

Example #1

Title: The Ethnically and Racially Uneven Role of Water Infrastructure Spending in Rural Economic Development

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Short Abstract: In this paper we test the hypothesis that local government spending on water infrastructure is associated with higher levels of economic development, as well as the hypothesis that this association is unequal between ethnoracial groups. Using data from the State and Local Government Finance Surveys and the US Census Bureau, we estimate a series of county-level spatial econometric (SLX) models from 1980 to 2015. Our results support our hypotheses, with most beneficial associations taking eight years to become evident. Further, through the use of interactional models, we show that this effect is ethnically and racially uneven, with the benefits of investment decreasing as counties become more Latino/a and non-Latino/a Indigenous, and either increasing or decreasing as counties become more non-Latino/a Black, dependent on the specific outcome. Our results suggest that continued investment in rural water infrastructure has the potential to have wide-ranging, but possibly uneven, economic benefits for residents.

Extended Abstract

Introduction

Water, while representing a fundamental human necessity and right (United Nations, 2010), also plays an important role in economic development worldwide. Without access to reliable clean water and sanitation, residential and industrial development is constrained. As such, the built capital of water infrastructure has often been assumed to be a necessary precondition for rural economic development (US Water Alliance 2020, Flora, et al. 2018). Although this conjecture may appear self-evident on its face, it has not been clearly tested and even if it is true, it remains poorly communicated to those directing rural economic development policy. Many rural areas of the United States—our focus in this study—remain in a prolonged state of economic stagnation (Tickamyer et al. 2017), while facing degrading, and often failing, water infrastructure (ASCE 2022; Greer 2020), as well as shrinking tax bases due to depopulation (Johnson, 2020).

Although improving water infrastructure in rural America represents an important need for improving public health, environmental health, and overall well-being, the cost of doing so is often a large barrier for rural governments. As such, it is essential that we evaluate the positive benefits water infrastructure can provide rural economies if we are to encourage these expensive infrastructural improvements. This importance is underscored by the recent attention water infrastructure has received from the federal government in the form of the 2021 Infrastructure Investment and Jobs Act and President Biden's attention to ensuring clean water for every child and every American in his first State of the Union address (Biden, 2022). Although there are theoretical reasons to expect a positive relationship between water infrastructure investment and economic development (Emery & Flora, 2006; Flora et al., 2018), it remains unclear how this association varies across different populations. Water infrastructure access and quality is well-known for being subject to considerable racial bias in the United States (Davis, 2021; Deitz & Meehan 2019; Fedinick & Roberts 2019; McDonald & Jones, 2018; Mueller & Gasteyer, 2021; Roller et al. 2019; Switzer & Teodoro 2018). As such, it is imperative that any analysis of the economic benefits of water infrastructure considers racial inequality due to the well documented patterns of systemic racism in the United States (Braveman et al., 2022). In this study, we address this important need by evaluating the association between county-area spending on water infrastructure and economic development in rural America from 1980 to 2015, as well as how that association varies across ethnoracial groups—meaning population groupings at the intersection of race and ethnicity (i.e. non-Latino/a Black, non-Latino Indigenous, and Latino/a).

We hypothesize that local government investment in water infrastructure will have a significant positive relationship with economic development in rural counties. Further, we expect this relationship will be moderated in rural areas with large portions of either non-Latino/a Black, non-Latino/a Indigenous, or Latino/a populations, such that the relationship becomes less beneficial in less-non-Latino/a white areas.

Data and Analysis

To test our hypotheses, we compiled a county-level dataset for the contiguous United States and Hawaii for the years of 1980, 1990, 2000, 2010, and 2015 from the U.S. Census Bureau, the State and Local Government Finance Survey (SLGFS), and the USDA ERS. We only extended our analysis to 2015 due to the most recent county-area SLGFS data being for the year of 2012. For our analysis, we define a county as rural if it is defined as nonmetropolitan by the Office of Management and Budget and focus exclusively on those counties identified as nonmetropolitan at the start of our study period (USDA-ERS, 2004). We first analyze descriptive trends in water infrastructure spending at the county level in the United States and then estimate a series of spatial econometric (SLX) models with county and year fixed effects and cluster robust standard errors at the county level

