Cardiff Business School
Cardiff University

FOOD EDITION

Welsh Economic Review

Volume 22 Spring 2011

BRASS
The Centre for Business Relationships
Accountability, Sustainability & Society

Welsh Economic Review

ISSN 0965-2450

The Welsh Economic Review is now published once a year, 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

Authors should send papers for potential publication in the Welsh Economic Review to the Editor at the address given below, preferably via e-mail in a Word for Windows format. Papers are welcome on any topic that would be of general interest to the readership, and should be written in a style suitable for non-specialist readers. Papers should be approximately 3,000-4,000 words, and any graphs or figures should be accompanied by the underlying data to allow reproduction.

Articles will be refereed within WERU. The Copyright for articles published in the Welsh Economic Review will be retained by WERU.

Dr Annette Roberts,
Editor, Welsh Economic Review,
Welsh Economy Research Unit,
Cardiff Business School,
Aberconway Building,
Colum Drive,
Cardiff, CF10 3EU.

Tel 029 2087 4173
Fax 020 2087 4419

e-mail robertsa1@cf.ac.uk

£35

Editorial

This Review follows in the wake of considerable political change in the UK. An inconclusive general election in May 2010 led to a coalition between the Conservatives and Liberal Democrats, the popularity of which is already proving to be contentious, as respective election manifestos have to bow to austerity measures. The figures reported in this Review show that 2010 was generally a year of recovery, but the impact of public expenditure cuts is yet to be felt.

The last Review focussed on Green Energy – a topic likely to have relevance for many years to come. This issue has an equally important and related focus: Wales' food sector. While agriculture makes only a small contribution to Welsh gross value added, it is crucial in terms of stewardship of the landscape and because of its interconnectedness with the food and drink sectors in Wales; all of which have the potential to participate in Wales' sustainable future.

This issue's interview is with Elin Jones AM, the Welsh Assembly Government Minister for Rural Affairs. While understanding the value of Welsh red meat exports she is mindful of the need to increase local food awareness and consumption in the interests of sustainability. Late last year she launched a new food strategy 'Food for Wales, Food from Wales 2010-2020' which faces this challenge and others.

This Review also features three articles. Peter Midmore of Aberystwyth University examines the contribution of the agri-food sector to the Welsh Economy with particular reference to the impact on employment of sector supply chain relationships. He concludes that the growth of food exports may not deliver prosperity in a sustainable manner, while encouraging local consumption of local produce might. This chimes with Calvin Jones' view in the Political Economy section.

In the second article by Kevin Morgan of Cardiff University, the two themes of food and social well-being are examined by plotting the history and development of school meals provision from the 1880s to the present day; the most recent improvements to which are threatened by impending cuts in public expenditure, and the change in the political landscape.

Melanie Jones, David Blackaby and Phil Murphy of Swansea University in their article 'Childhood Obesity in Wales' report the initial results of their work which compares the occurrence of obesity at the UK level and within Wales, and the relationships between childhood and adult obesity.

Contents

Editor: Annette Roberts

Assistant Editor: Jane Bryan

Contributors: Jane Bryan, Calvin Jones, Neil Roche, Max Munday and Annette Roberts.

Economic Commentary

World Economy

In October the International Monetary Fund (IMF) published its latest World Economic Outlook. This publication notes that whilst the global economic recovery continued to strengthen, this recovery remains fragile. The IMF expected that global economic activity will have expanded by 4.8% in 2010 and by 4.2% this year. Economic growth during 2010 was higher than had been predicted this time last year, and expectations are largely positive for 2011, although with uneven growth prospects for different world economies. According to The Economist (December 11th), 'America, the Euro zone and the emerging world are heading in very different directions, with very different growth prospects and contradictory policy choices' (p.13). Figure 1 shows output growth forecasts for 2010 and 2011 for selected economies, and illustrates the divergent prospects for the different economies shown.

Economic growth in China and India, (and in some other emerging and developing economies) has been staggeringly high, even during the worst years of the financial crisis. These economies contributed most to world economic growth in 2010 and predictions are for strong growth this year. These growth forecasts coupled with rising prices in many of these economies suggests the possibility of overheating, and a need for tighter economic policy. Such policies would have a moderating effect on economic growth in future years, although these economies are still expected to outperform those of developed economies in the years to come. A recent report by Pricewaterhouse Coopers suggests that by 2050, when ranked by size of economy, and adjusted for price differences (using purchasing-power parity), five of the top seven economies will be those presently described as 'emerging economies'. China and India are both expected to have economies larger than America, although as noted in the report, due to higher populations, gross domestic product (GDP) per person will generally still be lower in the emerging economies than those in the 'advanced' economies (Economist, January 15th, p.89).

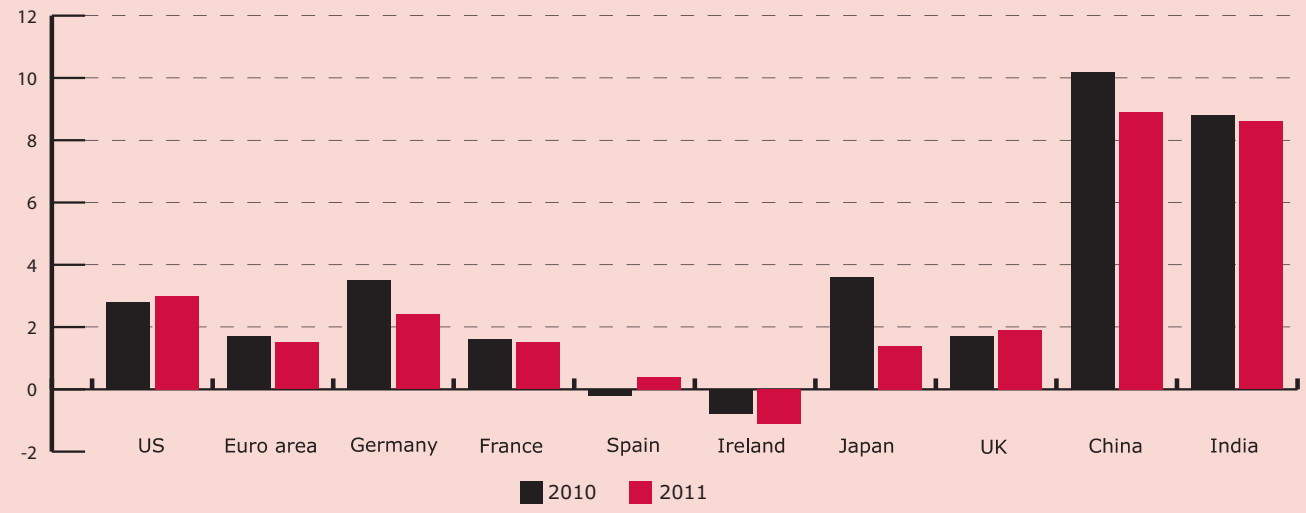
Economic growth in the US is expected to be around 3% in 2011, although there are some predictions that it may be considerably higher. In contrast to Euro area economies, economic policy in the US has been much less severe. Indeed there has been a tax cut agreement which has extended existing tax breaks and added new breaks. The stimulus to economic recovery is expected to reduce unemployment (which stood at 9.4% in December), but with some worries about the consequences for government revenues (and hence spending).

Economic growth in the Euro area is expected to slow this year, as the impacts of government spending cuts work through. Within the Euro area, the mixed fortunes of member countries can be seen from Figure 1. Germany, the largest Euro area economy had a strong 2010. Economic growth is expected to have been around 3.5% higher than in 2009, and industrial production was up by over 11% in the year to November 2010. There is expected to be some slowing of economic growth in Germany in 2011. However this economy will still perform well, and will prop-up the overall Euro area performance during this period. Spain is expected to return to positive (but low) economic growth in 2011. Industrial production in Spain increased by 2.7% in the year to November 2010, after falling by almost 4% in the year to October. However unemployment was an astonishing 20.6% in November. Economic growth prospects in other economies, such as Ireland, (and Portugal and Greece, not shown in Figure 1) are much worse. The Irish economy is expected to have contracted by around 0.8% in 2010, and that this will be followed by a fall of 1.1% this year. In Greece the forecast is that the economy will contract by over 4% in 2011.

Foreign Direct Investment

The World Investment Report 2010 (WIR, produced by the United Nations Conference on Trade and Development,

Figure 1: GDP Forecasts, Selected Economies, annual % change, 2010 and 2011.



Source: The Economist, January 15th 2011.

Table 1: FDI Inflows by Selected Region/Economy, 2007-2009, (US$m).

Region / economy	2007	2008	2009
World	2, 099, 973	1, 770, 873	1, 114, 189
Developed economies	1, 444, 075	1, 018, 273	565, 892
European Union	923, 810	536, 917	361, 949
France	96, 221	62, 257	59, 628
Germany	76, 543	24, 435	35, 606
United Kingdom	186, 381	91, 487	45, 676
North America	374, 371	379, 830	148, 540
Developing economies	564, 930	630, 013	478, 349
South, East and South-East Asia	258, 830	282, 440	233, 050
China	83, 521	108, 312	95, 000
India	25, 001	40, 418	34, 613
South-East Europe and the CIS	90, 968	122, 588	69, 948

Source, UNCTAD, WIR 2010.

UNCTAD), predicts that most regions will have seen a rebound in FDI flows during 2010. During 2009 world FDI flows fell to below US$1.2 trillion, and the figure for 2010 is expected to exceed this level, with a rise to US$1.3-1.5 trillion in 2011, and a further increase in 2012. The WIR however notes that these growth projections are closely tied to global economic performance and are subject to high levels of uncertainty.

The UK economy

Economic activity in the UK fell by almost 5% during 2009. During that period the UK economy faced a credit squeeze, due to the financial crisis and house prices fell, both impacting on business and consumer spending. The economy in 2010 is expected to have grown by around 1.7%; this is higher than had been previously forecasted by the International Monetary Fund (IMF) and others. Provisional data for 2010Q4 shows that the economy contracted by 0.5%, following growth of 0.7% in the previous quarter. In their press release the Office for National Statistics (ONS) comment that 'the change in GDP in Q4 was clearly affected by the extremely bad weather in December…..The disruption caused by the bad weather in December is likely to have contributed to most of the 0.5% decline, that is, if there had been no disruption, GDP would be showing a flattish picture rather than declining by 0.5%'. The ONS do however note that figures relating to the impact of the bad weather are still subject to uncertainty at this stage (ONS, 25th January). This turnaround in economic fortunes was not expected, and is due to contractions in the construction sector (with GDP down by 3.3%, the largest contributor to the overall decline) and in the services sector of the economy. There was positive GDP growth during the final quarter of 2010 in manufacturing and utilities. This fall in economic activity, together with other recent information on the labour market (see below) has raised fresh concerns about a possible double-dip recession this year.

The UK unemployment rate increased to 7.9% for the September – November 2010 period (see Table 4 later), with 2.5 million people now unemployed, and this trend is expected to continue as the public sector spending cuts outlined in the Spending Review work through the economy[1]. The Institute of Public Policy Research (IPPR) warned of a 'double-dip' jobless rise and of the risk that economic growth will not be fast enough during this year to prevent unemployment reaching new highs. The IPPR have suggested that economic growth needs to be more than 2% for unemployment to fall (BBC News, Business, 18th January). Of most concern, is the record number of 16 to 24 year olds who are without work - the unemployment rate for this group increased to 20.3%.

Figure 1 shows a small increase in the UK GDP forecast for this year. (However the OECD forecast for the UK economy, published in November, suggests 2010 will have seen growth of 1.8%, falling marginally this year to 1.7%.) This forecast precedes the 2010Q4 economic growth estimates, and as already noted prospects for the UK economy are highly uncertain. In addition to the austerity measures, there is the recent VAT increase and higher than expected inflation rates which will put pressure on the economy. In this situation it is indeed difficult to see where the predicted economic growth will come from.

The Welsh Economy

The Labour Markets section of this Review shows that unemployment in Wales is above the UK average at 8.4%. This represents 123,000 people (an increase of 4,000 on the previous quarter, although declining slightly over the year). In line with previous predictions about the Welsh economy, and expectations about the UK economy, there is every chance that unemployment in Wales could increase still further, particularly as Wales has a relatively high concentration of public sector employment compared to other parts of the UK (see Table 8). The Welsh Assembly Government has commented that its budget will be cut by £1.8bn in real terms over the next four years as a consequence of the Spending Review (although this figure varies from that given by the Treasury, which, for example does not include inflation in the calculations).

In December 2010, the ONS released data for regional, sub-regional and local gross value added (GVA). Table 2 gives an extract of the regional data provided, showing a time series of GVA per head indices for 1989, 1999 and 2009. The table shows that London and the South East (as would be expected) far outperform other regions of the UK, with London recording GVA per head of over 171 in 2009 compared to the UK average of 100. By sharp contrast, Wales has fallen from third from last position in 1989, to last place in 1999 and 2009, with the gap between Wales and the UK widening for each year shown.

The sub-regional and local data contained in this latest press release relates to 2008. At the sub-regional level (NUTS2), West Wales and the

Table 2: GVA Per head Indices[1], UK = 100.

	1989	1999	2009[2]
North East	83.4	78.1	78.2
North West	91.3	88.2	86.4
Yorkshire and the Humber	89.5	87.3	82.9
East Midlands	94.9	90.2	86.8
West Midlands	91.8	90.8	84.0
East of England	95.3	94.0	93.1
London	156.9	160.7	171.2
South East	100.2	106.8	104.7
South West	91.9	92.0	91.2
Wales	84.3	77.3	74.3
Scotland	96.0	94.5	98.8
Northern Ireland	73.1	79.4	79.1

Notes:

1. GVA per head indices at current basic prices on a workplace basis, based on a weighted 5-year moving average.
2. 2009 estimates are provisional.
Source: ONS, December 2010.

Valleys is bottom of the UK table, with GDP per head only 62.6% of the UK average. At the local level (NUTS3), the Central Valleys, Gwent Valleys and Isle of Anglesey are all in the bottom five of UK local areas, with Isle of Anglesey last in the table. In 2008 GDP per head in Anglesey was just 55.2% of the UK average.

Table 3 shows Forecasts for the Welsh economy for 2010 and 2011. Unfortunately Wales' economic performance is expected to lag behind that of the UK for the foreseeable future, hence the prospects for any narrowing of the GVA gap with the UK are poor. No growth is expected for 2010, and growth of 0.5% is forecast for this year.

Table 3 Forecast Change in Real GVA (%)

	2010	2011
Wales	0.0	0.5

Note

1. The Spending Review is a Treasury-led process to allocate resources across all government departments, according to the Government's priorities. Spending Reviews set firm and fixed spending budgets over several years for each department. It is then up to departments to decide how best to manage and distribute this spending within their areas of responsibility.
http://www.hm-treasury.gov.uk/spend_spendingreview_introduction.htm
Full details of the October 2010 Spending Review can be found at
http://cdn.hm-treasury.gov.uk/sr2010_completereport.pdf

Economic Events Diary November 2009-December 2010

November 2009

Anglesey was revealed as one of the ten locations in the UK where the new generation of nuclear power stations could be built. Plans to streamline the planning process for new energy projects, so that decisions on new facilities could be made within a year, were also announced.

Land developer St Modwen secured 2,000 acres of former BP owned land at Llandarcy, near Swansea, unveiling plans for around 4,000 new homes, a second campus for Swansea University, as well as employment and leisure space.

Cardiff came 6th in the Experian UK Retail Centre Rankings for 2009, trailing only London, Glasgow, Birmingham, Manchester and Birmingham. The opening of the St Davids 2 development was instrumental in the rise from 10th place in the hierarchy in the previous year.

December 2009

Carwyn Jones became First Minister for Wales and Welsh Labour Leader, following the retirement of Rhodri Morgan. Committing to fulfilling the coalition deal with Plaid Cymru, the First Minister also noted the goal of a referendum on law-making powers for the Assembly, on or before the 2011 election.

An additional £20m of funding for the social housing sector in Wales was secured from the European Investment Bank, extending the total allocation to £95m, or 30% of the UK total. The funding was to be administered through the not-for-profit Housing Finance Corporation.

The Sunday Times Virgin Fast Track 100 league table, ranking the fastest growing privately owned companies in the UK, included two from Wales. The MSS Group, who provide facilities management and support services from their Cardiff base, came 78th, and CMC Partnership, the change management consultants based in Monmouth, were 98th.

January 2010

The announcement of the companies winning the right to exclusively develop offshore wind farms in nine zones in UK waters was made by the UK Government and Crown Estate. RWE Npower Renewables were awarded the Bristol Channel Zone (11 miles off the south Wales coast), and Centrica Renewable Energy, with the RES Group, the Irish Sea Zone (9 miles from Anglesey).

It was revealed that Coleg Menai will be the home of a National Academy for Nuclear, helping create, develop and improve skills needed for the industry. The Academy, to be based at the college's £6m Energy and Fabrication Centre at Llangefni, will work closely with the nearby Wylfa nuclear power station.

BBC Cymru Wales confirmed plans to build a new drama centre in Cardiff Bay. Projected to cost around £25m, the drama village would replace two production sites based at Llandaff in Cardiff, and Upper Boat, near Pontypridd, and be operational by around autumn 2011.

February 2010

The Assembly Government announced a £15m skills growth initiative for business, to follow the ProAct programme which was due to end in June. The skills growth initiative will reportedly be focussed at firms that can display evidence of potential for job creation and growth.

According to research from the Royal Institution of Chartered Surveyors (RICS) prices of farmland in Wales had remained strong in the last six months of 2009. The Rural Market Survey 2009 (H2) indicated that while demand for both residential and commercial farmland had risen, supply was relatively low as farmers were increasingly optimistic about the outlook for agriculture.

The cross-party Energy and Learning Committee, of the National Assembly for Wales, published its Manufacturing Strategy report to better enable companies in the sector to innovate and grow. Amongst the report's recommendations were that focus should be on firms with high growth potential, and that to ensure long term competitiveness, the Welsh manufacturing strategy should be based on the development of sustainable energy solutions.

