

# WERU Conference 2004

In May 2004, the Welsh Economy Research Unit held its 12<sup>th</sup> annual conference. The conference theme was *Quo Vadis: Where Next for the Welsh Economy?* Following the conference, speakers were invited to provide a summary of their presentations for this Review. Those received are published below. A wide range of issues was debated during the conference, and WERU would like to thank all conference speakers and delegates for their participation.



## Simulating the Sleepy Dragon: Scenarios for the Welsh Economy

Professor James Foreman-Peck and Dr Laurian Lungu, Welsh Institute for Research in Economics and Development, Cardiff Business School.

'...Dr Dan Streetmentioner's *Time Traveller's Handbook of 1001 Tense Formations*.. will tell you for instance how to describe something that was about to happen to you in the past before you avoided it by time-jumping forward two days in order to avoid it..'

Douglas Adams *The Restaurant at the End of the Universe* 1980 pp79-80.

The convoluted grammar required of those who would simulate the Welsh economy, perhaps with a view to stimulating it, will already be familiar to time travellers. Answering the question 'What would have happened had policies been different?' (when they were not, the 'counterfactual conditional') is part of the answer to 'what action should we take so that living standards will be higher?' Simulating entails taking an artificial, simplified, economy and seeing how it responds to a range of policies or other changes. If the simplifications are appropriate, then the simulations will predict accurately the impacts of possible future changes, as well as what the effects would have been in the past.

The Welsh economy simulations discussed in the present paper are not the first with this broad type of model. A quarter of a century ago Stephen

Wanhill (1980) published his impressive econometric study of Wales based on data over the years 1948 to 1970. He estimated the employment effects of Welsh regional policy, finding it was responsible for around 20,000 jobs at the beginning of his period in 1949 and for some 105-110,000 jobs by 1970. The implication was that the proportion of employment due to regional policy was rising, while employment 'in the absence of policy' was apparently falling after 1956-7.

More recent investigations of regional policy effects in Wales include the findings of the Welsh Assembly's Economic Research Unit that both at Welsh and UK levels, over the period 1990-98, non-Regional Selective Assisted (RSA) plants tended to exhibit faster productivity growth. The latest work on the official website now shows that productivity in Wales on average is

the same as elsewhere in the UK<sup>1</sup>. However higher productivity is associated with *not* being in an assisted area and/or not having received RSA. Since to maintain the international competitiveness necessary to provide jobs, Welsh industry needs high and increasing productivity, RSA appears to have been found wanting.

On the other hand RSA's immediate objective is jobs, not productivity. Indeed without increases in outputs, higher productivity means fewer jobs. So it is not so surprising that RSA has apparently not delivered greater productivity. Instead, if official numbers are accepted, between 1971 and 2001 RSA in Wales 'created and safeguarded' about one third of today's total employment.

On top of this the Welsh Development Agency (WDA) has also been busy 'creating and safeguarding' apparently on a much larger scale. If the WDA's own figures are to be believed, the recent announcement of their forthcoming absorption by the Welsh Assembly Government was certainly not an instance of evidence-based policy. For in each of the last five years the WDA maintained they had created and safeguarded more jobs than in the last. In the last full financial year the total was double that of 2001/2, and over the quinquennium the WDA claimed credit for 153,000 jobs, getting close to sum of all Welsh manufacturing employment!<sup>2</sup>

The UK National Audit Office (2003), citing the calibrated model of Gillespie *et al* (2001), has criticised English regional policy spending for not delivering what was claimed and presumably there must be similar doubts about such assertions in Wales. It would at a minimum be useful to know how long these 'created or preserved' jobs last on average. In principle answers could be obtained from a regional model such as the one discussed below. Other policies of interest that might be examined in the same model include the consequences of the Richard Commission favouring income tax-varying powers for the Welsh Assembly, should legislative authority be granted. If the concern is to boost employment why not cut taxes on labour - employers' national insurance? Government employment in Wales has gone up massively over a generation; it would be useful to know, with what effects.

### The Model Structure

To allow an assessment of the impact on the Welsh economy of such policies, we have developed a model from the work of Patrick Minford and collaborators (1991, 1994, 1995). It is based on the distinction between tradable and non-tradable goods, critical to spatial economics. Without tradable goods, or rentier income in the broadest sense, there is no (spatial) economy. A subsistence, 'grow your own', economy produces its own tradable (food) products though it chooses not to trade. The tradable sector in a particular location is a basis for that place supporting a population. Alternatively, a pensioner (say) can in principle locate independently of tradable production because the pension income pays for tradable imports (such as food). In the long run, the level of Welsh demand as a whole depends upon spending derived from 'tradable' industry and from government, or other, 'unearned', income.

The traded sector is assumed to correspond with manufacturing and the non-traded with all other private sector production. These sectors respectively mainly employ unskilled and skilled labour. The unskilled labour is assumed immobile whereas the skilled labour is mobile (in and out of Wales). As much capital as wanted is supposedly available at the world price. Traded product prices are determined in the world market. There is also a public sector, the behaviour of which is determined outside the economic system.

It follows that employers' (unit) labour costs for the traded sector are also fixed (by world prices and the available technology). Manufacturing employment is then determined by the supply of labour to manufacturing. Manufacturing employment establishes manufacturing output and manufacturing output governs non-manufacturing output, together with employment. The public sector also influences non-manufacturing output.

The equation system can be represented as follows;

#### Assumed

1. Traded wage =  $f$  (price of traded goods, world cost of capital, technology, labour taxes)

#### Estimated

2. Labour Supply to the Traded Sector =  $g$  (traded wage, income tax, unemployment benefit)
3. Traded Sector output =  $h$  (traded sector employment, traded wage, traded price, technology)
4. Non-traded Non-public Sector Output =  $k$  (Demand, prices of traded/ non traded goods)

5. Non-traded Non-public Sector Employment =  $m$  (non-traded output, non-traded wages, labour taxes, prices non-traded)
  6. Non-traded after-tax real wage =  $n$  (working population, UK wage, prices, taxes)
  7. Working population =  $q$  (natural increase, net migration, participation rate (sickness benefit))
  8. Demand =  $r$  (traded output, government spending)
- Definition*
9. Unemployment = Working population - (traded + non-traded + public sector employment)

### Model Behaviour

As modelled, variations in domestic demand affect only non-tradable output and employment. Stronger domestic demand boosts non-tradable output. There is no link from domestic demand to manufacturing production, because all manufactures consumed are assumed imported and all manufactures produced are assumed exported. Stronger domestic demand should increase imports of traded goods but they are not substitutes for domestic production. Manufacturing therefore cannot be 'crowded out' by this process. Nonetheless it can be squeezed by reductions in the labour supply induced by other changes.

