FEDERAL RESERVE BANK OF RICHMOND
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ECON FOCUS

THE RURAL NURSING SHORTAGE

Special issue on rural and small-town America

Rural Entrepreneurship

Affordable Rural Housing

Penny Goldberg on Globalization

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FEATURES

DEPARTMENTS

Cover Image: Devon Smith, RN, dons protective gear before entering a COVID-19 patient room at Carilion Roanoke Memorial Hospital in Roanoke, Va. Courtesy of the Carilion Clinic

Making It Work

This issue of *Econ Focus* is a special issue on the economic challenges of rural areas and small towns. I spend a lot of time in these communities, meeting with local leaders — in government, business, and nonprofits — to learn from them about the issues they face and, often, the solutions that have worked for them. (During the pandemic, our meetings have been socially distanced.) What I have seen consistently is that success does not come from a single program or initiative. The places that are making it work have several key elements in common: a story, regional cooperation, and dedicated funding — tied together by something harder to define, which I like to call "scrappiness."

First, towns need a story: a reason to visit and a reason to stay; a sense of place to rally around. The story is for employers, and the story is for talent. But, importantly, the story is less about marketing to outsiders and more about marketing to those who live there — why one should come and why one should stay.

This is a relatively easy task for beach towns and college towns, but many other places also have strengths to build on. In Fayetteville, W.Va., a thriving outdoor sports industry has helped rejuvenate the area. An all-terrain vehicle trail system draws visitors to Gilbert, W.Va. The town of Danville, Va., has capitalized on its riverfront and New Bern, N.C., on its thriving waterfront district.

Other towns build on history, as Cambridge, Md., is doing by honoring Harriet Tubman for her antislavery activity in that region and by capitalizing on its rich maritime history. Abingdon, Va., has a revitalized downtown that dates back to the Revolutionary War (along with a thriving theater program). I could keep listing examples — the arts scene in Lake City, S.C.; the vibrant downtown in Aiken, S.C.; the lively retail district in Leonardtown, Md. The common thread is that these communities all believe in what they have to offer and are committed to making others believe too. (See "In Tourism, Old Stories and New Opportunities," *Econ Focus*, Fourth Quarter 2019.)

Second, towns need to collaborate regionally. Small towns tend to be surrounded by other small towns. They need to speak with one voice and operate to take advantage of each other's strengths, whether those are in education, amenities, employment opportunities, or housing. Similarly, a nearby bigger city isn't a problem but a benefit, as proximity to amenities and transportation can enhance the story.

Third, everything I've talked about obviously requires money. Here, some places have gotten creative. Danville and Martinsville, Va., and Asheville, N.C., used the sales of local hospitals to endow regional foundations that invest in health, education, and workforce programs. In Hagerstown, Md., a local business association worked with a state senator to secure legislation to issue bonds to fund a new baseball stadium, which is in turn supporting downtown revitalization. And the COVID-19 stimulus funding represents a major opportunity.

One challenge for small towns now is local capacity. Government institutions are slow to release money, and they tend to distribute it to places with a proven track record, access to matching funds, and a well-written plan for using the money. Some communities have built that grant writing and funding capacity, but most have not.

Bringing all these pieces together — building a sense of place, collaborating with neighbors, and being opportunistic about funding — requires scrappiness. It's hard to define, but we know it when we see it: a mix of determination, optimism, and creativity that sets some places apart. Every town I've mentioned has scrappy local leaders who just won't give up.

We'll be talking about many of these leaders and their communities at our Investing in Rural America conference on March 30 in Greensboro, N.C. You can register on our website, Richmondfed.org, to join us in person or virtually.

Thanks, and enjoy the issue.

BY KATRINA MULLEN

New from the Richmond Fed's Regional Matters blog

Laura Dawson Ullrich. "Community College Enrollment in Fall 2021 and Cumulative Enrollment Impacts."
In the first year of the COVID-19 pandemic, community colleges experienced significant enrollment declines. By fall 2021, community colleges were hopeful that enrollment would increase — only to experience another, though smaller, decline. While male enrollment fell considerably in fall 2020, female enrollment fell slightly more than male enrollment in fall 2021. Another trend emerged in the Fifth District: The most urban community colleges experienced greater enrollment declines compared with more rural schools, due to stricter COVID-19 restrictions, limited public transportation, and smaller campus size. Now the uncertainty of the pandemic is causing community colleges to think about funding and the dynamics of the future workforce.

Joseph Mengedoth and Jacob Walker. "Regional Job Openings and Quits Rates Jolt to New Highs."
The Job Openings and Labor Turnover Survey (JOLTS) provides information not only on the demand for labor, but also on firms' abilities to fill open positions or retain workers. Between June and July 2021, the job openings rate reached record highs in the United States and all Fifth District states — West Virginia reached the highest in the district at 9.1 percent. Two jurisdictions in the Fifth District, the District of Columbia and Maryland, had a higher quits rate than the United States as a whole. Overall, the JOLTS lends itself to state-level observations of the labor market and the confidence of workers.

Erika Bell. "Rural Spotlight: Promoting Small Business Development in South Carolina."
Small businesses — firms with fewer than 500 employees — comprise 99.9 percent of all businesses in the United States and are vital to local economies and communities. The Southeastern Institute for Manufacturing and Technology in Florence, S.C., and its Gould Business Incubator (GBI) is one example of the nearly 1,400 U.S. business incubators that provide startups and early-stage businesses the space and support to grow. Despite challenges from COVID-19, GBI pivoted and reallocated resources to continue its services. With more than 30 businesses ranging from home health to IT and an urban wear retailer, GBI has benefitted from networking and collaborating; in the process, it says it added over $20 million into the Florence and Darlington economies during the last fiscal year.

Hailey Phelps. "2020 Census: A Look at the Fifth District."
Since the last U.S. Census in 2010, the national population has grown 7.4 percent, the slowest growth rate since the 1930s. The slowdown is indicative of longer-term trends such as fewer births and more deaths from an aging population. Fifth District states, excluding the District of Columbia, experienced this slowdown in population growth. Still, total population in those states increased by nearly 2.5 million people. Another takeaway from the 2020 U.S. Census is a continued population shift toward urban areas: The number of people living in urban counties in the Fifth District increased, while generally, the number living in rural areas decreased.

Jason Kosakow. "Rising Wages and Increased Hiring Two Years Into the COVID-19 Pandemic."
The Richmond Fed's monthly survey of businesses about their hiring plans and changes in wages indicated that more businesses plan to increase employment and raise wages. Of the Fifth District firms that responded in November 2021, more than half said they planned to increase employment in the next 12 months. Between 2020 and 2021, the percentage of firms raising starting wages more than doubled for most job categories. Firms have noted there is a strong demand for workers, but it remains increasingly difficult to fill open positions, especially those requiring a high school degree or less. While skill matching and reservation wages continue to plague firms and workers, increasing employment and raising wages will depend on the ability of firms to find workers.

Tiffany Hollin-Wright and Jessica King. "Rural Spotlight: Resuscitating the Health Care Workforce Pipeline in the Valleys."
The COVID-19 pandemic has amplified shortages of health care workers, especially in rural areas, where more than half of the shortages exist. The Goodwill Industries of the Valleys, a community-based Goodwill organization in Roanoke, Va., and the surrounding areas, has been trying to address this shortage through its GoodCare program. With three occupational tracks — health information, nursing, and health care support — the program offers a six-week foundations training course, primarily for low-income individuals and referrals from Workforce Innovation and Opportunity Act providers. Despite partnerships and increased enrollment, GoodCare participants face workforce barriers including low entry-level wages, child care, and benefits cliffs. (See also "The Rural Nursing Shortage," p. 4.) **EF**

BY SAM LOUIS TAYLOR

After the Infrastructure Bill

IMAGE: GETTY/ISTOCK

In 1988, the congressionally chartered National Council on Public Works Improvements issued its final report card on the state of U.S. infrastructure. That report gave America's infrastructure a grade of C, and subsequent report cards issued by the American Society of Civil Engineers, or ASCE, have found that U.S. infrastructure needs have only grown since. The most recent report cards from ASCE ranked states in the Fifth District at about the national average, with infrastructure in Maryland and North Carolina receiving the highest overall grades of C and West Virginia and South Carolina the lowest, receiving a D and D+, respectively.

In November, partly in response to such concerns, Congress passed the Infrastructure Investment and Jobs Act (IIJA). This legislation will spend $1.2 trillion over the next 10 years, of which $550 billion in new funding is authorized over the next five years to rebuild transportation infrastructure and energy grids and to expand broadband access across the country. Though supporters estimate that the bill will produce up to $519 billion in new revenues to largely offset the cost of the new spending, the Congressional Budget Office estimated that the IIJA will produce a lower amount of new revenues and offsets and will add $256 billion to the deficit over the 10-year period. Though not quite as large as the public works programs of the New Deal era or the development of the Interstate Highway System, the IIJA represents the largest such spending program in generations and is expected to make a significant dent in the backlog of infrastructure needs across the country.

What does the IIJA mean for states and communities in the Fifth District, especially for small towns and rural areas? Based on estimated amounts of funding designated to be routed through existing formula-based spending programs, it's possible to estimate the minimum amount of funding that will come into the district.

The region will benefit from an estimated $27 billion routed through the Highway Trust Fund in order to upgrade and repair roads, including the heavily traveled roads in Washington, D.C., as well as those of the rural, mountainous terrain in West Virginia. Additionally, $2.4 billion will go toward repairing bridges, with each state having a large number of bridges that are either considered to be structurally deficient or approaching the end of their useful life. The Fifth District will see $5.5 billion over the next five years go toward public transit, with a substantial percentage of that funding going to Virginia, Maryland, and Washington, D.C., to help with maintenance backlogs of the large public transit areas around the Capital Region. Approximately $4 billion will go to repair and replace deficient drinking water and wastewater systems. Finally, Fifth District states will receive $411 million over the next five years to build out electric vehicle charging infrastructure along major road networks as well as throughout other communities.

One area of need that is of particular interest to rural areas in the Fifth District is access to high-speed internet service, known as broadband. The IIJA allocates a total of $65 billion toward broadband, with over $42 billion of that going directly to states to fund projects meeting minimum speeds; it requires participating states to fund projects that provide at least one affordable service option. Ten percent of the funding must go to meeting service needs in the hardest-to-reach areas. Each state will receive a minimum allocation of $100 million; additional funding will be allocated based on broadband access maps being developed by the FCC. In addition to this funding, $2 billion will be available to rural areas through the U.S. Department of Agriculture. The legislation also addresses barriers to internet access by sending $2.7 billion to states to help their most disadvantaged communities with training and equipment and by making COVID-era affordability vouchers permanent at a cost of $14.2 billion. All together, the Biden administration projects that this funding could help over 1.7 million people in the Fifth District who are currently without access to any broadband service gain access, and it could help 8.3 million people gain access who currently cannot afford to do so.

The Biden administration is only starting to implement this legislation, with the first payments going out to states for roads and water infrastructure in December 2021. There are still substantial hurdles to overcome in rolling out the new spending, including finding the necessary number of workers to undertake nationwide construction projects in the midst of tightness in the labor market. Legislation of this kind is always enacted with the promise of improving the lives of Americans. Success, however, will be measured where the rubber meets the road. **EF**

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BY TIM SABLIK

The Rural Nursing Shortage

The pandemic has worsened a long-standing national shortage of nurses. Rural communities face the greatest challenges.


Danielle Good, RN, outside Page Memorial Hospital, the 25-bed critical access hospital in Luray, Va., where she works.

IMAGE: COURTESY OF VALLEY HEALTH

During the pandemic, policymakers and reporters have focused on the number of available hospital beds as a measure of the health system's capacity to deal with COVID-19 infections. But those beds don't matter very much without medical staff — doctors, nurses, and other trained specialists — to treat the patients in them. And after nearly two years on the front lines of the pandemic, health care workers are stretched thin.

Nationwide, hospitals employ 105,000 fewer workers today than in February 2020, a loss of about 2 percent. According to the Bureau of Labor Statistics' Job Openings and Labor Turnover Survey (JOLTS), almost 600,000 health care and social assistance workers quit in November 2021, amounting to 3 percent of the total, and the highest number on record since the survey began in 2000. (See chart.) Many attribute these resignations, at least in part, to health care workers' mounting emotional and physical fatigue.

"Everybody is just tired," says Danielle Good, a registered nurse at Page Memorial Hospital, a 25-bed facility in Luray, Va. "A lot of nurses feel that they can't provide the care that their patients deserve because they have to keep moving. A 12-hour shift sounds like a lot, but it's not enough time when you are short-staffed and doing the jobs of several people."

As recurring surges of COVID-19 tax the health care system, the availability of registered nurses has become a major concern for hospital administrators. Nurses are critical to the assessment and treatment of patients, and numerous studies show that having more nurses improves patient outcomes. In the context of the current health crisis, a working paper by William Padula of the University of Southern California and Patricia Davidson of Johns Hopkins University's School of Nursing looked at data across 172 countries and found that having more nurses per patient was associated with a decrease in COVID-19 mortality.

Yet many hospitals have reported increased difficulties hiring and retaining nurses. This problem is particularly acute in rural settings. In a November 2021 survey of 130 rural hospital leaders by the Chartis Group, a health care advisory firm, nearly all respondents said they were having trouble filling nursing positions. That is limiting the care some of those hospitals can provide. Nearly half of the survey respondents said they had been forced to turn away patients due to a lack of nurses, and 27 percent reported that they had suspended offering some hospital services altogether for the same reason.

"When we talk to rural hospital leaders, nine times out of 10, their number one concern is staffing," says Michael Topchik, national leader for the Chartis Center for Rural Health. "It is really tough to get nurses in rural America."

A GROWING PROBLEM

This shortage of nurses isn't new. A patient in a Cleveland hospital over 100 years ago wrote a letter to the *American Journal of Nursing* commenting on the "present shortage of nurses." The patient observed that the short-handed nurses

Share this article: https://bit.ly/rural-nurses in the hospital were "like machines driven at high speed to perform their daily tasks" and seemed always exhausted.

Those words could have just as easily been written today. Burnout has always been a top challenge for health care workers, and the pandemic has dramatically increased stress levels in hospitals. A 2020 survey of health care workers by Mental Health America found that three in four were overwhelmed and experiencing burnout. And according to a 2021 survey of 1,000 health care workers by Morning Consult, 19 percent of those who had worked since February 2020 were considering quitting and leaving the health care industry entirely.

This comes on top of a wave of nurse retirements that has been building for years. According to the 2018 National Sample Survey of Registered Nurses, the average age for a registered nurse was 50. Many will retire soon, if they haven't already. At the same time, the graying of America is increasing demand for health care services, as more baby boomers age into their 60s and 70s. Before the pandemic, the Bureau of Labor Statistics predicted that the United States would need nearly 200,000 new registered nurses each year to keep up with retirements and rising demand for health care over the next decade. Given the elevated quits rate for nurses and other health care workers in recent months, that number is only likely to increase.

These problems are magnified at rural hospitals and clinics, which serve populations that tend to be older and sicker on average. Even without the looming challenge of older nurses retiring, rural areas have long struggled to recruit and retain enough medical personnel. The Health Resources and Services Administration designates counties as health professional shortage areas (HPSAs) based on criteria such as their population-to-provider ratio and the average travel time to the nearest site for care. For primary care providers, nearly two-thirds of HPSAs are in rural or partially rural areas. In the Fifth District, nearly all nonmetro (rural) counties are either partial or full HPSAs for primary care. (See chart.) For nurses specifically, in 2020, there were nearly 30 more registered nurses per 10,000 people in metro counties than in nonmetro counties.