March 2010

Horizon Nuclear Power, a joint venture between RWE npower and E.ON, revealed plans to build a new power station on Anglesey that would be able to enter service in 2020. The company stated it would apply for planning permission in 2012. A new facility would replace the existing Wylfa site that employs around 650 workers, and which is due to close in 2012.

Details were revealed by Coastal Housing Group of a £30m mixed-use development to regenerate Swansea High Street. The plans, drawn up by Holder Matthias Architects, include offices, apartments, new retail frontage and a customised facility for creative industries.

An economic impact study of the £250m Barry Waterfront redevelopment proposal claimed that up to 2,400 jobs could be created across south east Wales by the project, with around 510 full-time equivalent jobs created by employers within the scheme. The findings form part of a study by Nathaniel Litchfield and Partners, which was commissioned by the Barry Waterfront Consortium. An outline planning application had been submitted by the consortium, made up of the house builders Barratt Homes, Persimmon Homes, and Taylor Wimpey, to the Vale of Glamorgan County Borough Council.

April 2010

Following a two year building programme the first stage of the 245,000sqft St Catherine's Walk shopping centre in Carmarthen was opened. When completed the £74m development is predicted to create around 450 jobs in the town.

According to research from the Confederation of Business Industry (CBI) Wales, published in the Welsh Industrial Trends survey for April, the manufacturing labour force in the Principality had increased for the second consecutive quarter. Relatively good export volumes were given as a strong factor in this improvement in a period which saw domestic orders decline.

May 2010

The new UK Conservative/ Liberal Democrat coalition government came into power at Westminister. As part of financial cuts to address the economy's deficit, figures released from the Treasury indicated that the Assembly Government would initially experience a decrease of £187m from its budget of £15.7bn. Welsh language broadcaster S4C was informed its budget was being decreased by £2m.

It was revealed that Finance Wales, the independent company set up by the Assembly Government in 2001 to provide commercial funding to Welsh SMEs, had invested £37m in Welsh businesses in the financial year to March 2010. This was an increase of £11m on the previous financial year, and included 246 equity and debt investments.

June 2010

Deputy First Minister Ieuan Wyn Jones was in Newport to officially open the new Phoenix Park industrial estate. A joint venture between the Assembly Government and the Centre for Business, the industrial park consists of 45 high-specification units offering 43,000sqft of industrial space.

July 2010

In his capacity as Minister for the Economy and Transport, Ieuan Wyn Jones launched the Economic Renewal Programme (ERP), outlining the way the Assembly Government will refocus its economic development budget to support better infrastructure and workforce skills. Five priorities for delivering the vision were set out in the programme as: investing in high quality and sustainable infrastructure; making Wales a more attractive place to do business; broadening and deepening the skills base; encouraging innovation; and targeting the business support offered.

The ERP notes that the Department for the Economy and Transport (DE&T) will focus its support on work with six sectors: ICT; energy and the environment; advanced materials and manufacturing; creative industries; life sciences; and financial and professional services. The ERP commits the Assembly Government to move more towards an investment culture, and away from a business grant model. International Business Wales, the inward investment division of the assembly government, will no longer be a separate function within DE&T.

InsourceEnergy began work in Rogerstone, Newport, on a £5m facility to turn food waste into energy at Premier Food's RF Brookes ready-meal factory. The anaerobic digestion plant, planned to be completed by the end of the year, is projected to provide savings in energy costs, reduce waste disposal, and cut carbon emissions by an estimated 8,500 tonnes per year.

In a study by forecasting consultancy Oxford Economics for the Financial Times, it was predicted that Wales would be the region in the UK to experience the lowest net employment growth (in both job numbers and percentage terms) between 2010 and 2015. Current employment structure and predictions on future employment growth areas were taken into account in the analysis.

August 2010

Performance figures released for the Assembly Government inward investment arm, International Business Wales, covering the financial year to March 2010, showed that 65 investment projects had been attracted. These safeguarded or created a reported 7,362 jobs.

Tata Steel Europe announced a £185m investment to rebuild a blast furnace at its Corus steelworks in Port Talbot, giving an indication of its commitment to the site.

September 2010

Plans for a £39m development to the seafront at Mumbles were submitted to Swansea Council by Ameco, the firm who run Mumbles Pier. An element of housing, reportedly required to finance the restoration of the Victorian Pier, is included in the scheme, along with a hotel and café bars. A Protect Mumbles Headland group was formed to oppose the plans.

The Assembly Government announced funding of £11.7m in its joint venture with Swansea Council for developing the former Felindre steelworks site into a business park. Of the funding total, £9.7m was reported to have come from the EU European Regional Development Fund (ERDF) and Targeted Match Fund (TMF).

October 2010

The US v Europe Ryder Cup golf tournament was held at the Celtic Manor Resort near Newport. Pre-tournament forecasts of £15m were reported as potentially being generated from the event that was to put Wales on the global stage over four days.

The Chancellor of the Exchequer, George Osborne, unveiled the UK government's Spending Review detailing a £83bn reduction in public spending commitments. The Welsh Assembly's block grant settlement was to be reduced over the next four years- with initial estimates from Ieuan Wyn Jones suggesting that in 2011/12 alone the Principality would be £860m worse off when the figures were adjusted for inflation.

Additionally, a number of high profile schemes planned for the Welsh economy were hit by the government's reduction in spending commitments:

The St Athan Defence Academy, a £14bn private finance initiative scheme which was to be built and run by the Metrix Consortium, was cancelled due to military cutbacks resulting from the government's Strategic Defence Review. The Ministry of Defence noted that "...Metrix cannot deliver an affordable, commercially robust proposal within the prescribed period..." and that it would review the situation in spring 2011.

Proposals for an energy generating barrage across the Severn Estuary were cancelled with the £30bn potential cost of the scheme being branded as excessive by UK Energy Secretary, Chris Huhne. A feasibility study for the project noted that "...other low carbon options represent a better deal for taxpayers and consumers..."

Changes to the way S4C is to be funded were also announced, with the majority of the Welsh language broadcaster's finance to come in future from the BBC's funds, instead of through the Department for Culture, Media and Sport (DCMS). S4C currently has an annual budget of around £101m, but the proposed changes in the funding arrangements are expected to lead to substantial budget cuts in the future.

November 2010

It was announced that six out of the ten Technium Centres that provided office space and support services to new companies in Wales were to close. A review of the network by the Assembly Government concluded that a number of the sites were not delivering value for money. Technium

Aberystwyth, Technium Sustainable Technologies Baglan, Technium Cast Bangor, Technium Pembroke, Technium Performance Engineering Llanelli and Technium Digital @ Sony are to be closed.

Japanese company Sharp PV unveiled a £35m investment at its solar panel production facility in Wrexham. The new investment will fund three new assembly lines and double production capacity.

December 2010

A study by Experian, the global information services company, presented a challenge to the level of emphasis in the UK placed on fast-growth sectors and regions. The report, "Tomorrow's champions: finding the small business engines for economic growth", indicated that focusing on sectors was one of the least productive ways to generate growth, and showed that, over the last ten years, less than 10% of small and medium sized enterprises (SMEs) in the UK were responsible for two-thirds of the growth in jobs in SMEs.

Comings & Goings: Companies' Activities in Wales

UPM announced in January 2010 that up to 150 jobs were to be created at its paper mill in Shotton, Flintshire, with the construction of a waste recovery facility. A grant of £1.7m was secured from the Welsh Assembly Government to support the investment.

Western Corrugated, the Cwmbran based board manufacturer, ceased trading at the start of 2010 with the loss of over 80 jobs in Wales and a further 50 positions in Wolverhampton. Trading difficulties due to over capacity in the sector, along with the effect of rising paper prices were reported as contributing factors in the closure.

As part of a company restructuring aimed at reducing operational costs by 20%, Welsh Water announced that 300 water delivery jobs were to be cut over the next 5 years.

Fillcare, a French manufacturer of hair styling products, revealed plans to recruit around 200 more workers over the next four years in Llantrisant at the site of the former L'Oreal factory. Investment in three new production lines is scheduled to take place.

Bosch confirmed it was to close its automotive components factory in Miskin during 2011 with the loss of 900 jobs. Difficult trading conditions in the UK brought about by the recession were reported as the main reason for the decision to transfer the production of alternators to Hungary.

Also in the automotive sector, Toyoda Gosei announced that the former Valeo facility in Gorseinon, Swansea, was to be the location of its new components factory. Around 600 jobs are expected to be created at the site, with production commencing in 2011.

Over 100 jobs were being cut at the Toyota car engine plant in Deeside. This was part of a wider UK-wide workforce reduction due to the severe economic climate.

It was revealed in July that the Linamar car parts factory in Swansea was to close with the loss of 200 jobs. Its Canadian owners were reported as stating that it was no longer possible to retain a competitive position at the site.

It was feared that a restructuring of the Welsh Assembly Government's Department of the Economy and Transport could lead to around 250 jobs going from the division. This followed the change in strategy for business support outlined in the Economic Renewal Programme (see Diary section - July). Opportunities for redeployment to other vacant posts within the Assembly Government for the staff affected were being investigated.

Public spending cutbacks were also observed at the local government level. Powys Council announced in July 2010 that up to 800 jobs (10% of its total workforce) would go as part of plans to save £16m over the next four years. In October, Cardiff Council revealed that it was planning to cut 250 jobs over the next year as it addresses a funding shortfall of £90m over three years.

It was announced that the Ministry of Defence would be scaling back activities at their Large Aircraft Business Unit in St Athan. Around 200 aircraft maintenance jobs were expected to be cut by the end of 2010, with the remaining 139 likely to go by 2013 with the closure of the facility. The site services VC10 tankers that are approaching the end of their operational life.

The Welsh Country Foods meat processing plant in Anglesey revealed in April 2010 that it was to cut 181 jobs. Declining sales of lamb, along with general poor trading conditions, were the major contributing factors to the decision.

Ethnic Cuisine in Swansea ceased trading with the loss of 220 jobs in August. This followed the loss of a contract to supply supermarket chain Sainsbury with Chinese style ready-meals.

In September 2010, Sainsbury recruited an extra 200 staff in Newport as it opened its largest superstore in Wales on the site of the former Crindau gasworks.

Virgin Atlantic airline announced that more than 200 jobs were to be created over the next two years at a new customer service centre in Swansea.

Admiral, the motor insurance company, recruited over 700 workers from the start of 2010 at offices in Cardiff, Newport and Swansea. This took its total workforce in south Wales to around 3,700. The compulsory nature of car insurance was noted as one of the factors helping in the company's strong growth during generally challenging economic conditions.

Welsh furniture retailer Maskreys announced in September that it was to close with trading being wound down by March 2011. The decision was taken after a search for a successor to take control of the family owned business failed to find a suitable candidate. A total of 87 jobs are to go in branches in Cardiff, Newport and Bristol.

Engineering company Mabey Bridge began recruiting workers for its wind turbine tower factory in Chepstow, planned to be operational in February 2011. The site, at Newhouse Farm Distribution Park, will eventually employ 240 workers, and be able to produce around 300 wind turbine towers a year.

In October there were a number of notable job reduction announcements. Tata Steel subsidiary based in Shotton, Living Solutions, a manufacturer of prefabricated houses, revealed it was to close with l80 jobs being cut. The continuing weak nature of the construction sector and the conclusion of a major contract were blamed for the decision. A consultation period with staff and unions began in October 2010.

Packaging company Tetra Pak announced plans to stop production at its Wrexham facility with the loss of 150 jobs. Under the proposals, being discussed as part of a 90 day consultation period, 135 jobs would remain at the site to operate a finished goods warehouse. Falling demand from Russia and the Middle East, which were now becoming self-sufficient in carton manufacture, was given as a major factor in the decision.

It was confirmed by the Identity and Passport Service (IPS) that consultation was to begin on the closure of the Newport passport office. Around 300 staff are employed at the site. The IPS was reported as stating that changes were necessary to increase efficiency and reduce the size of the organisation.

In November, Cardiff based Glamalco, who fabricated and installed aluminium materials for customers in the construction industry, announced 140 redundancies before going into administration. Cash-flow problems were revealed as the reason for the company's inability to fund ongoing construction contracts.

The addition of a commercial development on Swansea Waterfront SA1 created around 90 jobs. A Premier Inn Hotel, Tesco store, and Beefeater Grill restaurant were opened as part of the £9m complex.

Political Economy

Food, Sustainability and Regional Development in Wales

Calvin Jones, (WERU and BRASS, email JonesC24@cardiff.ac.uk) and Iain Cox (EcoStudio, www.ecostudio.org.uk)

There are lots of good things happening in Welsh food policy. The challenge is to apply the lessons being learned to wider sustainable development.

Food matters to Wales. How could it not in a nation where the landscape has been fundamentally shaped by animal husbandry, and where the quality of regional produce is a source of genuine pride? However, there is a 'disconnect'. Consumer behaviours in Wales are not markedly different with regard to food than in other parts of the UK, driven by convenience and income more than any notional appreciation of local quality of supply. Moreover, these common behaviours are problematic, contributing significantly to the degradation of global ecosystems, diminishing water availability and species extinction. Meanwhile, Welsh residents are becoming increasingly obese and unhealthy as a result of this unsustainable diet.

There is a real drive on the part of the Rural Affairs Department of the Assembly Government to change this, and at the same time to lever the economic benefits that might arise from increasing local sourcing, Welsh food quality and hence competitiveness.

The True Taste Wales awards are a case in point. This Assembly sponsored initiative, now in its 9th year, accredits the best of Wales's produce. Attracting over 1,000 entries, and with wide support amongst private sector producers and sponsors, the Awards are of great significance to Wales and perhaps beyond (www.truetaste.tv). The True Taste Contribution to Sustainable Development award is a specific category that acknowledges organisations like Calon Wen, Aberystwyth University and (this year) Birchgrove Eggs. These organisations have all made genuine strides towards lessening the environmental impact of their activities and protecting and heeding social outcomes, while at the same time, producing food of the best quality and achieving business success. Now in its 4th year the sustainability award not only shows recognition of and sensitivity to the issues faced by industry today, it also raises awareness and sets the standard to businesses in line with the Welsh Assembly Government's commitment to sustainable development.

Meanwhile, the Sustainable Supply Chains initiative seeks to increase the resilience of Welsh food supply chains and commercial viability of indigenous food business, and again lessen negative outcomes whilst levering social good (www.sustainablesupplychains.org.uk). Several pilot projects are underway that include:

- carbon footprinting and new product development in a dairy supply chain;
- the strategic development of community food co-operatives to increase the access of those on lower incomes to fresh fruit and vegetables and build the marketplace for the Welsh horticulture industry;
- the development of a commitment to sustainable production and consumption amongst a collaborative group of Welsh wine makers;
- testing a new resilient model of horticultural enterprise, and;
- enabling supply chain ownership by local communities and developing collaborative marketing and distribution opportunities for small food producers to step up the availability of local food to trade buyers.

Outside the public arena, key figures such as Peter Segger and Patrick Holden in Pembrokeshire are global leading lights of long standing in the development of organic and permaculture techniques, seeking to fundamentally change the way farming operates. Importantly, the organic farming movement in Pembrokeshire sits within, and contributes to a wider group in Wales seeking alternatives to current unsustainable behaviours – including, for example the Centre for Alternative Technology and the more recent development of the Do Lectures (www.dolectures.com) – Wales' own version of the globally important TED talks (www.ted.com).

Individual Assembly actions sit within a wider policy framework that signal the importance of food to the Assembly. For example, you can read about the imminent food strategy elsewhere in this Review, whilst effort is underway to develop a food tourism trail. Meanwhile, whilst the Welsh horticultural strategy may not be especially radical, the fact Wales has a horticulture strategy at all is quite novel and certainly to be welcomed.

All is not rosy in the garden however. These welcome innovations and pilot projects remain just that. There are issues over how far the bulk of (conventional) farmers in Wales – around 95% - are involved in or open to these innovations, and consumers in Wales stubbornly continue to eat, not what is good for them and the planet, but what they want, in a packet that's convenient, and at a price they can afford.

Influencing the global food system or even consumer responses to it is a massive task. But there are a number of reasons why it may be even more difficult for the Assembly than it need be. First, there is the lack of devolution of agriculture and food policy to the regional level in the UK and there is the added complication that most agricultural policy is supremely non-devolved, subject to the EU Common Agricultural Policy. Secondly, and partly deriving from this structure, is the Department for Environment, Food and Rural Affairs' (Defra's) attitude to food production, seen through a European-competitive lens. This competitive paradigm emphasizes cost-cutting through rationalization and by increasing farm size: more a drive towards efficiency than true sustainability. And Defra, of course has UK wide responsibilities.

Despite this competitive UK paradigm for food and farming, the sector does not feature centrally - indeed hardly at all - in Assembly mainstream economic development policy. It is not one of Wales' six strategic sectors for example, but rather sector development remains the purview of the Department for Environment, Sustainability and Housing (DESH) rather than the Department for the Economy and Transport (DET). Whilst there are undoubtedly significant benefits to be gained from this separation, the sector risks losing out on genuine Assembly expertise on business support and local supply chain development to name but two areas, unless links between DET and the Food Division are well developed and well maintained.

There are, however, deeper problems to address. Wales has a comparative advantage in red meat and dairy that is, in anything greater than moderation,

unhealthy and unsustainable. It is far less developed (for in some cases good topographical reasons) in horticultural produce. There is a welter of evidence that for health, climate change and energy-intensity reasons diets should contain far less of the things Wales does particularly well, so this is a very complex policy area, especially for politicians and parties with a strongly rural constituency. The message to 'eat less but eat well(sh)' is one which may be amenable to stakeholders, but flies in the face of decades of policy which has prioritized the protection of sector output levels, and encouraged sector growth wherever possible.

