



CENTER FOR CITY SOLUTIONS



Bridging the Urban-Rural Economic Divide

About the National League of Cities

The National League of Cities (NLC) is the nation's leading advocacy organization devoted to strengthening and promoting cities as centers of opportunity, leadership and governance. Through its membership and partnerships with state municipal leagues, NLC serves as a resource and advocate for more than 19,000 cities and towns and more than 218 million Americans. NLC's Center for City Solutions provides research and analysis on key topics and trends important to cities, creative solutions to improve the quality of life in communities, inspiration and ideas for local officials to use in tackling tough issues, and opportunities for city leaders to connect with peers, share experiences and learn about innovative approaches in cities. Learn more at www.nlc.org.

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Introduction

The facts are stark. Economic change and recovery in our nation have resulted in vastly different opportunities and outcomes for individuals and families based on where they live. An urban-rural divide narrative is solidifying around these trends. It's one that touts (or bemoans) the all-consuming growth of our nation's largest cities and laments rural communities as devoid of economic potential. It juxtaposes urban and rural areas, pitting them against each other and, ultimately, isolating them from each other.

The narrative, whether political, economic or cultural, ignores nuances within broader urban-rural trends, all while largely avoiding solutions for more sustainable growth. Rural poverty, drug abuse, infant mortality and feelings of hopelessness are very real, but so too is rural entrepreneurship.¹ Even, as many major cities prosper, their success has been questioned as “uniquely vulnerable to future shocks,” due to gentrification, lack of affordability and industrial hyper-specialization.²

It's time for the narrative to shift from urban vs. rural to a shared economic future. Bridging the economic divide between urban and rural areas will require states, regions and localities to understand and bolster *the relationship between urban and rural areas* in economically meaningful and strategic ways.

A 2011 study examining the interdependence between Minnesota's urban and rural areas found that urban regions receive substantial economic benefits from improved prosperity in rural areas. Every \$1 billion increase in rural manufacturing output produces a 16% increase in urban jobs, significant additional business-to-business transactions and statewide consumer spending and investment.³ Similarly, a study of the Sacramento, California, region found that the majority of jobs and economic activity resulting from the region's rural food and agriculture cluster occurred in urban parts of the region.⁴ Integrated urban and rural areas can boost each other's economies, with ripple effects of that success felt throughout the region and state.

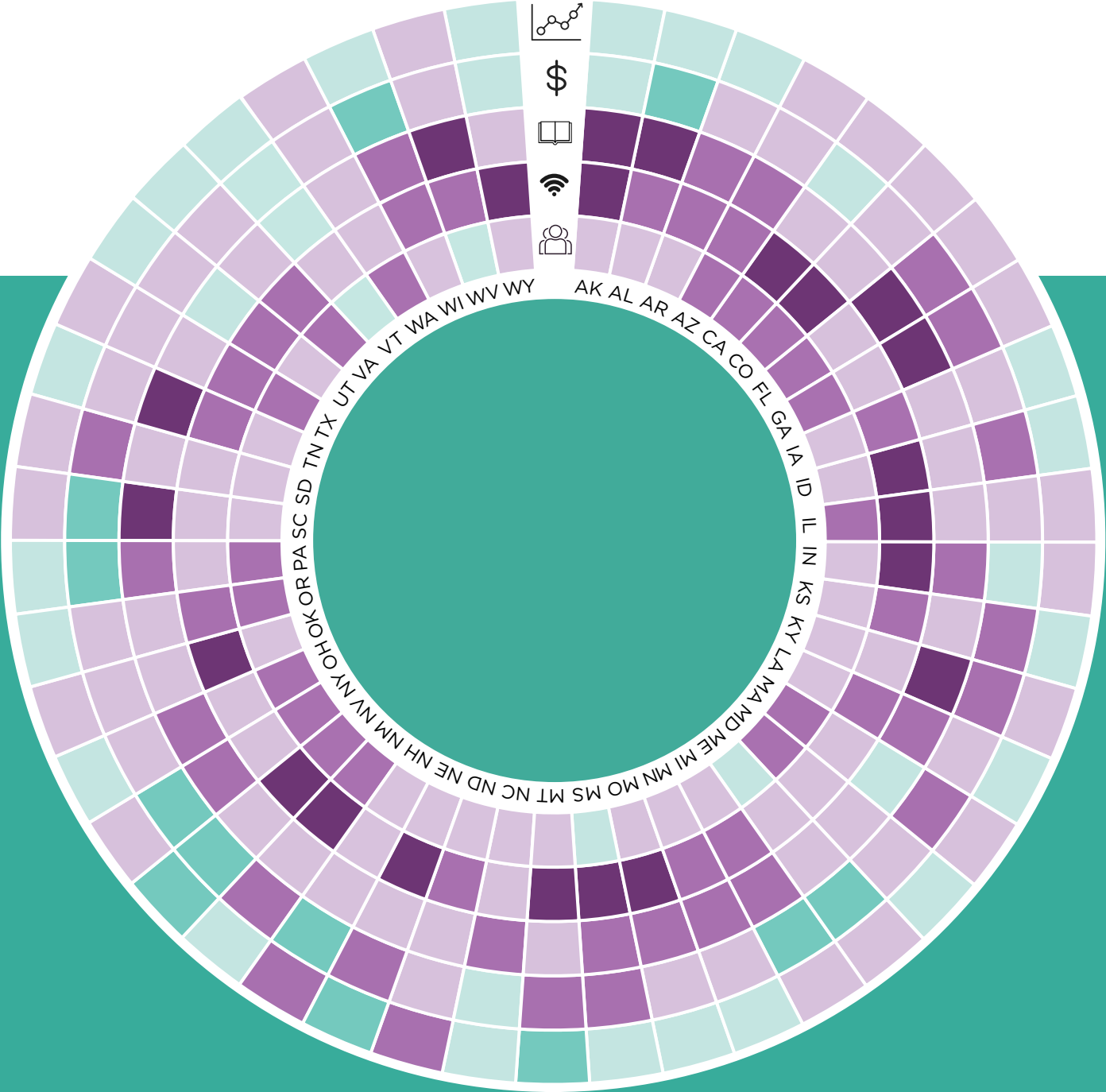
A viable path toward long term growth, then, is to strengthen these urban-rural economic interdependencies. This approach, however, has been largely unexplored or not taken to scale with the exception of a few cases. *Bridging the Urban-Rural Economic Divide* provides a first step. This report provides an analysis of urban and rural divides in economic inputs, business environments and economic outcomes as well as the ways in which they are intertwined. These characteristics not only shape the economic landscape but offer glimpses into opportunities for more impactful policies and programs to bridge the divide.

A scenic landscape featuring a river flowing through a lush green forest. In the background, majestic mountains rise against a clear blue sky. The foreground is dominated by a large, weathered log lying horizontally across the frame. The overall atmosphere is serene and natural.

“

It's time for the narrative to shift from urban vs. rural to a shared economic future. Bridging the economic divide between urban and rural areas will require states, regions and localities to understand and bolster *the relationship between urban and rural areas* in economically meaningful and strategic ways.

Bridging the Urban-Rural Economic Divide



More rural **More urban**

Narrow divide

Urban-rural divide is the percentage difference between urban and rural areas for each measure by state.

