Small-Town Tech Towns: Where Scalable Entrepreneurship Is Propelling Rural Growth

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Introduction: The Rise of the Digital Economy

The untold story of America's 21st-century economy is the growing gap between urban and rural places. For much of our nation's history, these places rose and fell together, opportunity broadly distributed across geography. That changed sharply with the Great Recession and its unequal recovery. By 2019, metro employment had grown to 10% higher than its prerecession rate, while rural employment remained 4% lower than its rate before the downturn.[2]

Many factors have contributed to this striking divide. One of the greatest long-term threats to rural prosperity is the continued decline in employment in traditional rural export industries—manufacturing, agriculture and natural resource extraction—due to automation. It is likely that automation will create net benefits for the nation's economy overall; however, because the digital economy firms designing and building the technology that powers automation are concentrated in major metro areas, automation will likely contribute to increased geographic inequality. And with the COVID-19 pandemic accelerating the shift toward automation,[3] traditionally rural jobs could be at risk,[4] further exacerbating the urban-rural economic divide.

The digital economy, which now comprises 6.9% of the overall economy, has grown at a rate 4.3 times faster than the economy as a whole.[5] Unfortunately for rural areas, 97% of computer and math jobs were created in metro areas from 2010 to 2019.[6] In addition, less than 1% of all venture capital goes to rural areas,[7] and the rural rate of self-employment fell by more than 20% from 1988 to 2016, leaving rural places without the entrepreneurs needed to drive new business growth after the 2008 crash.[8]

Reversing these trends is necessary for rural prosperity. Unless small towns can become beneficiaries of the digital economy's expansion, they will continue to fall behind. As real estate trends[9] and population surveys[10] during the COVID-19 pandemic have shown, fortunately there is a real drive among many Americans to live in rural places—especially when the

resources are there to support tech-enabled work. However, rural places face barriers to creating entrepreneurship ecosystems, including the reality that low population densities can hinder the creation of "agglomeration economies"—the benefits from firms and people being clustered near one another.[11] Still, we know that rural communities do have the power to take ownership over today's means of production—automation and technology—to drive digital entrepreneurship and innovation. In the age of the internet, there should be no limit to where digital economy jobs and entrepreneurship can thrive.

We believe this because we've seen it. At the Center on Rural Innovation (CORI), we work with small towns across the country, with a multitude of diverse local assets and opportunities, as they build digital economy ecosystems.[12] In our on-the-ground work and data analysis, we have identified scores of rural communities with the resources needed to grow strong innovation ecosystems. Many rural communities are within driving distance of institutions of higher education. Thousands are located in Opportunity Zones or New Markets Tax Credit areas that can attract investment. And many more have high-speed broadband, with our analysis finding more than 11 million rural Americans living in areas with access to fiber broadband. Many small towns also have additional assets useful for attracting and retaining the people that power innovation ecosystems, such as lower costs of living, less congestion, proximity to recreation, good public schools and tightknit communities. Moreover, many rural towns are growing,[13] with increasingly diverse populations,[14] often driven by immigration.[15]

By tapping into assets such as these, as well as their unique sense of place, small towns across the country have begun to do the work needed to create regenerative wealth, open opportunities for lifelong and new residents alike, and shape the innovations that will change the world.

What It Takes to Build Rural Entrepreneurial Ecosystems

In 2019, CORI launched the Rural Innovation Network (the Network), which by 2020 had grown to a cohort of 18 small towns across the country, each of which had recognized the need for growing a local digital economy. We help accelerate Network communities' journeys by building their capacity to develop digital economy jobs and businesses, including scalable
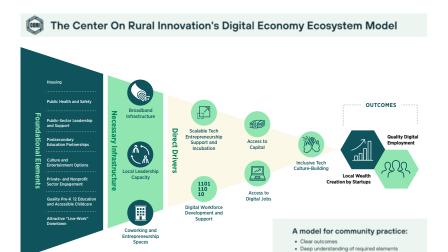
entrepreneurship ecosystems. Network members share best practices and benefit from close contact with peers engaging in similar groundbreaking digital strategies, and we facilitate their connection to national partnerships and resources.

Collaborative

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Through the Network, we've heard firsthand the local challenges that the decline in rural entrepreneurship has created—but we've also seen powerful examples of how rural digital economies can thrive. Each of our Network communities has different challenges and assets, but they have proven there are multiple paths to success.

Based on our data analysis and hands-on experience, we've identified three key components necessary to *participate* in the digital economy: local leadership capacity, coworking and entrepreneurship spaces, and broadband internet. Each of these factors is critical but on its own not sufficient to drive entrepreneurship growth. Broadband, for example, can bring a tech entrepreneur online but cannot guarantee the support for her idea to scale.