Food policy in Wales then has much to recommend it, especially compared to the rest of the UK. The recently published food strategy for Wales, Food for Wales, Food from Wales makes explicit the environmental limits within which we must work, and the need to place these at the heart of decision making. But there remain inherent tensions between the drivers of competitiveness and the environmental limits within which we can farm sustainably. The focus in the food strategy is on sustainability, resilience, competitiveness, and profitability, and with the at least implicit assumption that increases in the sustainability and resilience will lead to increased competitiveness and profitability. This may be true in the longer term, in the meantime it is difficult to see how ecological costs can be internalized within the Welsh food production system at the same time as produce remains cost-competitive internationally, and attractive to cost-conscious and cash strapped Welsh consumers. This is one of the most complex, politically-sensitive (and yet critically important) challenges of the Assembly's next decade.

Labour Markets

Labour Force Survey (LFS) data for the UK, in the three months to November 2010, showed a decrease in the level of employment and an increase in unemployment. Employment stood at 29.09m between September and November 2010, representing a decrease of 69,000 from the previous quarter, but up 184,000 on the same period a year earlier. The number of unemployed in the UK, seasonally adjusted, stood at 2.5m, up 38,000 on the previous year.

Table 4 provides summary data for the UK regional labour market and highlights that the seasonally adjusted working age employment rate for UK in the three months to November 2010 was 70.4%, having decreased by 0.3 of a percentage point on the previous quarter, and down 0.1 of a percentage point from a year earlier. The ILO unemployment rate was 7.9%, up 0.2 of a percentage point on the previous quarter and 0.1 of a percentage point from a year earlier.

The latest labour market indicators for Wales show a relatively improving picture overall. The seasonally adjusted employment rate during the latest quarter (September to November 2010) was 67.3%, an improvement of 0.2 of a percentage point from the previous year, while the seasonally adjusted ILO unemployment rate was 8.4%, down 0.1 percentage points from the same period a year earlier.

The LFS estimated the number of economically active people in Wales to be 1.455 million in the September to November 2010 period – a gain of 30,000 over the year. The economic activity rate for Wales increased to 73.8%, up by 0.3 of a percentage point from a year earlier. Meanwhile, the UK experienced a decrease of 0.1 of a percentage point in its economic activity rate over the same year. Of the UK regions, only the North East and Northern Ireland had a lower economic activity rate than Wales in the three months to November 2010.

The levels of workforce jobs in Wales, split by broad industry types over a period from June 2008 to June 2010, are shown in Table 5. These figures are taken from the latest available Labour Market Statistics Wales published by the Office for National Statistics (ONS). The overall number of workforce jobs in the Principality decreased by 50,000 between June 2008 and March 2009 to 1.35m, and fell by a further 9,000 to June 2010, standing at 1.341m.

Of particular concern, manufacturing in Wales experienced a 19.5% drop in workforce jobs over the whole of this time, amounting to 32,000 jobs. Workforce jobs in construction and other

Table 4: Labour Market Summary, September 2010 to November 2010.

	Economic Activity	Change on year	Employment rate	Change on year	ILO Unemploy -ment rate	Change on year
North East	73.2	-1.3	66.1	-0.9	9.6	-0.3
North West	75.3	0.3	69.5	0.7	7.6	-0.6
Yorks & Humber	75.0	-0.9	68.0	-0.9	9.2	0.1
East Midlands	77.1	-1.0	70.7	-1.7	8.1	0.9
West Midlands	75.5	-0.7	67.9	-0.8	9.9	0.3
East	79.2	0.4	73.8	0.0	6.6	0.3
London	75.2	0.3	68.3	0.5	9.2	-0.2
South East	80.1	0.2	75.1	0.2	6.1	-0.1
South West	79.0	1.0	74.2	1.3	5.9	-0.5
England	76.9	-0.1	70.8	0.0	7.8	0.0
Wales	73.8	0.3	67.3	0.2	8.4	-0.1
Scotland	77.3	-0.7	70.7	-1.4	8.4	0.9
Northern Ireland	71.0	0.7	65.3	-0.1	7.8	1.1
UK	76.6	-0.1	70.4	-0.1	7.9	0.1

Source: Labour Force Survey (September 2010 to November 2010)

Table 5: Workforce Jobs by Industry in Wales (thousands) seasonally adjusted.

Sector (SIC 2007)	June 2008	June 2009	June 2010	% change 08/10
All	1,400	1,350	1,341	-4.2
Manufacturing (C)	164	155	132	-19.5
Construction (F)	98	98	96	-2.0
Total Services (G to S)	1,083	1,049	1,070	-1.2
Other sectors (A,B,D&E)	55	48	43	-21.8

Source: Employer Surveys, Labour Force Survey and administrative sources; reported in Labour Market Statistics, Wales, June 2010.
http://www.statistics.gov.uk/pdfdir/lmswales1110.pdf

Table 6: Unemployment in Wales; Claimant Count by Unitary and Local Authority Area – 9th December 2010, % of Population (not seasonally adjusted)

	Men	change on year	Women	change on year	People	change on year
Wales	5.4	-0.9	2.0	0.0	3.7	-0.4
Blaenau Gwent	9.3	-2.0	3.7	-0.1	6.4	-1.1
Bridgend	5.7	-0.9	2.3	0.2	4.0	-0.3
Caerphilly	6.8	-1.5	2.6	0.1	4.7	-0.7
Cardiff	6.0	-0.1	2.1	0.2	4.0	0.0
Carmarthenshire	4.2	-0.7	1.6	0.2	2.9	-0.3
Ceredigion	2.8	-0.3	1.1	0.0	1.9	-0.2
Conwy	5.5	-0.9	1.8	0.0	3.6	-0.5
Denbighshire	5.7	-0.8	1.9	0.0	3.8	-0.4
Flintshire	4.3	-1.0	1.8	-0.1	3.1	-0.5
Gwynedd	4.6	-0.6	1.7	0.2	3.2	-0.1
Isle of Anglesey	6.2	-0.8	2.2	0.1	4.2	-0.3
Merthyr Tydfil	8.1	-2.3	3.0	-0.1	5.5	-1.1
Monmouthshire	2.6	-1.5	1.2	-0.4	1.9	-0.9
Neath Port Talbot	4.4	-1.5	1.8	-0.2	3.1	-0.8
Newport	7.3	-0.9	2.7	0.2	5.0	-0.4
Pembrokeshire	5.1	-0.5	1.8	0.1	3.4	-0.2
Powys	3.0	-0.7	1.4	0.0	2.2	-0.4
RCT	6.3	-1.1	2.4	0.2	4.3	-0.5
Swansea	4.5	-1.0	1.7	-0.1	3.1	-0.5
Torfaen	6.3	-1.3	2.3	0.1	4.3	-0.6
Vale of Glamorgan	5.7	-0.5	1.9	0.1	3.7	-0.2
Wrexham	5.3	-0.8	1.9	-0.1	3.6	-0.4

Source: Jobcentre Plus Administrative System

services decreased by a relatively small 2.0% and 1.2% respectively between June 2008 and June 2010.

Table 6 shows unemployment claimant count rates in Wales by unitary authority area in December 2010. The all Wales claimant count unemployment rate in December 2010 (not seasonally adjusted) was 3.7% (70,181 claimants), a decrease of 0.4 of a percentage point, or 7,903 claimants over the year. In the year to December 2010 there were decreases in the unemployment rate in all the unitary authorities of Wales except Cardiff (where there was no change in the rate).

The highest claimant count rates in Wales were found in Blaenau Gwent, at 6.4%, and Merthyr Tydfil, 5.5%, although these were the two authorities with the largest reductions in their unemployment rates in the last twelve months (of 1.1 percentage points each).

Earnings

Research published in April 2010 by Deloitte, the business advisory firm, and the Western Mail newspaper, indicated that 56% of businesses in Wales were expecting to award pay increases or bonuses in 2010. A third of the businesses planning pay increases stated that this was because of higher productivity and profits. A further third noted that their intention was due to them having not brought in a pay rise in the last year and they wanted to reward their employees. This Wales Business Watch survey also showed that just over half of the Welsh businesses who were planning to increase pay proposed to do so by an average of less than 2%.

Table 7 shows the Annual Survey of Hours and Earnings (ASHE) data for 2009 and 2010. These data are median gross weekly earnings, broken down by region and gender. In 2010 average weekly earnings in Wales (males and females combined) were £451.1, compared to £498.8 in the UK as a whole. This means that average earnings in Wales in 2010 were just 90.4% of the UK average (little change from the corresponding 2009 figure of 90.2%). The average national rate is, as always, strongly influenced by the high average earnings found in London (£642.3 per week in 2010) and the South East of England (£523.7).

Over the year from April 2009, the percentage increase in earnings in Wales (males and females combined) of 2.4% was among the highest in the UK regions, with only the West Midlands (at 2.5%) having a larger percentage improvement.

By gender in 2010, the average weekly earnings of full time females in Wales were 91.4% of the UK female average. Wages for males in the Principality were just 89.7% of the comparative UK figure.

Public Sector Employment (PSE)

This edition of Labour Markets will conclude by taking a closer look at figures released for employment in the Public Sector. The Westminster Government's Spending Review outlined the substantial expenditure cuts required to bring down the level of the UK's Public Spending deficit. With many public sector organisations now likely to face stringent pressures on their budgets, there will be many challenges to maintaining employment levels. Amongst the first Welsh local authorities to announce planned job cuts were Powys and Cardiff (see Diary section of this Review).

Table 7: Median Gross Weekly Earnings by Government Office Region for Full-time Adults Whose Pay was Unaffected by Absence, April 2009 and April 2010.

	2009			2010			
	Male	Female	All	Male	Female	All	Annual % Change, All 2009-2010
United Kingdom	531.0	425.8	488.5	538.2	439.0	498.8	2.1
North East	476.7	385.2	435.6	484.8	400.0	442.3	1.5
North West	497.5	406.2	459.8	500.0	417.8	467.1	1.6
Yorkshire and The Humber	488.3	395.3	451.0	496.9	404.9	460.2	2.0
East Midlands	499.5	387.4	456.1	507.7	393.5	465.2	2.0
West Midlands	492.8	393.2	456.2	502.8	400.0	467.5	2.5
East	523.8	408.6	478.6	535.0	424.4	488.7	2.1
London	689.8	565.2	627.4	698.6	582.3	642.3	2.4
South East	565.9	438.3	513.3	574.9	444.1	523.7	2.0
South West	498.6	385.9	454.0	503.4	399.7	460.0	1.3
Wales	478.8	383.3	440.4	483.0	401.3	451.1	2.4
Scotland	509.9	420.3	472.8	521.5	431.2	488.2	3.3
Northern Ireland	460.0	402.6	437.1	460.0	412.2	440.8	0.8

Source: 2009/ 2010 Annual Survey of Hours and Earnings (ASHE)

Table 8: Proportion of Workforce Employed in the Public Sector - 2010Q3 (not seasonally adjusted).

	PSE as a percentage of all employment	Percentage point change in the proportion of all employment in PSE 2009Q3 to 2010Q3
UK	20.5	-0.4
North West	21.7	-0.1
North East	24.9	-1.2
Yorks & the Humber	22.4	no change
West Midlands	20.6	-0.1
East Midlands	19.3	+0.7
East	17.4	-0.6
London	18.3	-0.2
South East	17.2	-0.3
South West	19.9	-1.1
England	19.6	-0.3
Wales	25.7	-1.2
Scotland	24.2	-0.1
Northern Ireland	29.8	-0.5

Sources:
Public Sector Employment Statistical Bulletin, ONS http://www.statistics.gov.uk/pdfdir/pse1210.pdf
Regional Analysis of public sector employment 2010, Business Statistics Division, ONS
http://www.statistics.gov.uk/articles/nojournal/regional-pse-finalv6.pdf

In 2010 the ONS published for the first time regional estimates of PSE based on returns from public sector organisations. These data supersede previous estimates from 2005 onwards (that were produced using a combination of the LFS and national PSE estimates). The ONS also now publish quarterly estimates of PSE by sector and industry classification for the UK as a whole.

Although the highest number of public sector employees are found in London (773,000 in 2010Q3), the North West (684,000), and the South East (680,000), the employment structure in Wales has, for a number of years, been characterised as having a relatively high proportion of jobs in the non-market sectors of public administration and health.

Table 8 shows PSE jobs by region as a percentage of the entire workforce in a region. Only Northern Ireland (29.8%) had a higher proportion of its workforce employed in the public sector than Wales (25.7%), in the third quarter of 2010. The South East of England was the region with the lowest proportion of its workforce in the public sector

(17.2%). As the second column of Table 8 shows, Wales had the equal highest percentage point decrease in employment in this sector over the year to 2010Q3, at -1.2 points.

The Assembly Government has noted that if PSE is expressed as a proportion of the resident population, linking employment in the sector with the size of the population it serves, then the difference in the proportion of total employment in PSE between Wales and the UK is reduced[1].

Table 9 shows the headcount number of people in PSE in Wales (Q2 not seasonally adjusted), increased by 13,000 between 2008 and 2009, but fell by 4,000 by 2010. This latter 0.9% decrease in the headcount in PSE in Wales between 2009 and 2010 compared favourably with the larger decreases in England (1.2 per cent) and Scotland (2.1 per cent), and equalled the fall in Northern Ireland (also 0.9 per cent).

Table 9: Public sector employment levels in Wales.

Year	Employment
2008	328,000
2009	341,000
2010	337,000

Note: Annual figures relate to June quarter (Q2)
Source: Public Sector Employment Statistical Bulletin, ONS
http://www.statistics.gov.uk/pdfdir/pse1210.pdf

Note:

1. For 2010Q1"...As a proportion of those in employment the public sector accounted for 27.5 per cent in Wales, more than the UK (21.2 per cent). However if public sector employment is expressed as a proportion of the resident population aged 16 and over, which illustrates the relationship between the size of the public sector and the size of the population it serves, the difference in the proportion of the public sector between Wales and the UK is reduced (14.2 per cent in Wales compared to 12.3 per cent in the UK)..."
http://wales.gov.uk/topics/statistics/headlines/economy2010/100906/;jsessionid=1NfQMZGPXtGLyGTcPwntGHD62bxNspl7XyS0y45VG8pG2jr9Lsdp!-42672990?lang=en

Property Markets

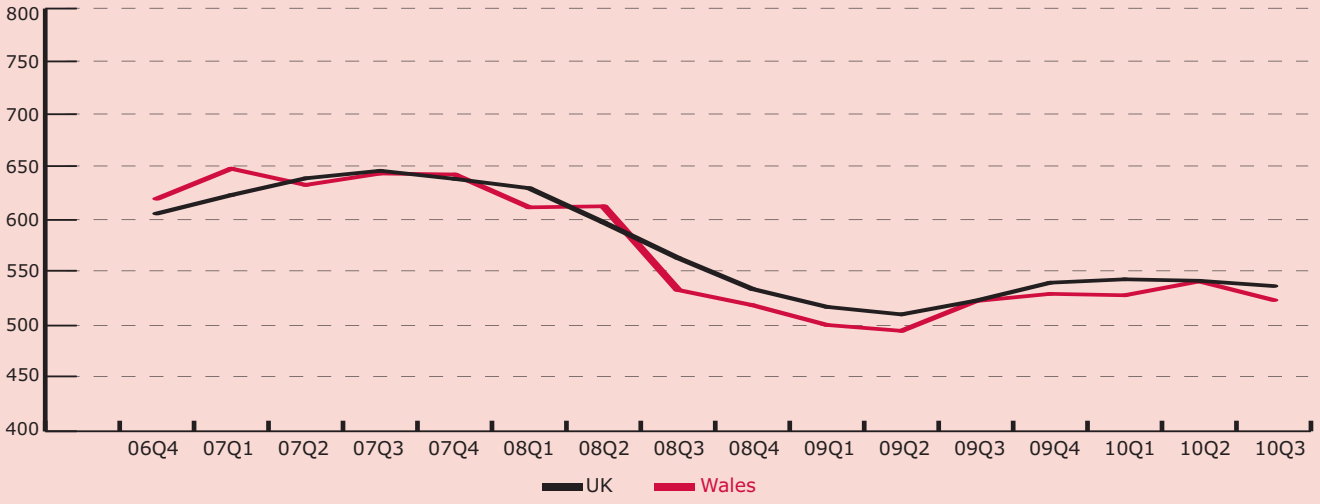
The Bank of England base lending rate has not had anywhere much to go, sitting at 0.5% since March 2009. Despite recent short term inflationary pressure the Monetary Policy Committee is currently resisting raising interest rates. Meanwhile, UK GDP output growth was negative throughout much of 2009, with green shoots at last appearing at the beginning of 2010. The national press has been relatively silent on the matter of housing in the UK throughout the year, perhaps because (as with interest rates) the market has been moribund, with small drops in July (0.5%) and August (0.9%) and flat in September. However, in October 2010, commentators expressed consternation that house prices fell faster that month than expected (0.7%), and with the third quarter change on the previous quarter also being negative at -0.9% (Figure 2). A press release from the Halifax[1] (10th January 2011) stated that UK houses prices had fallen 1.6% over the year, 0.9% over the final quarter of 2010, with a fall of 1.3% between November and December. Regional figures are not yet available for the final quarter of 2010.

The current market reflects a combination of (largely negative) conditions: low growth in wages, the prospect of rapidly rising unemployment, higher taxes, generally poor consumer confidence, and more particularly, persistently unfavourable lending conditions. With, as ever, too few homes, it will only take a small easement in lending to free up the market. Probably though, a more radical downward market correction is still needed to return to more acceptable price earnings ratios. House price movements over 2011 are likely to be very slight for the UK as a whole.

Figure 3 shows that lending had bottomed-out in the early part of 2009 with no sign then of easement in conditions.