There is no explicit government budget constraint in the model because the present arrangement is for taxes to be paid to the UK government which in return makes available a block grant to finance Welsh Assembly spending.

Government consumption and investment give rise to public sector employment. Increased government spending therefore has a labour market impact through working population. Greater expenditure raises working population by inducing net migration or participation. The impact of public sector employment (public administration, health, education) depends on whether the appointments are primarily from the immobile or mobile labour forces. If from mobile labour forces, an expansion of the public sector may reduce output in the non-traded sector and perhaps increase the working population by migration. Also there are multiplier effects as if public sector employees were exporting, because government spending (from the block grant) allows more importing. On the other hand, expanding state employment of immobile workers crowds out genuine export industry jobs. The magnitude of this effect depends on the coefficient on government employment in the export employment supply function and the working population equation.

Government expenditure additionally enters as a component of demand, influencing non-traded output, and expenditures on sickness and invalidity and unemployment benefit, have supply effects, determining traded employment. Thus the immediate impact of a pro-rata increase of all items of government expenditure is to reduce private traded sector output and employment and increase non-traded sector output and employment. However if transfer payments are separated from other government spending (as may be appropriate for some policy simulations because the benefit payments are not part of the block grant) and not increased at the same time, there is only the positive effect on the non-traded sector and the direct employment impact.

### Qualitative Policy Simulations

If this model captures the broad outlines of the Welsh economy then we can expect the following qualitative policy impacts.

- If **technical efficiency** is advanced, real wages in manufacturing rise and unemployment falls.
- A reduction in the **labour tax rate** (employers' national insurance contribution), boosts the after-tax manufacturing wage, which increases employment and output.
- **Regional Selective Assistance**, a capital subsidy, raises or lowers employment depending on capital substitution.
- Reductions in **income tax**, or in the **cost of living** expand unskilled labour supply. At the margin people are inclined to work more and more people are inclined to work if they are allowed to keep a higher proportion of their earnings, or their earnings buy more. This boosts output and employment.
- Greater **government spending** increases non-manufactured output, holding manufactured output constant (no crowding out) and raises working population (through migration).

### Quantitative Simulations

Several exercises are undertaken below to show the quantitative behaviour of model-determined (endogenous) variables of interest for policy. Of particular concern are employment and output. The responses are considered of these dependent variables to alternative values of influences operating from outside the model (exogenous variables). Of particular concern for Welsh policy are the impacts of changes in income tax, in the employment (national insurance) tax, in the effective cost of capital and in numbers on sickness benefit. Table 1 presents the

effect of selected shocks, obtained by assuming a temporary increase in the corresponding exogenous variable for three consecutive years for the 1991-1993 period.

*Simulation 1- Employment Tax.*

As indicated earlier, a permanent fall in manufacturing wages can be brought about by a rise in the tax on employment (national insurance contribution) without affecting gross unit labour costs, determined on world markets. Table 1 (column 5) show the effects of a one per cent rise in this 'taxfirm' variable (and the opposite movement of the manufacturing wage rate), in the short term. Manufacturing employment falls by 0.44%, or 871 jobs, with manufacturing output declining by the same percentage. Lower activity in the traded sector has a negative effect on non-traded sector output, which falls by around 0.04%. Employment in the non-traded sector declines by 0.5%, or some 3,410 jobs.

Considered as a job creating strategy, the overall cost per extra job is £42,000 in revenue forgone. But the direct effects of the tax increase, eliminating marginal firms and reducing profits and employment, has not been taken into account in this simulation. These would reduce the cost per job. However the implicit assumption in this simulation is that when taxes are increased, so also is spending, and the positive demand effects approximately offset the negative direct impact of the increase. For this reason the result cannot be compared with the supposedly lower cost per job of RSA. The RSA (or Welsh Development Agency costs) do not take into account the jobs destroyed by the

taxation necessary to finance such support.

*Simulation 2 - International Competitiveness.*

A 1% increase in gross manufacturing wage, which can be brought about only by a change in international competitiveness, raises manufacturing employment by almost 0.5%, creating an extra 970 jobs (column 3). The expansion in manufacturing output is 2.5%. More manufacturing output raises demand, which then boosts the non-traded sector. Non-traded output and demand increase by 1.98% and 3.88% respectively. The reduction in unemployment during the same period is rather small, -0.48%, because the rise in non-manufacturing jobs comes from a larger working population.

*Simulation 3 - Unemployment Benefits*

A 1% rise in real unemployment benefits contracts manufacturing employment by changing the trade-off with net take-home pay (column 1). Some workers in the manufacturing sector substitute leisure for work. Employment in this sector falls by 0.49% causing a similar reduction in manufacturing output. Consequently, unemployment rises by 0.09%. The contraction in manufacturing sector spills over into the non-traded sector, where output initially falls 0.15%. Total output and demand drop by 0.15% and 0.38% respectively. Total employment falls by 0.11%, or 1300 jobs.

*Simulation 4 - Income Tax*

A one pence in the pound rise in income tax induces a 0.61% fall in manufacturing output and employment (column 2). Again, the contraction

effects in the manufacturing sector spill over into the non-traded sector. Non-traded output falls by 0.09% triggering a 0.19% reduction in GDP. Total employment falls by 0.4%, or some 4,891 jobs while working population is also reduced, by 0.14%, because of emigration and withdrawal from the work force. As with the employment tax, this is purely a supply side effect, the consequence of the disincentive effects of taxation reducing labour supply. There is no direct effect of taxation on demand in the version of the model simulated here. Had this effect been modelled, the adverse effects of taxation would have been greater. Since taxation is separated from spending by the financial arrangements for devolution, there is no necessity to assume that in general higher taxing will be associated with any changes in government spending. However where a tax increase is assumed to originate from a hypothetically empowered Welsh Assembly, it is reasonable also to assume a matched increase in spending and therefore an approximate offset to the demand impact of a tax hike.

Considering the policy as a job creation or destruction exercise, a 1p in the £ cut on the average manufacturing sector wage, for example, costs £217/year/employee (£418/week\*1%\*52 weeks). For both sectors combined the cost per job is £42,712.

