

A New Prognosis:

Why Rural Health Depends on a New Economic Model

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Evaluation at the Center on Rural Innovation



Who We Are

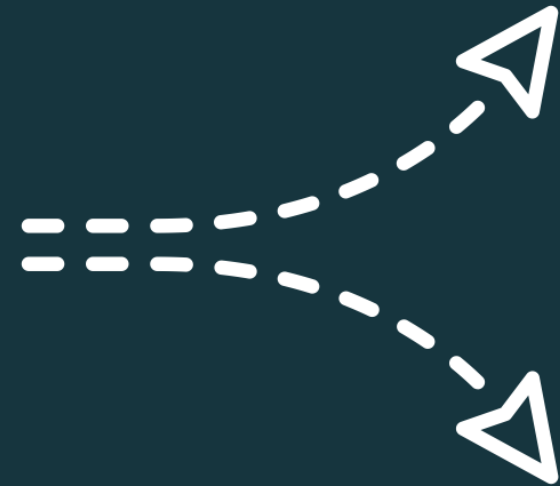
We believe that **small towns are home to big ideas** — and new models of economic development can empower rural communities to grow innovative businesses from the ground up.

Agenda

1. Rising Geographic Inequality
2. How Did this Happen?
3. The Good Soil For Economic Development
4. Rural Innovation Ecosystems



1. Rising Geographic Inequality

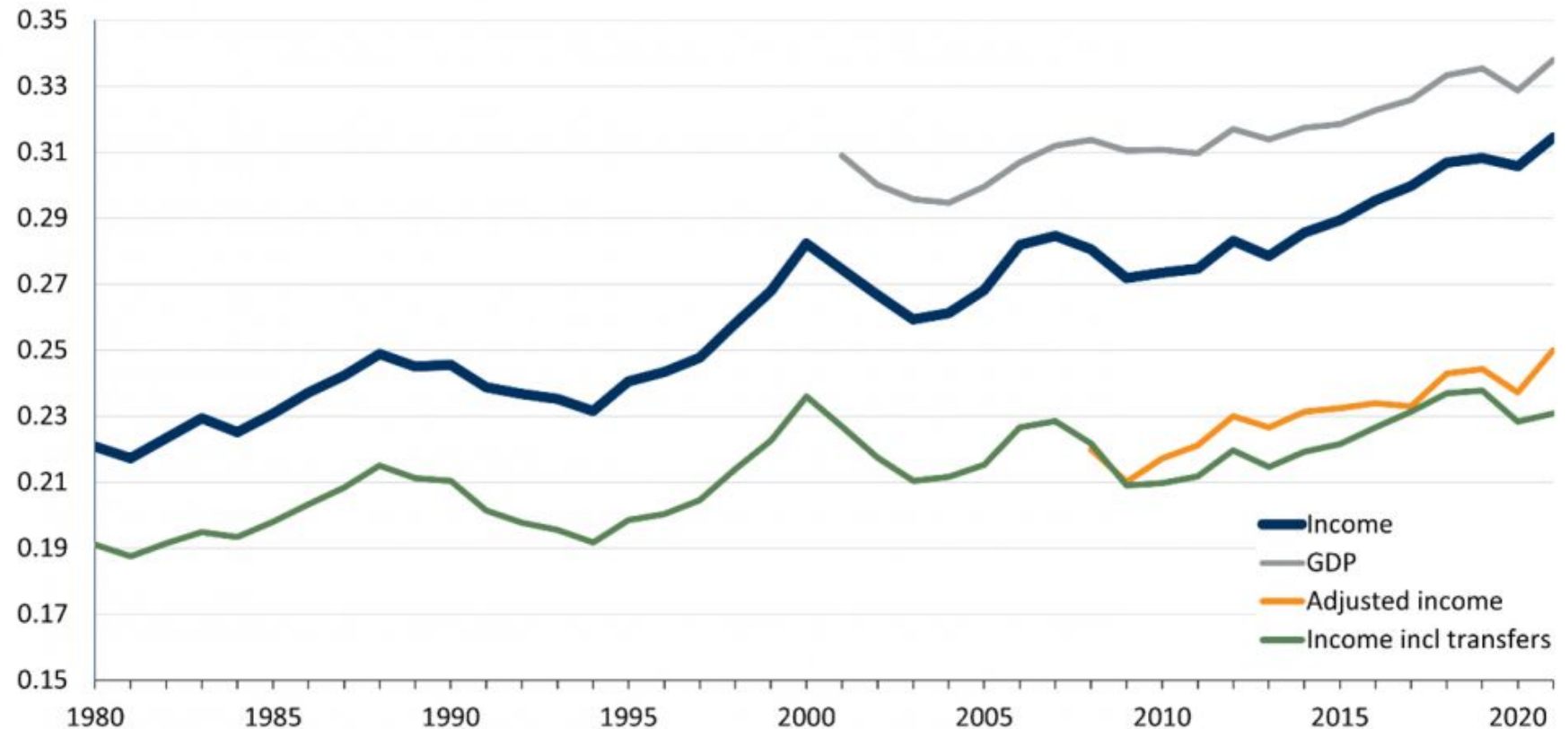


Geographic Inequality Is On The Rise In The U.S.

The gap is growing as richer places become richer and poorer places become poorer

Geographic Inequality Reached New High in 2021

Variation of per capita income across U.S. metros and counties



Population-weighted standard deviation of log per capita income, across all CBSAs and non-CBSA counties, 1980–2021.

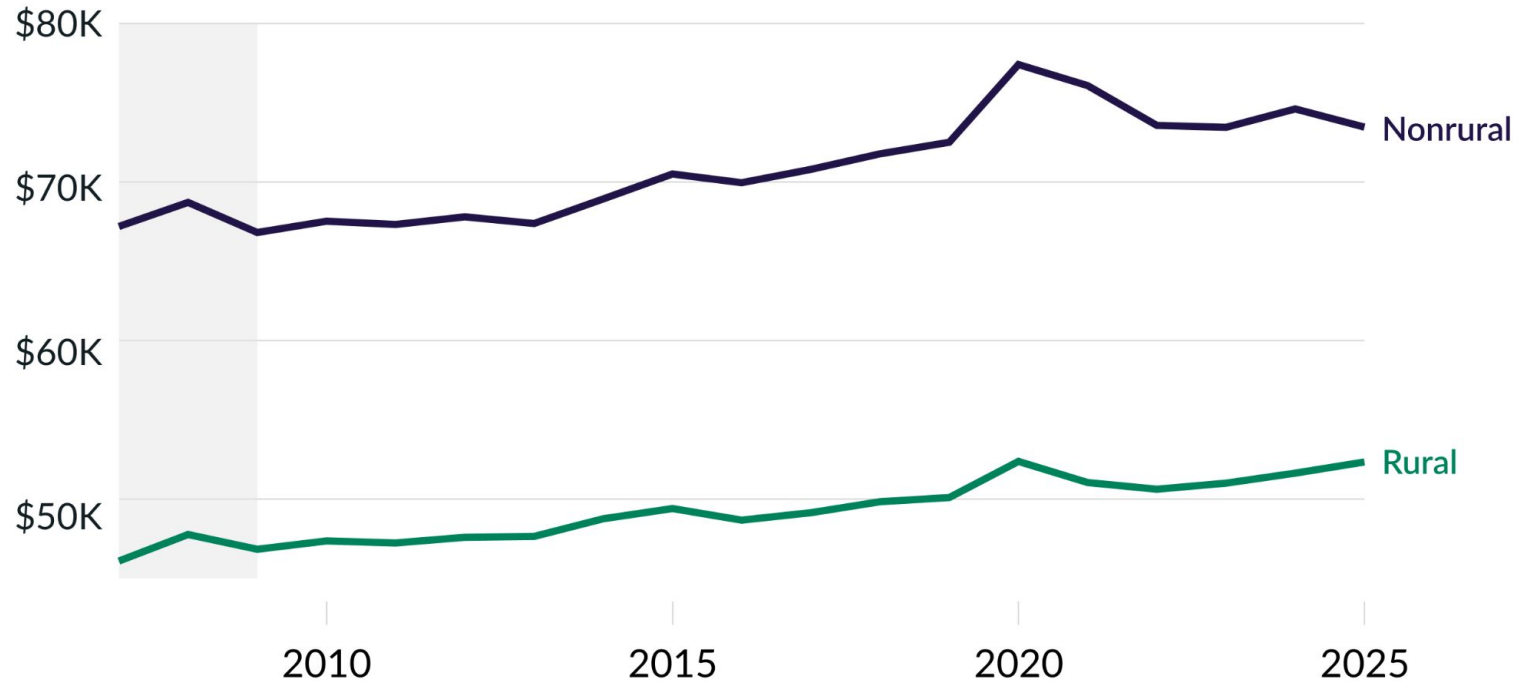
U.S. Department of Commerce Office of the Under Secretary for Economic Affairs (OUSEA) analysis of data from the U.S. Bureau of Economic Analysis

The Rural-Urban Income Gap

Rural-Nonrural wage gap remains wide



Average annual wages in 2023 real dollars, by rurality



Average annual wages are **40%** higher in nonrural areas

Rural: \$52,355
Metro: \$73,480

Source: CORI analysis of Bureau of Labor Statistics data (QCEW); 2025 values from Q2 quarterly data.

Note: Real wages in 2023 dollars.

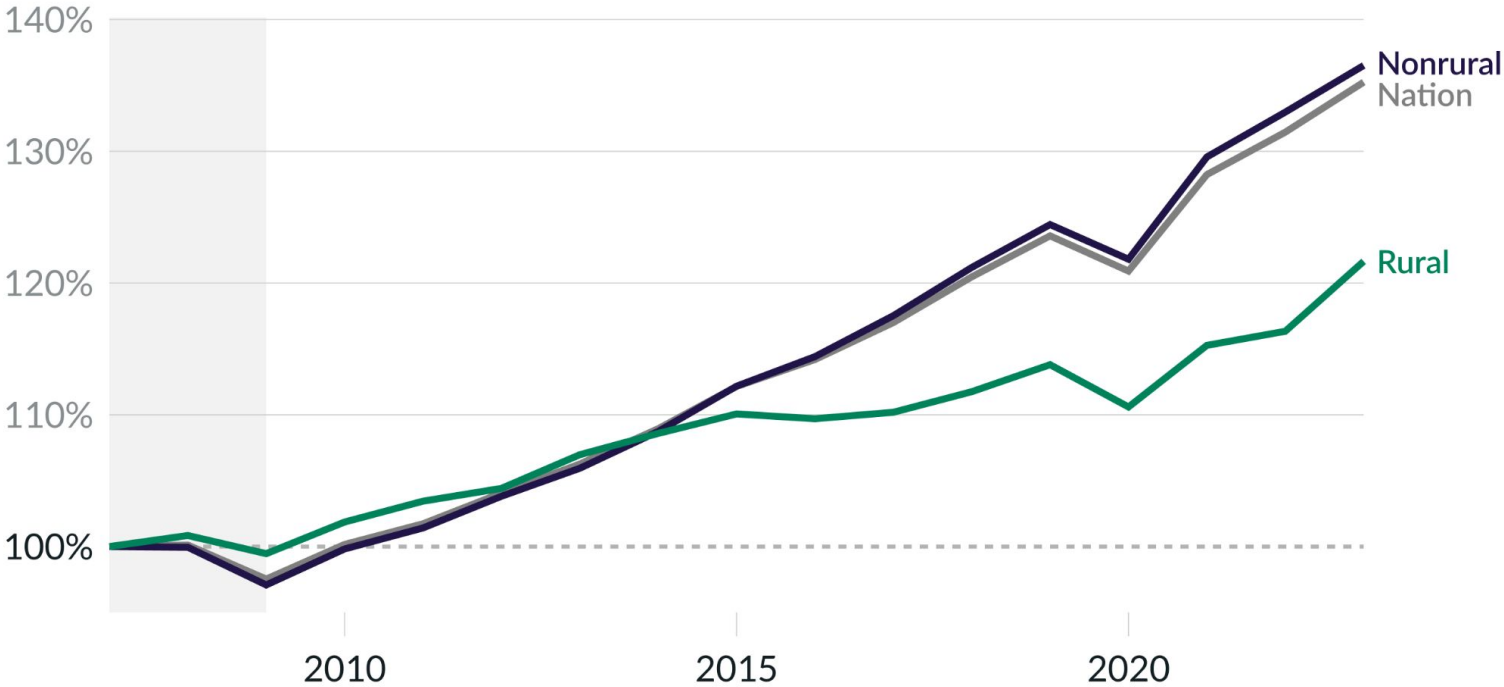
'Rural' refers to the nonmetro definition which includes all nonmetro counties.



National Forecasts May Not Represent Rural

Rural GDP lags behind the nation

Relative changes in GDP levels since the *Great Recession*



Despite previous lagging growth, rural GDP recently outpaced nonrural

Rural: +4.6%
Nonrural: +2.7%

(GDP growth, 2022–2023)

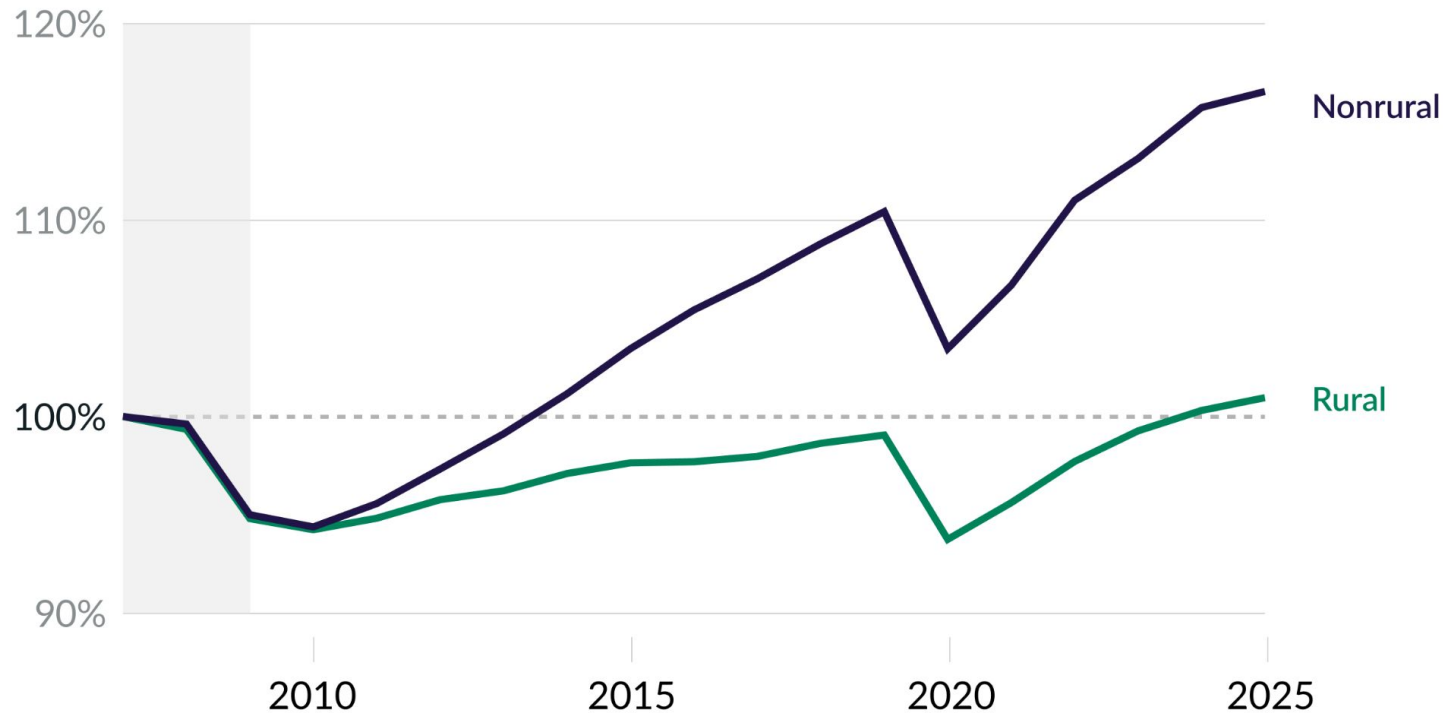
Source: CORI analysis of Bureau of Economic Analysis data.
Note: Percentages relative to January 2007; shaded area indicates Great Recession (2007 to 2009).
'Rural' refers to the nonmetro definition which includes all nonmetro counties.