Population
 Access to broadband
 Education

High-value business growth
 Prosperity growth

See appendix for individual state data.

This analysis finds that:

- In all states, urban areas outpace their rural counterparts in **broadband access**. States with overall higher levels of broadband access also have more significant urban-rural digital divides, underscoring the importance of extending affordable broadband to rural areas.
- States with strong levels of **educational attainment** have less conspicuous educational divides between urban and rural areas. Often, rural areas are home to universities, which connect rural residents to educational opportunities and narrow the gap.
- Although urban areas have somewhat stronger rates of **high-value business growth** (growth of establishments in exporting industry sectors), rural areas don't appear disadvantaged in this characteristic. In fact, many rural areas outpace their urban counterparts in creating high-value businesses.
- Most states do not have significant urban-rural divides in **prosperity growth**, defined as their per capita contributions to state GDP (gross domestic product). Both urban and rural areas contribute to states' economies.

These nuanced findings show the complexities of the urban-rural divide. One consistent theme, however, is the importance of infrastructure connectivity and market access, indicating that sustainable growth hinges on the *connectedness of places*, not necessarily their designation as urban or rural. In what follows, the report defines urban and rural, presents a detailed analysis of economic divides with comparative maps, and offers strategies, policy considerations and state, regional and local examples of those working to bridge the divide by strengthening urban-rural economic interdependencies.

Defining Urban and Rural



“The use of ‘urban vs. rural’ as shorthand for economic prosperity falls apart on some level. There are rural areas that enjoy prosperity, whether it’s built on tourism or an anchor institution such as a university. And there are urban areas that are struggling to provide jobs and services to residents, such as cities built on legacy manufacturing industries that have long since shuttered.”

// NORTH CAROLINA LEAGUE OF MUNICIPALITIES

Despite extensive national discussions about the urban-rural divide, the words “urban” and “rural” are not often defined in a parallel manner. Some researchers default to “metropolitan” and “non-metropolitan” as defined by the Office of Management and Budget. While data is more readily available using these categories, the terms are not entirely comparable with “urban” and “rural.” For example, in the

U.S., 20% of completely rural counties and 31% of mostly rural counties are part of metropolitan areas. Likewise, 6% of mostly urban counties are designated as non-metropolitan.⁵

Alternatively, this analysis defines urban and rural using the U.S. Census Bureau definition, which bases rurality on population size, density, land use and distance to an urban area.

Within these parameters, the bureau defines three levels of rurality: completely rural (704 counties), mostly rural (1,185) and mostly urban (1,253). In this report, we combine completely rural and mostly rural categories to allow us to examine and present state-by-state urban-rural divides. This analysis applies the bureau's definition to all 3,042 counties in the country. It also designates each county (instead of city) as either urban or rural because of limitations in economic data.

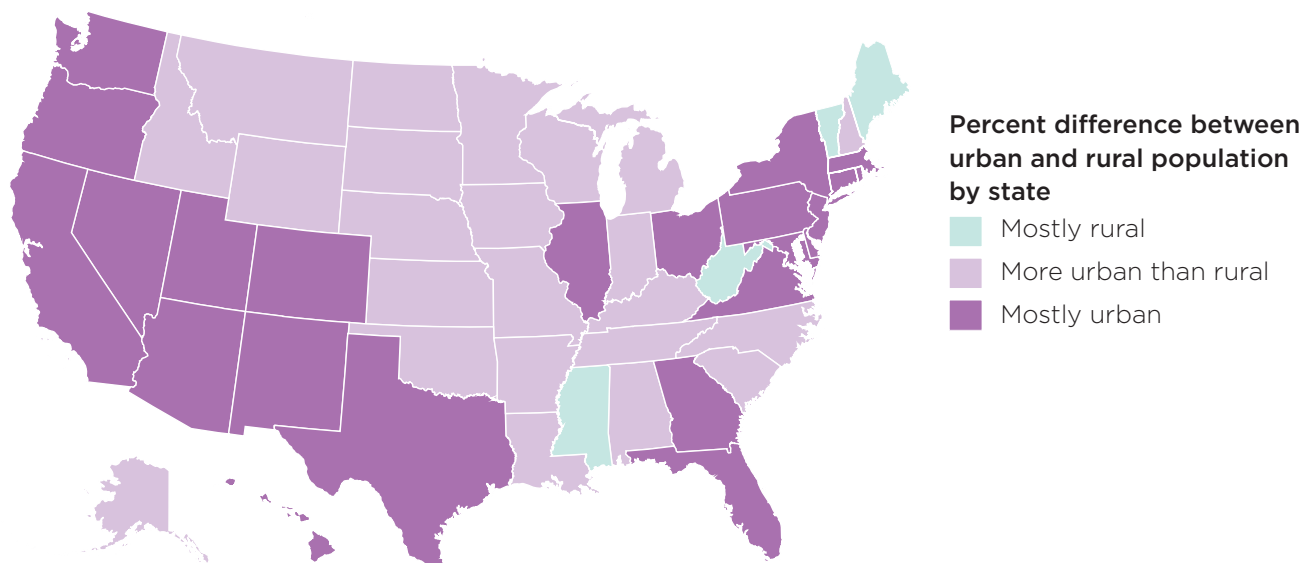
In the U.S., about four out of five (81%) people live in an urban area. Pennsylvania (79%), Oregon (81%), California (95%), New Jersey (95%), Nevada (94%) and Massachusetts (92%) are the most urban states in the country by percent of population (see Map 1 and appendix data table 1). California, Texas,

Florida and New York contain the largest urban populations. Maine (39%), Vermont (39%), West Virginia (49%) and Mississippi (49%) have the highest percentages of rural residents. Texas, North Carolina, Pennsylvania and Ohio have the largest number of rural residents of any state.

This analysis finds, however, that even this definition of urban and rural does not adequately capture the nuances of the urban-rural relationship. The following sections on broadband access, education, growth of high-value businesses and prosperity growth help to refine and broaden our understanding of urban and rural, and the economic relationships between them. All references to urban-rural divide are the percentage differences between urban and rural by state.

Map 1: Urban-Rural Population Divide

Only four states have greater rural than urban populations.



Source: U.S. Census Bureau, 2015

Connecticut, Delaware, New Jersey and Rhode Island lack rural counties, and Hawaii only has one. For this reason, these states are excluded from the rest of the analysis.

Broadband Access



“Many parts of the state are in virtual dead zones and that limits their ability to attract businesses and residents.”

// LEAGUE OF ARIZONA CITIES AND TOWNS

Using 2016 data provided by the Federal Communications Commission, “broadband access” is defined as the difference in the percentage of people living in urban and rural areas without access to high speed Internet.⁶ Nationwide, 10% of Americans do not have access to broadband, with rural areas experiencing significantly greater access challenges. In a world dominated by online communications, this digital divide severely limits rural residents’ access to online job application and employment opportunities, online higher educational and training opportunities, public school learning, research opportunities, health-

care and government services. The digital divide also limits rural areas’ capacity to grow and attract businesses and retain and attract residents.

