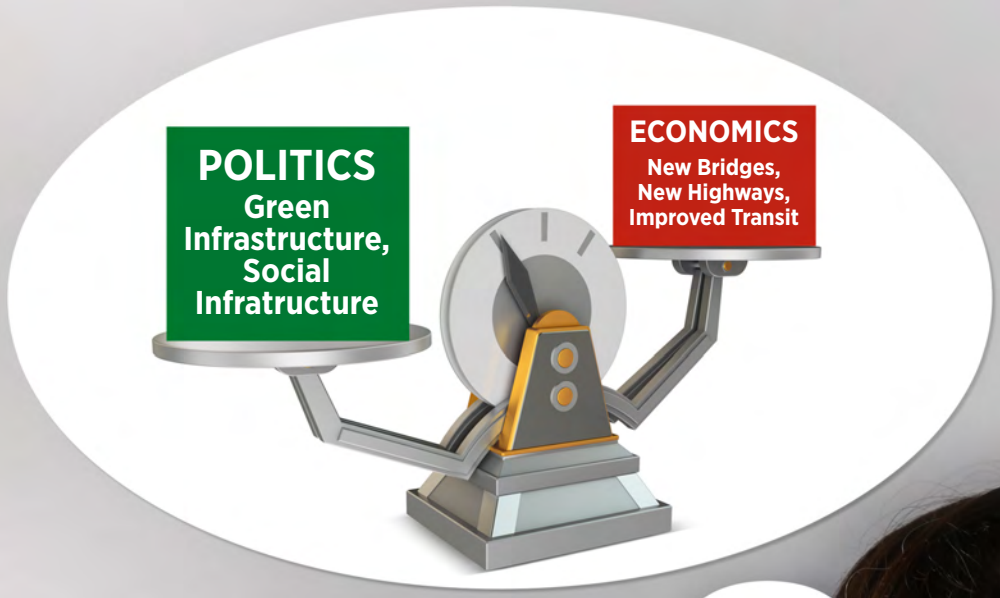
POLITICS INSTEAD OF ECONOMICS

HOW POLITICAL CONSIDERATIONS DRIVE INCREASED INFRASTRUCTURE SPENDING

Matthew Lau



It is not difficult to see why politicians often describe their spending promises as infrastructure: the public tends to be more accepting of this kind of spending. The logic is that more and better infrastructure will improve the mobility of people and goods, and enable greater economic growth.

Oftentimes, politicians really do intend to spend money on what the public normally thinks of as infrastructure, such as roads and highways. Other times, however, the "infrastructure" spending undertaken by governments does not fit this description at all. The so-called infrastructure spending in the most recent federal budget, for example, includes billions of dollars for "green infrastructure" such as climate change mitigation projects and "social infrastructure" such as cultural institutions and child care (Clemens and Veldhuis, 2016).

Due to the deadweight costs of removing the money from the private sector... the public spending must provide significantly higher benefits per dollar spent than private spending.

But even when governments do spend money on legitimate infrastructure, such as new highways, the public should be skeptical that their money is being well spent. One reason to believe that public infrastructure spending is often more likely to reduce economic welfare than enhance it is the cost of public funds. Every dollar spent by the government costs the private sector more than a dollar, because taxes distort economic decisions, creating what economists call "deadweight loss."

Economists Bev Dahlby and Ergete Ferede (2011) estimated that in 2006, the marginal cost of public funds (in other words, the cost to the private sector of each additional dollar raised by government) was $1.71 for the federal corporate income tax, $1.17 for the personal income tax, and $1.11 for the federal sales tax. These numbers tended to be much higher for the provincial governments. The marginal cost of public funds for the personal income tax ranged from $1.45 in Alberta to as high as $3.85 in Quebec in 2006, for example (Dahlby and Ferede, 2011).

Due to the deadweight costs of removing the money from the private sector, in order to make society better off, the public spending must provide significantly higher benefits per dollar spent than private spending. This is unlikely to happen for several reasons.

Firstly, decisions regarding public infrastructure spending are sometimes driven by political as opposed to economic considerations. Politicians may be tempted to award infrastructure contracts to corporations that have donated to their party, for example. Or the government may, in the lead up to an election, announce new infrastructure projects in regions simply because they want to win or retain seats in the area. Similarly, voters are likely to be drawn to politicians who promise to build infrastructure they will benefit from. Even if the benefits of the

infrastructure are outweighed by the costs, the voters in the area know they will reap most of the benefits from the infrastructure while the costs will be dispersed over a large population.

Secondly, even well-intentioned politicians will have significant difficulty determining whether certain infrastructure projects are worth pursuing. In the private sector, profits and losses provide signals that direct resources to its most productive uses. Not so in the public sector. "When the government spends on infrastructure, it doesn't use market signals that tell where money is best spent. So the government is flying blind" (Henderson, 2016). The absence of market signals prevents government from knowing how much infrastructure to build, or what kind. This makes it less likely that the government can improve economic welfare by taxing a dollar and spending it on infrastructure as opposed to simply not taxing it in the first place.