Preliminary Results

Figure 1 illustrates how county-area spending on water infrastructure has changed over the past fifty years in the 2,362 counties classified as nonmetropolitan in 1980. Indicators of spending are at the county area—meaning spending from the county government and all within-county municipalities—and include the share of total expenditures and operational expenditures, as well as a dichotomous indicator of whether any funds were spent on construction in that year. Water infrastructure spending is as reported by the SLGFS and includes both sewerage and water supply. The figure illustrates a steady increase in the percent of total and operational county-area spending going towards water infrastructure. Throughout the study period, the majority of counties spent at least some money on water infrastructure construction, with a steady increase from 1997 onwards.

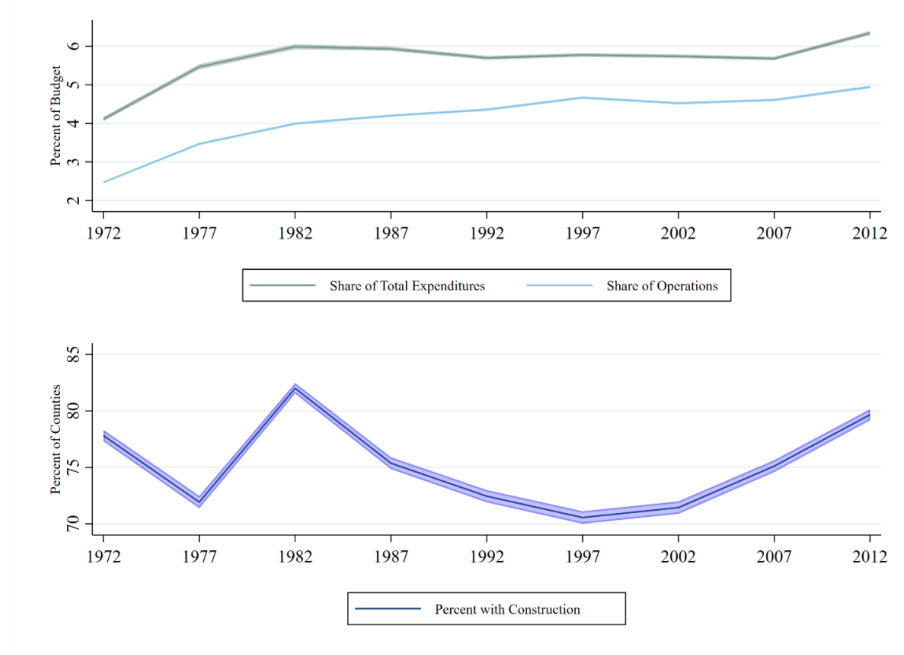


Figure 1. Trends in County-Area Water Infrastructure Spending

The results from the primary models are presented visually as a coefficient plot in Figure 2. We analyze the association between water infrastructure spending and four indicators of economic development: percent in poverty, per capita income, inequality via the Gini Index, and the unemployment rate. In the figure, within-county regression coefficient estimates are represented by dots, and the tails reflect the 95% CIs of the estimate. For all models, we estimate the association for both a three-year and eight-year lag between government spending and economic outcomes to allow for the possibility that benefits may take a significant amount of time to develop. These intervals are selected due to the nature of the SLGFS, our spending data, which is only administered in years ending in 2 and 7. For example, a three-year lag would link 1987 to 1990, and an eight-year lag would link 1982 to 1990.

Overall, our findings show that there is an association between increases in water infrastructure spending and economic development. However, it is only when we use the eight-year lag that many of these effects become apparent—suggesting that these benefits take time to accrue. We find that increases in both total and operational spending were associated with decreases in poverty, increases in per capita income, and

decreases in unemployment eight years later. Surprisingly, we find little evidence of an effect for construction spending, with the only significant effect being in the three-year lag of unemployment. Finally, we find no association between spending and the Gini Index, suggesting that infrastructure spending is not associated with inequality in nonmetropolitan America.

