



Measuring the Effectiveness of the Broadband Stimulus Plan

SCOTT WALLSTEN

The recently enacted economic stimulus package includes \$7.2 billion in grants, loans, and loan guarantees to bring broadband to areas lacking high-speed Internet services. The American Recovery and Reinvestment Act of 2009 charges government agencies not only with choosing grant recipients and setting performance benchmarks, but also with measuring results. Only a carefully preplanned evaluation strategy will enable them to accurately assess the effectiveness of the broadband stimulus.

Scott Wallsten is vice president for research and senior fellow at the Technology Policy Institute. Wallsten is also a senior fellow at the Georgetown Center for Business and Public Policy and a lecturer in Public Policy at Stanford University.

A UNIQUE OPPORTUNITY

The broadband stimulus offers an unprecedented opportunity to examine the effectiveness of newly funded programs and to apply that knowledge to existing and future programs.

Because most government grant and loan programs are ongoing, they generate a vested constituency with little interest in a rigorous evaluation of their work, for fear that evaluations might reveal shortcomings. By contrast, the broadband stimulus is a one-time plan that has not yet been implemented, and as such less of an already organized constituency with a stake in a predetermined result.

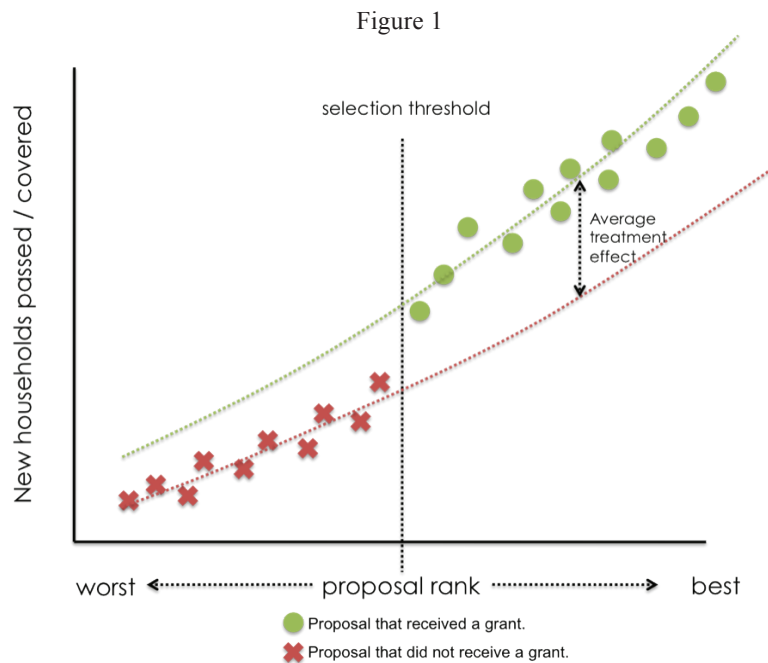
WHAT IS A SUCCESSFUL PROJECT?

In order to evaluate a program we must define its goal. The stimulus plan's goals are

both to create jobs and improve broadband, which, unfortunately, are not necessarily the same thing, and this could create conflicts.

Laying “fiber to nowhere” would create new construction jobs and additional demand for fiber, as no broadband provider would be likely to undertake such an investment on its own, yet such a project would do very little to improve any aspect of broadband. In contrast, spending the full \$7.2 billion subsidizing broadband access for low-income households could generate a substantial boost in the number of connected households, but would probably generate very few jobs, as broadband infrastructure is already available to most low-income households even if they don't subscribe to it.

The bulk of the broadband stimulus money is intended to subsidize new infrastructure—



Source: Figure 1 in Jaffe (2002).

broadband supply. Only \$250 million of the \$7.2 billion is targeted directly at potential users—demand—and even that money can go only to designated entities, such as nonprofits that aim to help low-income people, not to low-income individuals themselves.

Let us assume, therefore, that the goal of the broadband stimulus is to maximize improvement in broadband infrastructure (supply), while still creating some additional employment. Thus, the key measure is some indicator of new infrastructure, such as the increase in the number of households that have access to broadband infrastructure. This measure could be weighted by the share of the newly-served population that subscribes if the government decides that boosting demand is also important.

MEASURING NEW SUPPLY: THE GOLD STANDARD

Now that we know what to measure, how can we determine that the stimulus funds really are responsible for any changes in that measurement? The gold standard is randomization.

The government already uses this technique in other settings. For example, the Job Training Partnership Act included randomized

trials to help learn what types of training led to better job outcomes. And FDA double-blind randomized drug trials are generally considered the “gold standard” of determining drug effectiveness. If the government can subject the economically disadvantaged and the sick to randomized trials, then we should have no qualms about subjecting broadband providers to such procedures, especially since this experiment would not face the ethical or feasibility critiques that World Bank researcher Martin Ravallion leveled at the “Randomistas” in an earlier *Economists’ Voice* article.

MEASURING NEW SUPPLY: THE SILVER STANDARD

Unfortunately, political pressure will probably prevent the government from adopting the gold standard of randomization. A more politically feasible method of measuring the plan’s effectiveness may be a modified version of randomized trials. Under this second-best “silver standard,” agencies would track not only the broadband build-out of grant recipients, but also the build-out of providers not awarded grants—specifically, whether these rejected applicants continued with their proposed projects, even without a

grant. This second group would serve as an imperfect control group.

Presumably, the National Telecommunications and Information Administration (NTIA) will begin its funding process by ranking all of the broadband stimulus proposals it receives on certain criteria. Next, it will fund the highest-ranked project and continue funding lower-ranked projects until the stimulus funding has been exhausted. At that point, the NTIA should collect data not just on projects funded through stimulus funds, but also on projects that the stimulus program rejected.

With that information in hand, the NTIA can examine outcomes, as in Figure 1. Fitting regression lines between the points—controlling for factors such as population density and income, for example—it becomes possible to estimate the average “treatment effect,” or, in other words, the effects of the broadband grants.

CONCLUSION

The broadband stimulus plan provides not just an opportunity to connect the few regions of the country that lack access to broadband, but also to learn what types of subsidies work and what do not. To realize

both objectives, the agencies entrusted with distributing these subsidies should think carefully about how to evaluate their true effects and implement funding plans accordingly.

Letters commenting on this piece or others may be submitted at <http://www.bepress.com/cgi/submit.cgi?context=ev>.

REFERENCES AND FURTHER READING

Jaffe, A. (2002) “Building Program Evaluation Into the Design of Public Research Support Programs,” *Oxford Review of Economic Policy*, 18: 22–34.

Horrigan, John (2009) “Stimulating Broadband: If Obama builds it, will they log on?” *Pew Internet & American Life Project*. January 21. Available at: <http://www.pewinternet.org/Reports/2009/Stimulating-Broadband-If-Obama-builds-it-will-they-log-on.aspx>.

Ravallion, Martin (2009) “Should the Rando-mistas Rule?” *The Economists’ Voice*: Vol. 6(2): Art. 6. Available at: <http://www.bepress.com/ev/vol6/iss2/art6/>.