Urban-rural divides in broadband access are inversely related to the percent of state population without access to broadband. This means that as overall state access increases, so too does the *divide* in access between urban and rural areas. Broadband access tends to cluster in urban areas because it is a guaranteed market for private providers, unlike less densely populated rural areas.⁷ Even in rural areas where broadband

is available, it is often much more expensive, leading to gaps not only in access, but also in adoption.⁸

There are no states in which rural areas have more people with access to broadband than urban areas. Overall, rural communities have 37% more residents without broadband access, as compared to their urban counterparts. Alaska has the most significant digital divide, with a gap of 62%, meaning that rural areas in Alaska have 62% percent more people without access to broadband than the state's urban areas. Massachusetts has the narrowest digital divide, with rural areas having only 8% more people without broadband access than urban areas (see Map 2).

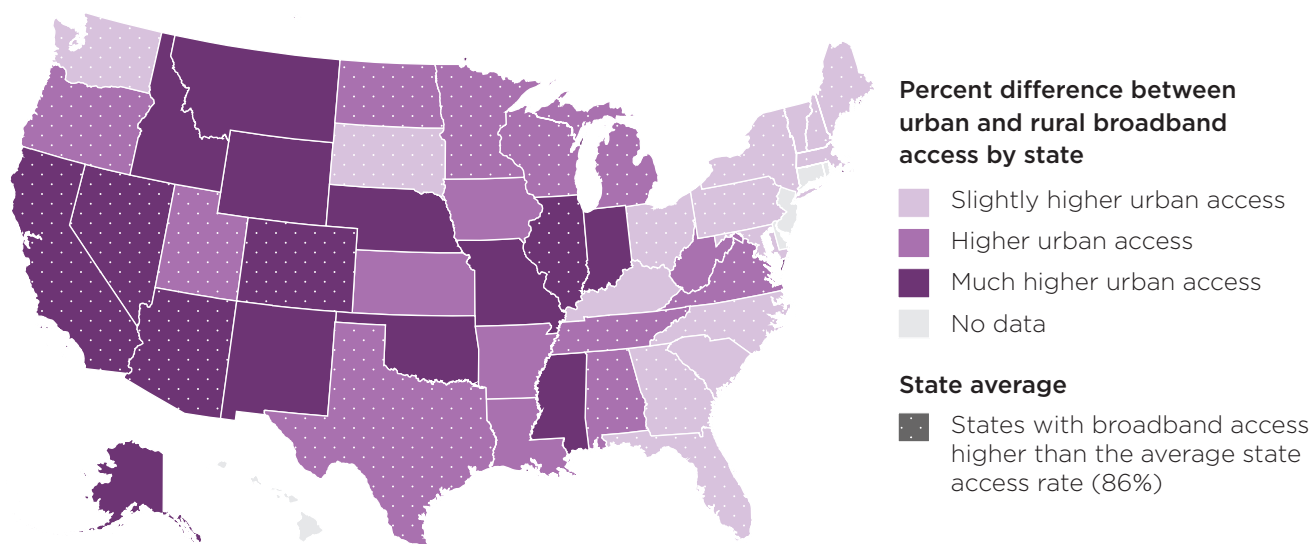
States with the narrowest urban-rural digital divide that have the highest propor-

tion of population with broadband access include New York, Pennsylvania, Washington, Maryland and Massachusetts (see appendix data table 2). States with the most significant urban-rural digital divides and most significant lack of high-speed Internet access include Wyoming, Alaska and Oklahoma.

While Massachusetts performs well in broadband access, it has continued to invest in networks in underserved rural areas, via grants that fund municipal networks and partnerships with private companies that were identified via public procurements. These efforts led to projects that will establish at least 96% coverage via grants to support 20-plus municipal-owned networks and for private companies to cover 18 additional munic-

Map 2: Urban-Rural Broadband Access Divide

In all states, broadband access is higher in urban areas than rural.



Source: Federal Communications Commission, 2016

“There is a role for government to play in this policy area, which up until now has been left entirely to the private sector.”

// NORTH CAROLINA LEAGUE OF MUNICIPALITIES

ipalities. Following those successful efforts, Massachusetts released a program to address the remaining unserved towns, noting it would consider proposals that fell below the 96% threshold but would reach the goal over time, a small adjustment that was enough to increase interest by private companies.⁹

Some communities are also exploring municipal broadband, which means that local government pays for all or part of the access. A 2018 Harvard University study found that community-owned broadband

networks provide consumers with much lower rates than their private-sector counterparts.¹⁰ Not all local governments, however, are able to provide municipal broadband services. In 2017, the National League of Cities identified 17 states that preempt, or don't allow, their cities or towns to create public broadband services.¹¹ These include some states with lower than average broadband access and more significant rural disadvantages, including Arkansas, Alabama and Nebraska.

Education



“In Kentucky, the biggest challenge is in the eastern part of the state, due to the mountainous terrain, generational poverty, too much reliance on one industry (coal) and the prevalence of drug abuse. These all contribute to lower economic development and educational attainment, as well as lack of urban cores around which rural areas can cluster.”

//KENTUCKY LEAGUE OF CITIES

Level of education is measured as the percent of the population 25 and older with at least some college education (U.S. Census Bureau 2015). Post-secondary education and training remains the single best identifier of those moving to the middle and upper class. The number of jobs available to individuals with at least some college or better

has nearly quadrupled since 1973, growing from 25 million to 91 million in 2015.¹²

Urban-rural divides in educational attainment tend to be narrower in states with greater proportions of their population with at least some college education. The education divide also tracks back to the

Bridging the Urban-Rural Economic Divide

digital divide. State education attainment levels tend to be higher in states that do a good job managing their levels of digital divide. In other words, the more access to broadband, the greater proportion of people able to attain education.

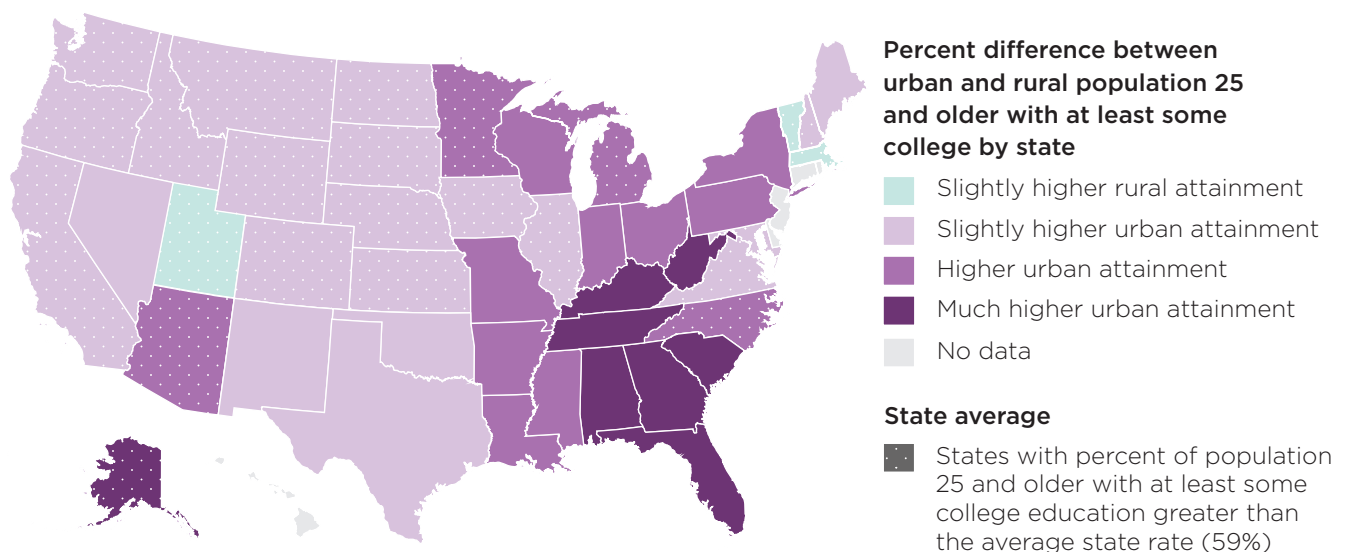
On average, 59% of those 25 and older in the U.S. have at least some college education. Urban areas have 7% more people with at least some college education, when compared to rural areas. Kentucky has the most significant divide, with urban areas having 17% more people with at least some college than rural areas (see Map 3). California has the narrowest education divide, with urban and rural areas having about the same proportion of people with at least some college education. Vermont has