Thus, to build on this critical infrastructure and truly *compete* in the digital economy, communities need to engage what we call the five *direct drivers* of digital economy ecosystems: digital workforce development and support, access to digital jobs (remote and local), inclusive tech culture-building, access to capital, and entrepreneur support and incubation.

Each driver plays a crucial role in fostering tech entrepreneurship: Having digital jobs and skilled workers creates a talent pool to staff startups; culture-building opportunities—especially those that include people from all backgrounds within the community—bring technologists and other creatives together to generate new ideas; programs to support entrepreneurs can take ideas from concept to reality; and capital investment enables new businesses to grow and scale.

The Center On Rural Innovation's Digital Economy Ecosystem Model

Case Studies: Successful Programs

Below are profiles of three organizations in our Rural Innovation Network that are putting these pieces together to build successful entrepreneurial ecosystems. Their shared strengths and diversity of approaches illustrate the possibility and urgency of scaling this work to other rural areas across the nation.
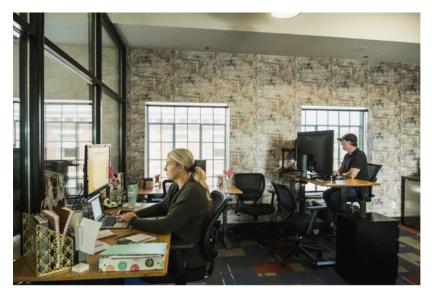
Codefi: Cape Girardeau, Missouri

In 2014, Chris Carnell, James Stapleton, Heather Holdman and Brian Holdman saw that there were no coworking spaces or technology incubators where they were in southeast Missouri. Recognizing the need for regional resilience, they started one, called Codefi. To attract startups, they created the 1ST50K Startup Competition, modeled after Arch Grants in St. Louis. Winners of the competition receive a $50,000 equity-free grant. The funding for the competition initially came via five $10,000 contributions from local investors, followed by a $325,000 grant from the Missouri Technology Corporation, $200,000 of which was specifically designated for 1ST50K awards.

1ST50K took off and now draws 100 applicants from around the world each year, culminating in six to 12 being invited to the final pitch competition. Awardees move to Cape Girardeau for at least a year, where Codefi and its partners work to help them launch and grow their companies. Winners receive dedicated coaching, mentorship and technical assistance to work through problems and connect with potential customers and investors for follow-on funding. The startups also benefit from access to the Codefi coworking space which, located downtown, is nearly 17,000 square feet of a historic building and, as of early 2021, had more than 350 members. Codefi also operates Code Labs—an adult coding "boot camp" that gives participants the necessary skills for entry-level software developer jobs and often places graduates in jobs with local tech startups. Entrepreneurs cite the energy and talent of this local ecosystem as crucial to their growth. In addition, they have noted how the low cost of living helps them stretch their funding, and the move to a smaller town frees them from the distractions and chaos that a big city may have.

Between 2014 and 2020, 1ST50K awarded a total of $550,000 to 11 startups. By a conservative count, these startups—seven of which are still operating in Cape Girardeau, while two have moved and two have wound down—have created 49 total jobs, 33 of which are still local. Additionally, Codefi has supported 50 startups housed or launched in its coworking space, which have created more than 250 jobs. Codefi's success has led to follow-on investment in the startups, Codefi's own space and the local ecosystem. For example, their success led to a grant to provide technical assistance in nearby Paducah, Kentucky, to develop and implement a digital ecosystem, including the launch of a seed fund for local startups.[16]

Local entrepreneurship in Cape Girardeau is also budding outside of Codefi, exemplified by SHO.ai, an artificial intelligence-driven branding startup that received seed investment from the CORI Innovation Fund (CIF). CIF is a seed fund that invests in growth businesses located in rural Opportunity Zones. CIF seeks attractive technology-enabled operating startups in rural geographies that are underserved by traditional venture capital institutions.

Local entrepreneurs advancing their ideas in the Codefi coworking space in Cape Girardeau, Missouri. Photo courtesy of the Center on Rural Innovation.

20Fathoms: Traverse City, Michigan

In the mid-2010s, workers in Traverse City started a monthly event, TCNewTech, to convene a new and growing community of innovators and technologists. They realized that the area's beautiful natural amenities had organically attracted a significant number of tech and remote workers to the area, yet those people were unaware that others like them had made the same move. The group began hosting regular meetups, casual networking events and informal startup pitch nights.