*Simulation 5. Government Spending*

A 1% increase in government expenditure on employees leads to a rise in Welsh demand and has no impact on the Welsh manufacturing sector (column 6). Unemployment falls and the working population rises by 0.03%. For

**Table 1 Short Term Impact of Shocks.**

	(1) +1% Unemployment Benefit	(2) +1p in £ Income tax	(3) International competitiveness	(4) +1% Sickness/ Invalidity Benefit	(5) +1% Employment tax (and fall in manufacturing wage)	(6) +1% Government spending
GDP	-0.15%	-0.19%	+1.31%	-	-0.12%	+0.29%
Manufacturing output	-0.49%	-0.61%	+2.44%	-	-0.43%	-
Non-Manufacturing output	-0.15%	-0.09%	+1.98%	-	-0.04%	+0.15%
Welsh Demand	-0.38%	-0.18%	+3.88%	-	-0.07%	+0.29%
Employment	-0.11%	-0.40%	+0.89%	-0.004%	-0.35%	+0.07%
		(4,891)			(4,281)	(858)
Non-Manufacturing Employment	-0.06%	-0.54%	+1.56%	-0.007%	-0.50%	+0.12%
		(3,683)			(3,410)	
Manufacturing employment	-0.49%	-0.61%	+0.5%	-	-0.44%	-
		(1,208)			(871)	
Working population	-0.04%	-0.14%	+0.04%	-0.039%	-0.13%	+0.03%
Unemployment rate	+0.09%	+0.26%	-0.48%	-0.033%	+0.22%	-0.04%

Note: Number of jobs in parenthesis. The estimates are for year 2001.



year 2001 a 1% increase in spending implies that the government has to raise roughly an additional £96 million. The indirect employment effects are 858 jobs to which must be added the direct employment consequences, perhaps another 1500 jobs on average, perhaps £40,000 a job. This does not include the negative effects of a tax increase and so is not directly comparable the tax changes discussed above. Taking these into account would raise the cost per job further.

#### Regional Selective Assistance

No simulation was undertaken to determine the employment impact of RSA, but in this model it depends critically upon the substitutability of labour and capital (as well as on the burden of taxation already mentioned). The parameters of the present model imply that (ignoring the tax costs) an RSA capital subsidy policy is beneficial in the short term<sup>3</sup> but is actually harmful to employment in the long run<sup>4</sup>.

#### Conclusions

Without models, such as that employed here, it is difficult to estimate what would have happened or what will happen if various policy changes are implemented. Economies are complex social organisations; one thing leads to another, and yet another, so that a policy conceived with one objective may even have the opposite effect. Models are simplifications, but to obtain quantitative conclusions from them for convincing policy exercises they should correspond with the most important facts of the economy. The 'fitting' of the model discussed in this paper to a large number of time series on the Welsh economy is quite a rigorous criterion of relevance.

The provisional quantitative conclusions obtained from the model and simulations so far are that:

- A reduction in the tax on labour, employers' national insurance, appears to be an expensive form of job creation at £40,000 a year. This is because all the employers who would not expand jobs receive the tax cut as well as those that will. However in the exercise reported here only the supply side effects of the tax are estimated, assuming matching expenditure changes, in contrast to conventional cost per job estimates.
- Government spending on average must be more expensive for creating direct jobs than income tax cuts, simply because the difference between these estimates and the tax estimates are too small to cover the demand impacts that are excluded from the tax effects. Smaller government linked with

correspondingly lower income or employment tax rates would raise total employment in Wales.

- Capital subsidies such as RSA boost employment on average in the short run (say one year) but in the longer run displace jobs through capital substitution. The elasticity of substitution between capital and labour is a critical parameter for RSA in the present model; the higher the elasticity the less favourable the impact on employment of the policy of implicitly subsidising capital. When the elasticity exceeds unity there is an adverse effect.

#### Endnotes

- 1 <http://www.wales.gov.uk/subiresearch/content/eru/projects/productivity-growth-e.htm>
- 2 [http://www.wda.co.uk/resources/A3\\_Main\\_AR2004\\_E.pdf](http://www.wda.co.uk/resources/A3_Main_AR2004_E.pdf)
- 3 The short-run elasticity of substitution is 0.7.
- 4 Harris and Robinson (2003) investigate the impact of RSA on total factor productivity, rather than on employment, and impose an elasticity of one by assuming a Cobb-Douglas production function. They find no effect within assisted areas (excluding Scotland).

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#### Higher Education in Wales: An Economic Driver?

Sir Brian Smith, Vice Chancellor of University of Wales, Cardiff 1993 to 2001

In 2002 *A Winning Wales-The National Economic Development Strategy* set a challenging target for the Welsh Economy. It took as 'the main goal of our economic policies' the raising of Welsh GDP per person from 80 percent to 90 percent of the UK average by 2012 (though recognising the difficulty of setting a precise timescale). This would reverse a decline from 85 percent of the UK average in 1989 to 79 percent in 2001. How can this be achieved? The natural resources that fuelled the growth of industrial Wales in the 19th-century are gone. Labour-intensive assembly plants and call centres which have helped to provide valuable employment in recent years cannot be more than a stopgap. For Wales to be successful, in the years to come, it must be capable of harnessing new ideas and technology to establish a knowledge-based economy. Institutions of Higher Education (HEIs) will play a critical role in this transformation.

#### The Third Mission

In addition to the traditional roles of teaching and research, a further responsibility is now placed on HEIs. It is called the Third Mission and its purpose is to 'meet the needs of business and the community, contributing to economic and social development both regionally and nationally'. The government has attached considerable importance to this new role. In 2000 the Department of Trade and Industry brought out a White Paper on Science and Innovation Policy for the 21st century. Following its implementation, a substantial sum of money was provided for research in key areas. The funding was provided specifically to 'build on universities' potential as drivers of growth in the knowledge economy'. In addition, a University Challenge Competition provided seed venture funding for knowledge transfer. In both England and Wales the governments have recently stated their commitment to maintaining a permanent third stream

of funding for institutions of higher education. Currently this support, in England, is consolidated in the Higher Education Innovation Fund that will provide £90 million per annum; approximately 0.8% of the total income of HEIs in England. In Wales a Higher Education Economic Development (HEED) Fund (soon to be renamed) of £3.1 million a year is to be made available over the next three years; about 0.4% of total HEI income. This fund will enable higher educational institutions to provide the posts and infrastructure needed to contribute to the development of the economy. This year, the focus of the fund has been broadened to *'encompass both the economic and social agendas'*. In addition the Knowledge Exploitation Fund (KEF) has been established to *'provide support for the effective transfer of knowledge and expertise from both higher and further education institutions to industry'*. The fund was to provide £40 million over the next three years, but it has recently been announced that the figure is to be reduced by £5 million. The administration of this Fund has now been transferred from the Higher Education Funding Council for Wales to the Welsh Development Agency which is undertaking a review to determine how it will be managed.

