

# Opinion: Government has a role in industry and innovation

By Ted Nordhaus and Michael Shellenberger

In the early days of the Solyndra debacle, as the reality dawned on the White House that its half-billion-dollar investment was about to go belly-up, former Obama economic adviser Larry Summers famously observed that, "Government is a lousy venture capitalist." The quip, discovered after House Republicans subpoenaed White House e-mails about Solyndra, fairly well characterizes good Washington opinion these days in the wake of the Solyndra bankruptcy.

But before we conclude that government ought to get out of the business of betting on new technologies, we'd do well to try imagining our modern economy without computers, the Internet and jet travel, all of which were heavily subsidized by the federal government.

Critics of government investment in technology cherry-pick high-profile failures such as Solyndra, the 1970s "synfuels" program to make gasoline out of coal, and corn ethanol. But these relatively marginal failures pale in comparison to the long history of successful government investments that have transformed our economy and contributed mightily to our affluence over the last century.

The idea that technological innovation is what drives economic growth – 80 percent or more by some estimations – is now broadly accepted by most economists. And there is even broad agreement that not all technologies are created equal. The technologies that really matter are those that economists call "general purpose technologies," things like the steam engine, electricity, and microchips. General purpose technologies make

an outsize contribution to economic growth because they find their way into all sorts of new applications, increasing productivity across large swaths of the economy.

But the question of where general purpose technologies actually come from remains hotly contested. The pat answer that mainstream neoclassical economists offer is that technological innovation primarily happens when private firms, disciplined by competitive markets, create new technologies and products in pursuit of profits. They argue that government investments in innovation have been, at best, a sideshow and brandish economic studies which purport to show that nations that spend more on public research and development don't grow any faster than those that spend less.

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