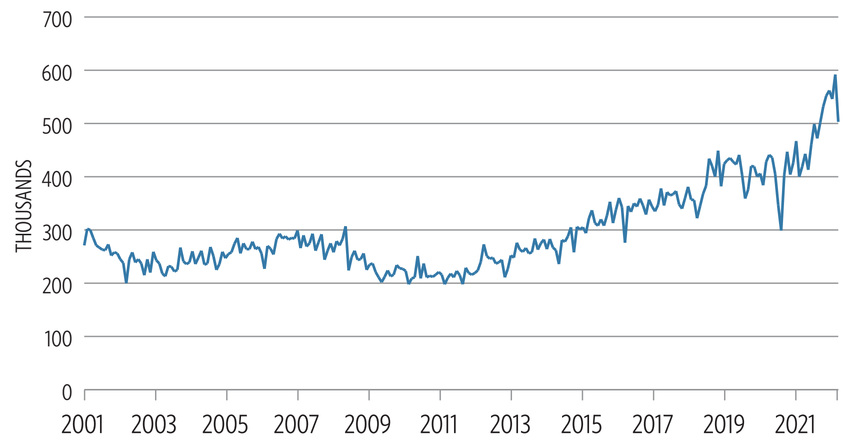
Moreover, as with some other occupations, it can be difficult to attract doctors and nurses to work in rural areas if they are not already from there. "Unless you grew up in a rural community, it's hard to make the move to one," says John Gale, a senior research associate and rural health expert at the University of Southern Maine.

Good's decision to work at Page Memorial Hospital after finishing her nursing degree at James Madison University was driven in large part by a desire to stay close to where she grew up.

"This is my home," she says. "I love living here. I like being close to my family. I like taking care of my own community."

Health Care Workers Call It Quits

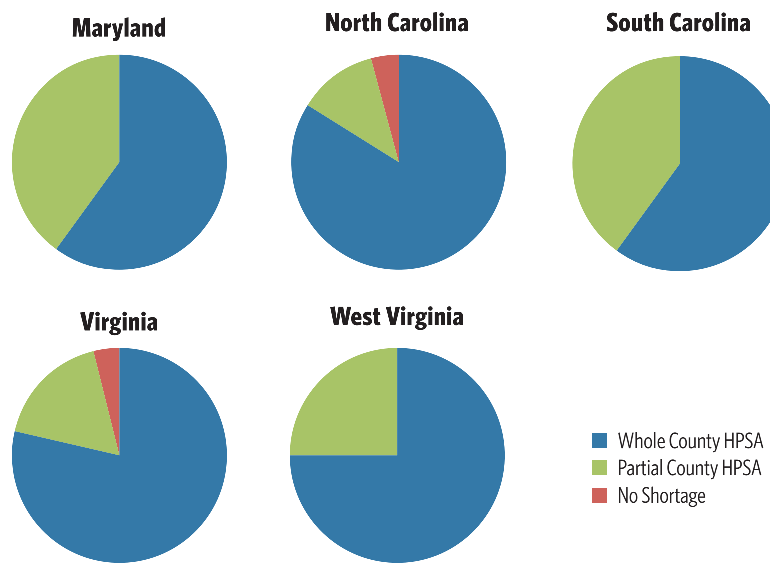
Number of quits (in thousands) for health care and social assistance workers



SOURCE: U.S. Bureau of Labor Statistics' Job Openings and Labor Turnover Survey

Most Rural Counties in the Fifth District Face Health Workforce Shortages

Share of nonmetro counties with health professional shortages for primary care as of January 2022



NOTE: "HPSA" stands for Health Professional Shortage Area, as designated by the Health Resources and Services Administration.
SOURCE: Health Resources and Services Administration

But while Page Memorial has mostly managed to stay adequately staffed through the pandemic, not all rural hospitals have been so lucky. To fill in the gaps, rural hospitals have historically turned to travel nurse agencies, which send nurses to facilities across the country on temporary contracts. But as COVID-19 caseloads spiked, demand for travel nurses increased, bidding up their salaries substantially. According to some reports, travel nurses have been able to earn more than $5,000 a week during the pandemic, while the median salary for a rural hospital nurse is $1,200 a week. This has both inflated the labor costs for rural hospitals relying on travel nurses and made it harder to retain permanent nursing staff when they can earn more doing the same job elsewhere.

Most rural hospitals lack the funds to compete with larger urban hospital systems for personnel in terms of salary. Indeed, they have increasingly struggled just to stay open. Since 2010, 138 rural hospitals have closed, and another 453 are vulnerable to closure. A 2021 Chartis Group report found that nearly half of rural hospitals were operating in the red, and the median hospital had only 33 days cash on hand. (See "Rural Hospital Closures and the Fifth District," *Econ Focus*, First Quarter 2019.) By all indications, the COVID-19 pandemic has only worsened these financial difficulties. Rural hospitals rely heavily on outpatient services for revenue, and those have been scaled back during the pandemic.

EXPANDING THE PIPELINE

To a large extent, the growing shortage of nurses is itself a symptom of another shortage: nursing instructors. In the midst of a major health crisis and surging demand for nurses, the American Association of Colleges of Nurses reported that more than 80,000 qualified applicants to nursing programs were turned away in 2020 due to a lack of clinical sites, faculty, and other resources.

This problem also predates the pandemic. The National Advisory Council on Nurse Education and Practice (NACNEP) published a report in 2010 warning of an inadequate supply of nursing faculty. In an update published December 2020, NACNEP noted that while some federal and state investments had been made to address the issue, they weren't enough. There is still a shortage of both academic nurse faculty and clinical preceptors — practicing nurses who provide hands-on clinical training for students.

Some of the root causes of this instructor shortage are similar to the ones behind the practicing nurse shortage. Like nurses in general, nursing teachers are getting older: Nearly one-third of faculty members who were active in 2015 will reach retirement age by 2025. Already, more than 50 percent of nursing schools report having vacant full-time faculty positions. Finding new instructors to fill those vacancies has proven difficult. Most nurse faculty positions require at least a master's degree, narrowing the pool of trained nurses who might apply. Less than 2 percent of nurses hold a doctorate, but more than half of the teaching vacancies require one.

Another reason schools struggle to find instructors is that salaries for faculty have long lagged behind what nurses with an advanced degree could earn by practicing in the field. According to NACNEP's 2020 report, salaries for nursing instructors range from $57,454 for those with a master's degree to $120,377 for those with a doctorate. In contrast, most practicing nurses with a master's degree earn more than $100,000 per year, while those with a doctorate can earn more than $200,000.

"For a nurse to teach, it often means taking a pay cut," says Topchik.

As with pay for hospital nurses, faculty salary shortfalls are often the result of lack of funding, something that federal, state, and private nonprofit entities have attempted to address. At the federal level, the Health Resources and Services Administration oversees the Faculty Loan Repayment Program to assist health professional faculty with loan repayment in exchange for teaching at institutions that train health care professionals. The program isn't specific to nurses, but from 2010 to 2019, it has made over 20 awards totaling more than $1 million to nurse faculty.

An example of state-based support is Maryland's Nurse Support Program II, created in 2005 specifically to support nursing faculty and expand nursing program capacity in Maryland. By 2013, the program was responsible for helping train nearly 6,000 new undergraduate nurses. For the fiscal year 2021, the program awarded 29 grants to state nursing schools worth $29.3 million.

For rural hospital administrators, developing local education and training opportunities for nursing candidates could be one way to help address staff shortfalls in the long run. Nurses who train in a rural setting may be more likely to stay there and practice when they graduate. Tabitha Fox, chief nursing officer at the Robert C. Byrd Clinic in Lewisburg, W.Va., also serves on the advisory council for the Greenbrier School of Practical Nursing just a few miles down the road.

"We try to get students into our clinic to do rotations and start the recruiting process early so when they graduate, they know we have jobs and would love to have them," she says.

Another solution might be to expand apprenticeship programs for nurse training, where nursing students learn on the job in hospitals and clinics. When nursing schools began in the United States, this model of training was typical, and both private and public entities have latched onto apprenticeships as one solution to health care worker shortages. Virginia Health Services graduated its first class of nursing assistants in April 2021 through a partnership with the Healthcare Apprenticeship Extension Program.

"If we can't train enough nurses in traditional academic programs, yet there are people who want to become nurses, that says to me that we need to think about doing things a bit differently," says Gale.

PATCHING THE LEAKS

Expanding the number of new nurses entering the workforce is only part of the solution. As the pandemic has highlighted, many hospitals also struggle to retain qualified nurses. Some seek new health care work in other locations, while others choose to leave the profession entirely.

According to the National Sample Survey of Registered Nurses, there were nearly 4 million licensed registered nurses in the United States in 2017, but only about 83 percent of them were working in a nursing-related job. In a 2005 article in the *Labor Studies Journal*, Gordon Lafer of the University of Oregon highlighted survey evidence suggesting that many of the qualified individuals not working as nurses would return to the profession if salaries and work conditions at hospitals improved.

"There is no shortage of qualified personnel—there is simply a shortage of nurses willing to work under the current conditions created by hospital managers," Lafer wrote.

It isn't always just a question of money. In a 2004 article in the *Economic Journal*, Michael Shields of Monash University reviewed econometric studies of nurse wages and labor supply starting in 1970. Most of these studies used data from the United States. Shields concluded that very large wage increases would be needed to generate a moderate increase in the supply of nurses, pointing to the importance of nonpecuniary aspects of the job.

One common complaint of nurses is the ratio of patients to staff is too high, inhibiting their ability to properly administer care and adding to their feelings of burnout. Numerous studies have suggested that limiting the number of patients per nurse results in better health outcomes, but so far only California has adopted a nurse-to-patient cap.

To be sure, capping the number of patients per nurse in the midst of a staff shortage and major health crisis isn't really feasible in the short run. But some rural hospitals are exploring other nonpecuniary incentives to entice nurses to stay. Carilion Clinic, a health care organization based in Roanoke, Va., recently became the first health system in the state and the 13th in the country to be certified by the Forum for Shared Governance. That organization promotes empowering nurses to be more involved in decision-making, arguing that collaboration between hospital staff, managers, and patients results in better health outcomes. As a result of these and other efforts to empower nurses, Carilion says it has lowered its turnover rate below the national average.

"As much as we're talking about recruitment, retaining our talented and dedicated employees is our top priority," says Alicia Bales, senior director for Carilion Tazewell Community Hospital.

At the Byrd Clinic, Fox says they have reexamined the tasks nurses were being asked to do in order to redistribute workloads. They created a position to handle medication refills and asked receptionists to handle more of the phone calls to patients. They also hired nursing assistants, which they hadn't previously employed, to handle tasks like taking patients' vital signs and cleaning examination rooms, freeing up other nurses to focus more on patient care. When she started at the clinic in November 2020, Fox says, there were six to seven openings on the nursing staff. That number climbed to 12 at one point but has since come down to just two.

"We're trying to give our nurses more opportunities to give us solutions," says Fox. "They're the ones in the trenches daily with the patients. We want them to know that their voices are heard. So far, I think it's working. We have three or four nurses in orientation right now, and once they are on board, I think we will all breathe a little sigh of relief."

FACING THE FUTURE

Ultimately, there is no single solution to the nursing recruitment and retention challenges that rural communities face.

"We've been talking about recruiting enough nurses, primary care physicians, and mental health staff to rural communities for more than 30 years, and we're not much farther along," says Gale.

While federal support in response to the pandemic has helped stem the bleeding at some rural facilities, Topchik sees the same problems now reemerging at an accelerated rate.

"The system is in absolute crisis," he says. "If nothing is done, we will continue to see a negative spiral in terms of hospital margins and closures once the federal support has worked its way through, because nothing has really changed."

For now, most hospitals and clinics are taking things day by day and trying to make the most of the staff and equipment they have. But looking ahead, Scot Mitchell, CEO of the Byrd Clinic in Lewisburg, thinks the pandemic will have a lasting effect on health care staffing.

"I think you're going to see more people leave health care, just because it's less stressful somewhere else," he says. "Health care providers and organizations are really going to have to change how we think about recruitment and retention. None of us know yet what will happen, but I think having more flexibility in terms of staffing, shifts, work-life balance, and providing staff with more opportunities to get additional education and responsibilities are all going to be much more important in the coming years." **EF**

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BY JOHN MULLIN

The Many Lives of Federal Job Training

They've received enduring, yet tepid, bipartisan support since the 1960s

President John F. Kennedy signs the Manpower Development and Training Act on March 15, 1962.

Federal job training programs have long enjoyed bipartisan support. Yet their emphasis has varied greatly across the years. At times, they have been advocated primarily as a means of helping workers displaced by automation or international trade. At other times, the focus has been on creating opportunities for those from disadvantaged backgrounds. More recently, they have gained attention as a possible remedy for a perceived "skills mismatch" that many observers see reflected in record high job vacancy rates.

Despite their enduring political popularity, federal employment and training (E&T) programs in the United States have generally not been funded on a vast scale. After peaking as a share of GDP during the mid-to-late 1970s, at over 0.4 percent, their funding declined substantially in the 1980s and has been around 0.1 percent of GDP during the past decade. That figure positions the United States at the low end among advanced economies — close to Australia, Canada, and Japan, but well below the funding levels of many European countries, such as Denmark, Finland, and Germany. According to a 2019 report by the Government Accountability Office (GAO), federal E&T spending obligations came to $13.9 billion in 2017, which amounted to $87 per U.S. worker or $2,112 per unemployed worker.

Federal E&T programs have been fragmented. The 2019 GAO report identified 43 programs spread among nine federal agencies, including the Department of Labor, the Department of Education, the Department of Health and Human Services, and the Department of the Interior. The report found considerable overlap among the programs, with 39 of the 43 providing employment counseling and assessment services, and 38 of the 43 providing job readiness training.

Much research has been devoted to assessing the programs' efficacy. Some of the more prominent academic studies have painted a mixed picture, suggesting that some programs have worked well while others have floundered. But assessment has been made more difficult by a variety of complications, including program fragmentation and the finding that program administrators have often manipulated their performance numbers.

FROM THE GREAT DEPRESSION TO THE GREAT SOCIETY

The federal government's first major forays into E&T took place during the Great Depression. The most enduring New Deal E&T initiative was the establishment of the U.S. Employment Service under the Wagner-Peyser Act of 1933. It established a nationwide system of employment offices to match workers with jobs, a service that remains in place today. Other major jobs programs created under the New Deal, such as the Works Progress Administration and the Civilian Conservations Corps, were discontinued during World War II, when millions of workers entered the armed forces.

The Great Depression had shaken confidence in the economy's ability to deliver full employment without government intervention. Reflecting these concerns, President Franklin Roosevelt had advanced the notion of an "Economic Bill of Rights" in 1944 that would have recognized the right of every individual to a paying job. The Employment Act of 1946, enacted under the Truman Administration, declared that the federal government had a responsibility to promote maximum employment.

Concerns about full employment were soon joined by concerns about the technical capabilities of the U.S. workforce. The Cold War — and the Soviet Union's 1957 launch of Sputnik, in particular

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— spawned anxiety about a perceived "missile gap" between the United States and the Soviets. It triggered the creation of NASA and an increased emphasis on scientific and technical education. In 1955 and 1960, hearings before the Joint Economic Committee of Congress demonstrated that policymakers also had concerns about the influence of automation on the U.S. economy.

Against this backdrop, the Manpower Development and Training Act (MDTA) was enacted under the Kennedy Administration in 1962. The law sought to train workers who were unemployed as a result of automation and technological change. Upon signing the bill, President Kennedy said the Act would live up to its name by "making possible the training of the hundreds of thousands of workers who are denied employment because they do not possess the skills required by our constantly changing economy." Under the program, eligible unemployed workers could expect up to 52 weeks of training followed by guidance through the U.S. Employment Service about the most suitable work. The MDTA required the Department of Labor to analyze labor market trends to identify occupations with impending skill shortages and to tailor training programs accordingly.

The MDTA program was managed by the federal government through the Department of Labor's 12 regional offices. Funds were allocated to communities based on population size and poverty rates. The program provided subsidies for vocational and technical training by private and public educational institutions, typically in classroom settings. Men were mostly trained for blue-collar jobs as machine shop workers, auto mechanics, and welders. Women were mostly trained for clerical occupations. In addition, the program funded on-the-job training, usually with private sector employers.