Concurrently, with the provision of Third Mission funding, universities were given both the intellectual property rights for government funded research and the obligation to exploit them. It was felt that there needed to be a change *'away from the practice of avoiding risk by holding on to intellectual property from research at the centre of government'* to devolving this responsibility to universities if it was to be effectively managed.

### The Higher Education Industry

There is no better example of a knowledge-based industry than Higher Education and, before turning to the various ways in which HEIs can stimulate economic growth, it is appropriate to consider their direct contribution to the regional economy. A recent publication, *The Economic Impact of Higher Education in Wales* by Professor Stephen Hill of the Glamorgan Business School, reports that Higher Education in Wales is a £1 billion industry. It generates some 24,000 jobs in Wales and is twice as important to Wales, in employment terms, as the Energy, Water Supply, Mining and Quarrying industries put together. Universities, it has been calculated, can add income up to £10,000 a year for each family in their region, especially if they are situated in small communities, as is often the case in Wales. The total income of Welsh higher education

institutions is some £700 million of which approximately half comes from public funds. Of this some £250 million is repaid in taxes.

Welsh higher education also contributes by bringing in approximately £100 million from overseas students. Higher education is one of the fastest growing world industries. A review commissioned by the British Council has estimated that the number of students educated outside their own countries will increase by 8 percent per annum amounting to a factor of three by 2020. Wales is well positioned to take advantage of the financial opportunities that this burgeoning foreign student market will generate in the future. The higher education institutions have recently established the Wales International Consortium to market the higher education opportunities available in Wales.

### Education and Entrepreneurship

HEIs make an important contribution to the economy by the provision of high-level skills. Unfortunately, many institutions find it hard to fill places in some of the subjects essential to the development of a high-tech economy. This is particularly true of engineering and physical sciences. Institutions are, of course, demand led and, if a shortage of skills appears, they can only rectify it if a sufficient number of young people wish to seek the appropriate training. This is to a large degree determined by the value society places on the skill in short supply. The shortage is compounded by the fact that, at the present time, only half those trained in the physical sciences take-up employment that uses their technical skills. Many are tempted to take further qualifications in, for instance, accountancy where they believe the rewards are higher.

A significant way in which HEIs can help the economy is by creating among students, graduates and staff a culture of entrepreneurship. A number of local and national initiatives have been established to help this process. The Graduates to Enterprise Programme is a pilot scheme which provides young graduates, postgraduate and research staff with formal training in core business skills. A further scheme, the Science Enterprise Challenge, aimed to establish a number of regional centres of excellence to enable the universities selected to provide support to entrepreneurial individuals through developing, either within the existing degree programmes or through supplementary studies, course materials that will equip the students at all levels with the knowledge and skills necessary to run successful enterprises.

### Knowledge Exploitation

Around major universities, notably in the United States, centres of high-tech companies have grown. The most quoted example is Stanford and Silicon Valley, but in Harvard and MIT near Boston, and indeed in Oxford and Cambridge in this country one can see similar development. The businesses that spin-out from universities are usually high-tech and most are in biotech, medical devices, software and electronics. The companies are usually small but can grow with remarkable speed. (The first five spin-out companies launched by Isis Innovation in Oxford that went public were valued at £2 billion in 2000.)

Universities can facilitate this spin-out process in two ways. The first is to provide direct support. Until recently that has been confined to technical expertise and the release and secondment of the key staff. However a government initiative, the £45 million University Challenge Seed Fund, launched in association with the Wellcome Trust and the Gatsby Foundation, has provided a limited number of universities with funds to support the creation of spin-out companies. Cardiff University and the University of Wales College of Medicine and the University of Wales, Aberystwyth were early beneficiaries of this fund. As a result, these universities will be able to play a direct role in stimulating and supporting spin-off companies. This fund was set up to plug the "development gap" that exists between the recognition of a commercial opportunity arising from university research programmes and that phase of company growth that can attract more traditional venture capital and other funding support.

These initiatives to facilitate spin-out companies have been very successful in the UK and particularly in Wales. In 2002 UK universities generated 158 spin-out companies, one for every £15 million of research expenditure and 2.7 per million of population. Over the same period the United States saw 494 spin-outs, one for every £44 million spent and 1.7 per million of population. Both the number of patents taken up by UK universities and their income from consultancy increased by some 20 percent in that year. During recent years not only was there increased focus on innovation but, at the same time, perhaps due to the continuing Research Assessment Exercises, the quantity and quality of research in British universities was improving leading to more opportunities for commercial development.

The year 2000–01 saw the number of Welsh spin-out companies increase from

5 to 17 representing approximately 8 percent of the total spin-outs in the UK from educational institutions. Thus in Wales a spin-out company is generated for every £9 million of research expenditure and 5.7 per million of population, a significantly higher rate than in the UK or United States. In the same year graduate business start-ups in Wales were 23 percent of the UK total. Welsh HEIs had approximately 8 percent share of the UK Teaching Company Schemes linking industry and academic research. If these figures are sustained Wales can look forward with confidence to the contribution of its HEIs to economic growth.

Intellectual property is also developed when ideas originating in universities are licensed to business. This tends to be the procedure most often followed when universities collaborate with larger companies. Wales has been particularly successful in this regard. A few years ago, the University of Wales College of Medicine had the highest earnings from the exploitation of intellectual property of all the institutions in the UK. Cardiff University, with an income from licensing of some £1 million per annum, is comparable to the most successful US universities which generate royalty income equivalent to 2-3% of their annual research expenditure. This would indicate that the licensing income generated by all Welsh HEIs could reach between £3-4.5 million a year. Of course ideas that are licensed to established businesses are often exploited outside Wales and indeed often outside the UK. It is essential to establish a business climate in Wales that can profit from inventions and ideas generated in our institutions of higher education.

### Supporting Business

It has been said that higher education's most important role is to *'inject the adrenalin of innovation into the bloodstream of the economy'*. Higher education is both a source of new ideas and a provider of expertise, technological developments and facilities that can assist business and individuals to explore new ideas. Innovation is not necessarily about major breakthroughs. Incremental improvement is just as important, particularly in the case of smaller companies (SMEs).

Many HEIs have made successful efforts to encourage links with business but it has proved very difficult for them to engage with SMEs. Cardiff has built links through the Cardiff University Innovation Network. The Innovation Network encourages a partnership approach to innovation by providing an informal, flexible forum where like-

minded business people can attend regular meetings to network with each other and with members of the University and local business support groups. These meetings address problems and issues that have been selected by a group of senior executives of SMEs who guide the Innovation Network in all its activities. The numbers attending meetings are typically 80-100, and it is an important feature that more than half are from business. The network also provides a freephone helpline which can be called by any SMEs with a problem or inquiry and over 600 problems have been solved since the helpline set up a few years ago.