Ultimately—with the help of a leader from the Northern Michigan Angels investor network, a local tech executive and a principal at local venture firm Boomerang Catapult—the group formed the technology incubator 20Fathoms, named with reference to Northern Michigan's deep waters and untapped depth of local tech talent.

According to Executive Director Lauren Bigelow, "20Fathoms is about imbuing entrepreneurship and innovation throughout the community." To build the local ecosystem, 20Fathoms supports entrepreneurs, builds linkages to risk capital and helps local startups scale.

While Traverse City has historically been a tourist destination, 20Fathoms aims to diversify local industry and centralize resources to spur technology growth. Since the onset of the COVID-19 pandemic, urban tech workers have flocked to the area, tightening the local housing market and increasing the demand for accessible job opportunities.

20Fathoms also operates HealthSpark, a telehealth incubator that helps early and growth-stage health care tech companies introduce their products to market. Tapping into regional assets and local expertise, HealthSpark is designed to support cohorts of Midwest companies focused on working with rural hospitals. The program is adapting the Y Combinator[17] accelerator model to the rural context, embedding personalized networking events and connections to industry leaders.

Beyond HealthSpark, 20Fathoms is building a diverse innovation ecosystem. 20Fathoms membership offers a professional workspace with amenities that include shared space, fiber internet and conference rooms, along with access to educational workshops, professional service providers, coaches and mentors. To broaden the talent available to entrepreneurs, the organization hosts *tccodes*, a professional training and career development program for new and established software developers.

Tailored

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20Fathoms' initial success was propelled by a local investment network that fostered the growing talent in the region and viewed investment as a path to giving back to the community. Its continued growth has been enabled by federal resources through an i6 Challenge award from the Economic Development Administration (EDA) within the U.S. Department of Commerce, which set the ambitious goals of creating 30 companies and 100 jobs in the region.

20Fathoms proves that rural economies aren't predestined; Traverse City

is evolving its tourism-driven history and diversifying it with a growing digital ecosystem. Access to capital and investors has provided companies with the confidence to locate there, organizational leadership has reaffirmed the importance of entrepreneurs in the region, and the strong community spaces are providing the spark to seed solid ideas.

Southwest Colorado Accelerator Program for Entrepreneurs: Durango, Colorado

Durango, like Traverse City, has traditionally been reliant on tourism. Unlike Traverse City, it leans heavily on the oil and gas industry. A group of local business owners, economic developers and angel investors recognized that this reliance was a problem and convened to discuss how to create high-wage jobs in other industries. They knew it would require going beyond business attraction and retention, and instead looked to scalable entrepreneurship and growing their own companies. This group first started an angel fund for local entrepreneurs but realized that many of the entrepreneurs were not ready for investment or growth. So, they launched the Southwest Colorado Accelerator Program for Entrepreneurs (SCAPE), an intensive six-month program in Durango serving the five counties in the Region 9 Economic Development District of Southwest Colorado.

Resilient

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Currently, SCAPE runs not only the accelerator program but a private investment fund that directly invests in SCAPE startups. When selecting local entrepreneurs for the accelerator, it focuses on ventures with strong job creation potential, a market beyond the local area and a desire to stay headquartered locally.

The companies selected benefit from intense programming, with a

structured six-month curriculum, curated mentorship relationships and exclusive access to funding. The program helps SCAPE build a relationship with the startups before deploying venture capital; the several dozen investors who make up the angel fund appreciate that the companies are vetted and trained before they receive capital. Entrepreneurs laud the personalized attention, fundraising focus and staff expertise that allow them to focus their products on what can fit the market.

SCAPE has succeeded at both incubating growth startups and helping the local economy because it sees those two missions as intertwined. SCAPE is explicitly place-based, so unlike other accelerators that just chase investment returns, SCAPE stays focused on targeted economic development—a major reason it has retained its dedicated mentorship base while achieving an impressive investment return. It has also focused on recruiting local investors into the fund—a task aided by the presence of successful executives and a founder living in Durango—helping to ensure that the people funding SCAPE's portfolio companies care deeply about the place they are supporting.

The region's successes have been powerful, proving that a focus on rural economic development can coincide with scalable tech startup growth. GitPrime, a software company that participated in SCAPE in 2015 and grew to employing more than 30 in Durango, was acquired for $170 million in 2019 by Pluralsight, an exit which created regenerative wealth in the community and spun off a tech talent pool that could power the next generation of local tech startups.[18] Agile Space Industries, another local startup, has raised millions in venture capital and captured a unique market by recruiting talent to the low-cost, high-amenity Durango lifestyle. In addition, MUNIRevs, a startup accelerated through SCAPE, is rapidly expanding.

