Beyond Subsidies: Why Rural Broadband Grants Can Better Sustain Small Farms

Introduction

Small farms represent 86% of U.S. agriculture, yet nearly half report negative farm income [1, 2]. Off-farm income is crucial for the survival of small farms. Federal agricultural policy, including commodity programs, crop insurance premium subsidies, and disaster payments, has traditionally focused on direct farm income, which refers to payments that supplement or stabilize revenue from production, rather than expanding off-farm earning opportunities. In contrast, newer policy strategies emphasize broadband expansion to sustain small farm households. In 2017, 56% of principal farm operators held off-farm jobs, making rural broadband essential for both farming operations and off-farm employment [1]. In this brief, rural broadband expansion is compared with the farm safety net using the criteria of effectiveness and efficiency to assess which policy better supports small farm viability.

Rationale

Rural broadband expansion addresses a market failure and negative externality: providers often underinvest due to high costs and sparse populations, leaving many households unserved. Government intervention helps correct this failure by funding broadband infrastructure to ensure access to an essential service that benefits both farm and non-farm households [6,7].

Explanation

Off-farm income is the primary source of earnings for most small farm households and is central to their viability. In 2023, more than 90% of total farm household income originated from off-farm sources, and more than half of the principal operators held off-farm jobs, while many reported a negative median farm income [2]. For small farms (low-sales farms), the earnings from off-farm jobs typically cover household living costs, service farm debt, and fund reinvestment in the operation [2]. Larger farms can rely more on production income alone, which eventually widens income gaps between small and large farms over time [2,4]. Because most small farms depend on income earned from off-farm sources, policies that expand access to off-farm work have a substantial positive impact on small farm viability [1,2].

Rural broadband is the key enabler that connects farm households to off-farm labor markets and essential services [6,7]. Reliable internet supports remote work, letting household members access higher-paying off-farm income markets that can be scheduled around planting, harvest, and other seasonal farm demands. This flexibility allows families to balance on-farm responsibilities with steady, year-round income sources. Broadband expands access to education and training, such as distance learning and online certifications, that can raise earnings potential. Telehealth improves quality of life and frees time and money for the farm by reducing travel to and from the doctor and travel costs [6,7]. Broadband lowers barriers to starting rural small businesses, which allows for diversified income streams. A 2023 study on telecommunications policy found that expanding broadband access significantly increased per-capita economic

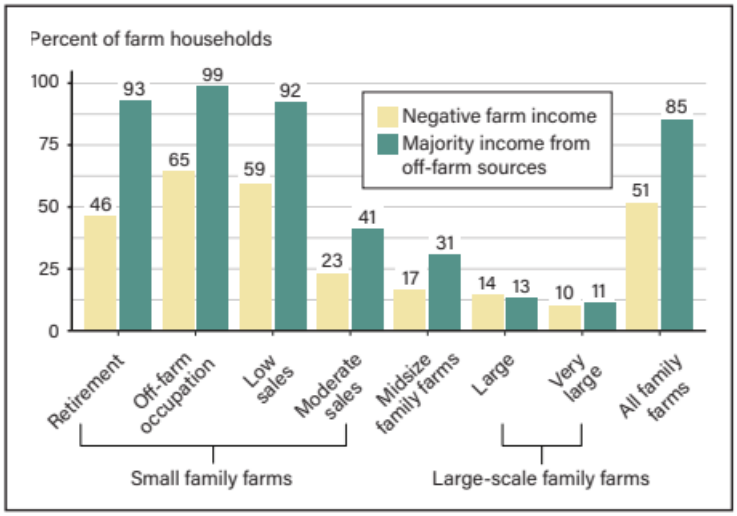
growth in rural regions. The authors found that high-speed broadband acts as “general-purpose infrastructure,” driving rural economic development [12].

On the farm, connectivity enables precision agriculture, digital compliance and reporting, and direct marketing, but for small farms, the largest financial impact still comes from supporting off-farm income sources [6,7]. Empirical studies have linked rural internet access to higher household earnings and reduced the income gap often found in rural communities. With about 57% of rural employment in service sector jobs, connectivity is crucial for accessing the jobs themselves [1]. Federal broadband grants (e.g., BEAD) address rural underinvestment by funding infrastructure via states, co-ops, and local providers, often with state matching requirements, to reach underserved areas [6,7]. Ultimately, broadband strengthens the dominant income streams, including off-farm income and businesses, which keep small farms operating and viable [1,2].

Tradeoffs/Research Findings

Effectiveness measures how well a policy achieves its intended goal. Farm safety net programs help stabilize farm revenue during difficult years, but their benefits are concentrated among larger operations. In 2023, more than 90% of small farm households earned the majority of their income from off-farm sources, and many reported a negative net farm income [2]:

Figure 7
Share of principal operator households with negative farm income and a majority of their income from off-farm sources by farm type, 2023



Research supports the broader economic returns from rural broadband investment. An economic study found that broadband access above 30 Mbit/s boosted regional GDP growth, while high-speed coverage (> 100 Mbit/s) produced the most significant gains in rural areas [12]. Broadband expansion connects rural communities and enables both farm and nonfarm work [6]. In 2017, 56% of principal operators held an off-farm job, and 82% of farm household income comes from off-farm sources [1]. With 57% of rural employment in service-sector jobs, broadband directly supports the primary income stream for most farm households.

Efficiency considers whether benefits are worth the costs. Farm safety net programs cost taxpayers billions annually, but benefits are concentrated among larger farms. Broadband grants (e.g., BEAD's $42.45 billion) have high upfront costs but deliver spillovers across farms, households, schools, businesses, and healthcare providers [6,7]. Because broadband underpins the off-farm earnings that sustain most farm households, its returns are distributed community-wide rather than captured by a small slice of producers [1].

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