the widest divide that favors rural communities. Approximately 9% more people in rural areas than urban areas of Vermont have at least some college education, reflective of the high density of rural universities in the state.

States with both the narrowest urban-rural educational divides and the greatest proportion of the population with at least some college include Utah, Washington and Colorado (see appendix data table 3). Of the 24 states outperforming the national average for educational attainment, only one state, Alaska, has an urban-rural educational divide that significantly disadvantages rural areas.

Map 3: Urban-Rural Education Divide

States with less than average educational attainment also have greater urban-rural divides.



Source: U.S. Census Bureau, 2015

Of the 21 states that are underperforming, 76% have divides that significantly disadvantage rural areas. Those states with the most significant urban-rural divides and lowest statewide attainment levels of educational attainment include Alabama, West Virginia, Tennessee and Kentucky.

A key issue for states with more significant urban-rural education divides is rural talent attraction and retention. Even Utah, which performs well on both overall state education attainment and a low urban-rural divide, strives to create good work opportunities for young people in rural areas to discourage them from leaving for employment and training opportunities elsewhere. The state legislature is considering economic development legislation that would not only grow rural online

job opportunities like freelance work and provide “post-employment incentives” to companies for jobs created in targeted areas, but also direct the Utah State University extension offices to work with rural parts of the state for online job training at the high school and college level to prepare students. To qualify, communities must demonstrate that they struggle with high unemployment. They must also have access to high-speed Internet.¹³

High-Value Business Growth



High-value business growth measures the formation of new businesses in traded-sectors (U.S. Cluster Mapping Project calculations based on U.S. Census Bureau, 2010-2015). New businesses play a major role in job creation and innovation in the American economy. Even more so, new businesses in traded-sectors are particularly “high-value” because they produce goods and services used by consumers outside the region. This brings new money into the area and connects communities to state, national and global supply chains. Traded-sectors also provide significant economic benefits to local areas because they tend to pay higher wages.

States with stronger growth of new high-value businesses tend to experience stronger

growth in wages, and it’s not limited to urban areas. Although urban areas have somewhat stronger growth rates, a clear rural disadvantage does not exist. In many states, rural areas actually outpace the high-value business growth of their urban counterparts.

On average, across states urban areas only had 3% greater growth in traded sector establishments than rural areas. Maine has the most significant divide, with rural areas outpacing their urban counterparts by 25% (see Map 4). Ohio has the narrowest divide, with urban and rural areas having approximately the same rates of growth. Kansas has the most significant divide favoring urban areas with 20% more growth of business establishments in urban parts of the state.

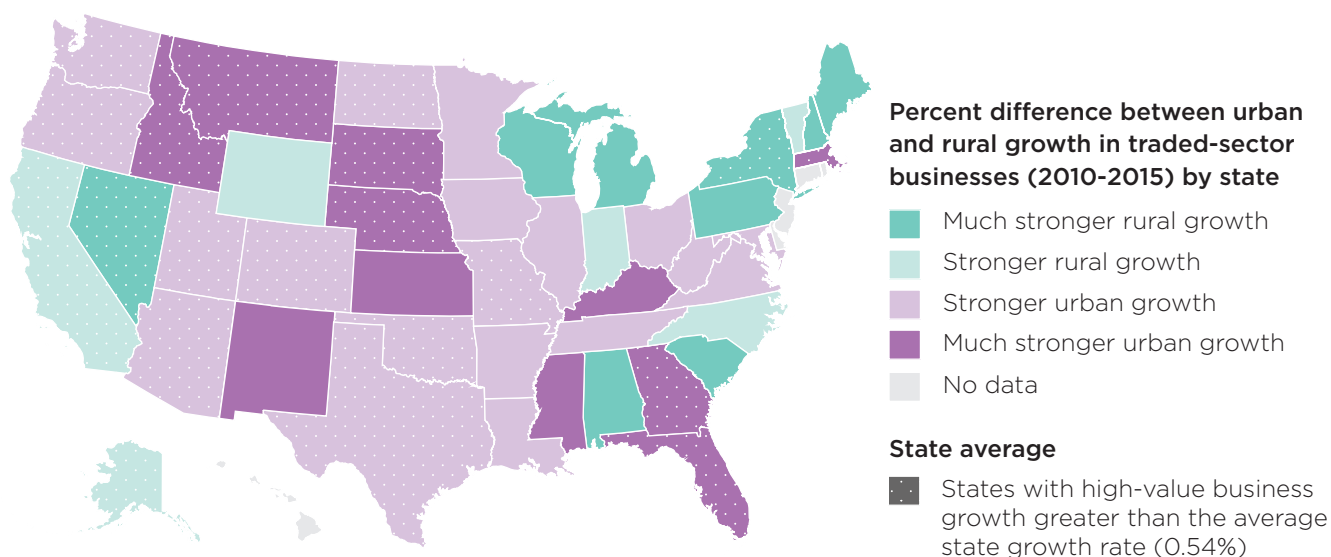
The states with both a narrow urban-rural divide in the growth of traded-sector establishments and high overall growth include California, Alaska and Wyoming (see appendix data table 4). Of the 21 states outperforming the average growth of traded-sector establishments, 76% either favor rural areas or have no significant divide between urban and rural parts of the state.

Only five states that are performing above average have urban-rural business growth divides that significantly favor more urban parts of the state, including Massachusetts, Idaho, South Dakota, Nebraska and Montana. Interestingly, the majority of these states are largely rural, with extensive economic activity originating in rural areas. The success of

urban areas in these states is connected to and largely dependent on rural industries. A study of Oregon urban-rural economic relationships found that, “many jobs in urban areas were historically tied to the natural-resources industries. The legal, financial, trade and transportation sectors serviced natural resources, and a number of urban-based food and wood-processing manufacturers also depended on raw materials from the rural areas.”¹⁴ Similarly, although a leading industry in Idaho is agriculture, so too is food and beverage processing, which extends the rural-based value chain throughout the state.