The goals of the MDTA program evolved during the 1960s. For one thing, the emphasis increasingly shifted away from mainly classroom training toward a combination of classroom training and on-the-job training, as policymakers came to believe that classroom training was not delivering the skills demanded by the marketplace. In addition, as the 1960s progressed and the U.S. unemployment rate declined to below 4 percent, the target of the programs increasingly shifted from displaced workers to those who were not ready for competitive employment.

The programs were not free from administrative problems. An Upjohn Institute study found, "Federal grants… occasionally were a duplication of effort" such that "the need for high-level coordination became painfully obvious." Another criticism of the MDTA was that it circumvented the authority of state and local political entities by having the federal government interact directly with local providers of job training services.

While the MDTA was the major E&T initiative of the 1960s, many additional programs were launched during the decade. The Trade Expansion Act of 1962 introduced the Trade Adjustment Assistance program to provide transitional help for workers displaced by import competition. The Economic Opportunity Act of 1964 established the Job Corps, which provides counseling, education, and training for low-income youths in a structured residential environment.

THE NIXON ADMINISTRATION: REVENUE SHARING

The MDTA was superseded in 1973 by the Comprehensive Employment and Training Act (CETA), which attempted to consolidate most federal E&T programs under one statute. Consistent with the Nixon Administration's advocacy of the "New Federalism" — which sought to move the administration of government programs to the state and local levels — the CETA brought the concept of "revenue sharing" to federal E&T programs. Under the policy, the federal government provided block grants to cities, counties, and local government consortia so that they could tailor and administer their own programs. Nevertheless, the federal government retained substantial control over how the money was spent. Local governments had to submit annual plans to the Department of Labor, and their ability to allocate funds across different demographic groups and program categories was restricted by various federal formulas.

The CETA further shifted the emphasis of federal E&T programs toward the unemployed and economically disadvantaged. To that end, the legislation took steps to mitigate the problem of "cream skimming"— a practice whereby program administrators attempted to make their programs look better by biasing their admissions toward those applicants most likely to do well after training, regardless of the training's effect on their skills. Special programs were created for groups with significant barriers, including Native Americans and migrant workers. Moreover, local program administrators were required to affirm in their annual plans that they would support those "most in need," including "low-income persons."

In a break from the MDTA, the CETA included a major public sector employment component, which eventually grew to be the largest part of the CETA. By the late 1970s, however, some observers had grown concerned that state and local governments were using CETA funds to pay for government positions, also known as "fiscal substitution." The CETA was amended in 1978 with measures designed to curtail the practice.

Total spending under the CETA peaked during the Carter Administration at levels well above those of the MDTA program of the 1960s. But CETA programs spent less money per "customer" than the 1960s programs, a change that reflected a policy shift toward making smaller expenditures per person on a larger group of low-income people. Local administrators emphasized shorter-duration programs and job search assistance — services designed to place people in jobs rather than to increase their skills.

THE REAGAN ADMINISTRATION: BUDGET CUTS

The CETA was supplanted by the Job Training Partnership Act (JTPA) of 1982, which cut the size and restricted the focus of U.S. employment and training programs. It eliminated many public sector employment programs, increasing the focus on training for hard-to-employ people.

Under the JTPA, federal training programs continued to operate under the federalist principles introduced by the Nixon Administration. To address concerns that government training programs were not providing the types of skills demanded of potential employers, however, the JTPA required each local training jurisdictions to establish and take direction from a private industry council consisting of local businesses, labor organizations, and political and community officials. (The councils had been authorized by a 1978 amendment to the CETA but were given much more authority by the JTPA.)

The JTPA further developed the system for measuring program performance that had evolved under the CETA. Local providers were to be judged by outcome-based measures, such as post-program employment and wage rates. Although the performance standards were meant to improve program performance, they increased the incentive for administrators to engage in cream skimming, which tended to undermine the JTPA's goal of concentrating on hard-to-employ people.

Yet despite the presence of this perverse incentive, JTPA programs appear to have largely succeeded in focusing on hard-to-employ people. In 1985, for example, 40 percent of program participants were receiving public assistance, 41 percent were high school dropouts, and 92 percent were from families in poverty.

The JTPA also provided job search and training services for displaced workers. Amendments under the Omnibus Trade and Competitiveness Act of 1988 reflected a desire by policymakers to shift away from providing low-cost job search and training services and toward providing more intensive job training. Further changes to the JTPA during the 1990s placed greater emphasis on training for displaced workers.

THE CLINTON ADMINISTRATION: ONE-STOP CAREER CENTERS

The JTPA was replaced by the Workforce Investment Act (WIA) of 1998, which attempted a renewed consolidation of federal and state training and employment programs. It increased states' flexibility to use federal money to develop their own employment and training plans. The federal government still retained some control; states were required to submit "training plans" for approval from the Department of Labor.

The WIA established "one-stop career centers" within local jurisdictions to streamline services. The WIA's one-stop centers were created with the goal of providing "universal access" across the income spectrum, which was somewhat in tension with the goal of providing service for those most in need. Other WIA innovations included individual training accounts, which acted as vouchers to give program participants greater choice among job training providers, such as community colleges and private nonprofit and for-profit schools. WIA also instituted new performance standards and mandated that local administrators monitor the performance of training providers and maintain "eligibility" lists of such providers.

WIA also sought to coordinate E&T programs with existing social services. This effort dovetailed with another significant Clinton Administration program, Temporary Assistance to Needy Families (TANF). Enacted in 1996, TANF replaced the welfare program known as Aid to Families with Dependent Children, which had offered cash assistance to families with children in poverty since 1935. TANF placed various work conditions on the receipt of aid and significantly reduced the number of families receiving cash assistance.

The WIA was supplanted by the Workforce Innovation and Opportunity Act (WIOA) of 2014. WIOA placed greater emphasis on aligning and integrating workforce programs. Among other things, the new law increased the emphasis on industry-recognized credentials. Despite these changes, however, some observers judge WIOA to have been largely a continuation of previous policies.

A MIXED PERFORMANCE RECORD

Federal job training and employment programs have been the subject of numerous evaluations. An interesting characteristic of the research is the frequent use of experiments. In no small part, experimental studies have proliferated as a response to the skepticism that nonexperimental studies on job training have received from academics and policymakers alike. The results of nonexperimental studies can be distorted in many ways, some of which stem from the strategic behavior of program administrators, who have been known to manipulate program admissions and report results to enhance their performance ratings.

"There's a lot of games that administrators play," says Gordon Lafer of the University of Oregon and author of the 2002 book *The Job Training Charade*. "For one, they don't count people as having completed the program unless they've gotten a job, in order to hide the number of people who have not been helped by the program."

Unfortunately, however, experimental methods in studies of job training come with their own problems. Some people who are randomly chosen for the "treatment" of job training turn out to be no-shows who do not actually receive the intended training, while some people who are chosen for the "control" group that is intended to forgo training nevertheless end up receiving training, one way or another.

"When two of my colleagues visited a community college in Corpus Christi that was part of an experiment, they found that a treatment group member and a control group member were enrolled in the same class," says Jeffrey Smith of the University of Wisconsin-Madison. "Maybe the control group member enrolled on his or her own dime, but the two people were getting the exact same training. These experiments are complicated in a way that policymakers and policy wonks don't necessarily want to hear about."

The fragmented nature of federal E&T programs makes the task of evaluating them even more difficult. "The total number of studies is large," says Smith, "but since there are so many different programs, the number of studies per program is not very large, so trying to gauge their combined effect is challenging, to say the least."

In a 2003 survey of the literature, Lalonde identified several patterns that had emerged from experimental and nonexperimental evaluations. He found that federal E&T programs had not had a substantial effect on poverty — a result that he attributed mostly to the programs' typically small investments, which generally amounted to much less than a year of formal schooling. Yet despite the modest investments, he found that E&T programs had consistently improved the employment prospects of economically disadvantaged adult women. In his view, these programs earned a high social rate of return that may well justify their expansion. By contrast, he found discouraging results for disadvantaged youths.

In a 2016 survey, Burt Barnow of George Washington University and Jeffrey Smith found that WIA programs had positive earnings effects for adult men and women — effects that appeared to pass cost-benefit tests under reasonable assumptions. By contrast, they found that WIA programs appeared to have been worse than useless for dislocated workers. The poor results of Trade Adjustment Assistance programs suggest, in their view, "that we should perhaps seek a more efficient way to compensate workers who suffer individually while the public benefits from reduced trade barriers."

WHERE DOES TRAINING GO FROM HERE?

Some conservative critics of federal E&T programs argue that they are a highly bureaucratic and costly means of providing services that are more effectively delivered by the private sector. "Today's problem is job vacancies," says Chris Edwards of the Cato Institute. "Companies will go to great lengths to hire the skilled workers they need, and they're probably doing a lot of training themselves." Moreover, Edwards believes some federal efforts have been redundant. "Just look at the federal Employment and Training Administration website. It seems like they are trying to duplicate what the private sector is already providing."

In Edwards' view, the government's efforts are best spent on providing information that the private sector is not well positioned to gather. "The government can help lubricate labor markets in its traditional manner by providing information based on broad surveys of the economy," he says. "The Department of Labor can provide valuable information on job opportunities and average salaries for different occupations."

Gordon Lafer, a critic of the programs, has argued that they are more a political strategy than an actual effort to help workers. In his view, the existence of the programs allows politicians to claim they are doing something, without having to spend a lot of money. The political strategy, in Lafer's view, puts the onus for low wages and unemployment on workers. Lafer favors strengthening unions and taking other measures to increase workers' political and market power.

Nevertheless, federal job training programs continue to enjoy some measure of bipartisan support. With U.S job vacancies at 10.9 million, near their record high, many observers are concerned that the economy may not have a sufficient supply of skilled labor to implement the major infrastructure plan recently enacted by Congress. (See "After the Infrastructure Bill," p. 3.) To address the perceived skills mismatch, legislators have introduced training proposals, including the Jumpstart Our Businesses by Supporting Students (JOBS) Act, which would expand the federal Pell Grant program to fund educational programs of shorter duration than are currently allowed for students pursuing certificates and licenses. (See "Pell Grants and Workforce Development," Policy Briefing, August 2021.) The continuing support for such programs suggests that the federal government's long-standing role in job training is likely to endure. **EF**

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BY MATTHEW WELLS

Climate Change and the Economy

Richmond Fed senior economist Toan Phan has spent the past decade exploring the economics of climate change. His research in this area began as he was finishing graduate school in 2012, when he was struck by the potential economic implications of climate-related disasters like flooding and hurricanes. So, along with colleagues Riccardo Colacito of the University of North Carolina and Bridget Hoffmann of the Inter-American Development Bank, he began a project to understand the relationship between increasing temperatures and economic growth. The resulting article, "Temperature and Growth: A Panel Analysis of the United States," garnered a great deal of attention from economists, the business world, and policymakers, as it showed that increasing temperatures throughout the United States are associated with reduced growth in the service industry and other sectors that comprise a significant portion of the economy, not just in agriculture as was previously thought.

The Fed has long sought to promote the stability of the financial system, and research initiatives like Phan's seek to identify potential threats to that stability. As another example, Phan points to a growing research literature in climate finance documenting that financial markets have started pricing in transition risks, or the additional exposure to environmental regulations among carbon-intensive industries, potentially reducing the price of fossil fuel assets.

The Fed has long sought to promote the stability of the financial system, and research initiatives like Phan's seek to identify potential threats to that stability.

In other research, Phan recently partnered with Hee Soo Kim and Christian Matthes, both of Indiana University, on a working paper documenting that current extreme weather and climate-related natural disasters reduce the growth rate of industrial production while increasing unemployment and inflation in the United States, not just in developing countries, as had been suggested in earlier literature. He also has a working paper co-authored with Ranie Lin of Rice University and Lala Ma of the University of Kentucky indicating that minority populations in the United States are more worried about environmental issues, including global warming, than their nonminority counterparts, reflecting the potentially unequal effects of environmental problems across socioeconomic groups.

Phan's work is part of a broader effort at the Fed and beyond to better understand climate change's potential effects on the economy. The System Climate Network, an informal network of several hundred economists, bank supervision staff, and others within the Fed, has taken root with the aim of sharing ideas and research that will further the Fed's ability to understand the potential effects of climate change and climate risk on the financial system. Phan explains that "it felt very natural to be a part of this ecosystem," noting that among other activities, he organized a virtual climate change economics conference at the Richmond Fed in November 2020. That same year, he and Glenn Rudebusch, Òscar Jordà, and Stephie Fried of the San Francisco Fed and Michael Bauer of the University of Hamburg started an ongoing series of virtual seminars, where presenters explore a myriad of topics in climate economics and finance, including the implications of climate change for infrastructure planning, ways to measure the social cost of carbon dioxide emissions, and potential adaptation and mitigation policies including carbon taxes. Phan is also co-editor of the Fed's System Climate Forum, an internal resource for Fed researchers working on climate issues.

There is also an emerging consensus among financial regulators that solving a global problem like climate change will require global cooperation. In late 2020, the Fed joined the Network for Greening the Financial System, an international group of over 100 central banks and bank supervisory agencies founded in 2017. Its goal is to improve the global financial system's ability to manage the risks associated with climate change through the sharing of ideas, best practices, and research by economists like Phan.

When reflecting on what's next in climate economics research, Phan stressed that the field is young, and there is no shortage of questions to be answered. In particular, he pointed to ongoing efforts to put a monetary cost on each ton of carbon dioxide or greenhouse gas emitted into the atmosphere. He also is currently drafting a paper with Russell Wong, a Richmond Fed senior economist, and Laura Bakkensen of the University of Arizona that examines the effect of sea level rise on the mortgage market, a market that he views as an "elephant in the room" when it comes to the climate's effect on financial stability.

Phan is also working with a group of researchers drafting the Fifth National Climate Assessment, a congressionally mandated report summarizing the rapidly growing research literature on estimating the effects of climate change in the United States, now and in the future. It will be up to policymakers to decide whether and how to act on the findings in the report, but Phan and his colleagues will continue to conduct research with the hope of shedding light on this complex and dynamic relationship. **EF**

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BY MATTHEW WELLS

Global Banks, Local Branches, and Faraway Crises

Correa, Ricardo, Horacio Sapriza, and Andrei Zlate. "Wholesale Funding Runs, Global Banks' Supply of Liquidity Insurance, and Corporate Investment." ***Journal of International Economics*****, November 2021, vol. 133.**

How do financial crises affecting banks in one part of the world ripple through the global economy? The answer to this question provides insight into how market actors — including investors, borrowers, and banks — respond to risk, as well as the effects of their reactions on the wider economy.

Past research has shown that in times of crisis, international banks can experience "liquidity shocks" that limit their access to funding due to a range of factors, including concerns about their solvency. As a result, these banks are unable to lend to their own branch offices abroad. The branches, in turn, reduce their lending to local firms, limiting the firms' ability to invest and grow.

In an article recently published in the *Journal of International Economics*, Horacio Sapriza of the Richmond Fed and Ricardo Correa and Andrei Zlate of the Fed Board of Governors suggested an alternative pathway for the spread of financial shocks. In particular, they used the case of the 2011 European debt crisis to show that local branches of global banks can also amplify shocks through pathways distinct from any effects stemming from their parent banks' capitalization levels.

These branches are immersed to a surprising extent in the economies of the countries where they are located. In the United States, for example, they play an active role in the wholesale funding market, gaining access to dollars from money market funds looking for short-term investments. These branches then use that money to provide loans and revolving credit, known as liquidity insurance, to local firms.

Money market funds invest in these local branches primarily through large time deposits, which are uninsured deposits of $100,000 or more. Also, the Securities and Exchange Commission instituted a requirement in late 2010 that these funds publicly disclose their asset portfolios. As a result, the authors posited that as the crisis in Europe grew more severe, these foreign branches became vulnerable to "inefficient liquidation" — a run on the branch — as fund managers pulled their deposits because of general public concern over what was happening in Europe rather than any factors related to the specific banks or their local branches.

