

# Welsh Economic Review

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The *Welsh Economic Review* is normally produced twice yearly, by the Welsh Economy Research Unit (WERU) at Cardiff Business School. The aim of the *Review* is to provide an authoritative and objective analysis of the Welsh economy in a manner that promotes understanding and informs decision-making. The core section of the *Review* is written by members of WERU, with feature articles contributed by academics or practitioners within or outside Wales. The *Review* is circulated widely within Wales, to both private and public sector organisations, including the education sector and the Welsh Assembly Government.

#### **Notes for Contributors**

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This year, the *Welsh Economic Review* celebrates its 20<sup>th</sup> anniversary. For this edition, the *Review* follows a different format to those which have gone previously. As well as containing the usual diary section, which notes recent events, publications and company activities, this *Review* features a series of short articles relating to various aspects of the Welsh economy. The foreword is written by Stephen Hill, Head of staff development and research at the University of Glamorgan, and Editor of the *Review* from 1988-2000.

The first article, by Patrick Minford, examines the current financial crisis, the government's response, possible future actions and implications for the Welsh economy. Jane Bryan then compares key features of the Welsh economy in 1988 and in 2008, and reflects on the issues facing the economy during the past two decades. As part of the historical perspective, this *Review* contains a reprint of a paper from 1991, written by Brian Morgan, when he was Principal Economist at the Welsh Development Agency. This article examined the features of the recession at that time, and looked forward to the likely recovery noting possible effects on Wales.

The next article, by Max Munday and Annette Roberts, provides a data overview of foreign direct investment (FDI) trends in Wales in the recent past. This paper also outlines some of the implications of the financial crisis on FDI flows and considers the future of FDI in Wales. The relative performance of the Welsh economy in terms of GVA per capita is examined in a paper by Joel Strange and Max Munday. This article concludes that the GVA gap between Wales and the UK has widened in recent years and that this situation is unlikely to improve in the near future. The final paper '*Rethinking the Region: Actions for a Sustainable Welsh Economy*' is by Calvin Jones. This article suggests a reconsideration of the current economic development approach in Wales and outlines some steps necessary for the move toward a sustainable Welsh economy.

Finally this *Review* contains an interview with Steve Harris of Science Shops Wales at the University of Glamorgan. Science Shops Wales is an innovative science-society interaction organisation funded by the Higher Education Funding Council of Wales. In the interview Dr Harris explains the operation and aims of Science Shops Wales, and gives his opinions on the current economic situation, and on the future local and global scenarios.

## **WERU Activities**

Information about WERU publications, projects and activities can be found at [www.weru.org.uk](http://www.weru.org.uk). Alternatively please contact Annette Roberts ([robertsa1@cf.ac.uk](mailto:robertsa1@cf.ac.uk)) or Jane Bryan ([bryanj@cardiff.ac.uk](mailto:bryanj@cardiff.ac.uk)).

The next edition of the *Welsh Economic Review* will return to the usual format and is due to be published in the spring of 2009.

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# Foreword

**Stephen Hill, Editor – *Welsh Economic Review*, 1988-2000.**

I was both pleased and surprised to receive the invitation to write the foreword for this 20<sup>th</sup> anniversary edition of the *Welsh Economic Review*. Pleased, because it was a kind invitation, and surprised because it's been twenty years. The *Review* was established all that time ago, with the help of the Institute of Welsh Affairs, for a number of reasons. First, there was too little awareness of economic issues in Wales, with too big a gap between the newspaper business correspondent and the serious academic journal. Hence we were seeking to enhance economic literacy in Wales. Secondly, we wanted to establish the credentials of the newly-formed Welsh Economy Research Unit (WERU), developing a team of academics who could (or would) write knowledgeably about economic events in Wales. Finally, the *Review* would provide a platform for the informed reader to access economic research undertaken in Wales.

These objectives helped define the format of the *Review*; with an opening interview with a lead player in the Welsh economy followed by in-house analysis of economic data and events and then by contributed papers, bringing academic business research in and about Wales to a wider audience. This format, like the *Review* itself, has stood the test of time. The resilience of the *Welsh Economic Review* reflects both the strength of these foundations and the quality of the writing and production team, who have consistently produced interesting and contemporary copy.

This is an opportunity to reflect on changes in both the Welsh economy and economic priorities in Wales over the past two decades. The first issue carried a Foreword by Peter Walker, the then Secretary of State for Wales. This acknowledged painful structural changes in the Welsh economy, but was briskly optimistic: "*We have come to the end of the painful cycle of pit closures and closures of major steel plants*", and "*It is the influx of new activities, partly by inward investment, partly by the growth of firms started and created in Wales, that is bringing a new dimension to the Welsh economy.*" The benefits of hindsight notwithstanding, the recurring theme in that first issue was that inward investment was building a new, and more prosperous Wales. Indeed two of the three feature articles in that issue were about Japanese investment in Wales. While there is no doubt that inward investment has played a major role in the transformation of the Welsh economy, and was a substantial palliative in the dark days of major structural change, the sad fact remains that, relative to the UK average, Wales

may be worse-off in 2008 than in 1998. This is of course a bold statement – living standards have risen in Wales, and many people in Wales have a level of material wealth today that was accessible to very few twenty years ago. The world has changed, and Wales with it. It is interesting to reflect on those changes, but it is still true that that first issue reported that GDP per capita in Wales was 88.8% of the UK average in 1985 – twenty years later that relative GDP per capita was closer to 78%. Of course there are major disagreements about the appropriateness of GDP per capita as a measure of prosperity, but it is difficult to argue that Welsh prosperity has not declined relative to the UK.

Finally the economic landscape has changed considerably in the past two decades, but many of the issues raised in that first *Review* still resonate today. While mining and steel have continued to decline in employment terms, changes in the world price of coal and concerns about the security of energy supplies may be about to herald a new age of coal in Wales. The Welsh economy continues to be relatively public-sector dependent, despite the rapid rise in business services, whilst manufacturing has fallen as a share of employment – though not as quickly in Wales as in other parts of the UK. The transport infrastructure in Wales has begun to reflect contemporary activity rather than the industrial past, with major investments across South Wales (M4, Second Severn Crossing) and North Wales (A55 dualling), but with rather less between North and South. Improvements to the A470 have made it much easier to live in one place and work in another, while Wales

(International) Airport has perhaps struggled to live up to its title. One of the biggest and most expensive urban development projects in Europe has transformed Cardiff Bay.

The major political change has been the birth of the Welsh Assembly, and, perhaps even more remarkably, the development of coalition Government in Wales. Less positive has been the demise of some transformative Welsh institutions, especially the Welsh Development Agency. It is difficult to see its civil service replacement as an improvement. Alongside these economic and political changes has been significant social change, with the mobile phone becoming ubiquitous, closely followed by an increasingly mobile internet. Higher education has shifted from a privileged few to a common teenage aspiration, although often accompanied by levels of debt that can frighten parents, if not the debtor. Finally, and above all, has been the expectation of continuous economic growth paired with ever higher house prices, both encouraging and facilitating debt-fuelled consumer spending. We are in the first stages of re-adjustment, with output likely to fall as unemployment rises. Those of us who have been observing the Welsh economy for a long time will recognise that things will get better – but they might have to get worse first.

Congratulations on the endurance of the *Welsh Economic Review*, by now a Welsh institution that has been around for twice as long as the Welsh Assembly Government. Here's to the next twenty years!

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The views expressed in feature articles are those of the authors and not necessarily the opinions of WERU.

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# Economic Events Diary

November 2007 - November 2008

## November 2007

The Welsh Assembly Government announced details of a £30m investment in the communications network in North Wales as the first part of a programme to upgrade bandwidth availability in the region. The **FibreSpeed project**, which will link 14 business parks in a fibre optic network, was to be part financed by European Structural Funds.

Business secretary John Hutton granted permission for a **wood chip fuelled biomass power station** in Port Talbot to be built by London based Prenergy Power. The station is expected to create around 150 jobs and burn 3m tonnes of shipped-in chippings.

Planning permission was granted for a £21m **mixed use development** on the brownfield **Jack's Pill** site in Newport. Work was expected to commence on the riverside development, comprising commercial space and 228 residential units, at the start of 2008.

Details of how the Welsh hotel market benefited from the Rugby World Cup 2007 were revealed in Deloitte's *Hotel Benchmark Survey*, with Cardiff experiencing a room revenue per available room (RevPAR) growth of 23% during the period of the competition.

## December

International Business Wales, the Welsh Assembly Government's export arm, ran a **trade mission to India** aimed at forging greater trading links. Amongst the reported outcomes of the event, led by Deputy First Minister Ieuan Wyn Jones, was an export order for EPS Steels (UK) of Bridgend and potential opportunities for SAL Consultants from Carmarthenshire, and Teddington Engineered Solutions of Llanelli.

**Admiral Motor Insurance**, launched in Cardiff in 1992, was admitted into the **FTSE 100 index** with a market capitalisation of £2.7bn. It became the first South Wales company to have achieved this.

HM Revenue and Customs figures highlighted that the value of **Welsh exports in 2007Q3 had fallen** by 4.1% or £383m on the previous quarter. Commentators attributed part of the reason for this to be the relatively high strength of the pound against the dollar.

## January 2008

The UK Government announced that the second smaller phase of the **£16 billion defence package** destined for the Vale of Glamorgan - the logistics and personnel training activities - had been dropped due to concerns around its affordability. The Metrix Consortium, the supplier behind the larger training academy, was to go-ahead as planned with the initial phase at **St Athan**.

Mining at **Tower Colliery** in Hirwaun came to an end after its official closure. It had been Britain's only mine owned by its workers after being bought using redundancy monies 13 years ago. Around 70 of the colliery's 260 workers were expected to transfer to Aberpergwm mine.

The problems of **economic inactivity in the over-50s** in

Wales were outlined in research for Prime Cymru, the Prince of Wales' initiative for mature enterprise. The report *Improving Employment Prospects for the Over-50s*, written by former chief economist of Barclays Bank, Christopher Isherwood, made the case for more flexible working arrangements to help those with care responsibilities; better disabled facilities in the workplace; and increased skill levels to help overcome discrimination.

**A new strategy for skills and employment in Wales** was launched as consultation began on *Skills That Work For Wales (STWFW)*. The strategy, which aims to address improving skills levels in line with business needs, included plans in its draft version to create a Wales Employment and Skills Board giving employers a greater say in the skills and qualifications system.

## February

Plans for a new £225 million **village development** near Bridgend were revealed. The **Parc Derwen** scheme, a joint venture between the Welsh Assembly Government and a consortium of property companies, includes proposals for 1,500 houses, as well as a small shopping centre and primary school. Meanwhile, St Modwen Developments signed contracts on the **Coed Darcy Urban Village** project to be built on the former oil refinery at Llandarcy. Around 4,000 homes are planned for the brownfield site over a 20 year development period.

**Tata**, the Indian conglomerate, unveiled a £60 million energy management technology **investment in Port Talbot** at its subsidiary company, Corus Strip Products UK. The announcement helped to alleviate some concerns for the site's future which had arisen when Corus was acquired by Tata in April 2007.

## March

Car manufacturer **Toyota** announced plans for a **£88 million investment** at its **Deeside** plant in North Wales to produce a new 1.3 litre petrol engine. Production of the engine, named the NR, is planned to begin during the latter part of 2009, and is expected to help safeguard existing jobs.

According to research by professional services company KPMG, in its *Report on Jobs* for the Recruitment and Employment Confederation, there was **increasing evidence of a general slowdown in the UK economy**. The decline in placements in the previous month was seen as a sign of the credit crunch, reflecting a general slowdown in the growth of demand for staff.

Deputy First Minister for Wales, Ieuan Wyn Jones, attended the launch of an **aerospace training partnership** between Deeside College and Barry College. Repair, maintenance and manufacture of aircraft training are offered by the partnership to apprentices and existing workers in the sector. The scheme, which has been granted a Civil Aviation Authority licence to act as an official training provider, will provide support to Welsh and other UK businesses.

## April

According to figures from the Bank of Scotland **confidence levels amongst Welsh small businesses** fell for the fourth

quarter in a row. The Small Business Confidence Index for Wales had fallen 25% (or 12 points) since April 2007 in the wake of turbulence in the financial markets. These findings were echoed in a UK wide survey by the Small Business Research Trust, with the Forum of Private Business, which highlighted the negative impact of the credit crunch on investment. The Trust called for urgent action on the bureaucracy faced by small firms, the burden of tax and late payments.

**IBM** announced they were setting up a **research centre** at Technium Pembrokeshire for environmental sciences and renewable energy. The centre of excellence was to be part of a collaboration with Swansea University.

The **Welsh Assembly Government** unveiled **new arrangements to deliver all its business support finance** through a single investment fund, replacing the many capital grants and business support programmes that were on offer. This bid to become more customer focused will see the merger of tourism industry section 4 grants, regional selective assistance, property development and assembly investment. A dedicated phone number for business enquiries has been set up along with a single application form.

According to figures from the Royal Institution of Chartered Surveyors (RICS), growth in the **construction sector in Wales** had stalled in the face of the credit crunch and low housing demand. The organisation's construction market survey also indicated that anticipated workload growth was at its lowest level since 2003Q3.

## May

The Welsh Assembly Government launched **Jobmatch**, a £38m regeneration scheme to help people back into work in the Heads of the Valleys. After an initial pilot of the scheme in Blaenau Gwent where 1,300 people were aided, the scheme was to be rolled-out to Caerphilly, Torfaen, Merthyr Tydfil and Rhondda Cynon Taff with the aim of helping 10,000 people into work by 2012.

Aviation company **Airbus** unveiled a £103m investment in next generation wing technology at its Broughton, Flintshire site. The Welsh Assembly Government contributed £7.5m towards the research and development programme that is hoped will help safeguard 7,000 jobs in North Wales.

Evidence of the **slowdown in the residential housing market** was highlighted by the cancelling of a city centre development in Cardiff as part of a £150m mixed-use scheme. The developers, JR Smart, backed away from proposals to build 765 flats and were instead considering putting forward plans for commercial units at the site.

The M4 motorway in Wales was hit as part of **national fuel price demonstrations** by haulage drivers protesting against increasing fuel charges in the UK.

## June

The Assembly Government and the Department for Work and Pensions announced the extension of the joint initiative **Want2Work** with the aim of helping 5,000 of the unemployed in Wales to get back into employment. A further £32m of funding for the project was secured through the European Social Fund and match-funding.

The local authority led **South West Wales Business Finance Scheme** was launched with the aim of creating job opportunities in Carmarthenshire, Neath Port Talbot, Pembrokeshire, and Swansea. Around 2,000 grants of up to

£5,000 will be available to existing and new start-up businesses through the scheme.

The **Alphasteel** factory in Newport, which was closed in December 2007 with 350 workers being made redundant, was acquired by Libala, a company controlled by Russian entrepreneur Vadim Varshavsky. A memorandum of understanding has reportedly been signed with creditors to explore recommencing production at the plant.

## July

The new Assembly legislative programme for 2008/09 was revealed by First Minister Rhodri Morgan, notably including plans to designate areas of housing pressure and suspend the "Right to Buy" on social housing for a limited time.

According to figures from the Royal Institution of Chartered Surveyors **demand for commercial property in Wales had fallen** by more than a third in 2008Q2 compared to 2008Q1.