Discussion

In this study, we found support for our primary hypothesis that increased spending on water infrastructure was associated with positive rural economic development outcomes. This association was only readily visible eight years after investment and was apparent for poverty, per capita income, and unemployment—but not inequality. Improving water infrastructure is valuable due to the dramatic improvements in public health and the health of the global environment it offers. However, the costs of doing so in rural America are prohibitively high. Rural America continues to age and depopulate, resulting in a shrinking tax base even less equipped to make necessary upgrades (Johnson, 2020). Given that much of the United States' water infrastructure is reaching the end of its lifecycle (ASCE, 2022), it is essential that we show the value of this investment beyond the obvious outcomes—as we have done here—so that those who direct the flow of resources understand the true value of investing in water infrastructure. If the funds recently made available for water infrastructure under the Infrastructure Investment and Jobs Act make their way to rural counties, our results suggest there could be positive downstream economic benefits.

Next Steps

Prior to the Rural Sociological Society Meeting, we will expand our analysis by estimating the moderating role of ethnoracial composition through the use of interactional models. These models will take the same form as our initial models with the exception that we will interact the ethnoracial group of interest with the direct and indirect effects of water infrastructure spending. Due to the complexities of interpreting interaction terms, we plan to estimate and plot marginal effects across a range of percent non-Latino/a Black, non-Latino/a Indigenous, and Latino/a to illustrate our findings visually.

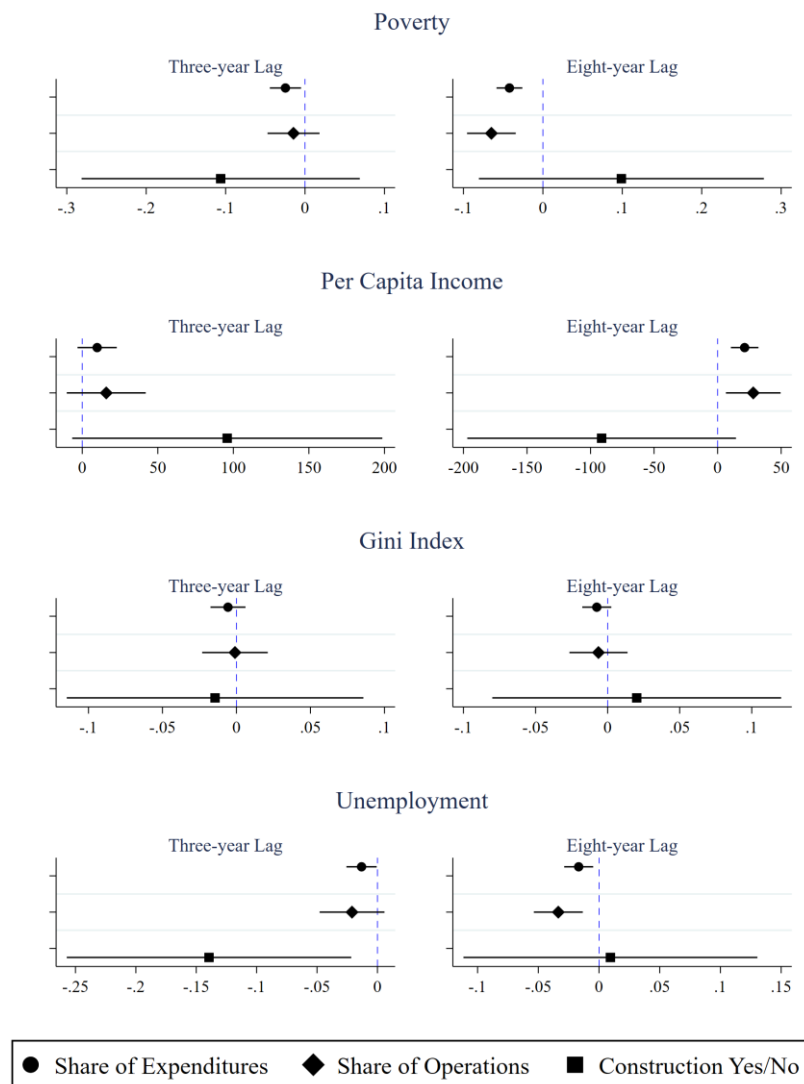


Figure 2. Coefficient Plots of Model Results

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Example #2

SHORT ABSTRACT

Title: “Your Neighbors are New Every Week”: Short-term Rentals, Housing, and Community Wellbeing in High-Amenity Rural Places

