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Rural Development Research and Policy: Perspectives from Federal and State Experiences with an Application to Broadband*

Sarah A. Low

Division of Applied Social Sciences, University of Missouri, USA

Abstract: Throughout time and space, rural economies have changed, but they have seemingly remained disadvantaged. In this article, I discuss rural development research and policy from federal and state perspectives and provide lessons learned from my rural broadband work in both contexts. I promulgate better integration of federal and state government, academia, and the private sector to solve rural economic development challenges. Fostering relationships among federal and state rural development researchers and outreach practitioners would allow researchers to better anticipate future research needs as contacts in the field, or inside the beltway, could share an early look into where they need on-the-ground problem-solving support. I close with suggestions for fostering these relationships and I encourage my SRSA colleagues to embrace the wonderful interdisciplinary nature of regional science in addressing rural development and policy challenges.

Keywords: rural development, rural policy, rural research, broadband

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Sarah A. Low is an associate professor of regional economics, Fred V. Heinkel Chair in Agriculture, and director of MU Extension's Exceed program at the University of Missouri, Columbia, Missouri. LowSA@missouri.edu

1. INTRODUCTION

In the 12 months before delivering this presidential address, I transitioned from being a regional economist in the federal government to being an associate professor of regional economics at a Midwestern land-grant university. This essay discusses rural development research and policy – my passions – from these perspectives, and it shares ideas for improving the approach to rural development research and policymaking.

Throughout time and space, rural economies have changed, but they have remained seemingly disadvantaged. Rural development policy often ignores the rural nonfarm economy and instead emphasizes the farm economy, which contributed about 1 percent of the country's GDP in 2017 (U.S. Department of Agriculture, 2019). The nonfarm economy, however, is essential to rural America. Small farms, in particular, depend on a strong nonfarm rural economy. Of the producers running small farms, defined as operations with less than \$350,000 in annual gross cash farm income, 40 percent had full-time off-farm jobs in 2018, and 71 percent recorded negative farm income (Whitt et al., 2019).

Many factors influence a regional scientist's perspectives on rural development. Those include one's academic discipline, methodological toolbox and experiences - rural or urban. In this essay, I first discuss how space and time may affect our perspectives on rural development. I then narrate my perspective on rural development research and policy given my experience in federal government and at land-grant institution, the University of Missouri. My federal perspectives draw from having spent 10 years at the U.S. Department of Agriculture's Economic Research Service – including time in a detail role to the Secretary of Agriculture's office – and time at the Federal Reserve Bank of Kansas City's Center for the Study of Rural America. I base my nascent state rural development perspectives on my relatively short time at the University of Missouri as a research and extension faculty member. Next, I compare and contrast my federal and state experiences in the context of my rural broadband research and policy work. I close with lessons learned and suggest that stronger linkages between federal and state rural development research and outreach could enhance rural America in the long-run.

2. TEMPORAL AND SPATIAL INFLUENCES ON MY RURAL DEVELOPMENT PERSPECTIVES

Andy Isserman prominently featured time and space in his 2010 SRSA Fellows Address titled *A Space Odyssey: The Future is Not What It Used to Be – A Babyboomer's Travel Guide and Challenge to Young Explorers*. He wrote that his generation – the baby boomers – were the bridge between regional science's founders and SRSA's 50th anniversary (Isserman, 2010). Further, Isserman noted his students would influence SRSA for the next 50 years and into the organization's centennial anniversary. I was one of Andy's students, and my generation – known as Gen X – represents to regional science the bridge between the rural America baby boomers knew and rural America's future. I stand here as the bridge between my mother, who was born in 1948 to rural Iowa farmers, and my son, who was born in 2015 in urban Washington, D.C., to parents who met at an SRSA meeting. How will my son and his peers perceive rural development? In this section, I will discuss how time and space may affect

our rural development perspectives.

2.1. Temporal Influences

Rural areas' dependence on agriculture and natural resources has changed over time as Cochran's treadmill just keeps going faster and faster (Cochran, 1993). Rural people and places have changed as production agriculture, forestry, and fishing have evolved. In Iowa during the Great Depression, my grandfather left school after sixth grade to farm – with horses. By the late 1970s, he'd purchased a state-of-the-art International Harvester combine. The 1980s brought upheaval – and not just in Iowa. In the Pacific Northwest, for example, the recession, mechanization, and international trade massively restructured the region's timber industry and forever changed its rural areas.