Research from Oxford Economics, the economic analysis and advice unit, found that Wales was a net drain on the UK economy. Using regional public spending and tax receipt data from 2006/7 it was found that the Principality received £9.1bn more in Government spending than it raised in taxes.

## August

Evidence of the continued effects of the credit crisis and slowdown of the economy were evident as the **Quinn Group postponed investment plans** for a £67m production facility for insulation panels next to its existing radiator facility in Newport. The Irish company revealed that the plans were likely to be on hold until there were signs of an upturn in the UK construction sector.

**Bellway Homes Wales halted work** on their Quayside and Prospect Place luxury developments in Cardiff Bay following concerns about the downturn in the housing market.

According to figures from the Nationwide's monthly price index survey **house prices in Wales and England were falling at a record rate**, with an average home having lost 8.1% of its value over the previous year.

The **Corus Centre of Excellence** was launched at Cardiff University's School of Engineering as part of a £1.2m partnership agreement to aid training provision and research in the steel industry in Wales.

## September

Deputy Minister for Regeneration, Leighton Andrews, joined Mr. Hiroyuki Takao, the president of Japanese automotive company **Takao**, at the unveiling of a **new production facility** for the firm in Ebbw Vale. The £15.5m expansion has doubled the size of Takao's factory which supplies components to Toyota and Honda.

A memorandum of understanding was signed between **CBI Wales and the Welsh Local Government Agency** forming a commitment to building public/private partnerships to help exchange best practice.

Following the credit crisis in the US financial markets, with the collapse of investment bank Lehman Brothers/takeover of Merrill Lynch by the Bank of America, the Bank of England intervened in the UK market to offer £40bn to the banking sector in an effort to ease capitalisation pressures.

The first meeting of the Welsh Assembly Government's **Strategic Capital Investment Advisory Panel** took place. The group has the role of advising on the most effective ways to spend a £400m capital investment fund over the next three years, seeking to deliver value for money and better public services.

## October

It was revealed that **£78m of Welsh public sector funds**, including £60m from nine Welsh local authorities, was sitting in **frozen accounts in failed Icelandic banks**. Amidst Government efforts to have the accounts unfrozen, finance minister Andrew Davies stated that financial compensation from the Assembly Government to the Welsh public bodies was not an option.

In an attempt to curb the instability in the banking sector the UK Government announced it was to take a significant stake in three UK banks- LloydsTSB, Halifax Bank of Scotland, and Royal Bank of Scotland.

**Ford Motor Company** confirmed it was investing £70m in its Bridgend engine plant to produce a new generation of low CO<sub>2</sub>, energy efficient petrol engines. The investment, which includes a £13.4m grant from the Welsh Assembly Government, was however accompanied by news that temporary staff lay-offs could be expected in the near future due to a significant reduction in the volume of engine orders.

## November

The **second session of the All-Wales Economic Summit** took place in North Wales. The event, organised by the Welsh Assembly Government, was to help prepare the Principality to face the current global economic climate. Improving skills training - through raising the *Workforce Development Programme* intervention rate for SMEs, and increasing the capacity of the *ReAct* programme - was one of the areas addressed for action.

Research by global information services company Experian showed a **marked increase in the number of Welsh business failures** over the last year. Comparing 2008Q3 with 2007Q3 there had been a 47% increase in the number of companies in Wales going out of business.

A plan to reduce the environmental impact of activities in Wales, committing the region to using only its fair share of world resources, was launched by the Assembly Environment Minister, Jane Davidson. The consultation paper for **One Wales: One Planet** sets out targets that include an 80 - 90% cut in carbon-based energy over a 30 - 40 year timescale.

## Comings & Goings: Companies' Activities in Wales

In November 2007 **Therma-Tru**, a US owned specialist door manufacturer, announced it was to close its Nantgarw facility with the loss of 150 jobs. The decision followed a review of the company's UK business and market conditions.

The manufacturing sector in Wales continued to experience employment shocks at the start of the New Year as **Everwhite Plastics**, who employed 140 workers in Aberdare producing uPVC building products, and Mold based cylinder maker, **The Keating Group**, employing 90 workers, both moved into administration.

The **Cameo Sofa Company** announced it was to move production from its Treforest factory to a lower cost base in

Lithuania. Around 150 workers at the former Christie Tyler site were to lose their jobs.

**3M** revealed that it was to cut 185 jobs over the next year at its adhesive and tape production facility in Gorseinon. The decision was part of a move by the company aimed at reducing costs through consolidating its manufacturing base.

**Corus Packaging Plus** announced plans to reduce its workforce in Trostre, Llanelli, by 300 due to overcapacity in the global tin market. Around 460 workers were to remain employed at the site after these cuts and the previous shedding of 100 jobs in 2007.

**Financial Services Data Management**, a debt advice firm, announced in January plans to expand its call centre workforce by 200 moving to a new office location in Swansea. Increases in debt levels due to the onset of the global credit crunch were reportedly a determining factor in the decision.

Supermarket chain **Waitrose** revealed it was to open a store in Pentwyn, Cardiff, creating more than 100 jobs.

In February **Siemens Medical Solutions** announced it was transferring work from its Los Angeles facility to Llanberis in North Wales, in a move creating 192 jobs, and helping to safeguard those of the existing 327 employees. Medical and diagnostic testing equipment are manufactured at the facility.

**Next Generation Data** revealed that it was to build a £200m green data centre at the site of the former LG Semicon plant in Newport, creating around 100 skilled jobs.

US conglomerate **Doncasters Group** unveiled plans to expand its Blaenavon facility with a £16m investment creating 125 aerospace jobs. The company manufactures products for gas turbine engine makers.

Call centre contractor **Ventura** announced the closure of its Cardiff base in June with the loss of 600 jobs. The company, the UK's largest call centre outsourcer, had taken over the former Serco site in 2004. The move was seen as evidence of the effects of the credit crunch impacting along the financial services sector supply chain.

**Paramount Foods** revealed that it was cutting 156 jobs from its Deeside toppings factory, as well as a possible 144 jobs in Salford, as a result of reductions in orders from its main supermarket customers.

**McKesson** the US healthcare IT solutions company announced it was to create a further 300 jobs in Bangor over the next three years providing support services for the NHS. The investment had been secured with support from Assembly Government grant aid.

Motor insurers **Admiral** unveiled plans to expand into Newport in the autumn of 2008 creating an initial 90 jobs at Langstone Business Park. This employment figure was expected to rise to around 450 over the next three years. In July Admiral also revealed it was to create a further 100 jobs in Cardiff by the end of the year.

A restructuring of its UK operations by cards and gift-wrap supplier **International Greetings** resulted in 210 jobs being cut in South Wales, with the company retaining around 60% of its workforce in Wales based in Hengoed and Pentre.

**Draka** confirmed it was to close its copper wire factory in Llanelli with the loss of 135 jobs. High transportation costs were blamed for the closure, with UK operations now to be consolidated in Derby.



In August **HBOS** announced it was to close its mortgage service centre in Cardiff with the loss of 150 jobs as part of a streamlining of its mortgage business. Around half of the staff affected were found alternative roles within the group. In September the bank revealed it was cutting a further 118 jobs at two further sites in the Capital - Cardiff Gate Retail Park and Cardiff Bay. These losses were attributed to a downturn in the company's credit card and loans business.

**RCT Homes**, a housing Community Mutual organisation, revealed it was to create 120 new jobs and training opportunities with a £170m refurbishment programme of its homes in Rhondda Cynon Taff. The investment was required in order to meet the Welsh Housing Quality Standard. As part of the organisation's commitment to support the economic regeneration and development of the area main contractors were tied into utilising locally-based suppliers.

**Capita Symonds**, the engineering consultancy, signed a deal with the local authorities of Bridgend, Merthyr Tydfil and Rhondda Cynon Taff to help deliver £75m of capital projects. Around 130 jobs are expected to be created over the next five years as part of the private-public venture which replaced the Glamorgan Engineering Consultancy (GEC) joint venture between the authorities.

The transport costs of imported raw materials were reportedly a major factor in the decision by cosmetics company **L'Oreal** to transfer work abroad from its Talbot Green, Llantrisant site. Around 200 jobs are expected to be lost, leaving only 60 staff at the site to help supply the UK market.

**David McClean**, the Deeside based housing company went into administration in October with 134 staff initially being

made redundant. The remaining workforce of around 200 were being kept on while a buyer was sought. The property downturn impacting on the company's cash flow was highlighted as the reason for the company's position.

There were a number of job announcements in Wales during November as difficult trading conditions continued to hit the world economy. **Corus**, the steelmaker, revealed plans to cut around 400 distribution jobs across the UK, with 100 jobs expected to go in Shotton, north Wales and 50 in south Wales.

**Hoover** revealed plans to cut 337 jobs at its Merthyr washing machine factory, where it has operated since 1948, due to difficulties in making competitively priced products at the site.

An announcement was made that 250 jobs were at risk at the Miskin facility of automotive company **Bosch** following a decline in customer orders. The company started a 90-day period of consultation with its plant council.

Cosmetics maker **Budelpack Cosi**, went into administration threatening 389 jobs in Maesteg, and 200 staff at the Llantrisant site of **Sun Juice** faced redundancy following restructuring. Furthermore, the UK and Welsh economies are likely to face a number of redundancies in the next year following the announcements that retailer **Woolworths** and furniture maker **MFI** were moving into administration. Both companies employ more than 1,000 people across the UK.

Health care business **Pastoral Cymru** announced that 180 jobs are expected to be created in their new 44 bed mental health facility in Cardiff, due for completion in autumn 2009.

# Notes on the Banking Crisis and the Economic Outlook

Patrick Minford, Julian Hodge Institute of Applied Macroeconomics, Cardiff Business School.

## Background on the banking crisis

This crisis arose out of the mispricing of repackaged US mortgages that were made to poor Americans over a long period of time. The history of this mortgage provision to 'sub-prime' borrowers stretches back to 1992 when Congress passed the first law instructing Fannie and Freddie, the two US government-backed mortgage funders, to ensure that a substantial percentage of their portfolio went to such borrowers. In later years these percentages were ratcheted upwards. The mortgage packages were then sold on to investors all over the world, and the 'top slices' (e.g. the first 50% claim on a repossessed house) were rated AAA by the rating agencies. It did not seem to occur to anyone with power to alter things that in the event of an economic downturn in which house prices fell even these top slices would be worthless. Basically, as long as the US expansion continued and house prices rose, no one worried, including non-US regulators whose banks had stuffed 'special investment vehicles' (i.e. various hedge funds etc to which they made large loans) with these packages.

This is another of the many historical episodes of capitalist bust. It is, however, spectacularly big- the Bank's October Financial Stability Report estimated the total losses so far worldwide at \$2.8 trillion. This is a fifth of US GDP and 5% of world GDP. The bust happens to be in the financial sector; but then so was for example the collapse of the US thrifts (aka home mortgage companies of that time) that resulted in the 1989 Resolution Trust Corporation (RTC). Even the numbers

are not dissimilar for the US; the US government put some 5% of GDP into the RTC. Today Paulson's proposed sum of \$700 billion is about the same percentage of GDP. As it happens the US government made no serious loss on the RTC which managed to dispose of its assets advantageously over calmer times. The same could happen again. Other governments have now put similar percentages of their GDP into banks as capital injections- for example the UK Treasury package of capital injection is of this order (other amounts relate to liquidity provision and guarantees which are much less exposed to loss).

Underpinning the attitude of the Fed and the US government lies their predecessors' experience of another great financial bust: the crash of 1929 and its sequel in the collapse of one third of the US banking system and the Great Depression. Just as Walter Bagehot concluded from 19<sup>th</sup> century experience that lender of last resort action by the central bank was necessary, so today's US authorities have concluded that the financial system cannot be allowed to collapse. The fact that that system has extended so widely to embrace a host of new financial intermediaries has merely extended the scope of today's lender of last resort requirements. Other governments came around to the US government viewpoint as the damage spread to their own financial systems.

This viewpoint tells us that finance and banking are too important to the rest of the economy to be allowed to collapse, unlike any other sector- be it dotcoms,

telecoms, railways, or bits of manufacturing. Partly this is due to modern politics: ordinary people's deposits, savings and, yes, houses must somehow be kept safe by the politicians. The implicit political compact of democratic capitalism is that markets can be free, the high rollers of the market economy free too to make and lose large amounts, but in return the ordinary voter must have some basic guarantees, among them that their finances will be protected.

Partly it is due to the key role of finance in the capitalist machine. As we see currently in the UK housing market, if finance withdraws from a market more or less totally (apart from existing contracts), the market freezes up; if this went on for very long, the market would have to reorganise itself on a quite different model, with only large players or wealthy people holding housing and the rest renting. This is very far from the ideal model of 'complete contracts' in which people can smooth consumption across contingencies. One could imagine a world of free financial markets without any such implicit public guarantees; it would be one in which there was a restoration of massive caution with financial firms selling themselves on safety to a pre-eminent degree. However, there is not much point in thinking long about it since it is not on offer.

Unfortunately the bank crisis, and the 'credit crunch' coincided with a boom in emerging markets which drove commodity prices to dizzy heights during the early part of 2008. So while the credit crunch was raising effective

## BOX 1 - Anatomy of the two shocks and monetary policy reactions: current crisis- what should monetary policy have done and now do?

To assess what needs to be done we need first to assess the scale of the shocks currently hitting the economy. The two figures that follow later show estimates of the 'commodity price shock' and the 'credit crunch shock' for Europe generally, based on a reworking recently carried out of a model of the EU by Smets and Wouters (SW), two ECB economists. This reworking undertaken by the Julian Hodge Institute of Applied Macroeconomics was done to improve the model's capacity to match the data.

Figure 1 shows the commodity price shock, together with the likely response of interest rates- by quarterly periods from the date of the shock. As one can see a slowdown results as well as some rise in inflation; and interest rates rise a bit to discourage firms from raising domestic wages and prices.

Figure 2 shows the credit crunch effect quarter by quarter from the date of the shock. Here we see a much larger recessionary shock, with inflation plunging too and interest rates, on a proper monetary response, being cut sharply in reply. The cuts in rates greatly more than offset the credit crunch rise due to bank risk and crisis; so base rates are cut sharply because of the effects on the economy of the crunch.

The implication when the two shocks are added together is that the damage to the economy overall is extensive. The 1.5% cut in interest rates was welcome, but further significant cuts are needed to make up for lost time - as with the latest 1% cut in December.

rates of interest in the marketplace by something like 6% per annum, central banks this side of the Atlantic were extremely twitchy about the effect of this commodity price boom on their consumer price indices; as a result they did little at all to offset the credit crunch, allowing it in effect to tighten monetary policy without they themselves having to raise base rates. In Box 1 I argue that this twitchiness was quite wrong and that they should have gone ahead and

cut interest rates sooner to offset the credit crunch, explaining that the commodity price boom would raise inflation in the short term but leave it unchanged in the longer term. By delaying interest rate cuts until very recently these central banks have allowed their economies to slip into a recession which just started, in the third quarter of this year and now has a serious momentum. This recession in Europe, joining the US slowdown as well

as (correct) monetary tightening by emerging markets, has in turn led to the collapse of commodity prices over the past couple of months.

