



## **THE ROLE OF INFRASTRUCTURE INVESTMENT IN STIMULATING ECONOMIC GROWTH DURING A RECESSION WITH EXAMPLES FROM AUSTRALIA AND USA**

David Battye  
Research Officer  
Research and Library Services

### **Introduction:**

History has shown that investing in infrastructure can be an effective means to get a nation's finances back on track after a recession. Australia and USA are two examples of countries currently investing heavily in their infrastructure to improve efficiency for the long term competitiveness of their economies.

### **1 Australia<sup>1</sup>:**

#### Roads, Rail and Ports<sup>2</sup>:

There are many projects underway, for example, The *National Broadband Network* will commence roll-out in Tasmania, while investment in Australia's road network, and in particular, along the Network 1 (N1) linking Melbourne to Cairns, will support the more efficient movement of people and freight along one of Australia's busy road networks and most important freight routes.

To improve the liveability and sustainability of the cities, the Australian Government is investing in nine metropolitan rail projects across six major Australian cities: Melbourne, Sydney, Brisbane, Adelaide, Perth and the Gold Coast. The government is investing \$(AUD) 27.7 billion through the *Nation Building Program* and *Building Australia Fund<sup>3</sup>*, including \$(AUD) 3.4 billion as part of this budget, to enhance the safety and efficiency of the national road network.

#### Value for Money:

The OECD's report, *Going for Growth*, has noted that past investment in Australia's roads has been associated with higher GDP, relative to other types of investment. Similarly, investment in Australia's rail network has gone hand-in-hand in the past with higher aggregate output levels in comparison to other types of investment.

#### Cost of Congestion:

Congestion imposes a real and substantial economic and social cost on Australia's communities. These costs include longer travel times, higher green house gas emissions, higher vehicle operating costs and road accidents. The avoidable cost of congestion is estimated to rise to around \$(AUD) 20 billion per year by 2020.

<sup>1</sup> [http://www.ato.gov.au/budget/2009-10/content/bp1/html/bp1\\_bst1-09.htm](http://www.ato.gov.au/budget/2009-10/content/bp1/html/bp1_bst1-09.htm)

<sup>2</sup> [http://www.ato.gov.au/budget/2009-10/content/bp1/html/bp1\\_bst1-09.htm](http://www.ato.gov.au/budget/2009-10/content/bp1/html/bp1_bst1-09.htm)

<sup>3</sup> <http://www.finance.gov.au/investment-funds/NBF/BAF.html>

Through this investment, the government is taking action to reduce these economic and social costs to make the cities more prosperous and productive.

Need for Higher Freight Capacity:

Each year, the amount of freight carried along Australia's national roads and highways increases. By 2019, it is estimated that 55 million tonnes of goods and products will be transported to domestic and global markets each year. This represents around a 30 per cent increase from 2009 levels.

According to KPMG Role of Private Sector is Essential<sup>4</sup>:

For the private sector, the ability of the local banking system to pick up the slack remains uncertain and will probably depend on the banks' ability to access offshore capital markets on reasonable terms. Attracting sufficient funding could well depend on the ability of project sponsors to develop new funding, ownership, management and risk sharing models. Short of assuming full fiscal responsibility, governments can help kick-start projects by offering:

- Direct grants and loans;
- Supported debt models;
- Credit guaranteed finance;
- Financial guarantees of project debt;
- Guaranteed payment of agreed service charges.

## 2 USA<sup>5</sup>

Infrastructure Investments and Economic Growth Rise and Fall Together:

In his 1933 inaugural address, Franklin Roosevelt said: "This nation asks for action, and action now. Our greatest primary task is to put people to work. It can be accomplished in part by direct recruiting by the government itself, but at the same time, through this employment, accomplishing greatly needed projects to stimulate and reorganise the use of our natural resources."

Statistical evidence shows that there is a direct link between infrastructure investment and GDP.

1950-79:

- Public infrastructure investment and economic growth rise together. During this period public investments in core areas – transportation, water management, and electricity transmission -- grew at an average rate of 4.0%. Overall economic growth (GDP) averaged 4.1% per year over the same period.

1980-2007:

- Public infrastructure investment and economic growth fall together. During this period, public investment growth falls dramatically, to an average of 2.3%. GDP growth also falls into this more recent period, to a 2.9% average annual rate.

---

<sup>4</sup> [http://www.infrastructureusa.org/wp-content/uploads/2009/07/aam\\_investments.pdf](http://www.infrastructureusa.org/wp-content/uploads/2009/07/aam_investments.pdf)

<sup>5</sup> [http://www.infrastructureusa.org/wp-content/uploads/2009/07/aam\\_investments.pdf](http://www.infrastructureusa.org/wp-content/uploads/2009/07/aam_investments.pdf)

Infrastructure Investments as a Job Creation Tool<sup>6</sup>:

- All forms of spending will produce jobs. But infrastructure investment is a highly effective engine of job creation. Thus, infrastructure investment spending will create about 18,000 total jobs for every \$1 billion (US) in new investment spending, including direct, indirect and induced jobs. By contrast, a rise in household spending levels generated by a tax cut will create, at most, about 14,000 total jobs per \$1 billion (US) in spending. This is 22% less than infrastructure investments.
- The main reason infrastructure investments create more jobs than an increase in household consumption is that the share of spending done within the U.S, as opposed to the purchase of imports, is significantly higher with infrastructure investments.

Obama's Stimulus Package:

- The President's FY 2010 budget includes funding of \$25 billion (US) over the next five years to capitalise a *National Infrastructure Bank* to invest in large infrastructure projects that promise significant national or regional economic benefits.

