

Residents' Perceptions of the Need and Potential for Rural Renewal in Two Farming-Dependent Counties






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Abstract

Many rural counties in the U.S. are struggling, particularly farming-dependent counties experiencing persistent poverty. This Rapid Rural Appraisal study focused on two farming-dependent counties in rural Oklahoma experiencing persistent poverty, population declines, and related stressors. In a series of open forums, rural community members most frequently referenced built capital (i.e., infrastructure) as the major reason that prevented the growth of new businesses and suppressed pride in the community. In comparison, community members expressed their greatest accomplishments and sources of hope which involved human capital, in the way of the school systems, teachers, and students, and social capital, in the way of their athletic teams, churches, and relationships with each other. Although these counties rely heavily on agriculture as a major contributor to their economy, residents expressed challenges and concerns related to high concentrations of nitrate in the drinking water and seasonal air pollution related to agricultural processing facilities. Recommendations include encouraging residents in these two counties to rally together around their perceived strengths—human and social capital—to actively solve the problems identified during the open forums.

Keywords

Community capitals framework, community development, sustainable livelihoods

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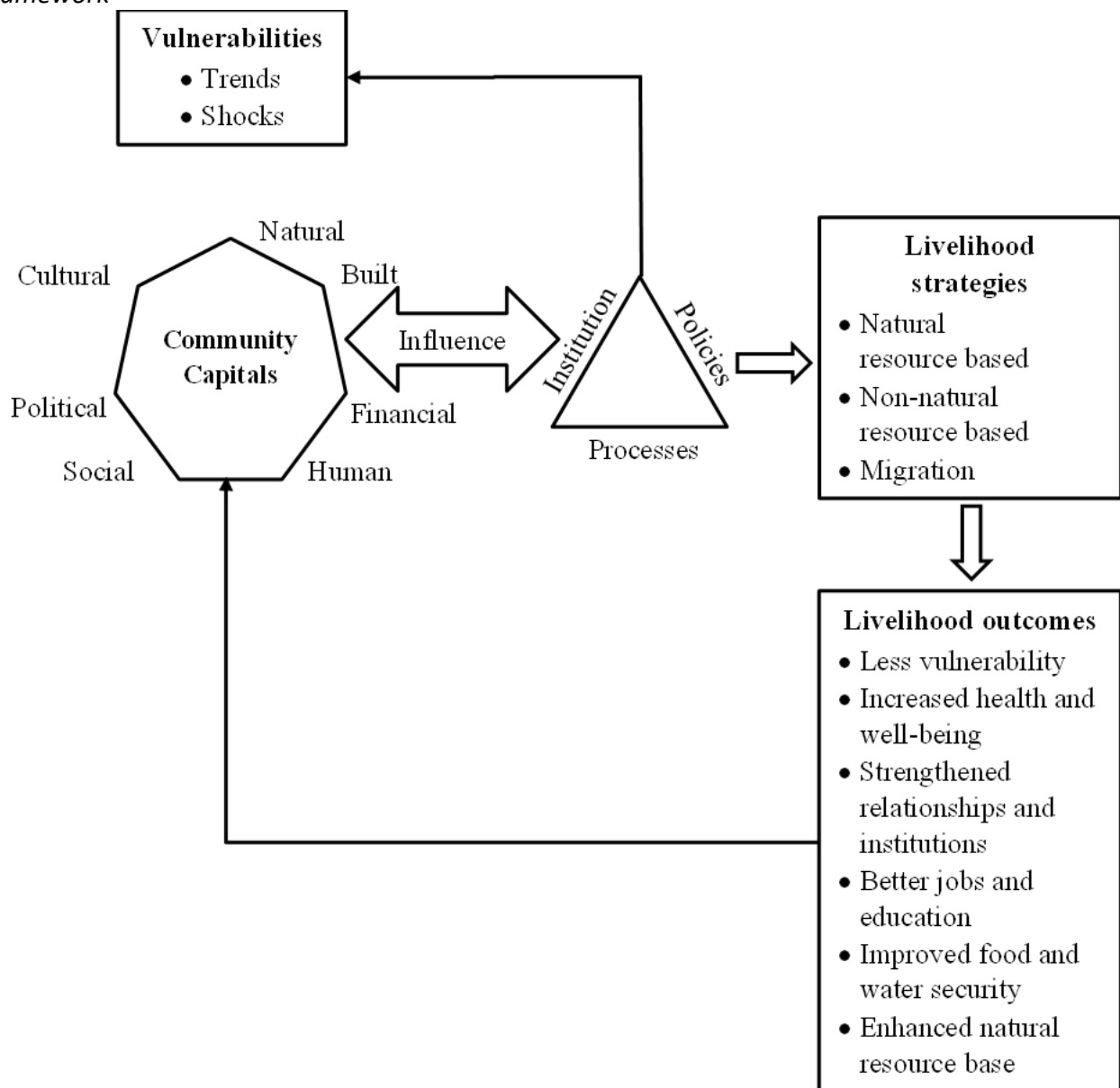
Introduction and Problem Statement