In seven years, SCAPE has helped rural companies raise over $24 million to create more than 150 jobs at above-average wages. SCAPE has taken advantage of the mentors and young retirees that a tourism community can provide to help the next generations of companies create jobs and succeed. By providing employment opportunities, SCAPE is helping to address regional issues and to build a local community poised for continued success.

SCAPE Outreach Coordinator Brittany Cupp (left) and Executive Director Elizabeth Marsh (right), at the office in Durango, Colorado. Photo courtesy of the Center on Rural Innovation.

Conclusion: How to Scale Successful Rural Ecosystems

The three communities profiled here are proof that with an intentional approach to developing a supportive environment for digital economy jobs and businesses, rural communities can support local scalable technology entrepreneurship that helps to drive future economic growth. They show that rural economies can build strength and resilience when they create good-paying jobs in industries that are less likely to be impacted by automation and other market disruptions. Initiatives such as these are necessary to close the rural opportunity gap and reverse widening geographic divides. They are especially urgent given the need to ensure equitable long-term recovery from the coronavirus-driven economic downturn. The question then for poli-cymakers, practitioners and funders remains: How can we scale successful practices for building digital entrepreneurship ecosystems in rural places?

A core belief at CORI is that many rural communities have the necessary foundational elements, infrastructure and local assets needed for digital economy success; they just need to understand how to unlock them and gain access to the resources needed to execute.

Often, this strategy and fundraising development requires capacity that rural communities do not have. Rural America's economic decline has led to years of budget tightening and disinvestment that have decreased the resources of already small rural economic development operations. And ongoing economic crises, including from the COVID-19 pandemic, absorb available resources for immediate aid, leaving the proactive future-focused approach without the resources needed to create digital jobs. Given that raising money requires money (via the staff and expertise needed to submit competitive grant proposals), rural communities are left out.

To address these gaps, rural communities need additional capacity-building support. This can come in the form of technical assistance from organizations with issue-area expertise that can provide local leaders with the data, tools, advice and development support needed to compete with better-endowed places vying for funding opportunities. For example, the EDA supported a pilot project that allowed our sister organization, Rural Innovation Strategies, Inc., to deliver intensive technical assistance to communities as they designed and executed digital economy ecosystem strategies and identified funding opportunities. This support provided communities with access to detailed rural data that they often cannot generate on their own, which offered insights into their digital economy building blocks. Other organizations—such as Rural LISC, Rural Community Assistance Partnership, RuralRISE, WealthWorks, Rural Community Assistance Corporation and CO.STARTERS—have also established creative and effective programs for building the capacity of rural communities in areas as diverse as water resource development, internet skills, community finance, value-chain leveraging and entrepreneurship.

Successful technical assistance efforts such as these demonstrate that with relatively small investments in capacity-building, rural communities can be put in a far stronger position to generate economic returns that are resilient in the age of automation. As funders consider strategies to jump-start small towns, similar approaches are poised to have outsized impacts.

Innovation may currently be concentrated in a narrow set of geographies, but our communities' track record shows it does not have to be. And the major shifts caused by COVID-19—including digital economy workers' moving (and returning) to small towns—have proven that digital economy

work can be done from rural places. With continued targeted support and renewed determination that small towns can start scalable startups, more rural places will gain the tools to take their economic destinies into their own hands through technology and entrepreneurship.

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Endnotes

[1]   Yefei Jin, Mark Rembert and Aidan Calvelli provided research support for this chapter.

[2]   See U.S. Bureau of Labor Statistics, *Current Employment Statistics—CES (National)*.

[3]   See Lund et al.

[4]   See Muro et al.

[5]   See Jolliff and Nicholson.

[6]   See U.S. Bureau of Labor Statistics, *Occupational Employment and Wage Statistics*.

[7]   See Jacob.

[8]   See Wilmoth, and for another reference point on the decline of rural entrepreneurship, see Morelix et al.

[9]   See Anderson.

[10]   See The Harris Poll.

[11]   See Glaeser.

[12]   Digital economy ecosystems combine the programs and structures needed to allow technology-based entrepreneurs, businesses and workers to thrive, generating good jobs and building wealth in the local community. A strong digital economy ecosystem requires certain pieces of foundational infrastructure, such as local broadband, coworking space and local leadership capacity, as well as direct drivers of the digital economy, such as jobs, capital and support for entrepreneurs. For a fuller definition of the digital economy ecosystem model, see CORI (website).

13   See Cromartie and Vilorio.

14   See Van Hook and Lee.

15   See Mathema et al.

16   See Moncrief.

17   See Y Combinator.

18   See Armijo.