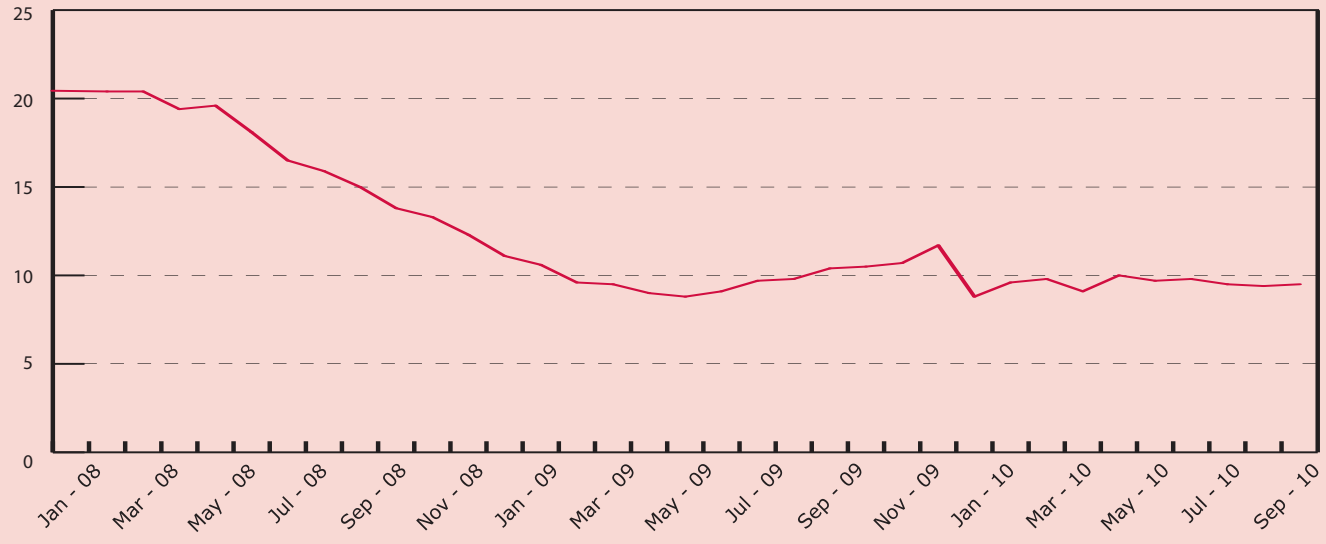
In 2009 Q2 the standardised average house price (based on sales) in the UK was £156,944 having dropped by 15%

Figure 2: House Prices Index. All Houses – All Buyers Seasonally Adjusted (1983=100).



Source: Halifax House Price Index

Figure 3: Gross Mortgage Lending by the major UK Lenders (seasonally adjusted) £ billions.



Source: Bank of England

Table 10: All Houses, All Buyers (Seasonally Adjusted) 3rd Quarter 2010, Quarter Averages.

Region	2010 Q3 Standardised Average Price £	2010 Q3 Annual Change %	Change 2010 Q3 -2000 Q3 %
North	125,415	-1.2	126
Yorkshire & the Humber	124,152	4.6	122
North West	122,181	-5.0	98
East Midlands	145,701	8.9	109
West Midlands	153,923	2.1	94
East Anglia	155,391	-0.5	85
South West	195,371	10.6	101
South East	223,983	3.1	68
Greater London	259,749	4.8	74
Wales	135,624	0.1	117
Northern Ireland	127,881	-13.1	85
Scotland	121,165	-3.6	94
UK	166,035	2.6	95

Source: Halifax 2010

Table 11: Average House Price by Welsh Local Authority, 12 months to November 2010.

Local Authority	Average house Price (£) November 2010	% Monthly Change	% Annual Change*
Blaenau Gwent	74,144	6.1	-6.4
Bridgend	126,241	-0.2	5.1
Caerphilly	106,240	0.9	7.7
Cardiff	146,263	-0.2	3.3
Carmarthenshire	113,384	-0.7	-2.0
Ceredigion	174,432	-1.8	0.2
Conway	136,998	-0.6	-1.2
Denbighshire	120,651	-1.4	-3.0
Flintshire	130,937	-0.2	0.1
Gwynedd	148,805	0.5	1.7
Isle of Anglesey	135,464	-2.0	1.9
Merthyr Tydfil	78,491	2.6	11.3
Monmouthshire	180,693	-2.2	1.7
Neath Port Talbot	92,320	1.9	2.5
Newport	121,491	-0.6	1.8
Pembrokeshire	152,967	0.2	2.8
Powys	161,449	0.9	2.3
Rhonda Cynon Taff	80,815	-0.3	1.3
Swansea	115,771	-1.2	-0.2
The Vale of Glamorgan	161,828	-0.5	1.5
Torfaen	106,788	-4.1	-1.7
Wrexham	123,646	-2.1	3.4
Wales	125,131	0.3	2.2

* 12 months to November 2010
Source: Land Registry 2010
Note: Prices shown in the table above are arithmetic averages of houses on which an offer of mortgage has been granted. These are not standardised. This means that prices can be affected by changes in the sample from one quarter to another. Figures may include properties sold for £1m plus. Houses prices reported at the town or LA level must be interpreted with caution.

over the year (the corresponding figure for Wales was £127,876, an annual fall of 19.5%). Since then UK house prices have bumped along the bottom, though over the year to Q3 experiencing a small rise of 2.6%. Table 10 shows marked variations across the regions, with house prices in Northern Ireland down by 13.1% in contrast to gains in the south west of 10.6%. The final column in Table 10 shows the percentage change over the decade, with UK property values being up by 95%, and again with markedly different experiences across the regions. From albeit a lower base, the North and Yorkshire and Humber have experienced value gains of 126% and 122%, with Wales just behind them at 117%. Meanwhile, Greater London and the South East were up 68% and 74% respectively.

Unitary Authority data for Wales is sourced from the Land Registry which is not comparable with the Halifax data[2]. Table 11 shows that average house prices in Wales show great variability. Lowest house prices are found in Merthyr Tydfil (£78,491) with the highest prices to be found in Monmouthshire some 2.3 times higher (£180,693). In the last property report the highest prices were to be found in Ceredigion (£172,288); around 1.8 times higher than the lowest (Merthyr £70,347). At the moment then conditions in Wales are conspiring to widen existing local differences. Demand for housing is typically strong in Monmouthshire, Caerphilly, Cardiff and the Vale, and the annual figures reflect this strength. Meanwhile, Merthyr Tydfil experienced the highest annual price change in November, with a movement of 11.3 per cent, and Blaenau Gwent experienced the strongest monthly growth with an increase of 6.1 per cent. Torfaen had the highest monthly price fall during November with a movement of -4.1 per cent. On the whole though, the picture in Wales is more optimistic than that reported in the last Review, in which the % annual change was negative across the board.

Construction News

The hard winter of 2009/10 hampered the construction industry. However, new house building activity during the three months to the end of February 2010 was up by 89% on the same period in the previous year. Of the 927 registrations (of new homes) 78% were private sector related builds.

Figures released by the Welsh Assembly Government over a period from 2000-01 to 2008-09 show that total stock increased from 1,274,500 to 1,338,490 (+5%). Owner-occupied stock increased from 904,514 to 954,710 dwellings (+5.5%), while the rise in private rentals was 28% (albeit from a small base).

Community Housing Cymru figures for 2009 suggest that the holding by registered social landlord (RSLs) is more likely to be in excess of 112,000 (compared with the 2008-9 estimate of almost 107,000, shown in Table 12). A goal has been set to add 6,500 new homes to social housing stock in Wales during the period 2008 to 2011.

The Comprehensive Spending Review has tempered the mood of the construction industry in Wales, and a number of commentators (among them the Royal Institute of Chartered Surveyors, the construction company Wilmott Dixon, and trade credit assurance firm Atradius) are keen to highlight the need for banks to increase their lending. The protection afforded to the construction industry by public sector spending in Wales is no longer guaranteed, even though it is its most important client. Order books are down on the year, and in such a competitive environment, quality will inevitably be under threat.

The inability of Metrix to pare down their costs on the St Athan training college has meant that this project will be scrapped, as has the tidal Severn estuary barrage. If this is the pattern of things to come, then the optimism felt earlier in 2010 should be substantially moderated.

Notes:

1 http://www.lloydsbankinggroup.com/media1/research/halifax_hpi.asp?WT.ac=015

2 For interest, on 28th September 2010 the Land Registry reported an average UK house price of £167,423, with an August monthly change of 0.3% (fifth in a row showing a positive movement) and an annual change of 6.7%.

Table 12: Dwelling Stock Estimates, by tenure, 2000-01 and 2008-09.

Type of Tenure	2000-01	2008-09
Local Authority	187,720	112,996
Registered Social Landlord (RSL)	54,999	106,891
Owner-Occupied	904,514	954,710
Privately Rented	127,267	163,893
All Tenures	1,274,500	1,338,490

Source: Stats Wales

Industrial Activity

The focus in this issue of the Welsh Economic Review is on the index of manufacturing output in Wales. There is mounting concern regarding cuts in public spending. A corollary is growing interest in how far elements of the private sector will be able to respond and fill gaps left by the reduction in activity in the non-market sector. It is argued here that a strong manufacturing sector will be important to the Welsh recovery.

In 1990 Welsh manufacturing employed around 235,000 people, falling in 2000 to an estimated 201,000 people. By 2008 this had declined further to an estimated 162,000 people or around 14% of Welsh employment. This sharp reduction was caused, in large measure, by the exit of some of Wales' longest standing inward investors. Sectors which experienced the sharpest decreases in the period 2000-08 included clothing & textiles, publishing and printing, metal manufacture and mechanical engineering. However, losses in these sectors were dwarfed by the loss of an estimated 18,000 jobs in electrical engineering, a sector to which Wales had been so successful in attracting investment from overseas in the 1980s and 1990s.

Figure 4 shows the UK and Welsh index of manufacturing over the period 2004 to 2010Q2. The trend in the Welsh index is generally close to that of the UK as a whole. Between 2008Q1 and 2009Q2 the value of the index fell by around 20%. The worst affected sectors over this period included food and drink (a fall of 25% in the index value), transport equipment (29% fall), metals (30% fall), and mechanical engineering (30% fall).

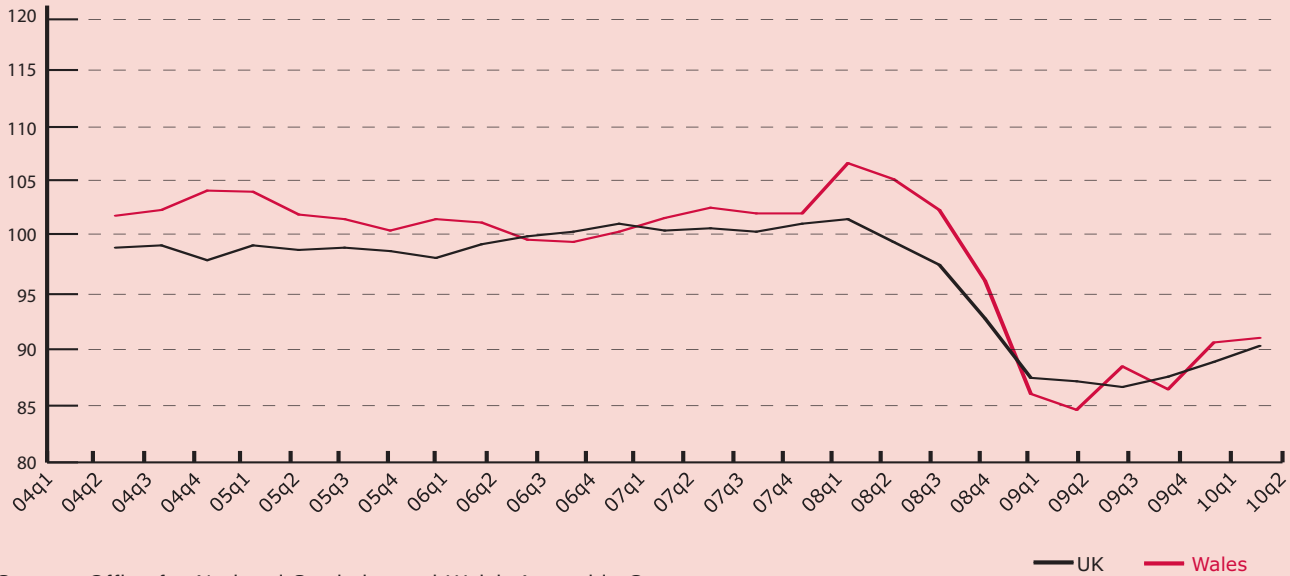
More encouraging has been the increase in the index after the low point of 2009Q2. In the year to 2010Q2 the index of manufacturing for Wales grew by 3.6%. While this is welcome news, it still means that at 2010Q2 the index value was around 9% lower than it was in 2006. The Labour Markets section of this Review shows that over 30,000 manufacturing jobs were lost over the June 2008 – June 2010 period (Table 5). Wales therefore comes out of recession with around 130,000 manufacturing jobs remaining.

The longer term decline in manufacturing, together with the shorter term described above are a cause for concern. Manufacturing makes an important contribution to the Welsh economy for the following reasons:

- In spite of its falling contribution to Welsh employment, the sector still contributed an estimated 17% of Welsh gross value added in 2010.
- The sector is relatively well paid, with earnings closer to (or even above) UK averages, when compared with financial and business services, for example.
- Full time as opposed to part time employment is more prevalent in manufacturing than services.
- The sector purchases regional goods and services which then support significant indirect employment in Wales.
- The foreign-owned manufacturing sector in Wales has been connected to more subtle developmental processes including productivity and knowledge spillovers to domestic firms.

Manufacturing also makes a large contribution to Welsh exports. However, the value of Welsh exports fell during the recession. For example, in 2008 HM Revenue and Customs data revealed that Welsh exports were £10.64bn, falling to £9.01bn in 2009 (i.e. a fall of 15.3%). Latest data is available for 2010Q2 and suggests exports were making a slow recovery. In the first half of 2010 the value of Welsh exports was around £4.3bn, compared to £4.7bn in the same two quarters in 2009. Manufacturing still contributes the lion's share of exports. For example, in the year ending 2010Q2 manufacturing contributed an estimated £5.6bn out of £8.7bn (around 64%) of Welsh exports.

Figure 4: Index of Manufacturing: UK and Wales 2004-2010Q2 (2006=100).

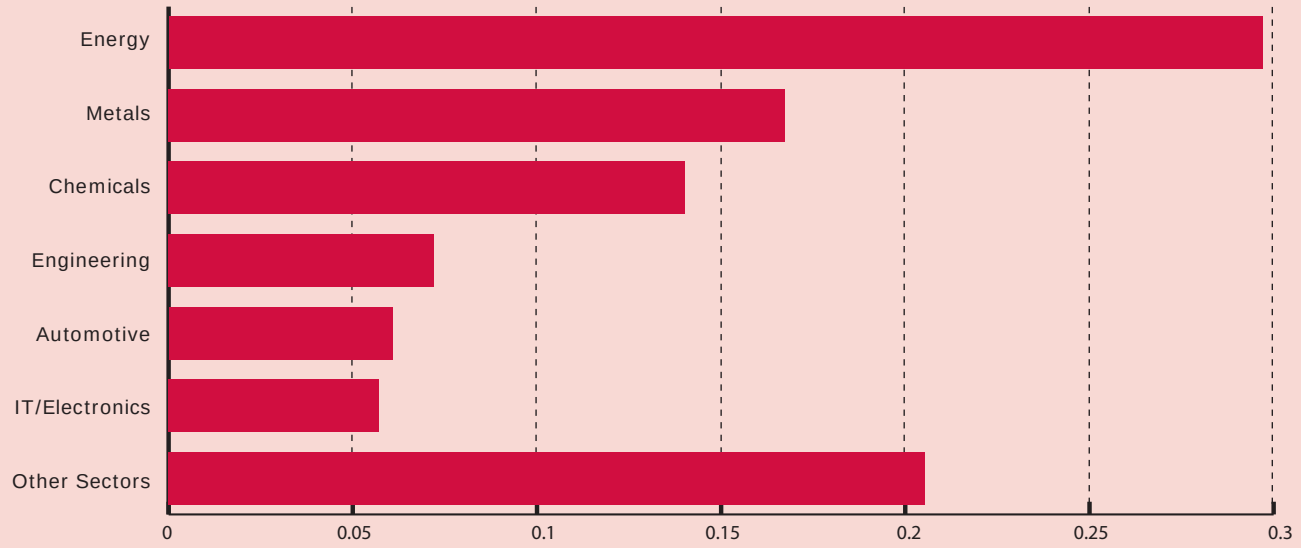


Source: Office for National Statistics and Welsh Assembly Government

Key exporting sectors include metals, chemicals, engineering and automotive (see Figure 5).

On the basis of the above analysis a strong manufacturing sector will be important to the Welsh recovery in 2011-2012. Consequently, it will be important to conserve the manufacturing base and to continue to attract new inward manufacturing investment from overseas. While encouraging indigenous manufacturing, and services sectors is important, the attraction of high quality manufacturing investment from overseas has been shown to produce strong economic dividends for the region. For these reasons policymakers should monitor current trends in the regional manufacturing base very carefully.

Figure 5: Key Welsh exporting sectors (% of total exports in year to 2010Q2)



Source: HMCE

Interview and Feature Articles

Interview with Elin Jones, Minister for Rural Affairs, Welsh Assembly Government.

Elin Jones was elected to the Assembly in May 1999 and served as Shadow Economic Development Minister during the Assembly's first term. Following the Assembly election in 2003, she retained this portfolio until 2006 when she became Shadow Minister for Environment, Planning and Countryside. On 9 July 2007 the One Wales Government was formed and Elin was made Minister for Rural Affairs.

This review has a focus on food, but nonetheless it would be helpful for our readers to understand the full range of your brief. Could you summarise your responsibilities, and perhaps prioritise them?
My responsibilities are wide-ranging and include farming, forestry, food and fisheries in Wales, and my department also ensures that all Welsh Assembly Government policies take account of any rural issues.

High profile issues such as bovine TB, farm subsidy payments, animal disease outbreaks, the promotion of food from Wales, land management, farm business support, fisheries management and plant health including GM crops, all fall within my remit.

In terms of my priorities, ensuring a sustainable future for farming, fishing and the woodland industries is at the heart of all the policies for which I am responsible.