Authors: Alexander Theophilus and Jessica D. Ulrich-Schad

Short Abstract: Amenity driven in-migration, seasonal home ownership, and tourism are long standing processes impacting housing affordability and community wellbeing in high natural amenity rural communities. Short-term rental (STR) accommodations, such as Airbnb and Vacation Rentals By Owner (VRBO), are a relatively new phenomenon that can further limit housing options for full-time residents and members of the seasonal workforce. There is tremendous variation across communities in their efforts to regulate STRs. To assess the impacts of STRs on housing affordability and community wellbeing in a high-amenity rural place, we analyze and discuss interviews with 28 residents of the Bear Lake area in northeastern Utah and southeastern Idaho. Most communities around Bear Lake had enacted minimal to no regulations on STRs at the time of this research, making this a suitable case study for the impacts of STRs when no restrictions are placed on them. Community members expressed concern that STRs are driving high housing costs while also negatively impacting community interactions and providing little to no benefit to the local economy. To illuminate avenues for better STR regulation, we discuss alternative examples of how STRs can be regulated in high-amenity rural communities. We conclude with a discussion of the future implications of STR policy, particularly as it relates to housing affordability and socioeconomic inequality.

EXTENDED ABSTRACT

Title: “Your Neighbors are New Every Week”: Short-term Rentals, Housing, and Community Wellbeing in High-amenity Rural Places

Authors: Alexander Theophilus and Jessica D. Ulrich-Schad

Extended Abstract:

Background

High amenity rural communities often depend on tourism and recreation for economic activity while facing rising housing costs and growing pressure on local services. Amenity migration, second homeownership, and seasonal visitation have long shaped these places, particularly where newcomers and visitors have greater purchasing power than year-round residents. Short-term rental (STR) platforms have introduced another way to use residential housing for tourism. Houses that could accommodate permanent residents or seasonal workers may instead be rented to visitors for a few nights at a time. STRs can bring income to property owners and lodging capacity to places with few hotels, but their community consequences extend beyond the number of visitors they accommodate.

Research on amenity migration has documented rural gentrification, housing inequality, and tensions between newcomers and long-time residents (Winkler, 2013; Sherman, 2021). Research on STRs has largely emphasized urban housing markets or tourism destinations outside the rural United States (Cocola-Gant & Gago, 2021; Gurran et al., 2020). We know less about how residents of high amenity rural places understand STRs in relation to both housing and everyday community life. We address this gap through the concepts of community wellbeing and interactional capacity: the social relationships and opportunities for collective action that help residents respond to change (Wilkinson, 1991; Flint et al., 2024).

Research Questions and Purpose

Bear Lake spans Rich County, Utah, and Bear Lake County, Idaho. Its lake and mountain amenities attract visitors from nearby population centers, while its year-round population remains small. Tourism and seasonal homeownership have a long history in the area. At the time of our 2024 research, local STR rules were minimal, and conventional lodging options were limited. This setting offers an opportunity to examine resident experiences where STRs have expanded with few local restrictions.

We ask three questions: (1) What are the perceived impacts of STRs on community wellbeing and interactional capacity in the Bear Lake area? (2) How do STRs compound known impacts of amenity migration such as culture clash and housing inequality? and (3) Are community members in favor of STR regulation in the Bear Lake area?

Methods

In spring and summer 2024, a Utah State University research team conducted 26 semi-structured interviews with 28 community members from communities around the lake and in nearby areas, including Garden City, St. Charles, Paris, Fish Haven, Montpelier, and Bennington. Twenty-one interviewees lived in the area year-round, and seven were seasonal residents. Recruitment used

referrals, social media, flyers, community events, and a local nonprofit partnership. Interviews generally lasted 45 to 75 minutes and addressed amenity migration, housing, tourism, and community wellbeing. STRs were not the interviews' initial focus but emerged early on as a prominent concern; all interviews included discussion of housing and visitor lodging. With participants' consent, interviews were recorded, transcribed, and coded in ATLAS.ti. Initial coding followed themes emerging from participant accounts. We then used an abductive approach to relate those themes to research on amenity migration, housing stress, inequality, and community relationships. A second researcher coded three transcripts; disagreements were resolved through discussion, yielding a Krippendorff's alpha of .751.

