

Agglomerate to accumulate

Enabling more workers to reach central employment zones was a key argument for building Crossrail in London and can strengthen the case for transport investment elsewhere, attendees heard recently at a seminar organised by the Transport Statistics Users Group. **Rhodri Clark** reports from Cardiff.

It's generally accepted that investment in transport can influence economic growth, but how and where are critical issues which arguably remain little understood. The traditional idea, that new railways and roads spread prosperity, is not always borne out by Gross Value Added statistics for areas such as Anglesey which have received substantial investment in roads.

At the recent seminar on the subject in Cardiff, Dr Ian Smith, of the University of the West of England, said there was little correlation between the quality of cities' transport systems and their prosperity. 'You can be a city region with an absolutely pants transport system and still do OK,' he said.

Prof Stuart Cole, of the University of South Wales, mused: 'Is there a two-way road when the public authority builds a transport network and then finds that creameries close in West Wales because it's cheaper to bring the milk in bulk to Gloucestershire and build a big creamery there to serve Wales and the West Country?'

The seminar heard that relatively little post-project appraisal had been conducted, to verify whether theoretical forecasts were borne out by reality. However, Paul Buchanan, partner at Volterra, said the Jubilee Line Extension had been evaluated after implementation – and the results were significant.

The JLE was particularly interesting because, like the original Fleet Line (Jubilee Line) and Docklands Light Railway, the project forecasts had produced a Benefit-Cost Ratio of less than one, denoting poor value for money. 'The



Urban rail investment supports a higher density of jobs than would be possible through investment in roads alone.

JLE has added large numbers of jobs at Canary Wharf, London Bridge, Waterloo and Stratford. It's regenerated other places. It's a hugely successful railway,' said Mr Buchanan, who until recently was director of economics at SKM Colin Buchanan.

'Having led the economic appraisal for JLE, I was annoyed that it was built first, because I knew that other railways under the same rules had BCRs that were better than JLE. The Treasury wouldn't pay for Thameslink and Crossrail even though they had BCRs over two [denoting high value].

'The decision, though, was all about economic development and growth. That was what Government was really interested in. Valuing time savings held little relevance for them.'

However, both the Thameslink upgrade and Crossrail are now well under way. What swayed Whitehall?

The benefits of agglomeration have made governments in many countries look at urban rail investment in a new light, said Mr Buchanan. Investment in urban roads could not support the high density of jobs which a modern

metro system would permit in city centres.

Dr Smith presented an overview of research on agglomeration. A study of data from six EU countries, including the UK, at NUTS 2 and NUTS 3 levels from 1981 to 2006 found that where the number of jobs doubled in agglomeration areas, productivity increased by 14%. This meant that each worker, whether in a new or pre-existing job, was producing 14% more on average. 'In Europe in the round, there seems to be an advantage in having higher job density,' he summarised.

Another study, this time taking NUTS 3 areas as the geographical unit, looked at agglomeration in 20 EU countries by sector. It found a 10% productivity gain where job density doubled. 'There was an advantage in being close to other businesses, but not necessarily other businesses that were similar to yours. That was more important for the service sector than for manufacturing, for example.'

His own university had looked into the clustering of companies producing television programmes and animation in Bristol. 'The TV companies had self-employed staff who were able to move from place to place.' He said this was one way in which companies in a cluster benefited from the spreading of experience and ideas. Another was informally meeting people, for example at the sandwich bar, who might have expertise in a complementary field.

Mr Buchanan pointed out that in 2007, for the first time more than half of the world's population lived in cities. By 2025 that was expected to reach 70%. 'Cities are



Cardiff is blessed with a city-centre rail station, served by trains on all routes. Work is under way at Cardiff Central to create an additional platform to boost capacity and reliability.

money-making machines. They're hugely successful,' he said. 'Businesses are more productive in cities than outside them.'

'Private companies pay rents in city centres that are double what they are in the suburbs, and their staff have to put up with overcrowded commutes. They do that because they make a commercial decision that they get more out of being in that location than the extra costs they incur. There's a big productivity gain from being in the centre.'

He gave a hypothetical example of a lawyer in the north of Scotland who would have to do a bit of conveyancing, family law, wills and other things because there were too few people in the area to generate enough custom for a practice specialising in only one of those subjects. 'If you're a law firm in central London, you have to be very specialist and really good at what you do. London can supply law specialists across the world because the size of the cluster produces world-class specialists.'