Numerous rural communities are threatened by declines in their built, human, and natural capital (Crowe, 2006; Renkow, 2003). Rural residents around the world face major challenges in maintaining and developing infrastructure systems, mitigating poverty, and slowing the outward migration of its population in a pursuit to sustain local quality of life (Rodríguez-Pose & Hardy, 2015). In Oklahoma, nearly one-third of its residents live in rural, non-metro, areas (USDA ERS, 2021) with populations less than 2,500 (U.S. Census, 2016); 19 of its counties are farming-dependent, indicating that farming accounted for at least 25% of the county's earnings, or 16% of its employment (United States Department of Agriculture, Economic Resource Service, 2017). When canvassing the >3,000 counties and county-equivalents in the U.S., only 38 are categorized by the USDA ERS (2017) as having low levels of education, low employment, sustained population loss, persistent poverty, and persistent child poverty. Two of those counties are the focus of this study.

Research has noted that farming communities frequently experience low population density, accessibility, and economic resources (Argent, 2020). Even in farming-dependent communities, many rural farming families require at least one member to earn income outside of the farm (Beach & Kulcsár, 2015). As such, population growth has been slow in farming-dependent counties across the U.S., with many such counties in the Great Plains region experiencing pronounced population declines (Johnson, 2012). Although numerous challenges are present, rural communities also have an abundance of assets. People in rural counties need to work together to identify and resolve community needs and shortcomings (Rivera & Alex, 2007). To do so, residents should “align their diverse attitudes, motivations and values into a shared knowledge pool and collective or concerted action” (Tisenkopfs et al., 2015, p. 15) so they might realize greater community outputs (Bertin et al., 2014).

Theoretical and Conceptual Framework

Our study was underpinned by the Sustainable Livelihoods Approach of the Institute for Development Studies (Chambers & Conway, 1992; Scoones, 1998), which considers five capitals—natural, built, human, social, and financial—an emphasis of the Rural Renewal Initiative (RRI) at Oklahoma State University. That list was expanded for this study by also considering cultural and political capitals, following the Community Capitals Framework of Emery's and Flora's (2006) model (see Figure 1). The Rural Renewal through Sustainable Livelihoods and Community Capitals (RR-SLCC) Framework allows researchers to assess a community's assets and evaluate its current situation (Gutierrez-Montes et al., 2009) through action-based research (Pigg et al., 2013) by analyzing its “efforts from a systems perspective by identifying assets in each capital . . . the interaction among capitals, and the resulting impacts across capitals” (Emery & Flora, 2006, p. 20).

Figure 1*Increasing Rural Renewal through Sustainable Livelihoods and Community Capitals (RR-SLCC) Framework*

Rural communities are vulnerable to both long-term trends (i.e., population decline, drought, and poverty) and immediate shocks (i.e., loss of industry, severe weather, and funding cuts). These vulnerabilities can impact one or more community capitals. When these community capitals are impacted, they can directly influence, and are influenced by, institutions, policies, and processes, which can cause or contribute to additional vulnerabilities facing rural communities. All these components and interactions can affect livelihood strategies and outcomes, which ultimately impacts a community's various capitals (see Figure 1).