My father was a fisherman in rural Scotland; he fished with little financial capital. On a lucky day, he'd catch lobsters in the Irish Sea. When times were tough, he'd handpick mussels and periwinkles, a type of sea snail that we called “winkles.” In the early 1980s, my parents bought a salmon fishery. Other than the cost of securing heritable rights to the salmon, fishing then was inexpensive. All you needed was a dinghy, a net, and a couple of men. By the time I was 8, I could substitute for one of the men. We would take the salmon to the wholesaler in the nearest city – or what at that point of my life I considered a city, which was really a town with fewer than 4,000 residents. Over time, we experimented with directly selling fresh salmon to wealthy individuals and adding value by smoking salmon.

Agriculture is now much more capital-intensive. Today, you'd be hard-pressed to buy your way into a commercial Iowa farm and run it with the help of neighbors – the way my father bought into a salmon fishery in Scotland almost 40 years ago. Further, production agriculture and fishing's socioeconomic and environmental implications for rural areas are very different today than they were when I was a child. Certainly, time has changed rural America and our perspectives.

2.2. Spatial Influences

Geography may also affect our rural development perspectives. Appropriate rural development policy intervention depends on a region's entrepreneurial mindset and whether the given region's economy qualifies as agrarian, industrial, or service-oriented. We can look to several international cases as examples. In Nigeria, agriculture and rural development are strongly linked, and rural underdevelopment is common (Nchuchuwe and Adejuwon, 2012). Agrarian laborers who became industrial workers transformed rural China (Long et al., 2011). As rural workers in India transitioned from laboring in production agriculture to taking jobs in the rural nonfarm sector, productivity rose, yet rural well-being may not have increased. Self-employment among Indians became predominant, and these jobs didn't provide health, retirement, or unemployment benefits (Binswanger-Mkhize, 2013).

As a regional scientist, I recognize that rural development varies tremendously across space, meaning countries and regions. In their examination of Appalachia – an economically lagging U.S. rural region – Stephens et al. (2013) noted that self-employment plays a vital role in economic development. They found little positive association between knowledge in-

dustries, which tend to drive urban growth, and wage and salary employment in Appalachia. Thus, rural development and urban development require different approaches, and rural regions located in different geographies may require different approaches. Rogers and Weiler (1995) noted that regional science benefits when young scholars rigorously analyze regional development issues as Heather Stephens did for Appalachia (2013) with her coauthors. Notably, Stephan Weiler began his career working on rural-urban issues in Africa, but his interest in U.S. rural poverty and a coincident meeting with Andy Isserman led him to Appalachia and shifted his career to focus on domestic rural-urban development. In his work, Weiler discovered that different places often face the same rural development challenges.

Although geography may not change rural development fundamentals, it does shape our perspectives on it. As a girl, I desperately wanted to leave Scotland and go to America. I imagined Americans, unlike the Scottish, would not be judged by the economic class of their forefathers. In America, I envisioned that hard work – combined with hope and economic mobility – could get you anywhere you wanted to go. I dreamed of escaping the challenges I perceived in rural Scotland. When I moved to the U.S., I quickly learned – as Weiler found – that rural Iowa’s challenges were surprisingly similar to those in Scotland. The two geographies had different contexts but the same challenges. These perhaps unexpected commonalities led me to devote my career to rural development research and policy.

3. A RETROSPECTIVE VIEW: RURAL DEVELOPMENT IN THE FEDERAL GOVERNMENT

From a young age, I was interested in national policy and how it could improve rural people and places. My father would meet with our MP (Minister of Parliament) at the pub across the street, and once, I got to go. I loved it. By the time I was 10, I staunchly supported the Scottish National Party, much to my Tory father’s disappointment. After immigrating to the U.S., I was keen to learn about the federal government and its role in forming rural policy and improving rural lives. I interned for the chair of the Senate Committee on Agriculture, Nutrition, and Forestry. By then, I was hooked on rural policy and knew I wanted to work in this field.

3.1. The Dream

When I was a junior at Iowa State, my adviser introduced me to the *Main Street Economist*, published by the Federal Reserve Bank of Kansas City’s Center for the Study of Rural America. I learned of a young female research associate at the center, and I decided I wanted a job like hers. My undergraduate adviser, who was a rural sociologist, told me I’d better get a degree in agricultural economics if that’s what I wanted to do. I ultimately pursued an MS in the subject at Purdue a few years later and was assigned to work for Kevin McNamara.