The Rural-Urban Job Divide

A fragile recovery: Rural employment set back twice since 2007

Relative change in employment levels since the **Great Recession**



Rural GDP has recovered from the **Great Recession**, but job growth still lags

Rural: +1%
Nonrural: +2.3%

(Employment growth, 2023–2024)

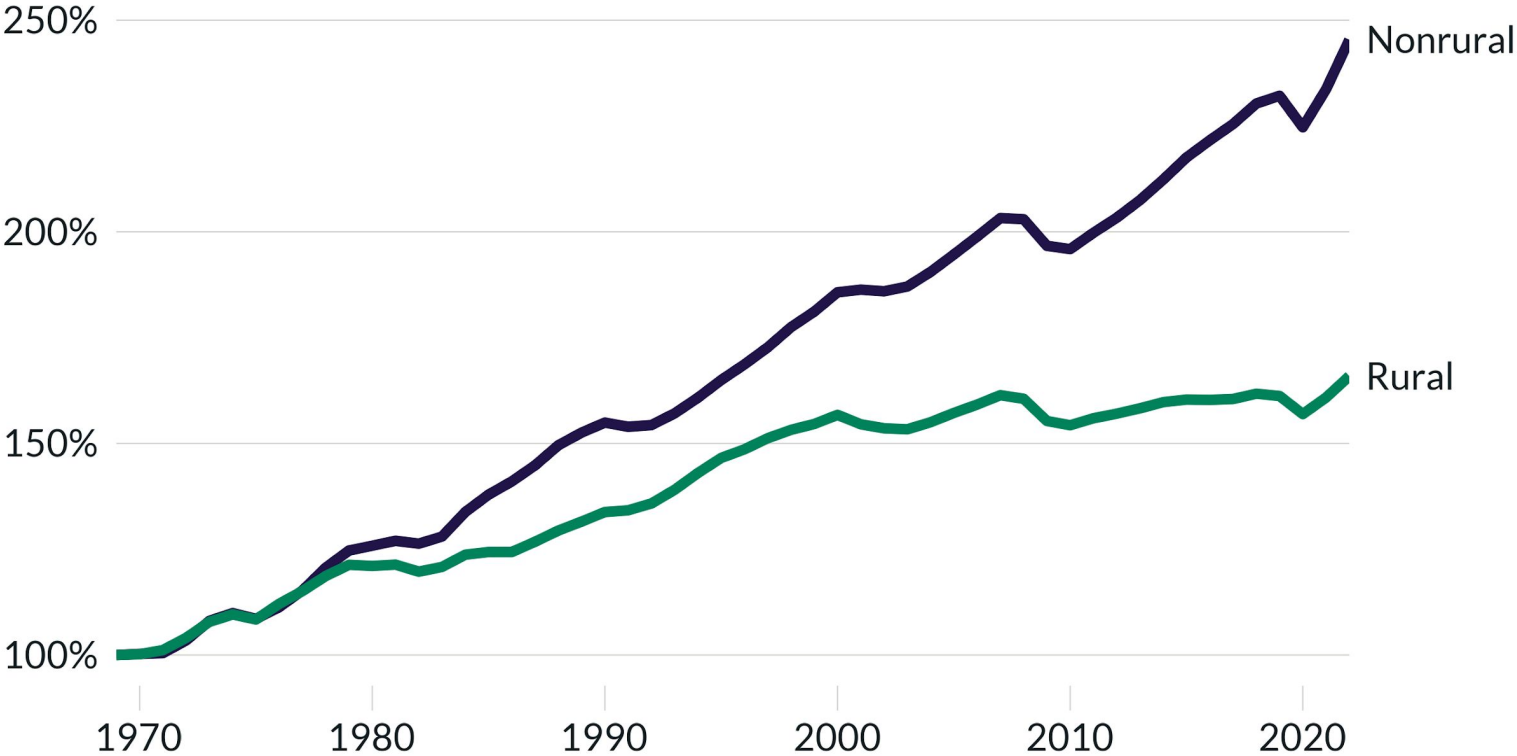
Source: CORI analysis of Bureau of Labor Statistics data (QCEW); 2025 values from Q2 quarterly data. Note: Percentages relative to January 2007; shaded area indicates Great Recession (2007 to 2009). 'Rural' refers to the nonmetro definition which includes all nonmetro counties.



Decades of Divergence

The widening gap in rural and nonrural employment

Employment relative to 1969 levels



Recessions tend to reinforce pre-existing trends

(Weinstein & Patrick, 2020)

Source: Bureau of Economic Analysis

Note: "Rural" refers to the nonmetro definition which includes all nonmetro counties.



The Ripple Effects

LIFE AND HEALTH IN RURAL AMERICA

Poll: Many Rural Americans Struggle With Financial Insecurity, Access To Health Care

May 21, 2019 · 5:01 AM ET

Heard on Morning Edition

By Joe Neel, Patti Neighmond

K KFF Health News

Looming Cuts to Emergency SNAP Benefits Threaten Food Security in Rural America

Pa. rural school educators urge lawmakers to build a new fair funding formula

'We need state legislators to make a commitment to increase funding for public schools.'

BY: CASSIE MILLER - AUGUST 3, 2023 6:30 AM



Resource

Map Monday: Rural Hospitals Closing Their Doors



Young and Homeless in Rural America

Most social services impossible to get

AUGUST 19, 2021



Some digital divides persist between rural, urban and suburban America

Factory closures may have helped fuel the opioid crisis.



AAMCNEWS

Health Disparities Affect Millions in Rural U.S. Communities

EDUCATION

Beyond Fate: Funding Structure and Public Policy Mean Rural Schools Don't Get Fair Share

2. How Did This Happen?



Globalization



Automation



Decline in
entrepreneurship

Over-Reliance on Tradable Goods in Rural

Manufacturing,
Mining, Farming

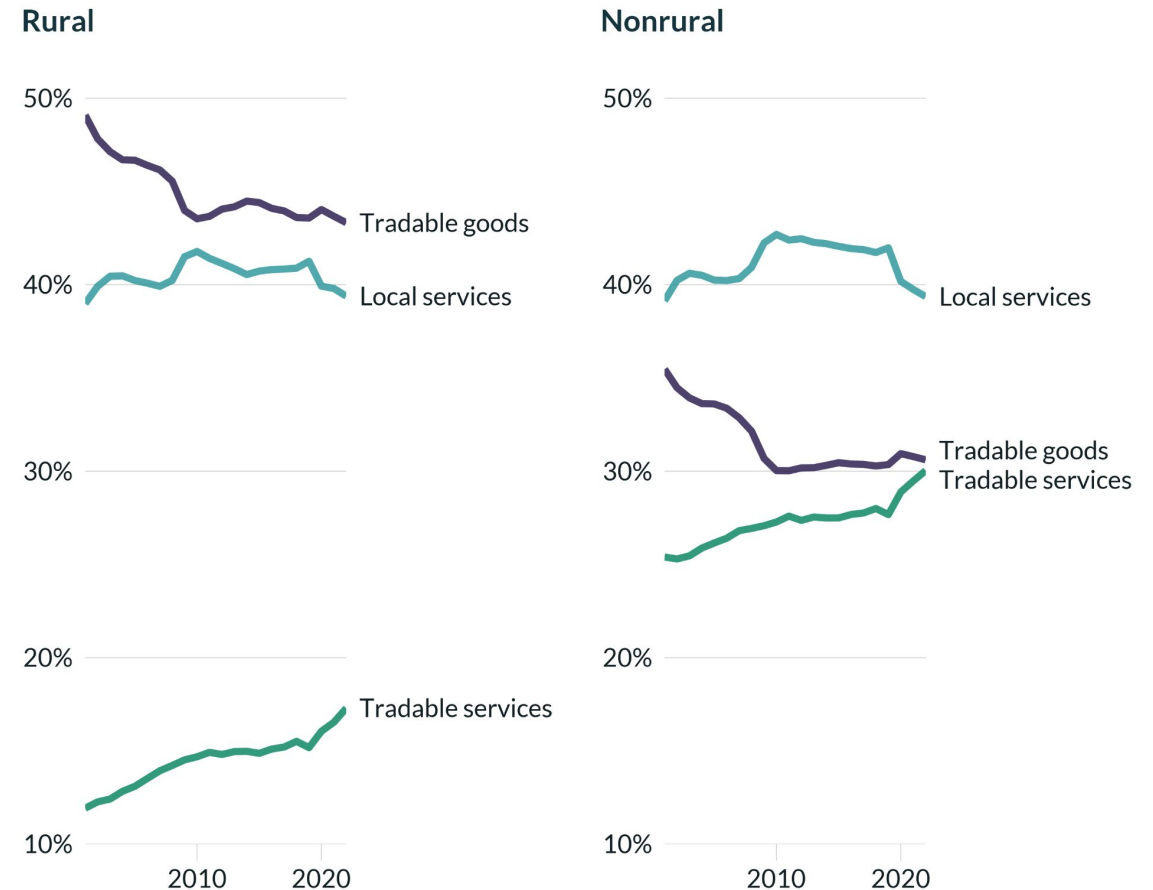
Over-reliance on traditional tradable goods industries (farming, manufacturing, mining) has led to lower job growth

[\(Goetz et al. 2018; Kilkenney and Partridge, 2009; Weiler, 2001; Glaeser and Saiz, 2004\)](#)

Tradable services represent a larger share of employment in nonrural areas than rural areas



Share of employment by sector



Source: Bureau of Economic Analysis

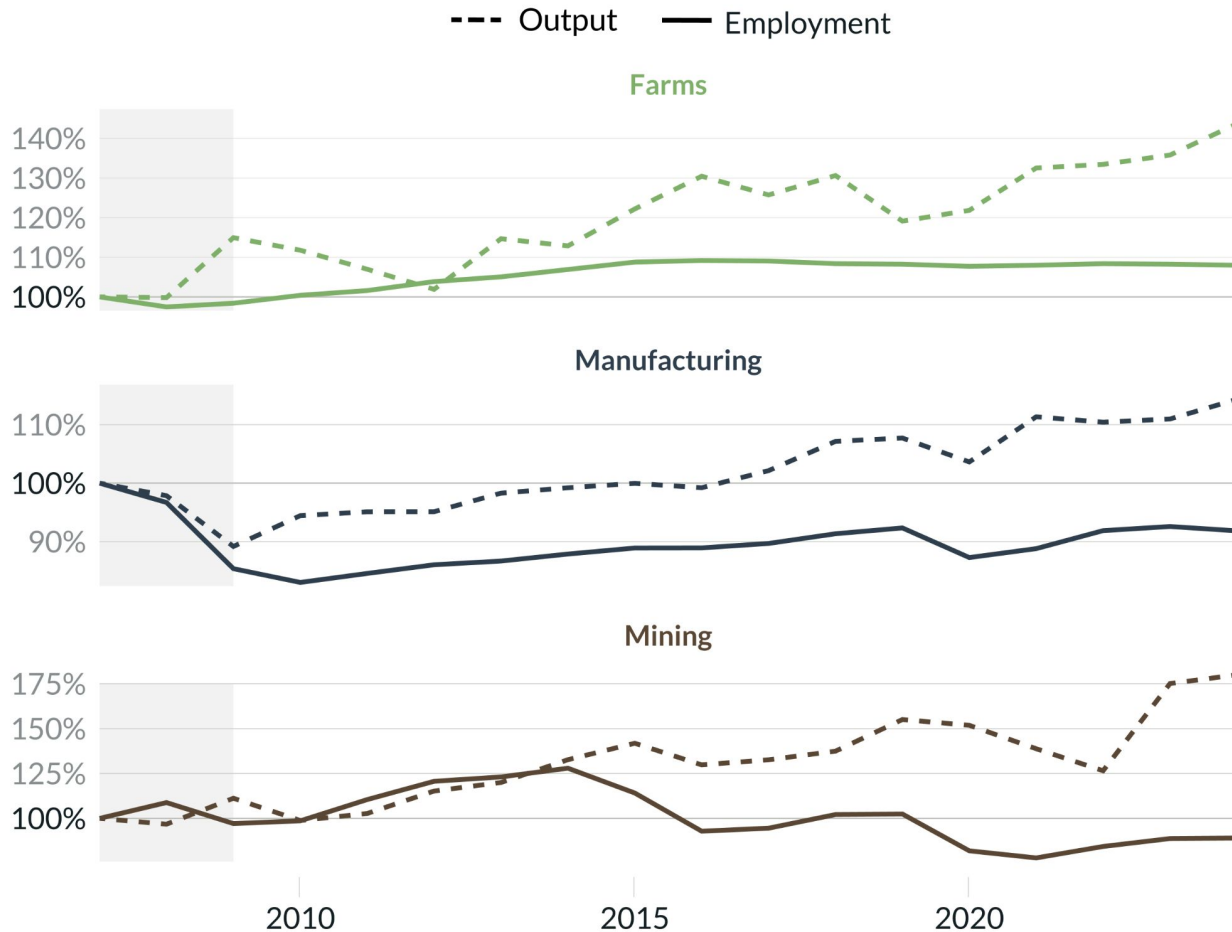
Note: "Rural" refers to the nonmetro definition which includes all nonmetro counties.

The Output-Employment Gap in Rural

Leaner, larger: output expands as industry workforces stall



Relative changes in output and employment levels by industry since the Great Recession



Output growth in traditional rural sectors, tradable goods sectors, continue without employment gains because of **automation** ([Dumont, 2024](#))

Source: CORI analysis of Bureau of Economic Analysis data.
Note: Percentages relative to January 2007; shaded area indicates Great Recession (2007 to 2009).



Where are the jobs?



Chronicle / Courtesy of Jim L

Manufacturing
employment share:

1940:
31%

1950:
29%

1980:
21%

2010:
9%

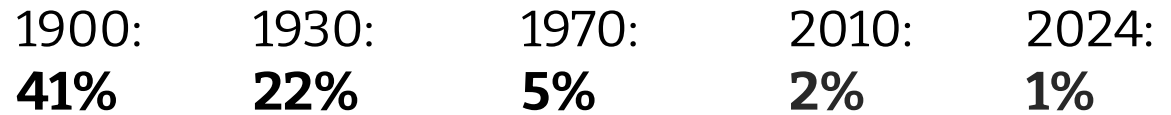
2025:
8%



Where are the jobs?