The authors found support for this hypothesis using data on large time deposits between 2010 and 2011 from the Federal Financial Institutions Examination Council, which also showed that these runs were isolated to euro-area bank branches specifically and did not affect branches of banks from other parts of the world. Putting it in terms of numbers, between the second and fourth quarters of 2011, large time deposits into U.S. branches of euro-area banks declined by almost $250 billion.

The authors next used Fed data on the U.S. branch networks of foreign banks to show that the more a local branch lost in deposits, the more the parent bank tried to fill in the gap so that the branch could continue lending. A significant shortfall in funding remained, however; the authors' modeling showed that branches that had larger drop-offs in deposits still decreased their lending activity.

To delve into the size of the effect, the authors used U.S. bank supervisory data capturing all syndicated loans (that is, loans with multiple lenders) over $20 million to publicly traded firms with at least three U.S. banks participating in the loan. After controlling for loan demand at the firm and sector levels, they found that the funding shock led to a decrease of $11 billion in commercial and industrial loans in the United States between 2010 and 2011. They also found that the decrease mainly took the form of lending to fewer firms rather than smaller lending amounts to each firm.

How did affected firms react to the lost loans? The authors used balance sheet data from S&P Compustat to show that the U.S. firms that lost funding from euro-area bank branches reduced their investments in 2011 relative to firms that did not have such relationships by about $22 billion, or about 7 percent of all 2010 investment by publicly traded firms in the sample. These firms instead tried to build up their own liquidity insurance, accumulating about $17 billion more in cash reserves in the wake of the crisis than similar firms with no euro-area bank exposure.

Typically, firms experience liquidity shocks when banks come to view them as risky investments. In this case, however, as the crisis in Europe deepened, wholesale investors in the United States believed the opposite: Branches of euro-area banks were no longer safe places to put their money. The resulting chain reaction ultimately left vulnerable U.S. firms sacrificing growth to cover cash shortfalls. **EF**

Growing Rural America Through Startups

Entrepreneurship creates many local benefits, but starting a new business in rural places can be challenging

BY TIM SABLIK

Rural places, by many measures, have tended to be less vibrant economically than metro areas, on average. Some small towns looking to create more job opportunities have tried to attract large businesses, while others have leaned on their natural amenities to draw residents and tourists. But another, less obvious, approach is in the running: entrepreneurship. New businesses contribute disproportionately to job and productivity growth, providing numerous benefits to a local community.

Entrepreneurship in America has become increasingly concentrated in cities. In a 2020 paper for the American Enterprise Institute, Mark Partridge, a professor of economics at Ohio State University, documented that the self-employment share of personal income was 12.3 percent in nonmetro areas and 7.7 percent in metro areas in 1969. By 2017, it had fallen to 7.2 percent in nonmetro areas and risen to 8.9 percent in metro areas. Likewise, job creation as a percentage of employment has fallen faster in rural places than urban areas since the 1970s. In the Fifth District, the number of rural startups created each year fell noticeably during the Great Recession and remained depressed through 2019. (See chart.)

One silver lining is that the nationwide startup slump seems to be reversing. Beginning in the summer of 2020, applications for new businesses soared to record highs. (See "A Pandemic-Era Startup Boom," *Econ Focus*, Fourth Quarter 2021.) Can rural communities and small towns capitalize on this surge to build more dynamic and resilient economies?

A CHALLENGING ENVIRONMENT

When researchers and policymakers talk about promoting entrepreneurship, their focus has tended to be on the fast-growing success stories — the Apples, Googles, and Amazons that started in a garage or basement and grew into huge enterprises.

While there is no question that such firms have tremendous impact in terms of job creation, innovation, and productivity growth, it's also true that small, locally owned businesses contribute a lot to economic health. In a 2013 Atlanta Fed discussion paper, Anil Rupasingha, now at the USDA's Economic Research Service, found evidence that having a higher share of employment at small businesses with two to 99 employees was positively associated with local income and employment growth and poverty reduction. The impact of greater employment at larger firms was more mixed.

Historically, rural towns have had higher concentrations of self-employment than cities, owing largely to differences in population density. "If you have a business that fixes air conditioners and furnaces in a rural place, it's not going to employ 1,000 people like it might in a major city," explains Partridge. "So you tend to see more small businesses in rural areas."

But rural entrepreneurs face significant hurdles when it comes to getting their businesses off the ground. The first is the low population density that traditionally encouraged

IMAGE: GETTY/ISTOCK

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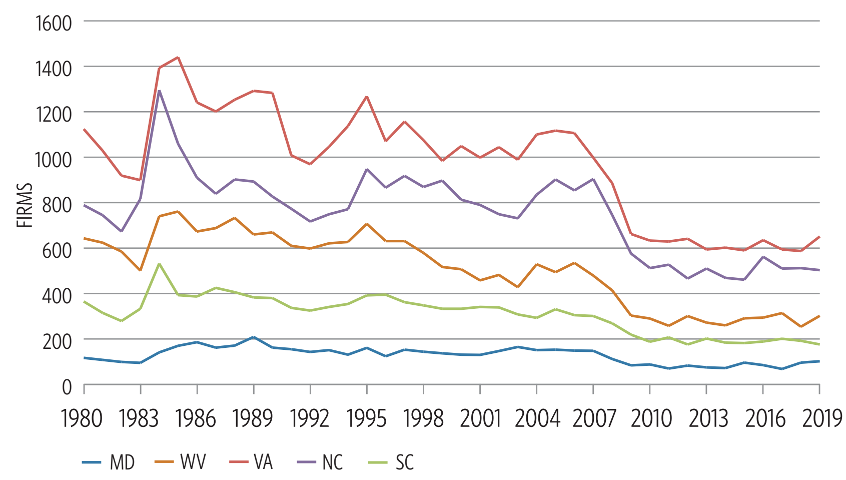
self-employment. More residents in a community means a bigger market for new businesses to serve, a deeper labor pool to draw from, and more opportunities to interact with and learn from other business owners — and fewer residents means the opposite.

"Entrepreneurial ecosystems are much thinner in rural areas than they are in urban areas," says Stephan Goetz, an agricultural economist and director of the Northeast Regional Center for Rural Development at Pennsylvania State University. This means that rural entrepreneurs may struggle to find local support businesses, such as accountants or marketers, to help get their ventures started.

The drag of low population density on startup activity can become a self-reinforcing cycle. Would-be rural entrepreneurs may move to a bigger city to start their business or give up on their venture entirely. Each person who moves away makes it harder for the next new business to emerge.

Rural Startups in the Fifth District

New Firms Created in Non-Metro/Non-Micropolitan Areas



NOTE: Metropolitan Statistical Areas have at least one urbanized area of 50,000 or more inhabitants. Micropolitan Statistical Areas have at least one urban cluster of at least 10,000 but fewer than 50,000 people. A firm is a business organization consisting of one or more domestic establishments in the same geographic area and industry under common ownership or control.
SOURCE: U.S. Census Bureau Business Dynamics Statistics

As the 2020 census revealed, most rural places have lost people over the last decade. In the Fifth District, only rural counties in Virginia grew between 2010-2020, and then only slightly — increasing their population by just 1 percent in that time. In every other state in the District, rural areas lost population.

Another key ingredient for startups is access to capital. Historically, rural entrepreneurs have had some advantages in this area. The 2016 small business credit survey conducted by the Richmond and Atlanta Feds found that rural small businesses faced fewer financing constraints and were more financially stable than urban small businesses. The researchers concluded that this was partly because small community banks, which are more prevalent in rural areas, are more likely to approve requests for loans from local small businesses.

That advantage may be eroding, however. The number of banks in the United States has fallen by more than half since the 1980s, the result of both rapid industry consolidation and a drought in new banks being formed. (See "Who Wants to Start a Bank?" *Econ Focus*, First Quarter 2016.)

Large banks may still have branches in rural places, but they don't necessarily serve the same function as local community banks, Partridge explains. Community bank managers may be more inclined to lend to entrepreneurs in their community because they have local knowledge that enables them to better assess the risks of local business ventures. Managers of bank branches whose headquarters are in large cities may be less willing to lend to rural businesses because they lack that specialized knowledge. "That makes it even harder for rural businesses to get working capital," he says.

For entrepreneurs in small towns hoping to build the next Apple or Google, access to large-scale venture capital is even harder to come by. Venture capital investing, angel investing, and other startup investing has long been tied heavily to geography. A 2020 National Bureau of Economic Research working paper looked at data from social networks on Facebook and found that institutional investors were more likely to invest in firms from regions where they had the strongest social ties. This has tended to concentrate investors and startups in big cities, like New York.

"If you're in Silicon Valley and you walk into an investor's office with a great idea, they are going to lavish you with a mountain of cash long before you even produce anything," says Russ Seagle. "In rural America, you've got to prove yourself." Seagle is a lifelong entrepreneur who, for the past dozen years, has managed the Sequoyah Fund, a community development financial institution that makes loans primarily to Cherokee-owned businesses in western North Carolina. (The fund takes its name from the creator of the Cherokee system of writing and isn't related to Sequoia Capital, a prominent Silicon Valley venture capital firm.)

LAYING THE GROUNDWORK

For rural communities hoping to encourage more local businesses, overcoming these and other barriers is a challenge. One way that both rural and urban places have tried to build their own entrepreneurial ecosystems is by first attracting large firms to the area through various incentives. In theory, those firms both create jobs in the community and spur the creation of other local support businesses.

But a 2020 article in *Economic Development Quarterly* by Partridge and co-authors Alexandra Tsvetokova of the OECD Trento Centre for Local Development, Sydney Schreiner

Wertz of the U.S. Treasury Department's Office of Economic Policy, and Carlianne Patrick of Georgia State University called into question the effectiveness of this approach. They found that providing incentives to attract firms to an area has a negative effect on local startup rates. Based on these results, Partridge argues that localities hoping to spur business growth shouldn't focus on providing tax incentives to attract big firms at the expense of small ones.

"Instead, lower taxes for all businesses a little bit and encourage startups that way," says Partridge.

Every town is different, and there is no secret recipe to building an innovative economy. But researchers have identified some key ingredients to creating an environment where startups can thrive.

Broadband is increasingly crucial to the success of businesses, and it can be hard to come by in parts of rural America. Geography, both distance and terrain, has made it difficult to bring fast and reliable wired internet to many rural places. (See "Closing the Digital Divide," *Econ Focus*, Second/Third Quarter 2020.) Seagle notes that in some rural places, it can be expensive and time consuming to connect a new business to local water and sewer systems, let alone get broadband access or even a phone line.

"You don't have to be at the confluence of major rivers or highways anymore," Seagle says. "But if you're not digitally connected to the rest of the world, it's a tough row to hoe."

Digital connections may also open doors to new funding opportunities for rural entrepreneurs. In a 2021 article in Research Policy, Sandy Yu of the University of Minnesota and Lee Fleming of the University of California, Berkeley found that crowdfunding through platforms like Kickstarter enables entrepreneurs across regions to gain early funding, support and advice, and inexpensive market feedback. While more crowdfunding campaigns per capita happen in big cities, Yu and Fleming estimated that the impact per campaign was greatest in poorer, more rural regions.

Seagle says that the Sequoyah Fund worked with a client who developed an educational video game that taught players how to speak Cherokee. The game developer started a Kickstarter campaign to fund the project. When it became apparent that he needed more time to reach his crowdfunding goal, Sequoyah Fund loaned him the money to get started, telling him that he could repay the loan once the Kickstarter campaign ended.

"Before Kickstarter, he wouldn't have had a whole lot of other options," says Seagle. "It's possible to do these kinds of things in rural America now."

While building out broadband to every rural home and business to connect entrepreneurs to the web is a continuing process, some communities have found a solution in the form of business incubators, which can provide rentable office space with internet and phone access already set up. The Gould Business Incubator, which launched in 2013, grew out of the Southeastern Institute of Manufacturing and Technology (SiMT), a division of Florence-Darlington Technical College in Florence, S.C. The incubator offers fully equipped office facilities for rent to both established and new businesses, raising money for the college while also supporting local entrepreneurs. While it took a little while to win locals over to the concept of an incubator, says Tressa Gardner, associate vice president of SiMT, now the incubator is completely full, housing 35 businesses that range from sole proprietorships to the local baseball team — the Florence Flamingos.

"We used to say that it was worth coming into the incubator because the Wi-Fi was already set up," says Gardner. Now, entrepreneurs come in to take classes, access the 3D printing facility at SiMT to make product prototypes, and just be around other small-business owners.

BUILDING A COMMUNITY

In addition to providing access to crucial infrastructure, business incubators and similar organizations help foster a culture of entrepreneurship in places where people may never have thought about starting a business.

The WV Hive Network, headquartered in Beckley, W.Va., supports startups across 12 counties in the southern part of the state, an area that has historically been economically reliant on the coal industry. That kind of industry concentration can prove detrimental to entrepreneurship. A 2015 *Energy Economics* article by Partridge, Michael Betz and Linda Lobao of Ohio State University, and Michael Farren of the Mercatus Center at George Mason University found that coal mining in Appalachia reduced population growth and entrepreneurship.

"When we started, many entrepreneurs and small-business owners weren't aware that there were organizations that could support them in their entrepreneurial journeys," says Judy Moore, executive director of the WV Hive. "One of the first things we did was to help create that mindset and then layer in the other educational opportunities and workshops we offer now."

Building a support community may be an important component of keeping local startups local. Connectivity with broader markets, whether through physical or digital highways, can help rural businesses grow, but it can also be a double-edged sword.

"If you bring broadband into a community, it can help the local businesses sell their products elsewhere, but it also helps local consumers find alternative products elsewhere in the country," says Goetz.

Having an environment that supports local businesses means that entrepreneurs don't necessarily have to look elsewhere to succeed. It may even help bring back some who left. Dan Cox's grandfather grew up in West Virginia but moved to Pennsylvania after returning from the Korean War. Cox grew up in Pennsylvania, but his grandparents ended up moving back to West Virginia, and he visited often. He also grew familiar with the area through his work doing cellular service upgrades. Seeing the need for better telecom service in the region, he decided to move to Oak Hill, W.Va., and start his own business, Cox Telecom, with help from WV Hive.

Once a community starts supporting entrepreneurs, it can become a self-reinforcing process. In a 2013 article in the *Journal of Regional Science*, Partridge, Heather

Stephens of West Virginia University, and Alessandra Faggian of Gran Sasso Science Institute found that having more entrepreneurs in a region was associated with even greater levels of self-employment 20 years later. Additionally, they concluded that entrepreneurship was one of the best ways to boost wages and jobs in places that were lagging economically.

One way to cultivate an entrepreneurial environment is through education. That includes investments in general education. Evidence suggests that a town doesn't need a top-tier university to become a startup hub — just having higher levels of high school completion is associated with more entrepreneurship. Teaching entrepreneurship in schools can also get students thinking from an early age about running their own business as a career option and equip them with the skills to succeed. For instance, a 2017 article in *Teaching and Teacher Education* examined a program in Mexico in which fifth and sixth graders created their own small businesses with the help of teachers; the authors found that the experience enhanced entrepreneurial knowledge, values, and skills in the students.

In 2015, Seagle led the Sequoyah Fund to take over REAL (Rural Entrepreneurship through Action Learning), an entrepreneurship education program that started in North Carolina high schools in the 1980s. The program is now taught around the world to students from kindergarten to college as well as new business owners. Students learn how to think like entrepreneurs and acquire the skills needed to run their own business. Seagle became a certified teacher of REAL in 1999, and when the organization behind it ran into financial difficulties, he knew he had to step in to keep the program alive.

"I've seen people come into the program who had to take over a family business but didn't know how to do it. By the end of the program, they had a skillset they never imagined they could have," says Seagle. "It's important for us to teach people how to create jobs rather than just seek jobs. And if they decide that starting a business isn't for them, this training still makes them better employees, because now they understand their boss's mindset and how their work affects the bottom line."

