

# BIG LONG-RUN PAYOFFS FROM PUBLIC INVESTMENT

Is public investment in transport, education and health-related infrastructure socially productive? In other words, is an extra pound of tax revenue better spent on additional public investment or returned to taxpayers to fund private investment? These are exactly the questions to which Chancellor Gordon Brown would like to answer YES, in the light of his latest announcement on additional public spending. New research by **Panicos Demetriades** and **Theofanis Mamuneas**, published in the July 2000 issue of the *Economic Journal*, produces striking results on the comparative returns to public and private capital, which provide some support for the Chancellor's view:

- Analysing data on 12 OECD countries for the period 1972-91, the researchers find that while in the short-run, private capital appears to be more productive than public capital, the converse is generally true when a long-run perspective is taken.
- For example, the short-run rate of return to public capital in the UK during 1972-91 was 19.3% per annum, while that of private capital was 21.7% per annum. This may go some way in justifying the cuts in public expenditure, which successive Tory governments implemented during the 1980s.
- On the other hand, the long-run rate of return to public capital during the same period was 28.4% a year while the long-run rate of return to private capital, was only 14.3% a year. Given that the full long-run benefits of public capital may take up to 15 years to materialise, it is not surprising that some politicians may be tempted to adopt short-term horizons when dealing with public investment decisions.

While the estimated rates of return to public capital vary considerably across time and countries, the researchers conclude that on the whole, according to long-run criteria, public capital was sub-optimally provided in all of the 12 countries they analysed. By 1991, however, a number of countries - Australia, Belgium, Sweden and Finland - had closed their under-investment gaps.

The UK experienced a growing under-investment gap in the period 1980-6 and a narrowing gap during 1987-91, to some extent reflecting changing government policies. Interestingly, according to this analysis, while both the UK and the United States had substantial under-investment gaps in 1991, they will have closed these gaps by 2001.

The researchers use a new econometric framework to estimate the effects of public infrastructure investment on *private* output supply and input demand decisions over time. Public infrastructure capital may reduce the costs to firms: better roads reduce transport costs, better schooling and health care are likely to make workers more productive, etc. Lower costs result in increased output supply, which in turns leads to greater employment and increased private investment, all of which have further spillover effects in the economy.

The analysis uses data from 12 OECD countries during the period 1972-91 to estimate the rates of return to public capital in the short run, the intermediate run and the long run, focusing purely on the production side of the economy (hence ignoring benefits to consumers). These are then compared to private rates of return in order to address the question of whether an extra pound of spending would have been socially more productive in the form of *public* capital as opposed to *private* capital.

**Note for Editors:** 'Intertemporal Output and Employment Effects of Public Infrastructure Capital: Evidence from 12 OECD Economies' by Panicos Demetriades and Theofanis Mamuneas is published in the July 2000 issue of the Economic Journal. Demetriades is Professor of Financial Economics at the University of Leicester; Mamuneas is at the University of Cyprus.

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