The enthusiasm of SMEs for the network is most encouraging. However, the network is just one of many initiatives to provide support for SMEs in Wales. HELP-WALES is an example of the initiative which involves all the HEIs in Wales working together to pool their resources and facilities to assist SMEs. This scheme provided subsidised consultancy support for SMEs to work with any one or more of the 7,000 or so academic and research staff in our HEIs. In addition the Go Wales fund of £1.9 million per annum funds a number of activities including a project to encourage graduates to work in SMEs.

### The Research Culture

Perhaps the most important factor in determining HEIs capacity to support economic growth is the strength of their research base. The 2000 White Paper concluded *'Major innovations flow from breakthroughs made by curiosity driven research'*. It is no accident that the universities which are famous for producing spin-off companies and for stimulating growth in their local economies are also famous for the fundamental research they do. British research is second only to the United States in its importance. With only one percent of the world's population we produce eight percent of the world's scientific papers and they receive over 9 percent of citations. This is one of the areas where we can claim to be truly world-class. It is most important that universities continue to develop research of the highest quality. Only in this way will the ideas be generated that can lead to the founding of new businesses and the significant development of existing companies. It is very important to ensure that the research we carry out is focused on the future. I asked a leading engineer from Stanford what British universities needed to do to be able to create our own Silicon Valley's. His answer was unequivocal: *'spend less time supporting existing industry and think more about creating the industries of the future'*.

The Foresight programme, which brings people from universities and industry together to identify areas of research considered critical to economic progress, can help us to plan that future, but it cannot foretell the future. We cannot predict where the research ideas that are blossoming in our young research staff's minds will take us forward in the new millennium. A recent government document states that it will no longer *'go back to the situation where the government attempted to pick winners'*. Clearly some degree of concentration of research effort is beneficial, but over-prescription can lead to a loss of opportunities. Who would have envisaged 15 or 20 years ago that the information technology tools developed by the international particle physics research community to maintain contact with each other would form the basis of the multibillion pound industry that the Internet has become today?

But good research is only the first step. It was recently reported in the press that, although Britain was second only to the United States in recording patents in biotechnology, the majority of these patents were in foreign ownership. Innovation requires the correct economic climate, with the opportunity for firms to make investments that will provide benefits only in the longer term.

### Conclusions

HEIs are well placed in the UK, and particularly in Wales, to take the lead in the drive to a knowledge-based, high-tech economy. Over the past few years we have had considerable success particularly with the development of spin-out companies. The quality of the Welsh research base, which has caused so much concern in the past, is now improving. Welsh HEI's share of Research Council funding, though still below that indicated by the size of the sector, has improved significantly over recent years. Much is being done in our HEIs to harness innovation and to stimulate entrepreneurship. However, much more needs to be done. We need to make all businesses aware of the power of higher education. Many smaller companies still need convincing that HEIs, in particular the universities, can provide them with valuable support. Within HEIs we need to develop further and maintain units that can provide a professional approach to the problems of business support.

Institutions of higher education will play their part in leading Wales to a brighter economic future. To do this our HEIs will need to continue to:

- develop strong research capacity,
- establish effective procedures for encouraging the exploitation of intellectual property (through



- licensing and spin-out companies),
- create strong links with business to enable businesses (especially SMEs) to benefit from their expertise.

### Realising the Potential of Wales' Rural Economy

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Wales is a more rural country than England. That provides one rationalization, among many others, for devolution; policies can be designed to suit rural circumstances better, taking local understanding and preferences into account. Depending on definitions, improving the performance of the rural economy is much more important for Wales. In general terms, the areas around the M4 and A55 corridors are performing at least as well as the UK average, so, together with the Valleys, the rest of the interior of Wales provides the main obstacle to achieving the headline GDP targets guiding the Assembly's economic strategy.

Economies, and particularly rural economies, are not easy to define. There are distinguishing characteristics, such as industrial structure (rural activities tend to be more based on primary, land-based sectors), demography (countryside populations are older), culture (lifestyles are different), and of course population density. On the last feature, "rural Wales" would consist of local authority areas with less than 50 residents per square kilometre (the OECD definition), forming a contiguous area from the Northwest, all of Mid and West Wales, and the far Southeast.<sup>1</sup> This rural block, however, is far from homogenous, especially in economic terms. Economists often try to represent the systems that they study as a set of simultaneous equations, showing the

interdependence between sales and purchases of different sectors. But for rural economies, and this is particularly relevant in Wales, there is hardly any integration at all. They are more like dependent satellites of nearby metropolitan economies, with few of the variables in the set of equations having any value other than zero.

This presents a headache for policymakers, since efforts to stimulate economic growth leak away much more quickly than they would in an urban context. Reliance on inward manufacturing investment as the source of new employment is often inappropriate given its vulnerability to closures, and given that SMEs can be major employers in scattered communities with small workforces. Hence, a primary objective for rural regeneration should be to build local self-reliance as much as possible. Low population means that there will always be considerable external dependence, but as much as possible of the external revenues should be retained locally to build up a resilient structure of businesses and employment.

A more reflective policy, based on this principle, should develop from a review of the current extent of rural economic problems, an assessment of future potential, and a brief examination of the policy benchmarks set out by other, similar regions. The statistical base is not good; one of the problems of a sparse population. Table 1 shows some summary indicators of the economic situation for most of rural Wales (for many indicators, Carmarthen, Ceredigion and Pembrokeshire are combined; income figures for Monmouth are amalgamated with the highly urban Newport unitary authority area; and even at this level, there are huge gaps in information on wages).

These summary figures show that low wages rather than absolute lack of work

contribute to lagging rural economic performance, and that strong population growth from in-migration has done little yet to contribute to the solution. These figures also fail to show variations within this area of Wales. The most extreme example is Anglesey, where a high concentration of disadvantage in urban Holyhead drags down what would otherwise be a more respectable accomplishment.

More insightful detail can be brought together from the simple structure of a Strengths and Weaknesses, Opportunities and Threats (SWOT) analysis. Strengths clearly include the quality of the natural environment, both in landscape and biodiversity. Against that background, resonances of the culture of small communities with distinctive lifestyles are an attraction for visitors, for those who move in more permanently, and for the indigenous population. The quality of educational provision is high, with several universities, good performance by schools, and adequate vocational training. Although small in size, the quality workforce is an asset provided that the right match of employment opportunities exists, and there are localised clusters of manufacturing. There are clear competitive advantages in tourism and niche food processing.