SEIZING NEW OPPORTUNITIES

The pandemic seems to have prompted many people to rethink their relationship with their job, a movement that pundits have called the "Great Resignation." Some have been forced out of work by the disruptions of the pandemic while others are reevaluating what they want to do with their careers.

Gardner recently visited a tenant at the Gould Business Incubator who runs an insurance company. His office had become a makeshift playroom for his grandchildren after their day care sent the children home because of a staffing shortage.

"Everybody's life is in flux right now," says Gardner. "If you can't provide flexibility, you're going to lose your employees. I think a lot of people are deciding that if they are going to work this hard, they're going to work for themselves."

Can rural places attract some of these new entrepreneurs to their communities? For many places, it may be an uphill battle. In their research, both Goetz and Partridge note that the worsening picture of rural America painted by the data is partly an artifact of how researchers define rural and urban — by population density. Rural towns that succeed and grow "graduate" to metro status, leaving behind communities that are still struggling. In a recent interview, Edward Glaeser of Harvard University suggested that small towns with desirable natural amenities may benefit from a pandemic-induced migration away from cities, but the ability of small towns without those attractive amenities to benefit from this reshuffling is less clear. (See "Interview: Edward Glaeser," *Econ Focus*, Fourth Quarter 2021.)

Still, there are rural places that have managed to build a thriving entrepreneurial climate seemingly in the middle of nowhere. Partridge cites the example of Holmes County, Ohio, a predominantly Amish region about halfway between Columbus and Cleveland. Out of necessity, locals cultivated a thriving small-business environment where entrepreneurs support one another.

"Having good public schools or a nearby medical center can help retain population," he says. "But just having the right attitude really makes a difference." **EF**

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BY JOHN MULLIN

Revisiting the Community Reinvestment Act

Regulators are considering changes to how the 1977 law is implemented

During the mid-to-late 1930s, real estate appraisers working for the government-sponsored Home Owners' Loan Corporation (HOLC) undertook the unprecedented task of rating the creditworthiness of neighborhoods in over 200 of America's largest cities. Among other things, they gauged the incomes of a neighborhood's residents, the quality of its housing stock, and the proximity of amenities such as public transportation and schools. Perhaps unsurprisingly, their ratings ended up being highly correlated with measures of neighborhood affluence. They consistently assigned their lowest credit grade of "hazardous" to low-income neighborhoods.

Race and ethnicity also played prominent roles in HOLC credit reports. For example, under the heading "Favorable Influences," the HOLC assessment report for the neighborhood surrounding McMannen Street in Durham, N.C., sounds neutral, at first — citing "All city conveniences, adequate transportation, schools located in area, also community business center." But under the heading "Clarifying Remarks," the report added, "This was formerly a good white residential street but negroes are gradually taking up the area." The HOLC rated the neighborhood hazardous.

The pattern played out across the country. The HOLC report for Bedford-Stuyvesant in Brooklyn, N.Y., noted that "colored infiltration [is] a definitely adverse influence on neighborhood desirability." The report for a south Philadelphia neighborhood posited that the "infiltration" of Jews in the area had depressed house values. And the report for a Berkeley, Calif., neighborhood stated that the HOLC grade could have been higher "but for [the] infiltration of Orientals and gradual infiltration of Negroes."

The HOLC grades were used to construct color-coded city maps in which the lowest graded sections were shaded red — thus giving birth to the term "redlining." Maps based on similar methods and biases were drawn at about the same time by the Federal Housing Administration, an institution that would play a major role in post-World War II mortgage markets. It is difficult to judge the extent to which these early redlined maps exerted an independent influence versus how much they simply reflected preexisting practices in real estate and lending markets that may have continued regardless of the maps. What is certain is that the maps represented the official codification of practices that made it difficult for minority and lower-income families to obtain mortgages for home purchases or improvements in redlined neighborhoods. Shut off from homeownership, many families were blocked from what was arguably 20th century America's most important avenue for the intergenerational accumulation of wealth.

A RESPONSE TO REDLINING

The Community Reinvestment Act (CRA) was enacted in 1977 as part of an attempt to remedy the legacy of redlining and to encourage banks to meet the needs of minority and low- and moderate-income (LMI) communities. Although it was meant to address long-standing issues, it was enacted during a period of heightened concern about declining conditions in the nation's urban neighborhoods.

While the CRA did not explicitly target racial discrimination, it was meant to complement civil rights laws that had been passed during the previous decade to address inequities in housing and lending markets. The Fair Housing Act of 1968 outlawed many of the discriminatory practices that had shaped the U.S. housing market, including racially restrictive covenants and zoning laws. (Although the U.S. Supreme Court had barred states from enforcing racially restrictive covenants in its 1948 decision in *Shelley v. Kraemer*, the decision had not barred their use by private parties.) The 1968 law's prohibition of discriminatory mortgage lending was buttressed by the Equal Credit Opportunity Act of 1974, which prohibited financial institutions from discriminating against credit applicants based on, among other protected characteristics, their race, color, religion, national origin, or sex. The Home Mortgage Disclosure Act (HMDA) of 1975 assisted the enforcement of antidiscrimination laws. It required banks to collect and disclose data about the ethnicity and race of credit applicants to aid in the identification of discriminatory lending practices.

Data collected under HMDA played a role in informing congressional debate over the CRA. Sen. William Proxmire (D.-Wis.), the CRA's main architect, stated on the Senate floor, "The data provided by [the HMDA] remove any doubt that redlining indeed exists, that many credit-worthy areas are denied loans. This denial of credit, while it is certainly not the sole cause of our urban problems, undoubtedly aggravates urban decline."

The CRA declares that "banks have a continuing and affirmative obligation to help meet the credit needs of their local communities, including low- and moderate-income (LMI) neighborhoods where they are chartered, consistent with the safe and sound operations

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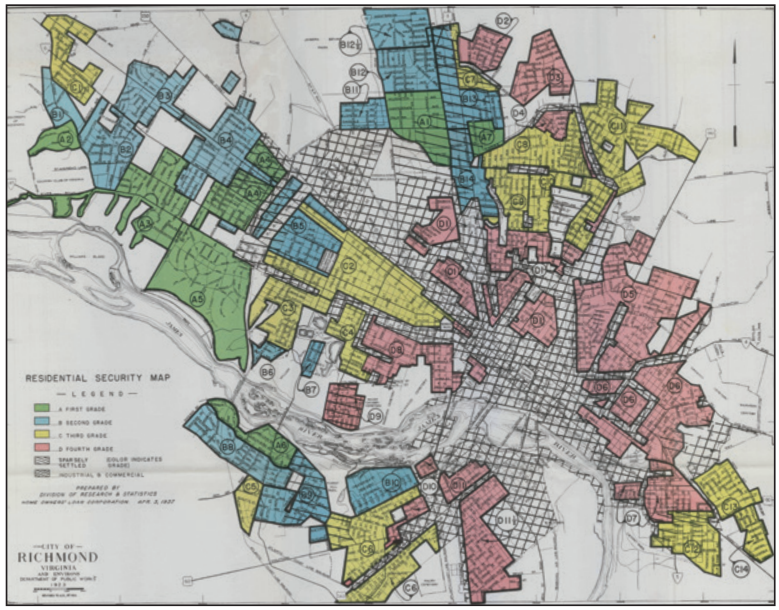
of the institutions." The Act directed bank supervisory agencies to examine banks periodically to assess their records of meeting the credit needs of their entire communities, including LMI neighborhoods. To give the CRA teeth, regulators were to factor in their CRA assessments when deciding whether to approve a bank's applications for mergers, acquisitions, or branch openings.

The CRA has undergone several legislative changes. Changes enacted in 1989, for instance, required bank supervisors to publicly disclose institutions' CRA ratings and performance assessments. In addition to legislative changes, bank supervisors have periodically reviewed and revised the regulatory framework they employ to implement the CRA. Regulatory changes in 1995, for example, increased the importance of objective performance measures relative to the more subjective and process-oriented criteria that supervisors had previously emphasized.



Color-coded map of Richmond, drawn by the federally sponsored Home Owners' Loan Corporation in 1937, showing ratings of neighborhood creditworthiness, with the lowest-rated sections in red.

IMAGE: COURTESY MAPPING INEQUALITY

BANK SUPERVISION UNDER THE CRA

CRA exams are conducted at roughly three-year intervals by a bank's federal supervisor — either the Fed, the Office of the Comptroller of the Currency (OCC), or the Federal Deposit Insurance Corporation (FDIC). Banks of different sizes are subject to different CRA tests. Large banks — those with assets above $1.384 billion — are evaluated under separate lending, investment, and service tests. Small banks — those with assets of less than $346 million — are primarily evaluated under a retail lending test. A blended set of tests is applied to banks in between.

For each test, banks are evaluated based on their performance within their geographic "assessment areas," which, as a practical matter, define the communities that they are obligated to serve under their charters. As part of a CRA exam, banks propose assessment areas, which bank supervisors then evaluate. The CRA spells out rules for the delineation of assessment areas, which "may not reflect illegal discrimination" and "may not arbitrarily exclude low- or moderate-income geographies." A bank's assessment areas typically consist of already-defined areas such as metropolitan statistical areas or cities or counties in which the bank locates its main office, branches, and deposit-taking ATMs. Assessment areas are frequently expanded to include contiguous geographies where a bank makes a substantial amount of its loans.

According to William Nurney, a senior manager in the Richmond Fed's Supervision, Regulation and Credit department, which conducts CRA assessments for the Richmond Fed, "We go through an analytical process, before every exam, where we look at the assessment areas that the bank has given us. We apply the criteria from the existing CRA regulations to determine, 'Does that assessment area make sense within the context of the reg or does it not?'" In cases where proposed assessment areas do not appear to conform to regulation, Nurney adds, "We'll ask them, 'Why did you draw the boundary here instead of there?' We really try to understand where they're coming from." The back-and-forth process usually produces an agreed-upon area, he says.

When conducting the CRA lending tests, bank examiners address three questions about a bank's record. First, is the bank meeting the needs of its community at large by lending sufficiently within its assessment areas? Here, examiners gauge whether a bank's overall lending is sufficient relative to its deposit base and whether the bank's lending inside its assessment areas is sufficient relative to its lending outside the areas. Second, is the bank making a sufficiently high fraction of its loans to borrowers located in LMI census tracts? Finally, is the bank making a sufficiently high fraction of its loans to LMI borrowers?

The CRA's investment test evaluates a bank's record of serving its assessment areas through qualified community development investments. "For a large bank's investment test, we basically look at the bank's securities portfolio to see how much of it consists of qualified CRA investments," says Nurney. "Those would include investments that focus on affordable housing, such as bonds issued by the Virginia Housing Development Authority. Another qualified investment would be a bond issued by a qualified small business development company."

The CRA's service test evaluates the availability and effectiveness of a bank's retail banking services and the extent of its community development services. "We look at where a bank has opened and closed offices to assess whether the changes have positively or negatively affected their ability to service their assessment area as a whole," Nurney explains. "We also look at a bank's service activities, such as whether the bank's officers serve on the boards of community development organizations — Habitat for Humanity is one example that comes to mind."

There are four possible CRA ratings: Outstanding, Satisfactory, Needs to Improve, and Substantial Noncompliance. According to a 2020 report by the Congressional Research Service, approximately 97 percent or more of the banks examined between 2006 and 2018 received CRA ratings of Satisfactory or Outstanding.

CRA RATIONALES AND CRITICISMS

For proponents of the CRA, the law was needed to overcome market failures that may have inhibited lending in low-income neighborhoods, even in the absence of discrimination. By its nature, lending is about risk assessment, which requires information that is often in short supply in lower-income markets. Compared to higher-income neighborhoods, lower-income neighborhoods often have fewer home sales and more varied housing structures, which makes property appraisals challenging. In addition, credit evaluations can be more costly for lower-income borrowers, who often have short or irregular credit histories. According to former Fed Chair Ben Bernanke, "The high costs of gathering information, together with the difficulty of keeping information proprietary, may have created a 'first-mover' problem, in which each financial institution has an incentive to let one of its competitors be the first to enter an underserved market."

In the eyes of many, the CRA serves as a coordinating mechanism to increase the number of transactions in low-income lending markets, thereby increasing the availability of information and helping to overcome the informational "first-mover" problem. The CRA may also help overcome another "first-mover" problem: peoples' reluctance to be the first to invest in housing improvements in a poor neighborhood.

Critics of the CRA contend that credit markets tend to be highly efficient — that, if there were profits to be made from lending to LMI communities, banks would readily make loans without regulatory intervention. This proposition is particularly true today, they argue, because institutional changes that have occurred since the law's 1977 enactment have made financial markets increasingly competitive. According to Diego Zuluaga, writing in a 2019 essay published by the Cato Institute, "Branching liberalization and the advent of online lending have allowed for freer local bank entry, substantially reducing the likelihood of persistently low lending rates in LMI communities." He argued that the emergence of nonbank lending has had a similar effect, pointing to data from the Bureau of Consumer Financial Protection showing that the largest U.S. nonbanks, which are not subject to CRA regulation, actually made a higher percentage of their mortgage loans to LMI borrowers in 2017 than the largest U.S. banks, which are subject to it.

CRA critics also contend that the law is costly to administer, encourages banks to make risky loans, and undermines their ability to diversify their loan portfolios geographically. In addition, some observers have argued that the current CRA framework perversely discourages banks from adding new branches or entering new lending markets in cases where the banks perceive that these activities may cause an expansion of their CRA-related requirements.

Whatever the CRA's shortcomings, numerous studies have found evidence suggesting that it has at least partially achieved the core goal of increasing banks' LMI lending. One such study, by Robert Avery of the Federal Housing Finance Agency, Glenn Canner of the Federal Reserve Board, and Raphael Bostic, now president of the Atlanta Fed, examined survey data collected by the Board about the performance and profitability of CRA-related lending. The study found that the "majority of surveyed institutions engaged in some lending that they would not have done in the absence of the act." They also found that "the vast majority of institutions… were able to do so profitably," but "that a significant minority incurred losses from some of their marginal CRA-related lending." The researchers concluded with the caveat, however, that the CRA's effect on loan volumes and profitability appeared to be small. (Bostic was a professor at the University of Southern California at the time of this research.)

REFORM PROPOSALS

In October 2020, the Fed published an advance notice of proposed rule-making to seek public input about the modernization of its CRA regulatory and supervisory framework. The notice advanced several reform proposals and posed numerous questions with the goal of eliciting responses from community groups, financial industry representatives, and scholars.

A key question was how to best define bank assessment areas so that they do not reflect illegal discrimination or arbitrarily exclude LMI census tracts. Some community advocates favor a broadening of assessment areas. "This is a huge area," says Josh Silver of the National Community Reinvestment Coalition (NCRC). "We think it's critically important to expand assessment areas to places where banks do a significant amount of lending beyond their branches." The NCRC also favors incorporating race and ethnicity more explicitly in the determination of CRA assessment areas, proposing that CRA exams "require banks to affirmatively include communities of color in their assessment areas." While usually stopping short of favoring an outright expansion of assessment areas, some bankers have advocated flexibility that would allow bank examiners to give them credit for community development activities outside their current assessment borders.

The Fed is considering a variety of approaches to assessment areas. For large traditional banks, it has proposed expanding assessment areas to better reflect activities, such as deposit taking and loan origination, that take place in geographies far outside of their currently delineated assessment areas. Such an approach is being considered for banks with high concentrations of online business. For pure online lenders without physical loan-making locations, the Fed has proposed the establishment of national assessment areas in lieu of the current approach, which bases assessment areas on the locations of an online bank's main office.

The Fed also asked for comments about changing the CRA ratings system. "The CRA has done some tremendous good, but the full potential is not realized," says Silver. "Part of the issue is CRA ratings. About 98 percent of banks pass, and 90 percent get Satisfactory, which is like a B. Imagine if 90 percent of the students in the class are getting a B — it wouldn't exactly encourage excellence." Silver and others have proposed adding different gradations or adopting numerical scores that would similarly differentiate banks' CRA exam outcomes. Some bankers also appear to favor a rating system that would better differentiate them from their peers. To make the ratings more consequential, the NCRC also favors strengthening the role of ratings in bank merger reviews.

