home. While there are no good data on such matters, local sources suggest that there has been a boomerang effect on young adults. Allan Burke might be called the eyes, ears and mouth of Emmons County. In 1993, Burke and his wife Leah bought the *Emmons County Record*, the oldest business in the county and the third-largest weekly newspaper in the state. While Burke is semi-retired, he still keeps close tabs on the community as the publisher emeritus.

Before the ag boom hit, "our farmers were aging, and nobody wanted their kids to come back and farm. But now, they want junior to come home … [and] we have a lot of young couples and young farmers who have come back" to work the land, he said. Burke's son graduated from high school in 2007 and recently moved to Washington state to teach high school biology—a common move for many graduates in the past. "Nobody stayed around here, or very few," said Burke. But that appears to be changing. "Now there's like five or six boys from his class [of about 34] who are farming, and then there's a couple who are in agronomy."

Vold has seen the same phenomenon in Carrington. "There was a point in North Dakota [where we said] goodbye to our kids. Graduation felt like a funeral. It was like, 'Well, nice having you here for these 18 years, and you're all going to go off and get jobs everywhere around the country,'" said Vold. "Now, we have all kinds of people, young families [coming back]. Many of them are farming, but [there are] also a lot of other choices. We have three excellent doctors in our clinic and three physician assistants, and they're all from here."

Vold's middle child, Matthew, "grew up here, went off to college, came back, and he's got a good job" in the business office at the pasta plant in town. Just 26 years old, "he bought a house here in town. Doing better that way than I was" at that age, Vold said.

Though Vold's older son, Bryan, said he enjoys living in the Twin Cities, he hasn't dismissed the idea of coming home. "I definitely have not ruled it out." Bryan Vold is single right now, but if he were raising a family, he said, "I would rather do it in Carrington. It just feels better." f

And now, a word from our sponsor

The genesis of this *fedgazette* project on intergenerational income mobility, and the raw data that underlie it, comes from research by a group of academics that gathered unprecedented (and anonymous) income records from the Internal Revenue Service on 40 million individuals.

The principal researchers—Raj Chetty and Nathaniel Hendren from Harvard University, and Patrick Kline and Emmanuel Saez from the University of California, Berkeley—started by looking at 1996 tax records of 30 million people, who were identified only by a Social Security number. Dependents also were listed by Social Security number on tax returns, allowing the team to identify 10 million children born between 1980 and 1982.

In February, Chetty discussed this undertaking, dubbed the Equality of Opportunity Project, in a radio interview with St. Cloud State University economist King Banaian, who is also a state legislator and radio host on the Wall Street Business Network.

"We're trying to understand the determinants of intergenerational mobility. A simple way to think about it is 'your odds of moving up in the income distribution,' [which is] kind of the core ideal of the American dream. We want to investigate what factors seem to increase kids' chances of moving up in the income distribution and what we can do to promote the outcomes of disadvantaged youth," Chetty said.

"The way I think about the work that we're doing is using big data to improve public policy in much the same way that private sector companies like Amazon or Google are trying to use big data to improve the products that they deliver."

The team calculated parents' income by averaging family income from 1996 to 2000. It then calculated the income of the (now adult) children in 2011 and 2012, when they would be between the ages of 30 and 32 years old. Then the researchers added a geographic component by assigning the income of both parents and their children to their place of residence when the children were 16 years old, regardless of where the income was earned when children were 30-somethings.

To better generalize the geographic data, the research team grouped income records by commuting zones, which are clusters of counties that are characterized by strong internal commuting ties (as defined, in this case, by the 1990 census). Because employers and workers in a local market tend to be located within commuting distance, commuting zones serve as rough proxies of local economies. Because these zones don't rely on the presence of a major city (as with metropolitan statistical areas) they cover the entire United States, including rural areas.

In all, the team collected data on 741 commuting zones


PHOTOGRAPH BY CHRIS LONG
Raj Chetty

across the country—including 101 in the Ninth District. Some zones were eliminated because sample sizes were too small to include, bringing the final tally of commuting zones in the study to 709 nationwide and 87 in the Ninth District. The team also made its data publicly available, which the *fedgazette* used as the foundation of its investigation.

Mobility rankings by the Chetty research team don't solely depend on the net change or difference in the income of children versus that of parents. In many commuting zones, the income of the children (as 30- to 32-year-olds) does not exceed that of their parents, in part because the children's income is measured comparatively early in their careers.

Instead, the Chetty team used a so-called rank-rank analysis, whereby parent household income is ranked against the income of other parents with children in the same birth cohort, and adult children are ranked based on their household incomes relative to other adult children in the same birth cohort. The Chetty team then ranks upward mobility based on a linear regression of child rank against parent rank.

The research findings run counter to much of the conventional wisdom on intergenerational income mobility, Chetty said in the local radio interview.

"Many people have the perception that the U.S. once was a land of opportunity, and maybe upward mobility has been declining over time. What we find actually, in contrast, is looking over the past 30, 40 years or so, mobility seems relatively stable at the national level. There haven't been significant changes. So the much bigger story here, in our view, is not so much that mobility is declining over time, but rather that there are some places in the U.S. that have persistently low levels of upward mobility relative to others."

Chetty said that the odds of a child moving from the bottom fifth to the top fifth of the income distribution "are three times as large in places like Salt Lake City or parts of Minnesota relative to other areas such as Charlotte or Indianapolis or Atlanta." So the best income mobility places in the United States—many of which are in the Ninth District—"look somewhat like Denmark or Sweden or Norway, on average." But he added that the United States looks "significantly worse" overall because it has "many places with much, much lower levels of upward mobility."

"Why are we seeing these really large differences in kids' outcomes across these areas? A very likely reason is local policy or other differences in local economic conditions."

—Ronald A. Wirtz