Share of the U.S.
workforce in agriculture:

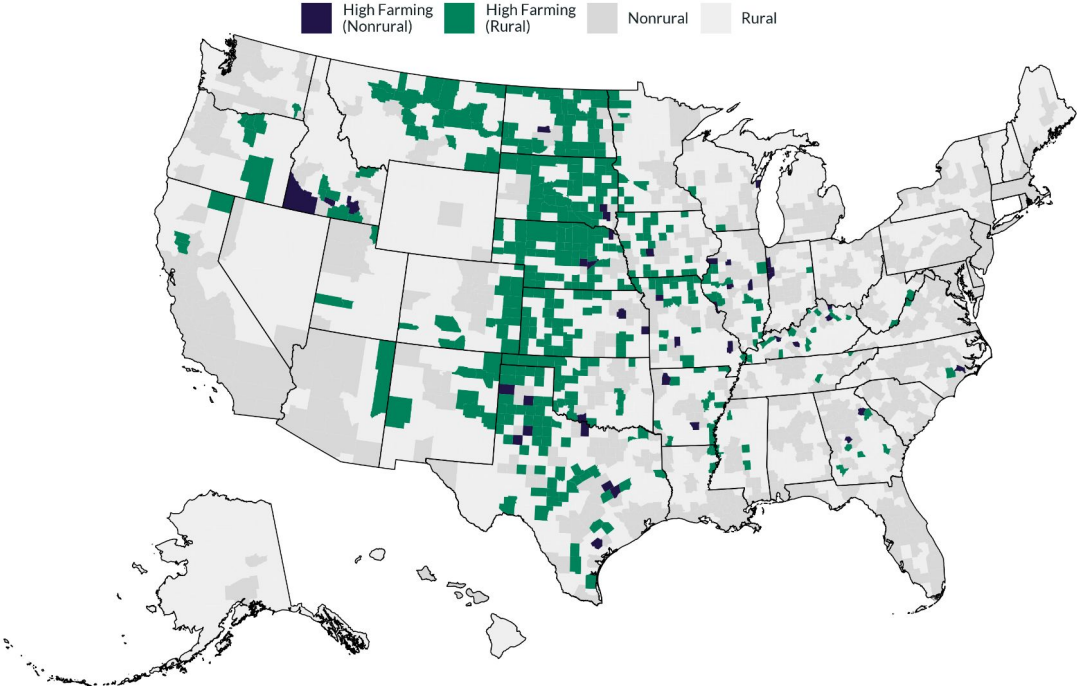


High Farming & Manufacturing Concentrations

Rural counties are more likely than **nonrural** counties to have high concentrations of farming or manufacturing activity

High Farming-Concentration Counties

Counties with $\geq 15\%$ of earnings or $\geq 10\%$ of jobs in farming (2019-2022 average)

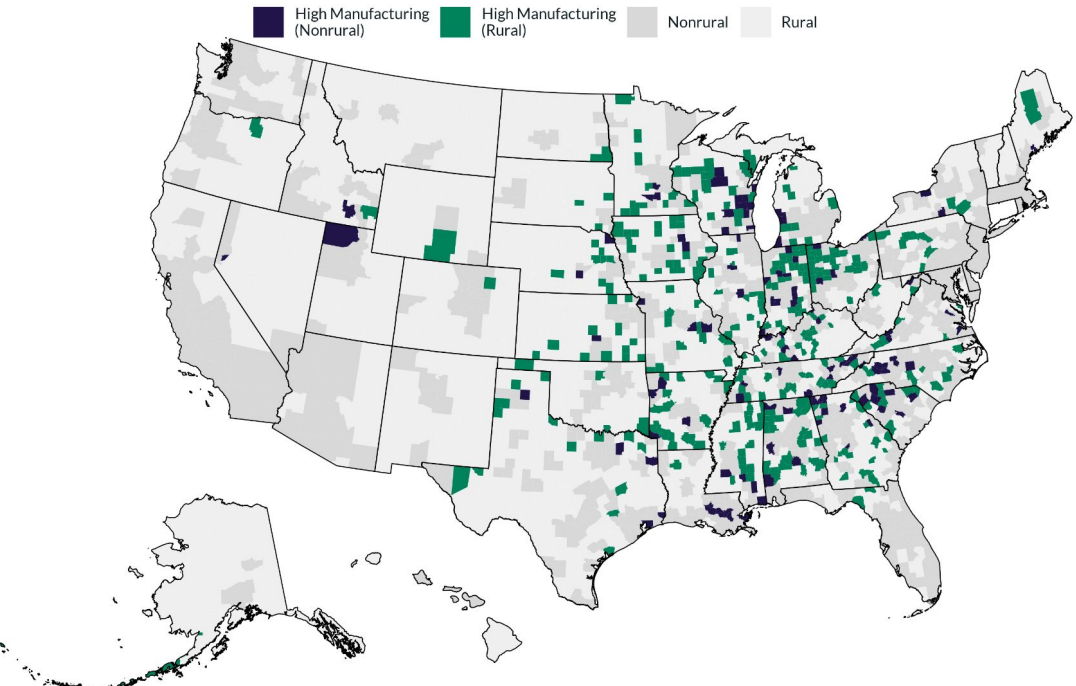


Source: USDA Economic Research Service County Typology Codes, 2025 Edition.
Note: 'Rural' refers to the nonmetro definition which includes all nonmetro counties.



High Manufacturing-Concentration Counties

Counties with $\geq 25\%$ of earnings or $\geq 17\%$ of jobs in manufacturing (2019-2022 average)



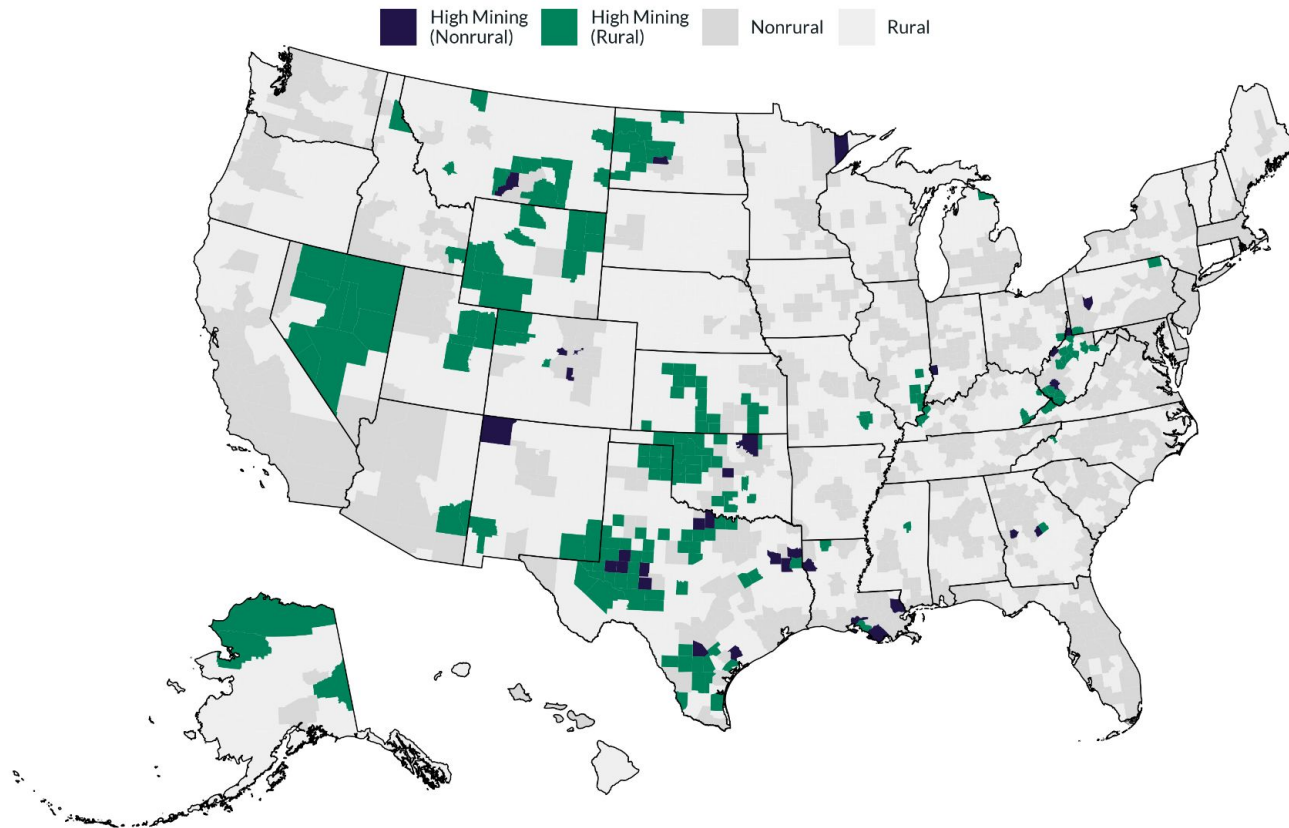
Source: USDA Economic Research Service County Typology Codes, 2025 Edition.
Note: 'Rural' refers to the nonmetro definition which includes all nonmetro counties.



High Mining Concentration

High Mining-Concentration Counties

Counties with $\geq 8\%$ of earnings or $\geq 5\%$ of jobs in mining (2019-2022 average)



Source: USDA Economic Research Service County Typology Codes, 2025 Edition.
Note: 'Rural' refers to the nonmetro definition which includes all nonmetro counties.



Rural counties are more likely than **nonrural** to have high concentrations of mining activity

Highly specialized rural economies face industry-dependent outlooks (with growing output-employment gaps)



The BIG Problem in Rural

“Today's shift towards services seems to benefit **large incumbent cities** the most.”

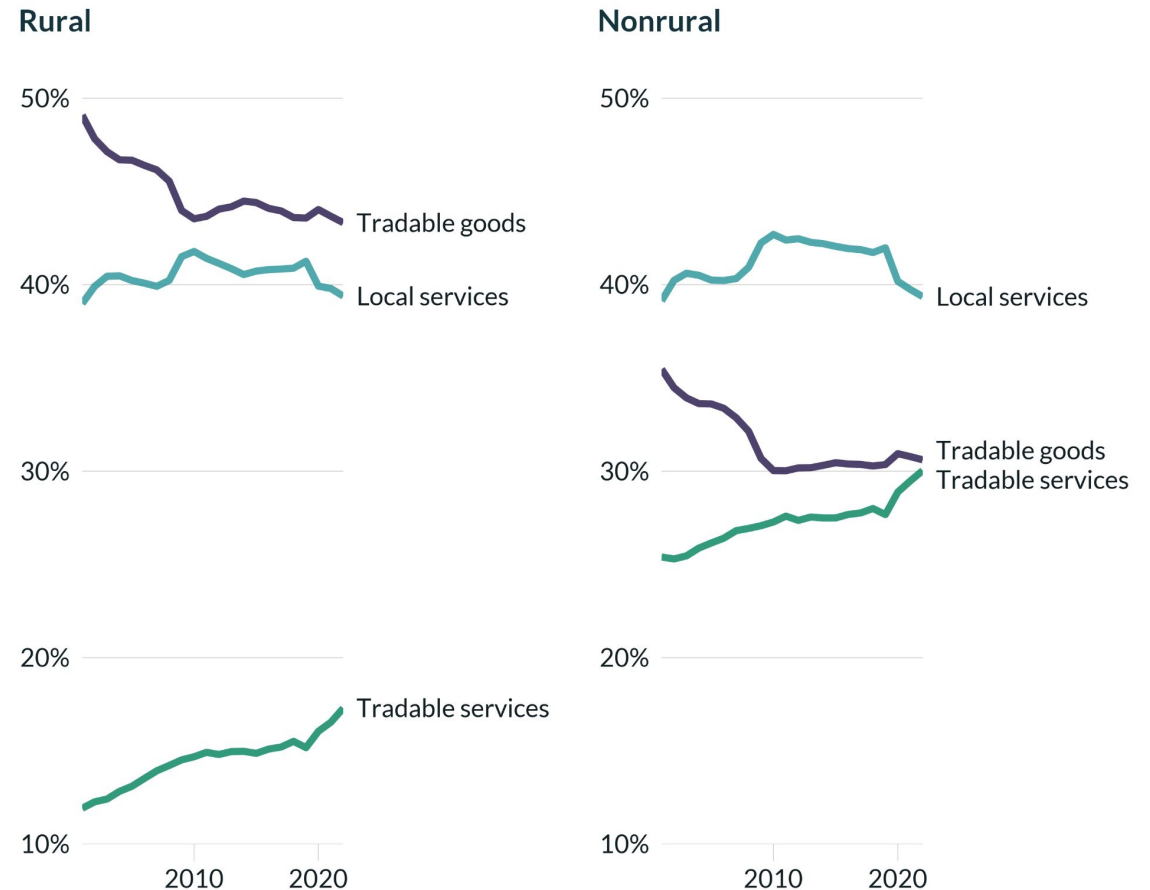
([Eckert, Juneau, & Peters, 2023](#))



Tradable services represent a larger share of employment in nonrural areas than rural areas



Share of employment by sector



Source: Bureau of Economic Analysis

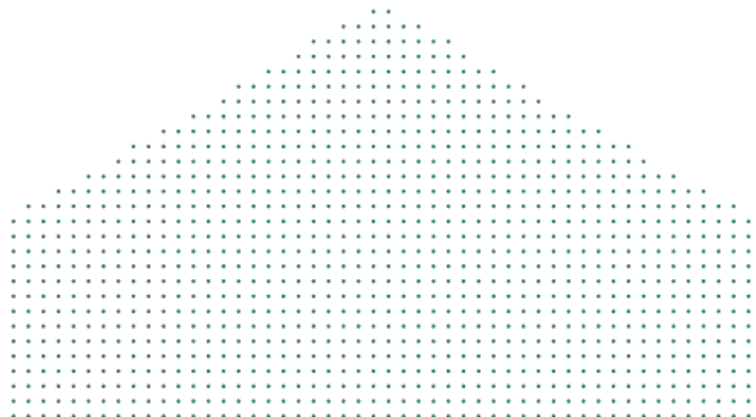
Note: "Rural" refers to the nonmetro definition which includes all nonmetro counties.