**How quickly can normal monetary service resume?**

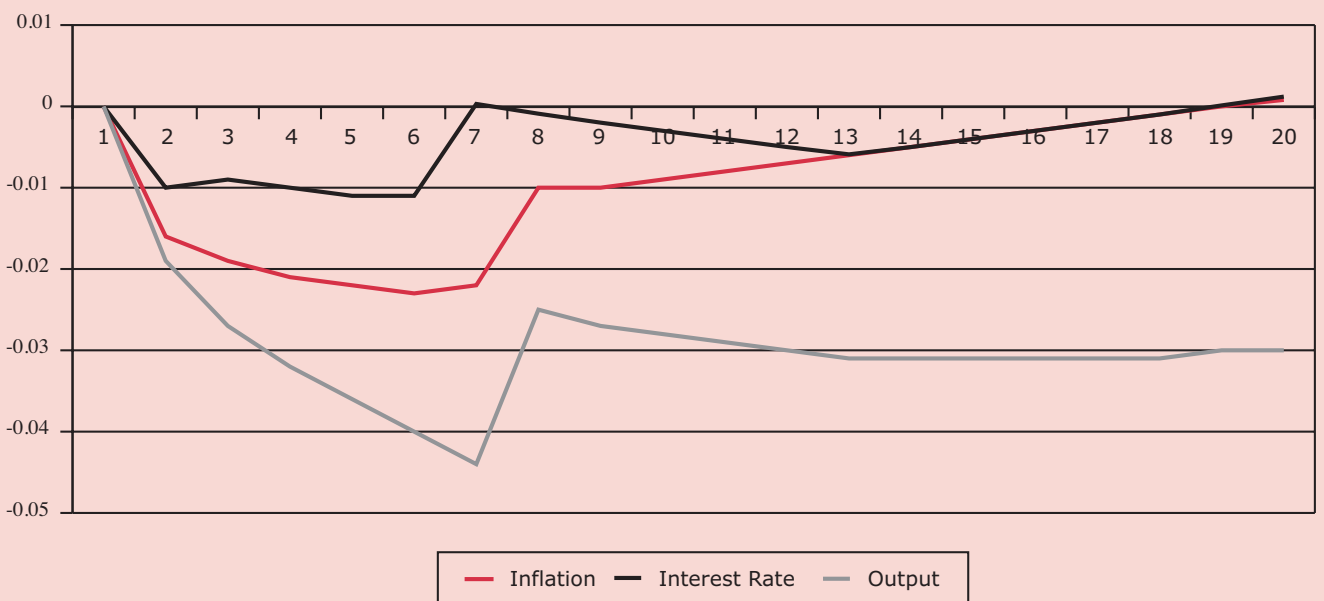
The economy is now in a weakened state. Third quarter growth in the UK was -0.5%. In Europe the figures are almost as bad. The US had a fairly robust second quarter and policy has

**Figure 1: World inflation – effects of rise in world inflation on EU**



Note: This is a simulation of the "weighted" model described in Meenagh, Minford and Wickens, 2008, on Minford Cardiff webpage. Inflation/interest rate in fraction per quarter; output fraction of potential output. The horizontal axis shows quarters.

**Figure 2: Credit Crunch shock (weighted model) - effect on EU**



Note: The horizontal axis shows quarters.

been far more supportive, but also events there have been more hostile, with repossessions now becoming widespread as homeowners on 'no-recourse' mortgages (i.e. ones where the mortgage debt is extinguished if the house is surrendered for repossession; these are the bulk of US mortgages) simply leave their homes empty. The result is that the US too has had falling GDP in the third quarter.

All this is the lagged effect of the extreme 'credit crunch' conditions that have prevailed for the past 15 months. These have driven the effective cost of credit to the average borrower up by a large percentage; in the UK and the euro-zone where central banks have barely if at all offset this tightening, the amount as above we at the Julian Hodge Institute estimate to be of the order of 6% (remembering that a large chunk of marginal borrowers were denied credit altogether except on punitive terms). Such tightening was bound to slow these economies down sharply; only in the US has there been a serious mitigation by cuts in the central bank lending rate but even there we saw a significant net tightening.

The bank crisis took a nasty turn when Lehman went bankrupt. This caused money market funds major losses; the 90 cents in the dollar losses on Lehman bonds when recently auctioned have kept this uncertainty alive, as no one knows still which banks were the insurers and whether any of them have been hit by big new holes in their balance sheets. Because of this uncertainty governments were forced to act, now in most cases via large capital injections into the banking system. These have been accompanied by concerted central bank rate cuts, the provision of massive extra liquidity and other government guarantees of banks' security.

One question now is how long this will take to calm money market fears so that the spreads between three-month's

Libor and Bank base rates decline. There is currently some easing but in the UK for example the spread is still around 100 basis points. Another question is how long will it take for lending activity to resume, in line with governments' commitment and conditions for these actions. Some wonder how the government can force banks to lend; but this is no mystery - the answer is; just as any dominant shareholder would do, via the chief executive. In the UK some banks are not participating in the government package but they will be affected by the emergence of competition from those that are lending again.

Our view is that both these processes will roll out in the period to Christmas. In the UK this is urgent politically for a government that has its back to the wall, with a general election only a year and a half away at most.

Alistair Darling's recent budget projects a risky level of borrowing, and the tax cuts will not be effective as they will soon need to be offset by tax rises. If worries surface about UK solvency the budget changes could be counter-productive as it will force up interest rates on longer term borrowing.

We expect further cuts in interest rates in the short term as the Bank now has no alternative, given the abrupt and dramatic reversal in commodity prices. Just as the past year of tightening has done its damage in today's slowdown, so its reversal will bring about a recovery. Our tentative forecast is that late 2009 will see the beginning of that so that 2010 will see growth again.

That may seem a boldly optimistic view in today's climate of opinion. But it must be borne in mind that bad and deep recessions - such as 1974-5, 1980-81, 1990-91 - were all brought about by monetary tightening that was lengthy and determined and not reversed until inflation had fully responded to the monetary medicine. Today domestic

inflation (or 'long-term' inflation) has not risen at all; therefore there is no pressure to keep the tightening in place. In fact as we have seen government and central banks are now falling over themselves to loosen conditions. In our view a year or so of very tight conditions if rapidly reversed will not be sufficient to produce a prolonged and deep recession.

The business cycle experience of Wales is rather similar to that of the rest of the UK. In this downturn all sectors are equally badly affected, services (including of course financial services) and manufacturing. So while Wales has somewhat more manufacturing than the rest of the UK this will not make much difference in this recession. Public employment too, a big part of the Welsh economy, will be cut as government finances plunge deeply into the red.

In sum, though there is currently general panic among politicians, with much talk of 'Keynesian spending', the recession has been caused by very tight monetary conditions stemming from the credit crunch. It can be reversed by a determined loosening of monetary conditions, together with a restoration of normality in the credit markets by the government bank support packages. The return of normality will take a few months but return it surely will. Central banks this side of the Atlantic have been chastened by their dreadful misjudgements of the past year into a mood to cut rates sharply. As for Keynesian packages, European governments are going to have such large budget deficits anyway as tax revenues melt away and benefit spending rises that they cannot contemplate extra spending without damaging their credit status in world markets- if they do that the extra spending will damage demand and output too by raising long term market interest rates. So perforce the burden of countering the recession monetary tightening has unleashed will fall on monetary policy and central banks.

# A couple of snapshots - Wales in 1988 and in 2008

Jane Bryan, Welsh Economy Research Unit

When the *Welsh Economic Review* published its first edition in 1988, Dr Gwyn Jones had just been appointed as Chairman of the Welsh Development Agency (WDA). The WDA (now merged into the Welsh Assembly Government) had been established in 1976 to encourage business development and investment in Wales. At the time of his interview with the *Review* Dr Jones stated that the Agency's aim was to make Wales one of the most prosperous countries in Western Europe. A key mechanism to spur development was foreign direct investment, and WINvest had been very successful in achieving this; Wales having only 5% of the population had managed at that time to attract 20% of UK inward investment. However, Dr Jones was also keen to emphasise that small indigenous businesses were important, with 14% of the working population in self-employment in Wales compared to 11% in the UK as a whole.

Twenty years ago, the UK was the fastest growing economy in Europe growing by 3.6% during 1988. The EU was growing more slowly at 2.5%. Meanwhile, growth in the USA (at 3.3%) was closely aligned with the UK. Japan had grown strongly in the 1960s and 1970s, but its troubles were just beginning in the 1980s. A strong yen in 1985 was creating export difficulties and so interest rates were lowered, contributing to a financial bubble to which the government then responded with interest rate rises, up to 6% in 1990. Thereafter, Japan's economy shrunk, with interest rates at 0.5%

between 1995-2000 failing to provide the required stimulus, and prompt banks to increase their lending. Latest figures suggest Japan's economy is now in recession.

Back in 1988, *Welsh Economic Review* commentators attributed strong UK GDP growth to retail sales, with 'the rate at which consumer credit is being extended being an important reason for the boom in consumer spending' (*Welsh Economic Review* Volume 1, 1988). Hence, our love affair with spending is old news, having consequences that are all too easily forgotten and seldom learned from. In the late eighties, the mortgage market was just beginning to relax lending terms so that buyers could acquire 100% mortgages. This fuelled the housing market, and raised house prices. Does this sound familiar? As inflation took off, interest rates were forced up to subdue consumption, then making life difficult for mortgage holders and impossible for potential buyers; homeowners were experiencing negative equity and buyers did not bother to enter the market, so it stalled. The average price of a house in the South-east was £105,000. By 1992, this had fallen to £74,000. Negative equity is bad news today just as it was bad news twenty years ago.

Turning now to the indicators shown in Table 1, we can see that Wales's population has increased slightly over the period in absolute terms, while Wales's share of the UK population has declined slightly.

Government officials, politicians and economic commentators have for a long time considered GDP per head to be a convenient way to measure relative regional prosperity, and indeed in the 1980s and 1990s Wales was a GDP target driven economy, seeking to diminish the prosperity gap between it and the rest of the UK. Today, most would see this to be an implausible challenge, for how could Wales hope to outpace the economic engine room of London and the South East, suffering as it does from the disadvantage of being peripheral, with few headquarters, an increasing dependency on footloose contact centres for employment, a relatively high reliance on public sector employment, and persistently low participation in the workforce. None of these characteristics can easily be turned round or converted into wealth, let alone the super-growth that is needed to catch up with the most prosperous of the UK regions.

Wales's predicament is also illustrated by the observations of the economic think-tank Oxford Economics, who state 'based on people who resided in Wales, tax revenues of £19.3bn were raised in 2006-07. This compares to Government expenditure of £28.4bn – a net drain of minus £9.1bn'. It is not so much that Wales is a net drain, it is more that many of the UK regions including Wales fare poorly compared with a very rich capital city and surrounding south east. The key issue as much now as twenty years ago is the unequal distribution of growth and prosperity throughout the UK, making regional redistributive policy

**Table 1: Key Welsh Economic Indicators 1988 and 2008**

Key Indicator	1988	2008 <sup>1</sup>
Area (km <sup>2</sup> )	20,779 (8.6% of UK)	
Population in Wales	2.8m (5% of UK)	3m (4.95% of UK)
GVA per head as % of UK	86 <sup>2</sup>	77 <sup>3</sup>
Economic Activity Rates (%) <sup>4</sup> (working age 16-59/64, All)	73.3	75.5
Unemployment Rate (%) <sup>5</sup>	10.5	6.7
Household Income /hd (£) as % of UK	86.9	86.9
Average male earnings (UK =100)	91.2	84.2
Average Female earnings (UK = 100)	92.8	90.2
Number of Foreign-owned manufacturing enterprises	236	350 <sup>6</sup>
Employment in Foreign-owned manufacturing enterprises	51,300	64,500 <sup>6</sup>

1: Latest available data. This may not be for 2008.

2: GDP

3: GVA, 2006

4: 1988 activity rates from the labour force survey

2007 activity rates from the Annual Population Survey

5: 1988 source is Department of Employment, 2008 is ILO rate, July-September

6: 2007 data – estimates.

as much a necessity as it ever was; if only to prevent discontent in the outer reaches of the UK that lie outside the M25.

Successive Welsh Assembly strategy documents appear to show a gradual distancing from GVA targets, and now the catch-up process is much more an aspiration than a goal. The latest published 'prosperity indicator' GVA/head data for 2006 show that Wales now languishes well below Northern Ireland, and is at the bottom of the productivity league. Wales' share of UK GVA/head stands at 77%, compared to 86% of UK GDP/head in 1988. A wide gap is now wider than ever.

Low participation or economic inactivity has been identified as a core contributor to the UK and Wales GDP/GVA differences, which have long challenged policy makers. Even in 1996, activity rates for Wales for persons of working age were 4 percentage points below the UK. Low participation is, to an extent, an inheritance from the past: a vestige from the industrial coal and steel shake-out of the 1980s and earlier when whole communities were rendered jobless. As a result the participation gap between Wales and UK in terms of male economic activity was particularly striking. This feature still exists today, and the marginal improvements that have been achieved over time can be linked to the fact that female participation figures are much closer to the UK average. Massive industrial restructuring is history, and cannot forever be called to account for low activity in Wales, unless perhaps, economic inactivity as a way of life can cross the generation divide.

Meanwhile, historical data relating to economic participants shows that unemployment was high in the late 1980s, but has tended to be relatively low in the last decade. This is a reflection of respective government philosophies, and particularly reveals the policy effects of Labour's drive to 'full employment' partially secured by high levels of public spending. With the spectre of recession looming, rising unemployment is already in evidence with the current government's good record on employment soon to be severely challenged. Maintaining 'full employment' may be a strong underlying motive for the Chancellor of the Exchequer to promote a 'big' government and Keynesian spending policy reflex, as the financial crisis deepens.

The Coming and Goings Section of the *Review* which features business arrivals and departures usually does not require much paring down; a process that does apply in this edition with many more departures than usual. Each tells its own story. Financial Services Data

Management (a firm which provides advice on debt) is expanding its call centre workforce by 200 and moving to a new office location in Swansea. Meanwhile, HBOS announced in August that it intends to close its mortgage service centre in Cardiff, with the loss of 150 jobs as part of a streamlining process. A couple of firms making doors and windows announced job losses and a sofa company is moving from Wales to a lower cost base in Eastern Europe. In the Nineties recession private sector activities had a strong tendency to retrench to the core, and this is likely to reoccur, as branches of services industries seek to cut costs and retract their feelers.

A withdrawal of cheap lending (which used to pay for the new house *and* its contents), a seized housing market, falling house price and worse – negative equity – in Wales, as elsewhere throughout the UK, infiltrates the whole economy as people make do with what they have got, cut their expenditure on DIY and all manner of household goods, furniture, doors and windows and buy less and cheaper food, and so on. The trouble is that if everyone stops spending, including those who have no immediate need for caution (disgruntled savers with small or no mortgages and secure-ish jobs), then the downward vortex is accelerated.

Back copies of the *Welsh Economic Review* remind us that in 1988, Wales still had a coal industry, employing 9,900 people and producing 6 million tonnes of coal from 11 collieries. Three fifths of this output was burnt in the power stations at Uskmouth and Aberthaw, with the then British Steel Corporation buying a further fifth. The rest was used for domestic purposes, and other local industrial use with the remaining 10% exported. In January 2008, it was announced that Tower Colliery in Hirwaun, (the last of the deep mines in Wales) was officially closed. The colliery was uniquely owned by its workers after they courageously invested their redundancy money in the buy-out.