Map 4: Urban-Rural High-Value Business Growth Divide

States with stronger high-value business growth have narrower urban-rural divides.



Source: U.S. Census Bureau, 2010-2015

Prosperity Growth



The concept of “prosperity” implies the general productivity and standard of living in a particular place. Prosperity growth is measured as the per capita change in contribution to gross domestic product, or GDP (U.S. Cluster Mapping Project calculations based on Moody’s economy.com data, 2010-2015). Although GDP is not a full measure of economic welfare, it does approximate the productivity (output per hour worked), strength and overall standard of living of a place.¹⁵ On average, state-level prosperity grew 2.7% during the post-recession period throughout the U.S.

States with greater growth in their contributions to national GDP have stronger employment growth and wage growth. Prosperity growth also links back to the digital divide.

Those states with greater digital divides between urban and rural areas experience greater divides in prosperity growth that disadvantage rural communities. This finding corroborates a McKinsey global study on the economic impact of the Internet that found that increases in Internet access strongly correlate with increases in real per capita GDP.¹⁶

At near zero, Pennsylvania has the narrowest divide between urban and rural prosperity growth (see Map 5). Nevada has the widest gap favoring rural areas, with rural areas experiencing 5% greater prosperity growth than their urban counterparts. North Dakota has the widest gap favoring urban areas, at 6% greater prosperity growth in these parts of the state. The state’s oil boom (due to

hydraulic fracturing, or fracking) accounts for much of this growth. Although fracking occurs primarily in rural parts of North Dakota, the rural energy industry has an extensive multiplier effect throughout the state, particularly in urban areas, which provide the industry with legal, financial, trade and transportation services as well as technological innovations.

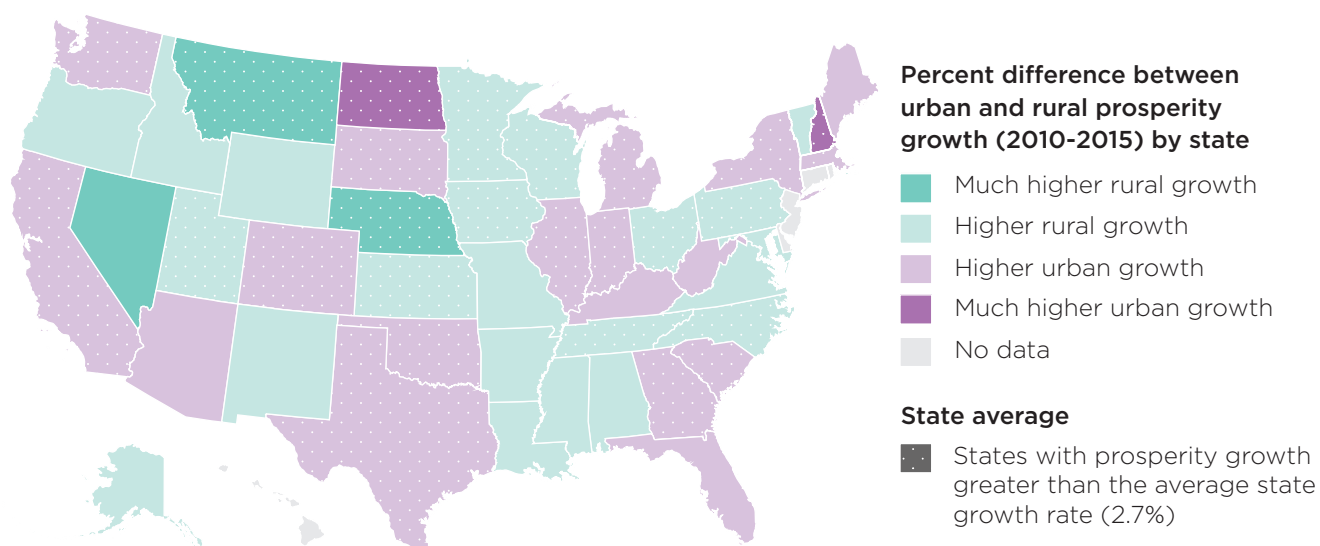
The vast majority of states with strong growth overall do not have significant urban-rural divides when it comes to prosperity growth (see appendix data table 5). Rural areas in many states contribute the same, if not more, than urban areas to the growth of the state economy. Although energy production accelerated growth in the rural parts of many states from 2010-2015, not all states with strong rural prosperity growth resulted from fracking.

Michigan has both a narrow urban-rural prosperity divide and higher state prosperity growth. Michigan's GDP growth is attributed primarily to the rebound of the manufacturing industry, particularly advanced manufacturing, as well as agriculture and freshwater technology.¹⁷ Of the 26 states outperforming the average in prosperity growth, 92% either favor rural areas or have no significant divide between urban and rural parts of the state.

Several states, including New Hampshire and North Dakota, have significant prosperity growth and urban-rural prosperity growth divides that favor urban areas. Again, these are highly rural states, with strong economic bases in rural communities that extend into urban areas and throughout the state.

Map 5: Urban-Rural Prosperity Growth Divide

States with stronger prosperity growth have narrower urban-rural divides.



Source: U.S. Cluster Mapping Project calculations based on Moody's economy.com data, 2010-2015

Bridging the Divide



“Rural areas struggle to find ‘drivers’ to their economic engines.”

//FLORIDA LEAGUE OF CITIES

This analysis of key economic inputs, business environments and economic outcomes gives context to and tests traditional narratives about the urban-rural divide. Challenges exist for rural communities, but not uniformly. Strengths and opportunities are also widespread, as indicated by significant role of rural economies to the growth of urban areas in many states throughout the country. These findings signal that other critical drivers, beyond a strict urban-rural divide, are at play.

Indeed, sustainable growth hinges less on a place’s designation as urban or rural, and more on its economic connections. A 2015 study examined the importance of highly-connected local economies. It classified western U.S. counties in three ways: metropolitan, rural but connected to a larger hub, and rural and isolated.¹⁸ Rural but connected economies were found to have higher median incomes, lower income volatility, more high-wage service jobs, lower median ages, higher population growth and greater educational attainment than their isolated peers. This underscores the value of connectedness in approaching rural economic development, and in bridging the urban-rural divide via state and local policies that expand rural connectivity and bolster urban-rural economic relationships.

So, how can states, regions and localities build sustainable growth? To date, strategies have been either hands-off, relying on the strength of urban areas’ “rising tides to lift all boats,” or focused on foundational rural development in isolation from broader economic contexts. Although core assets, like

rural talent, infrastructure and housing, are imperative to a comprehensive economic development strategy, those things in and of themselves are not industry drivers. Growth drivers can be found, however, in the linkages among urban and rural places.