The Fed proposal seeks to increase the transparency of CRA lending tests. One idea is to set quantitative targets based on community and market standards. In the case of, say, mortgage lending, the percentage of a bank's mortgages in an assessment area that are made to LMI families would be compared to a community benchmark based on the percentage of households in the area that are LMI and to a market benchmark based on the percentage of peer-bank mortgages in the area that are LMI.

As a general matter, the banking industry is receptive to the idea of increased transparency. "One of the complaints we hear from banks is that there isn't a lot of predictability about what kind of activities and products are viewed favorably — particularly community development activities," says Paige Paridon of the Bank Policy Institute, which conducts research and advocates for the banking industry. Thus, banks have asked for greater clarity about what level of activity is required to achieve certain ratings.

The banking industry is also asking for greater flexibility. "There's a need for the CRA and the regulators to adapt some of the assessments and performance tests under the CRA to recognize that there are just such a broad range of business models," says Paridon. "We would like to see increased flexibility about looking at the different ways banks serve their communities."

Yet transparency and flexibility may be hard to combine. "It's a difficult trade-off," says Paridon. "We recognize that it's hard for regulators to offer the transparency that comes with quantitative standards while also maintaining flexibility."

NEXT STEPS

There is one outstanding issue, in the view of bankers and consumer advocates, that cannot be addressed by the supervisory agencies alone — and that is the fact that banks are subject to CRA regulation, and nonbank lenders are not. The banking industry favors expanding the CRA's jurisdiction to nonbank lenders to create a more level playing field for compliance. "To the extent that you are providing the same sort of products and services as banks, you should be held to the same requirements," says Paridon. On this, consumer advocates tend to agree with the bankers. "If you have CRA applied to some financial industry sectors and not others, you will not be as effective in reaching traditionally underserved or formerly redlined communities," says Silver. "The community reinvestment obligation should apply throughout the financial industry." Such an extension of the CRA's scope, however, would require new congressional legislation.

Thus, regulatory reform remains the main task at hand. The Fed, OCC, and FDIC are currently working toward creating a CRA framework that is consistent across the agencies. "There have been a lot of conversations and discussions — a real effort to find an approach that all three agencies can sign off on and implement and reinforce," says Nurney of the Richmond Fed. "They have been at it since last year, and they have received a lot of insights based on industry and public feedback." A likely next step is for the agencies to formulate a set of proposed rules that can be published for public comment. **EF**

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Pinelopi Goldberg

On developing countries, measuring economies by satellite, and the learning crisis

IMAGE: COURTESY OF YALE UNIVERSITY

Yale economist Pinelopi "Penny" Goldberg was educated in her native Greece at a German-language school, the Deutsche Schule Athen. "My parents were engineers, and they had a natural admiration for German engineering," she explains. "So they sent us to a German school." From there, she went to study economics at a German university, where the curriculum at the time centered on the writings of the field's important figures. "We were very much encouraged in Germany to read the great texts, with everything in the original — Adam Smith, Keynes, the great thinkers."

As a Ph.D. student at Stanford, Goldberg did research on the trade war between the United States and Japan, looking at the countries' auto industries and strategic trade policies. "There are many parallels to what's happening now," she says. Her research work gradually moved into development economics as she saw the dependence of low-income countries on trade for economic survival.

Today, she is a leading researcher in trade and development economics, with a series of faculty appointments at Columbia University, Princeton University, and Yale, interrupted by her tenure from 2018 to 2020 as chief economist of the World Bank. There, she was active in the Bank's efforts to improve the measurement of human capital in developing countries as well as research into the use of satellite data to measure economic activity, among other areas. She was editor-in-chief of the *American Economic Review* from 2011 to 2016.

David A. Price interviewed Goldberg by videoconference in January 2022.

EF: Many people and institutions involved in development economics in the 1990s were optimistic about the ability of globalization to bring progress to developing countries. Reducing trade restrictions and eliminating barriers to direct foreign investment were of course a major part of the so-called "Washington Consensus" about what developing countries should do. Is there still such a sense of optimism?

Goldberg: Globalization was just one component of the Washington Consensus. In my opinion, it did deliver. It did help countries, especially in East Asia, reduce poverty and grow quickly.

But right now, there is a pessimism that the same model can deliver in the future. So my answer to your question is "no." This is partly because of the rise of automation. The traditional advantage of low-wage countries has been in low-skill-intensive manufacturing, which they would export to richer countries consistent with their comparative advantage. At the same time, this process created export revenue, which they could invest in physical infrastructure, human capital, institutions, and so on. This is a model that worked well in many countries, especially in East Asia.

With the rise of automation, there is fear that machines are going to replace low-wage workers in many developing countries. That said, this has not happened yet. But the concern is there.

What is more real, in my view, is that there has been an enormous backlash against globalization — not just in the United States, in many countries all over the world. We've seen worldwide the rise of economic nationalism. Trade is not dead; trade is still growing, actually. But I don't think

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that Africa can play the same role in the future that China or Vietnam or Korea played in the past. The conditions for such export-led growth are not there anymore. I cannot imagine the United States opening its borders these days to an influx of imports from low-wage countries in Africa. So I don't think this model is viable anymore.

DEVELOPMENT AND RANDOMIZED CONTROL TRIALS

EF: What have been the biggest advances in development economics since the years of the Washington Consensus?

Goldberg: I think the main advances have been more on the micro side. Early on, development was much more macro-oriented, focusing on models and theories of structural transformation, starting with the seminal work of Arthur Lewis in the 1950s. Of course, this work is incredibly important and still very relevant. But in the last two decades, people have realized that the micro foundations of growth are equally important, especially in the context of developing countries. So there has been a lot of work on the role of human capital in developing countries, on the role of institutions, on the role of gender. That's one aspect of progress.

The other aspect is that there has been a realization that it doesn't just matter what policies you adopt, but also how they are implemented. Careful implementation is key for success. So there has been a lot of work in trying to figure out which policies work and why they work. And that has led to the rise of randomized control trials, in which the field of development has played a key role. Development led the charge for what people call the credibility revolution in economics.

I see these two aspects as the main contributions of recent work in development. At this point, the field is very general. It stretches across every area of economics and every subfield within economics.

EF: What is an example of the use of randomized control trials in development economics?

Goldberg: One example is a famous paper in 2004 by Michael Kremer and Ted Miguel on deworming, which was shown to have long-term effects on people's health and on economic outcomes. It was one of the first papers in development economics to use a randomized control trial. The main insight of this paper is that in the case of many health interventions, one needs to randomize across groups — across schools, in this case — and not just within groups (that is, within schools). Why? Because there are externalities: When one deworms some students, other students in the same school also benefit. This was an insight that *ex post* may seem obvious, but at the time was not.

Many years after the completion of the randomized control trial, Kremer and Miguel went back with some additional co-authors and examined the long-term trajectory of people who had been exposed to this intervention, and they found extremely large effects.

Early on, randomized control trials were very limited in scope. That has changed. These days, randomized control trials tend to be much more ambitious.

MEASURING BY SATELLITE

EF: You have experimented with using alternative measures of economic growth for developing countries, such as satellite measurement of nighttime lighting. Why is this interesting to you?

Goldberg: First, let me emphasize that I am an advocate of these measures, but as a supplement to traditional methods, not as a substitute. To give you one example, in work we published in the *Journal of Economic Perspectives*, we talk about the vegetation index, which is based on satellite data. Of course, no one would ever think of replacing the systems of national accounts with the vegetation index. But for some countries, especially in Africa, we show that the vegetation index can capture small-holder agricultural activity, which is very important for these countries. So if you combine that index with traditional data, you can get a more accurate measure of GDP and of growth. So sometimes this data can complement existing measures.

A second big advantage is low cost.

Third, such data come in high frequency. If you think of a census of population, it's every 10 years. The data are, of course, more current if you're using mobile phone activity or nighttime lights to estimate economic activity in a particular area.

Another advantage, finally, is that in some settings, where we may not trust the authorities, satellite data offer an additional way of checking the official data. A good example is the Billion Prices Project. In most cases, the inflation measures you would get out of this data would be similar to what you would get from the official data. But in the case of Argentina, people got a very different estimate of inflation based on this data in the past. So this is a good way of providing an additional check.

Of course, the main disadvantage of all these data is that they're not collected for the purpose of measuring economic activity. With the system of national accounts and the data sets that are collected by statistical agencies, statisticians put considerable effort into making sure that the data are representative of the whole population. This new data is not necessarily representative of the whole population, and this is something we need to keep in mind. My first choice would be to promote the collection of better data through statistical agencies in low-income countries and better training of statisticians in these countries. But this is not always possible.

MISSING EDUCATION

EF: While you were at the World Bank, you and several co-authors developed a new way to compare the formation of human capital in different countries. Why does this matter?

Goldberg: Human capital, generally speaking, refers to resources embedded in people. Broadly, we associate human capital with the knowledge, skills, and health that form an individual's potential to contribute to an economy. In the common definition used in the academic literature in economics, we tend to focus on education.

Human capital is important because people are one of the most important resources of a country. There has been a lot of work that shows that human capital is positively associated with growth. The question of causality — what causes what — is always a tricky one, but there is substantial supporting evidence that investing in human capital leads to higher growth. So these are some of the reasons to take human capital seriously.

While I was at the World Bank, we put a lot of emphasis on human capital. The main reason is that policymakers tend to prioritize investments in physical infrastructure — roads and bridges. It's quite striking that in many countries, policymakers are willing to invest very heavily in physical infrastructure, but not in human infrastructure.

Of course, roads and bridges are important. From a policymaker's point of view, they also have the advantage that the results are visible in the short run or medium run. You can see the bridge, you can see the road, you use them, and then you value the politician who's behind it. Investments in human capital take many years to bear fruit. Because of that, we thought it was important to promote this agenda and to provide incentives to policymakers to invest in human capital, because left on their own, they would not do that; the political incentives are not there.

Pinelopi (Penny) Koujianou Goldberg

PRESENT POSITION

Elihu Professor of Economics, Yale University

SELECTED PAST POSITIONS

Chief Economist, World Bank Group, 2018-2020; William K. Lanman, Jr. Professor of Economics, Yale University, 2010-2017; Professor of Economics, Princeton University, 2007-2010; editor-in-chief, *American Economic Review*, 2011-2016

SELECTED ADDITIONAL AFFILIATIONS

President, Econometric Society; Faculty Research Associate, National Bureau of Economic Research; Distinguished Fellow, Centre for Economic Policy Research; Member, National Academy of Sciences; Member, American Academy of Arts and Sciences

EDUCATION

Ph.D. (1992), Stanford University; Diplom in Economics (1986), University of Freiburg, Germany

EF: You and your co-authors said it's important to go beyond looking at years of schooling when making these kinds of comparisons. Why?

Goldberg: Years of schooling is the standard measure of education. The reason people have traditionally used it is because it's easier to obtain than any other measure. It's also comparable across countries. But there has been a lot of recent work by the World Bank, UNESCO, Lant Pritchett, and others that argued that in many countries, we saw increasing enrollment rates in primary school and increasing years of schooling, yet we saw no improvements in education. There are some examples in the *World Development Report* of the World Bank in 2018. For instance, in India, kids in grade three could not do a two-digit subtraction, like 47 minus 18. Or they could not read a very simple sentence.

So there was anecdotal evidence suggesting that kids were going to school, but they were not learning basic skills like reading or writing or simple arithmetic. Then what's the point of going to school?

In our further work, we showed that this didn't apply only to a few isolated countries. It's a global phenomenon. Many institutions have called it a learning crisis.

EF: What do you think has been going on here?

Goldberg: There has been a lot of evidence on what has not worked in education. There is little evidence of what has worked. Let me start by ruling out one hypothesis that has been suggested. The first thing that comes to mind when you talk about increasing enrollment is that this may generate selection effects — that is, if you increase enrollment rates, some marginal students may enter the system, and those students will not do well in tests. I think that in general, this is a very valid comment, especially if you apply it to secondary education. But at the primary school level, we are talking about very basic skills, reading and writing. And the whole point of going to the primary school is that you learn these basic skills. It's not rocket science; you don't need to be a genius to know how to read a sentence. So if the additional students who enter the primary schools do not improve, even if they were marginal by some metric of ability, that would be a failure of the educational system, because these are very basic skills. In addition, in many settings, we can show that the outcomes are not driven by selection effects.

So what is going on? In some countries, there is evidence that in many schools, there is absenteeism — on the part of the teachers and on the part of the students, partly because there's no accountability. Teachers may not show up for whatever reason. Or students may not show up because, in some cases, the parents do not value education; they enroll the kids in school, but then the kids miss many days.

Another factor is that in many low-income settings, teachers and books target the top students but not the average student. So the teaching methods and the books are great if you are a student who is going to continue onward to secondary school or get a university education. But for the average student who needs very basic skills, the system fails them. Some people have suggested tracking as a better method to address this issue.

One thing that has not worked to improve the quality of education is spending on buildings or computers. I mention that because donors are often eager to help and they send money in. And this money is invested in textbooks, beautiful buildings, laptop computers. But a lot of work has shown that none of these has helped much to increase the quality of education. The lesson is that simply throwing money at the problem does not solve it. This is a case where randomized control trials have helped because you can often use randomization to see which interventions are effective and which are not — and the results may not be what was anticipated.

THE COVID-19 SURPRISE

EF: In work with Tristan Reed, you have found that COVID-19 deaths per capita were actually much lower in poorer countries than in richer ones. This seems surprising. What happened?

Goldberg: Tristan and I presented this research at a Brookings conference in June 2020 with great trepidation, because that was near the beginning of the pandemic. Most people's reaction was that this result was just because poor countries are not connected, so COVID-19 had not arrived there yet. But there was anecdotal evidence that COVID-19 had indeed arrived there. Most capitals of low-income countries are not as isolated as people think; many of these cities are global cities. They are connected to the rest of the world. So it was surprising that the deaths were so low.

Another reaction was that this was all measurement error. And, again, that comes back to the issue that people tend to dismiss data coming from developing countries. It's clear that measurement error exists and is important in the case of COVID-19 in many countries, especially in low-income settings. But the differences in deaths are huge — orders of magnitude apart. Just to give you one striking example, in the United States right now, the deaths per million are around 2,500. In Nigeria, the number is 14; in India, it's 340. And it's not easy to hide deaths. Yes, there is measurement error — probably deaths and hospitalizations are much higher in low-income countries than the statistics show — but still, there is a big difference between low-income countries and richer ones.

"The differences in [COVID-19] deaths are huge — orders of magnitude apart. Just to give you one striking example, in the United States right now, the deaths per million are around 2,500. In Nigeria, the number is 14; in India, it's 340. And it's not easy to hide deaths. Yes, there is measurement error, but still, there is a big difference between low-income countries and richer ones."

I think there are three reasons at work. We pointed out two of them in this initial working paper. First, everyone agrees that two of the risk factors for a serious reaction to COVID-19 leading to hospitalization and death are age and obesity. The age distribution in many low-income countries is very different from that in the United States. To mention a striking case, in Niger, the median age is 15; there, COVID-19 would probably not have very severe health effects on the population. On top of that, in low-income settings, obesity is much lower. These two factors alone could explain a lot of the difference.

In addition, many epidemiologists talk about what they call "trained immunity" for low-income countries. The idea is that people in those countries are exposed to disease all the time, so their immune systems have learned how to cope. An alternative interpretation is that there has been selection; the ones who have managed to survive the various diseases they've been exposed to have very strong immune systems.

It seems that all these factors have contributed. It's still the case that the poorer the country, the lower the per capita COVID-19 deaths so far. We'll see whether this holds in the future.

EF: In research that was published in 2020 in the *Quarterly Journal of Economics*, you looked at the effects of the 2018 Trump tariffs. You found that between those tariffs and the retaliatory tariffs of other countries, such as China, there was a substantial redistribution from U.S. buyers of foreign goods in favor of U.S. producers and to the government. Is this what you expected to see?