Purpose

The purpose of the study was twofold: (a) explore residents' perceptions of their rural communities, and (b) apply these findings to the RR-SLCC Framework. The research question guiding the study was: How do rural residents perceive the strengths, weaknesses, opportunities, and threats affecting their communities?

Methods

Two farming-dependent counties in Oklahoma were selected as the focus communities for this study because they were categorized as having prolonged population decline, low education, low employment, and persistent poverty and childhood poverty (United States Department of Agriculture, Economic Resource Service [USDA ERS], 2017). Further, these two counties rank at the bottom in Oklahoma in economic indicators, specifically people in poverty (24% and 20%, respectively) and children in poverty (35% and 30%, respectively; USDA ERS, 2021). Clearly, these two counties exhibit a need for development and renewal.

We conducted a rapid rural appraisal (RRA) (Chambers, 1981) of residents living in two target communities. An RRA is a "systematic but semi-structured activity out in the field by a multidisciplinary team and is designed to obtain new information" (Crawford, 1997, p. 86). RRA uses a variety of methods to learn about rural conditions in a cost-effective way, but the most distinctive part of this method is the team-based approach. RRA team members should represent a variety of technical backgrounds and possess varying skill sets and research expertise (Crawford, 1997).

We conducted our RRA through six community forums with approximately 120 participants in two counties in Oklahoma in 2019. The forums were open format, conducted in public spaces, and offered in various towns of the two target counties to promote attendance and accessibility. Each forum included an opening session with introductions, handouts with open-ended questions related to participants' hopes and dreams for their county, and blank Post-it posters for community members to record their perceived strengths, weaknesses, opportunities, and threats related to their respective county. Community members were encouraged to contribute thoughts to and engage with each other in a collaborative and comprehensive community analysis. Each forum concluded with a rich discussion among facilitators and community members where major ideas were summarized and research opportunities identified. Each forum lasted roughly two hours. Four types of data were collected at the community forums: focus group interviews, individual reflection documents, group posters, and observations of physical facilities. Researchers also journaled and compiled field notes during data collection.

All data were compiled digitally and input into MAXQDA2020. Glaser's (1965) constant comparative method was used to conduct a multistage analysis consisting of open, axial, and selective coding. Codes were developed to categorize the data in two distinct ways. First, data

were aligned with the seven community capital categories (Emery & Flora, 2006). Next, they were sorted into perceived strengths, weaknesses, opportunities, and threats.

We used Lincoln's and Guba's (1985) four standards of qualitative quality to guide our decisions. Specifically, credibility was achieved through persistent and intentional observations and triangulation of the data across participants in both target counties. Triangulation was ensured through observations and reflection. Outside researchers reviewed the instrument and research process prior to the study, as well as the findings after the study, to establish dependability. Finally, confirmability was achieved through an audit trail established from our journaling of notes taken during each open forum. Following these standards enhanced the rigor and trustworthiness of the data and subsequent interpretations.

Findings

In all, 440 unique codes were identified (see Table 1). Of the seven forms of community capitals, residents mentioned built capital ($f = 175$) more than any other followed by human capital ($f = 92$). The total mentions of strengths and weaknesses were nearly equal ($f = 154$ and 157 , respectively). Moreover, community members mentioned relatively the same number of opportunities as they did threats ($f = 61$ and 68 , respectively).

Table 1

Frequency of Strengths, Weaknesses, Opportunities, and Threats by Community Capitals

Community Capitals	Strengths	Weaknesses	Opportunities	Threats	Total
Built	67	52	24	32	175
Human	30	40	13	9	92
Social	25	15	10	15	65
Financial	10	24	7	3	44
Natural	20	5	2	2	29
Cultural	1	18	2	4	25
Political	1	3	3	3	10
Total	154	157	61	68	440

Built Capital

The built capital of communities was the most frequently mentioned source of concern for their residents. Although there had been a few recent improvements in both counties' infrastructure, residents had numerous concerns. Three themes emerged in built capital: roads, water, and buildings. Specifically, a frequent complaint among residents was the poor condition of roads in the communities. Regarding roads, one resident stated, "I would like to see new things built, especially new roads." This finding aligned with researcher notes. While driving through the various towns in these two counties, it was obvious that the roads were in major need of repair, with most roads riddled with substantial potholes.