The BIG Problem in Rural

*Rural areas are missing over **80,000** tech jobs in their **core industries**.*

(Center on Rural Innovation, 2022)



Missing Rural Tech Jobs by Core Rural Industry

Missing tech employment by core non-tech rural industry

Comparison of the rate of tech employment within core non-tech rural industries to the national rate of tech employment for the same industries

[\(Center on Rural Innovation, 2022\)](#)

Industry	Current rural tech employment	Missing rural tech employment
Manufacturing	14,634	42,836
Government	23,971	17,654
Banks	7,547	5,741
All other finance and insurance	3,822	5,172
Mining	2,296	2,336
Colleges, universities, and professional schools	15,940	2,307
Hospitals	3,733	2,185
Insurance carriers	2,496	1,930
Utilities	2,124	1,482
Elementary and secondary schools	579	228
Total	77,143	81,871



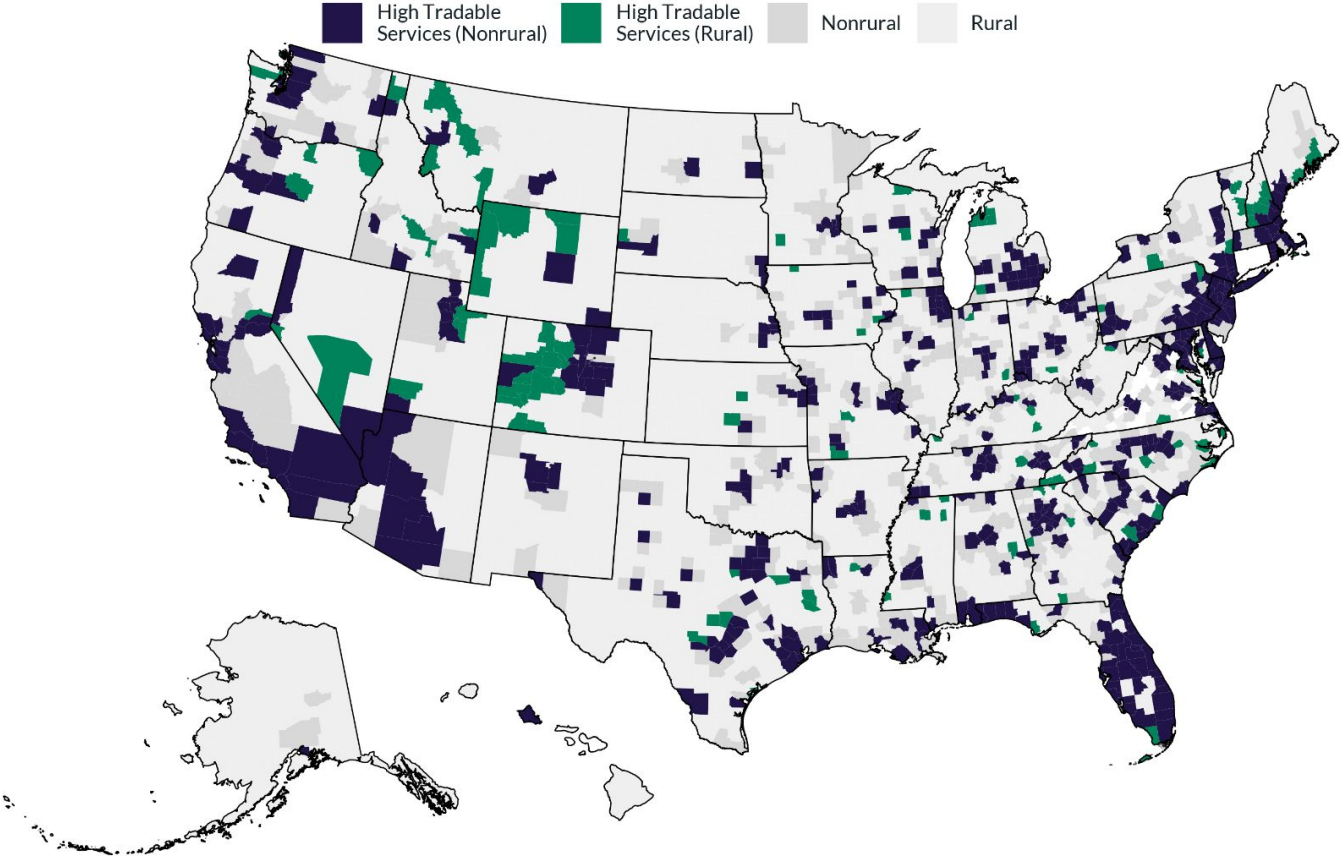
(Source: CORI analysis of EMSI BG data)



High Tradable Services Concentration

Tradable Services-Dependent Counties

Counties with $\geq 30\%$ of earnings or $\geq 20\%$ of jobs in tradable services (2019-2022 average)



Tradable service sector share of employment:

Nonrural: **22%**

Rural: **10%**

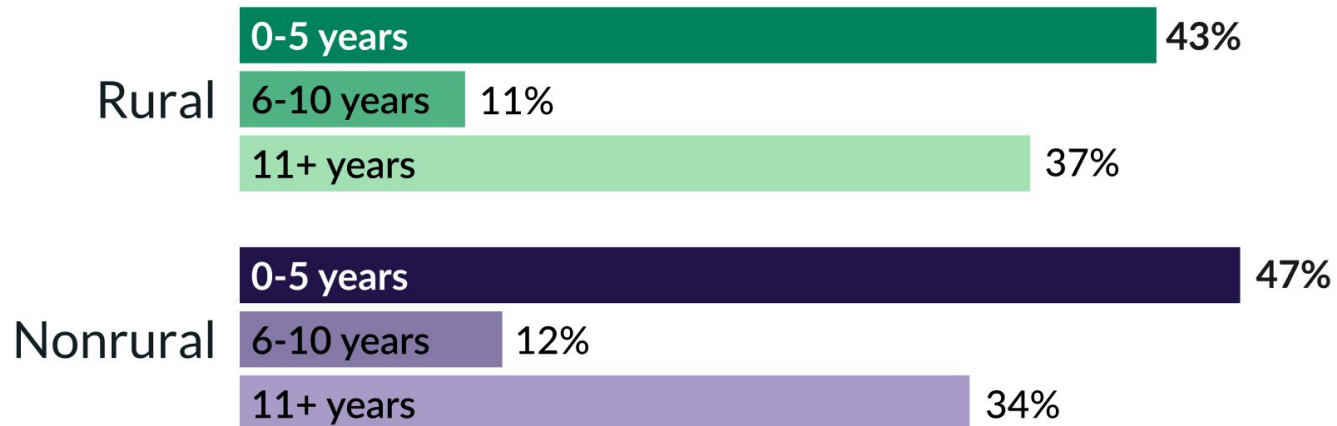
Source: CORI analysis of BEA Regional Economic Accounts (CAINC5N, CAEMP25N).
Note: Tradable services include Finance & insurance, Information, Professional/scientific/technical services, Management of companies, Administrative services, and Real estate & rental.
'Rural' refers to the nonmetro definition which includes all nonmetro counties.



Startups Power Job Growth and Diversification

Young firms lead job creation for both rural and nonrural areas

Share of job creation by firm age and rurality, 2023



Source: CORI analysis of Business Dynamics Statistics.

Note: Censored establishment ages are excluded from analysis.

'Rural' refers to the nonmetro definition which includes all nonmetro counties.



Young firms increase industry diversity and economic adaptation

Entrepreneurship is key to long-term rural resilience (it's also where most job growth comes from)



Small Businesses Power Job Growth

Small firms lead rural job creation

Share of job creation by firm size and rurality, 2023



Small businesses have an outsized impact on rural areas - accounting for 54% of total jobs ([Wilmoth, 2023](#))

Source: CORI analysis of Bureau of Business Dynamics Statistics.

Note: Firm size based on BDS coarse firm-size category.

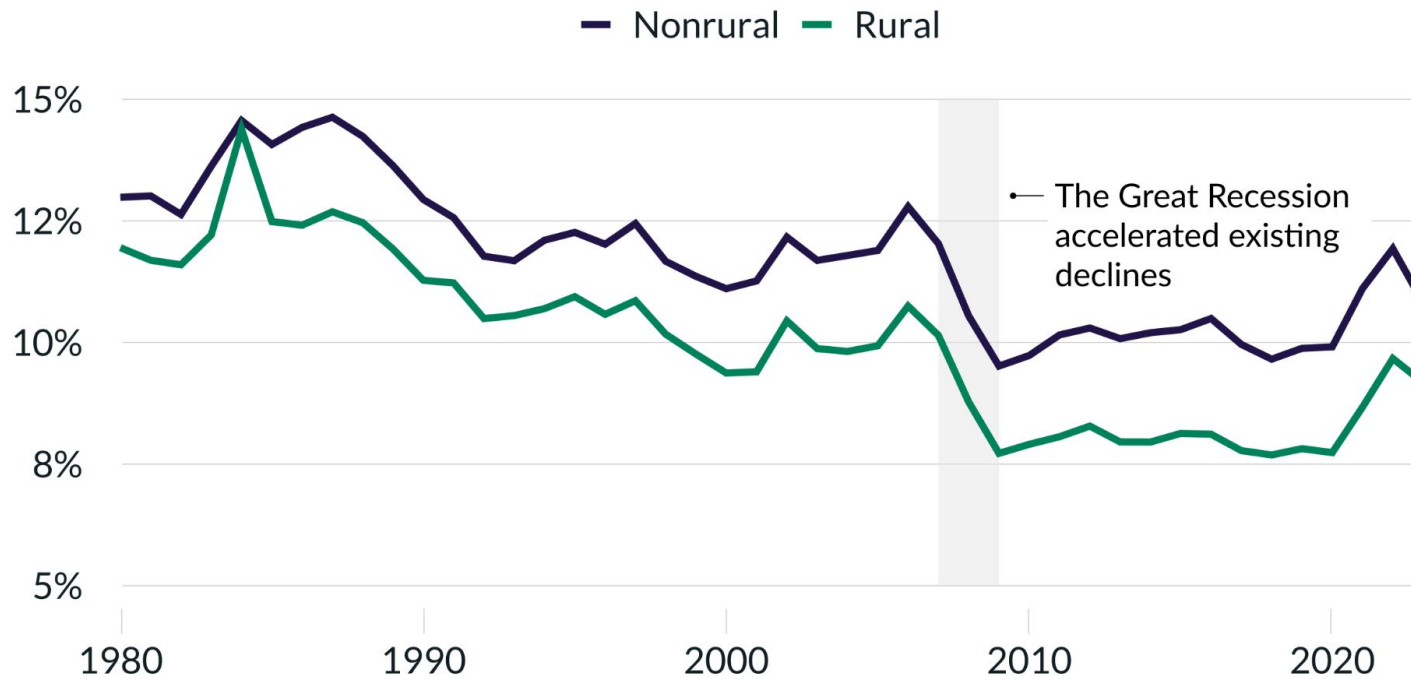
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The BIGGER Problem in Rural

Business entry rates show modest recovery post-recession but remain below historical levels

Share of establishments entering the market in the prior 12 months



Source: CORI analysis of Census data (Business Dynamics Statistics).

Note: 'Rural' refers to the nonmetro definition which includes all nonmetro counties.



Entrepreneurship has declined nationwide, with steeper drops in rural areas ([Rubinton, 2021](#); [Rubinton, 2020](#); [Akcigit and Ates, 2020](#); [Hathaway and Litan, 2014 ...](#))

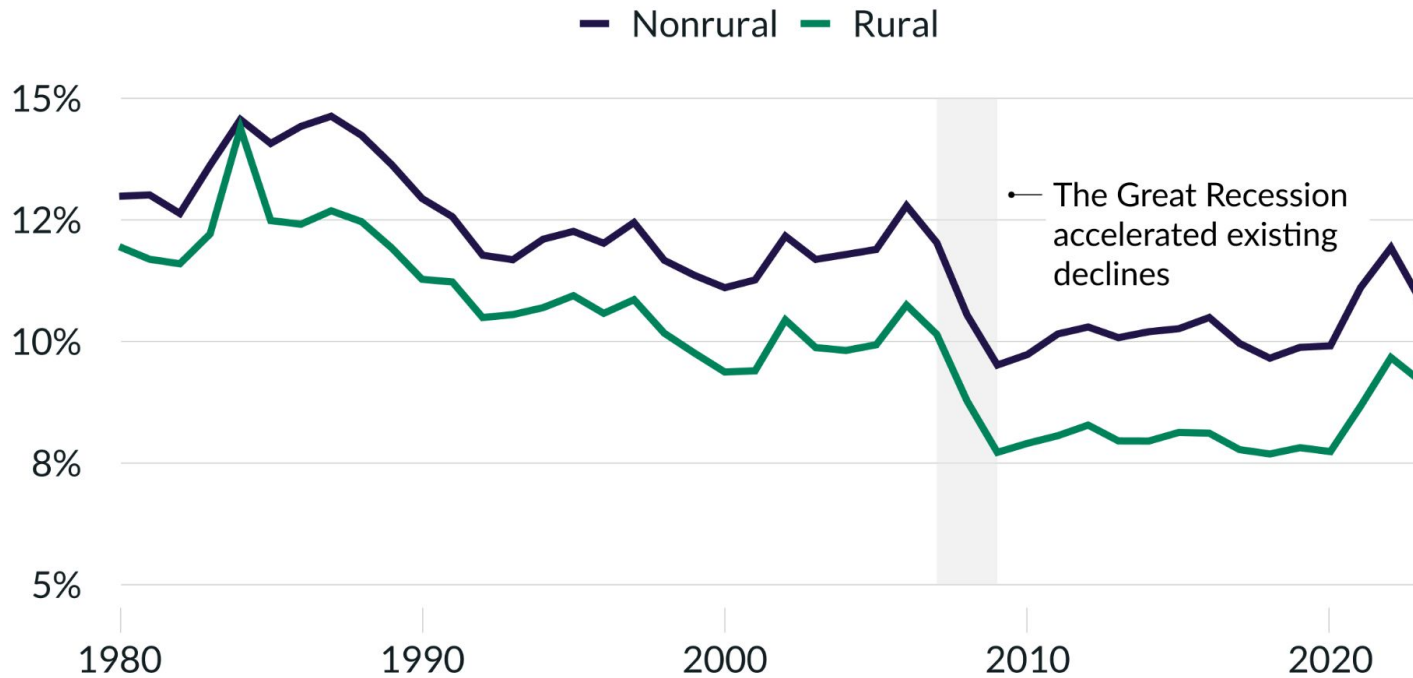
Yet, entrepreneurial aspirations and self-employment are higher in rural areas. ([2024 G.R.O.W. Report](#), [ACS, 2024](#))



The BIGGER Problem in Rural

Business entry rates show modest recovery post-recession but remain below historical levels

Share of establishments entering the market in the prior 12 months



Rural entrepreneurs and rural workers are less likely to have the resources to start and scale a business and to pivot into new careers
[\(CORI, 2025\)](#)

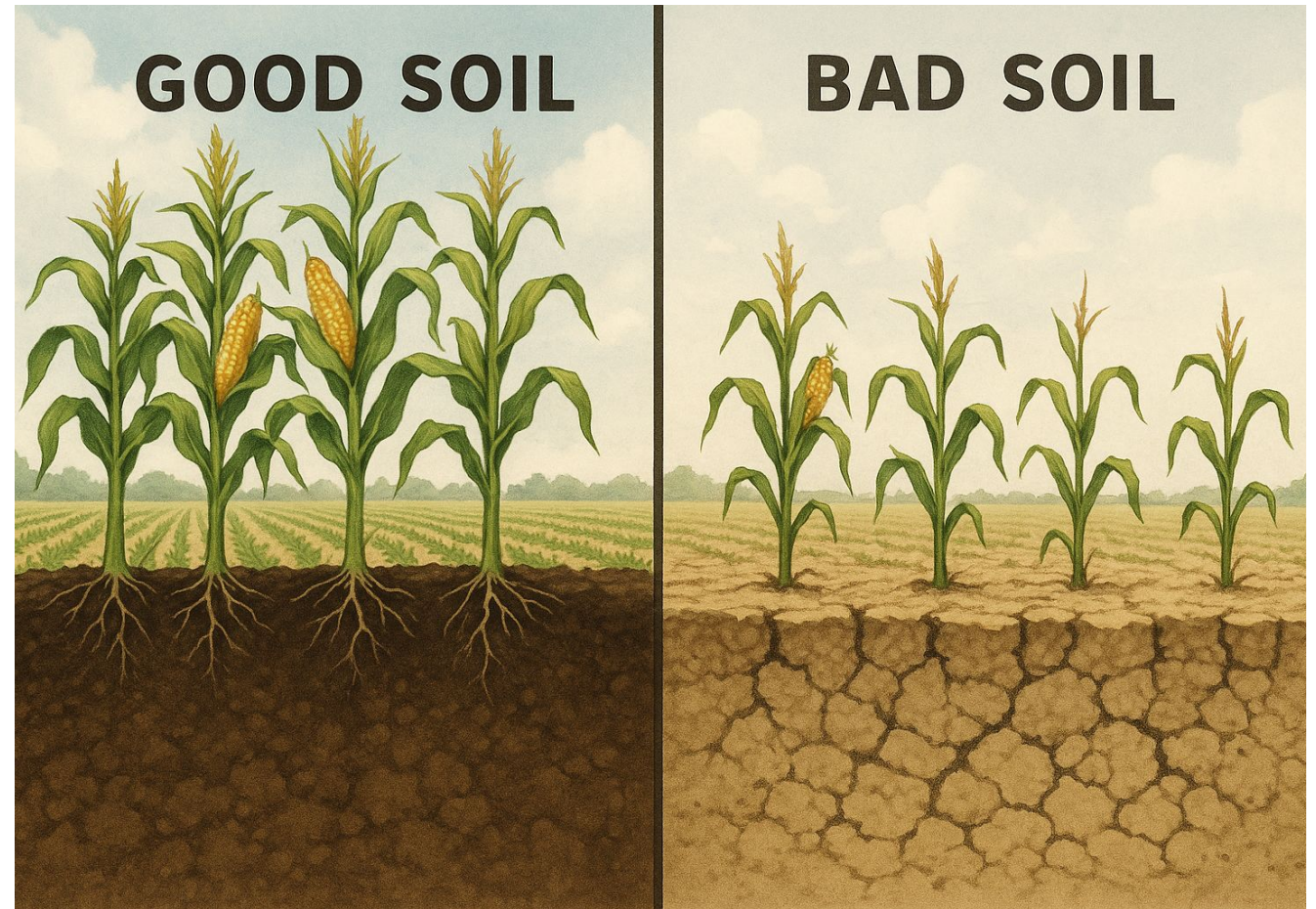
Source: CORI analysis of Census data (Business Dynamics Statistics).

