

## The myth of crowding out

A new working paper explores the effects of government spending, via defence R&D, on the private sector.



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If you've had the misfortune of having to learn economics, you may remember the theory of the "crowding out effect" from your studies.

Popularised in the 1970s, the idea is that an increase public sector investment, and therefore borrowing, has the rather undesirable effect of displacing the private sector's planned borrowing and investment.

For instance if the government decided to fund a \$10bn "broadband for all" policy via the bond market, interest rates may rise due to a larger fiscal deficit, and therefore make some projects the private sector is planning less profitable due to a higher cost of capital. Said projects then may not go ahead.

The cumulative effect, it is postulated, is that private sector investment, and therefore growth and productivity, will ultimately be lower, reducing future output.

Yet, as it turns out, this economic theory might not hold. [A new working paper](#) by Enrico Moretti, John Van Reenen, Claudia Steinwender, from the economics departments of the University of California, Berkeley and MIT, and the MIT Sloan School of Management respectively, explores one particular segment of federal spending — defence research and development — and its effects on private sector R&D expenditure.

In contrast to expectations, the paper finds that public sector R&D expenditure — whether directly or via subsidies — actually leads to an increase in private sector spending in R&D. A “crowding-in effect”, if you will.

By how much we hear you ask? Well, here’s a quote from the paper:

Our preferred elasticity for the OECD data set is 0.434 . . . suggesting that a 10% increase in government subsidies in a given year is expected to result in a 4% increase in private sector R&D the following year. This implies that \$1 of additional public funds for R&D translates into \$5 of extra R&D funded by the private sector at the mean values of public and private R&D.

The authors’ conclusions won’t be of a great surprise to many economists — on [both sides](#) of the political spectrum — who have been campaigning for greater government involvement in funding research and development since the financial crisis.

They cite three reasons as to why this “crowding-in effect” may be taking the place. First, is that frontier technology projects have extremely high fixed costs — whether in the form of equipment or labour — so by letting the public sector fund the research, it allows the private sector to realise higher profits. Second is “spillover effects”, where new technologies find different applications in the private sector. GPS, for instance, was first developed to help missiles find their targets. It now helps FT Alphaville find lunch. Third are credit constraints on the private sector, where a project is difficult to fund without government support due to, say, an economic downturn.

The fixed cost argument is perhaps the most important one. Bill Janeway, formerly of Warburg Pincus and now of Cambridge university, has long argued that public sector R&D spending is not just about sharing risk, but wearing it.

Speaking from his experience of being a venture capitalist, Janeway argues that most frontier technology, from a quantifiable point-of-view, is uninvestable. His reasoning is simple: the potential outcomes from speculative research and development are inherently unknowable, which makes a new project impossible to justify commercially. In brief, only the public sector, or a private sector absent of market discipline (in the grips of a mania), will fund such projects.

And as the private sector is not always in the grips of a speculative mania, the public sector must continue to be the funder-of-first-resort for research. From Janeway's book *Doing Capitalism*:

For, contrary to the central dogma of neoclassical economics, efficiency is not the virtue of a market economy whose growth is a function of the creative destruction identified by Joseph Schumpeter as the engine of economic development. The prime virtue is the ability to tolerate unavoidable waste in the evolution of the Innovation Economy. So the state has become central to the Innovation Economy's dynamics, both to fund the upstream research that generates discovery and invention, and to preserve continuity in the market economy when the speculative bubble that has funded its transformation bursts.

With government spending front and centre of the political debate on both sides of the Atlantic, Moretti, Van Reenen and Steinwender's work is timely.

Whether it changes anyone's mind about the role of government in markets, however, remains to be seen.