Goldberg: To a certain extent, what we didn't expect to see is that U.S. buyers would be hurt. This is because the United States is a powerful country; to a certain extent, everyone thought that China would eat some of the tariff. What our work showed, and others' as well, is that the tariffs were completely paid by the U.S. importing side. The other effect that some people didn't expect is that the part of the economy that was hurt the most by the tariffs was people in Republican counties, and this is because of the retaliation by China; they targeted mainly agricultural commodities.

We have a follow-up paper where we look at how third countries were affected by the tariffs. What we show is that many countries benefited from the tariffs; trade seems to have been reallocated from the United States and China toward other countries. What did not happen is reshoring of economic activity back to the United States.

EF: What are you working on now?

Goldberg: I have three different lines of research. One is my follow-up work on the U.S.-China trade war. As I mentioned, we focus in our new paper on bystander countries or third countries. One interesting finding of this work is that we find that the trade war didn't simply reallocate the exports of these countries toward the United States and China, as you might expect. It also increased global exports. So, to a certain extent, it led to net trade creation, which is surprising. We don't expect a trade war to actually lead to more trade. But it seems that happened in this case, maybe because countries decided to invest more in trade capacity, or perhaps because there are scale economies. We think it's an interesting pattern.

Then I have a line of work on informality in developing countries. By informality, I mean the part of the economy that's invisible to governments. And often, this informal sector emerges in response to labor market regulations and restrictions. We look at the case of Brazil in particular. We developed a framework that helps us understand the emergence of informality, and we ask the question of how trade policy affects various outcomes in the presence of informality.

And then I have a new line of research — new for me — on gender in developing countries. This line of research that was inspired by my time at the World Bank in which I saw how important these gender issues are. In low-income countries, they're important not just for the women who live there, but also highly important for the country as a whole for growth.

RESEARCH INSIDE POLICY INSTITUTIONS

EF: Based on your experience at the World Bank, do you think institutions outside of academia — such as the World Bank or the Fed — benefit from having their own research departments?

Goldberg: I think they benefit greatly from their research departments. And these research departments also benefit both academia and the world at large. The reason is that the research in such institutions tends to be a little different from the research in academia. It tends to focus on policy-relevant questions. People who are close to policy tend to have a much better sense, at least in the short run, of what the important questions are. So in terms of coming up with and framing questions, they're often ahead of academia. I think that's an important service that research departments in these institutions provide.

An additional reason research departments are good for the institutions is that they offer a way to attract the best talent. If you want to attract talented, creative people, you have to give them some freedom to think independently.

Finally, structured thinking is important in policymaking. Research tends to hone precisely those qualities that are important in policy: You have to be creative, you have to be able to question assumptions, you have to be able to formulate hypotheses and test them, you have to be able to abandon hypotheses that were proven wrong.

"Research in [policy] institutions tends to be a little different from the research in academia. It tends to focus on policy-relevant questions. People who are close to policy tend to have a much better sense, at least in the short run, of what the important questions are. So in terms of coming up with and framing questions, they're often ahead of academia."

EF: And from the researcher's point of view, what is different about doing economic research in an institution outside of academia?

Goldberg: I already mentioned they're much closer to policy and to applied questions. For many people, this is fascinating. Another big difference, I think, is that you operate on a different time horizon. In academia, we can take our time, we can spend five years on the project, we can revise the paper multiple times if we want. Research departments in policy institutions are not given five years to complete a project. So there is more time pressure, and that has pluses and minuses. On one hand, your work is much more topical and relevant. On the other hand, sometimes you are under pressure to put out work that is not completed.

Another difference — which, in my opinion, is often exaggerated — is freedom of speech. I agree to a certain extent with Paul Romer that when you work in the private sector or in a policy institution, you cannot say whatever you want. But the fact is, neither can you in academia. In academia, of course you can write whatever you want, and you can put it on your website. Most academics, however, want to be published. And if you want to get published, you are constrained by the conventions and norms of your field. And most academics internalize those norms. So yes, there are constraints in both settings. But if you're in a good policy institution, there is a lot of freedom to do interesting and important work. **EF**

BY SIERRA LATHAM

Housing the Workforce in the Rural Fifth District

Although real estate is often less costly in rural areas than in urban areas, many low- and middle-income households in rural areas struggle with housing expense. There are multiple reasons why rural households end up financially constrained by housing costs. First, incomes tend to be lower in rural areas. Second, there are limited available units — multifamily or single family — in rural areas for reasons that reflect the unique challenges of the rural housing landscape.

Although these challenges to finding affordable, quality housing tend to cut across the rural Fifth District, there are also differences that arise from the diversity of rural areas. Rural communities possess unique assets that they can use to leverage policy and market-based tools to resolve housing shortages. Depending on local constraints, communities may choose to preserve or repurpose existing properties or create new units to make housing more affordable.

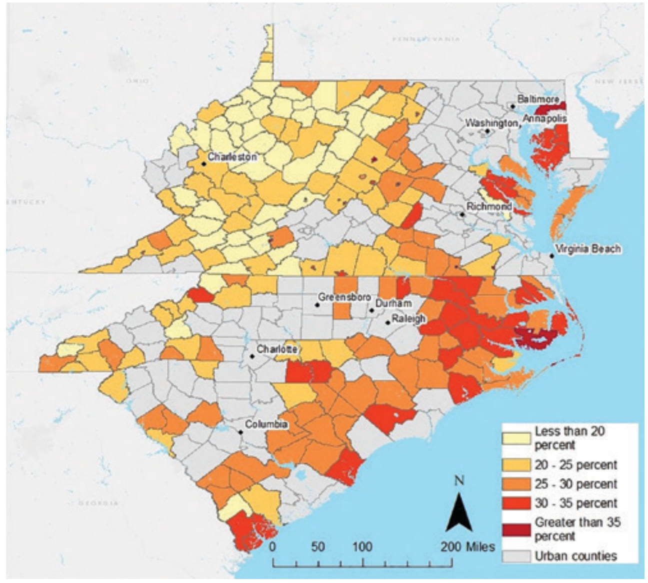
Typically, the terms "affordable housing" and "workforce housing" are used to refer to housing that is affordable to low- and middle-income households, respectively. This article uses the term "low- to middle-income housing" to refer to both — that is, all housing affordable to low- to middle-income households earning up to 120 percent of the area median income (AMI).

THE BURDEN OF RURAL HOUSING COST

When housing practitioners think about the affordability of housing expense, they consider households to be "cost burdened" if rent or ownership costs account for more than 30 percent of gross income. For example, for a household earning $48,000 per year, or $4,000 per month, a home that costs up to $1,200 per month would be considered affordable at that income level (because $1,200 is 30 percent of $4,000). If the household lives in a unit that costs more than $1,200 per month, they would be considered housing cost burdened. This includes households that willingly spend more than 30 percent of their income on housing. Housing cost burden can be distinct from housing instability, which can include households facing eviction or experiencing homelessness.

Housing Cost Burden, by County

Share of housing cost burdened households



SOURCE: U.S. Census Bureau 2015-2019 American Community Survey 5-year estimates

In the Fifth District, rural households are only slightly less likely to be housing cost burdened than urban households. Twenty-five percent of rural households at all income levels are housing cost burdened, versus 28 percent of urban households. Within rural parts of the Fifth District, the share of housing cost burdened households is greatest in areas along the coasts of Maryland and the Carolinas and is less pronounced in the Appalachian region. (See map.)

Housing cost burden is often thought of in urban contexts where property values and rent costs are relatively high. In rural areas, lower incomes are often the driving forces behind housing cost burden levels.

Focusing on low- to middle-income households, about 38 percent of Fifth District rural households earning 120 percent AMI or less are housing cost burdened. For rural households earning less than 60 percent AMI, the share that are housing cost burdened jumps to more than half.

Nationally, in rural areas, the share of renters who are housing cost burdened has consistently been greater than the share of owners who are. This trend holds true for the Fifth District, where 45 percent of rural renters are cost burdened versus 25 percent of homeowners with a mortgage.

FIFTH DISTRICT RURAL HOUSING MARKETS

Trends in the age and type of residential properties influence the quality of housing stock, while homeownership rates, vacancy rates, and select demographic characteristics influence the overall supply. Rural housing markets tend to differ from urban ones along all of these dimensions.

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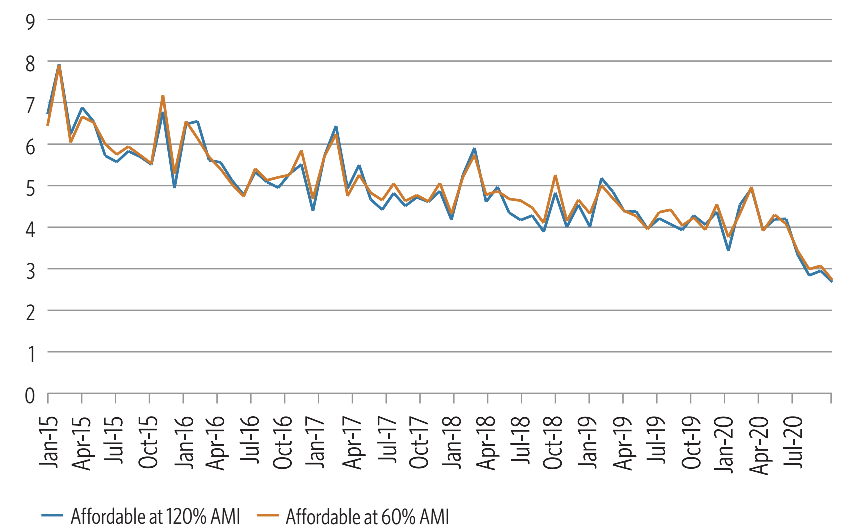
Months' Housing Supply for Low- to Middle-Income Households in Rural Areas of the Fifth District



SOURCE: CoreLogic and author's calculations

NOTE: All homes affordable to households earning 60 percent AMI are, by definition, affordable to households earning 120 percent AMI. Because of this overlap, the two series track each other closely.

The housing stock in rural areas tends to be older than in urban areas. Aging housing stock poses housing quality concerns, which can affect residents' health, comfort, and utility bills. In the Fifth District, 48 percent of units in rural areas were constructed prior to 1980 versus 44 percent in urban areas. In particular, Virginia and West Virginia have a larger share of housing units constructed prior to 1950 in rural areas compared to urban areas. Single-family and manufactured homes make up a larger share of the rural housing stock nationwide, while apartment buildings represent a greater share of units in urban areas. In rural parts of the Fifth District, single-family and manufactured homes account for most of the housing stock (71 and 17 percent, respectively). Apartments account for only 12 percent of rural housing stock (versus 25 percent in urban areas), in part because it is more difficult to finance and construct multifamily properties in less dense communities. Because apartment units make up such a small share of rural housing, rural renters are more likely to rent a single-family or mobile home than renters in urban areas.

Homeownership rates are higher in rural areas than urban areas, both nationally and in the Fifth District. In the Fifth District, 69 percent of rural households own their homes versus 65 percent of households in urban areas. The tendency toward homeownership means there are fewer units available to rent for low- and middle-income households for whom homeownership may be out of reach.

Vacancy rates also tend to be higher in rural areas. In destination locations, vacation homes make up a large share of vacancies; in other areas, unused or abandoned buildings account for a large share. These conditions constrain housing supply and put upward pressure on prices in the ownership market. In line with national trends, housing vacancy rates differ between urban and rural parts of the Fifth District. Nineteen percent of residential units in rural areas are vacant versus 11 percent in urban areas. Compared to urban areas, smaller shares of rural units are vacant because they are either for rent or for sale.

Lastly, rural areas are characterized by an aging population. Senior populations have historically chosen to move out of their family home, but the trend toward aging in place has increased competition for starter homes and limited opportunities for first-time homebuyers. Eighteen percent of rural Fifth District residents are over the age of 65 versus only 14 percent of urban residents.

Together, these trends constrain the supply of high-quality low- to middle-income housing in rural parts of the Fifth District.

LOW- TO MIDDLE-INCOME HOUSING IN THE OWNERSHIP MARKET

In the ownership market, the tightness of a housing market is commonly measured by the number of months of housing supply, which is measured as the ratio of new and existing homes on the market to homes sold in a given month.

Focusing on homes affordable to low- to middle-income households, rural areas tend to have a greater supply of housing in any given month than urban areas. But the low- to middle-income housing market has been tightening in both urban and rural areas over time. In rural parts of the Fifth District between January 2015 and September 2020, the months' supply of homes affordable to households earning 120 percent AMI and 60 percent AMI declined from around seven months to three months. (See chart.) This decline is attributable to several factors: a decline in the number of homes for sale — the result of less housing being built, homeowners becoming less willing to sell their homes during a pandemic, and an increase in home prices that has outpaced income growth — and an increase in demand due to low mortgage rates.

Among rural areas in Fifth District states, Virginia and North Carolina tend to have the shortest supply of low- to middle-income homes for purchase. On average, between January and September 2020, rural parts of Virginia had 3.5 months of supply for households earning 120 percent AMI, and rural parts of North Carolina had 3.6 months. Rural parts of Maryland, West

Virginia, and South Carolina all had between 4.0 and 4.2 months of housing supply.

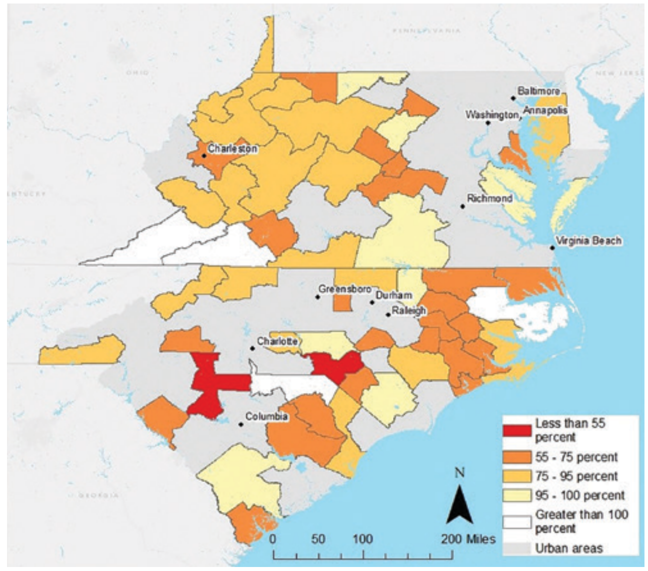
LOW- TO MIDDLE-INCOME HOUSING IN THE RENTAL MARKET

While renter households are in the minority in rural parts of the Fifth District, they are disproportionately represented in the ranks of low- to middle-income households. Some 41 percent of households earning 60 percent AMI or less and 28 percent of households earning 60 percent to 120 percent AMI are renters, compared to only 14 percent of those earning more than 120 percent AMI. The shortage of low- to middle-income rental units can be measured by comparing the number of rental households at each income level to the number of housing units that would be affordable at that income level, minus those units rented by household in higher income categories. While there appear to be enough rental units for renters earning 120 percent AMI, there are only enough affordable rental units for four-fifths of households earning 60 percent AMI throughout rural parts of the Fifth District. This means that at least one-fifth of low-income households are most likely housing cost burdened, although some may also be experiencing housing instability.

Considering that the Fifth District spans five states and the District of Columbia, available low- to middle-income rental housing in more localized markets may be better or worse depending on rental market and household income characteristics. There is a cluster of areas with relatively high shortages in affordable rental housing in eastern North Carolina and several other locations scattered throughout the Fifth District. (See map.)

Affordable Rental Housing Stock in Rural Areas

Ratio of affordable rental housing stock to households earning 60 percent of area median income



SOURCE: U.S. Census Bureau 2015-2019 American Community Survey Public Use Microdata Sample (PUMS) and author's calculations

NOTE: Map shows the amount of rental housing affordable to households earning 60 percent AMI in public use microdata areas (PUMAs) as defined by the U.S. Census Bureau. In order to protect survey respondent privacy, rural PUMAs may consist of multiple counties.