Infrastructure Costs Less During a Recession:

Harvard economist Edward L. Glaeser<sup>7</sup> supports "spending more right now ... because the costs of those investments are lower during a recession, when people are out of work and equipment is underutilised. Moreover, public programs can reduce the human costs of a recession, and perhaps reduce the chance that this current downturn can become a deep and lasting depression"

Need for New Economic Focus:

According to David Brooks from the *New York Times*<sup>8</sup> there is need for a long term vision:

- "Major highway projects take about 13 years from initiation to completion – too long to counteract any recession. But at least they create a legacy that can improve the economic environment for decades to come".
- "A major infrastructure initiative would create jobs for the less-educated workers who have been hit hardest by the transition to an information economy. It would allow the U.S to return to the fundamentals".
- "Americans now spend 3.5 billion hours a year stuck in traffic, a figure expected to double by 2020. The U.S. population is projected to increase by 50% over the next 42 years. American residential patterns have radically changed. Workplaces have decentralised. Commuting patterns are no longer

---

6

[http://www.publishpath.com/Websites/investininfrastructure/Images/Newsroom/Press%20Releases/12\\_3\\_wtas\\_about\\_infrastructure.pdf](http://www.publishpath.com/Websites/investininfrastructure/Images/Newsroom/Press%20Releases/12_3_wtas_about_infrastructure.pdf)

7

[http://www.publishpath.com/Websites/investininfrastructure/Images/Newsroom/Press%20Releases/12\\_3\\_wtas\\_about\\_infrastructure.pdf](http://www.publishpath.com/Websites/investininfrastructure/Images/Newsroom/Press%20Releases/12_3_wtas_about_infrastructure.pdf)

8

[http://www.publishpath.com/Websites/investininfrastructure/Images/Newsroom/Press%20Releases/12\\_3\\_wtas\\_about\\_infrastructure.pdf](http://www.publishpath.com/Websites/investininfrastructure/Images/Newsroom/Press%20Releases/12_3_wtas_about_infrastructure.pdf)

radial, from suburban residences to central cities. Now they are complex weaves across broad mega-regions. Yet the infrastructure system hasn't adapted".

Evidence of Visible Catastrophic Failures<sup>9</sup>:

- Breach of the levies in New Orleans;
- The collapse of a major bridge in Minneapolis;
- Power blackouts that flowed from the Mid-West to New York.

**3 President's Economic Recovery Advisory Board (PERAB)<sup>10</sup>:**

In the USA, the PERAB believes that infrastructure spending by the federal government can boost the growth of output and employment during the extended recovery period. There are several reasons for this belief:

Boost for GDP:

According to PERAB, macroeconomic models indicate that \$1 of infrastructure spending boosts GDP by \$1.59. A dollar of government spending on infrastructure has a larger effect on GDP and employment than many other kinds of government spending. Many of the jobs created through infrastructure spending are in the construction industry and related sectors that have sustained the largest job losses (about 25% of the total).

Mobilise Budgetary Constraints:

As a result of severe budgetary constraints on state and local governments, there will continue to be a large backlog of economically justifiable infrastructure projects that can quickly be mobilised to employ workers if federal funding is available.

State and local governments account for 75% of public infrastructure spending and many of these governments are under severe fiscal strain. Projects involving substantial public benefits, that cannot be fully captured through user fees, or that cross state boundaries, are particularly unlikely to be funded by state and local governments in this economic climate.

Long Term Planning:

Infrastructure projects will often take well over two years to complete, so federally funded projects initiated in 2010 will provide ongoing fiscal support during the multi-year recovery period.

According to PERAB there is broad agreement among experts and business leaders that spending on physical infrastructure – primarily transportation, water and sewage, and energy is not sufficient to meet the nation's long-term needs. Infrastructure spending in real inflation adjusted dollars and adjusting to the depreciation of existing assets is about the same level as it was in 1968 when the economy was one-third smaller.

Real Cost of Poor Infrastructure:

- Congestion and traffic delays wasted over 2.8 billion gallons of fuel and cost an estimated \$87 billion in 2007;

---

<sup>9</sup> <http://www.sharedprosperity.org/bp217/bp217.pdf>

<sup>10</sup> <http://www.whitehouse.gov/sites/default/files/microsites/091204-PERAB-Infrastructure-Memo.pdf>

## ROLE OF INFRASTRUCTURE INVESTMENT IN STIMULATING ECONOMIC GROWTH DURING A RECESSION

- Freight bottlenecks cost about \$200billion or 1.6% of GDP per year;
- Lagging infrastructure saps the productivity of American companies competing with foreign companies operating in emerging nations with lower costs and newer infrastructure.

### Need for National Infrastructure Bank to be Established:

The PERAB believes that the creation of a National Infrastructure Bank would help achieve important infrastructure spending. It is to help garner additional funding for worthy projects that would not otherwise be taken.

The NIB is to consider a range of funding and project delivery alternatives, including private sector co-investment, and select the alternative that delivers the highest-value financing to meet the NIB's objectives. One of the goals is to leverage private lending with public financing on a project-level basis.

### Scope of Projects:

The PERAB believes that the NIB should focus on projects of national or regional significance. Often, such projects will be regional or cross-state projects that are neglected by current allocation processes and that involve complex coordination among many public and private actors. The NIB should choose projects on the basis of transparent and fact-based selection processes and cost-benefit analysis.

21<sup>st</sup> January 2010