One approach that holds great promise for bolstering these linkages is industry cluster strategy. Industry clusters are geographically concentrated firms in a particular field linked to each other via strong networks of specialized suppliers and knowledge spillovers from employees in complimentary and similar industries working in close proximity to each other.¹⁹ The cluster approach has been less explored for rural settings, primarily because of the reliance of clusters on high density of people and firms. Indeed, “there is evidence that cluster-based economic development might be more difficult in rural areas.”²⁰

A key economic development study adapted the cluster approach for rural communities and proposed rural regional innovation ecosystems. This approach can be realized in three ways:

- Rural linkages to urban clusters
- Urban linkages to rural clusters
- Rural entrepreneurship and urban markets²¹

Rural Linkages to Urban Clusters

Rural businesses located within or close to metropolitan centers may be able to plug directly into clusters and value chains as suppliers and subcontractors.²² When a rural business builds connections with nearby urban areas, it gains the strengths of its larger neighbors as a competitive advantage. Once these regional strengths solidify, these clusters gain even more strength by bolstering complementary industries, supply chain manufacturers and service providers.²³

This approach is gaining traction in Virginia. As part of GO Virginia (a state initiative to strengthen the economy by supporting regional programs), a highly rural region in the southern part of the state is leveraging the strength of urban clusters to create three critical opportunities. These include: workforce talent development and recruitment; sectoral development in four target sectors; and, cyber infrastructure, including novel approaches to regional collaboration in infrastructure development and opportunities to provide incentives for “middle mile” and “last mile” network completion.²⁴

Specifically, the plan approaches economic drivers for the rural Virginia region by using a cluster analysis that includes the metropolitan areas surrounding the rural area. In addition to growing smaller clusters unique to the region, the analysis suggests that the region expand upon seven “clusters on the cusp,” which have solid workforce potential and are well-aligned with nearby urban clusters. These represent opportunities for the rural region to position itself as a prime location for supply chain companies to locate close to the urban clusters, but at lower cost.²⁵

Similarly, in Kansas, the Regional Economic Area Partnership has led regional economic development efforts, seeing the attraction or retention of a business anywhere in the area as a positive for everyone. In the case of aviation, larger companies often locate in Wichita, but spur the creation of suppliers that typically settle further out in the region, creating economic benefits throughout the region.²⁶

Urban Linkages to Rural Clusters

For sectors that require space rather than proximity to operate - like natural resource industries and large land users such as power plants, chemical facilities and defense establishments - cluster strategies can focus on supporting the linkages of these sectors into regional, national and global supply chains.²⁷

A 2011 study examining the interdependence between Minnesota’s urban and rural areas found that increases in the strength of rural industry clusters substantially impacted nearby urban areas.²⁸ For example, every \$1 billion increase in rural manufacturing output produced three benefits: a 16% increase in urban jobs, significant additional business-to-business transactions and statewide consumer spending and investment. Similarly, a study of the Sacramento region found that the majority of jobs and economic activity resulting from the region’s rural food and agriculture cluster occurred in urban parts of the region (see case study: Sacramento’s Specialty Crops Industry Cluster). These studies show some of the ways that integrated urban and rural areas boost each other’s economies, with ripple effects of that success felt throughout the region and state.

Case Study: Sacramento's Specialty Crops Industry Cluster

The Sacramento, California, region is solidifying urban-rural economic connections via specialty crops industry clusters. Growing specialty food and fiber in rural parts of the region creates jobs and income in urban areas. The way that food reaches the table is complicated, yet remarkable, as fresh and processed food travels in and out of the region daily. Although some products arrive “raw,” most are transformed into processed or packaged goods along the way. Indeed, the specialty crop food system encompasses multiple business sectors providing a range of services that refine, enhance and move food products from farms to consumers. Together, these industries represent the specialty crop cluster—a group of interdependent firms and related institutions linked through strong relationships and transactions.

The various components of the cluster add nearly \$4 billion in direct output a year to the Sacramento regional economy. Only 30% of the cluster's direct output stems from the value of specialty crops as they leave the farm—the majority of the cluster's gross output value is generated as specialty crops move through the larger regional food system. While specialty crop production includes the majority of employment within the cluster, over 6,400 jobs (37%) fall into the distribution, processing and support subsectors off the farm.

Taken together, employment in the specialty crop cluster increased by 6% from 2008 to 2014—a stark contrast to both the overall economy and to non-specialty crop agriculture, each of which declined in employment over the same period. Specialty crop growers engage with suppliers, processors and distributors to form a larger cluster, while each dollar generated by a specialty crop business then also leads to a mul-

tiplier effect in other industries. By expanding the food system beyond the farm, the contribution of the specialty crop base economy is greater than 31,000 jobs, \$2.4 billion in value added, and \$5.8 billion in total output value in the Sacramento region. And perhaps to an extent not achieved by any other segment of the economy, this specialty crop food system helps also connect the region's many rural and urban communities.

A full study of not only specialty crops, but all agriculture in the Sacramento region, found there are more food system jobs “off-the-farm” in processing, distribution and support activities, than on the farm. For instance, one of the largest concentrations of food system jobs in the region is in downtown Sacramento. Additionally, food systems are building out local-serving capacity like farmers markets and CSAs, which enhance the rural-urban connection. This keeps local money circulating in the local economy, instead of leaking to other markets.



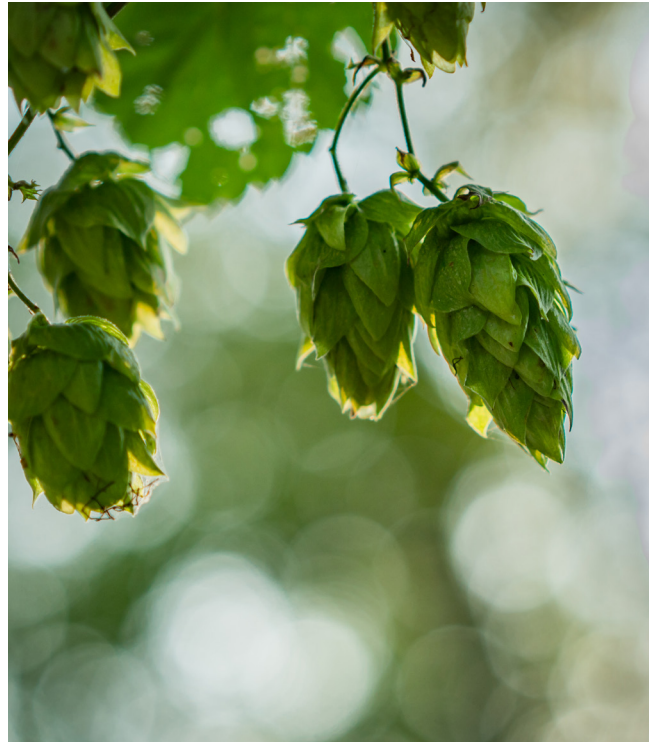
Sources: *Food System Multipliers for Specialty Crops (July 2016)* and *Food and Agriculture Cluster Assessment (March 2016)*. Projects of the Rural-Urban Connections Strategy of the Sacramento Area Council of Governments.

Rural Entrepreneurship and Urban Markets

Rural areas located further from urban concentrations can build upon the assets of their communities and regions, creating entrepreneurial opportunities that use virtual networks to link to customers.²⁹ A 2016 study of European rural entrepreneurship found that “rural entrepreneurs with rural-urban linkages are able to structure and use these linkages in order to profit from urban economies and draw advantages of a location in rural areas simultaneously.”³⁰

In the U.S., fueled by slow job growth, rural entrepreneurship and business survival rates relative to population have actually outpaced urban areas in recent years.³¹ More limited opportunities and resources have encouraged bootstrapping (using limited or local resources) for rural start-ups, increasing their innovation and resilience. Targeted policies and programs that support their growth, particularly capital access, business development and export promotion, have also emerged as critical factors. A 2017 study of small business lending found that lending in rural areas had a stronger, more positive impact on the rate of new business formation than lending in urban areas.³² For example, Colorado’s Office of Economic Development and International Trade has given aspiring entrepreneurs in its rural areas a boost by providing access to early stage funding.³³ The state office has set aside millions of dollars for startups in rural Colorado in industries from agriculture and advanced manufacturing to technology and tourism.

