

Oklahoma broadband success requires patience | Opinion

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Jayash Paudel, Guest Columnist | September 8, 2026

Federal officials approved Oklahoma's Broadband Equity, Access, and Deployment (BEAD) plan in April. Over the next few years, roughly \$574 million will go toward connecting more than 40,000 homes, farms and community institutions, with projects in all 77 counties.

While the state is aiming to have service operational by the end of 2028, an obvious question will be raised: Did it work? My research on the program that came before it suggests that 2028 is not the right time to ask such questions.

Oklahoma has previously been the country's biggest laboratory for this kind of program. Between 2002 and 2017, the Community Connect Grants program funded broadband construction in rural communities that had no service at all. Oklahoma received more of those projects than any other state in the country.

My co-author, Minhae Kim at Oklahoma State University, and I analyzed two decades of data on communities that received broadband money and comparable counterparts that didn't. We built a ZIP-code-level panel running from 1994 to 2017 and tracked what happened to crop productivity afterward. After all, investments in high-speed broadband infrastructure can foster the agricultural sector through sales expansion, reduced input costs and increased access to finance.

Three findings are worth the attention of anyone about to spend half a billion dollars.

First, the payoff is real but slow. In the year a community received its grant, crop productivity rose about 4% — a number statistically indistinguishable from zero. By the third year, productivity was up 9.3%, and it reached nearly 12% by the fifth year.

The lag is not utterly surprising. Money is awarded, which leads to construction and service, before a farm operation starts using soil sensors, checking commodity prices in real time, or running equipment it can monitor remotely. None of that shows up in productivity metrics during the first year.

Oklahoma's connections will be switched on in stages through 2028, and our clock starts when a community gets service. Even on schedule, the last farms connected won't show what they can do until about 2031. Evaluators should say in advance what success looks like and when they expect to see it — otherwise the first number available, close to zero by construction, becomes the verdict.

Second, the returns concentrated where the baseline was worst. When we split communities by income, the entire effect came from the lower half: Productivity rose 6.3% in the first year and 13.8% by the fifth. In higher-income areas, we found nothing distinguishable from zero.

The likeliest explanation is that a connection is worth most to the operation that had no alternative. Where farms had already improvised — driving into town for a signal, adopting technology more slowly — the new line changes less.

Third, size mattered. We sorted grants into quartiles. The largest ones produced clear productivity gains — about 11% in the first year and 15% by the fifth. The smallest quartile produced no detectable effect at all.

Reaching every county is a fair goal. But in our data, the smallest grants did nothing measurable. Smaller awards bought coverage on paper and nothing substantial in the fields.

There are some caveats, of course. We found no significant effect on the number of agricultural businesses, nor on farm income or expenses. Productivity rose, yet we cannot show the money landed in farmers' pockets.

What our data support is narrower and still substantial: connect a poor rural community that had nothing, fund it at a scale sufficient to complete the build, and its farms produce measurably more within three years.

Oklahoma has been through this once already. The mistake worth avoiding is writing the verdict before the evidence could possibly have arrived.

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