Results

Housing and increasing STRs. Housing was the most frequently raised concern. More than three quarters of interviewees expressed some concern that STRs compound existing affordability problems. Participants described residential properties being converted to visitor lodging and new units designed primarily for the STR market. In their view, this shifts scarce housing toward buyers who can earn rental income and away from year-round residents, young families, and seasonal workers. Several business owners also linked the lack of attainable housing to difficulty hiring and retaining workers. Interviewees associated these pressures with broader amenity driven growth, and some worried that the area could follow the path of more expensive resort communities. They also perceived local governments as having limited authority to shape development and regulate STRs.

Impacts of STRs on interactional capacity. Residents described neighborliness and a small-town atmosphere as important to wellbeing. They felt that a succession of short stay visitors makes it harder to know neighbors, sustain relationships, and build shared responsibility for local places. One participant summarized the experience by saying, "your neighbors are new every week." Interviewees also discussed noise, parking, and trash near STR properties. Their concern was therefore broader than occasional visitor behavior: when houses cease to be homes for people who participate in community life, the opportunities for routine interaction that support collective problem solving may decline. These accounts suggest that STRs can intensify the social disruptions associated with amenity migration, even though the visitors are temporary rather than permanent newcomers.

STRs and the local economy. Some participants questioned how much visitor spending remains in the local economy. They perceived that guests who stay in fully equipped rentals often buy groceries before arriving and patronize local restaurants less than day visitors or campers. Interviewees also believed that many STRs are owned by people outside the area, allowing rental income to leave the community. These are residents' assessments, not direct measures of spending or ownership. They nevertheless point to an important question for tourism dependent communities: who receives the returns from visitor growth, and who bears the housing and neighborhood costs?

Across these themes, most interviewees favored stronger local options for regulating STRs. Their concerns centered on balancing visitor accommodation with housing for residents, neighborhood conditions, and community influence over development.

Conclusion and Significance

This case shows how STRs may amplify familiar challenges of amenity driven change while creating a distinct problem for interactional capacity. A house used continuously by short stay visitors remains physically present in a neighborhood, yet offers fewer opportunities for enduring neighbor relationships. Residents perceive a related imbalance when housing is scarce, tourism jobs need workers, and the economic gains from STRs may flow to owners outside the area. Taken together, these accounts suggest that evaluating rural tourism solely through visitor counts or rental income misses key dimensions of community wellbeing.

The findings extend amenity migration research by connecting STR growth to housing access, social interaction, and the distribution of tourism benefits in one rural case. They also suggest practical questions for local decision makers: which units should be eligible for STR use, how can visitor behavior be managed, and what incentives might keep some homes available for longer term residents? Policies used elsewhere include limits on eligible property types, neighborhood conduct rules, and incentives for longer leases. The Bear Lake case does not establish which approach would work best locally. Further research should measure housing and spending outcomes and compare communities with different regulatory arrangements. For high amenity rural places, the central issue is whether tourism and amenity-driven growth can coexist with attainable housing and the social ties needed for community life.

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Example #3

SHORT ABSTRACT

Rural-Urban Variation in COVID-19 Experiences and Impacts among U.S. Working-Age Adults