Note: 'Rural' refers to the nonmetro definition which includes all nonmetro counties.



Rural-Urban Gaps Are Not About Destiny ... It's About Decisions

Decisions about which places have access to the **foundational elements**, **necessary infrastructure**, and the **direct drivers** of economic development



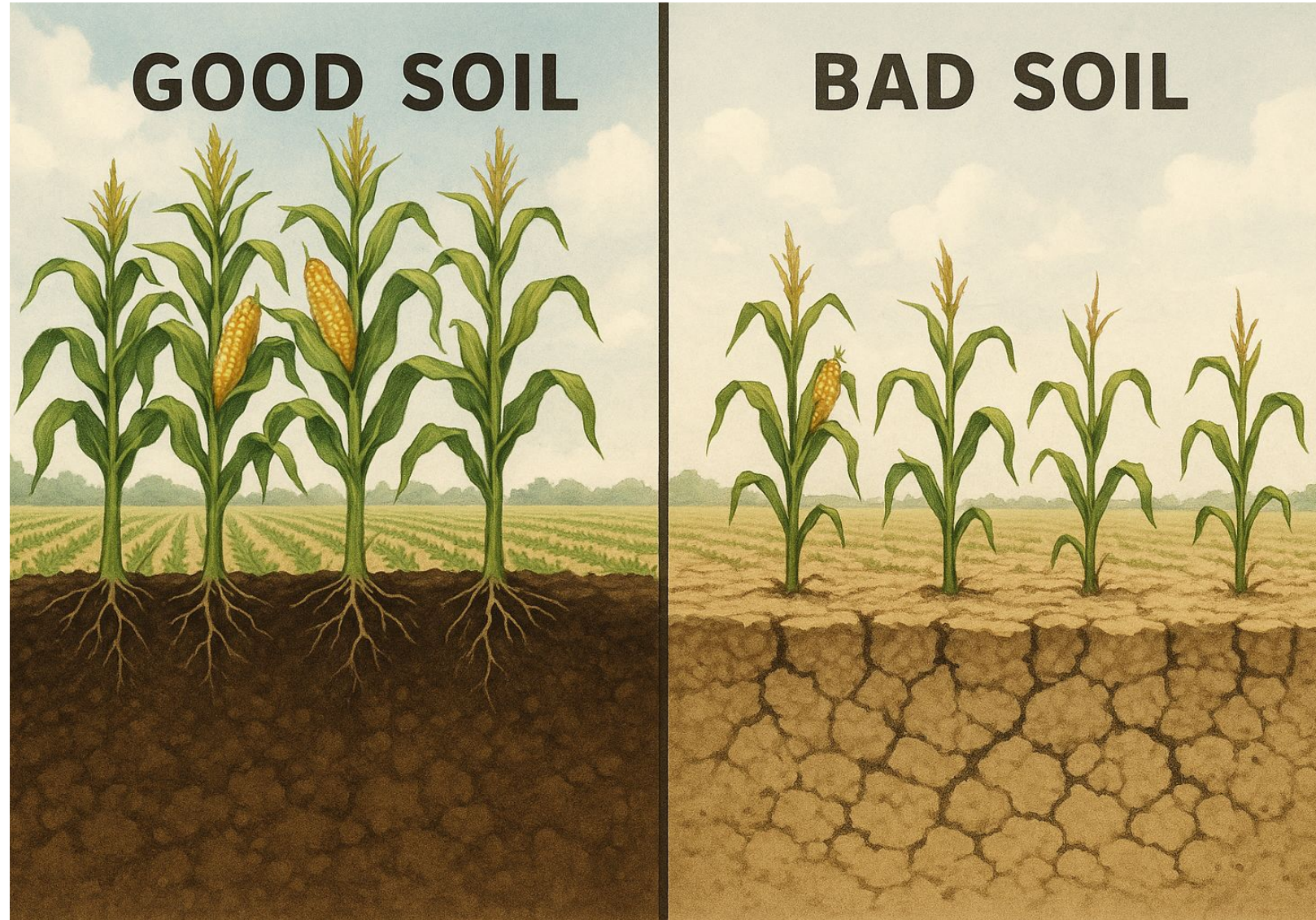
3. The Good Soil of Economic Development



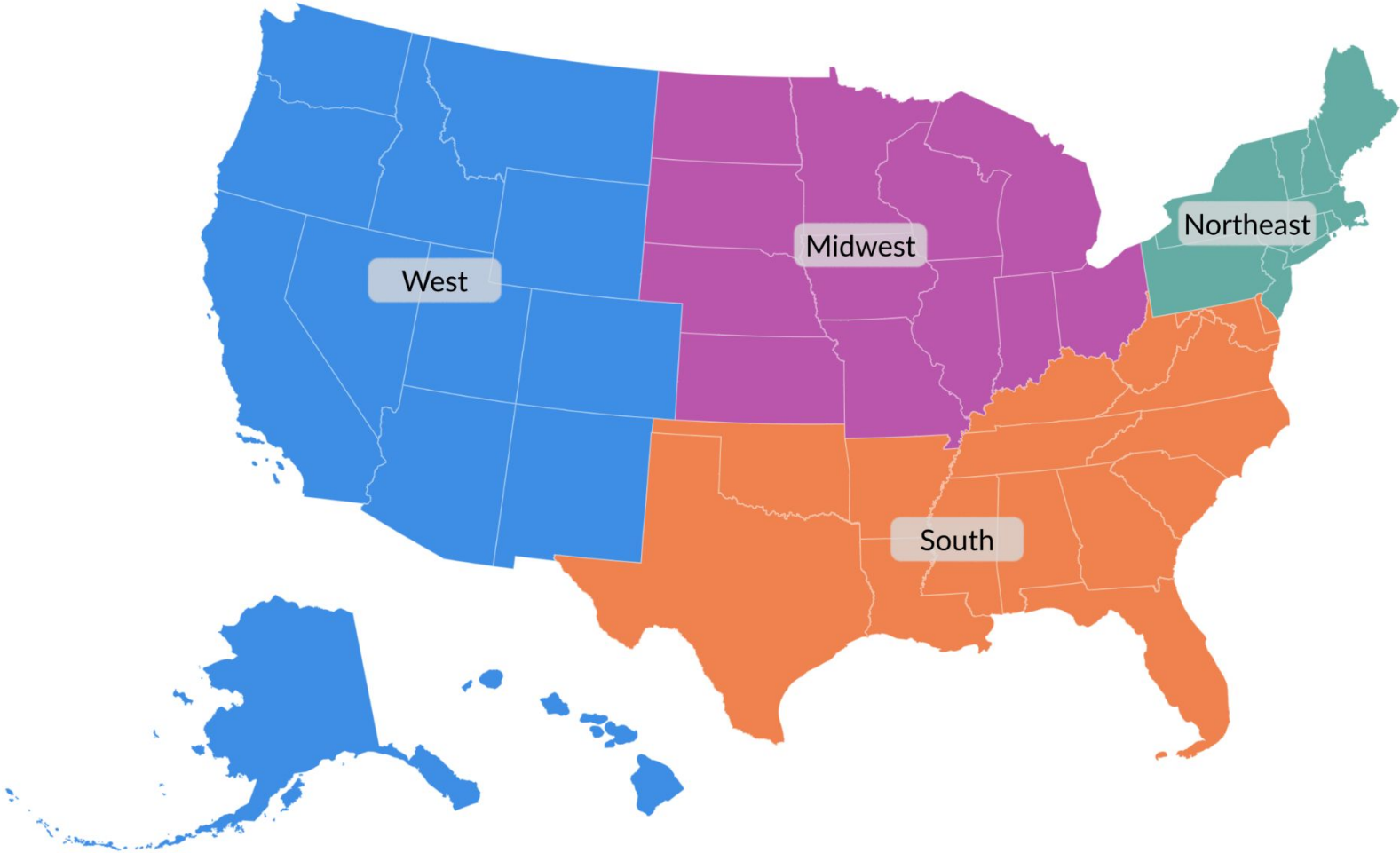
The Soil of Economic Development

Rural **electrification** in the 1930s spurred structural economic transformation for rural areas

[\(Gaggl et al., 2021\)](#)



Regional Patterns Across Rural America



Census Regions

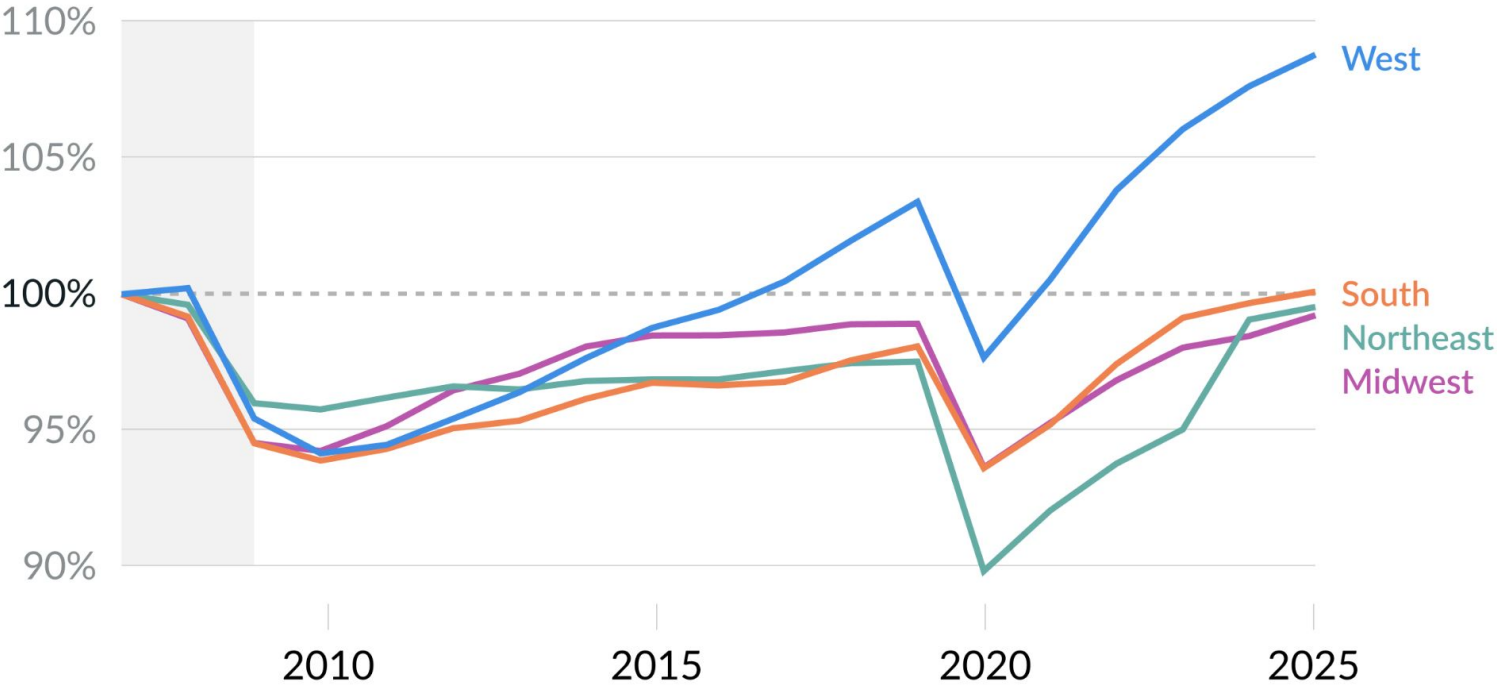
Source: TigerLINE sourced via 'tigris' package.



Uneven Regional Patterns in Rural Job Growth

West leads Rural job recovery post-recession

Relative change in Rural employment since the Great Recession, by rural census region



Rural job growth has been strongest in the West

Regional differences reflect:

- Amenity migration & population trends
- Industry mix

Source: CORI analysis of Bureau of Labor Statistics data (QCEW); 2025 values from Q2 quarterly data. Note: Percentages relative to January 2007; shaded area indicates Great Recession (2007 to 2009). 'Rural' refers to the nonmetro definition which includes all nonmetro counties.

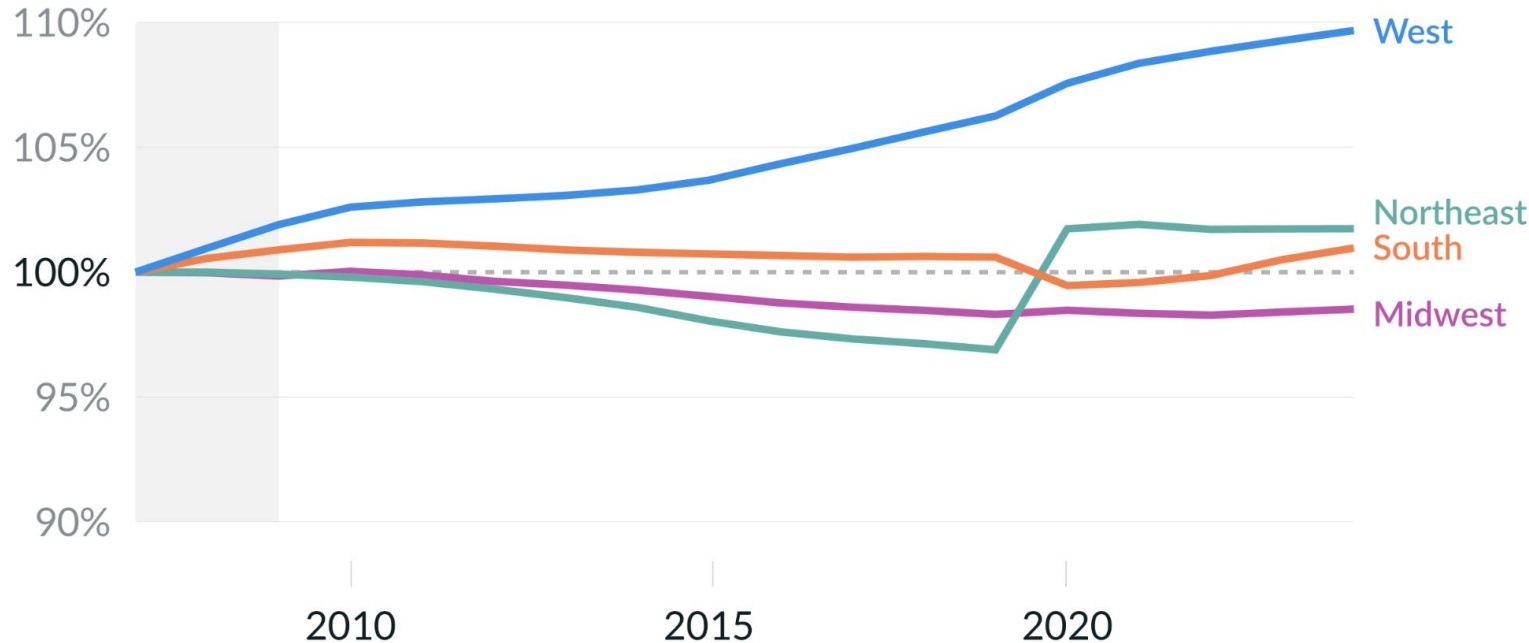


Strong Population Growth in the Rural West

Regional rebalancing: Rural population growth concentrates in the West



Relative change in Rural population since the Great Recession, by rural census region



Population growth in the rural West has been gradual and sustained

The rural Northeast experienced a sudden surge during COVID

Source: CORI analysis of Census data (Population Estimates Program).