Offsetting this, for much of the area transport and communication is very difficult. Perhaps as a result, there is no cohesive identity, and the rural interest is neglected, and often invisible. Agricultural incomes have been slowly but steadily declining, and with it the influence of the once powerful farm lobby. The quality of tourism provision is poor, and far fewer resources are devoted to supporting its upgrade than in other areas of development. Compared with other parts of Wales, it has been difficult to attract inward investment. There are no agglomeration economies, and the lack of critical mass

**Table 1: Rural Wales: Summary Economic Indicators**

	GVA per head as % UK £	Population ('000)	Net migration as % of total population	Activity rate in working population (%)	Wages (£/week)
Isle of Anglesey	52	68	-2.7	68.1	..
Gwynedd	63	117	2.5	79.9	393.40
Conwy and Denbighshire	62	203	6.9	77.5	353.10
South West Wales	62	362	6.0	71.3	..
Powys	69	126	7.0	83.0	371.20
"Rural" Wales	62	876	5.2	75.5	..

Source: Office for National Statistics.

Note: All figures are for 2001 except migration, which is for 1991-2001.

in labour and other markets means that it is hard to match supply and demand to generate internal linkages. All of these influences, in combination, make rewarding careers for young people thin on the ground, and contribute to the demographic 'hole' in the rural population between school leavers and the middle aged. An aspiration gap in terms of drive and vision seems to occur, reflected in the small numbers of high-growth SMEs.

Opportunities then exist for tourism development, mainly in the specialised areas of culture, landscape and environment. Policy shifts to environmental management in farming, where specific connections to tourism can be exploited, will expand this potential, and also where food can be linked, niche agri-food marketing could be improved. Because of the large distances between scattered businesses, many opportunities which could exist to improve internal linkages are simply unrecognised. However, improved networking, perhaps by making greater use of ICTs, could realise them. Also, there is still much scope for attracting lifestyle in-migrants in the high value end of ICT development, particularly as Broadband is increasingly connecting the Welsh countryside. Many existing in-migrants have business skills which are untapped, and more could be made of the higher education establishments' new commitments to working to enhance their local economies and to spin out technology transfer.

Some clear threats relate to uncertainty from the implementation of the latest round of CAP reform and EU expansion. Decoupled farm payments may have the many different effects, of which at least the possibility of significantly reduced output exists, jeopardising many upstream and downstream linkages. Other developing effects of globalisation, particularly the flight of manufacturing industry to Southeast Asia, will undermine many enterprises unless they have a significant competitive advantage. Similar impacts may be felt from the centralisation of public sector and utility activities. Modern lifestyles (especially those of in-migrants) may erode the social capital base of communities – ironically, since often that is a significant component of the initial attraction. And finally, uncertainty about changes in the fee basis for higher education could limit the effectiveness of these institutions as fertile growth poles in otherwise sluggish markets.

There is no template for successful rural regeneration, as the specific circumstances of each area vary so much. The search for neat, workable

definitions has always foundered because there are many different types of "rural". Contrast, for example, some areas of Powys close to the English border with the Lleyn Peninsular, or North Pembrokeshire. There are, however, common principles which are recognisable in examples of some impressive development performances in rural areas of Europe and North America. First, competitive advantage needs identifying and then robustly exploiting, in order to increase the flow of external income. This requires considerable flexibility in response to changing market conditions. Secondly, as much of possible of these earnings needs to be retained in local incomes, by "plugging the leaks". This requires businesses to network collaboratively, sharing information informally as a means to benchmark their performance, and also continually searching for and developing synergies where they exist. Thirdly, both of these processes need to be underpinned by robust social capital, and "institutional thickness"; the latter is a concept developed by Amin and Thrift (*Globalisation, Institutions and Regional Development in Europe*, Oxford University Press) which expresses the degree to which networked firms can interact with supportive public institutions whose aim is to develop and embed entrepreneurial dynamism.

On sober reflection, rural Wales falls far short with regard to these principles, but the gap is at its widest in respect of institutional thickness. Its clearly distinctive problems are not dealt with comprehensively, but are split between all four of the economic forums which are charged with regeneration, three of which have a majority urban population. Local authorities, and the Assembly Sponsored Public Bodies with an economic remit, are inward looking and defensive, and consequently there is no structure which allows local public leaders to play a key role in vision building and coordinated intervention. The one framework which offers most to development of rural social capital, business networking and particularly tourism development, the European Commission's LEADER Plus initiative, will cease in 2006, as the framework of regional policy is tilted eastwards.

Can the Welsh Assembly Government be persuaded that greater effort should be made to revitalise local government, reorient public bodies to make their rural remit more effective, and refresh their own strategies? Since most of the governing party represent urban constituencies, and all of the Cabinet are from Greater Cardiff, one might suspect that their appetite for action was faint. One argument, though, might work. Because participation rates are

substantially above average in rural Wales, relatively modest improvements in productivity could have a more marked effect on Gross Value Added. The potential that is displayed by similar rural regions elsewhere suggests that an improved and innovative economic focus, responded to by businesses, could raise wage levels substantially. With a 12-14% improvement, the rural GVA gap would be well on the way to being covered. With a roughly similar population, half of the Wales gap would disappear, leaving only the more intractable difficulties of the Valleys to be dealt with.

#### Endnote

1 Isle of Anglesey, Gwynedd, Conwy, Powys, Ceredigion, Pembrokeshire, Carmarthenshire Monmouthshire.

### Re-Imagining Wales' Economic Future: No More Snake Oils Please.

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Will devolution turn out to have transformed the Welsh economy? Devolution has certainly increased the flow of information, which is now more thorough, far-reaching and accessible than in pre-devolution days. But in the world of analysis, interpretation, prognosis and policy development, things have not progressed so far. If the pronouncements of the Welsh Assembly Government's 'Economics Minister' are to be believed, Wales is about to enter an era of profound change. A little caution seems in order.

Since the future is by definition unknown, imagining it is a matter of informed guesswork. The trouble arises when that guesswork is excessively influenced by ideological assumptions. The 'economy' is after all not a tangible entity but an evocation of ideas on what constitutes wealth, and how it can be acquired and distributed. Since these involve not only technical but also ethical and political judgements, economic policy has always been a rather ideological business. In recent times this has been particularly evident in the rise, and fall, of a series of 'explanatory-prescriptive paradigms' which have shaped assessments of Wales' economic problems, and their remedies.