Shannon M. Monnat, Syracuse University

Rural populations were expected to fare worse than urban populations as COVID-19 spread. Research shows higher infection and mortality rates in rural counties but smaller labor market impacts. Far less is known about the pandemic's secondary impacts on health, social relationships, and finances across the rural-urban continuum, or about differences between types of rural places. This study uses data from the 2021 National Wellbeing Survey, a national survey of 4,014 U.S. adults ages 18-64 fielded in February and March 2021 that oversampled rural residents. I compare 31 self-reported COVID-19 experiences and impacts across large urban, medium/small urban, metro-adjacent rural, and remote rural counties using weighted prevalence estimates and multilevel logistic regression models. Most respondents (58 percent) said COVID-19 had a negative impact on their lives, with no difference by metro status. Large urban residents were the most likely to lose a job, lose pay, and work remotely. Residents of rural counties adjacent to metro areas reported the worst outcomes on most other measures. After adjusting for demographic characteristics, socioeconomic status, and political ideology, they remained more likely than large urban residents to test positive, live with someone who tested positive, have a close friend or family member hospitalized, seek treatment for anxiety or depression, fall behind on rent, mortgage, and other bills, be unable to afford groceries or other necessities, and borrow money from family or friends. Lower household income and education accounted for metro-adjacent rural disadvantages in depression, anxiety, and overall financial situation, but not in infection experiences. Remote rural residents differed little from large urban residents after adjustment. The findings show that treating rural America as a single category hides important variation, and that future pandemic recovery policies need to account for where people live.

EXTENDED ABSTRACT

Rural-Urban Variation in COVID-19 Experiences and Impacts among U.S. Working-Age Adults

Shannon M. Monnat, Syracuse University

Background

Early in the COVID-19 pandemic, there were reasons to expect rural areas to be hit harder than urban areas once the virus reached them. Rural populations are older, have higher rates of chronic disease, and have less access to health care, and rural labor markets offer fewer jobs that can be done remotely (Monnat 2020; Peters 2020). Research since then shows higher cumulative infection and mortality rates in rural counties (Cromartie et al. 2020; Sun, Cheng, and Monnat 2021) but smaller labor market impacts than in urban counties (Brooks, Mueller, and Thiede 2021; Cho, Lee, and Winters 2020).

Deaths are only part of the pandemic's toll. The pandemic and the mitigation policies it prompted also affected mental health, employment, household finances, family relationships, and health care access (Czeisler et al. 2020; Horowitz, Brown, and Minkin 2021; Philpot et al. 2021). We know much less about how these secondary impacts were distributed across the rural-urban continuum. Mueller et al. (2021) documented substantial negative impacts among rural residents of the western United States, but their sample did not include urban residents. Most national surveys tracking COVID-19 impacts either lack geographic identifiers or have too few nonmetropolitan respondents to compare different types of rural places.

That comparison matters because rural America is not homogeneous. Rural counties adjacent to metro areas had higher infection rates early in the pandemic than remote rural counties (Cheng, Sun, and Monnat 2020; Zhang and Schwartz 2020). Commuting ties may have carried both the virus and the economic fallout of urban business closures into neighboring rural communities. Rural residents were also more likely to keep working in person in essential industries like meatpacking and agriculture (Taylor, Boulos, and Almond 2020), which may have protected paychecks while raising exposure risk. Higher rural poverty (Thiede, Lichter, and Slack 2018) may have left rural households with less capacity to absorb a financial shock even if they kept their jobs.

Research Questions

This study asks two questions. First, do COVID-19 infection and exposure experiences and the pandemic's health, social, employment, and financial impacts differ among residents of large urban, medium/small urban, metro-adjacent rural, and remote rural counties? Second, do any differences persist after accounting for demographic composition, socioeconomic status, and political ideology? Based on prior research, I expected rural residents to report smaller employment impacts but larger health impacts than large urban residents, and I expected impacts to be worse in metro-adjacent rural counties than in remote rural counties.

Methods

Data. I use the 2021 National Wellbeing Survey (NWS; Monnat and Rhubart 2021), a cross-sectional survey of 4,014 U.S. adults ages 18–64 conducted February 1 to March 18, 2021 through Qualtrics Panels. Respondents live in 1,430 counties across all 50 states and the District of Columbia. The NWS used quotas for age, sex, race/ethnicity, and rural-urban continuum code

and deliberately oversampled rural residents to support within-rural comparisons. Post-stratification weights align the sample with American Community Survey estimates on age, sex, race/ethnicity, education, and rural-urban distribution. Among panel members who reached the consent page, the completion rate was 40.4 percent. NWS prevalence estimates for anxiety, depression, job loss, and pay reduction closely match those from the Census Household Pulse Survey and other national surveys from the same period. The analytic sample is 3,933 after excluding cases with missing data (missing household income is retained with a dummy indicator).