As outlined in the One Wales agenda for government agreed in 2007, my main focus is on the following key commitments:

- Securing a £795million Rural Development Plan for Wales
- A scheme to support new entrants to farming
- A major initiative on local food procurement
- Support for indigenous woodlands, including a tree for all new babies and adopted children, helping to create a Welsh National Forest
- A Strategic Action Plan for the dairy industry
- Securing a derogation for Wales to EU Regulations prohibiting the burial of fallen stock on farm land
- To pursue vigorously the eradication of bovine TB
- Identifying and addressing the particular needs of "deep rural" areas
- Maintaining our commitment to maximum restrictions on GM crops.

Do you perceive conflicts in your portfolio, and how are these resolved? For example, there are perhaps conflicts between conventional and organic farming, and between pastoral and horticultural land use, with each having implications for sustainability. Also of economic significance are potential conflicts between landscape, tourism and sustainable energy.
In Wales, as elsewhere, there are always competing priorities for land use and sometimes these lead to conflicts. We have to balance the need of landowners to make a living from the land with the expectations of wider society of landowners to maintain the landscape and act in an environmentally-responsible way.

We have to think cleverly about balancing these demands, and my Department has responded with a new agri-environment scheme, Glastir, which will compensate farmers for providing environmental services.

I work closely with the other devolved administrations and UK government, as well as with other Ministers within the Welsh Assembly Government to deal with competing demands on land use in Wales. For example, the Environment Minister Jane Davidson and I have just finished a public consultation on the Natural Environment Framework for Wales, which focuses on managing our environment as a whole rather than focusing on separate parts.

What is meant by the term sustainable farming?
The vision of sustainable farming is an industry that enhances the economic, social and environmental wellbeing of people in Wales. Its success depends on the public, and governments, recognising the value of the services delivered, whilst supporting a balanced approach to the delivery on the food production agenda, as well as the delivery of other public goods and services.

The new, overarching food strategy for Wales for the next 10 years– Food for Wales Food from Wales makes a bold step-change in adopting a broad food system approach to food policy. It brings together many crosscutting issues in the areas of health, food culture and education, food security, environmental sustainability and community development to provide the basis for an integrated approach to food policy.

Can you outline the strategic objectives of the Farming Connect service?
Farming Connect supports the development of farming and forestry businesses, enabling them to remain viable and meet future challenges in a sustainable and innovative way.

It offers one-to-one support, knowledge, expertise, training and advisory services. It offers mentoring and help with the production of a Whole Farm Plan, a business plan for farm and forest enterprises.

Services are tailored to the individual farming business' needs, but include support in areas such as finance, technical, environmental, animal

welfare and diversification and innovation. Many services are fully funded or subsidised by 80%. Farming Connect can help farmers to run their businesses more efficiently and ultimately safeguard the future of the farm business.

Learning new skills and refreshing old ones is vital if individuals are to keep up with changes in the industry, and Farming Connect offers regulatory and vocational training courses and strategic awareness events, as well as keeping farmers up-to-date with the latest know-how.

What reputation does Wales have as a food producer, outside Wales? What is your assessment of this reputation?

Welsh food has a long-established reputation for distinctiveness and quality, making it popular with consumers across the world. Wales prides itself on supplying some of the finest produce in the world. Thanks to our producers, our unique geography, climate and farming practices, Wales boasts a range of high quality foods, from our iconic Welsh lamb and beef to cheeses and Welsh seafood.

Welsh Lamb and Welsh Beef have both been awarded the coveted status of Protected Geographical Indication (PGI) by the European Commission, a status enjoyed by the finest regional products from around the world, such as Parma Ham and Champagne. The PGI badge of authenticity means that only lambs and cattle born and reared in Wales and slaughtered in an approved abattoir can be marketed as Welsh. The stock must also be fully traceable.

Last summer, I launched the European Protected Food Names Initiative, to increase the number of Welsh products eligible for PGI status. The benefits for the beef and lamb sector have been tremendous in terms of consumer and trade recognition both within the United Kingdom but also overseas.

We aim to increase the Welsh share from two products with PGI status to ten over the next two years.

In future, we want Wales to increasingly be seen as a foodie destination, and our Food Tourism Action Plan focuses on ensuring visitors to Wales enjoy food as part of the overall Welsh experience.

Does Wales over or under achieve in terms of converting primary agricultural outputs into high quality branded commodities?
There are always opportunities for food producers to add value to their primary produce by developing high quality branded commodities, and food producers need to exploit these.

That said, we are a small nation punching above our weight in terms of our production of high quality food. Our lamb and beef are iconic, while our cheese and seafood is up there with the best in the world. We are also gaining a reputation for our innovative food and drink and hospitality sector, led by producers who know their market and develop their products in line with its demands.

Cheese production in Wales is one area in which milk producers are excelling in terms of adding value. Around 80% of the milk produced in Wales is processed into cheese, both for the mass market and the quality market. This year, Caws Cenarth's Golden Cenarth won best Semi Soft cheese, best Welsh Cheese and won the Supreme Champion at this year's British Cheese Awards, beating 903 other cheeses to the title.

The food manufacturing sector in Wales is important. How does your portfolio overlap with others in relation to this sector? What do you consider to be an appropriate role for the Welsh Assembly Government in developing the sector?
There are links between food manufacturing and many Welsh Assembly Government departments other than my own. Our recently published ten-year strategy for the food sector in Wales reflects the cross-cutting nature of food and its importance across all policy areas.

The Department for Economy and Transport, through its business support programmes, has strong links with the sector, as does the Health and Social Services portfolio, particularly in relation to healthy eating and improving wellbeing.

Ensuring that the food we produce does not impact adversely on the environment and our natural resources is the domain of the Environment, Sustainability and Housing portfolio, so again there are links with the sector.

Direct support for the food industry has been provided by the Welsh Assembly Government and European Union through the Processing and Marketing Scheme, part of the 2007-13 Rural Development Plan. To date, the Scheme has committed £25.5million into the food sector in Wales, helping 155 companies to develop their businesses.

While government can help the sector develop, by providing direction and support, it is ultimately up to the industry itself to fulfil its potential. I think this approach is the most appropriate to ensure the sector in Wales capitalises on its strengths.

Should food producers (whether farmers or manufacturers) in Wales be encouraged to expand their markets outside the UK?
I am committed to the promotion of Welsh food in international markets, and believe that food producers should be encouraged to export where appropriate and possible.

The success of Welsh Lamb exports are well publicised, but we need to ensure that we are able to help the wider food and drink industry take advantage of opportunities both within the UK and abroad. By doing this, we not only raise the competitiveness and viability of our industry, but also promote Wales as a producer of a diverse range of quality products.

We must also remember that we also need food to ensure we can feed the people of Wales. Our new Food Strategy, Food for Wales, Food from Wales sets a radical direction for industry and Government, and faces up to the challenge of ensuring that people have access to the affordable and healthy food they need whilst ensuring that it does not impact adversely on the natural environment.

The challenge facing food producers is to increase production to meet the demand from a growing population so that healthy food is available to all, while ensuring our land is sustainably managed. I am confident that the industry can respond positively to these challenges.

What does the Welsh Assembly Government do to support export initiatives, and how is the success of such support measured?
As part of the support we provide to food and drink producers in Wales, we actively help them to access opportunities within both home and overseas markets.

We have close links with food and drink businesses and understand their business needs. We offer a fully funded, detailed export capability review and appropriate guidance to any business wishing to export their product or explore new export markets. When required, we follow this up with market entry advice and support from local in-market specialists, helping those businesses maximise their chances of success.

Hybu Cig Cymru – Meat Promotion Wales, the Welsh red meat promotional

body, has successfully secured new markets for Welsh red meat internationally, including Hong Kong, Singapore and Dubai. It has also developed existing international markets such as Italy and France, to a point where lamb exports alone were worth £109 million in 2009.

The success of export initiatives is measured by the value of deals or contracts secured with overseas buyers. In turn, the increase in business for the producer will have an effect on their turnover, production, and number of employees. These are all elements which we try and measure through our contact with the industry.

How satisfactory is the market structure of UK food suppliers? For example, just as a few big banks have come to dominate the financial sector, is this not also the case with regard to supermarkets and retail food?
The Welsh Assembly Government aims to support the right market conditions to enable fair competition and supports the introduction of a fully independent enforcement body.

I have pressed for the introduction of an ombudsman to intervene where unfair practice is suspected, and have made this view clear to the UK government on several occasions. I am therefore pleased with the recent decision to introduce a "Groceries Code Adjudicator" to monitor and enforce the Groceries Supply Chain Code of Practice.

This is an important step towards the establishment of an arbitrator but I am aware that we could be some way off seeing anyone in that position.

In Wales, we have a diverse range of opportunities for food producers to sell their products. One in five Welsh food and drink products is bought direct from the producer, a statistic of which I am particularly pleased. Food festivals, farmers markets, farm shops and projects like Pembrokeshire Produce Direct have increased opportunities for the consumer to buy direct.

Supermarkets are becoming more aware of the local sourcing agenda and are stocking an increasing range of Welsh products. Through our consumer tracking research, we are able to identify how and where consumers buy Welsh food and drink and work with those retailers we feel are underperforming in this area.

We have a dedicated trade development programme to help companies large and small to engage with the range of retailers we have in the UK. The main aim is to facilitate the purchase of Welsh food and drink by retailers, and help them effectively manage their relationships with producers.

Access to Welsh seafood in Wales has traditionally been restricted because of the high dependence of the industry on export to Europe. Through the European Fisheries Fund, which has committed £7.4million to the fishing industry in Wales, real progress is being made to address our reliance on the European market. A recent success was the agreement between the South West Wales Fishing Association and Waitrose, which has increased the range of Welsh fish and shellfish in store.

What do you consider to be the greatest challenge for Welsh farmers and food producers over the next decade?
The major challenge ahead is how Wales can maintain its food production potential while at the same time cutting emissions of greenhouse gases.

In 2009, I set up the independent Land Use Climate Change Group to report to me on how the rural sector can respond to climate change in terms of food supply and security, carbon sequestration and renewable energy reply.

The report's emphasis is on maintaining intensive dairy, sheep and beef sectors while diversifying and increasing vegetable crops. In the longer term, the report recommends development of a more radical approach where much of the cattle herd is housed and methane emissions are captured. By 2040, agriculture and land use sectors could make substantial progress to carbon neutrality.

I will be publishing an implementation plan based on the Report's recommendations soon.

A visible example of the effect of climate change on farming today, and one which has featured in the media is its impact on animal health.

Climate change may have a significant impact on new and emerging animal diseases such as Bluetongue and African Horse Sickness, leading to an increase in the need for surveillance by government and increasing vigilance from the farming community.

This increase coupled with other factors will mean that the scope of Government to intervene and support the farming industry to manage endemic animal diseases is likely to become increasingly limited and you will see a more collaborative approach being taken. This is already evident in the way the bovine TB Eradication Programme in Wales is being taken forward.

However, this will also mean that the farming industry will be relied upon to come up with solutions for tackling many other animal diseases that do not have implications for human health. As we move forward it will become essential that we continue to develop ways of collaborative working that promote the highest standards of animal health and welfare.

Therefore, my current strategy is to encourage production of very high quality produce. This, coupled with high animal welfare standards, will ensure a highly sustainable farming industry that has an internationally recognised reputation for its excellence in food production.

In addition, less financial support from the Common Agricultural Policy (CAP) may be a challenge for farming. The European Commission has emphasised the importance of maintaining farming and food production across the 27 Member States, which is good news for Welsh farmers. Single Payment will continue to be the main support mechanism for farmers but with pressure on the EU budget and austerity measures in Member States, farmers will increasingly become market dependent.

The future CAP is emphasising the importance of food and environmental security as well as sustainable rural development, and funding will be maintained to support the provision of these 'public goods'. Farmers need to be astute business men and women to secure a profitable future through an integrated approach to the production of food and environmental benefits. CAP Reform inevitably means change and business planning will greatly reduce negative impacts such as income redistribution.

Elin Jones, Thank You.

Food and the Economy in Wales

Peter Midmore, Professor of Economics, School of Management and Business, Aberystwyth University[1].

Summary
Primary food production has, historically, been a relatively important part of the Welsh economy, especially beyond the industrial conurbations of the South and North-East. However, with successive changes in the supporting policy framework and fast-moving changes in both consumer tastes and retailing, agriculture in Wales has suffered a worse decline than in any other region of the UK between 1997 and 2007. As far back as 2000, Christine Gwyther's written answer to an Assembly Question suggested that agriculture contributed 1.4% of Welsh GVA but, if subsidies were excluded, its contribution was "close to zero." However, this ignores the fact that agriculture acts as the base of an increasingly closed supply chain embracing processing, distribution and retailing, and as an agri-food sector the contribution made is substantially greater. This paper reviews the analytic tools which can be used to demonstrate the strength of interconnections between the components of this supply chain and indicates the relative contributions of different commodities to employment and value-added in the economy of Wales. It concludes by challenging the conventional wisdom underpinning the strategy for the food and drink sectors which emphasises export-led growth.

Agriculture, often described as the backbone of Welsh rural areas, makes a contribution that goes beyond its own internal economic functioning. It is a provider of public goods, which include stewardship of the landscape and agro-biodiversity (both important for a growing rural tourist industry), and now more especially the role of upland farming in managing and developing the carbon sink provided by peat lands. These are emerging as key dimensions in the discussion about the future of EU subsidies after the current budgetary programming period expires in 2013. The fortunes of farming in Wales have always been volatile, and although at present farm gate prices are relatively high due to the combined effect of a world food price spike and sterling's weakness, the long term trends in employment, incomes and contribution to national Gross Value Added (GVA) are all downwards. Indeed, of all regions in the UK, the decline of farming in Wales has been the most pronounced over the past decade.[2] In 1998, the contribution of agriculture to Welsh GVA was 1.4%, although if direct subsidies were netted off this declined to 0.6%, and taking into account the (admittedly difficult to quantify) indirect subsidisation effects of tariffs on imports, it made no contribution at all.[3] Publication of this opinion attracted considerable criticism at the time but, neglecting any risk of further controversy, it is probably safe to assume that, measured in these terms, a decade later the contribution of farming is probably negative.

Nevertheless, the non-farm element of the EU's Rural Development Programme (RDP) is based on the idea that, together with the jobs associated with agriculture in marketing, processing and distribution of food products, the agri-food complex contributes substantially to rural economies. Because food manufacturing can take advantage of the proximity of sources of primary inputs, the multiplier effect is strong: in four European rural regions, Mattas and Tsakiridou (2010) found employment multipliers in the food sector ranging from 2.0 to almost 3.5. These linkages derive from the employment supported in other sectors that supply food manufacturing, and spending out of the wages they generate on local goods and services, in turn supporting more jobs.

Moreover, the food sector is one part of the manufacturing economy that is to an extent recession-proof, as spending on food is resilient even when economies stop growing. The contribution that the food sector can make in Wales is important, especially when, according to ONS data, Welsh manufacturing employment has shrunk from 19.6% of the total workforce in 1999 to 12.7% in 2009. In absolute terms, Wales has more than a quarter of its manufacturing labour force in the previous decade.

Development of a new Strategy for the Food and Drink sector in Wales takes this centrally into account: without a financially sustainable industry at its core, the wider aims relating to nutrition and health, cutting food miles and consequently also reducing greenhouse gas emissions, and developing thriving local economies throughout the territory of Wales, will all be frustrated. In its draft consultation form, Food for Wales, Food from Wales,[4] encapsulates the twin aims of increasing the consumption of fresh local produce by enhancing resident food culture, while at the same time raising the value of export sales by drawing on improved diversity, range, quality and distinctiveness. To achieve this, the ambitious intention (facilitated and led by the Assembly Government, rather than undertaken by it) is to improve the entire food system, through market development with an emphasis on stronger branding and promotion, improved consumer information and awareness, more ecologically efficient production and supply chains, innovation and niche product development, higher skill levels in the workforce, and integrated policy development, especially with regard to regulation.

This ambition appears more courageous now that the full extent of reductions in UK public expenditure has become apparent. To some extent, support for the whole agri-food complex is insulated from these funding pressures because the main resource comes from the EU budget, together with domestic co-funding which is pre-committed. However, the majority of RDP resources – themselves rather less generous than elsewhere in the EU, for historical reasons – are devoted to aids to the farming sector itself. Although there is the intention to leverage private contributions, only 8% of the overall €993 million of public spending component of the programme supports either the Processing and Marketing Grant Scheme or the Supply Chain Efficiency Scheme, which are the main means of accomplishing the Food Strategy objectives. It is unlikely that much additional funding will come from the Assembly Government's own reduced budget, and even European sources may contract after 2013 as the Commission's competitiveness and employment aspirations clash with member states' desire to restrict its spending to half of what has been proposed.

As currently structured, the draft Food Strategy envisages a coordinating role for updating all of the action plans that currently exist: for local sourcing, food tourism, red meat, dairy, horticulture and organic foods, as well as a new initiative for fish. Whilst some overarching activity is necessary for all food and drink produced in Wales, devoting limited and perhaps declining resources across all food sectors risks giving too little attention to any. This uncomfortable trade-off implies that prioritisation must occur, and one of the criteria that will help to distinguish between options is the strength of the employment multiplier effect (another could be the potential for future growth, which of course would also need to take any multiplier effect into account in order to gain an overall perspective).

The most popular way of estimating multipliers is to use an input-output model. This model is based on detailed representation of purchases and sales between different productive sectors as a means of constructing, understanding and reconciling different means of calculating GVA. It also possesses the virtue of being able to discriminate between the income and employment multiplier effect exerted by each individual sector. Less well-known, however, are the model's limitations. Firstly, because the underlying data required is so detailed and complex, by the time accurate input-output accounts become available they represent a dated snapshot of how an economy has worked historically, and intervening structural changes often substantially affect their accuracy. Secondly, the underlying model assumes that all the necessary inputs, especially labour, will be available, and utilised, from local sources where specified.