Water infrastructure was another major theme that emerged in the built capital category. One resident stated: “We need to rebuild our physical infrastructure, specifically sewer and drainage.” Another stated gravely: “Our drinking water is not suitable for children under six months old.” Numerous public notices hung on storefronts in one focus town warned residents that pregnant women and infants should not drink the water due to its high nitrate levels.

Buildings and housing also were major concerns, both the lack of housing and the poor condition of existing homes and commercial buildings. Although local civic groups had achieved some cosmetic improvements in downtown areas, many residents desired further improvements to buildings. “What can we do with all the dilapidated homes? No money to haul off [contaminated refuse]. Can’t buy them. We need a solution!” explained one resident emphatically. Another community member asked, “How do we address fallen down homes legally?” Demolishing such structures was deemed infeasible due to uncooperative or absentee owners, restrictive environmental regulations, and high costs. Residents perceived improvements to built capital would enhance the community’s attractiveness to new businesses and residents.

On the other hand, each community had its share of historic sites, which were identified as strengths by residents. Numerous residents mentioned their admiration for their local museums and theaters. In addition, community members referenced with pride the new benches, trees, and paint that had been recently added to improve their downtown areas. “New trees were planted on Broadway as part of the Broadway Initiative Cleanup,” said one proud resident. Another added: “Fourteen facades [i.e., store fronts] were improved in downtown.” Such improvements were perceived as a source of optimism and pride for the entire community.

The topic of high-speed internet emerged as an opportunity for improvement in both counties. Most notably, residents recognized the need to increase educational access as well as opportunities for people to work remotely. One resident claimed, “Free public internet access would allow for distance learning,” which could open venues for all residents. Participants were also hopeful that additional opportunities for recreation, specifically for youth, might be created in their communities. They were especially interested in creating a walking trail or fitness area and developing community meeting spaces. One resident stated: “We need reasons for people to stay here. We need places that entertain youth [such as] arcades, movies, sports, coffee house, etc.” Another asked pointedly, “Why isn’t [sic.] there more things available for our youth to do?”

Residents acknowledged threats to their optimism. The recently closed hospital was a point of concern for residents in one of the focus counties. Although many were interested in reviving it, others wanted to see the building repurposed and used in a different way. During the discussion, one participant asked if it might be “possible to convert the closed hospital to a cancer or diabetes facility.” In general, the revitalization of buildings, schools, and housing were

a high priority for several residents. One stated, “I hope we begin to invest in our infrastructure to ensure opportunities in the future.”

Human Capital

Healthcare, education, and employment were frequent discussion topics among the residents of these rural communities. Access and improvement to healthcare were deemed as opportunities in both counties. A strong desire exists to have access to an emergency room or urgent care facility in their counties. Participants advocated for mental health services, equitable access, and improved health care options. Residents were equally optimistic and concerned about education. A new library, involvement in the area Career Tech center, and recent achievements in competitive robotics teams were some highlights. However, stabilizing the statewide education system, creating more diverse education opportunities for youth, and attracting high-quality educators were concerns for participants. In addition, residents noted that there were limited opportunities for educated people to find employment and too few people to fill current job openings, particularly for farm labor. One resident stated:

“Competitive wages are needed to keep current residents [from leaving the community].” What is more, the community identified a lack of childcare, after school care, and elderly care, as well as their ability to retain youth in the community. “We have high achieving students, but most leave for ‘greener pastures,’” explained one resident. Another suggested the need to find ways “to change the atmosphere for young adults so they can see hope.” Residents spoke about the strengths of their communities being high-quality schools, including students, faculty, and new teaching hires. One resident stated pointedly: “Our biggest and best natural resource is our people.” Another added, “[The] system has been the highlight [of our community] the last ten years, with more improvement and things to brag about happening every year.”