The problem for central London was that building more offices would not necessarily generate more jobs because the city's transport systems couldn't cope with additional commuting from the outlying residential areas. An upgraded Thameslink and the new Crossrail, however, would create significant additional capacity, right into the centre.

Transport economists, including Mr Buchanan, argued that creating jobs in central London would be far more productive for the UK economy than creat-

ing them outside that area. They pitched this to the Wider Benefits Working Group, which included the Department for Transport, Home Office, Treasury, Network Rail and London Underground. The Government departments were sceptical initially, since the argument lay outside traditional appraisal systems with their emphasis on benefits for users of the transport mode in question, such as savings in journey time. The exception was the Treasury, which now began to see Crossrail as an economic growth scheme, rather than a transport scheme.

Here the JLE evaluation provided useful evidence. Previously Canary Wharf was unable to grow further because the DLR and local roads would have been overwhelmed by the extra commuting demand. Once the JLE was under construction, new offices began to spring up in anticipation of its opening in 1999.

The Treasury accepted that Crossrail, by enabling many more people to commute into central London, would stimulate further growth in employment in an area where agglomeration would produce bigger gains in output – and therefore tax revenues – than if the same number of jobs were created elsewhere.

'For Government, this is almost a profitable investment,' said Mr Buchanan. 'The overall economy is significantly bigger but more centralised, in terms of where that output is produced.'

Other London boroughs would argue that new jobs are needed in their areas too, but Crossrail sharp-

ens the distinction between them as primarily residential areas and the workplaces in the centre and Canary Wharf. Mr Buchanan said the people who benefit from the higher-paying jobs would spend their money in those residential areas. 'The wealth gets spread to the suburbs where people live. That's more important than where the wealth is created.'

He added: 'It's about relieving that constraint [to employment growth], and proving to the Treasury's satisfaction that this will work. We need to show that it's transport that's constraining that growth and not something else. There would be little point putting in a large increase in transport infrastructure to Mayfair because you couldn't build 50-storey office blocks there.'

London is an exceptional case in the UK context, in transport, economics and many other fields. How could other regions benefit from agglomeration?

Dr Smith said there was little evidence on causality – whether transport improvements stimulated or accompanied strong economies. 'There are plausible stories that link better transport to productivity, but if you increase accessibility to a poorly performing area it allows people to leave the area as well as getting others into the area.'

Welsh Government statistician Henry Small showed that the number of Travel To Work Areas in Great Britain had reduced from 334 in 1981 to 314 in 1991 and 243 in 2001. He expected the 2011 census results to show further reduction.

All of Britain is divided into TTWAs, defined by where 75% or more of the population work. The reduction in total number equates to each TTWA being larger in geographical size, on average.

However, new employment trends could start to impinge on the workforce's increasing centralisation, said Mr Small. 'Among young people, there's a lot of multiple job holding.' Greater use of internet technology could affect, for example, where retailing jobs are located.

Members of the seminar audience also raised potential new factors. The trend of centralisation of employment, reflected in the

TTWA statistics, coincided with a period of relatively cheap energy – making commuting attractive over longer distances – and former industrial land being freed up for redevelopment in or near city centres. Neither of these was likely to apply in future. Also highlighted were the effects of agglomeration on essential but low-paid workers, such as cleaners, who might be unable to afford to live in central areas or to commute.

Mr Buchanan's advice for South-east Wales, typical of many city regions, was to use the planning system to focus more jobs on Cardiff city centre. Investing in transport to reduce journey times would make some difference, but he felt that transport capacity was not constraining employment growth in Cardiff city centre, as it was in central London.

Unlike London, Cardiff is blessed with a city-centre rail station, into which all of the region's railways feed. Resignalling and construction of a new platform at Cardiff Central are due for completion next year, to improve capacity and reliability. Local trains can be overcrowded because there is a shortage of diesel units in Britain. Electrification of the routes by 2020 or 2021 will coincide with introduction of electric trains with three or six cars each, replacing today's two and four cars.

Mr Buchanan recently spent several years working on urban rail schemes in Australia and New Zealand. Many authorities there were recognising the value of metro systems to transport commuters into city centres from scattered suburbs which were planned around car use. He cited Auckland, where historically job growth was allocated between seven separate districts but the new mayor had focused on employment in the city centre, using investment in local railways to deliver that change.

However, persuading the Treasury that British urban rail schemes outside London would unlock agglomeration benefits would depend on the promoters being able to prove that growth is constrained by the existing transport system, and not by other factors. 'It's not just transport infrastructure that can deliver Wider Economic Benefits,' said Mr Buchanan.

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