

Seminal New Research Proves That Providing Fiber Broadband Experiences to Rural Communities Boosts Income, Entrepreneurship, and Business Investment

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First-of-its-kind peer-reviewed economic study by Center on Rural Innovation compares three different types of rural counties, finding communities with local providers offering greater access to broadband experiences prosper economically while underserved communities stagnate

HARTLAND, Vt.--(BUSINESS WIRE).--Sep. 30, 2024-- A new peer-reviewed economic study released today by the nonprofit <u>Center on Rural Innovation</u> (CORI) reveals groundbreaking evidence that fiber-fed broadband experiences enabled by local providers in rural communities significantly boost income, entrepreneurship, and business investment. "<u>Beyond Connectivity: The Role of Broadband in Rural Economic Growth and Resilience"</u> compares economic data from three types of rural communities: underserved communities, communities with access to basic broadband services, and communities served by smaller fiber broadband providers offering access to experiences that go beyond fast internet. The study finds a more significant economic impact in communities that are better connected and have access to additional services that allow users to effectively leverage that connection, while comparable underserved communities experience economic stagnation.

Researchers analyzed data from 2020-2022 for the study, primarily post-pandemic. It was sponsored by <u>Calix. Inc.</u> (NYSE: CALX), <u>NTCA-The Rural Broadband Association</u>, and the <u>Fiber Broadband Association</u>.

The study finds that rural counties with high broadband adoption rates of over 80% have significant advantages over those with low usage, including:

- 213% higher business growth. Rural counties with high broadband use see more
 businesses opening, while similar counties with low broadband utilization are losing
 businesses. On average, rural areas with low broadband usage lose three or more businesses
 each year. This drop in business activity likely means fewer jobs for residents, leading to a
 noticeable population decline.
- 10% higher self-employment growth. Broadband access can significantly lower barriers to starting a business for rural residents by connecting them to global markets and essential resources, like access to banks, small business loans, and venture capital. Broadband enables entrepreneurs to conduct market research and leverage digital marketing strategies, expanding their customer base and facilitating e-commerce. It supports remote work and collaboration, widening the pool of potential employees and reducing reliance on physical proximity to urban centers. Rural communities with higher broadband adoption rates have seen significantly more business startups.
- 44% higher GDP growth. High broadband use in rural communities creates an environment that fosters local businesses, triggering a chain reaction of growth and innovation synonymous with a stronger and more dynamic economy. Access to more broadband services delivered by local broadband service providers improves the economic dynamism of rural communities.
- 18% higher per capita income growth. Counties in the high broadband treatment group (with broadband adoption rates greater than 80% and broadband coverage predominantly from a small broadband service provider) saw per capita income grow 18% from 2020-2022. This amounts to an increase of nearly \$500 per person each year on average for county residents.

"Notably, we find evidence that existing residents are the primary beneficiaries of these economic gains (rather than new arrivals)," concludes the study, authored by economist Amanda Weinstein, Ph.D., director of research at CORI. "In stark contrast, areas with the lowest levels of broadband utilization have lower income growth rates and are more likely to experience business closures and population decline. These findings highlight the critical importance of both expanding broadband access and fostering its effective utilization to drive economic growth, enhance resilience, and build a more prosperous future for rural communities."

Case Study: Paul Bunyan Communications

In Beltrami County, Minn., Paul Bunyan Communications', GigaZone, built on the Calix Broadband Platform and Calix GigaSpire systems, is one of the largest all-fiber-optic broadband networks in the country. This rural network supports high-tech initiatives like Paul Bunyan Communications' GigaZone Gaming Championship, TechXpo, and Greater Bemidji's LaunchPad, a business incubator.

Since 2010, the number of businesses in Beltrami County has grown by 12.1%, outperforming both the state and the national average. In addition to the growth of new businesses and revenue, the per-person income in Beltrami County increased 7% between 2020 and 2022.

The study found that small broadband service providers are more likely to offer higher-speed options like fiber as well as innovative value-added services, allowing rural communities to more effectively utilize broadband infrastructure. Many of these providers began as telephone or electric cooperatives, spurring transformation that brought manufacturing plants to rural areas.

"Broadband is the equalizer in today's economy. We have known that intuitively for years, but seeing the impact in real numbers is reaffirming and provides hope for rural economies as unprecedented funding from the bipartisan Infrastructure Investment and Jobs Act rolls out to small communities across the country," said Matt Dunne, founder and executive director, CORI.

CORI is developing additional case studies highlighting the economic impact of high broadband usage on rural communities.

Case Study: Bulloch Solutions

In Bulloch County, Georgia, <u>Bulloch Solutions</u> is committed to delivering high value to the communities they serve. From homes to businesses and everything in between, Bulloch provides managed Wi-Fi, parental controls, security, and a proactive approach to help families protect their children from cyberbullying and other digital threats. Bulloch provides free community Wi-Fi access because cellular towers often become overloaded at high-density community events, like heavily attended football games — presenting a major safety issue. Bulloch Solutions began as a telephone cooperative and later became the first 100% fiber provider in Georgia, which has helped spur economic growth. They continue to survey and dive deeper into the demographics of their subscriber base to understand how to add value and enhance the subscriber experience. As a result, Bulloch has a 96.5% subscriber penetration rate for its high-speed broadband service and continues to grow.