Social Capital

Social capital was perceived by participants as a major strength of their communities. Specifically, residents were enthused about the recent successes of high school athletic teams, revived community events and organizations, and local 4-H and FFA programs. Despite these strengths, many participants had questions about access to community assets and the current poverty levels in their counties. One resident asked, “How can we better integrate our community racially [and] economically?” Another participant inquired, “How do we raise those in poverty to a higher quality of life?” Racial inequality also showed up as a threat for residents, and some expressed concern about the perceived high number of illegal and undocumented immigrants. One participant shared his frustration with the naturalization process: “We have a high population of illegal immigrants. Can we develop a program to speed up the legal process?” Another mentioned offering up open-access English classes for this population.

Opportunities included sustaining community offerings, retaining the population, and providing drug counseling for residents in their counties. One resident stated, “My goal for my community in the next ten years is to keep people and assets in our community.” Communities were anxious to create an opportunity to celebrate the community itself, continue the work of community advocacy organizations, and increase the attractiveness of the community to outsiders. One resident stated, “We need to develop a plan to celebrate the community itself.”

Financial Capital

Residents desired to attract more businesses, develop existing businesses, and grow the local economy. Several residents were interested in diversifying community income sources beyond city sales taxes. Residents were curious about optimizing their local resources. One asked, “How do we sell what we have? Energy? People? Retirement location? Mesquite?” Some mentioned repurposing old buildings into new businesses as an opportunity, but others quickly mentioned the lack of financial capital necessary to do so. Another weakness was identified as their community having extreme inequality in socio-economic status. A person stated: “We lack a middle class [because] it is difficult to attract new industries and businesses to our community.” Utility costs were also mentioned as being prohibitive to new business startups.

The threats to financial capital identified by residents included their apprehension about the state government’s willingness to continue to provide equitable funding to rural areas. Another threat to the financial stability of the counties involved the death of its residents. In many cases, their wealth left the community by being transferred to family members who no longer lived in the area, further depleting the counties’ financial resources. Finally, residents boasted about a factory that had moved into the community a few years ago. They admitted that it provided numerous jobs, which equated to financial capital for the county; however, they were concerned about losing the business and the effect it would have on the community long term if they did.

Natural Capital

Participants indicated innovations in agriculture, such as drip irrigation, were strengths of their communities. One resident stated, “We have had blessed crops through intensive crop management.” Another added that the current cotton crop was the “largest . . . of all time.” Although cotton production was deemed to be a strength by many in the audience, residents also recognized opportunities exist for improving cotton ginning procedures for cleaner air quality. “On windy days, air quality is really low,” explained one resident. Additionally, one resident admitted, “I’d like to learn how to improve my crop management practices.” Another advocated for improving the county’s dairy operations. At the time of data collection, the growth and sale of medical marijuana had been recently legalized in Oklahoma. This was perceived as both positive and negative by community members. Although it was an exciting potential revenue stream, it created concern for residents regarding water and energy conservation. “It will be interesting to see how medical marijuana affects us all long-term,” said one concerned resident. Many feared that the heavy use of irrigation water for medical marijuana could negatively affect their ability to water their cotton regularly. “Using our natural resources, like water, effectively will be even more important in the future,” voiced one concerned farmer. In addition to water use, residents also had concerns about the effect agricultural practices, such as applying nitrogen fertilizer to the soil, may have on their long-term health. “How does that use affect water sources and overall water quality in the area, and moreover, how does it affect our health?” asked one resident. Residents were hopeful natural resources could continue to be used responsibly and that the next generation of farmers could develop new procedures through adequate mentorship and education. One established farmer

stated: “Let’s cultivate the next generation of farmers and ranchers by transitioning land, capital, and knowledge through mentorship opportunities.”