During my time at Purdue, McNamara connected me to SRSA and Jason Henderson. Both connections made a meaningful difference in launching my rural development career. At the time, McNamara served as the SRSA treasurer, and one of my first tasks for him was stuffing envelopes to be mailed to SRSA members. I recall asking, “What is regional

science?” He replied, “It is hard to describe, but you’d like it.” Boy, he was right. Henderson, who was McNamara’s student while at Purdue, had recently taken a position at the Center for the Study of Rural America. Ultimately, the connection led me to my dream job, a job that could help me learn about and potentially shape rural development policy.

After I worked for a couple of years at the Center for the Study of Rural America, the center closed. Henderson moved to the bank’s Omaha branch; Weiler returned to Colorado State; Mark Drabenstott went to the University of Missouri; and I moved to Champaign, Illinois, and began my PhD studies with Andy Isserman in his newly established Regional Economics and Public Policy program within the Department of Agricultural and Consumer Economics. A little more than a year later, I visited with David McGranahan from USDA’s Economic Research Service while at NARSC, and I decided ERS might be a good place for me to continue learning and helping to shape rural development policy. After completing my coursework and a teaching stint, I landed in ERS’s Washington, D.C., office. *Rural Broadband at a Glance, 2009 Edition* (Stenberg and Low, 2009) was my first ERS publication. For that bulletin, I wrote about broadband availability and analyzed the FCC data I’d worked with first at the Kansas City Fed. The resulting bulletin was published within days of President Obama signing the American Recovery and Reinvestment Act of 2009, which included a massive \$7.2 billion investment in broadband infrastructure. The act allocated \$2.5 billion of its funding to USDA to develop broadband in rural areas. I felt like the bulletin, which happened to make SSRN’s top 10 most downloaded urban economics and regional science articles that summer, was timely and useful.

There I was. I was living and working in Washington, D.C., while helping to shape rural development policy. My dream had come true.

3.2. The Reality

My 10 years at ERS flew by. During my time there, I led a report to Congress on local and regional foods trends, developed surveys and analyzed data, participated in confidential staff analyses on topics such as small business financial capital availability, and spent four years as a visiting scholar at the Bureau of Labor Statistics – in an internet-free room where I used confidential microdata to conduct longitudinal analysis on rural manufacturing plant survival. My colleagues and I studiously researched policy-relevant topics; carefully conducted analysis; and cheerily distilled our academic work into briefings, short bulletins, and *Amber Waves* magazine articles. We hoped our rural economic development work would improve the lives of rural Americans.

While working at the federal level, I analyzed rural development trends and numbers and wrote about them, and I hoped and wondered whether what I wrote was useful. But really, I did not know. Occasionally, my cell phone would ring. A congressional staffer using my materials and had questions about them. Technically, though, I wasn’t allowed to talk to congressional staffers. They were supposed to communicate with me indirectly through USDA governmental relations staff neither party knew. Everything we communicated was carefully reviewed and scripted. One of my ERS reports had 17 peer reviewers – yes, 17, and that didn’t include reviews from layers of management.

As time passed, my rural roots began to weaken. I was less in touch with rural people

and places, the rural economy, and rural hopes and dreams than I'd ever been. My parents had both died, and my grandfather, the Iowa farmer, had died. I ventured outside D.C.'s famous beltway regularly only after my horse moved to a small private barn a few miles south. I learned more about the pulse of rural America at Virginia horse shows than I did at work.

Whether due to budget or political constraints, I decreasingly could participate in conferences with rural stakeholders and had to turn down speech request after speech request. My media contacts were increasingly censored. During an hour-long phone interview with a writer from a national newspaper, I'll never forget a USDA public affairs staffer being on the line and monitoring the discussion. My cell phone continued to ring – often after hours and on weekends when USDA staff weren't working but policymakers and political appointees were working. I was reachable to help them. They knew they shouldn't be calling my cell phone, but sometimes, you've got to get work done when it needs to be done. I began to feel like ERS was not getting necessary work done when it needed to be done. I felt that my effectiveness at shaping rural development policy had diminished.