Note: Percentages relative to January 2007; shaded area indicates Great Recession (2007 to 2009).

'Rural' refers to the nonmetro definition which includes all nonmetro counties.

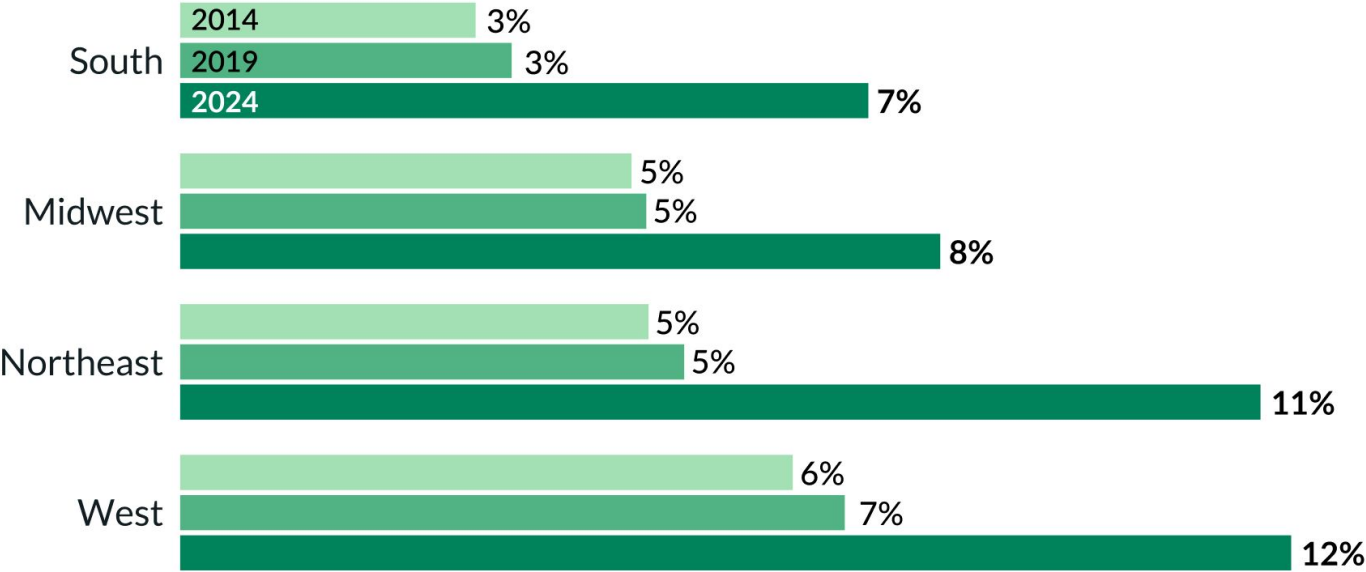


Remote Work Has Enabled Migration Shifts

Remote work adoption surged post-pandemic across all rural regions



Share of workforce working from home, by rural census region



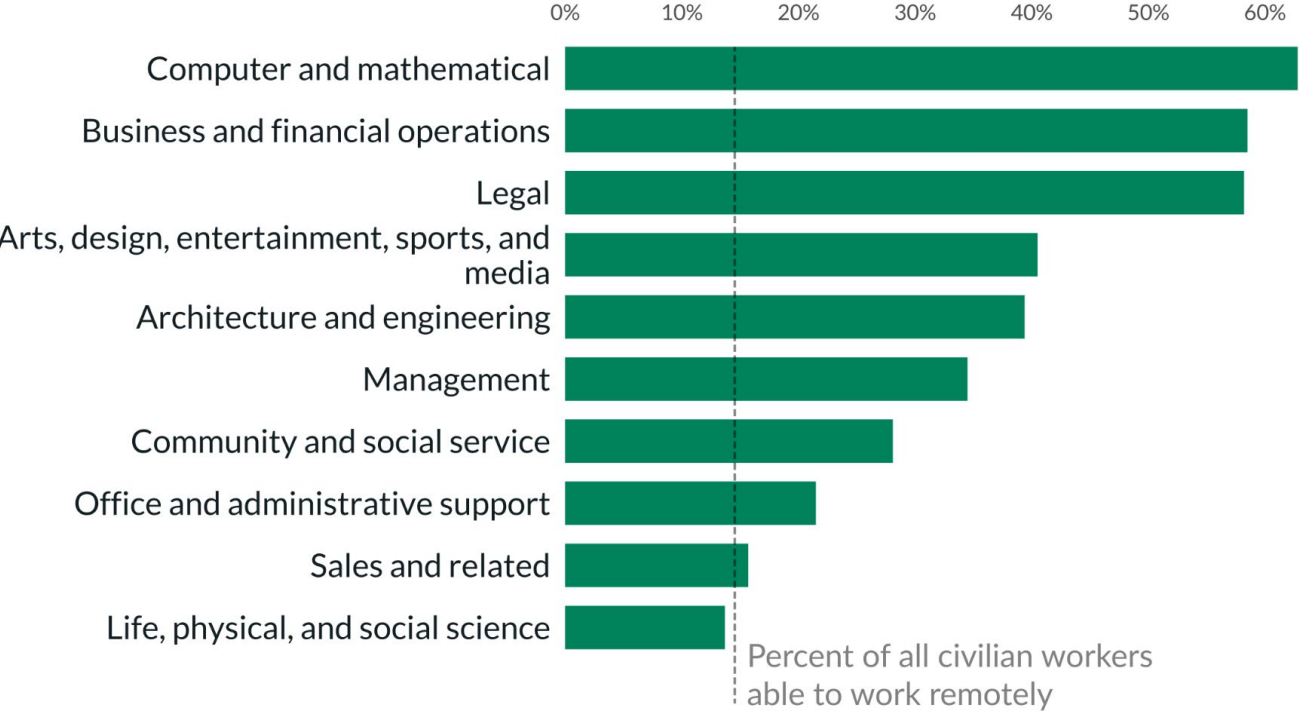
Source: CORI analysis of American Community Survey 5-year estimates.
Note: 'Rural' refers to the nonmetro definition which includes all nonmetro counties.



Remote Work Access Varies by Occupation

Ability to work remotely varies across occupation groups

Percentage of workers with the ability to telework, by major occupation group



Tradable services occupations have the greatest access to remote work—led by tech jobs at **63%**

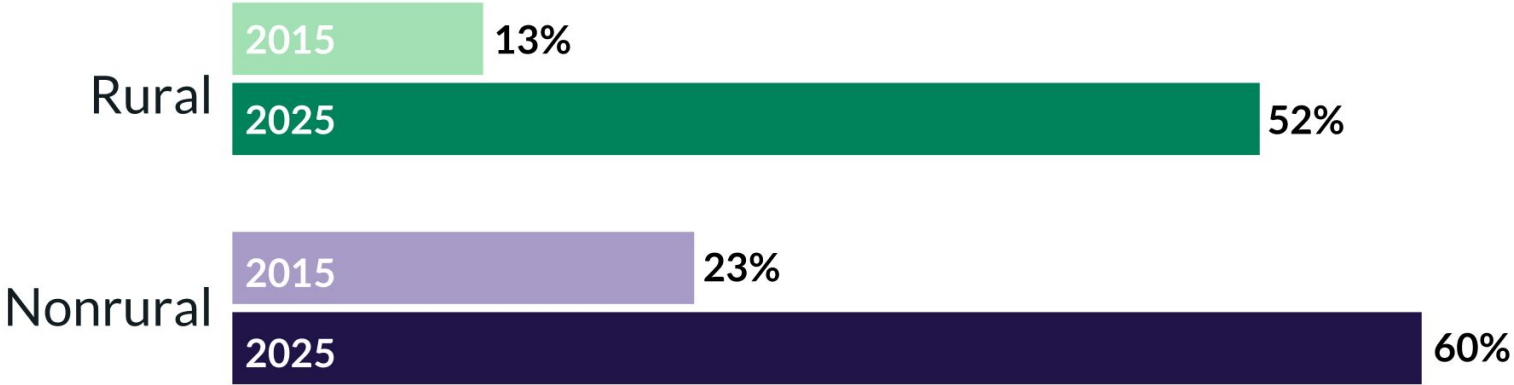
Source: CORI analysis of Bureau of Labor Statistics data (Occupational Requirements Survey, 2025).
Note: Major occupation groups below 10% telework capability are not shown.
'Rural' refers to the nonmetro definition which includes all nonmetro counties.



Broadband Is Fundamental Infrastructure

A decade of fiber infrastructure investment transforms broadband access

Share of households/locations with fiber access



Better broadband access can be leveraged to drive job growth and **increase the number of businesses** ([CORI, 2024](#))

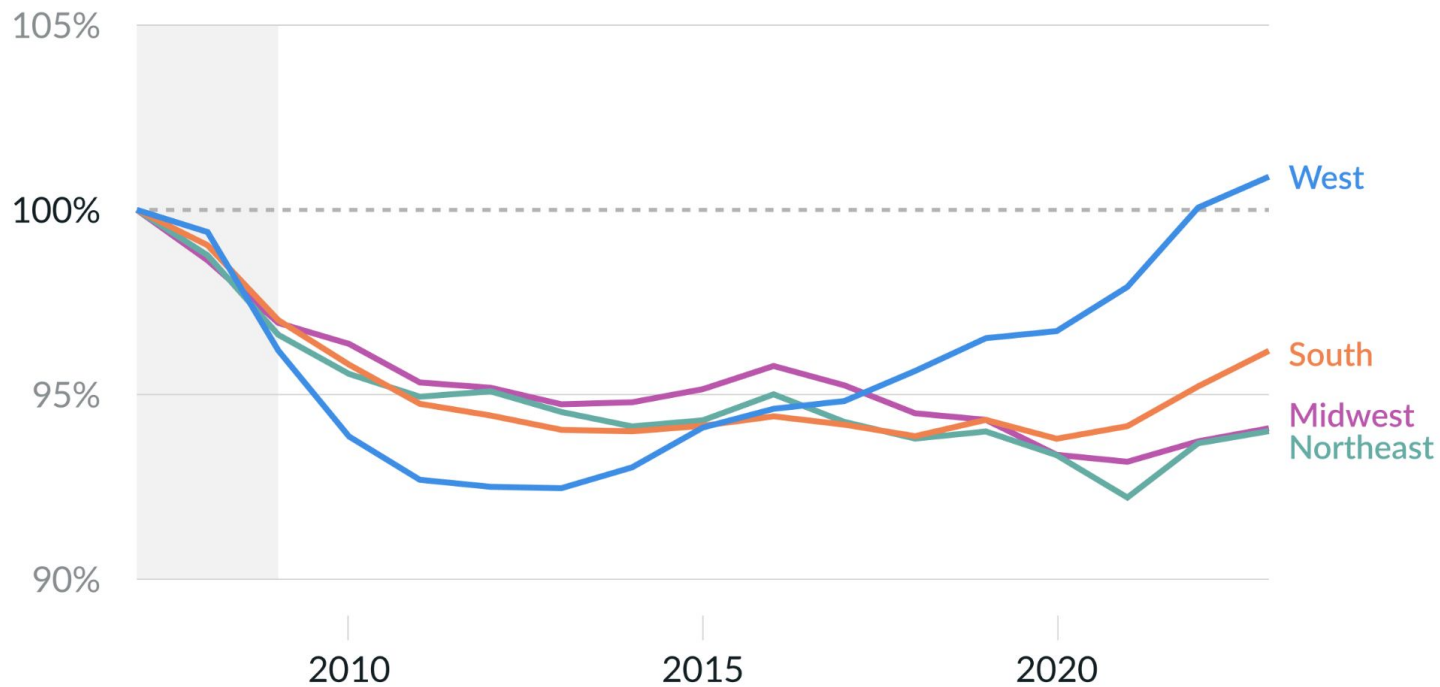
Source: CORI analysis of FCC broadband and staff estimates data.
Note: 2015 data from FCC Form 477; 2025 data from FCC Broadband Data Collection.
'Rural' refers to the nonmetro definition which includes all nonmetro counties.



Business is Booming in the Rural West

West is only Rural region to recover from business-creation-setback post-recession

Relative change in establishments since the **Great Recession**, by rural census region



Highly skilled workers are more likely to start businesses in high-amenity regions, especially the rural Mountain West
(Conroy and Watson, 2023)

Source: CORI analysis of Business Dynamics Statistics.

Note: Percentages relative to January 2007; shaded area indicates Great Recession (2007 to 2009).

'Rural' refers to the nonmetro definition which includes all nonmetro counties.



Survey of Entrepreneurs



Question:

What attracts innovative entrepreneurs to a location?

Answer:

Talented workers, and the **quality of life** that these workers like

([Endeavor, 2014](#))

The Ball Corporation

“There was **nothing** about the **town** that particularly **appealed to me**, but the men were all courteous, kind, and businesslike”

— Frank Clayton Ball, 1887

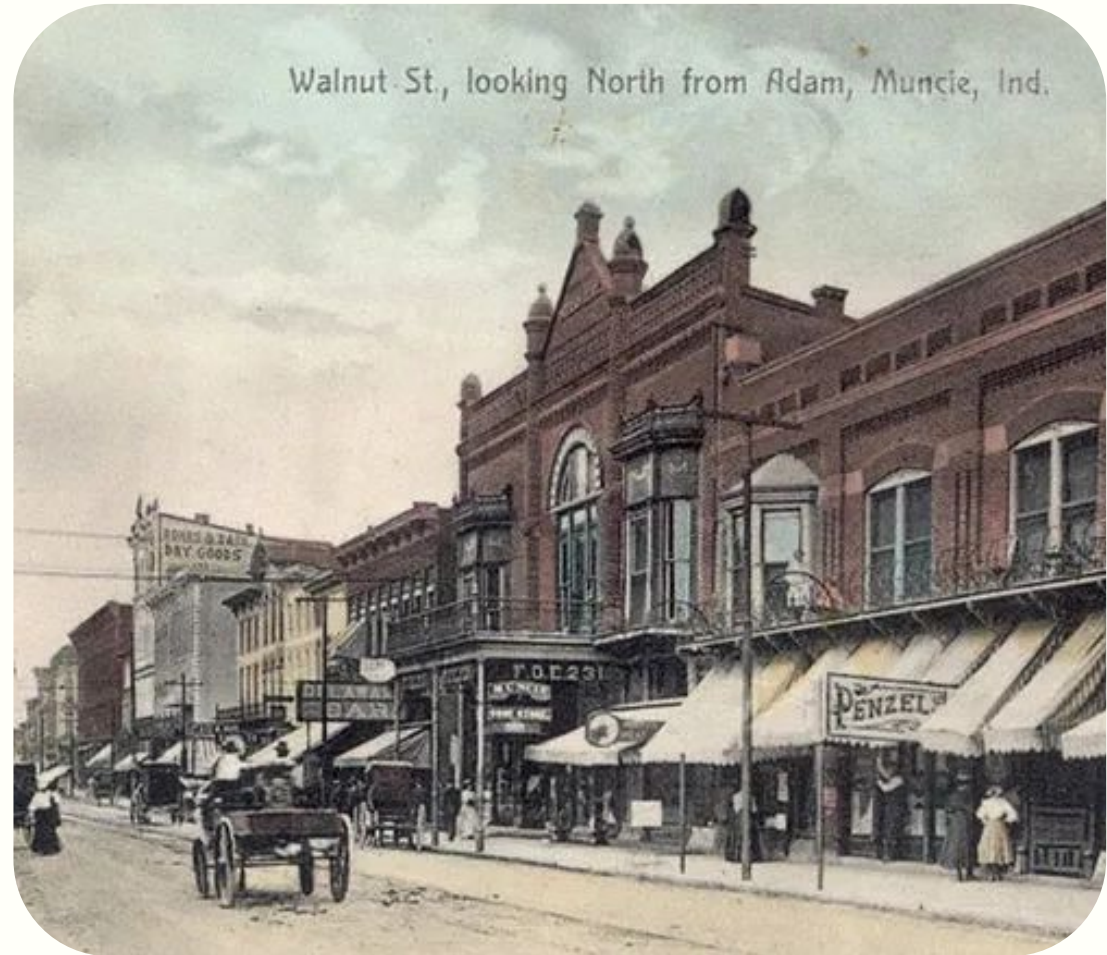


Muncie Population in 1880: 5,000

The Ball Corporation

“There was **nothing about the town that particularly appealed to me**, but the men were all courteous, kind, and businesslike”