Subject to these caveats, the following employment multipliers and relationships for the Welsh Food and Drink industry are drawn from an input-output table for 2003 (derived from an exercise to extend the framework to encompass the diverse nature of the tourism industry: see Jones and Munday, 2004).

The first column of the table shows the familiar employment multiplier measure, representing the total number jobs that depend, directly and indirectly, on each person directly employed in the various branches of the Welsh food sector. From this perspective, the dairy processing sector creates most, with just over two and a half additional jobs depending on every direct job, and overall the food sector generates about four extra jobs in other sectors for each five within it. The dairy and meat multipliers are broadly in line with those found by Mattas and Tsakiridou (2010). However, this measure can be misleading as it can be inflated if an industry is relatively labour-extensive, or vice-versa, so the second column shows an alternative based on jobs within or dependent on food processing sectors per unit of turnover; here, the largest multiplier effect is in other food products (including animal feed production, but also incorporating a small amount of employment in producing other minor products).

Finally, to account for the fact that the overall workforce size varies between processing sectors, the third column shows total employment directly and indirectly created within Wales by the various commodity activities. Directly, the food sector employs about 2% of the overall workforce, whereas if the indirect jobs are also taken into account this rises to about 3.6%. Given the bias of food industries towards locating in rural areas, the proportion of employment in the rural labour force is likely to be considerably higher. Meat processing is responsible for a third of all related jobs, and together with dairy processing, just over half of all food related jobs are dependent on these two sectors. Both activities are predominantly large in scale and concentrate jobs in a small number of localities, and such enterprises have benefited substantially from investment aids provided by the RDP.

While it is useful and important to know what proportion of employment in Wales exists as a result of the food sector, the data above do not provide a guide to the most appropriate priorities for public investment. Although they apparently lend support to the current strategy of developing the export sectors in dairy and sheepmeat, there are good reasons why such evidence needs to be interpreted cautiously. First, technology and market changes since 2003 will have almost certainly altered the relationships between directly created jobs in the food sector and those elsewhere, so that the magnitude of impact is overstated: for example, there are fewer slaughterhouses and creameries in Wales now than in 2003, and those that remain are more labour-efficient. Equally, the sources of inputs for expanding food industry employment will often be generated outside, rather than within, Wales, reducing backward local linkages. It is not uncommon, for example, for livestock from the North and East of England to be processed in Welsh facilities. Hence, the historic multipliers only poorly correspond to how different sectors will respond to expansion and contraction. More recent data provided by the forthcoming Input-Output Tables for Wales in 2007 will go some way to overcoming this drawback.

The critical issue, however, is that these multiplier relationships are merely a representation of the strength of existing supply-chain linkages in a regional economy. It is usual also to assume that any expansion (of the food processing sector, say) will be able to acquire the necessary inputs, particularly labour, from local sources. However, labour supply in rural Wales is limited in both quantity and quality, and as a result of new developments competing for labour with other existing rural employers, the overall effect on job growth and rural development is likely to be substantially weaker than the standard multiplier approach implies. There have been no studies in Wales of the ex-post rural multiplier: the change in employment observed after a new development has taken place, rather than that predicted by multiplier analysis beforehand. However, evidence from the United States (see, for example, Kilkenny and Partridge, 2009) suggest that too much rural employment in export-oriented food processing can reduce investments that make rural life attractive, undermine the quality of amenities and diminish the economically active population.

For a food strategy that aims to promote overall rural development, the

Table 1: Multiplier Relationships, Welsh Food Sector

	Employment Multiplier (direct and indirect employment per directly created job)	Jobs (direct and indirect) per £1m of turnover	Total jobs (and % workforce) in Wales dependent on sector†
Meat processing	2.11	15.5	13,280 (1.2%)
Dairy products	3.56	17.1	6,510 (0.6%)
Fruit, vegetable and fish processing	1.81	17.9	5,480 (0.5%)
Bread and biscuits	1.27	20.1	8,200 (0.8%)
Other food products	1.55	20.4	4,760 (0.4%)
Confectionery	1.60	17.2	1,240 (0.1%)
Average for food sector	1.84	17.5	39,470 (3.6%)

† Based on 2003 input-output relationships and 2007 workforce statistics, derived from NOMIS

implications of this question the conventional wisdom that the support for large scale, efficient export-oriented processing plants should form the main thrust of policy. Two effects may occur, the first putting pressure on limited rural labour markets, and the second (because of the trade balance effect) leading to an outflow of the capital necessary to develop a range of local activities that could counter this specialisation and improve the quality of amenities and services. In the extreme, this would even be self-defeating because together these pressures could accelerate population decline. As a result, the more important priority than market development appears to be the enhancement of food culture: diverse, innovative and high quality foods, available from short local supply chains, can be an important contributor to the attractiveness and amenity of rural areas for residence purposes. Though further investigation in the specific context of Wales is necessary, it seems likely that a larger and more stable rural population, generating demand for local food, is a necessary and important prerequisite for overall development.

Notes

1. Peter Midmore is a member of the Welsh Assembly Government's Food and Drink Advisory Partnership, but writes here in a personal capacity. Grateful acknowledgements are due to Dennis Thomas and Hadyn Edwards for helpful comments on an earlier draft.
2. Source: ONS, Statbase, available at http://www.statistics.gov.uk, and Welsh Assembly Government, http://wales.gov.uk/topics/statistics/?lang=en. In current price terms, Welsh agriculture, hunting, forestry & fishing contributed £634 million to GVA in 1997 and £202 million in 2007. If inflation is taken into account, this represents a decline of 77%. Total numbers in employment have not fallen so fast: in 1997 the total labour force was 63,397, whereas in 2007 it was 57,020.
3. National Assembly for Wales, Answers to Questions not reached in Plenary, 24 May 2000, available at: http://www.assemblywales.org/bus-home/bus-chamber/bus-chamber-first-assembly/bus-chamber-first-assembly-rop/392e716e000e84d2000012b800000000.pdf?langoption=3&ttl=Answers
4. Food for Wales, Food from Wales 2010-2020: Proposed Food Strategy for Wales, Cardiff, Welsh Assembly Government. Available at: http://wales.gov.uk/docs/drah/consultation/100705foodstrategyconsultationen.pdf (accessed 15th November 2010).

References

Jones, C. and Munday, M., 2004, Evaluating the economic benefits from tourism spending through input-output frameworks: issues and cases, Local Economy, Vol. 19, No. 2, pp. 117-133.

Kilkenny, M. and Partridge, M., 2009, Export sectors and rural development, American Journal of Agricultural Economics, Vol. 91, No. 4, pp. 910-929.

Mattas, K. and Tsakiridou, E., 2010, Shedding fresh light on food industry's role: the recession's aftermath, Trends in Food Science & Technology, Vol. 21, No. 4, pp. 212-216.

The Coming Crisis of School Food: From Sustainability to Austerity?

Kevin Morgan, Professor of Governance and Development, School of City and Regional Planning, Cardiff University.

Introduction

At a time of unprecedented economic upheaval, when the very foundations of the economy are being called into question, it is easy to forget that one of the most important social experiments of the post-war era could be coming to an end. It is no exaggeration to present the school food revolution in such grand terms because, in our view, school food is the litmus test of a society's commitment to social justice, public health and sustainable development (Morgan and Sonnino, 2010). In this article it is argued that the school food revolution - which aims to create a healthier diet for children, a more localised food economy and a more sustainable food system - was beginning to show some real progress, especially in deprived parts of the country where health gains are hard to secure. However, these hard won "little victories" are now under threat because severe public expenditure cuts are forcing local authorities to seriously consider their school food options. Should they form council or arm's length consortia to reap economies of scale and reduce overheads? Or is it safer to outsource to private contractors who have more incentive to cut costs? Most radically, should the service be reduced to the bare statutory minimum - the provision of free school meals to the very poorest children?

School food is the most visible part of a wider debate about the quality of public sector food provisioning in the UK. In recent years the government has woken up to the fact that public procurement is a powerful development tool if it can be deployed effectively. Public food is a good index of socially responsible public procurement because such food is destined for the most vulnerable consumers in society – like pupils, patients and pensioners, for example. If we want to deploy the power of purchase more effectively, the debate about the quality of food on the public plate – how it is produced, where it is sourced and, of course, its nutritional value – can no longer be confined to a narrow dialogue between procurement managers and their large corporate suppliers.

Public food provisioning has been moving up the political agenda for reasons that were succinctly expressed by the Department for Environment, Food and Rural Affairs (Defra):

> "If we are what we eat, then public sector food purchasers help shape the lives of millions of people. In hospitals, schools, prisons, and canteens [...], good food helps maintain good health, promote healing rates and improve concentration and behaviour. But sustainable food procurement isn't just about better nutrition. It's about where the food comes from, how it's produced and transported, and where it ends up. It's about food quality, safety and choice. Most of all, it's about defining best value in its broadest sense" (Defra, 2003)

Defining "best value" is easier said than done because, in the cut and thrust of procurement negotiations, this notion is often confused with low cost. School food reformers have been at the forefront of campaigns to define "best value in its broadest sense" because they believe that wholesome school food delivers values for money, and not just value for money in a narrow sense. Indeed, the way in which school food is viewed and valued will ultimately determine whether or not the school catering service has a viable future in the UK. Before addressing the future of the school food service, it is worth knowing something of its past.

The School Food Revolution: how and why it happened

The history of school food in the UK has been shaped by three very different regulatory regimes, each of which has had a profound effect on the nature of the service. This section draws on our recent book – The School Food Revolution - to provide a brief history of the school food service (Morgan and Sonnino, 2010)

The Welfare Era of Collective Provision

Social historians locate the origins of school food provision in the 1880s, when the birth of compulsory education exposed the problem of undernourished children and their inability to learn effectively. In fact in the early days, warfare was as important an influence as welfare because it was discovered that the poor physical condition of recruits during the Boer War was impairing the war effort. As a result, a Royal Commission on Physical Deterioration was established and its report led to the Education (Provision of Meals) Act of 1906, which gave Local Education Authorities (LEAs) the power to provide meals free for children without the means to pay for them.

Although the origins of the welfare era can be traced back to the 1880s, it was the Education Act of 1944 that really codified the values of the era of collective provision. Among other things, the 1944 Act laid a duty on all LEAs to provide school meals and milk in primary and secondary schools; it specified that the price of meals could not exceed the cost of the food; and it established that the school lunch had to be suitable as the main meal of the day and had to meet the nutritional standards that were first introduced in 1941. The welfare regime was killed off by the first Thatcher government.

The Neo-liberal Era of Choice

Although the neo-liberal regulatory regime was largely driven by a desire to cut costs, it was also an attempt to align the school meals service with the consumer culture of the 1970s. A new consumer culture was therefore marshaled as evidence to justify an old Conservative ideology (less public expenditure and more private choice). The neo-liberal era was embodied in two radically new policies. The first was the 1980 Education Act, which transformed the school meal service from a compulsory national subsidized service for all children to a discretionary local service. It also introduced four other major changes: (i) it removed the obligation on LEAs to provide school lunches, except for free school meals; (ii) it removed the obligation for meals to be sold at a fixed price; (iii) it eliminated the requirement for lunches to meet nutritional standards; and (iv) it abolished the entitlement to free school milk. The Conservative education minister, Mark Carlisle, identified three reasons why school meals had to be reformed:

- To make savings in public expenditure and establish the principle of "sound economics"
- To ensure that the burden of education expenditure cuts fell on school meals not the education service itself, and
- To give parents and children more freedom of choice.

The second piece of neo-liberal legislation was the 1988 Local Government Act, which introduced

compulsory competitive tendering (CCT) into public sector catering. Under the CCT regime, local authorities were required to submit their school meal service to outside competition. As bidders felt obliged to offer the lowest price, CCT triggered a dramatic reduction in costs, which induced major changes to the school meal service, including a loss of kitchens (as a processed food culture took root), a less skilled workforce, and the debasement of the food, transforming it into what one prominent school cook characterized as "cheap processed muck" (Orrey, 2003).

From a public health standpoint, the neo-liberal era was responsible for a monstrously myopic mistake. In its desire to make short-term public expenditure savings, the Conservative government fuelled the growth of unhealthy diets in schools, one of the primary determinants of obesity in children and young people. School food was driven by one factor above all others – if a food sold well and was profitable, it was provided (Passmore and Harris, 2004).

The (Emerging) Ecological Era

The ecological era is predicated on one of the core principles of sustainable development: the need to render visible the costs and connections that have been externalized (and rendered invisible) by conventional cost-benefit analysis. In other words, it highlights the multiple linkages between school food, public health, social justice and environmental integrity for example, all of which are key aspects of sustainable development.

Although the ecological era is popularly associated with the name of Jamie Oliver, whose TV series helped to put school food on the political agenda, the real origins of the new era lay in a new Scottish strategy called Hungry For Success, which championed a radically different type of school meal service (Scottish Executive, 2002). Among other things, the Scottish strategy contained three major social policy innovations: it recommended a "whole-school approach" to school food reform to ensure that the message of the classroom was reinforced in the dining room; it called for better quality food to be served in schools, supported by new nutrient-based standards; and it argued that the school meal service was closer to a health service than a commercial service.

This ecological approach is so radically different from the values of neo-liberal era that it constitutes nothing less than a school food revolution. In the eight years since the publication of Hungry For Success, the ecological approach has spread to England and Wales (though the latter decided not to follow the other two nations in adopting new nutrient-based standards because the Welsh Assembly Government feared that doing too much too soon would have an adverse effect on the take-up of school meals.)

Scope and Limits of the Ecological Era

When we discussed the new ecological era in our book, we concluded by saying that the euphoria that greeted it could prove to be short lived because at least three conditions had to be met before it could be declared a practical success. Firstly, extra resources were necessary. We argued that the school food service needed to be put on a sounder economic footing because, when local authorities were expected to introduce the most radical reform since 1944, the service was in a very fragile financial state. In fact, following the Jamie Oliver TV series, and in part caused by it, the take-up of school meals actually declined, placing school caterers in an unsustainable position of higher costs (for better quality food ingredients and extra labour time) and lower take-up (as some children recoiled from the new menus).

Second, new skills sets were also needed throughout the school food chain, from farm to fork. Cooks and caterers had to be equipped with healthy cooking skills for example, while local authority procurement officers needed the competence and the confidence to design tenders that allowed quality food (be it local, fresh or organic, for example) to be the norm, rather than the exception.

Third, we argued that greater social participation was needed if school food reform was to be sustained. While the welfare and neo-liberal eras had designed their policies for children, the ecological era should design its policy with children and their parents, enabling the latter to be active agents in the process, rather than the passive objects they had been in the past.

Some innovative local authorities were experimenting with the ecological approach to school food provisioning long before it was either fashionable or obligatory to do so. In our book we explore these school food pioneers – East Ayrshire in Scotland, Carmarthenshire in Wales and South Gloucestershire in England – to show that local reform was possible despite the limits of national regulations.

Apart from these three pioneering counties, the most ambitious attempt to realize the ecological approach in the UK to date has been the Soil Association's Food for Life Partnership (FFLP), which champions a whole-school approach to school food reform. Launched in 2007, and supported by a BIG Lottery grant of £16.9 million over five years, the FFLP programme is working with 2,700 schools in England to enable children to eat good food, learn where it comes from, how it is produced, and how to grow it and cook it themselves. Despite some very encouraging results – especially as regards higher take-up rates of school meals, improved learning environments and more localized food supply chains – the FFLP process looks likely to stop when Lottery funding ends in 2012.

The Unfinished Revolution: Austerity versus Sustainability?

If the school catering service was in a fragile financial state before the current economic crisis, what will it look like after the proposed public expenditure cuts? In its 2007 school meals survey, the Local Authority Caterers Association said "the service is under immense pressure and it is not inconceivable that local authorities would consider abandoning the service as budgets are unable to sustain the costs involved with the introduction of the new school food standards" (LACA, 2008). The key issue, as LACA rightly emphasized, is that "school caterers are currently being expected to provide what is essentially a welfare service whilst still endeavouring to operate as a commercial venture" (LACA, 2008).

As regards the economics of the service, school caterers face two formidable challenges: (i) how to increase take-up rates to offset the rising costs associated with food ingredients and labour costs and (ii) how to sustain the service in the face of local authority spending cuts.

If the school meals service is to be put on a sustainable footing, it must meet the take-up challenge. As one local authority business manager put it, "the key to low cost in providing a school meals service is not to reduce the food cost but to increase sales and thus spread staff and other overheads further" (FFLP, 2010). The FFLP's Caterers Circle estimates that average take-up levels of 55-60% are needed before school meals services can break even and become self-financing. The current average take-up in England is 41.1% in primary schools and 35.8% in secondary schools, while in Wales the figures are 49.6% and 40.1% respectively. Without transitional funding, it is inconceivable that school caterers can boost take-up rates to the

levels required to become self-sustaining.

The goal of a self-sustaining service looks doubly unlikely if local authorities reduce or withdraw their subsidies. The vast majority of local authority caterers in Wales, for example, are already operating at a deficit, where the average subsidy of a primary school meal stood was 95 pence in 2009 (LACA, 2009). If the level of subsidy falls, the price charged for a school meal will have to increase, putting the break even point beyond the reach of the very best caterers.

If the situation is as sombre as this analysis suggests, what is the future of the service? The progress of the past decade is in danger of being rapidly undone by a new cost-cutting drive, the likes of which have not been seen in school food circles since the CCT era. Two pioneering authorities in England have lost no time in taking radical action that bodes ill for the future of the school food service:

- Nottinghamshire County Council, once considered one of the leading local authority caterers in England, looks set to accept the conclusions of a trading service review conducted by Tribal Consulting, which recommended the outsourcing of the service on the grounds that no in-house option was viable. Tribal said that private operators had a greater capacity to cut costs, which account for 54% of the total, but it warned that the quality of the service could suffer. Tribal also said that the county needed to increase the "market appetite" for the service by bundling school catering with other services, like cleaning, building and landscaping for example. (Tribal, 2010). This is a classic example of the school food counter-revolution, where food provisioning is treated on a par with cleaning, just another service in the bundled package that is called facilities management.
- Croydon Council has served notice on one of the country's most innovative contract caterers for school food, deciding not to re-tender its school meals contract, forcing schools to go it alone (FFLP, 2010).