Given the role of new companies as job and innovation creators, entrepreneurship offers rural communities an exciting opportunity to grow from within.³⁴ However, the linkage



with urban and global markets is critical if these businesses are to transform their local economies. In addition to value chain relationships, “connections to metropolitan areas can facilitate the development of niche markets that can be tested and refined in adjacent urban areas before taking them to the global market.”³⁵ Rural hops growers in Oregon rely on the sophisticated tastes of urban consumers to help them innovate and stay ahead of national and global trends, making the state one of the top hop producers in the U.S. The power of export promotion for rural entrepreneurs, as well as broadband access (see case study of Minnesota’s Border-to-Border Broadband Development Grant Program) in this context cannot be understated.

Case Study: Minnesota's Border-to-Border Broadband Development Program

More than 252,000 households in Minnesota, or 12%, lack access to high-speed Internet. Without access, these households have limited or no access to telemedicine, online curriculums for school or training, or online job search tools and job applications. Businesses without access to broadband lack a crucial connection necessary to compete in today's global economy. In recognition of these challenges, in 2016, the Minnesota state legislature stated its goal explicitly, that by 2022, all Minnesota businesses and homes will have access to high-speed broadband, with faster speeds by 2026.

The Border-to-Border Broadband Development Grant Program is the state's primary mechanism to help connect unserved or underserved areas. The areas tend to be more rural (and less densely populated) than other areas, while also having terrain that is more difficult to navigate. This, in turn, drives up the cost for broadband providers to connect households in these areas. The program helps mitigate the cost and risk for providers and the communities they partner with. To address private competition concerns, the program allows an existing broadband provider to challenge an application if the proposed broadband deployment overlaps the existing provider's territory or if the proposed area is one that an existing provider plans to build on within 18 months of the award announcement.

Initially funded at \$20 million, the program provides matching funds to eligible service providers that agree to extend broadband service to unserved or underserved areas. The grants provide up to a dollar-for-dollar match on funds, not to exceed \$5 million for any one project. The

program has been funded for four consecutive years, with grants distributed during 2015 (two rounds), 2016 and 2017. In November 2017, the grants office announced \$26.47 million in funding for 39 projects across the state, which will bring broadband service to 9,973 households, 2,169 businesses and 60 community institutions—all of them previously unserved or underserved—across Minnesota.

For example, Westbrook (population 740) is the smallest city in Minnesota that has a full hospital. To help their hospital get the faster speeds and better reliability it needed to stay competitive, the city partnered with Woodstock Communications to build a fiber-to-the-home network that will serve the entire community. In Itasca County, Harris Township partnered with cable provider Mediacom to bring broadband infrastructure to unserved households, businesses and anchor institutions. Now, students in the area will be able to do their online homework with iPads issued by their schools. Without Internet access at home, students in the unserved households had fallen behind.

Source: 2017 Annual Report of the Governor's Task Force on Broadband. Recommendations for policy makers and stakeholders to consider in the 2018 legislative session, developed by Minnesota Governor Mark Dayton's taskforce. January 3, 2018.



Conclusion

The results of this study show that urban and rural labels do not need to be limiting or defining factors in determining the economic success of cities and towns. Broadening the definition of the “urban-rural divide” from population and density measures, to one that accounts for economic interconnectedness, further refines our understanding of how to develop effective economic development strategy. The consequences of failing to think beyond conventional notions of “urban” and “rural” will limit the ability of state and local leaders to encourage sustainable growth.

This study also reveals that an evidence-based pathway to narrowing urban and rural economic divides where they exist is by bolstering the economic relationships *between* urban and rural areas. Traditional economic development approaches to narrow the divide tend to focus solely on supporting critical infrastructure and other foundations for rural areas. Although this type of asset building is vitally important, it in and of itself does not generate new drivers of economic growth. A cluster approach can be adapted for a rural context to build and strengthen value chains, market access and other urban-rural economic relationships. With intention, states, regions and cities can make progress to improve not only local outcomes, but regional and state ones as well.

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A cluster approach can be adapted for a rural context to build and strengthen value chains, market access and other urban-rural economic relationships.



Appendix

Table 1: Population

Alabama	59%	18%	Montana	56%	12%
Alaska	66%	32%	Nebraska	73%	46%
Arizona	90%	80%	Nevada	94%	88%
Arkansas	56%	12%	New Hampshire	60%	21%
California	95%	90%	New Jersey	95%	89%
Colorado	86%	72%	New Mexico	77%	55%
Connecticut	88%	76%	New York	88%	76%
Delaware	83%	67%	North Carolina	66%	32%
Florida	91%	82%	North Dakota	60%	20%
Georgia	75%	50%	Ohio	78%	56%
Hawaii	92%	84%	Oklahoma	66%	32%
Idaho	71%	41%	Oregon	81%	62%
Illinois	88%	77%	Pennsylvania	79%	57%
Indiana	72%	45%	Rhode Island	91%	81%
Iowa	64%	28%	South Carolina	66%	33%
Kansas	74%	48%	South Dakota	57%	13%
Kentucky	58%	17%	Tennessee	66%	33%
Louisiana	73%	46%	Texas	85%	69%
Maine	39%	-23%	Utah	91%	81%
Maryland	87%	74%	Vermont	39%	-22%
Massachusetts	92%	84%	Virginia	75%	51%
Michigan	75%	49%	Washington	84%	68%
Minnesota	73%	47%	West Virginia	49%	-3%
Mississippi	49%	-1%	Wisconsin	70%	40%
Missouri	70%	41%	Wyoming	65%	30%
			Mean	74%	47%

Source: U.S. Census Bureau, 2015; negative "divide" percentages indicate greater rural than urban population i.e. Vermont has 22% more people living in rural than urban areas.

Table 2: Broadband Access

Alabama	20%	-35%	Montana	31%	-52%
Alaska	26%	-62%	Nebraska	16%	-45%
Arizona	13%	-55%	Nevada	8%	-60%
Arkansas	25%	-41%	New Hampshire	7%	-12%
California	5%	-59%	New Jersey	N/A	N/A
Colorado	10%	-49%	New Mexico	20%	-52%
Connecticut	N/A	N/A	New York	2%	-17%
Delaware	N/A	N/A	North Carolina	7%	-19%
Florida	7%	-25%	North Dakota	14%	-35%
Georgia	9%	-21%	Ohio	8%	-29%
Hawaii	N/A	N/A	Oklahoma	27%	-57%
Idaho	18%	-51%	Oregon	10%	-32%
Illinois	9%	-52%	Pennsylvania	6%	-17%
Indiana	17%	-47%	Rhode Island	N/A	N/A
Iowa	15%	-33%	South Carolina	18%	-30%
Kansas	15%	-44%	South Dakota	11%	-24%
Kentucky	16%	-31%	Tennessee	13%	-32%
Louisiana	19%	-42%	Texas	11%	-41%
Maine	12%	-13%	Utah	6%	-36%
Maryland	4%	-10%	Vermont	17%	-25%
Massachusetts	3%	-8%	Virginia	11%	-35%
Michigan	12%	-34%	Washington	3%	-13%
Minnesota	12%	-42%	West Virginia	30%	-38%
Mississippi	34%	-51%	Wisconsin	13%	-42%
Missouri	20%	-56%	Wyoming	23%	-60%
			Mean	14%	-37%

Source: Federal Communications Commission, 2016; negative “divide” percentages indicate greater rural than urban percentage without access to broadband, i.e. Rural Wisconsin has 42% more people than urban areas without broadband access.