Shortly after returning to ERS from a detail to USDA Secretary Purdue's office, I was allowed, after much haggling, to travel to the Heartland and speak about my manufacturing research. I was invited to give a keynote address at the Illinois Institute for Rural Affairs' annual conference. Right after sharing my remarks, two University of Missouri Extension educators approached me to discuss how my research could be helpful in Missouri. One directed MU Extension's Exceed program, which focused on community economic and entrepreneurial development. Her job seemed ideal. As someone from inside the beltway who irregularly heard from business owners and community leaders about the true issues in rural America, what was I doing professing to be an expert on rural economic development research? Without such feedback from rural businesses and people, how could I help rural development policy and make rural America a better place to live? Two months later, I flew with my husband to Missouri to interview for a job with the Exceed program.

4. A VIEW FROM THE DOORWAY: RURAL DEVELOPMENT AT A LAND-GRANT UNIVERSITY

I now practice rural development from outside the beltway – far outside the beltway. Moving to a land-grant university, such as the University of Missouri, to work on rural development often implies extension work. The Smith-Lever Act formally established cooperative extension in 1914 by forging a partnership between USDA and land-grant universities to apply research and provide education on rural agricultural issues.¹ Today, extension provides practical education to a broader audience – people, businesses, and communities – to build a stronger future by using campus-based faculty as disciplinary specialists. Campus faculty develop curricula that translate research into language appropriate for targeted audiences. According to Extension's Committee on Organization and Policy (ECOP), campus-based faculty then rely on county-based educators, who live in the communities where they work, to contribute in two ways: 1) solve local problems important to community residents and

¹From NIFA <https://nifa.usda.gov/cooperative-extension-history>

groups and 2) share input to prioritize campus faculty research (Association of Public and Land Grant Universities, 2020).

ECOP's definition of extension, which I highlighted above, is idealistic. In Missouri, I found less extension coordination at the state level than I expected. Relative to my expectations, most of the 44 county engagement specialists in MU Extension's Community Economic Development program – those who the ECOP definition described as focused on *solving local problems* and *giving input for research* – rarely feed campus faculty input on research topics and educational needs.

A more productive collaboration began in 2018 between University of Missouri Extension and the Missouri Department of Agriculture (MDA). A joint meeting attended by on- and off-campus extension faculty, not administrators, and MDA staff took place. We traveled to neutral territory – Missouri Farm Bureau's headquarters – and the two organizations learned about each other. Extension faculty and MDA staff sat in alternating seating to maximize grassroots-level cross-pollination of people and ideas. As a result, I now recognize MDA staff at extension workshops at which I present, and it is great to see a familiar face and call upon that person to answer questions and offer the state's perspectives. I would love to see comparable grassroots cooperation of rural development efforts at the federal and state levels.

5. COMPARING FEDERAL AND STATE PERSPECTIVES ON RURAL DEVELOPMENT

The biggest difference between rural development-focused regional science in the federal government and at a land-grant university – other than not having to work in a windowless cubicle now that I no longer work in federal government – is that I as a university faculty person am allowed to talk to the people I'm trying to help. Instead of briefing one undersecretary on rural manufacturing resilience, I speak to 400 manufacturing plant owners and technical assistance providers about my rural manufacturing resilience work. Instead of answering the phone when congressional staff call and saying I'm not allowed to talk until you go through ERS congressional relations staff, I answer the phone when Missouri state lawmakers call and ask what can be done to help rural areas of their districts.

The ability to offer timely rural development input also varies between working in the federal government and at a land-grant university. At a land-grant university, my rural development work simply enables me to be nimbler and more connected. Ultimately, that makes my work more timely. I'm now working with county extension faculty to help local food growers solve issues they face on a same-day basis instead of writing a congressional local and regional foods report that would take months to publish.² I recently co-developed a policy brief on the potential economic impact of COVID-19 on local food producers, and the brief moved from conception to publication in a couple of days, so it could be used to inform the CARES Act.³ The brief certainly wasn't as polished as it would have been had I been

²Interestingly, this report (Low et al., 2015) was completed six months after being requested, and it was one of the fastest ERS reports to be completed. It was another six months until it was published.

³We're passionate about our work and want it to be timely and useful. Coauthors and I were simultaneously editing the brief in Google Docs. Soon after, it was circulated on the Hill and then published on

at ERS. However, as an effort rooted in land-grant universities – Colorado State University and University of Missouri – it was timelier than anything I’d done at ERS.