Cultural Capital

Although cultural capital was the least commonly mentioned capital, it was also a point of disagreement for residents. For example, one resident stated emphatically that the strength of the community revolved around the recent shift in overall, progressive attitudes of community members. However, others contradicted that view by stating that there was a major lack of hope, motivation, and community pride. Therefore, the cultural capital was deemed a major weakness of the community by those residents. Said one individual: “This area has been driven into the ground by a ruling class. Zero attention has been given to investing in the future. Why are we surprised by what we look around and see today?” However, residents did not debate the strength of their churches in the community. They were quick to point out the strong working relationship of the ministerial team of preachers at each church in their counties, especially as it relates to their synergy for attending to specific community needs, like serving at the local foodbank. Residents admitted to wanting to provide a better quality of life and vision for their communities. One resident stated: “I feel a lot of people have lost pride in [these small towns]. If we can get the community back together, I think that would be a great start.”

Political Capital

Like cultural capital, political capital was infrequently mentioned by residents. Residents identified the safety of their communities as its greatest strength relative to political capital. Some, however, hinted that a lack of highly educated, progressive leaders working in city and county governance was their greatest weakness. One resident posed the question: “Do we need [more] forward-thinking council members?” Another responded rhetorically: “Are we willing to move into uncharted territory?” These questions seemed to be met with unresolved silence. However, residents agreed their communities lacked effective representation at the state level. The enforcement of current, and implementation of new, city regulations were identified as opportunities for the communities. One resident said, “Policy changes that impact the overall aesthetics of the community, such as required lawn care, leash laws, and a maximum number of household pets would benefit our community.” Another opportunity identified was to create different regulations for rural places as compared to urban sectors. “Having more laxer [sic] regulations may be something to bring businesses to our rural community,” stated one resident.

Conclusions, Discussion, and Recommendations

It was clear that residents from both counties recognized numerous assets present in their communities. Interestingly, residents noted an equal number of strengths and weaknesses present in their counties. Of the 440 statements that emerged through the data, 35% were deemed strengths and 36% were deemed weaknesses. Of those, residents listed built capital most frequently. These two focus counties suffer from severely dilapidated infrastructure that is in major need of revitalization. Opportunities ($f = 61$) received the fewest statements,

followed by threats ($f = 68$), accounting for 14% and 16% of the total statements submitted, respectively. Built capital received the most statements of the four. Unfortunately, the built capital has deteriorated to a point that it is prohibitively expensive to repair. Specifically, many of the buildings and storefronts include walls and ceilings that have crumbled and fallen. All that remains is a frontage facade. Yet, due to cost, ownership issues, and environmental regulations, residents cannot repair or deconstruct the remains, leaving them to face the ghosts of their past as they drive through their town. In addition to built capital, residents were also highly concerned with the financial capital in their counties. This conclusion is congruent with former research related to built and financial capital being the lowest among those measured in the CCF (Borron et al., 2020).

Human capital was the second most frequently mentioned theme. It was concluded that residents believe the best part of living in their rural counties is their neighbors. They frequently mentioned people as the greatest asset to their communities. Their biggest concerns are losing youth once they leave for college and having adequate health care facilities. They are proud of their school systems, teachers, and administration. The school system plays a central role in keeping these community alive, functioning, and hopeful for a better future.

Residents realized farming is the staple of the economy in their counties. However, farming practices have contributed to an unsafe supply of drinking water due to high nitrate concentrations and occasionally a poor quality of air from ginning cotton and tilling the soil. It is possible these practices might contribute to the demise of the overall community capital (Crowe, 2006; Renkow, 2003) and lead to an overall lower quality of life (Rodríguez-Pose & Hardy, 2015) in these two counties. If so, it is incumbent on the local leadership to identify or develop other, more positive contributors to community capital and the overall wellbeing of its residents. We recommend community leaders create a strategic vision for their communities that empowers all residents (Aigner et al., 2001; Flora et al., 2005) by focusing on their communities' inherent strengths rather than their deficiencies (Bertin et al., 2014; Rivera & Alex, 2007). Leaders in the two target communities should rally their residents around the needs identified in this study and create a plan for empowering them to plan out and serve on committees to address the weaknesses and threats identified. In addition, leaders should engage the youth in their communities in civic engagement and leadership training and empower them to help make decisions related to improving the long-term hope and viability of their towns, especially since these communities are concerned about their youth leaving. With strong local leadership (Lamm et al., 2017), perhaps human and cultural capital can be used in tandem to solve many of the existing problems voiced during the open forums. We also recommend additional research and development in these two communities to close the gap on the weaker capitals in the community, such as built and financial capitals (Emery & Flora, 2006). Finally, we recommend replicating this study in other rural, farming-dependent counties in Oklahoma and across the U.S. to determine if the strengths and deficiencies recognized here are congruent with other, similar communities. If so, coalitions should be formed with local communities and land-grant universities to help address these pressing needs.