— *Frank Clayton Ball, 1887*



Muncie Population in 1880: 5,000

The Importance of Quality of Life

“The success of cities hinges more and more on cities’ role as centers of consumption” ([Glaeser, Kolko, Saiz, 2001](#))



Boulder, CO (Population: 100,000)

Quality of Life

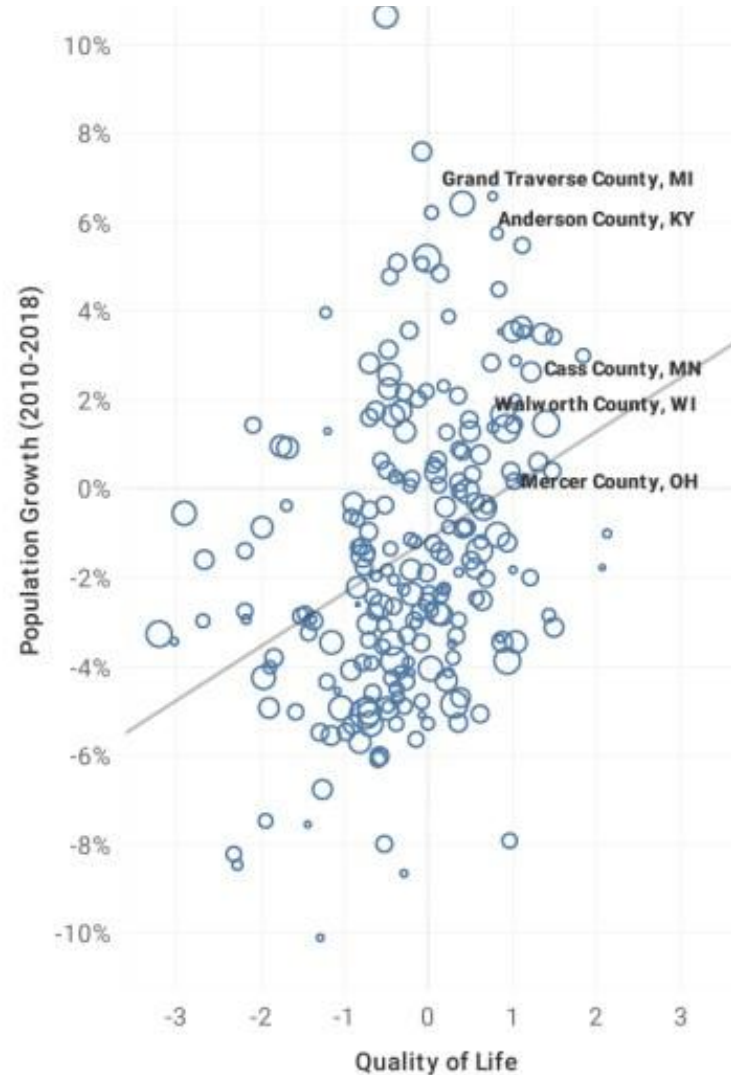
Matters for **population growth** and **job growth** (and business startups)

([Weinstein, Hicks, Wornell, 2023](#), [Partridge, 2010](#), [Conroy and Watson, 2023](#))

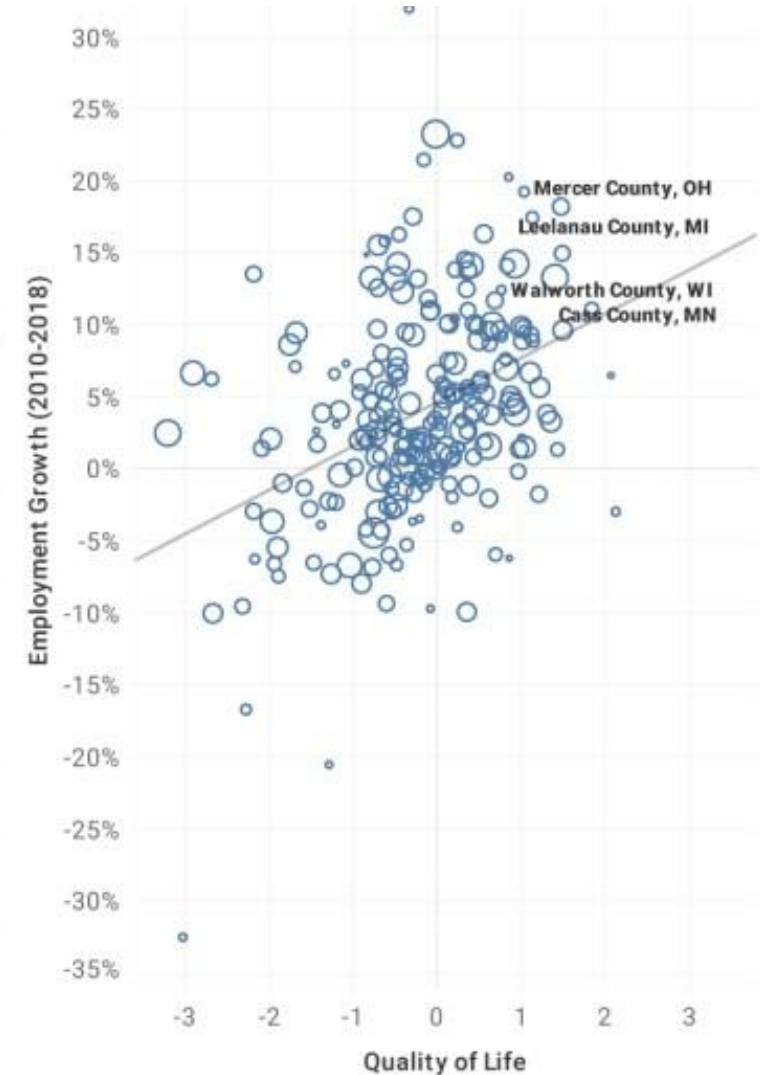
Especially true for **small towns** (rural areas) and for the **Midwest**

([Austin, Weinstein, Hicks, Wornell, 2022](#))

population growth



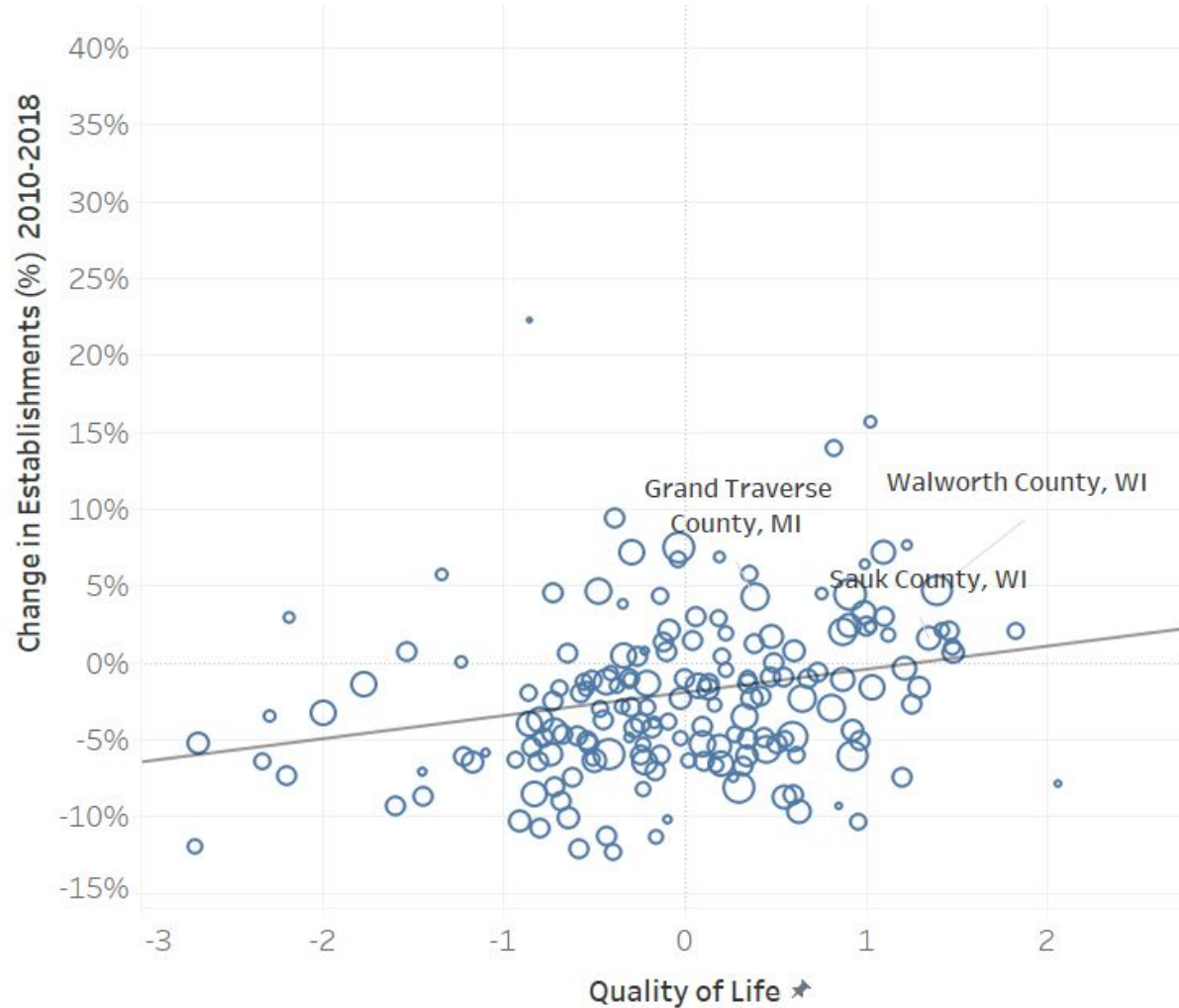
job growth



Source: Authors' calculations using Census Bureau data

Quality of Life → More Business Startups

Midwestern Small Towns



[Find Your Place](#) [Best Places](#) [Topics](#)

Why Entrepreneurs, Tech Start-ups Are Flocking to Traverse City, MI



The vibrant entrepreneurial ecosystem is complemented by a supportive community.

More Like This

By Heather Cherry on September 28, 2022



Hybrid Robotics in Traverse City, MI, designs and manufactures robotic solutions for research and inspections.

Building Local Economic Dynamism

Foundational Elements

- Housing
- Public Health and Safety
- Public-Sector Leadership and Support
- Postsecondary Education Partnerships
- Culture and Entertainment Options
- Private- and Nonprofit-Sector Engagement
- Quality Pre-K-12 Education and Accessible Childcare
- Attractive "Live-Work" Downtown

Necessary Infrastructure

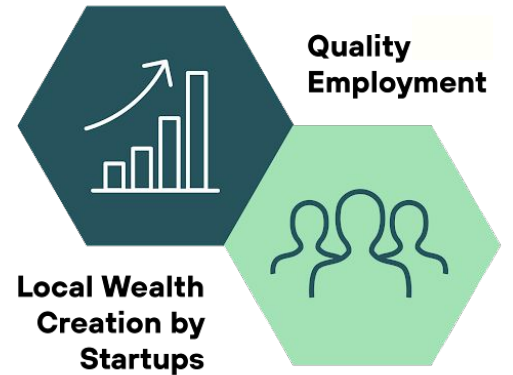
- Broadband Infrastructure
- Local Leadership Capacity
- Coworking and Entrepreneurship Spaces

Direct Drivers

- Scalable Tech Entrepreneurship Support and Incubation
- Access to Capital
- Inclusive Tech Culture-Building
- Access to Tech Jobs
- Tech Workforce Development and Support

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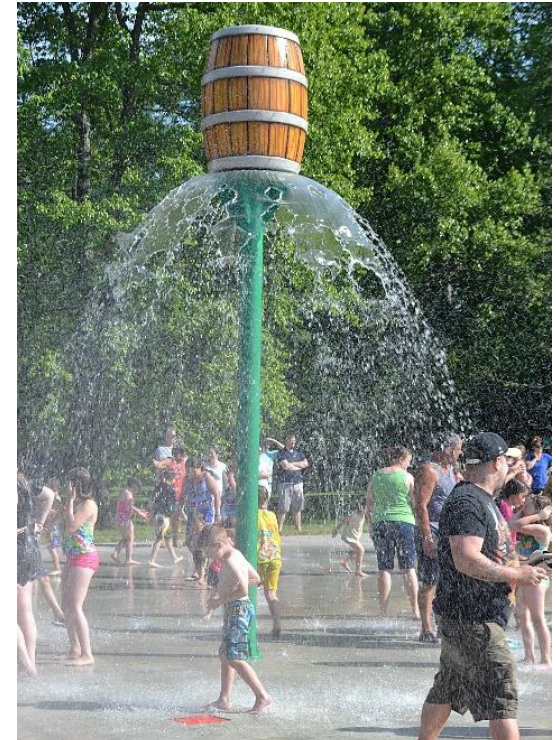
OUTCOMES



QUALITY OF LIFE
for residents

Quality of Life

- Recreation
- Arts & Culture
- Food stores
- Personal care places
- **Better health**
- Low crime rates
- Good schools
- Work from home (broadband)