6. LESSONS LEARNED FROM FEDERAL AND STATE RURAL BROADBAND WORK

My work on rural broadband both inside the beltway and in Missouri serves as a useful example of contributing to rural development in the two contexts. While working in federal government, I was tapped to go on a temporary detail from ERS to USDA’s Office of the Secretary during summer 2017. In this role, I served as the data and research lead for the Secretary’s rural infrastructure group, and I led efforts to provide data, analysis, and science in support of the Secretary’s e-connectivity and rural prosperity initiatives. USDA’s rural infrastructure group cooperated with the White House’s so-called infrastructure czar and his team to work on the President’s infrastructure bill.⁴ The idea was that a massive federal investment – an investment on the scale of the Rural Electrification Act of 1936, which loaned trillions of dollars to rural electric coops for universal service via vertical monopolies (Person, 1950) – was necessary to make rural broadband a reality.

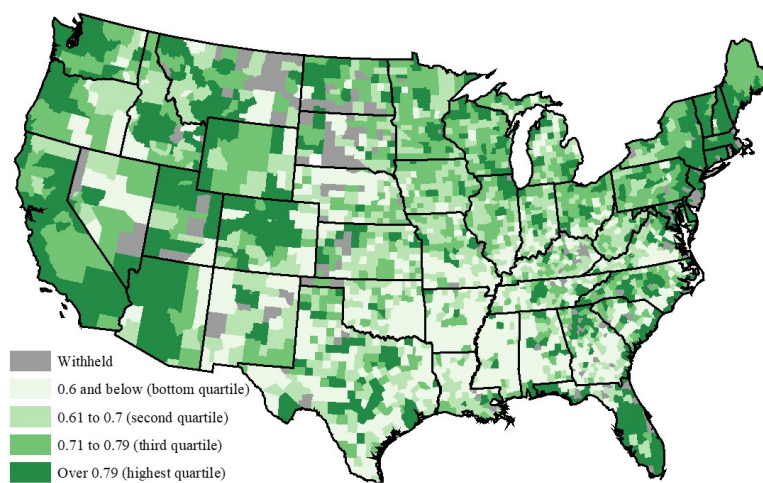
While part of the Secretary’s office, I also worked on business use cases for spurring rural broadband infrastructure investment. We asked, what were the economic impacts of farmers not having high-speed internet access in their fields and rural manufacturers not having broadband connectivity to supply chain partners? What surprised me most was that many of my inside-the-beltway colleagues assumed that all people had home broadband internet. My colleagues were seemingly oblivious to the rural households with no high-speed connectivity. Instead, the focus was on increasing speed and reliability for rural businesses and providing broadband access in every inch of the field – assuming farmers had access in their offices. I may have suffered from weakening ties to rural America, but I knew farmers would be thrilled to simply have broadband access in their offices. Access to affordable, reliable, fast internet service would do much to increase rural broadband adoption rates, in spite of the share of farms with any internet access increasing from 57 percent to 75 percent between 2007 and 2017 (O’Hara and Low, 2020).

At the University of Missouri, my responsibility is to respond to economic opportunities and needs. Although states have fewer resources than the federal government, the stakes are higher because I’m working directly with individuals whose lives and livelihoods are adversely affected by inadequate internet access. Like USDA, Missouri has been laser-focused on rural broadband deployment in the past couple of years. Compared with other states, Missouri ranks in the bottom quartile for broadband access, as illustrated in Figure 1 (Federal Communications Commission, 2019). Such limited access surely has adversely affected the state’s economy and its residents’ education. In 2018, 18 states had broadband expansion spending programs (Whitacre and Gallardo, 2020), and the Missouri Broadband Grant Program received inaugural funding in 2019 at \$5M. These monies were leveraged by FCC and USDA funding, however. In 2020, Missouri announced \$50M for broadband expansion

LocalFoodEconomics.com and the National Sustainable Agriculture Coalition website within days.

⁴Although the bill was never publicly released, the principles are available: <https://www.whitehouse.gov/wp-content/uploads/2018/02/INFRASTRUCTURE-211.pdf>

Figure 1: Ratio of Broadband Connections to Households, December 2017



Data source: County residential fixed high-speed connections (FCC Form 477, December 31, 2017) over households (American Community Survey 2013-17).

using federal CARES Act monies. In 2018, the state hired its first director of broadband development – a step 25 states had already implemented (Whitacre and Gallardo, 2020). I recently had the pleasure of working with Missouri’s broadband development director and the state librarian’s office on increasing digital literacy and workforce development, but I have generally had little involvement in state broadband policy.