Measures. I examine 31 binary outcomes in six domains: global impact (“All things considered, what impact would you say COVID-19 has had on your life?”); eight infection and exposure experiences; six physical and mental health measures, including PHQ-2 screens for anxiety and depression (score ≥ 3 ; Kroenke et al. 2007); two social relationship measures; eight employment experiences; and six financial hardship measures. Most items ask respondents to attribute the experience to COVID-19 directly. Metropolitan status uses USDA Economic Research Service Rural-Urban Continuum Codes (RUCCs) linked to respondents’ county of residence: large urban (RUCC 1), medium/small urban (2–3), metro-adjacent rural (4, 6, 8), and remote rural (5, 7, 9).

Analysis. I first estimate weighted prevalence by metro status, with t-tests against large urban counties. I then estimate three-level random-intercept logistic regression models (individuals nested in counties nested in states), first unadjusted and then adjusted for age, sex, race/ethnicity, marital status, household composition, recent move, educational attainment, 2019 household income, homeownership, political party, and 2020 presidential vote. Stepwise models identify which sets of covariates account for metro status differences.

Results

Most respondents (58 percent) said COVID-19 had a negative impact on their lives, and this did not differ by metro status. About one-third met screening criteria for anxiety or depression. Beneath that similar global assessment, the specific experiences differed sharply (Figure 1).

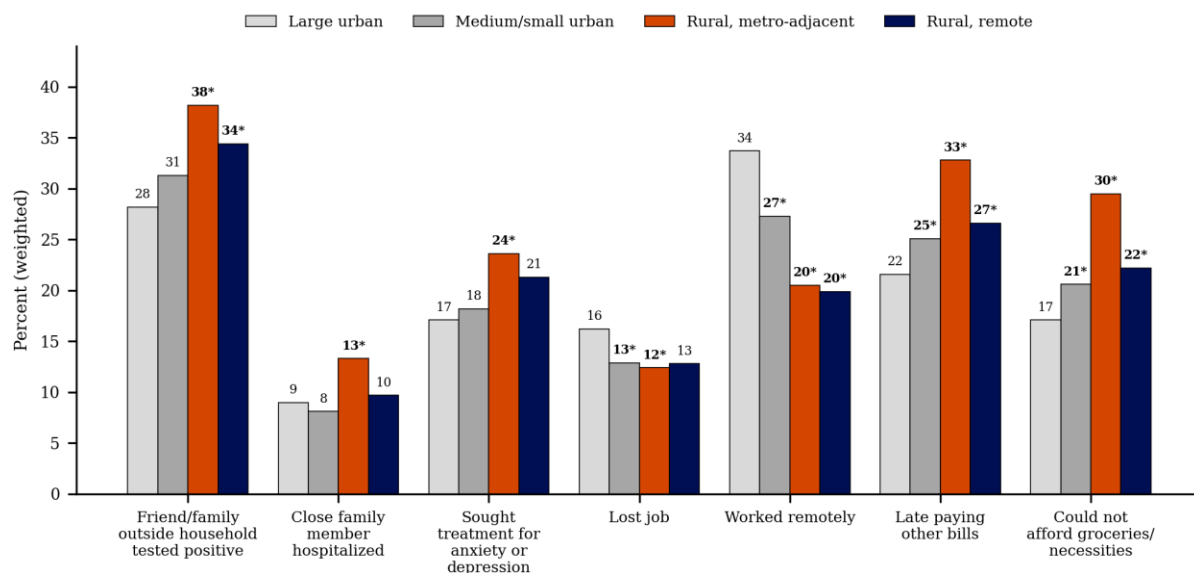


Figure 1. Selected COVID-19 experiences and impacts by metropolitan status (weighted percent). N=3,933 adults ages 18–64. *Significantly different from large urban ($p < .05$).