Tower Colliery estimated there to still be around 250m tons of coal remaining in Wales, comprising half of the UK's identified reserves. There is the prospect of Energy Build Holdings (mostly owned by Cambrian Mining PLC) accessing a seam at Aberpergwm that could provide decades of operation and hence employment, and certainly some of Tower's ex miners may be transferring to this drift mine. How much of Wales's remaining coal reserves will be exploited now or in the future depends on energy prices. Some commentators believe that, if the remaining reserves were nationalised

and preserved for a future when carbon capture was perfected and energy priced considerably higher than now, Wales could be sitting on a 'gold' mine rather than a coal mine. But that is a remote prospect.

Meanwhile, the current financial crisis (partially seeded by high fuel costs) is still unfurling. In 2008, our broadcast media is structured in such a way that it depends on news to fill large chunks of available band width, and the credit crunch has inevitably provided more grist for this voraciously hungry news mill. People will be asking how will the recession affect Wales?

For those who do not recognise Wales as an economic entity (i.e. not having separate national accounts) the recession will be perceived as hitting the UK and Wales as a singular event. Other commentators have observed 'a silver lining to the poisonous cloud of toxic assets choking the financial system' because the recession will have a proportionately more profound impact on the very rich south east, while Wales will plough on much as before, enjoying as it does a measure of protection afforded by relatively high public sector employment. Hence, there are regional nuances to the financial crisis. Reliance on high public sector employment means that choosing a public spending recovery route (favoured by Gordon Brown) could indeed provide some protection in Wales, as those with relatively secure income and employment can help underpin the economy with their household expenditure and so on. But none of us is immune.

As 2009 approaches there is less buoyancy, and less optimism than in 1988, but if this article had been written before the run on Northern Rock, it would still have contained a downbeat message as last year the aggregate borrowings of individuals in the UK exceeded their aggregate earnings.

During the lifetime of the *Review* most have experienced or are able to remember a few recessions, and therefore know that recovery is a matter of time. If, throughout the inevitable hardships of the coming months, there is pressure to become less wasteful and more resourceful, then Wales will emerge better prepared for the long-run.

The article which follows this was written by Brian Morgan in 1991 when he was Chief Economist at the Welsh Development Agency and Wales was showing signs of emerging from the last recession. It should offer assurances that even as all bubbles eventually burst then so do all recessions recede.

# A Lesson From History

This article first appeared in the Welsh Economic Review Volume 4 Number 2, 1991

## The Current UK Recession, the Timing of the Recovery and the likely effects on Wales.

Brian Morgan, Principal Economist, Welsh Development Agency \*

### Introduction: Data problems.

Recent UK data have displayed some unmistakable signs of recovery, even though the consensus is that the economic upturn is initially likely to be weak. However, because of the inevitable data lag of about 4 to 5 months, and assuming that the latest data are reliable then the early stages of recovery are already well underway. So, although the official CSO data will not confirm the upturn until it is almost the boom period, the production sector could grow sharply in the first half of 1992.

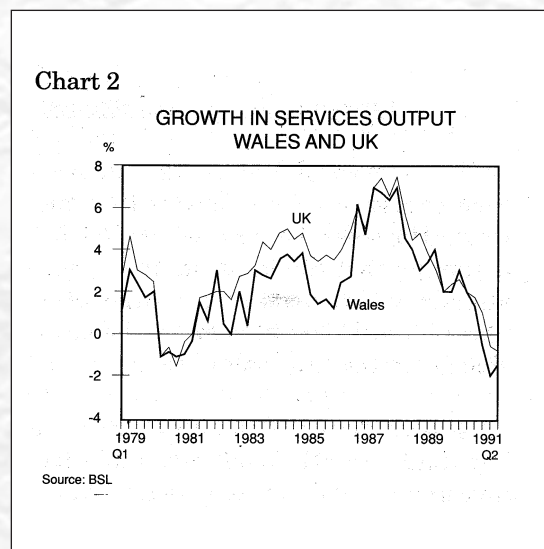
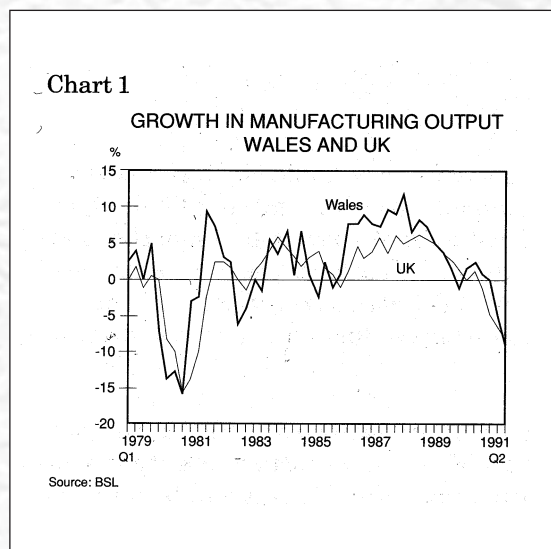
This lag between data and reality is even more pronounced in Wales because key data recently made available for the UK (e.g. manufacturing output and investment) will not become available until much later. Thus it will be difficult to discern the timing of the recovery in Wales from published data. Comparing the performance of the Welsh and UK economies during recent recessions may produce some useful insights.

### Recent Recessions

The main point is that, although UK output has stopped declining, there is nothing automatic about the shape of the recovery. Economists talk of "V"-shaped recessions (i.e. rapid recovery), "U"-shaped (weak recovery) and "W"-shaped (early recovery followed by a further, small, recession).

A comparison of manufacturing growth in Wales and the UK since 1979 in Chart 1, shows some interesting patterns: (i) in the UK, recessions were normally "V"-shaped but often "W"-shaped in Wales. (ii) the recovery phase often began sooner in Wales than the UK. (iii) the peaks were higher and more sustained in Wales, which confirms the view that manufacturing growth was higher in Wales than the UK in the 1980s

Chart 2 contrasts service sector growth with manufacturing over the same period. (Services include both public and private sector services.) Other interesting issues are revealed: (iv) service sector recessions were much milder in both Wales and the UK. (v) there were only two recessions; one in 1980 and one this year. (vi) the current recession in services is no worse than in 1980.



### A Service Sector Collapse?

There is a misapprehension in the financial press that the current recession has been dominated by the collapse of the service sector. The reality is that services, in output terms, have fared no worse in this recession compared with the last one. The main difference is that the manufacturing sector has not collapsed as badly as it did in 1980.

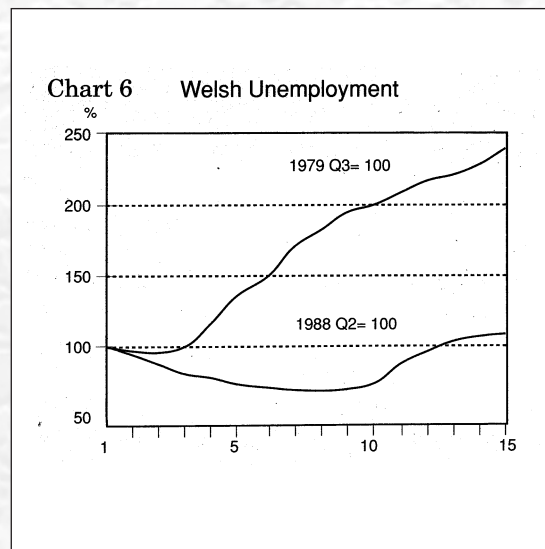
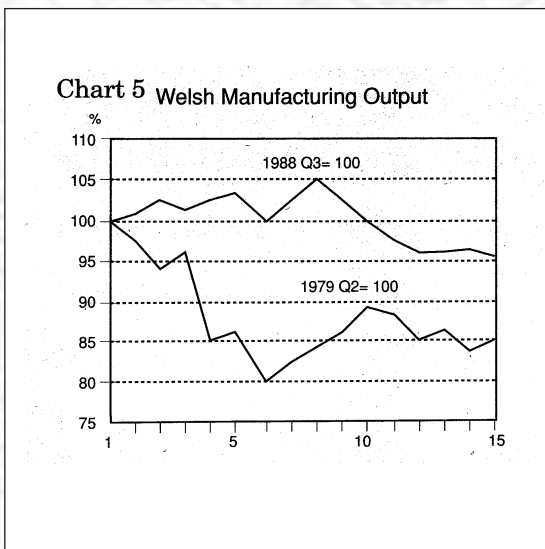
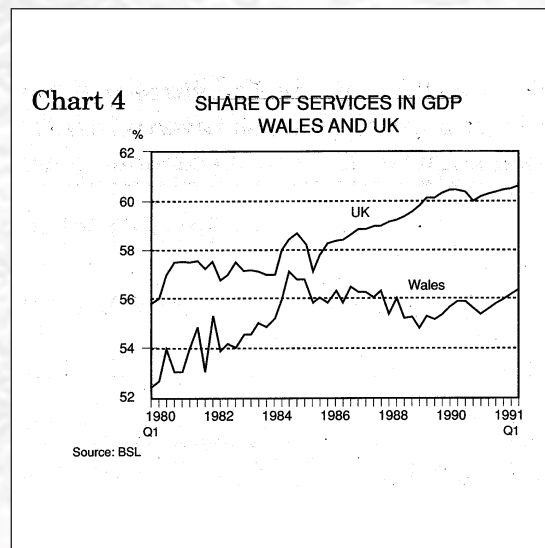
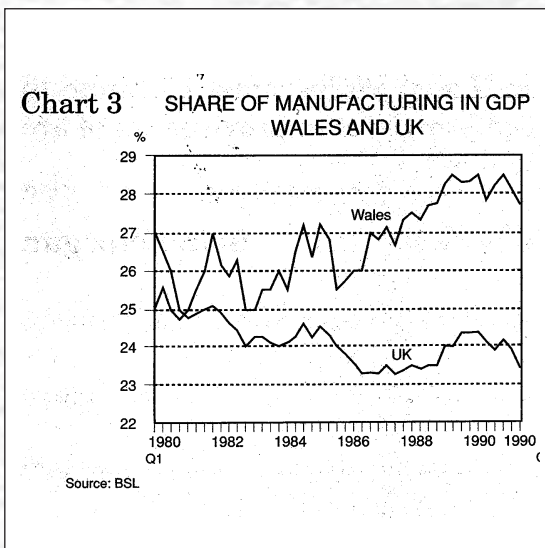
The service industries appear to have contracted more sharply during the current recession because services sector employment has fallen rapidly. This sector is now in a similar position to that of manufacturing a decade ago: under strong financial pressure to cut costs following a period of heavy investment and borrowing. In many service sectors, notably financial services and telecoms, this investment left companies carrying surplus manpower, just as manufacturing did after the 1970s investment boom. There is therefore great scope for higher productivity in the service sector of the economy - especially in the South East where much of the investment was concentrated.

### Recessions Compared

The result was that, in 1979/81 manufacturing lost five times as many jobs as services but in 1989/91 job losses have been identical. This

contrast between the manufacturing and service sectors has important implication for the prospects for economic recovery in Wales. Charts 3 and 4 present trends in the share of manufacturing and services in GDP. They show that Wales has expanded its manufacturing base relative to the UK but that the service sector share, despite some recent growth, remains below the UK average.

These comparisons favour Wales in that manufacturing job losses will be much lower than in 1980 and a stronger manufacturing base in 1991 should enable Wales to out perform the UK.



Output and Unemployment = Quarterly response following onset of recession.

Similarly, the surge in productivity in the service sector is likely to adversely affect the UK economy more than Wales because the heavy investment programme in services is only now getting underway in Wales. However, this is likely to mean less take-up-of new employees in the service sector in Wales, as employers learn from the South East's experience, rather than widespread redundancies.

**Conclusion**

So, the recession is likely to be milder in Wales, recovery is probably underway, but official data will not confirm or deny this trend until well into 1992. Existing data, illustrated in Charts 5 & 6, show a much more resilient response by the Welsh economy in 1990/91 compared with 1979/80.

The one pessimistic note is that service sector employment growth in Wales, as opposed to output growth, will probably be less now than previously envisaged. Thus existing firms in both sectors need to be encouraged to invest at an early stage in the current economic cycle and Wales must continue to attract a major share of inward investment. Subject to these provisos there are good auguries for future economic growth in Wales.

Footnote: \* The opinions expressed in this article are those of the author and do not necessarily represent the views of the WDA



# Foreign Direct Investment in Wales: Past, Present and Future

Max Munday and Annette Roberts, Welsh Economy Research Unit and ESRC Centre for Business Relationships, Accountability, Sustainability and Society (BRASS)

## Background

The attraction of foreign direct investment (FDI) and its impacts on the Welsh economy have been an integral part of the regional economic policy debate for many decades. The nature of the debate has changed dramatically in the last two decades. During the 1980s policy resources were strongly oriented towards the attraction of large internationally mobile projects. During the nineties policy documents steered towards an emphasis on endogenous growth and with greater resources focused on indigenous firm development, SMEs, knowledge and learning. FDI, however, continues to be an important part of the Welsh economy, in terms of employment and output contribution, its contribution to Welsh exports, and its potential spillovers impacts to other parts of the regional economy.

This short paper provides a brief data overview of FDI at a global, national and local level, and offers some insights into the possible future directions of FDI. There are a range of data sources used for the analysis of FDI in Wales, and these sources vary in terms of information provided and time period covered. Hence the Welsh analysis presented later contains a mix of data, often relating to different periods. The aim however is to paint a contemporary picture of the scale and scope of FDI in Wales and to comment on changes in FDI in the recent past.

## A global and national perspective

Table 1 shows the global profile of FDI for 1990 and 2007, and demonstrates the increasing significance of FDI to the world economy. Global FDI inflows were estimated to be \$202bn in 1990. The growth of FDI inflows reached a peak of \$1,411bn in 2000 and then fell back in the global slowdown period up until 2003. Global FDI inflows increased again from 2004 and reached a new high of \$1,833bn in 2007. UNCTAD estimated that foreign affiliates employed almost 82 million people in 2007, and that their activity accounted for around 11% of global GDP (*World Investment Report*, 2008, p.9).

Table 1 further shows the extent to which FDI inflows were dominated by cross-border merger and acquisition (M&A) activity. In 2007, the value of cross-border M&As grew to a record \$1,637bn, whilst the number of greenfield FDI projects fell between 2006 and 2007.

The UK remains the largest FDI recipient nation in Europe. In 2007, FDI inflows into the UK were almost \$224m, having increased sharply over the year. In 2007 inward FDI flows were equivalent to almost 45% of gross fixed capital formation, with the inward FDI stock representing almost 50% of UK GDP. The impacts of the global financial crises have yet to be reflected in the official statistics, and UNCTAD have commented on the difficulties of

making predications relating to future FDI flows at this time (see more on this later).