#### The Golden Age

Between about 1950 and 1975 economic policy in Britain, as elsewhere, was framed by a welfare-nationalist conception of the role of the state. The basis of economic growth was the recirculation of increasing working class



incomes, and the national production of the housing, manufactures and services that implied. Wales' fortunes depended on getting its share of that action, and Keynesian regional policy largely made sure that it did. Manufacturing jobs were relocated from the Midlands and South east. Explicit regional measures played only a relatively minor role overall. Far more importantly, the public sector steadily expanded, creating new job opportunities in relatively decent conditions of employment. Moreover, national welfare benefits and national union-negotiated wage systems meant that real incomes of most people rose steadily, and social and spatial inequalities generally declined. The stock in trade of politicians seeking election was to promise more of the same, and generally, from whichever of the two major parties, they provided it.

### De-industrialisation

All that ground to halt in the mid 1970s. When Jim Callaghan, Prime Minister and MP for Cardiff South, adopted what came later to be called 'neo-liberalism' (or 'Thatcherism') as part of the deal to get the International Monetary Fund loan, the trends of the 'Golden Age' went into reverse. The principle shaping economic thinking began to shift from the need for jobs to the need for mobile capital to be able to cross borders with minimum constraints. Regional policy was gradually rebuilt on the assumption that 'regions' should be treated as economic entities, rather than merely geographically labelled parts of a national economic system. The economic prospects for Wales came to be seen as depending on its ability to 'globalise'. To this end the branch plant economy should become more 'dynamic'. To help this inward investment was to be encouraged (a shift that took on real potency as it gave the otherwise anachronistic WDA something politically acceptable to do). Together with a new push for labour market flexibility this would help trigger an industrial 'culture shock' that would precipitate a new Age of Entrepreneurship.

It did not arrive, though Wales did indeed become the most 'globalised' region in the UK. Overseas firms became more prominent in manufacturing, and large chains began to take over much of the service industries. But self-employment remained virtually static (it actually declined in the 1990s). Wales overall slipped further behind England. The number of full-time jobs per head of the labour force began its long decline. If this was globalisation, for most people it did not work.

On the one hand the growth of 'privatism' meant people became less

aware of, or bothered by, the economic conditions of their neighbours. On the other, many people were re-categorised out of existence. The number of people in Britain defined as long-term unfit for work quadrupled in the 1980s and 1990s to 2.1 million – a far more rapid increase than could be explained by medical trends. The geographical pattern of long-term illness in the UK today suggests that rates reflect not so much the health of people's minds and bodies as the health of the local labour market. If it is a long-term effect rather than a cause of economic weakness, the apparent growth of 'ill-health' in South Wales should not therefore be too hastily attributed to particular Welsh lifestyle choices.

### Globalisation and Competitiveness

By the early 1990s, the idea that regions should be treated as if they were quasi-independent economic units, capable of standing on their own competitive feet, had trickled down from the mountains of Reaganite-Thatcherite revelation and was being picked up by a wide range of policy-makers and ideas-entrepreneurs, (it had a particular impact on the European Commission, for which regional development was a major activity). The result was the New Regionalism, the now-ubiquitous ideology that the region (or, increasingly, the city-region) is the appropriate scale for policy to create competitive economic 'units' fitting a globalised world.

This spawned a new sequence of explanatory-prescriptive 'paradigms', and networks giving voice to them. The first fixation was with 'post-Fordism' and the related obsession with flexibility and innovation. This became Wales real problem. Yet though it was (and is) true that Wales 'innovates less' than some other parts of the UK, the economic significance of this - how it relates to local standards of livings - has never been examined. The new imported anxiety over innovation was accompanied by a set of medicines. Things would be improved by a spray of initiatives to boost networking, encourage industrial 'clusters', upgrade the quality of inward investment, enhance local supply chains, encourage more research and development, and university high-tech 'spin-off's.

Some valuable projects resulted, but little changed in terms of aggregate economic trends. The share of Welsh manufacturing employment accounted for by foreign firms continued to increase, but by this time only because the total amount of employment actually fell. Overall, Welsh income and employment growth was determined, as before, mainly by the continued growth in the service sector, especially that part

driven by public spending. Yet, this was insufficient to make a real dent on unemployment (Datris, 2004).

### Combining 'Competitiveness' with 'Sustainability'

In Wales and in the UK the failure of globalised manufacturing to provide jobs also encouraged a shift of interest to the service industries, and a widening to consider the 'human side' of the economy. This Hayekian-Liberal agenda of re-engineering civil society to better fit the needs of the global market was first made explicit in the Thatcher years. It was modified through the 1990s with the addition of a neo-Durkheimian emphasis on the need for social cohesion. Over the following years, especially after the election of New Labour in 1997, the social dimension of the latest paradigm became more explicit under the banner of the Third Way.

Economic prognoses increasingly stressed the need for modifying training and education provision, and beyond. Following the model exemplified by the National Strategy for Neighbourhood Renewal (Communities First in Wales) and the New Deal, labour market interventions were reformed in the name of improving skills and motivation, but also targeting which helped reduce 'social exclusion'. From the late 1990s European Labour Market strategy (largely shaped by Britain) required each member country to prepare its own action plan detailing just how this would occur. Wales' plan however was merely an arithmetic derivative of the UK's, and was not debated by the Assembly.

The new emphasis on the social preconditions of global competitiveness was packaged in the language of 'sustainability'. Few words have had their meaning transformed so rapidly. Sustainability entered global policy discourse in the early 1990s as a challenging environmental demand. It is now widely regarded as a label for attempts to somewhat reduce waste, and social disruption. Symptomatically, although the Assembly has a legal commitment to Sustainable Development this has never caused it to rethink its economic strategy. The Assembly does its non-thinking about these matters on the edge of the one of the most environmentally unsustainable (and socially ambivalent) developments in Europe – Cardiff Bay. For Welsh Labours' 'Economy Minister', but equally for critics such as Kevin Morgan (2004), sustainability has come to be defined almost entirely in Third Way terms, embracing initiatives for social inclusion, and waste minimisation, in the wider service of competitiveness (see also Thomas and Rhisiart, 2004).

### Knowledge, Culture

By 2000 the ever-growing wish-list - innovation, constantly-upgrading skills, increased entrepreneurship, better health and (thereby) sustainable competitiveness - was being re-described in terms of a new paradigm, the 'Knowledge Economy'. This is at once almost boundless in its range of possible applications and extraordinarily nebulous in terms of substance. But the meaning of words is how they are used. These have been used in practice to bless at one pole late-Hayekian visions for the reconstruction of education and training, and at another the desirability of promoting this or that venture because it is a 'cultural industry'.