Thirdly, even if the government does manage to identify and build the "correct" infrastructure projects, in order to improve economic welfare it must have done so more efficiently than a private firm would have. For example, economist Don Boudreaux (2012) notes that if government did not build highways connecting cities, a private firm likely would (provided that these highways are worthwhile projects)—and the privately built highway would probably be less costly and of higher quality.

Fourthly, public infrastructure investments—whether in new roads, new highways or improved public transit—may not even achieve its intended goals of reducing congestion and increasing mobility.

Many economists, researchers at public policy institutes, and commentators have continuously pointed out that more highways and more roads cannot solve congestion in the long run (they have instead advocated road tolls). While building new highways and roads can help in the short term, in the long run it will only encourage more people to get behind the wheel, to the point that congestion is as bad as it was before the new infrastructure was built. As Andrew Coyne (2011) has put it, "Countless empirical studies have shown: add more road space, and traffic simply expands to fill it."

Infrastructure spending is sometimes driven by political as opposed to economic considerations.

For example, a recent study by economists Gilles Durantan and Matthew A. Turner (2011) on the effect of road lane expansion in American cities found that "increased provision of interstate highways and major urban roads is unlikely to relieve congestion of these roads" and that increased provision of public transit would be similarly ineffective. To make matters worse, building more infrastructure may even in some cases have the perverse effect of increasing travel times. Arnott and Small (1994) explain, using simple models and mathematics, three traffic paradoxes demonstrating why building new infrastructure in many cases does not reduce travel times.

The Pigou-Knight-Downs paradox mathematically demonstrates the situation described above: expanding a road or highway that is subject to congestion will not ease the congestion problem since it will only encourage more drivers to take that route. The Downs-Thomson and Braess paradoxes, meanwhile, mathematically demonstrate how building more infrastructure can actually make congestion worse. In the former, expanding infrastructure for drivers not only induces more cars onto the road, it also discourages public transit use, resulting in worsened public transit services. In the latter, building roads that enable greater access to congestion-prone bridges or highways will divert traffic onto them from other routes that are not prone to congestion, resulting in increased travel times for everybody.

Arnott and Small (1994) argue that these paradoxes are not simply thought experiments without real world application, nothing that it "has been claimed that the Braess paradox explains some traffic problems observed in Stuttgart, Manhattan and Oslo. Martin Mogridge of University College, London, has forcefully, if controversially, asserted that the Downs-Thomson paradox explains the deterioration of road speeds over 20 years or so in central London." Lastly, the Pigou-Knight-Downs paradox "is so enshrined in transportation planning that it is often called 'the fundamental law of traffic congestion.'"

To sum up: infrastructure spending is sometimes driven by political as opposed to economic considerations, even well-meaning

politicians are often "flying blind" because they are not guided by market signals, public infrastructure spending crowds out private infrastructure spending which is likely to be more efficient, and building infrastructure in many cases will not help and may even exacerbate congestion problems. On top of that, public infrastructure spending necessarily involves the deadweight costs of taxation, and many things politicians call "infrastructure" are not infrastructure at all. That is all to say, taxpayers should always be skeptical when politicians claim that their spending promises—including on infrastructure—will lead to improved economic outcomes.

Matthew Lau was a research intern at the Fraser Institute this summer. He has a degree in Economics and Finance from the University of Toronto.

REFERENCES

Arnott, R. and K. Small (1994). The Economics of Traffic Congestion. *American Scientist, 82, 5*: 446-455. Retrieved from http://www.jstor.org.myaccess.library.utoronto.ca/stable/29775281

Boudreaux, D.J. (2012, August 14). Crowding out private-sector success. *TribLIVE*. <http://triblive.com/opinion/donaldboudreaux/2371691-74/government-highways-private-built-mart-wal-build-companies-obama-oil>, as of June 14, 2016.

Clemens, J. and N. Veldhuis. (2016, March 30). Infrastructure spending OK, but that's not what the Liberals proposed. *Fraser Forum blog*. <https://www.fraserinstitute.org/blogs/infrastructure-spending-ok-but-that-s-not-what-the-liberals-proposed>, as of June 14, 2016.

Coyne, A. (2011, January 11). Stuck in traffic. *Maclean's magazine*. <http://www.macleans.ca/news/canada/stuck-in-traffic/>, as of June 13, 2016.

Dahlby, B. and E. Ferede. (2011, March). What Does it Cost Society to Raise a Dollar of Tax Revenue? The Marginal Cost of Public Funds. *C.D. Howe Institute*. <https://www.cdhowe.org/sites/default/files/attachments/research_papers/mixed//Commentary_324.pdf>, as of June 14, 2016.

Duranton, G. and M.A. Turner (2011, October). The Fundamental Law of Road Congestion: Evidence from US Cities. *American Economic Review* 101, 6: 2616-2652. <http://pubs.aeaweb.org/doi/pdfplus/10.1257/aer.101.6.2616>, as of June 13, 2016.

Henderson, D.R. (2016, January 16). More government spending (on infrastructure or anything else) will make Canadians poorer. *Fraser Forum blog*. <https://www.fraserinstitute.org/blogs/more-government-spending-on-infrastructure-or-anything-else-will-make-canadians-poorer>, as of June 14, 2016.