Local authority provision of school food is much higher in Wales than it is in England, therefore the challenge to local authorities is that much greater. Carmarthenshire has been one of the most innovative school catering services in Wales and it is therefore a good bellwether of what a forward-looking local authority can do. Although it is still monitoring its options, Carmarthenshire appears to have already rejected two options: it has decided against following the Nottinghamshire option of outsourcing the service to a private contractor, and it has rejected the minimalist statutory option of becoming a "free school meals only" service. Among the remaining options, Carmarthenshire is exploring a combination of in-house changes, including price increases and much reduced choice to enable greater volumes of a smaller range of foods, and more radical organizational changes, like regional consortia for service delivery. Carmarthenshire is already part of a regional consortium of six local authorities in west Wales, and one option would be for it to assume the lead role for school food for the region as a whole, given its widely acknowledged competence.

The Welsh Assembly Government is keen to promote organizational innovation along these lines so as to overcome the high costs associated with 22 separate local authorities, a structure that is guaranteed to inflate costs. A regional consortium of local authorities, or an arm's length not-for-profit organization for the region, would provide the economies of scale that could help to offset the cost pressures in the service as it is currently structured. Whichever one of these regional options is chosen, it is clear that the status quo is not a viable option for the future.

As important as it is, structural change alone will not save the service. Indeed, whether or not a viable school meals service survives the current round of public expenditure cuts, depends mostly on the way in which school food is viewed and valued. If it is viewed and valued in narrow commercial terms, where profit and loss are the only metrics, then the service is doomed to decline, probably dwindling into a statutory rump of highly stigmatized free school meals. But if it is viewed and valued in more capacious terms, where public health, social justice and ecological integrity are the key metrics, then another scenario is possible because school food will be recognized for what it really is - a health and wellbeing service. No great leap of the imagination is required to view and value school food in a more capacious way.

In health terms, the UK has the highest rate of childhood obesity in Europe, with a quarter of children obese or overweight, and the Foresight Programme estimated that 40% of Britons will be obese by 2025 if current trends are not checked. School food reformers in England have shown that the Government spends more on diabetes in three days than it spends on the School Lunch Grant in an entire year (FFLP, 2010). In education terms, it has been shown that wholesome school food helps to fashion a more congenial learning environment, yielding educational dividends even in very poor areas like the London borough of Greenwich (Belot and James, 2009). More "joined-up" thinking is what is really needed to put the school food service on a sustainable footing.

Viewing and valuing school food in a more "joined-up" fashion will be a major challenge to the public procurement profession in the UK because, with notable exceptions, it has allowed low cost to masquerade as best value (Morgan, 2008). Public procurement professionals find themselves on the front line in the age of austerity because, while they are under pressure to secure "more for less" as it were, they are also expected to deliver values for money. In Wales public procurement managers are also enjoined to increase the proportion of food they procure from Welsh sources, one of the key aims of the Welsh Assembly Government's new food strategy (WAG, 2010).[1]

If it is to deliver "best value in its broadest sense", the public procurement profession in Wales will need to acquire new and better skill sets because, as it is presently organized, it is under-staffed and ill-equipped to meet such an exacting challenge (Morgan, 2010).

In conclusion, the school food revolution, embodying one of the most hopeful and inspiring social experiments in post-war Britain, has been stopped in its tracks by the age of austerity. Indeed, if the school food service is not viewed and valued differently, especially by central and local government, it is not too fanciful to suggest that there is no viable future for it, other than as a rump provider of free school meals. In that event, the school meals service would become a highly stigmatized service, the preserve of the poorest of the poor, which is the exact opposite of what it should and could be: a health-promoting service for all.

Note

1. According to the 2009 Public Sector Food Purchasing Survey, the proportion of "Welsh origin" purchases now accounts for 47.4% of all key category food purchases in Wales, equivalent to £16.5 million out of a £35 million market.

References

Belot, M. and James, J. (2009) Healthy School Meals and Education Outcomes, Centre for Experimental Social Sciences, Nuffield College, Oxford.

Defra (2003) Unlocking Opportunities: lifting the lid on public sector food procurement, Department of Environment, Food and Rural Affairs, London.

Food for Life Partnership (2010) Return of the Turkey Twizzler? How cost cuts threaten the school food revolution, Soil Association, Bristol.

LACA (2008) 2007 School Meals Survey in Wales, Local Authority Caterers Association.

LACA (2009) Results of the Welsh Survey 2009 , Local Authority Caterers Association.

Morgan, K. (2008) Greening the Realm: sustainable food chains and the public plate, Regional Studies, Volume 42, 9.

Morgan, K. (2010) The Power of Purchase, Agenda: The Journal of the Institute of Welsh Affairs, Cardiff, Spring Issue.

Morgan, K. and Sonnino, R. (2010) The School Food Revolution: public food and the challenge of sustainable development, Earthscan, London.

Orrey, J. (2003) The Dinner Lady, Transworld, London.

Passmore, S. and Harris, G. (2004) Education, health and school meals: a review of policy changes in England and Wales over the last century, Nutrition Bulletin, Volume 29.

Scottish Executive (2002) Hungry for Success, Scottish Executive, Edinburgh.

Tribal (2010) Trading Services Review: Schools Catering, Nottinghamshire County Council, Nottingham.

Welsh Assembly Government (2010) Food for Wales, Food from Wales, WAG, Cardiff.

Childhood Obesity in Wales

Melanie Jones, David Blackaby and Phil Murphy, School of Business and Economics, Swansea University[1].

Introduction

The human capital, or the health, education and skills of the next generation, will be fundamental in determining their labour market success and the future prosperity of the Welsh economy. While it is today's children who will form this future generation economic analysis typically ignores this group until they reach working age. However, there is now a growing body of theoretical and empirical research which demonstrates that an individual's health and development in childhood is an important determinant of their later (adult) economic outcomes (see, for example, Case, Fertig and Paxson, 2005). Further, it is argued that early policy intervention is more effective in changing the fortunes of those from disadvantaged backgrounds, with the rate of return to policy interventions among young children being higher than those among adolescents (see, for example, Cunha and Heckman, 2007).

It is therefore interesting to ask if the disadvantage observed among adults in Wales actually stems from differences in childhood. Currently available data does not permit researchers to examine this question. It has, however, become possible to answer a different (but related) question. Instead of looking backwards at the childhood outcomes of adults, it is possible to look forwards to examine whether the health and development of children in Wales is different from their counterparts in the rest of the UK. This approach should facilitate the early identification of disadvantage which may then contribute to cross country differences in adult outcomes among a future generation. Indeed, this issue has been examined in a recent project "An Investigation into Regional Differences in Child Health and Cognitive Function" supported by the Economic Research Unit of the Welsh Assembly Government.[2] This paper provides a brief overview of some of the key findings in the report before focusing more specifically on one key indicator of child health, namely, childhood obesity. The main objective here, therefore, is to document and explore regional differences in childhood obesity and to examine characteristics of the child and its family that affect the risk of obesity.

Is Child Health and Cognitive Development different in Wales?

In the latest of the series of British birth cohort studies, the Millennium Cohort Study (MCS), there has been a boost to the sample of children in Wales, Scotland and Northern Ireland to facilitate cross country comparisons. Indeed, the MCS collects data on 19,244 families with children born in the Millennium of which 2,760 were sampled from Wales[3]. At the time of writing information is available on these children from birth until age 5. More specifically, three sweeps of the data are available, the first of which collects data when the cohort are aged about 9 months. At the second and third sweeps the cohort are aged about 3 and 5 years respectively[4]. The survey contains a comprehensive set of information on the outcomes of the child and the characteristics and behaviour of their parents. While the precise measures depend upon the age at which the child is assessed indicators of child health include measures of health problems during pregnancy and birth, birth weight, childhood accidents and non-accident hospital admissions, parental reported child health and height and weight. Information is collected on a well established set of measures of child development including the Denver Development Screening Test, various elements of the British Ability Scales (BAS) and the Bracken School Readiness Test. Information on child behaviour is also assessed using the Strengths and Difficulties Questionnaire. In the subsequent analysis the sample is restricted to the first child of any multiple birth families and to children where the natural mother is the main respondent at all productive sweeps.

Statistical evidence presented in the full report shows that several of the indicators of child health and cognitive development exhibit no significant cross country variation. For example, there are no significant differences in maternal reports of a child's limiting illness. There are also no definite patterns in terms of early child development (at 9 months) and child behaviour at age 3 and age 5. There are, however, several indicators where a more consistent picture of cross country variation emerges. For example, in terms of health, children in Wales are more likely to have received medical help either for a non-accident hospital admission or for an accident or injury than in any other UK country. Children in Wales are also more likely to be overweight with 28% being classed as overweight or obese at age 3 compared to 23% in England. By age 5, there is also some evidence to suggest children in Wales have fallen slightly behind all other UK countries in terms of vocabulary when assessed using the naming vocabulary subtest of the BAS.

Greater disparities are found to exist within Wales between areas defined on the basis of the level of deprivation. This is particularly the case for indicators of development, where disparities appear to widen as the child ages. Indeed, at age 5, children from the disadvantaged area (see later definition) are less developed in terms of a range of tests of ability, including tests designed to measure vocabulary (BAS naming vocabulary test), problem solving skills (BAS picture similarity test) and spatial awareness (BAS pattern construction test). In addition, children from the disadvantaged area are more than twice as likely to have abnormal behaviour as identified by the Strengths and Difficulties Questionnaire.

The report goes on to investigate possible explanations for these differences and while it is beyond the scope of this paper to consider each measure of health and development, the results share some common features which are worth highlighting. Multivariate analysis suggests that the cross country differences in child health and development identified above exist even after controlling for the characteristics of the child and its family. As such, they reflect influences, such as differences in national policy or culture, which are not included in the model. In contrast, differences between areas within Wales on the basis of deprivation are largely explained by differences in the characteristics of the child and its family. Therefore, only a very small part, if any, of the raw difference between more and less deprived areas actually reflects the influence of local area deprivation.

A Focus on Childhood Obesity

In the remainder of this paper we explore the findings with respect to childhood obesity in more detail. There has been increasing interest in obesity generally and childhood obesity in particular. One reason for this is the dramatic increase in childhood obesity observed in the UK. Recent figures suggest rates of childhood obesity more than doubled between 1984 and 2002 (Wang and Lobstein, 2006). Obesity in childhood has been found to be related to adult obesity and a range of other health problems in later life and, as such, represents an increasing burden on public services (see Audit Commission, Healthcare Commission, and National Audit Office, 2006 for full details). In addition to the effects on

health, obesity in adolescence has been linked to a range of social and economic consequences in adulthood and these relationships exist even after controlling for socioeconomic background and child ability (see Gortmaker et al., 1993). It is therefore unsurprising that government initiatives have been developed which attempt to tackle the issue. For example, the Welsh Assembly has recently introduced the MEND programme which aims to help overweight or obese children (aged between 7 and 13) improve their diet and physical activity levels.

In both the second and third sweep of the MCS, trained interviewers weighed and measured the MCS cohort. This information is used to calculate Body Mass Index (BMI) values which, when compared to age and gender adjusted critical values, can be used to define 'normal weight', 'overweight' and 'obese' children. In addition, in sweep 3, waist circumference measures were taken as an additional measure of body fat. Waist circumference measures have recently been found to be a more accurate predictor of health in later life (see, for example, Schmidt et al., 2011).

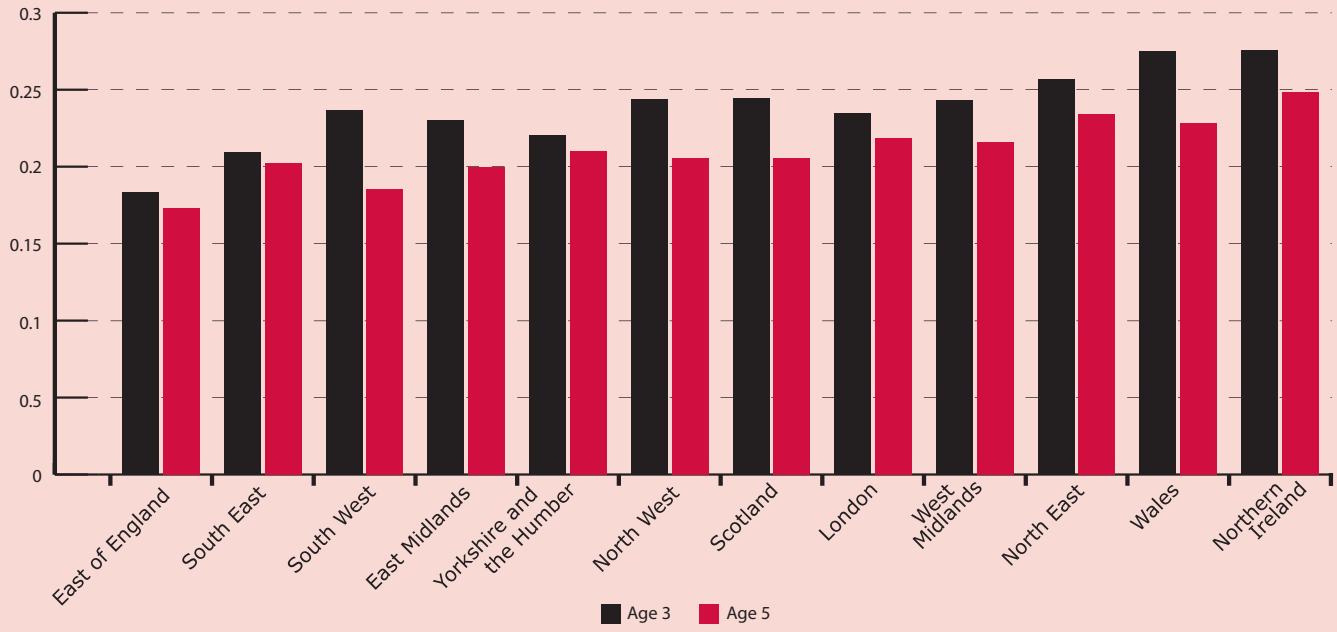
The results are presented in Table 1, which shows cross country differences by gender for the cohort when aged 3 and 5 respectively. At age 3, over a quarter of children in Wales are classed as overweight or obese, with the rates being slightly higher for females than males. Further, the rates are significantly higher than the corresponding figures in England. For example, 26.3% of male children and 28.9% of female children in Wales are overweight or obese compared to 22.2% and 22.8% in England respectively. The rates in Wales are

Table 1. Obesity by UK country at age 3 and age 5.

Percent	England		Wales		Scotland		Northern Ireland	
Age 3	Male	Female	Male	Female	Male	Female	Male	Female
BMI- normal	77.82**	77.17***	73.71	71.11	76.32	74.43	71.64	73.43
BMI- overweight	17.47	17.51***	19.86	23.67	17.35	20.04*	20.86	20.66
BMI- obese	4.71**	5.32	6.43	5.22	6.33	5.53	7.50	5.91
Observations	4,451	4,376	1,048	970	830	806	656	651
Age 5								
BMI- normal	81.85**	77.46**	79.02	73.33	82.37*	76.95*	76.74	73.82
BMI- overweight	13.34***	17.06**	16.26	20.06	13.12**	16.68**	15.36	20.42
BMI- obese	4.81	5.48	4.73	6.62	4.51	6.37	7.90**	5.77
Observations	4,620	4,440	1,088	1,001	893	857	730	734

Notes to table: Data are weighted and '*','**' and '***' are used to denote the difference from Wales is statistically significant at the 10%, 5% and 1% level respectively. The sample is restricted to the first child of any multiple birth (twin/triplets) families and to members of the cohort where their natural mother responds at all productive sweeps. The number of observations reflects an unweighted count.

Figure 1. Proportion of children who are overweight or obese at age 3 and 5, by region.



Notes to table: Data are weighted. The sample is restricted to the first child of any multiple birth (twin/triplets) families and to members of the cohort where their natural mother responds at all productive sweeps.

Table 2. Obesity in Wales, by local area deprivation, at age 3 and age 5.

Percent	Advantaged		Disadvantaged	
Age 3	Male	Female	Male	Female
BMI- normal	71.79	70.07	75.99	72.34
BMI- overweight	22.26	25.17	17.01**	21.89
BMI- obese	5.96	4.76	7.00	5.77
Observations	319	294	729	676
Age 5				
BMI- normal	79.82	73.14	78.03	73.56
BMI- overweight	15.73	20.39	16.91	19.65
BMI- obese	4.45	6.47	5.06	6.79
Observations	337	309	751	692

Notes to table: Sample is restricted to children resident in Wales. Data are weighted and '*','**' and '***' are used to denote statistical significance from the advantaged area in Wales at the 10%, 5% and 1% level respectively. The sample is restricted to the first child of any multiple birth (twin/triplets) families and to members of the cohort where their natural mother responds at all productive sweeps.

more similar to those in Northern Ireland, where childhood obesity is also more prevalent. Between the age of 3 and 5 there is a fall in the proportion of children classed as overweight or obese across all UK countries. At age 5, 21.0% and 26.7% of male and female children in Wales are overweight or obese. Despite this, cross country differences remain significant. Relative to children in England and Scotland the probability of being overweight at age 5 is significantly higher in Wales. Consistent with this, children in Wales are also more likely to have a 'high' waist to height ratio[5] relative to Scotland or England.

Further regional analysis of BMI values among the cohort is presented in Figure 1. Statistics are presented for the proportion of children who are obese or overweight at age 3 and 5 respectively. The regions are ranked from lowest to highest based on (average) rates of overweightness or obesity. It confirms many of the findings from the previous table but also shows that Wales and Northern Ireland have a higher concentration of children who are obese or overweight than any of the regions with England. It also demonstrates the regional variation that exists within the UK. For example, while nearly 25% of children in Northern Ireland are above 'normal' weight the corresponding figure in the East of England is 17%.