## FDI in Wales

The importance of FDI both globally and nationally has already been outlined. FDI has a long and varied history in Wales. The first comprehensive study of FDI in Wales was by Davies and Thomas (1976). According to this study, by 1974 there were 127 foreign-owned companies in Wales, employing almost 53,000 people. Around 90% of Welsh FDI employment at this time was in North American-owned companies. The region has, in general terms, performed well in terms of its share of UK FDI. The 1980s can perhaps be seen as the 'golden age' of FDI in Wales, it being the most popular UK location for foreign manufacturing investment (see Hill and Munday, 1992). During the latter part of the 1980s the increase in Asian investment was stimulated by European policy and various anti-dumping measures. At this time, the Welsh economy was growing at a relatively fast rate, and part of this success was linked to inward investment.

During the 1990s, there was a movement away from the inward investment model of regional development towards local industry development and the promotion of SMEs etc, with some major reversals in the Asian owned manufacturing sector in Wales. In 1996 Wales secured a £1.7bn

**Table 1: Selected indicators of global FDI and international production, 1990 and 2007 (Current prices)**

	Value in current prices (billions of US dollars)	
	1990	2007
FDI Inflows*	202	1,833
FDI Outflows*	230	1,997
Inward FDI stock*	1,779	15,211
Outward FDI stock*	1,815	15,602
Cross-border M&As	200	1,637
Sales of foreign affiliates	6,126	31,197
Gross product of foreign affiliates	1,501	6,029
Exports of foreign affiliates	1,523	5,174
Employment of foreign affiliates (in thousands)	25,103	81,615

\* Note: Whilst global FDI inflows (stocks, and income) should theoretically equal global FDI outflows (stocks, and income), differences arise due to recording and accounting variations between countries.

Source: UNCTAD (*World Investment Report*, 2008, table I.4. page 10)

investment by Korean owned LG Electronics and Semicon. This was to involve multiple phases of production in an electronics plant and in a semiconductor production facility. In total, this investment projected the creation of 6,000 in the period to 2001. LG however faced problems in the global semiconductor market as well as in the Korean economy, and many of these jobs never materialised whilst others were short lived. There was considerable debate about the levels of public funding offered or received by LG. This funding included Regional Selective Assistance, various infrastructure and property grants from the WDA, as well as local authority and other grants and support.

The 1990s were a period of growing globalisation, with increasing competition for FDI from Central and Eastern European States. During this decade the English Regional Development Agencies were also established, adding to the competitive pressures in relation to the attraction of FDI.

During the last ten years or so manufacturing in Wales has been under considerable pressure from cheaper factor cost locations, most notably from Central and Eastern European states. Sectors such as electronics, automotive components, textiles and clothing have been particularly vulnerable. There have been a number of foreign-owned firm exits in Wales. These have mostly, but

not exclusively, been in the manufacturing sector. Examples of recent FDI closures include Matsushita (Panasonic) in Cardiff (2000), Matsushita (Panasonic) in Neath Port Talbot (2006), Valeo Climate Control in Swansea (2001), Nippon Electric Glass Ltd in Cardiff (2005) and Sharp Precision Manufacturing (UK) Ltd in Wrexham (2005).

Despite the changing nature of the global and national competitive environment, and with more limited resources to actively market the region, Wales continues to attract relatively high levels of UK inward investment. Table 2 shows that the South East of England and London have dominated in terms of new projects during the period

**Table 2: Regional inward investment, 2001/2 to 2006/7 totals.**

	<b>No. of projects</b>	<b>No. of new jobs</b>	<b>No. of safeguarded jobs</b>	<b>Total no. of associated jobs</b>
East Midlands	331	8,283	11,100	19,383
East of England	404	8,555	11,175	19,730
London	1,492	23,868	6,766	30,634
North East	364	19,386	16,970	36,356
North West	460	23,192	14,285	37,477
Northern Ireland	178	13,297	19,618	32,915
Scotland	399	20,863	11,833	32,696
South East	1,014	24,464	14,143	38,607
South West	258	8,377	16,210	24,587
UK Wide	11	250	25,631	25,881
Wales	362	21,123	17,329	38,452
West Midlands	466	20,945	37,222	58,167
Yorkshire & Humber	262	11,538	8,259	19,797
<b>Total</b>	<b>6,001</b>	<b>204,141</b>	<b>210,541</b>	<b>414,682</b>

Source: Published figures from the UKTI Database

**Table 3: Overseas Inward investment in Wales, 1984 – 2007.**

<b>Project type</b>	<b>1984-1987</b>	<b>1988-1997</b>	<b>1998-2007</b>	<b>Total</b>
Acquisition	16	101	76	193
Expansion	92	384	282	758
Joint Venture	9	13	9	31
New	85	189	190	464
<i>Total number of projects</i>	<i>202</i>	<i>687</i>	<i>557</i>	<i>1446</i>
Jobs – new	14178	47879	37634	99691
Job – safeguarded	9664	35633	25630	70927

Source: IBW database (DE&T, Welsh Assembly Government)  
 Database was maintained by Welsh office from 1983 to 1995  
 Database maintained by WDA from 1996 to 2006  
 Database maintained by IBW (DE&T) since 2006

shown, but that the distribution is more equal between the regions in terms of jobs. However, relative to its size, Wales attracted a higher percentage of FDI projects and jobs. With just under 5% of the UK population, Wales attracted 6% of UK projects and over 9% of associated jobs during the period shown in Table 2.

Table 3 focuses on overseas FDI in Wales from 1984, and shows the composition of projects, the associated new and safeguarded jobs. The table shows stability in the number of FDI projects and jobs over the period, and that expansion and new projects far exceed the number of acquisitions and joint ventures in Wales.

Historically, the main interest in FDI in Wales and the UK has been in the manufacturing sector. Limited data was collected nationally or locally on FDI in the services sector in Wales until

comparatively recently.

Figure 1 shows employment in the foreign-owned manufacturing sector in Wales since 1980. This data shows that, despite a recent trend of closures and divestments in the foreign manufacturing sector in Wales, total employment does appear to have increased in the period to 2007. Examples of foreign-owned manufacturing companies operating in Wales at present include Ford in Bridgend, GE in Caerphilly, Dow Corning in Barry, International Rectifier in Swansea and Sony (which has scaled down production considerably in recent years) in Bridgend.

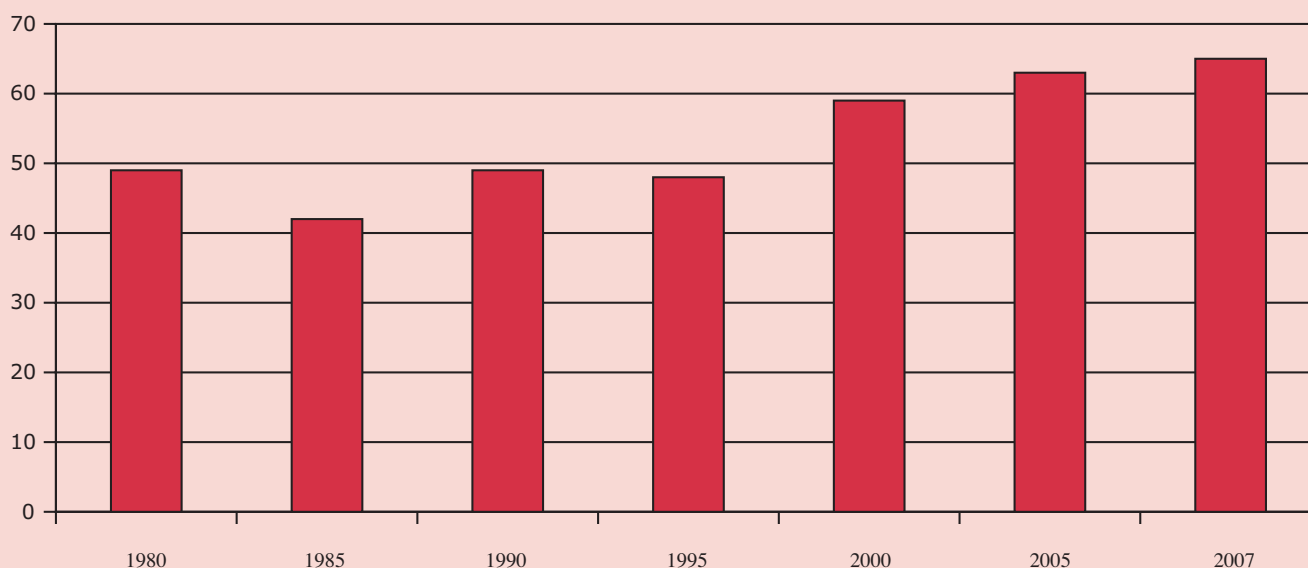
A more interesting development has been the significant growth in service sector FDI. Table 4 shows that FDI employment in the wholesale and retail industries increased from around 7,400 in 1998 to almost 24,700 in 2005. This

number will have grown again since then, particularly as a result of the recent arrival of Amazon. The location of Amazon in Neath Port Talbot was announced in 2007 and at that time 1,200 new jobs were expected to be generated by the US owned company. Employment in the foreign-owned hotel and restaurants sector was over 6,000 in 2005, growing from almost nothing in 1998. FDI employment in real estate, renting and business activities was over 9,000 by 2005.

Figure 2 shows the countries of origin of FDI in Wales. The US is still by far the main provider of FDI employment in Wales, accounting for around 36% of FDI employment in 2007. European countries now represent almost half of Welsh FDI employment, with Italy and Spain having the highest employment shares in 2007.

Figure 3 provides an analysis of the ABI

**Figure 1: Employment in Foreign-owned manufacturing companies in Wales, selected years, thousands.**



Sources: 1980-1995, ACOP, 2000 and 2005, ABI, 2007, IDBR, ONS. Figures for 1980 and 2007 are estimated.

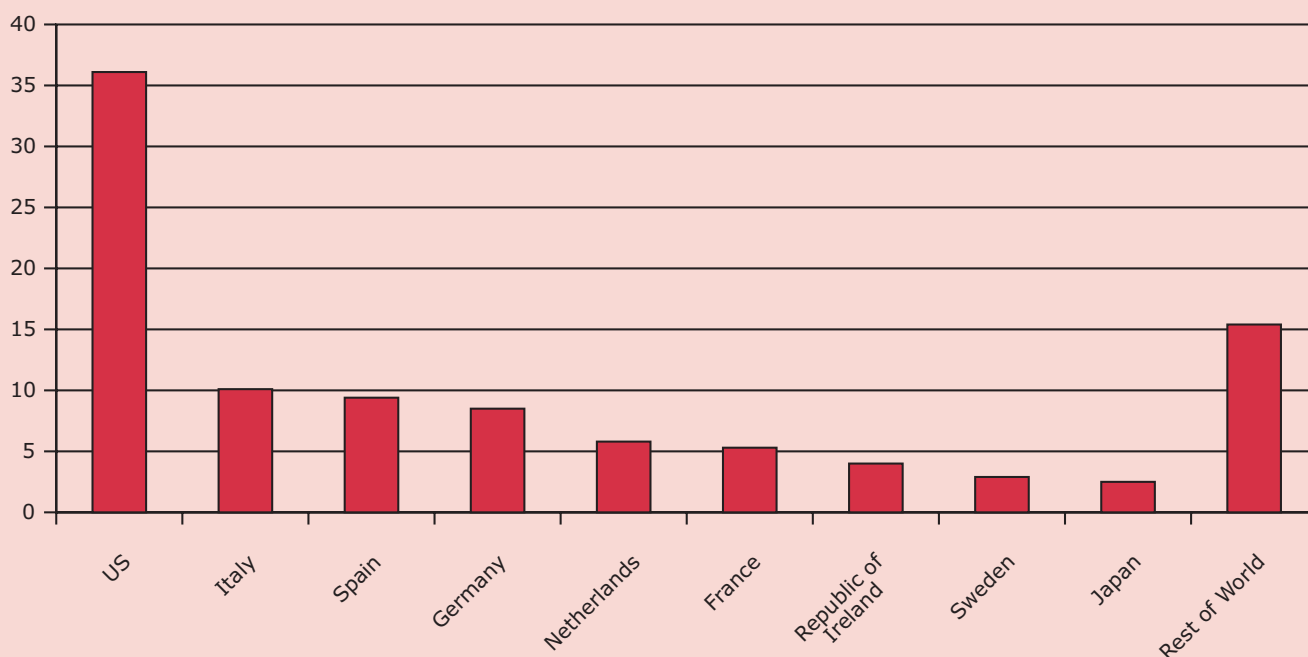
**Table 4: Foreign owned company employment in Wales, selected sectors, 1998 and 2005**

Total Number of Employees	1998	2005	Change %
Manufacturing	43,379	63,304	46
Construction	367	1,945	430
Wholesale and retail trade	7,373	24,693	235
Hotels and restaurants	162	6,032	3,623
Transport, storage and communication	2,175	7,613	250
Real estate, renting and business activities	4,936	9,168	86
Health and social work	*	2,802	-
Other services	577	1,422	146

\* data not reported due to disclosure problems

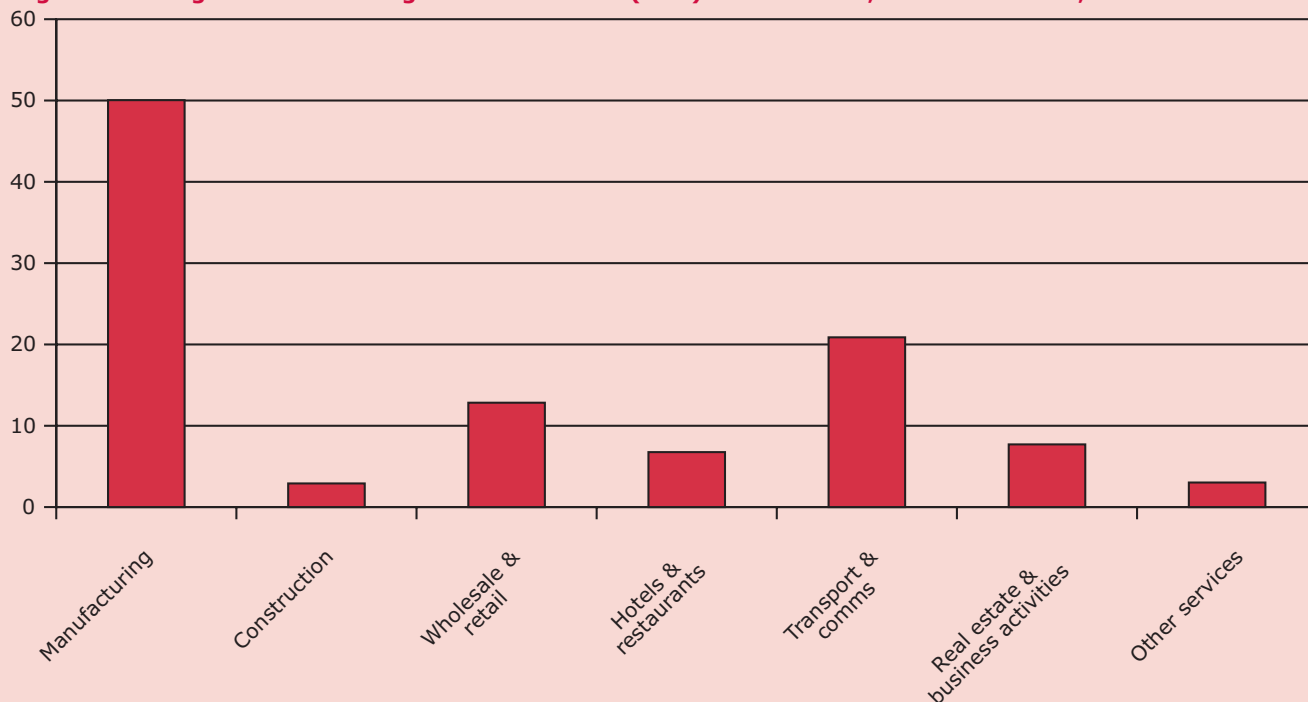
Source: ABI special analysis

**Figure 2: Employment in Foreign-owned enterprises in Wales by ultimate country of ownership, %, 2007.**



Source: Inter-departmental business register (IDBR), Office for National Statistics.