The idea that culture is the key to economic competitiveness dovetailed with what academics (especially in Geography) celebrated as the 'cultural turn'. The arrival of New Labour intensified official interest. Chris Smith, the first 'culture minister' published a book enthusing about the economic benefits of Britain's cultural industries, but also noting that culture is a good thing in its own right. The latter has received conspicuously little attention as the instrumentalist promotion of cultural industries has risen to top the local economic development charts. The theory is that cultural industries provide the social infrastructure appropriate to modern competitive cities (Florida 2002). On the ground, this has affected economic outcomes mainly by legitimating changes in planning.

This has been particularly evident in Cardiff, which has acquired sports stadia, opera houses, conference centres, night-clubs and - next - casinos. This has been sold to those who live alongside it, and pay for it, as improving competitiveness. Whether that has any substance remains to be seen (these have so far often added to rather than reduced costs). Meanwhile it makes visible the increasing gap between the capital city and the rest of Wales.

### The Public Sector and the Non-global Economy

The main economic motors of Wales (Cardiff included) are not the Knowledge Economy, or exports of manufactures or 'cultural products'. They are public and consumer spending; both serving localised rather than global markets. The public sector remains central - directly accounting for virtually the entire increase in the early 2000s. Despite this, some commentators regard the public sector as an economic negative, except for those parts that can be squeezed into the definition of the Knowledge Economy (see Cooke 2003). This is to develop policy-making for

Wales as if it is really only a soggy version of Singapore in disguise. How confident would you feel if your doctor prescribed for you on the basis of a diagnosis of someone else?

The most damaging consequence of the overlapping recent sequence of 'paradigms' of analysis and diagnosis has been the total disregard for non-globalised markets, along with a reductionist view of the public sector. For these are particularly important in Wales - it is not an island turning out Knowledge-based exports. The 'play economy' for example, especially entertainment, recreation, clubbing, spectator-sports, etc (Woudhuysen 2001), has been a major spur to growth from the biggest city to the smallest towns. The public sector plays a crucial background role here too in that changes in UK regulations concerning drinking (and next gambling), have transformed the market, and local planners have been central to getting particular projects off the ground.

This should not be surprising. The most affluent regions and most large cities in the world are driven not only by external trade and investment, but also by the bubbling spontaneity of local supply and demand, and public services. The belief that the former are always and everywhere the most important is a recent ideological invention, with a fairly obvious history. Interestingly the sources most commonly cited as 'Authoritative' are sociologists or business analysts - such as Manuel Castells or Michael Porter - whose work does not actually show that at all.

### The Changing Goals of Economic Governance

Interpretations of, and policies for the Welsh economy have drifted some way from the realities over the past couple of decades. At least the Keynesian regionalists knew what they were talking about, but then they were closer to the levers of power. The issues identified as priorities today, by organisations that have rather less economic leverage, frequently lack any explicit logic in terms of the overall economic dynamics of Wales. It is surely revealing that there has been not one serious attempt since devolution to analyse how these actually work. This despite a proliferation of committees, advisory groups, networks and glossy publications. The important work on input-output tables by WERU does not seem to have impacted on policy thinking. Two thirds of women in Wales work in only two sectors, neither of which wears the badge of 'Knowledge Economy'. It seems that policy still arrives at Wales rather than arising from it.

The current rhetoric - being holistic, taking the longer view, and seeking to link economic to other goals, including sustainability - has all the right words. But much needs to change to give them the kind of substance most people associate with them. They would need to become strategies drawn out in terms of the specific dynamics of Welsh economy and society. For example, as we have seen the extent to which the 'global competitiveness imperative' does, and should, govern Wales's economic development is currently defined solely by assertion. It is properly a matter for research.

### Into the Future

All the fanfares for a new Welsh economic dawn turned out to be just forgettable tunes. Talk of 'high-tech' clusters, science parks, the Knowledge Economy, and now the cultural industries has often meant little more in practice than privileging a modest industrial expansion here and there, a fair amount of property development, and acres of news print. Their impact on the economic development of Wales as a whole has not been overriding.

Meanwhile, we can all see that some things are happening. A spate of redevelopment is visibly transforming Wales' cities - along with most cities in the world. A possibly even more portentous post-agricultural commodification of the countryside is visibly underway. But neither suggest that Wales will cease to be relatively backward in terms of most economic indicators compared to the south of England - currently rapidly transforming into a sprawling 'global mega-city'.

Within Wales the geography of economic development seems likely to take on a more 'city-regional' pattern. Related to this, development seems likely to fall further under the influence of 'boosterism'. The Americanisation of Welsh economic governance is most apparent in the emergence of alliances between local political leaders, bureaucrats, property developers, and service-sector investors (mainly sports and drink corporations) finding common ground in prominent commercial projects. This poses a potentially significant challenge to the ability of the Assembly to impose any coherence on economic development, if it wants to. The problem may be intractable if this style of 'urban regeneration' is, as some argue, the spatial corollary of globalising neo-liberalism, and this remains the over-arching framework conditioning the economics of devolution.

This path will certainly bring new uncertainties. Urban regeneration projects depend on the buoyancy of

property investors' sentiments. Some (St Davids II, the Sports Village) will be vulnerable to any new volatility in global property markets and interest rates. The social dimension of the push for sustainability is also imponderable. Despite the considerable efforts being made in community development and social inclusion in various arenas, the prospects for reducing 'real joblessness' will remain limited so long as they continue to lack the context of a credible aggregate employment strategy. Policies targeting one or other group for 'social inclusion' may yet again end up mainly rearranging the sequence of faces in the queue.

#### More Politics, not Less

If devolution is to have a more productive economic impact it needs to open up new kinds of economic debate, both in terms of the analytical perspectives and values considered, and those doing the considering. One positive point is that devolution has obliged (and Electoral Commission funding enabled) all the Welsh political parties to think out their strategies in more depth than ever before. But they have a very long way to go.

So do the educational institutions. Academia engages with Welsh economic development mainly through inevitably myopic contract research. It could do much more on a broader canvas by reviving its traditional civic responsibility role. Open fora for on-going wide-ranging debate are urgently needed –

perhaps the annual WERU conference offers one model to build on.

The core of the problem is the lack of any real popular engagement with economic strategy. Rather than widen the debate, devolution has encouraged the insistence that the number one priority is consensus. The story sketched here suggests the opposite. Wales' most worrying economic weaknesses is not that there is too much politics in its economics, but too little.

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#### NOTE

Jonathan Price of the Welsh Assembly Government's Economic Research Unit presented a paper entitled *Emerging Research Findings: Economic Inactivity*. A power point presentation is available at [www.weru.org.uk](http://www.weru.org.uk)