In contrast to many indicators of child health, which often show dramatic variation on the basis of deprivation or socio-economic grouping (see, for example, Case et al., 2002), childhood obesity, at least among young children, does not vary dramatically by local deprivation. Table 2 presents obesity rates for children resident in Wales by deprivation in the local area around the time of birth. More specifically, the disadvantaged area is defined as the poorest quarter of wards as measured by the Child Poverty Index for England and Wales. The remaining wards are referred to as the advantaged area. Interestingly, at age 3, a greater proportion of children in the disadvantaged area are classed as 'normal' weight. For males, the difference is significant with 22.3% of those resident in the advantaged area being overweight compared to 17.0% in the disadvantaged area. By age 5, there are no significant differences in childhood obesity between those from the more and less deprived area, consistent with deprivation not being the main driver of the relatively high rates of obesity in Wales.

The Influence of Child and Family Characteristic

There are several possible explanations for the cross country differences in child obesity identified in Table 1. Firstly, it may be that children in Wales and their parents have different characteristics and/or behaviours to those elsewhere in the UK. Differences in parental characteristics (such as obesity) potentially generate an intergenerational transmission mechanism where the child's outcomes are correlated with the outcomes of their parents. Secondly, it may be that features of the social and economic (but also physical) environment in Wales (that surround the family) advantage or disadvantage its children (a 'neighbourhood' effect or even an 'all Wales' effect). Thirdly, it may be that institutions in Wales (e.g. schools) and other health or education related policies which differ between parts of the UK contribute to any differences in outcomes observed. Using the MCS, it is possible to control for differences in the composition of the population between countries and examine if the influence of the country of residence remains significant. Importantly, this type of analysis also identifies child and parenting behaviour which are correlated with childhood obesity. The results from multivariate analysis are summarised in Table 3, where the dependent variable is a measure of being overweight or obese at age 3 (column 2) and age 5 (column 3) respectively.

Interestingly, country of residence is still important after controlling for personal and household related characteristics and parenting behaviour. At age 3 children in Wales and Northern Ireland have a significantly higher probability of being overweight or obese relative to those in England. Indeed, at this age, being resident in Wales increases the probability of a child being overweight or obese by nearly 5 percentage points. Further, this gap across the countries does not narrow as additional controls for personal, parental and parenting characteristics are included. This suggests that differences in the composition of the population are not the main driver of the high rates of overweight/obesity in Table 1. Instead, at age 3, a child with identical personal and household characteristics would have a higher risk of being obese/overweight if resident in Wales. The explanation for this must, therefore, lie in differences between countries that are not controlled for in the model, for example, differences in culture, government policy or the physical environment. This evidence is entirely consistent with Hawkins et al. (2008b) who find that, at age 3, children in Wales and Northern Ireland are more likely to be overweight even after controlling for their personal and family

characteristics, suggesting there is a country specific childhood obesity effect. When obesity is measured at age 5, the country effect remains significant for Northern Ireland. However, importantly, the inclusion of the child and family characteristics reduces the influence of being resident in Wales and it becomes statistically insignificant at conventional levels. Importantly therefore, the 'Welsh effect' appears to diminish as the child ages. Future sweeps of the data will, however, enable this to be examined further.

Table 3. Multivariate analysis of childhood obesity or overweightness.

Explanatory Variable	Age 3	Age 5
Country of residence	✓ Wales (+) Northern Ireland (+)	✓ Northern Ireland (+)
Gender	-	✓ Male (-)
Ethnicity	-	✓ White (-)
Lone parent	-	-
Mother's age at birth	✓ Mother 20>age<30 (-)	✓ Mother 20>age<30 (-)
Mother's education	-	✓ Mother Degree (-) Mother A Level (-)
Low birth weight	✓ Low birth weight (-)	✓ Low birth weight (-)
Multiple birth	✓ Twin or triplet (-)	-
Mother smokes	✓ Mother smokes (+)	✓ Mother smokes (+)
Mother employed	-	-
Household poverty	-	-
Early introduction of solid food	✓ Solid food within 3 months (+)	✓ Solid food within 3 months (+)
Duration breastfed	✓ Never breastfed (+)	✓ Never breastfed (+) Short duration of breastfed (+)
Mother's obesity	✓ Mother underweight (-) Mother overweight (+) Mother obese (+)	✓ Mother underweight (-) Mother overweight (+) Mother obese (+)
Mother limiting illness	✓ Mother long term ill health (-)	✓ Mother long term ill health (-)
Mother diabetes	✓ Mother diabetes (+)	✓ Mother diabetes (+)
Breakfast daily	N.A.	✓ Breakfast daily (-)
Consumption of fruit	-	-
Physical activity	-	-
Hours spent watching TV	-	✓ TV more than 3 hours per day (+)

Notes to table: Table summarises coefficient estimates from a probit model where the dependent variable is child obesity or overweightness at age 3 and age 5 respectively.a indicates significant at the 10% level or better and the direction of the relationship is indicated within brackets. '–' indicates that the variable was included but has no significant effect and N.A. indicates the variable was not available to include as a control. The sample is restricted to the first child of any multiple birth (twin/triplets) families and to members of the cohort where their natural mother responds at all productive sweeps.

In terms of child characteristics, males and white children are significantly less likely to be overweight at age 5. Children with a mother qualified to 'A level' standard or above are less likely to be overweight at age 5 than those whose mother has no qualifications. Living in a lone parent family has no effect on obesity at either age 3 or 5, whereas, having a mother aged between 20 and 30 (at childbirth) reduces the risk of childhood obesity relative to the omitted group of mothers aged over 30. Recent evidence has found a positive relationship between maternal employment and childhood obesity (see, for example, Anderson et al., 2003 and Hawkins et al., 2008a) but, in this analysis, the indicator for current employment is not significant at either age. This, however, may be a result of the nature of the measure which captures maternal employment status at the time of interview rather than the intensity of maternal employment over the early years.

Consistent with the absence of a relationship between local area deprivation and obesity, noted above, there is also no influence of family income. A child living in a household in poverty is no more or less likely to be overweight or obese, after controlling for other family characteristics. What appears to be more important is parenting behaviour in the early years. For example, children with no (or short durations of) breastfeeding are more likely to be overweight/obese, as are children who are fed solid foods within 3 months of birth. Importantly, relative to children in England, those resident in Wales are less likely to have been breastfed and are more likely to have been fed solid foods early in childhood, both of which contribute to the problem of obesity in Wales.

As may be expected, weight at birth is important; those of low birth weight are less likely to be overweight or obese at age 3 or 5, consistent with the positive correlation of weight across the lifecycle[6]. There is also evidence of strong positive intergenerational correlation of obesity between the mother (measured before pregnancy) and child. For example, having an obese mother increases the risk of a child being overweight or obese by 18 percentage points at age 5. This may reflect genetic influences or similarity in the diet and physical activity of the mother and child. Recent evidence from Perez-Pastor et al. (2009) suggests there is a strong link between mother's obesity and obesity of female children, whereas paternal obesity has a strong influence when the child is male. As such, they argue the link is a consequence of common lifestyle characteristics rather than a genetic influence. It is, however, worth noting that no significant cross country differences in maternal obesity (measured pre-pregnancy) are identified, with 29% of mothers being overweight or obese in Wales. Table 3 also shows that other measures of maternal health are important, for example, having a mother who has been diagnosed with diabetes increases the risk of obesity, consistent with recent research in the US (Hillier et al., 2007). Other maternal long-term illness has a much smaller negative effect.

Surprisingly, few of the controls for diet or physical activity are significant determinants of childhood obesity. However, some of the variables may be poorly measured. For example, the consumption of fruit may reflect appetite more generally as well as the composition of the child's diet. There is, however, one important exception, having breakfast daily is negatively correlated with childhood obesity[7]. Despite higher rates of attendance at school breakfast clubs, children in Wales are significantly less likely than those in England to have breakfast every day. There is also some evidence that, at age 5, a sedentary lifestyle (watching more than 3 hours television per day) is positively associated with obesity, although more direct questions about physical activity (with mother or at school) are not important.

Longitudinal Analysis

In addition to undertaking analysis focused on obesity measured at a specific age (as above) the longitudinal nature of the data enables researchers to examine changes over the lifecycle. Table 4 examines the obesity of the cohort at age 5 conditional on their weight at age 3. As expected, there is evidence of persistence. For example, 91% of children who are normal weight at age 3 are still normal weight at age 5. However, reassuringly, the evidence shows mobility out of the obese/overweight groups; 46% of children who were overweight at age 3 are of normal weight at age 5 and the corresponding figure for those initially obese is 20%. Overall the rate of exit from being overweight or obese (expressed as a proportion of all children) is higher (9.5%) than the rate of entry (7.2%) which is consistent with the decline in the rate of obesity/overweightness between age 3 and 5.

Conditional on being normal weight, children resident in Wales are significantly more likely to become overweight or obese between the ages of 3 and 5 than those in England. However, conditional on being overweight or obese at age 3, children in Wales also have a higher probability of moving to normal weight at age 5[8]. It is also interesting to examine the factors associated with becoming overweight / obese and exiting this state. Multivariate analysis (results not reported) shows that the probability of becoming overweight is lower for males, those of white ethnic origin, those with low birth weight and who are part of a twin/triplet birth. The probability is also lower for those whose mothers were aged between 20 and 30 at childbirth and for those with mothers who hold degree level qualifications. In contrast, having a mother that smokes or was herself obese prior to pregnancy increases the risk of becoming overweight/obese. It is particularly interesting to note that being fed solid food before 3 months of age increases the probability of becoming obese between the age of 3

Table 4. Obesity at age 3 and age 5, UK.

	Age 5		
Age 3	Normal	Overweight	Obese
Normal	8363 (91%)	743 (8%)	132 (1%)
Overweight	999 (46%)	954 (45%)	240 (10%)
Obese	148 (20%)	223 (33%)	309 (47%)

Notes to table: Figures refer to (unweighted) cell counts whereas figures in parenthesis refer to weighted row frequencies. Probabilities may not sum to 1 due to rounding. The sample is restricted to the first child of any multiple birth (twin/triplets) families and to members of the cohort where their natural mother responds at all productive sweeps.

and 5, suggesting parenting behaviour during infancy may have longer term effects beyond what is evident immediately[9].

Males and white children also have a higher probability of moving out of the obese/overweight group between the ages of 3 and 5. In contrast, maternal education has no influence but maternal obesity remains important. Children whose mothers are overweight or obese are themselves less likely to exit this state. The early introduction of solid foods has a weak but negative effect on exit and, for the first the first time in this analysis, physical activity is important, being positively associated with exiting overweightness/obesity.

Conclusion

The Millennium Cohort Study provides an opportunity for researchers to identify and examine cross country differences in child health and development among a contemporary cohort. These data reveal significant cross country differences in overweightness and obesity among young children (at age 3 and 5). Children in Wales (and Northern Ireland) are more likely to be overweight or obese than those in England (and Scotland). At age 3 this gap is not explained by differences in observable family characteristics between countries. However, at age 5 the raw gap is smaller and is further narrowed by introducing controls for family characteristics and parenting behaviour. Parenting behaviour in the child's early years is particularly important; differences between Wales and England in the prevalence and duration of breastfeeding and the date at which solid foods are introduced into the child's diet contribute to the differences in overweightness and obesity. While more detailed investigation is clearly warranted, policies designed to inform parenting behaviour would seem to have the potential for immediate benefits at a relatively modest cost.

Existing policies in Wales, such as the free breakfast club initiative, while beyond formal evaluation in this paper, have the potential to reduce childhood obesity, especially if participation is among children who would otherwise not eat breakfast daily. Long term policies, such as those which aim to raise educational attainment generally, will have positive intergenerational effects and there is evidence in this paper that these effects could spread as far childhood obesity. However, in this analysis, the largest influence on the child's obesity status is the obesity level of their mother. Policies to tackle childhood obesity must, therefore, go hand in hand with those aimed at adults. Indeed, there will be positive spillover effects between these types of policies in the long-run.

The MCS will become an increasingly valuable source of data for analysis on Wales. As the cohort age it will be possible to monitor progress of some of the indicators and issues discussed. Further, future sweeps of the data will facilitate the examination of formal schooling, the transition into adulthood and of cross country differences in the relationship between childhood and adult indicators. Ultimately therefore, it should be possible to shed light on the wider issues mentioned in the introduction, particularly, how much of any disadvantage observed among adults in Wales actually stems from differences in their experience as children and, importantly, at what stage over the lifecycle any cross country gaps in health and educational attainment emerge.

Acknowledgements

The Millennium Cohort Study is sponsored by the Economic and Social Research Council, Office for National Statistics, Department for Education and Skills, Department for Work and Pensions, Department of Health, Welsh Assembly Government, Scottish Executive and Northern Ireland Executive. It is accessible from the UK Data Archive, University of Essex, Colchester and is copyright of University of London, Centre for Longitudinal Studies. The analysis was undertaken as part of a research grant from the Economic Research Unit of the Welsh Assembly Government. None of these organisations bears any responsibility for the analysis or interpretation undertaken here.

Notes

1. Melanie Jones, David Blackaby and Philip Murphy are members of the Wales Institute of Social and Economic Research, Data and Methods (WISERD) and the Welsh Economy and Labour Market Evaluation and Research Centre (WELMERC). David Blackaby and Philip Murphy are also members of the Spatial Economics Research Centre (SERC).
2. The full report is available at http://wales.gov.uk/docs//dfm/research/100524childhealthen.pdf
3. Joshi and Hawkes (2005) are among the first to specifically utilise the boost to the sample in Wales. They focus on cross country differences in the characteristics of mothers, particularly the age at child birth. Consistent with the argument that there may be regional differences in maternal characteristics, they find teenage mothers are overrepresented in Wales compared to the rest of the UK and that motherhood over the age of 30 is relatively less prevalent.
4. Information has also been collected at age 7 (MCS4) and future sweeps of the data will be collected as the children age.
5. A ratio of more than 0.5 has used to identify abdominal obesity (see, Garnett, et al., 2008).
6. Children in Wales have a slightly lower average birth weight than those born in Scotland or Northern Ireland. There are, however, no significant differences in the proportion of low birth weight (defined as less than 2.5kg). Within Wales, there are also no significant differences in the proportion classed as low birth weight by areas of relative deprivation, although children born in the disadvantaged area are lighter on average.
7. Importantly, this does not just reflect the presence of routines within the household since it is significant after controlling for a measure of having a regular bedtime.
8. It should be acknowledged that some of the transitions may represent quite substantial changes in BMI (relative to the age cohort) while, due to the nature of the cut off points between normal weight and overweight/obesity, other transitions may only represent very small changes in BMI. No consideration is given to this issue in this analysis.
9. Of course, the control for early introduction of solid foods may capture elements of the child's diet between age 3 and 5 which are unobserved in this study.

References

Anderson, P. M., Butcher, K. F. and Levine, P. B. (2003) Maternal employment and overweight children. Journal of Health Economics, 22(3), 477-504.

Audit Commission, Healthcare Commission, and National Audit Office. 2006. Tackling Childhood Obesity– First Steps. Report by the Comptroller and Auditor General, HC 801 Session 2005–2006, 28 February 2006. The Stationery Office, London.

Case, A., Fertig, A. and Paxson, C. (2005) The lasting impact of childhood health and circumstances, Journal of Health Economics, 24(2), 365-389.

Case, A., Lubotsky, D. and Paxson, C., (2002) Economic status and health in childhood: The origins of the gradient, American Economic Review, 92, 1308-1334.

Cunha, F. and Heckman, J. (2007) The technology of skill formation, American Economic Review, 97(2), 31-47.

Garnett, S. P., Baur, L. A. and Cowell, C. T. (2008) Waist-to-height ratio: a simple option for determining excess central adiposity in young people, International Journal of Obesity, 32(6), 1028-1030.

Gortmaker, S. L., Must, A., Perrin, J. M., Sobol, A. M. and Dietz, W. H. (1993) Social and economic consequences of overweight in adolescence and young adulthood, New England Journal of Medicine, 329, 1008–1012.

Hawkins, S. S., Cole, T. J. and Law, C. (2008a) Maternal employment and early childhood overweight: findings from the UK Millennium Cohort Study, International Journal of Obesity, 32, 30-38.

Hawkins, S. S., Griffiths, L. J., Cole, T. J., Dezateux, C. and Law, C. (2008b) Regional differences in overweight: an effect of people or place?, Archives of Disease in Childhood, 93, 407-413.

Hillier, T., Pedula, K., Schmidt, M., Mullen, J., Charles, M. and Pettitt, D. (2007) Childhood obesity and metabolic imprinting, Diabetes Care, 30 (9), 2287-2292.

Joshi, H. and Hawkes, D. (2005) Early and Late Entry to Motherhood in Wales: Evidence of Socio-economic Inequalities in the First Survey of the UK Millennium Cohort, Report for the Economic Research Unit, Welsh Assembly Government.

Perez-Pastor, E. M., Metcalf, B. S., Hosking, J., Jeffery, A. N., Voss, L. D. and Wilkin, T. J. (2009) Assortative weight gain in mother-daughter and father-son pairs: an emerging source of childhood obesity. Longitudinal study of trios (EarlyBird 43). International Journal of Obesity, 33, 727-735.

Schmidt, M. D., Dwyer, T. Magnussen, C. G. and Venn, A. J. (2011) Predictive associations between alternative measures of childhood adiposity and adult cardio-metabolic health, International Journal of Obesity, 35, 38-45

Wang, Y. and Lobstein, T. (2006) Worldwide trends in childhood overweight and obesity. International Journal of Pediatric Obesity, 1, 11-25.

Cardiff Business School
Aberconway Building
Colum Drive
Cardiff CF10 3EU

Tel: 029 2087 4000

The Welsh Economic Review has been printed using
REVIVE Silk, a recycled product with de-inked post-consumer waste content.