The University of Missouri System recently created a broadband leadership team, and in June 2020, the team cooperated with MU Extension to lead a planning workshop designed to understand what was needed to develop a workable plan to expand affordable, reliable high-speed internet service to one county in rural Missouri.⁵ Interestingly, the private sector was not at the table. No internet service provider or electrical cooperative stepped forward to work with the one county and the university to implement the plan.

What can a regional scientist do to help deploy broadband to rural America? A land-grant university’s mission is, at least in part, to respond to economic opportunity and education access needs. Both of these needs related to agriculture 100 years ago, and today, both relate to broadband internet, I believe. As I mentioned earlier, the stakes are high for states, but resources are limited. At the federal level, I felt as if I could make a difference for rural development through communicating analysis to support a massive federal investment in broadband. At a land-grant university, my role may not be as influential as I had hoped when I visited Missouri during summer 2018.

⁵Workshop report available at <https://mobroadband.org/wp-content/uploads/sites/44/2020/07/WORKSHOP-REPORT-FINAL.pdf>

7. IMPLICATIONS AND A PATH FORWARD

Having recently experienced rural development research and policy from federal and state perspectives, I would love to see better integration of federal and state government, academia, and the private sector – the so-called triple helix. All three types of institutions can support universities as knowledge-based rural development facilitators. I would love to see governmental units, including localities, listening to each other and participating in relevant research. Inviting the private sector to the table is essential to help lagging regions improve their economies. We need to ensure internet service providers join broadband discussions and lenders join economic development discussions. Rural development efforts and rural areas are disadvantaged by not having their own lobby the way many industries do. Farm lobbying groups champion rural issues, such as broadband availability, but the farm lobby will prioritize issues most relevant to farmers and only secondarily look to issues that more broadly affect rural areas.

Fostering relationships among federal and state rural development researchers and outreach practitioners would allow researchers to better anticipate future research needs as contacts in the field, or inside the beltway, could share an early look into where they need on-the-ground problem-solving support. This process could ensure that the necessary analysis is ready to go when policy questions arise. How can we do this? The following are possible first steps:

- Encourage state and local researchers and policymakers to know their federal partners and vice versa. Managers could host virtual get-to-know-each-other meetings, though face-to-face networking is optimal.
- Urge state researchers and state policymakers to get to know each other better. The same goes for federal researchers and policymakers. Getting out and getting connected can be difficult but fruitful.
- Enable rural researchers employed by the federal government to travel more and foster partnerships with university researchers and extension faculty. The pre-1984 model of USDA ERS had researchers stationed at land-grant universities – just as USDA ARS researchers currently work from land-grant universities. Maybe budgeting for travel – perhaps led by cooperative extension service faculty – and allocating resources to more cooperative agreements are answers? Telecommunications can be leveraged to make these connections more sustainable.
- Facilitate cross-pollination of U.S rural development research and rural research in other countries. International collaboration was once the model. For example, when I was at the Federal Reserve Bank of Kansas City, we had close ties with the OECD Territorial Committee. That process, however, left out many interested scholars and should be more inclusive.
- Recognize that the USDA Economic Research Services move from inside the beltway to Kansas City will not necessarily benefit rural development research and policy. It remains to be seen whether those researchers will engage with rural areas more as

a result. Instead, the move could very well cause them to lose important ties to policymakers and further divorce rural areas from attention and resources.

What does all of this mean for the future of the Southern Regional Science Association, which was once – and perhaps still – known as the focal organization for rural development? Rogers and Weiler, both trained economists, suggest the “real potential crisis in regional science is ... a lack of ‘children’ to carry the torch into the future.” As an economics subfield, regional economics has declined in popularity, but I feel like regional and rural economics has grown as a subfield within agricultural economics. Today, the Community and Regional Economics Network (CRENET) within the Agricultural and Applied Economics Association has 246 members, up from 150 in 1982-83 (Weber, 2020). Cooperative extension placing more importance on rural and community economic development has partly driven the recent increase. Perhaps, as a result, SRSA is now overly influenced by agricultural economics? When I attended my first SRSA meeting in 2004, I think many more rural sociologists, regional planners, and public policy scholars attended than they do now. I encourage fellow SRSA members interested in rural development to continue fostering the interdisciplinary and applied nature of regional science for the good of the organization, regional science, and rural people and places.

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