Case Study: Blackfoot Communications

In Gallatin County, Montana, <u>Blackfoot Communications</u> deploys the latest technologies in voice, broadband, network and managed services. Residential subscribers have access to safe, secure, and reliable internet with content controls. Businesses receive the same safe, secure internet with added value such as dedicated Wi-Fi networks for the business owner, staff, and point-of-sale system, content controls, customer Wi-Fi portal, network resilience, and a self-service mobile app. The company, which began as a telephone cooperative, partners with civic groups, events, nonprofits and economic development agencies to provide expertise and support that drives economic impact in Gallatin County.

Supporting Quotes

"Calix sees the impact of empowering customers to simplify their businesses, innovate for their subscribers, and grow their value every day," said Matt Collins, chief commercial operations officer at Calix. "When broadband service providers thrive, their communities thrive — economically, culturally, and socially. Kids can connect to do homework safely no matter where they are in the community. Families can access health care services without driving hours away. And businesses can grow and recruit talent from anywhere."

"The CORI study highlights how smaller community-based broadband providers deliver the best possible connectivity and ultimately enable better outcomes for rural communities," said NTCA CEO Shirley Bloomfield. "Even as these local providers deploy cutting-edge fiber networks to start, the study confirms that their efforts to go beyond this — to ensure consumers and small businesses can capitalize upon these connections — help make a substantial difference in driving economic growth, employment gains, and innovation. Community-based broadband providers offer a clear roadmap for success when it comes to ensuring that rural America survives and thrives in the 21st-century digital economy."

"CORI's economic study underscores the positive impact that reliable, high-quality, fiber-based connectivity can have on the success of our families, businesses, and communities," said Gary Bolton, president and CEO of the Fiber Broadband Association. "Every community — especially those in rural environments — needs access to reliable, high-speed broadband services to compete in today's digital economy and access modern applications for health care, education, employment, and more. When those services are connected by fiber, we know they are backed by the most reliable, sustainable, long-lasting, and high-performing broadband technology available. When fiber leads, the future follows."

About the Center on Rural Innovation

The Center on Rural Innovation (CORI) is a national nonprofit committed to advancing economic prosperity in rural America through the creation of inclusive tech economy ecosystems that support scalable entrepreneurship and tech job creation. Established in 2017, CORI is at the heart of a dynamic social enterprise focused on closing the rural opportunity gap. The organization partners with a taxable nonprofit, Rural Innovation Strategies, Inc. (RISI), and a seed fund, the CORI Innovation Fund, focused on early-stage technology companies located in rural areas. For more information, visit www.ruralinnovation.us.

About Calix

<u>Calix, Inc.</u> (NYSE: CALX)—Calix is a platform, cloud and managed services company. Broadband service providers leverage Calix's broadband platform, cloud and managed services to simplify their operations, subscriber engagement and services; innovate for their consumer, business and municipal subscribers; and grow their value for members, investors and the communities they serve.

Our end-to-end platform and managed services democratize the use of data — enabling our customers of any size to operate efficiently, acquire subscribers, and deliver exceptional experiences. Calix is dedicated to driving continuous improvement in partnership with our growing ecosystem to support the transformation of our customers and their communities.

About NTCA-The Rural Broadband Association

NTCA—The Rural Broadband Association is the premier association representing over 850 independent, community-based telecommunications companies that are leading innovative change in smart rural communities across America. In an era of transformative technological developments, regulatory challenges and marketplace competition, NTCA members are advancing efforts to close the digital divide by delivering robust and high-quality services over future-proof networks. Their commitment to building sustainable networks makes rural communities fertile ground for innovation in economic development, e-commerce, health care, agriculture and education, and it contributes billions of dollars to the U.S. economy each year. Visit us at www.ntca.org.

About the Fiber Broadband Association

The Fiber Broadband Association is the largest and only trade association that represents the complete fiber ecosystem of service providers, manufacturers, industry experts and deployment specialists dedicated to the advancement of fiber broadband deployment and the pursuit of a world where communications are limitless, advancing quality of life and digital equity anywhere and everywhere. The Fiber Broadband Association helps providers, communities and policymakers make informed decisions about how, where and why to build better fiber broadband networks. Since 2001,

these companies, organizations and members have worked with communities and consumers in mind to build the critical infrastructure that provides the economic and societal benefits that only fiber can deliver. The Fiber Broadband Association is part of the Fibre Council Global Alliance, which is a platform of six global FTTH Councils in North America, LATAM, Europe, MEA, APAC and South Africa. Learn more at <u>fiberbroadband.org</u>.

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