**Figure 3: Foreign-owned sector gross value added (GVA) as % of total, selected sectors, 2005.**



Source: ABI special analysis.

data where available to show the significance of the foreign sector in terms of gross value added share. The figure shows the significance of foreign-owned firms to manufacturing in Wales, accounting for half of all GVA in the Welsh manufacturing sector. In the transport and communications sector, just over 20% of GVA was in foreign-owned companies. Table 4 shows

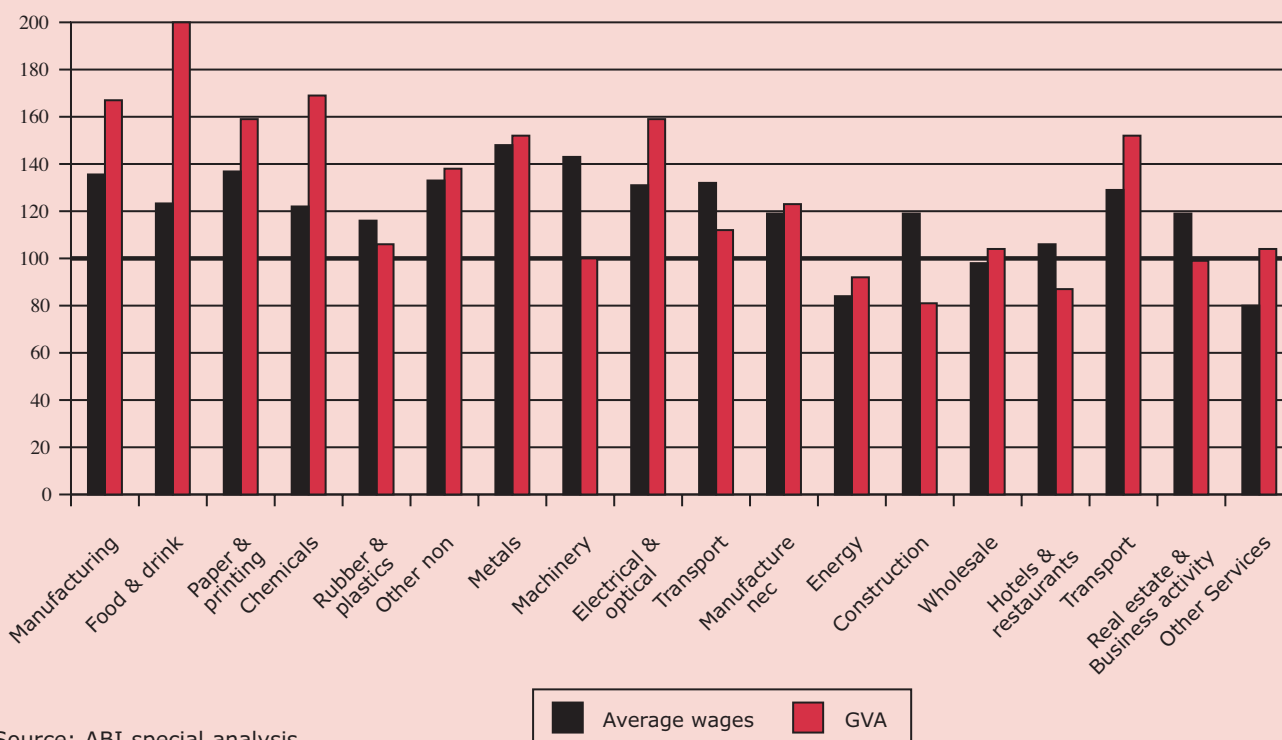
significant numbers employed in the foreign-owned wholesale and retail sector, and the strong growth profile of employment since 1998. However in the retail and wholesale sector only around 13% of total sector GVA was in foreign-owned firms.

One important rationale for attracting FDI has been that this investment has

different characteristics from domestic firms. These characteristics include the fact that on average, foreign-owned companies are larger, and have higher GVA and earnings per head compared with domestic firms in the same sector. To a large extent the ABI data shows this to be the case for FDI in Wales.

In most of the sectors shown in figure 4,

**Figure 4: Average wages and GVA per employee in foreign-owned companies as a % of the domestic sector, selected sectors, Wales, 2005.**



Source: ABI special analysis.

GVA per employee and average wages in the foreign-owned sector exceeded those of domestic firms in the same sector. For example, in manufacturing (the all manufacturing average is shown in the first 2 bars of figure 4), average wages were over 30% above the domestic sector, whilst GVA per employee was over 60% above. Those sectors where average wages or GDP per employee in the foreign-owned sectors were below the domestic sector were outside of manufacturing.

There are however some problems in comparing the foreign and domestic sectors in Wales. Due to the relatively aggregate nature of the data, there are not for example any controls for skills within defined sectors. Even if firm level data were available, within Wales there are very few domestic firms which could be usefully compared with similar foreign firms.

**The future**

As already noted, it is extremely difficult during this time of economic uncertainty to comment with any great confidence on likely trends in FDI flows in the near future. Usefully however the latest UNCTAD World Investment Report contains a chapter on the current

financial crisis and FDI flows, and the key points mentioned in that report are as follows:

- The problems relating to sub-prime mortgage lending crisis are also affecting FDI flows, mainly due to impacts on cross-border M&As.
- The scale of impact will depend on how the crisis affects lending to the corporate sector and other foreign investors.
- The crisis has led to a decline in the issuance of corporate bonds, while credit available for investment has fallen.
- The crisis has mainly affected North American and European commercial investment banks, whereas negative effects on the Asian financial system have been fairly limited.

UNCTAD also commented on the influence of the falling dollar on FDI decisions. Whilst the impacts of exchange rate changes on FDI flows are less than clear, UNCTAD note that 'there are some discernible cases of European firms that increased their FDI in the US in reaction to the appreciating euro' (p. 19).

In the longer term, and at a regional level, it is expected that manufacturing

FDI in Wales will shrink in terms of its employment and output contribution with FDI in services continuing to become more significant. What is clear is that Wales is battling far harder to win new inward investment, and in particular having to compete against the EU Accession states which have moved quickly to market themselves as potential FDI locations.

At the same time the real level of resources available to market Wales overseas is under considerable pressure. The strong track record of Wales in offering a competitive business climate for incoming foreign firms, providing appropriate physical infrastructure, together with a successful record of meeting inward investor needs is expected to mean that Wales continue to hit above its weight in attracting foreign capital for the future.

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# GVA per capita Trends: Is Wales Bridging the Divide?

Joel Strange\* and Max Munday, Cardiff Business School.

Other articles in this *Review* hint at the problems associated with gross value added as a measure of welfare, particularly when used to compare economies. This article accepts some of the problems inherent in focusing on gross value added as a measure of regional progress, but provides a consideration of how far Wales is converging with other parts of the UK on this measure. The article considers recent trends in regional income distribution and whether it has become more equitable over time. Examining regional income convergence enables us to better contextualise Wales's recent economic performance. At the outset the analysis was undertaken with historical data, and we are mindful that the GVA series for Wales is continually being updated and revised. Notwithstanding we believe that the paper provides a snapshot of the extent to which Wales is succeeding in 'bridging the divide'. The article has a further relevance in that when the *Review* was established 20 years ago gaps in economic prosperity between Wales and other parts of the UK were very much on

the policy agenda. However, the divergence between Wales and other parts of the UK on conventional economic measures has been very persistent, and with Wales still well down the economic prosperity league in the UK.

## Great Britain: Regional Convergence post 1975

The literature on economic convergence considers two concepts.  $\beta$ -convergence is said to exist if poorer regions tend to grow more quickly than rich ones (Sala-i-Martin, 1996). The second concept,  $\sigma$ -convergence, applies where regions are converging in terms of the dispersion of per-capita income between them. This can be measured by the sample variance of the regions' incomes (Barro and Sala-i-Martin, 2004).

GVA per-capita statistics for eleven UK Government Office Regions (GORs) are available from the Office for National Statistics from 1989. This data is produced in nominal terms and has serious shortcomings for any analysis of convergence. One key issue is that

regional price differences are not accounted for (Henley, 2004). There has been some limited progress towards creating regional deflators (see Morris (2001) and Riefler (2006)), but there construction depends on numerous assumptions. Then in the analysis here the focus is on income convergence in *nominal* terms.

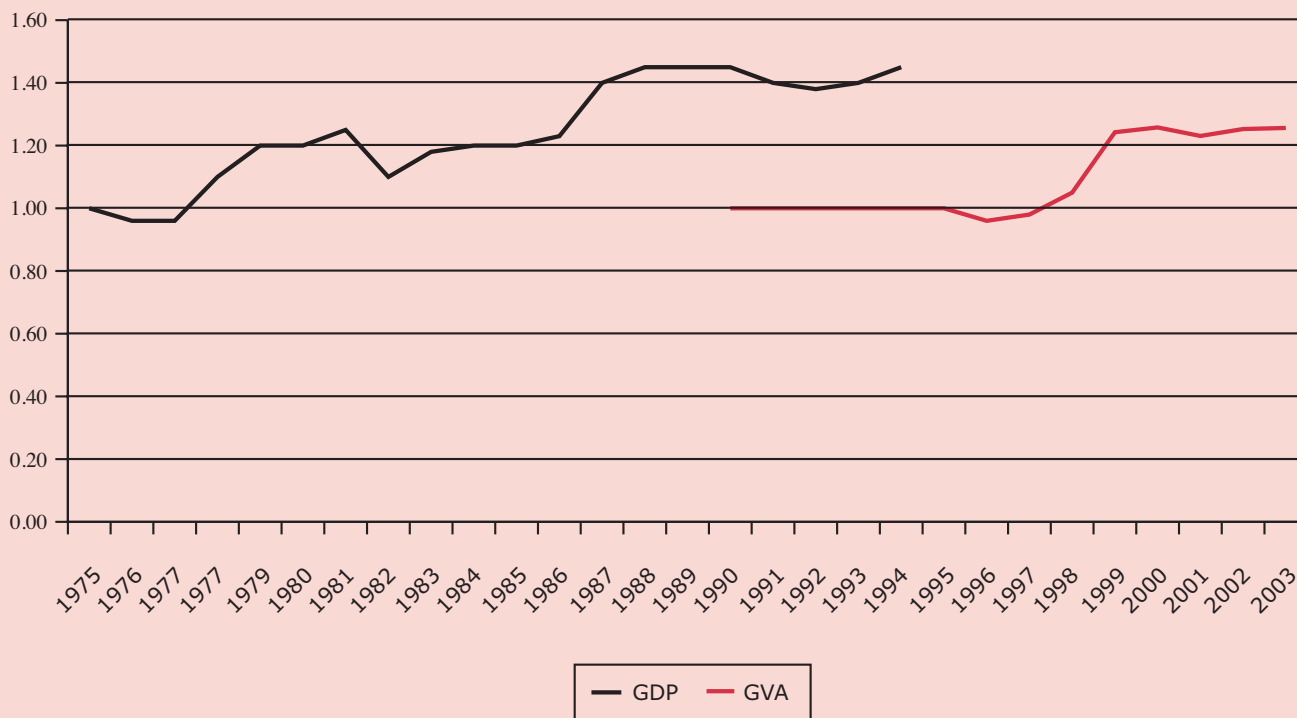
First  $\beta$ -convergence is considered. To consider this it necessary to use the regression:

$$\ln(y_{i,t+T} / y_{i,t}) \frac{1}{T} = \alpha + \beta \ln(y_{i,t}) + e_{i,t} \quad (1)$$

where  $y_{i,t}$  is region  $i$ 's income per capita at time  $t$  and  $e_{i,t}$  is an error term with the usual properties. If we find that  $\beta < 0$  ( $\beta > 0$ ), then there is a tendency for poorer regions to grow more quickly (slowly) than richer ones; the regions are considered to be  $\beta$ -converging ( $\beta$ -diverging). Since this model includes just one explanatory variable,  $\beta$  is interpreted as the rate of divergence with no other variables held constant.

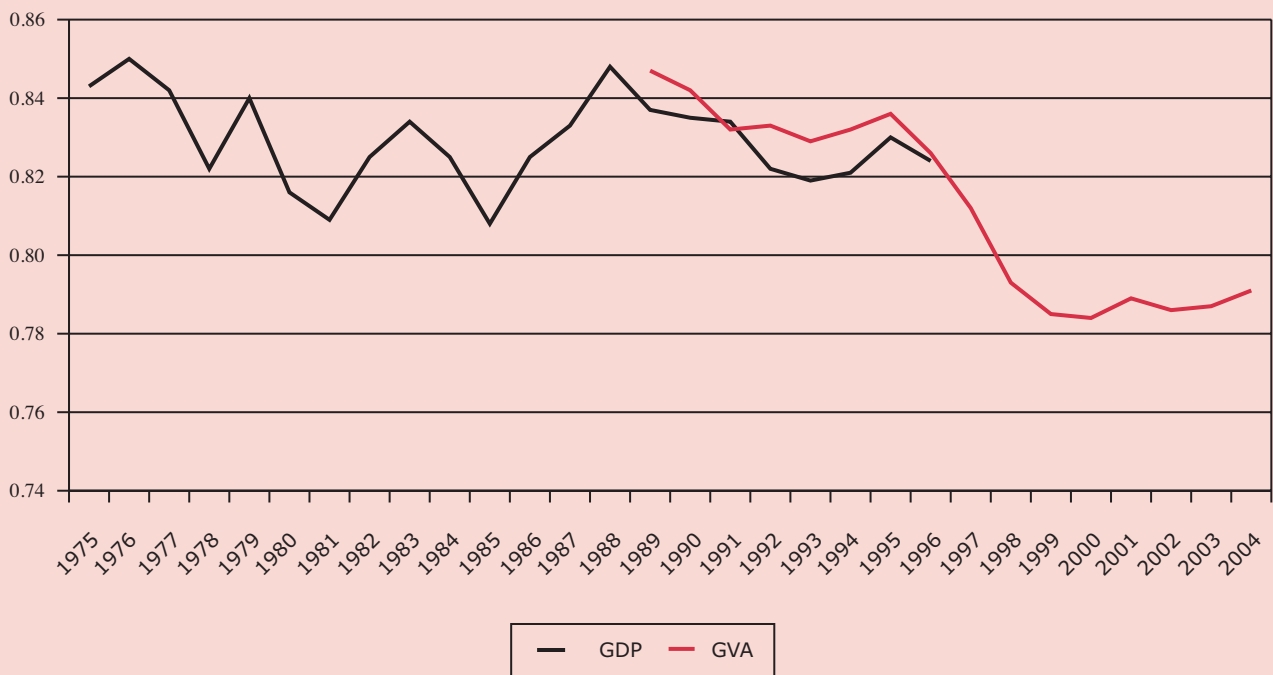
Equation 1 can be estimated by

**Figure 1: Variance of regional GDP 1975-95/GVA 1989-2003 as a proportion of the UK average – 1975/1989=1.00**



Note: The GDP measure changed to a GVA measure during the period shown in Figures 1 and 2, hence there is a break the series shown in these two figures

Figure 2: Welsh GDP/GVA per-capita as a proportion of the UK average, 1975-2004



Source: Derived from ONS sources.