Table 3: Education

Alabama	53%	14%	Montana	63%	4%
Alaska	64%	14%	Nebraska	63%	2%
Arizona	62%	11%	Nevada	57%	3%
Arkansas	50%	8%	New Hampshire	64%	7%
California	61%	0%	New Jersey	N/A	N/A
Colorado	69%	1%	New Mexico	58%	3%
Connecticut	N/A	N/A	New York	59%	9%
Delaware	N/A	N/A	North Carolina	59%	9%
Florida	57%	14%	North Dakota	64%	6%
Georgia	57%	14%	Ohio	55%	11%
Hawaii	N/A	N/A	Oklahoma	55%	7%
Idaho	62%	6%	Oregon	66%	5%
Illinois	61%	7%	Pennsylvania	53%	10%
Indiana	53%	10%	Rhode Island	N/A	N/A
Iowa	59%	6%	South Carolina	56%	15%
Kansas	63%	3%	South Dakota	60%	7%
Kentucky	51%	17%	Tennessee	52%	16%
Louisiana	49%	9%	Texas	57%	1%
Maine	58%	6%	Utah	68%	-1%
Maryland	64%	7%	Vermont	62%	-9%
Massachusetts	64%	-1%	Virginia	64%	6%
Michigan	60%	10%	Washington	67%	1%
Minnesota	66%	8%	West Virginia	44%	15%
Mississippi	52%	11%	Wisconsin	59%	8%
Missouri	57%	11%	Wyoming	63%	4%
			Mean	59%	7%

Source: U.S. Census Bureau, 2015; negative "divide" percentages indicate greater rural than urban percentage with at least some college education, i.e. Rural areas of Utah have 1% greater proportion of their population with at least some education than urban areas.

Table 4: High-Value Business Growth, 2010-2015

Alabama	-0.14%	-8.37%	Montana	0.69%	17.51%
Alaska	0.91%	-2.38%	Nebraska	0.70%	14.46%
Arizona	0.67%	7.25%	Nevada	1.37%	-8.59%
Arkansas	0.01%	2.38%	New Hampshire	0.12%	-17.53%
California	1.33%	-3.44%	New Jersey	N/A	N/A
Colorado	1.25%	4.63%	New Mexico	-0.19%	12.91%
Connecticut	N/A	N/A	New York	0.79%	-7.33%
Delaware	N/A	N/A	North Carolina	0.46%	-3.59%
Florida	1.64%	10.15%	North Dakota	2.62%	8.53%
Georgia	0.68%	11.77%	Ohio	-0.14%	0.14%
Hawaii	N/A	N/A	Oklahoma	0.67%	4.00%
Idaho	0.59%	13.20%	Oregon	0.91%	9.24%
Illinois	0.26%	4.88%	Pennsylvania	0.18%	-12.93%
Indiana	0.01%	-1.11%	Rhode Island	N/A	N/A
Iowa	0.04%	6.47%	South Carolina	0.38%	-8.11%
Kansas	0.06%	20.29%	South Dakota	0.68%	13.26%
Kentucky	0.24%	15.44%	Tennessee	0.27%	1.62%
Louisiana	0.42%	2.59%	Texas	1.74%	6.79%
Maine	0.11%	-25.14%	Utah	1.86%	7.58%
Maryland	0.39%	8.39%	Vermont	-0.31%	-5.67%
Massachusetts	0.63%	12.77%	Virginia	0.45%	5.54%
Michigan	0.05%	-9.27%	Washington	0.78%	8.87%
Minnesota	0.44%	0.41%	West Virginia	-0.89%	0.57%
Mississippi	-0.22%	10.28%	Wisconsin	-0.01%	-9.30%
Missouri	1.08%	9.51%	Wyoming	0.79%	-0.97%
			Mean	0.54%	2.84%

Source: U.S. Census Bureau, 2010-2015; negative "divide" percentages indicate greater rural than urban growth of traded-sector establishments, i.e. Rural areas of South Carolina have 8.11% greater growth of high-value businesses than urban areas.

Table 5: Prosperity Growth, 2010-2015

Alabama	2.45%	-0.02%	Montana	2.78%	-3.55%
Alaska	-0.93%	-0.29%	Nebraska	3.52%	-3.44%
Arizona	2.20%	0.47%	Nevada	1.67%	-4.72%
Arkansas	2.49%	-0.24%	New Hampshire	2.76%	1.58%
California	3.94%	1.11%	New Jersey	N/A	N/A
Colorado	2.76%	0.22%	New Mexico	1.46%	-1.31%
Connecticut	N/A	N/A	New York	3.35%	0.46%
Delaware	N/A	N/A	North Carolina	2.73%	-0.06%
Florida	2.28%	0.75%	North Dakota	6.61%	5.60%
Georgia	2.98%	0.36%	Ohio	3.89%	-0.43%
Hawaii	N/A	N/A	Oklahoma	3.83%	0.04%
Idaho	2.40%	-0.37%	Oregon	1.56%	-1.47%
Illinois	3.40%	0.71%	Pennsylvania	3.36%	-0.01%
Indiana	3.00%	0.43%	Rhode Island	N/A	N/A
Iowa	3.93%	-1.34%	South Carolina	3.10%	0.04%
Kansas	3.05%	-0.79%	South Dakota	3.25%	1.02%
Kentucky	2.59%	0.81%	Tennessee	3.87%	-0.41%
Louisiana	-0.07%	-0.24%	Texas	3.58%	0.40%
Maine	2.16%	0.16%	Utah	3.29%	-1.06%
Maryland	2.41%	-0.32%	Vermont	2.61%	-1.42%
Massachusetts	3.25%	0.86%	Virginia	1.88%	-0.06%
Michigan	4.01%	0.32%	Washington	3.17%	0.15%
Minnesota	3.24%	-0.27%	West Virginia	1.91%	0.92%
Mississippi	1.89%	-0.55%	Wisconsin	3.31%	-0.02%
Missouri	2.46%	-0.49%	Wyoming	-0.61%	-0.50%
			Mean	2.70%	-0.15%

Source: U.S. Cluster Mapping Project calculations based on Moody's economy.com data, 2010-2015; negative "divide" percentages indicate greater rural than urban growth of contribution to state GDP, i.e. Rural areas of Idaho have 0.37% greater prosperity growth than urban areas.

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