CREATING NEW UNITS

Several public financing programs assist with development costs for new rental housing affordable to low-income households. In rural counties throughout the Fifth District, Low Income Housing Tax Credits, or LIHTCs, are the most common source of housing assistance, accounting for more than 50 percent of all units receiving any type of public assistance in Virginia and Maryland and more than 30 percent in West Virginia and the Carolinas. USDA–Rural Development (RD) Section 515 loans subsidized the development of more than 20 percent of all units receiving public assistance in Maryland, North Carolina, and Virginia. More than 20 percent of assisted units in West Virginia and the Carolinas were public housing, meaning the property is owned and maintained by public funding.

While LIHTCs, USDA-RD Section 515 loans, and public housing have been powerful tools for creating dedicated affordable rental housing in the past, they are not sufficient mechanisms for meeting demand in most markets. For LIHTCs, only about one in every four developments that apply receive funding due to resource constraints. Funding for the USDA-RD Section 515 program has been declining over time, and the loans that are issued cover only about 20 percent of property development costs on average. The remaining funds are typically covered through complementary public funding programs or through debt financing from lending institutions. Nationally, the number of public housing units has declined over time as units have been taken out of service due to deterioration or demolition, and the need for capital expenditures exceeds the amount included in the federal budget. For existing units, the median waitlist time is nine months but can be as long as five years in high-need areas.

Also, with the exception of public housing, affordable properties that were developed using public assistance have a time limit on how long they are required to remain affordable — usually 15-30 years. Once that time limit has been reached, they can be converted to market-rate units, meaning they lose their affordability. In rural parts of the Fifth District, for example, nearly 7,700 units built using LIHTCs or Section 515 loans (or 11 percent of all LIHTC and Section 515 units) are at risk of losing their affordability by 2030 unless another financing mechanism is used to preserve them.

Both for-profit and nonprofit real estate developers can play a role in developing new low- to middle-income housing in rural areas. In some areas, market-rate homes may be affordable to middle-income households. In other places, developers rely on grant funding, philanthropic funding, and public donations that allow them to sell homes to income-eligible buyers at below-market prices. In many cases, homes sold at below-market value are equipped with resale formulas — contract terms that limit the future resale price of the home — to allow homeowners to accrue equity without sacrificing the long-term affordability of the property.

In the Fifth District, Georgetown County Habitat for Humanity in South Carolina is developing an affordable homeownership community. The county gifted 30 acres of county-owned land to the project, zeroing out the cost of land. Habitat also received a HOME grant from the U.S. Department of Housing and Urban Development to cover 80 percent of the development cost for the homes and sought the remaining 20 percent of financing from lending institutions. Households earning 30 percent to 80 percent of AMI will be eligible to purchase the homes; buyers will be provided a mortgage at zero interest with no down payment.

PRESERVING EXISTING UNITS

Preserving existing low- to middle-income housing will help sustain the supply and quality of it into the future. Creating financing opportunities to repair and rehabilitate homes helps keep utility costs down for residents, improve health conditions, and extend the useful life of the structure. Homeowners with limited financial resources who live in aging properties are especially at risk of living in homes that have fallen into disrepair over time. Nonprofit organizations, such as Rebuilding Together and Habitat for Humanity, local government programs, and federal programs, such as USDA-RD Section 504 and the Department of Energy's Weatherization Assistance Program, provide affordable home repair loans, grants, and direct services to low-income households, seniors, and residents with disabilities.

Because all affordable home repair programs are subject to resource constraints, many of them limit eligibility to a subset of low- to middle-income households. For example, Section 504 serves homeowners earning 50 percent AMI or less and offers loans of up to $20,000 per home. Other programs prioritize households that include seniors, children, or persons with disabilities. As a result, not all low- to middle-income households will be eligible for these programs. Rebuilding Together Kent County, located on Maryland's rural Eastern Shore, is an example of a program that rehabilitates homes for low-income homeowners. After performing a home assessment, Rebuilding Together Kent County coordinates home repairs to improve the health and safety of the home and home modifications as needed for seniors and persons with disabilities to reduce the risk of falls or injury. In 2020, the organization served 21 unique households, all of whom had incomes below 80 percent AMI. The majority of households served reported improved physical and mental health as a result of the program, and 40 percent reported that their home increased in value.

COMMUNITY LAND TRUSTS

One mechanism for preserving low- to middle-income housing in the long term is community land trusts (CLTs), through which nonprofit, community-based organizations purchase and retain ownership of the land on which housing is built. Residents who purchase homes located on CLT land benefit from establishing equity, and resale formulas guarantee that the homes will continue to be affordable to low- to middle-income owners in the future (though this dampens appreciation). In many cases, CLTs continually support residents in ways that range from homebuyer education classes to ongoing financial and maintenance counseling, resulting in lower rates of mortgage delinquency and foreclosure.

For example, Piedmont Community Land Trust (PCLT) is a Fifth District CLT that serves Charlottesville, Va., and the surrounding rural counties. PCLT creates homeownership opportunities for households earning 80 percent AMI or less by purchasing land and holding it in trust while the homeowner purchases the home on the land. The homeowner and PCLT enter into a 90-year ground lease on the land, which renews automatically. Removing the cost of land from the purchase price reduces monthly payments for the homeowner by anywhere from 20 percent to 40 percent. PCLT works in partnership with a community development financial institution that administers down payment assistance to eligible homebuyers.

Although CLTs have been around since the 1960s, many communities lack knowledge about how they operate and, as a result, are hesitant to adopt policies to encourage their establishment. Even with the support of the local community, creating a new CLT can be challenging as it requires coalition building, financial resources, and organizational capacity. Acquiring land can be difficult or expensive, particularly in counties where land is priced at a premium. Lastly, CLTs are not a suitable mechanism for resolving all low- to middle-income housing shortages because they often limit eligibility to a subset of low- to middle-income households, such as households with incomes below 80 percent AMI.

REPURPOSING EXISTING PROPERTIES

Underutilized or vacant properties in rural areas provide an opportunity to create low- to middle-income housing and simultaneously prevent or resolve blight.

Many small towns have vacant commercial or industrial properties that could be rehabilitated by a developer. Finding a developer willing to undertake property acquisition and redevelopment costs might be difficult for some rural jurisdictions, and in some cases current owners might be unwilling to sell their properties. Local governments and community-based organizations can facilitate this process by brokering relationships between property owners and developers and minimizing permitting and redevelopment costs for viable adaptive reuse projects.

Graham, N.C., is home to an example of an industrial property that was redeveloped into affordable housing in 2017. Prior to the building's redevelopment, the Oneida Mill Lofts had lived a previous life as a textile mill before sitting vacant for two decades. Today, the property consists of 133 one- and two-bedroom units affordable to households earning up to 60 percent AMI. The development team took care to preserve the historic character of the building during redevelopment.

Communities with a significant network of vacant and abandoned properties might benefit from establishing a land bank, which is an entity that systematically acquires properties and prepares them for sale or lease. In addition to converting previously unused property to low- to middle-income housing, land banks are a strategy for improving public safety, increasing property values of adjacent properties, and expanding the jurisdiction's tax base. Within the Fifth District, Virginia, West Virginia, and Maryland have legislation enabling land banks. CLTs may complement land banks if the land bank agrees to sell remediated land to the CLT to redevelop.

Acquiring vacant and underutilized properties can be challenging. For a land bank to assume control of a vacant property, either the owner has to willingly transfer the property or the property needs to be foreclosed upon, usually due to a tax foreclosure. After either of these events occur, the land bank may need to overcome a number of legal obstacles to assume ownership of the property, such as issues related to property right law, tax foreclosure law, or titling defects. After obtaining new land, the land bank may need to finance remediation activities and may experience funding limitations.

Roanoke, Va., established a land bank in 2019 with the goal of converting abandoned and derelict properties into affordable housing. After properties have gone through the tax delinquency process, the city will turn them over to a partner organization, Total Action for Progress (TAP). TAP will then work with other nonprofits, such as Habitat for Humanity, to renovate or construct new affordable housing on the site.

DIRECT SUBSIDIES

Several public programs exist to provide direct rental subsidies to low-income households. Housing choice vouchers (HCVs) and USDA-RD Section 521 (which subsidizes rent in some USDA-RD Section 515 properties) are two types of direct rental subsidies in rural spaces. In addition to these, local nonprofit and public entities can create public-private partnerships with local employers to develop dedicated housing affordable to low- to middle-income households, as has been done in urban communities with constrained rental housing markets.

HCVs and USDA-RD Section 521 do not reach all income-eligible households due to funding limitations. Due to limited availability, the median waitlist length for HCVs is one and a half years nationally and up to seven years in high-need areas. Only households earning 50 percent AMI or less are eligible for HCVs. By definition, USDA-RD Section 521 serves only Section 514, 515, or 516 properties, which meet the needs of only a fraction of low- to middle-income households.

Public and nonprofit organizations can help working families afford housing by creating programs to help cover the upfront costs associated with purchasing a home. For many low- to middle-income households, these costs are a greater barrier than monthly mortgage payments. Down payment assistance (DPA) and closing cost assistance programs can provide either grants or low-interest loans and are usually intended to help low- to middle-income first-time homebuyers. In the Fifth District, state-level organizations in North Carolina and South Carolina offer DPA programs for qualifying households, whereas other local jurisdictions use these programs to allow public employees to live locally. Maryland, Virginia, and West Virginia go a step further to provide funding to help with closing costs. These state-level organizations also provide low-cost mortgages to qualifying households.

CONCLUSION

As evidenced by the persistence of housing cost burdens and measured housing shortages, rural areas have unmet low- to middle-income housing needs. Local housing market conditions, including demographics, housing stock quality, and other assets, vary and therefore point toward different policy solutions. At the same time, many available policy solutions are designed for low-income households but not middle-income ones. This reflects what the Richmond Fed has been hearing from businesses in rural areas: that local housing shortages have made it challenging to attract and retain workers, especially low- to middle-income workers.

In addition to longstanding housing challenges in rural communities, the pandemic-driven migration of households from more densely populated areas has increased demand for housing in rural markets, reducing the amount of time homes spend on the market and putting upward pressure on prices. Rural areas that have lost population in recent years may welcome additional residents as contributors to their tax base and community. At the same time, this recent trend heightens the need for new low- to middle-income housing solutions in rural communities throughout the Fifth District. **EF**

BY KARTIK ATHREYA

Our Work on Rural Economies

Rural areas and small towns come in many varieties. Some are affluent; some are poor. Some are home to major universities and hospitals; some are isolated. About a quarter of the population of the Fifth District lives in rural counties. And on average, across many measures, rural America has been having a harder time than the cities — in terms of employment, educational attainment, and health. As a regional Fed, it is in our mission to help wherever we can to promote economic vitality in our District. So, starting in early 2018, the Richmond Fed stepped up its efforts to learn about rural and small-town economies and to seek ways in which outcomes could be improved and potential unleashed. I'd like to give you an update on what we're doing.

As you might expect, much of this work takes us into the field. The Bank's president, Tom Barkin, has made over 70 trips to rural areas and small towns to meet with leaders in both the public and private sectors to hear their points of view. Also spending a lot of time on the road are members of the Bank's research department, especially our regional executives and community development field managers, who engage local governments, businesses, and nonprofits. Many of these trips are part of our Community Conversations series, which takes Tom and our research staff on the road to communities across the Fifth District to gather input from local leaders and residents. The team meets on a regular basis (usually monthly) to talk about what they've been hearing and what issues seem to be emerging. That discussion, in turn, helps us figure out what we can do to lend a hand through research, events that highlight issues and foster discussions, and other programs.

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Several events anchor our rural and small-town efforts. In October 2021, we held our second annual Rural America Week, in which we brought together community leaders, representatives of financial institutions and foundations, and Richmond Fed leaders and staff. We hosted a series of sessions to discuss development projects that are potentially eligible for Community Reinvestment Act funding, highlighted success stories of small-town and rural social and economic progress, and heard the perspectives of educators. (Last year's was virtual; we hope this year's will include in-person events.) On March 30, soon after this issue comes out, we will present our third Investing in Rural America conference, this time in Greensboro, N.C., where experts from nonprofits and academia, community leaders, and others will discuss economic development issues.

To try to make progress on more specific areas of concern, our District Dialogues series brings experts and leaders together either in person or virtually for discussions of topics such as K-12 education and adult workforce training. For instance, a program in March 2021 on digital access brought together Richmond Fed economists, policymakers, and funders to consider ways of making broadband more available in rural communities; teachers shared their perspectives on virtual learning during a pandemic.

Another Richmond Fed program, Investment Connection, gives community and economic development organizations a venue where they can pitch project ideas to funders, along the lines of the television show "Shark Tank." Launched in 2019, the program includes an advance review of project ideas by the Richmond Fed's Supervision, Regulation, and Credit staff to determine whether the proposals would likely qualify their funders for positive recognition in their Community Reinvestment Act records — possibly giving those projects a boost in the eyes of potential funders. (The idea for Investment Connection came to us from one of our fellow Reserve Banks; it was originated by the Kansas City Fed in 2011.)

The information we bring back from all of these activities then feeds back into our research and publications — and the cycle starts again.

If you'd like to learn more, many of our past programs are available for viewing on our website. We also detail some of the success stories that we learn about in our Rural Spotlight publication series, which is part of our Regional Matters blog. For example, a recent Rural Spotlight looked at the experiences of the Goodwill Industries of the Valleys GoodCare Program, which seeks to mitigate the shortage of health care workers in its mostly rural and small-town service areas in Virginia by offering free education and supports to individuals who aspire to enter the field.

And you can keep up with what we're doing on rural and small towns through the pages of this magazine — not just in this special issue, but in all of its issues. It's also a great place to keep up with the Fed's activities on topics like inflation, employment, and financial stability. If you aren't already a regular reader, I hope you'll join us as a subscriber. **EF**

Kartik Athreya is executive vice president and director of research at the Federal Reserve Bank of Richmond.

NEXT ISSUE

THE POST-9/11 G.I. BILL

In 2008, Congress passed the largest expansion of federal education aid to veterans since the original G.I. Bill following World War II. Some 82,000 service members signed up for the benefit within the first two months. Today, however, fewer than half of eligible veterans are using the benefit, and there are signs that the earnings of those who have used it are lower than expected. Policymakers are considering whether such benefits might be better tailored to fit the needs of the current economy.

FED DIGITAL CURRENCY

In January, the Fed issued a report on the implications of launching a central bank digital currency. Such a move would allow the general public to maintain digital accounts directly at the Fed. The Fed cited a number of benefits, such as convenience, as well as possible risks to the financial system, such as the disruption of banking and financial markets.

THE APPALACHIAN REGIONAL COMMISSION

When presidential candidate John F. Kennedy campaigned in West Virginia and saw living conditions there, he became convinced of the need for government aid in Appalachia. He created the President's Appalachian Regional Commission, a body of state governors and cabinet-level officials, in 1963 to address the region's economic problems. In 1965, Congress continued his work by creating the Appalachian Regional Commission, which helped connect the region to the national highway system and has funded thousands of economic development programs.

INTERVIEW WITH TYLER COWEN

The George Mason University economist, columnist, and author on inflation, the study of progress, spotting talent, and being spotted.

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District Dialogues is Back!

The Richmond Fed's District Dialogues returned in 2022 — it's a forum that gives community members a unique opportunity to engage with experts about issues facing the Fifth District.

Our February session explored how the future of work is changing human capital decisions, what skills will be needed in the economy of tomorrow, and what this means for the region and country as a whole.

WATCH NOW
www.richmondfed.org/DistrictDialogues

Keep an eye on our social media and website for more details on the upcoming sessions.

www.richmondfed.org/DistrictDialogues

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#districtdialogues

UPCOMING SESSIONS:

MAY: A Conversation on Racial Wealth Disparities

AUGUST: The Economic Impact of an Aging America

NOVEMBER: The Economic Outlook for Youth in America