Table 1: Estimate of  $\beta$

Data Set	$\beta$	S.E.	t-statistic	R <sup>2</sup>	S.E. Regression
GVA 1989-2004 (less Northern Ireland).	0.0053	0.0017	3.04	0.51	0.00071

regression with GVA per-head data for the period 1989 to 2004. The results for  $\beta$  are summarised in Table 1 and reveal that  $\beta > 0$ , which is statistically significant at the 1% level implying that there has been *divergence* amongst UK regions of around half a percentage point per-year since 1989.

In terms of the  $\sigma$  convergence, the UK has experienced income divergence since the middle 1970s. Here we use a longer term dataset which includes GDP per capita data back to 1975. Figure 1 shows summary information about the dispersion of GDP per-capita between 1975 and 1995. Whilst there were some brief interludes of  $\sigma$ -convergence, the general trend is clearly upwards, implying that the variance of regional income has become progressively larger. Figure 1 also reveals that there was further regional  $\sigma$ -divergence for the later period of 1989 to 2004. Most of the divergence in this period took place between 1996 and 1999. This means that the income distribution between UK regions has become less equal over time. In general, the wealthier regions enjoyed comparatively high economic growth, whilst poorer ones, including Wales, languished at the bottom of the regional growth league table.

The analysis summarised here should also be viewed against a backdrop of convergence, or at least no divergence, between regions of the EU (see for instance Armstrong (1995) and Neven and Gouyette (1995)).

**What about Wales?**

We now focus on Wales’s economic performance in recent years, considering whether it has bucked the trend of regional divergence or whether in fact it has typified it. During the period 1989 to 2004 Wales was amongst the slowest growing regions of the UK. This growth profile is accentuated in Figure 2 showing how GVA per capita in Wales, as a percentage of the UK average, changed between 1989 and 2004. Many of the relatively poorer regions of the UK in the period 1989 to 2004 fell further behind in relation to the UK average (the notable exception being Northern Ireland). However, it was Wales that saw the largest fall. In other words, Wales ‘diverged’ more than any other region between 1989 and 2004.

Figure 2 also shows that while the period 1975 to 1988 saw relatively large

fluctuations in Wales’s relative GDP, the mean remained broadly constant. However, from the late 1980s to the turn of the twenty-first century, Welsh GDP and subsequently GVA experienced a considerable fall in relation to the UK average.

We finally consider Wales’s current position in terms of GVA per head. In 2006 provisional figures from the ONS suggest that Wales’s GVA per capita was £14,400 or just 77% of the UK average. This if anything marks a continuation of the trends in Figure 2, and marks Wales out as the poorest UK region on conventional measures. In summary, by these measures of prosperity, Wales lags behind the rest of the UK. Moreover, over the last fifteen years or so, Wales has performed poorly not only in relation to the national average, but compared to every other region in the UK.

**Some conclusions**

Elements of WAG sponsored research have investigated the causes for the GVA per capita gap, and its development. A real issue has been falling productivity in Wales relative to the UK as a whole. In fact, whilst in the

late 1980s it was low levels of employment (relatively high levels of inactivity) that were a key determinant of Wales's low GVA per-capita, it is now Wales's comparatively low productivity. What explains Wales's falling productivity relative to the UK average? Particularly important are changes in the industrial structure of Wales compared to what has happened across the UK as a whole. The recent past has seen a movement in employment from more productive sectors, such as manufacturing and financial and business services, to relatively less productive sectors such as distribution and hotels and education and health. Importantly between 1995 and 2001 these changes have happened in Wales at a faster rate than has occurred in the

UK as a whole. The corollary of this is falling average productivity per worker in Wales relative to the UK.

While these trends continue, and an examination of the forecasts of the major regional forecasting groups supports this for Wales, then it is unlikely that the trend summarised in Figure 2 will improve. Indeed, in the context of current patterns of structural change, maintaining the gap between Welsh GVA per capita and the UK average could be a real regional economic challenge.

*\*Joel Strange is currently working with the World Trade Organisation, and is undertaking postgraduate studies at Oxford University.*

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# Rethinking the Region: Actions for a Sustainable Welsh Economy

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"We know what happens to people who stay in the middle of the road. They get run down."

Aneurin Bevan

## Introduction

There are few today who would argue that the conjunction of growth-oriented capitalism with the technical ability to extract and combust hydrocarbon fuels on a massive scale has resulted in extreme pressure on a number of global ecosystems. Many ecosystems not yet directly impacted by human-origin climate change have faced the more mundane problem of extreme over-exploitation, with many fish stocks, fresh water supplies and levels of important biodiversity in danger of collapse. In part this has been painted as a population problem, and one that is set to worsen, but with natural resources having been so far consumed in a hugely disproportionate fashion by Western/Northern countries whose populations are now static or in decline, a focus on population neglects the central cause of existing environmental pressure: *economic* rather than population growth.

The development of the corporation in the 17<sup>th</sup> and 18<sup>th</sup> centuries as a legally separate entity with a single requirement to maximise shareholder value (in the UK and US cases at least) has led modern capitalism to develop in a way which values profit growth, and hence firm, sector and economy growth, above all else (Joel Bakan's film and book *The Corporation* provides an interesting polemic).

Meanwhile, startling technical developments and an increase in efficiencies due to trade have led in the West to an immense surplus of wealth over our fundamental needs of food, shelter and clothing. Rather than this surplus generating a debate on what to do 'next', now that capitalism has done its job of making lives comfortable, firms have responded to protect their own existence by convincing 'consumers' that they cannot be satisfied with their current level of consumption or material wealth, and hence consume ever more in search of happiness. This is, of course wholly self-defeating for the consumer, engendering no more actual satisfaction, and according to Hamilton and Dennis (2005) actually far less. Importantly, it results in an increasing proportion of resources being allocated to non-productive use which nevertheless

protects or enhances market share. These include advertising and marketing; the production of dozens of differentiated products that do the same job; and the aggressive creation of a need for a product where none formerly existed (for example, the marketing of deodorants to non-Western populations who were hitherto unaware that they smelled or razors with an ever-increasing number of blades).

Events throughout 2007 and 2008 suggest that not only is the current economic system environmentally damaging, but also that it may be a good deal less efficient and stable than was previously thought. Additionally, as environmental pressure increases, and the need for climate action becomes more pressing, an economic (and value) system which prioritises (indeed *needs*) ever increasing consumption appears fatally flawed. There is then a strong rationale for a reconsideration of capitalism at a fundamental level. Despite, indeed because of, its small size and relative lack of 'prosperity' Wales is ideally placed to be among the first regions to forge a new approach to economic production and consumption.

## A New Approach?

Progress made in recent years toward reining in environmental damage caused by resource exploitation has been extremely patchy. This arises in part from an incoherence and fragmentation in the conceptualisation and hence implementation of sustainable development policy. The ultimate objective of policy, in Wales as in most other regions is to increase the level of economic activity or output, with this by implication raising the income and welfare of Welsh residents. Whilst individual policy actions might thus be considered 'sustainable', their success will still result in an increase in consumption, and thus an increase in the Welsh contribution to climate change emissions, natural resource depletion and ecosystem fragility. The policy paradigm here rests wholly on a largely unspoken assumption that consumption can be made income-neutral (or spun 180 degrees to have an inverse relationship), and that this can be achieved not in generations or decades, but in mere years. Work being undertaken by DEFRA suggests this to

be a very tall order (see [www.defra.gov.uk](http://www.defra.gov.uk)). At the same time, of course production and distribution systems for goods must be largely decarbonised, further complicating the policy context.

There is an alternative to the above, which involves a pause and reflection to consider what a regional economy is for, and how it might continue to deliver the goods and services a region needs in the face of far stronger local and global environmental, security and logistical risks – and very much higher energy costs (the 2008 World Energy Review is forthcoming). A pause for reflection might reconsider the following elements of our current regional economic development concept:

**The Need for Growth** – When one is a child, growth is good. When one is a mature adult, growth = more fat and is to be avoided. The analogy between adopting a less calorific, healthier (and hence safer) personal lifestyle, and re-engineering our economy in a similar fashion is trite, but illustrative. Meanwhile, the rationale for growth is often couched in terms of enabling the new wealth to be distributed to the most needy, either via governments or directly, as in Reagan's infamous 'trickle down' theory (see Andrew Simms, *New Scientist*, 18<sup>th</sup> October 2008). This, of course assumes first that ever-continued growth will be possible, and secondly that there will never be a time when there is finally enough money, food or shelter to 'go around' (either locally or globally). Gross disposable income per head in Wales was £12,300 in 2006 (£12,000 in West Wales & the Valleys) – around £30,000 for every Welsh household. If it was suggested to earlier generations that was this is not yet enough, reasonably distributed (and inflation adjusted), to provide a comfortable lifestyle, a robust response might have been forthcoming.

**A Competitive Region** – The reason that we do not sit back in satisfied repose and consider our comfortable lifestyle is because we do not compare ourselves to previous generations, but to our current peer group which is of course made vastly wider with the advent of mass and far-reaching media. Competition with the neighbours has

become a central plank of economic policy across many geographies and at different spatial scales – indeed, the Nobel Laureate economist Paul Krugman referred to competitiveness as ‘a dangerous obsession’ for nations and regions. The idea that the welfare or happiness of a population is measured on a relative, purely monetary, ranking of the level of economic activity occurring within an arbitrary administrative area is problematic to say the least. Yet chasing ever-increasing levels of economic gross value added in pursuit of the ever-receding target of a ‘UK average’ dominated by London and the South East has intimately shaped our economic life and physical surroundings for decades.

**A Reliance on External Actors** – Despite laudable intentions on the part of the Assembly Government, Wales has not developed a dynamic, innovative and high value SME sector that can compete internationally. We remain largely a back office region for national and multinational companies, with existing high value, non-Welsh owned activities such as steel, aerospace and automobiles vulnerable to contraction. Meanwhile our way of thinking about our economy is adopted wholesale from Whitehall, which itself promotes a mildly tweaked version of something that appeared to be a good idea in California twenty years ago. As a small, increasingly peripheral nation, Wales will always lag the larger motor regions if it follows the same template for development. The alternative, which considers how Wales might live sustainably largely on its own resources, both material and intellectual is worthy of consideration.

**Managing Change – Steps to a Sustainable Economy**

Moving from a growth agenda to a true development agenda for Wales clearly implies a host of changes in objectives and goals, in policies and in management tools. A fundamental first step is a restatement of public policy objectives. A first stab at this was made in 2005 by a group of economists drawn together by *Cynnal Cymru* (Table 1).

Table 1 contains elements which might attract criticism or debate, but its central thrust of prioritising the retention of natural resources, and of enhancing (or at least protecting) the basic welfare of Welsh residents is a coherent (albeit certainly not easy or cost free) alternative to the current growth paradigm. In fact, given the worsening of environmental conditions and forecasts since 2005, elements of Table 1 might be considered rather too weak. Casting forward from the adoption of a Table 1- type framework, one can imagine an overarching policy context which is clear in its motivation, transparent in its implementation and which gives firms and households absolute confidence in the policy and regulatory framework over the medium term. There are some policy implications that fall self evidently out of this strongly sustainable framework.

*The Emissions Test:  
There will be no single Assembly or partner policy which leads to a **net** increase in carbon emissions*

Any policy, infrastructure or way of thinking that relies upon the continued burning of fossil fuels at levels akin to (let alone more than) the current rate

beyond 2020 (let’s be generous) is wholly unfit for purpose, and exposes Wales to ever higher levels of vulnerability to environmental and energy pressures. Money should not be allocated to any such project, be it an M4 relief road, a business park at Junction 33 of the M4, or a new single use housing development remote from public transport links. Of course, such an appraisal is nowhere near enough to prepare us for a low carbon future, but it would be a start.

*Quality of Life:  
Policy proponents will demonstrate how their policy will improve the quality of life of Welsh residents, with improvements to outcomes for the poorest weighted most heavily*

Assembly policies should be benchmarked on their impact of the wider quality of life of those affected both as potential employees and local residents. There is also the need for a consistent and comparable policy framework and *ex ante* evaluation (something the Assembly has worked towards) – only in this way can the total (opportunity) cost associated with Assembly action be gauged and a hierarchy of policy actions developed.

*Bye Bye, FDI  
The attraction of Mobile Capital is a short-term fix and will not enhance the resilience of Wales’ economy for the longer term.*

No matter how long they stay, we are still devastated when they leave. The

**Table 1: A Welsh Sustainable Development Philosophy?**

<ul style="list-style-type: none"> <li>• Understands that society and its economy are wholly dependent upon the environment but not <i>vice versa</i> and treats the loss of irreplaceable resources for economic use appropriately</li> </ul>
<ul style="list-style-type: none"> <li>• Accepts both the intrinsic and economic importance of those natural resources</li> </ul>
<ul style="list-style-type: none"> <li>• Is mainly local and community-led in production, consumption work and leisure</li> </ul>
<ul style="list-style-type: none"> <li>• Does not rely solely on markets to attach long-term value to irreplaceable natural resources</li> </ul>
<ul style="list-style-type: none"> <li>• Has a higher level of public sector involvement in economic life than is currently the case, for example in the management of resources</li> </ul>
<ul style="list-style-type: none"> <li>• Actively plans and regulates current socio-economic activity for a low-carbon future</li> </ul>
<ul style="list-style-type: none"> <li>• Values improvements in welfare for lower income groups more than increases in overall wealth</li> </ul>
<ul style="list-style-type: none"> <li>• Attracts and retains people who empathise with the ethical stance that the philosophy adopts, to social and economic benefit</li> </ul>
<ul style="list-style-type: none"> <li>• Measures welfare improvements in absolute, not relative terms</li> </ul>

Source: Cynnal Cymru. Submitted to the Assembly Government as part of the consultation on Wales: A Vibrant Economy. A full paper is available from Calvin Jones. Jonesc24@cardiff.ac.uk

withdrawal of waves of foreign investors following often a very long term presence has left Wales no more dynamic or innovative than before they arrived (although the level of prosperity that we would have faced if they had not arrived is open to an interesting debate). Whilst FDI policies have provided substantial, high paid and welcome employment for Wales in the past, their time has passed, and we never managed to embed firms in a way which delivered high-value and locked-in activities. The realities of our expensive wage rates relative to competitor regions has combined with lower levels of FDI globally to diminish the level and importance of new inward investments; as consumer markets follow producers East, marginal returns to FDI activity will diminish more rapidly, and Western regions competing for investment will simply appear desperate. Living within our means should mean striving to live within our own sustainable productive capacity, and welcoming like-minded investors only should they proactively wish to be involved.