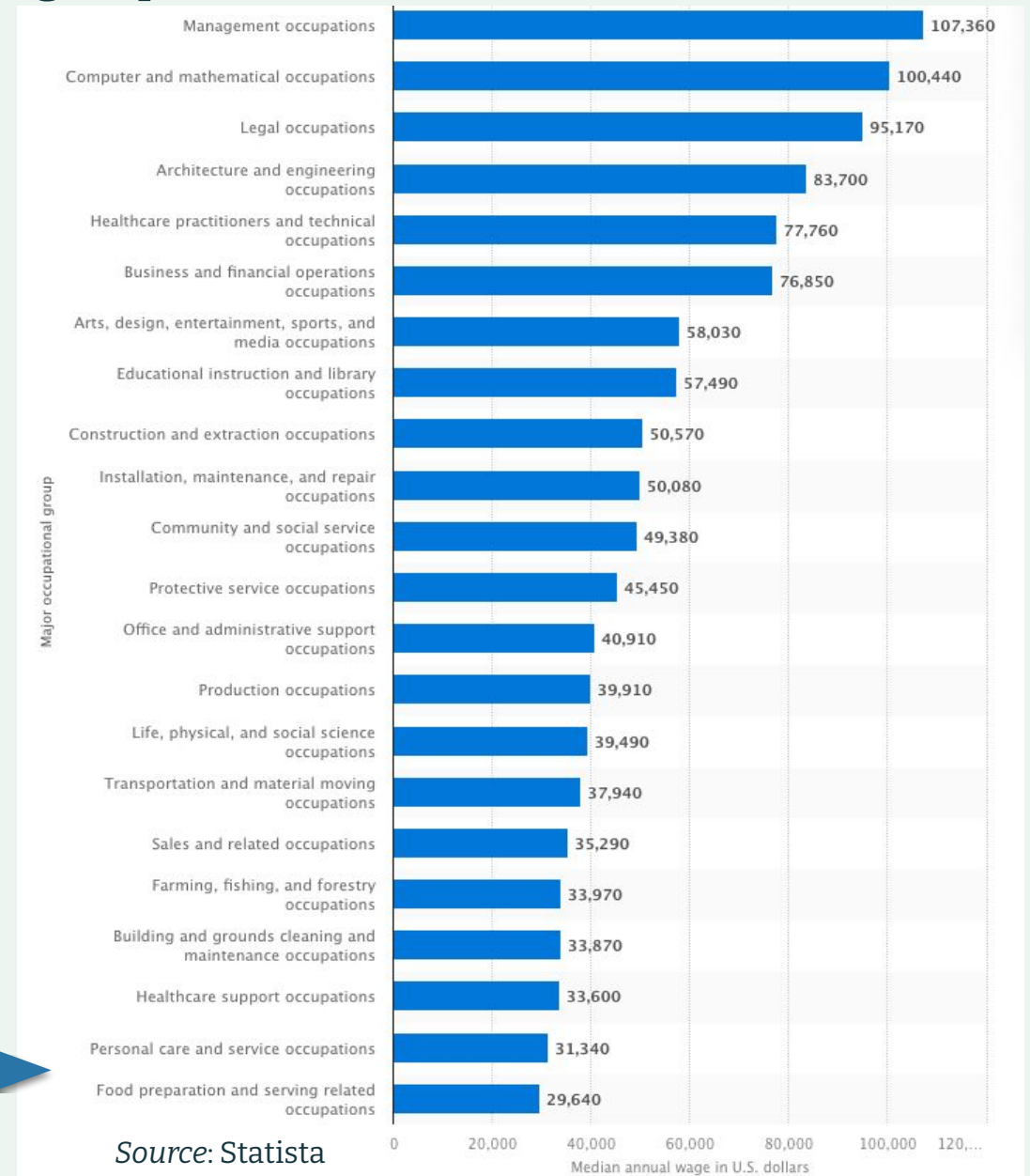
(Weinstein, Hicks, Wornell, 2023)

Access to Economic Opportunity

Many rural areas already offer a high quality of life, yet lack access to larger labor markets with higher paying jobs

Rural residents in high amenity places have higher incomes, but the higher cost of living in these areas cancels out those income gains ([Hunter et al., 2005](#))

Median annual wage by major occupational group (2022)



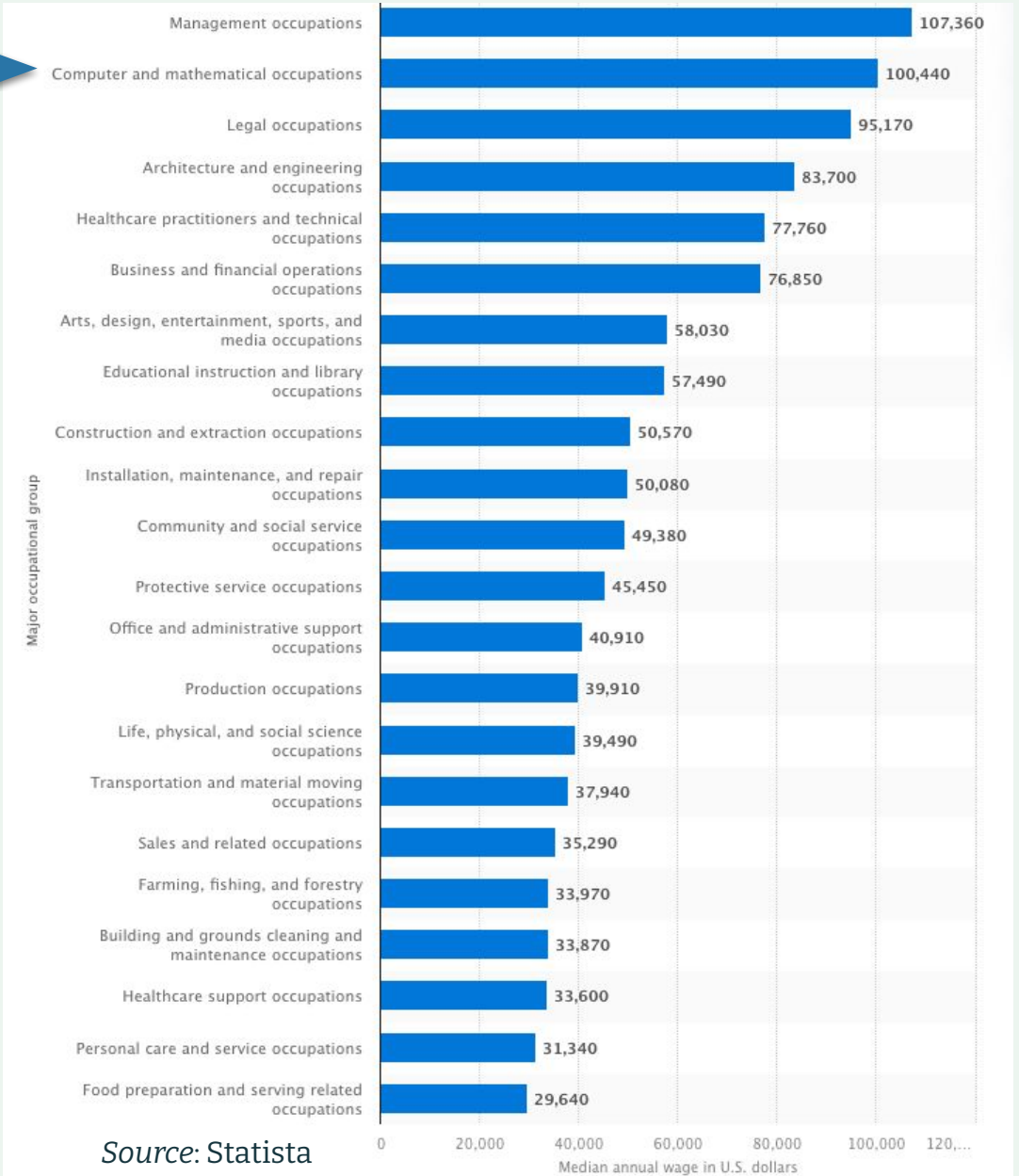
Access to Economic Opportunity

Rural residents need accessible pathways into higher paying careers: *tradable service jobs and entrepreneurship*

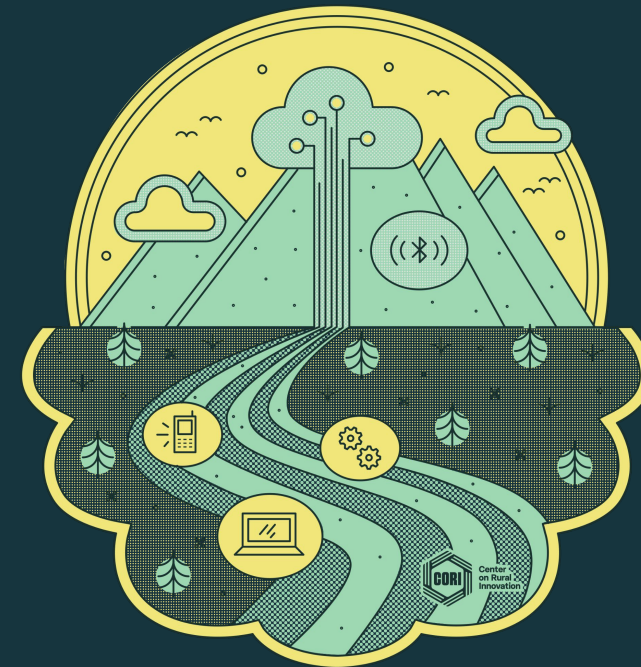
Rural entrepreneurs out earn rural workers

[\(Yu & Artz, 2018\)](#)

Median annual wage by major occupational group (2022)



4. Rural Innovation Ecosystems



Building Local Economic Dynamism

Foundational Elements

Housing

Public Health and Safety

Public-Sector Leadership and Support

Postsecondary Education Partnerships

Culture and Entertainment Options

Private- and Nonprofit-Sector Engagement

Quality Pre-K-12 Education and Accessible Childcare

Attractive "Live-Work" Downtown

Necessary Infrastructure



Broadband Infrastructure



Local Leadership Capacity



Coworking and Entrepreneurship Spaces

Direct Drivers



Scalable Tech Entrepreneurship Support and Incubation



Access to Capital



Access to Tech Jobs



Tech Workforce Development and Support



Inclusive Tech Culture-Building

OUTCOMES



Local Wealth Creation by Startups

Quality Employment



CONNECTION

Connecting residents and businesses to markets, to each other, to ideas, and to resources



Necessary Infrastructure

*“Researchers widely agree that **high-speed internet** improves economic outcomes of rural areas, whether it is through increases in **business activity** or in more general economic development measures (e.g. **productivity, jobs, income**)”*

(Mack et al., 2023)

Bemidji, Minnesota

- **Gigazone fiber network**
- **Bemidji Technology Park**
 - Business park supporting tech companies with infrastructure and resources for growth
- **GigaZone Gaming Championship and TechXpo**
 - Esports gaming competition and technology expo
- **NORTHSTARup Pitch Competition**
- **Launchpad**
 - Startup incubator and coworking space



Building Local Economic Dynamism

Foundational Elements

Housing

Public Health and Safety

Public-Sector Leadership and Support

Postsecondary Education Partnerships

Culture and Entertainment Options

Private- and Nonprofit-Sector Engagement

Quality Pre-K-12 Education and Accessible Childcare

Attractive "Live-Work" Downtown

Necessary Infrastructure



Broadband Infrastructure



Local Leadership Capacity



Coworking and Entrepreneurship Spaces

Direct Drivers



Scalable Tech Entrepreneurship Support and Incubation



Access to Capital



Inclusive Tech Culture-Building



Access to Tech Jobs



Tech Workforce Development and Support

Tech workforce development & startup support

OUTCOMES



Local Wealth Creation by Startups

Quality Employment





Direct Drivers - Workforce Development

“Better **skills for local workers** help attract and grow higher-wage jobs.” ([Bartik, 2018](#))

92% of jobs now require digital skills and workers with even one digital skill earn **23%** more than those without ([Bergson-Shilcock et al., 2023](#))





Direct Drivers - Entrepreneurship

“A skilled workforce fuels entrepreneurship, and entrepreneurship is one of the clearest paths to rural renewal.”

(Center on Rural Innovation, 2025)

Building Local Economic Dynamism

- Foundational Elements**
- Housing
 - Public Health and Safety
 - Public-Sector Leadership and Support
 - Postsecondary Education Partnerships
 - Culture and Entertainment Options
 - Private- and Nonprofit-Sector Engagement
 - Quality Pre-K-12 Education and Accessible Childcare
 - Attractive "Live-Work" Downtown

Necessary Infrastructure

- Broadband Infrastructure
- Local Leadership Capacity
- Coworking and Entrepreneurship Spaces

Direct Drivers

- Scalable Tech Entrepreneurship Support and Incubation
- Access to Capital
- Access to Tech Jobs
- Inclusive Tech Culture-Building
- Tech Workforce Development and Support

OUTCOMES

- Local Wealth Creation by Startups
- Quality Employment

It's a ~~Vicious~~ → Virtuous Circle

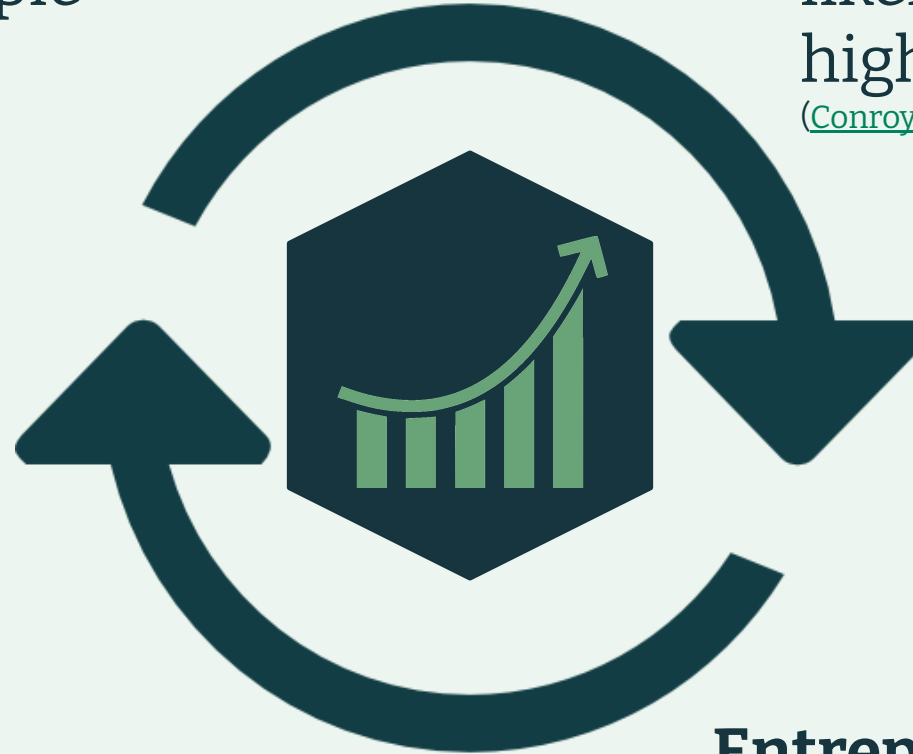
High quality of life places
keep & attract more people

[\(Weinstein, Hicks, Wornell, 2023\)](#)

Small businesses can
increase quality of life
providing local goods &
services we need and
want

[\(Weinstein, Hicks, Wornell, 2023\)](#)

Growth of **startups** in
tradable services → local wealth
creation & reinvestment → quality of life



Highly skilled workers more
likely to **start businesses** in
high-amenity places

[\(Conroy and Watson, 2023\)](#)

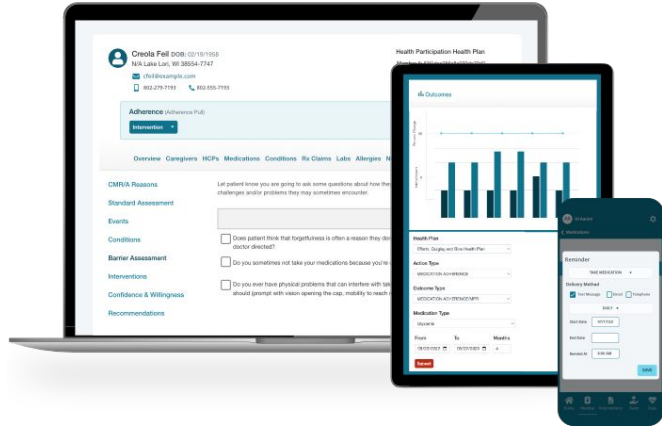
**Small locally owned
firms** have a larger
impact on economic
growth

[\(Fleming and Goetz, 2011; Wilmoth, 2023\)](#)

Entrepreneurs increase
growth in lagging regions

[\(Stephens and Partridge, 2011\)](#)

The Nation's Innovation Landscape Must Include Rural



Keri LeCompte
Montpelier, VT



Medication therapy management software



Dr. Matthew Allen
Buena Vista, CO



Patient experience platform for the dental industry



Ehsan Soltan
Rupert, ID



Monitoring soil, crops, and storage



Tammy Lee
Red Wing, MN



FDA-registered Class I cool therapy products



Thank you

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