Large urban residents were the most likely to be tested for coronavirus (42.3 percent vs. 34.8 percent in remote rural counties), lose a job (16.2 percent vs. about 12–13 percent elsewhere), lose pay, and work remotely (33.7 percent vs. about 20 percent in rural counties). Metro-adjacent rural residents fared worst on nearly everything else. They were the most likely to have a friend or family member outside the household test positive (38.2 vs. 28.2 percent), have a close family member hospitalized (13.3 vs. 9.0 percent), seek treatment for anxiety or depression (23.6 vs. 17.1 percent), and report worsened family relationships. Their employment advantage did not translate into financial security: 29.5 percent could not afford groceries or other necessities (vs. 17.1 percent of large urban residents), and 32.8 percent were late paying bills other than rent or mortgage (vs. 21.6 percent).

Table 1 shows adjusted odds ratios. Large urban residents' higher rates of remote work and pay reduction were explained by covariates, and only the medium/small urban job loss difference remained significant. In contrast, most metro-adjacent rural disadvantages held after adjustment, especially for infection experiences and financial hardship. Stepwise models showed that household income and education accounted for the metro-adjacent rural disadvantage in depression, anxiety, family relationships, and overall financial situation. Political ideology did not account for differences in infection and exposure. Remote rural residents reported elevated rates on several outcomes in the descriptive results, but few differences reached significance in the adjusted models.

Table 1. Adjusted odds ratios (95% CI) from three-level logistic regression models, selected outcomes (reference = large urban)

Outcome	Medium/small urban	Rural, metro-adjacent	Rural, remote
<i>Infection and exposure</i>			
Tested positive	0.97 (0.71–1.33)	1.55* (1.01–2.37)	1.63^ (0.93–2.85)
Lived with someone who tested positive	1.44^ (0.99–2.09)	1.94* (1.17–3.21)	1.63 (0.80–3.31)
Close family member hospitalized	0.89 (0.66–1.20)	1.65* (1.12–2.44)	1.15 (0.64–2.06)
Friend/family outside household tested positive	1.06 (0.87–1.29)	1.33* (1.01–1.75)	1.20 (0.82–1.75)
<i>Mental health</i>			
Sought treatment for anxiety or depression	1.08 (0.86–1.35)	1.40* (1.03–1.91)	1.21 (0.79–1.87)
Anxiety (PHQ-2 ≥ 3)	1.08 (0.89–1.31)	1.27^ (0.97–1.67)	1.10 (0.76–1.59)
<i>Employment</i>			
Lost job	0.75* (0.59–0.97)	0.78 (0.54–1.14)	0.82 (0.49–1.37)
Worked remotely	1.10 (0.90–1.34)	0.95 (0.69–1.30)	0.85 (0.55–1.32)
<i>Financial hardship</i>			
Late paying rent or mortgage	1.07 (0.85–1.36)	1.56** (1.12–2.16)	0.92 (0.56–1.51)
Late paying other bills	1.14 (0.92–1.42)	1.62** (1.20–2.17)	1.22 (0.81–1.83)
Could not afford groceries or necessities	1.10 (0.87–1.40)	1.58** (1.15–2.16)	1.07 (0.69–1.67)

Outcome	Medium/small urban	Rural, metro-adjacent	Rural, remote
Got a loan from family or friend	1.17 (0.89–1.52)	1.66** (1.16–2.37)	1.15 (0.68–1.94)

Note: Weighted. Models adjust for age, sex, race/ethnicity, marital status, number of adults and children in household, education, 2019 household income, homeownership, moved in past 12 months, political party, and 2020 presidential vote. ^p<.10; *p<.05; **p<.01.

Conclusion and Significance

The pandemic's secondary impacts were not distributed evenly across geography, but the pattern does not reflect a simple rural-urban divide. Residents of rural counties adjacent to metro areas had the most personal contact with COVID-19 infection and the most financial hardship, even though they were less likely than large urban residents to lose jobs or pay. Remote rural residents looked more like large urban residents than like their metro-adjacent rural neighbors. Studies that combine all nonmetro counties into one category would miss this.

This study makes three contributions. It provides the first national comparison of COVID-19's secondary impacts across the rural-urban continuum among working-age adults, the group that absorbed most of the pandemic's employment disruption and mental health toll. It shows that within-rural variation, specifically metro adjacency, matters for understanding who was hurt most. Findings also show that lower income and education explain much of the metro-adjacent rural disadvantage in mental health and finances, but not in infection experiences, which points to workplace exposure and prevention behaviors as targets for interventions.

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