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*A Moral Economy;  
Wales will not export emissions to enable a consumptive lifestyle and will not support industries or firms which do not adhere to strict environmental and labour standards*

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There is little point in decarbonising Welsh production to then import goods that are carbon intensive, or to then engage in high-carbon lifestyles. A strong moral thread should be evident in Welsh economic policy, which is consistent with the Bruntland and other definitions of sustainability, making no distinction between the welfare of our own (current and future) residents and those of other regions or nations.

There are, of course, a myriad of other areas where a non-growth economic policy implies radical change: a number of these areas will be expanded upon in future editions of the *Welsh Economic Review*. Meanwhile, in terms of economic policy, measurement and evaluation will need to change radically.

### **Monitoring, Measurement and Evaluation of Policy**

Despite the aspirations contained in *Wales: A Vibrant Economy* in 2005, our region has developed no alternative to GVA that is appropriate to guide economic policy, with the Ecological Footprint only available infrequently, using a proprietary (and partially non-Welsh specific) approach and being expensive to estimate. We require a measure of welfare that disregards

unsustainable improvements, be these environmentally unsustainable; socially unsustainable (in terms of developing inequalities); or economically unsustainable (as has been recently the case with asset-bubble and debt-fuelled growth in the UK and US). A number of approaches have been investigated, but have run aground on the sand of the Assembly civil service, beached by a lack of methodological certainty. The time for such niceties is past. Fully describing an appropriate welfare indicator set is outside the scope of this article, but some useful characteristics might include:

*Quantification of Environmental Targets & Impacts* – The Assembly has introduced a laudable ambition to reduce carbon equivalent emissions from 2011 by 3% a year. This means we have a three year window to develop, test and refine emissions calculators that are able to quantify current levels of direct and indirect emissions across all areas of Assembly remit, plus allow for scenario and impact assessment to help develop efficient policy. At the same time, a number of non-climate change environmental limits are being breached, requiring the development and integration into policy of other tools that can assess the impact of activity on the exploitation of natural resources, or on other areas of deep ecological concern

*Make Risk Analysis Explicit* – Governments, like people, are bad at accounting for risks that are low-likelihood but high impact. As likelihood of adverse climate and other impacts increases, local risk-resilience is being incorporated into the planning of the Environment Agency, local authorities and others. A similar approach needs to be adopted to examine macro or systematic risk. For example the decision to support the creation of massive capacity at Milford Haven to land ‘cheap’ gas probably did not account for the possibility that three of the world’s largest producers of gas (Russia, Iran and Qatar) would move towards the creation of a gas ‘OPEC’, with the intention presumably of controlling supply and driving up price. The extent to which Assembly policies (economic, but also on housing, transport and elsewhere) imply lower levels of resource, energy or environmental security should be explicit.

*Have a Sophisticated Approach to Welfare* – £10,000 spent with an automotive retailer on upgrading from a BMW 320i to a BMW335i is unlikely to have the same welfare impact as £10,000 spent on the purchase of a family supermini. Policy evaluation

should reflect these types of considerations, and there are a number of ways of incorporating ‘graded’ welfare into indicators. For example, Gini coefficients provide an overall measure of income inequality, whilst there are various approaches to valuing human needs (*Maslow’s Hierarchy of Human Needs* being the best known) that might help prioritise policies that address the ‘basic’ needs of Welsh residents.

*Understand Wales as an Economic Entity* – We can only make the Welsh economy eco-efficient *and* morally guided if we understand it fully. Current ONS statistics are inadequate for this task, and the Assembly will need to develop tools which can trace the flow of goods, services and people in and out of Wales, and use this basis to properly assess our ‘carbon trade balance’ (and, indeed, use *social accounting matrices* to examine how the resultant economic surpluses accrue across companies and household types in Wales).

### **Conclusion: Can’t Get There from Here?**

This article begins to paint a picture of a very different Welsh economy and a very different Wales. It carries a host of undeveloped implications, not least the move to a largely localised production and consumption structure, with all the lifestyle changes that implies. Yet it should not be thought of as an alternative to the *status quo*. There is no status quo; resource debt is increasing and we have no way of repaying. The only uncertainty is which catastrophe hits first. Given that change is inevitable, we must decide how we react to that change; either by moving quickly towards a lower impact economy before we are forced to do so, or by waiting, in the hope that technological or societal solutions will arrive from outside our region to ‘solve’ ecological problems. There is no evidence that solutions are imminent, or that if they do arise, they will be appropriate for Wales. Yet again, we are likely to lag larger regions in adaptation.

The alternative is to forge a truly local approach to our pressing problems; to be amongst the first regions to re-shape our regional economy to deliver access to fundamental needs and a level of comfort for our residents as a first priority within long-term environmental limitations. Clearly, the Assembly is limited in its remit and powers, but a clear statement on its aspiration for the development of a steady state, sustainable and moral economy will have a huge impact. There will be short-term economic costs, as unsympathetic businesses and people decamp to less discriminating regions, and electoral pain as unsustainable household

behaviours are discouraged. But in the longer term, a far more resilient, localised and welfare oriented economy would develop. First-mover advantage would give us the products, skills and attitudes that could be exported to our neighbours, whilst a strong ethical 'brand' would attract like-minded footloose individuals and companies. As Jared Diamond points out in his sobering work *Collapse*, we will be forced to abandon many of our current values if we are to survive. It is time to assess which of our values can be retained and developed to sow the seeds of a new type of prosperity.

#### **Reference**

Hamilton, C and Deniss, R, (2005) *Affluenza: when too much is never enough*, Allen and Unwin.



## **Interview**

# Interview with Dr Steve Harris, Science Shops Wales



*Steve Harris is a Senior Lecturer in Science Communication at the University of Glamorgan, where he is responsible for managing Science Shops Wales, an innovative science-society interaction organisation funded by the Higher Education Funding Council of Wales. With a BSc in computing and a PhD in human-computer interaction, Steve's early research interests focused on the intersection between science, computers, communication and learning. His post-graduate training in cybernetics and activity theory, a holistic approach to systems analysis and design developed in Russian psychology and ergonomics, led to a growing interest in General Systems Theory and latterly, systems ecology, ecological economics and Earth Systems Science. Steve is a member of the International Society for Cultural and Activity Research, the British Computer Society, the BA, the British Society for the History of Science, the Institute of Welsh Affairs, and Scientists for Global Responsibility.*

*Science Shops Wales together with Cynnal Cymru/Sustain Wales and the Sustainability College of the Valleys are organising a conference on "A Prosperous Way Down? Exploring Green Economic Futures for Wales". The conference is to be held on Wednesday 28th January 2009 at City Hall, Cardiff. Contact [thornto@glam.ac.uk](mailto:thornto@glam.ac.uk) (01443 654526) for further information.*

## **What is Science Shops Wales, and why do you think its work is important?**

Science Shops Wales is an attempt to open up our Higher Education Institutions to civil society in Wales. With the backing of the Higher Education Funding Council of Wales, we're trying to use the resources and expertise of Welsh Universities to assist community organisations in their efforts

to generate new scientific and technical knowledge, the knowledge they need to contribute toward building an equitable and sustainable Wales. So we have University students, lecturers and contract researchers out in the community, working alongside citizen groups to try to find answers to knowledge-based problems they have identified for themselves. And we're doing it for free.

Science Shops Wales provides a very real example of putting these vast, state-funded institutions – the Universities – at the service of the people. It is a demonstration of the role enlightened Universities could play in shaping our common future, a role that looks beyond simply serving the needs and wishes of governments, industry and the military. By bridging the gap between science and society, between academia and citizens, we're hopefully making a contribution toward developing a genuinely informed, participatory democracy here in Wales.

## **How does the 'green mission' fit with Science Shops' wider objectives?**

The name "Science Shop" comes from the origins of what is now a huge international movement in community-based research, a movement which originated in the radical left-wing politics of the 1970s. The first Science Shops were established by socially-engaged university students and faculty in the Netherlands, Scandinavia and the United States, and right from the start they had a strong focus on supporting citizens groups and NGOs campaigning for environmental and social justice. So when we came to set up a network of Science Shops in Wales in 2006, the big question was how can we continue, and stay true to, this tradition in the context of a tiny, newly devolved but culturally unique nation with a statutory commitment to sustainable development? And as soon as you begin to try to sketch out an answer to that question it becomes clear that, although the "green mission" of course has to be at the heart of everything we do, it's so much more than that. Because we can't adequately respond to the challenges of climate change, resource depletion and biodiversity loss without confronting the systemic causes of those problems, causes which also result in human poverty, social exclusion, illness and so forth. So for me, our mission is about environmental, social *and* cognitive justice. It's about supporting citizens who are struggling not just to protect and preserve the environment, not just to get fair shares for everyone, but also to have the right to have their knowledge, their experience, their learning and culture counted as valid, legitimate and useful.

## **Who are the activities of Science Shops Wales aimed at?**

Welsh civil society, in the broadest sense. NGOs and community organisations from the smallest to the

biggest in Wales, from angling clubs to Transition Town groups, residents associations to large not-for-profits. Everybody and anybody who isn't either business or the state.

**What is your proudest achievement in the project so far?**

Well, there's so much. I'm really proud of the work we've carried out doing participatory community biodiversity audits with communities in the Valleys. It's fantastic to see people of all ages working alongside scientists, conservationists and wildlife experts, learning about scientific methods while at the same time making that deeper reconnection with the natural world that we all so badly need. I'm really proud of the leaflets, exhibitions and workshops we've produced to help community groups understand, and face up to, the challenges of climate change and peak oil. I'm also really proud of our collaborations with great partners like Cynnal Cymru, The UK Climate Impacts Programme, and the National Museum of Wales. There are dozens of other examples I could give you, but it's perhaps simpler to just say that I'm so pleased to have been able to bring together, and keep together a fantastic, multidisciplinary team of talented and committed people – the people who actually do the real work on these projects, while I spend my time pontificating and giving interviews!

**What do you hope to gain from the January conference?**

Personally? Knowledge, courage, and moral support. I see the work of building, linking and strengthening networks of committed people across Wales as absolutely central to making the kind of whole-systems changes we need to bring about if we're to have any hope of dealing with the challenges that face us. In terms of wider outcomes, I'd like the conference to help make it increasingly possible for thinking people across Wales to openly question the economic growth paradigm without being regarded by their peers as dangerous lunatics. At the moment political and business leaders in Wales are suffering from a form of collective schizophrenia, trying to hang on to the old mantras about the benefits of economic growth based on steadily increasing consumer demand in the face of an overwhelming flood of scientific evidence to the contrary. No matter how much we may wish it otherwise, our science tells us very clearly that right now there simply is no way we can tackle climate change or attempt to build a more sustainable Wales while continuing to pursue economic policies that favour using more energy to build more roads and runways so we can fly and truck in more of our most basic

goods and foodstuffs from the other side of the globe. This kind of globalised "business as usual" is simply not an option, full stop. To continue to try to convince ourselves otherwise is a form of collective suicide, the worst possible example of the triumph of superstition over science. I hope the conference will encourage those who lead us to acknowledge these facts and face up to the fundamental contradictions in their current policies.

**Do you see the current downturn as an opportunity or a challenge for you?**

I think it's an opportunity. It's really focusing ordinary people's attention on the whole house-of-cards, smoke-and-mirrors nature of our current economic arrangements. I think all over Wales people are waking up to the reality that we can't go on living on credit forever – whether in the form of the fictional money invented by banks for their own benefit or the very real debt we owe to the environment which supports all our lives and livelihoods. Everywhere I go I meet more and more people who understand the extreme urgency of this Earth system crisis we're all facing, and who are ready to put their efforts into building the kind of sustainable, equitable and peaceful Wales – and world – so many of us would like to see. In this country we have a truly inspiring tradition of collective action for social justice, from the Chartists onwards, and a wonderfully strong and vibrant culture which has always supported people through hard economic times.

At the moment, I really feel that we have the opportunity for radical, whole-system change in Wales, and the current economic downturn is just one more factor driving us toward that change.

**More generally how do you see our global future, and Wales's?**

Everything I understand about energetics and the behaviour of complex systems tells me that the transition to a society based on much lower energy use is absolutely inevitable. Everything I understand about global warming and the Earth System crisis tells me that this transition is also absolutely desirable. So for me it's a given that the future, globally and in Wales, has to be a low-energy, low-carbon one. The big question is how we get there, how we manage the energy descent. It can be peaceful, graceful – joyful even – if we approach it wisely. Alternatively, it can be catastrophic, violent, traumatic, tragic. I can't even begin to predict which of the multiple possible near-future scenarios is most likely – I'm too busy working as hard as I can to try to ensure that the pathway we walk along

together is as wise and compassionate, as rooted in sound science, as possible.

**Do you think Wales could be a leader in the pursuit of sustainable economic development?**

Yes, absolutely, for all the reasons I've already mentioned and many more. For example we have just fantastic resources available to us for renewable energy generation, we can really go for it in that arena. But in order to lead others, we first have to sort out our own affairs. For me this means explicitly repudiating, once and for all, the mythology that links private ownership, economic growth and the increasing consumption of energy and commodity goods to human happiness and social stability. Above all, we need to develop an entirely new sense of ourselves in relation to nature, one in which we not only value the services our ecosystems provide us with, but recognise and celebrate that we are part of, not in any way apart from, those ecosystems, the laws that govern them, and the patterns they follow. We have to put our scientific understanding of the behaviour of complex systems at the heart of policy-making. We cannot continue to rely on advice from economists whose theories wilfully ignore our total dependence on the Earth's ecosystems, and discount or downplay our catastrophic, destructive impact on those ecosystems. We simply can't continue to put the vested interests of the vanishingly small minority who benefit from our current economic arrangements ahead of the common good, ahead of the welfare of future generations and the planet itself.

If Wales is truly to be a leader in the 21<sup>st</sup> Century, we need to develop the confidence to align ourselves with those nations and movements around the world that are trying to build a post-carbon, post-capitalist future. After all, we were one of the first nations into the fossil-fuel frenzy, and one of the first to come out the other side, so perhaps we have a special responsibility in this regard. Now we find ourselves at least nominally in the lead again, with an elected government committed to sustainable development, it's up to all of us to make sure that commitment turns into a reality. And that will demand a lot of courage, a lot of commitment, a lot of great leadership from individuals at all levels of Welsh society.

**Are you an optimist?**

Yes, very much so. As the saying goes, the situation is far too serious for pessimism. I deeply believe in the creative power of human beings, and I know the so-called "impossible" can happen, because I've seen it in my own lifetime and with my own eyes. Whoever would have believed that we could walk

on the moon? That the Berlin Wall could fall? That we could get a worldwide agreement on fixing the ozone hole, or that a black man could become President of the United States? Or? We have the science, we have some the wisdom, and we have most of the technical means, to create a sustainable future for us all. All we have to do is get together and use it in a sensible and

humane way. I'm such an optimist, I even believe that economics might one day develop into a serious science that will help us plan and manage human affairs within environmental limits...

**Can we succeed in paying the world back?**

We *are* the world, and as such we don't really have anything to pay back, or

anyone to pay it back to. When we really begin to embed our knowledge of that total interconnectedness into everything we do, then perhaps we'll begin to develop the kind of collective and responsible culture we need if we are to live sustainably and harmoniously on the Earth. I certainly hope so.

Steve Harris. Thank you very much.