2013
- 67 *Ibid.*, p.8
- 68 *Ibid.*, p.8
- 69 *Ibid.*, p.9
- 70 The Tote and the BBC have this legal status. Suggestion originally made in interview with Gerry Holtham, April 2013



**Author:** James Meadway

**Special thanks to:** Martin Mansfield (Wales TUC), Jeff Andrews, Prof. Kevin Morgan, Owen Evans (Education and Skills Directorate), Hugh Owen (Enterprise, Science & Transport Directorate), Jonathan Price (Chief Economist, Welsh Government) and Gerald Holtham, for their time and help giving interviews during the writing of this report.

**Edited by:** Mary Murphy – [www.irjjol.com](http://www.irjjol.com)

**Design by:** the Argument by Design – [www.tabd.co.uk](http://www.tabd.co.uk)

**Cover image:** geezaweezer via Flickr

**new economics foundation**

3 Jonathan Street  
London SE11 5NH  
United Kingdom

Telephone: +44 (0)20 7820 6300

Facsimile: +44 (0)20 7820 6301

E-mail: [info@neweconomics.org](mailto:info@neweconomics.org)

Website: [www.neweconomics.org](http://www.neweconomics.org)

Registered charity number 1055254

© May 2013 **nef** (the new economics foundation)

ISBN: 978 1 908506 37 5



This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Unported License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/3.0/> and [www.neweconomics.org/publications](http://www.neweconomics.org/publications)