Acknowledgements

A. E. H. King – formal analysis, writing-original draft; **J. S. Robinson** – formal analysis, investigation, writing-original draft; **T. E. Ochsner** – investigation, writing-review and editing; **P. Weckler** – investigation; **M. Woodring** – investigation

Funding for this project was provided by RRI, one of the Tier 1 research initiatives supported by the Office of the Vice President for Research at Oklahoma State University. We also wish to thank the citizens living in the two target counties who participated in this study, and the County Extension educators who work there.

References

- Aigner, S. M., Flora, C. B., & Hernandez, J. M. (2001). The premise and promise of citizenship and civil society for renewing democracies and empowering sustainable communities. *Sociological Inquiry*, 71(4), 493–507. <https://doi.org/10.1111/j.1475-682X.2001.tb01129.x>
- Argent, N. (2020). The little island that did: Related variety, branding and place-based development in South Australia. *Journal of Rural and Community Development*, 15(4), 175–197. <https://journals.brandonu.ca/jrcd/article/view/1851/435>
- Beach, S. S., & Kulcsár, L. J. (2015). It often takes two income earners to raise a farm: On-farm and off-farm employment in Kansas. *Journal of Rural and Community Development*, 10(4), 54–74. <https://journals.brandonu.ca/jrcd/article/view/1139/288>
- Bertin, T., Zacharie, T., Ann, D., Ebenezar, A., & Alain, T. (2014). Scaling-up sustainable land management practices through the concept of the rural resource centre: Reconciling farmers' interests with research agendas. *The Journal of Agricultural Education and Extension*, 20(5), 463–483. <https://doi.org/10.1080/1389224X.2014.913984>
- Borron, A., Lamm, K. W., & Atkins, K. (2020). The development and validation of a personal agency scale based in the community capitals framework. *Journal of International Agricultural and Extension Education*, 27(3), 43–58. <https://doi.org/10.4148/2831-5960.1096>
- Chambers, R. (1981). Rapid rural appraisal: Rationale and repertoire. *Public Administration and Development*, 1, 95–106. <https://doi.org/10.1002/pad.4230010202>
- Chambers, R., & Conway, G. (1992). *Sustainable rural livelihoods: Practical concepts for the 21st century*. Institute of Development Studies (UK). <https://www.ids.ac.uk/publications/sustainable-rural-livelihoods-practical-concepts-for-the-21st-century/>

- Crawford, I. M. (1997). *Marketing research and information systems*. Food and Agriculture Organization of the United Nations. <https://www.fao.org/3/w3241e/w3241e00.htm>
- Crowe, J. A. (2006). Community economic development strategies in rural Washington: Toward a synthesis of natural and social capital. *Rural Sociology*, 71(4), 573–596. <https://doi.org/10.1526/003601106781262043>
- Emery, M., & Flora, C. (2006). Spiraling-up: Mapping community transformation with community capitals framework. *Community Development*, 37(1), 19–35. <https://doi.org/10.1080/15575330609490152>
- Flora, C. B., Emery, M., Fey, S., & Bregendahl, C. (2005). *Community capitals: A tool for evaluating strategic interventions and projects*. North Central Regional Center for Rural Development. <http://winnemuccafutures.com/blog1/wp-content/uploads/2010/05/7-capitalshandout.pdf>
- Glaser, B. G. (1965). The constant comparative method of qualitative analysis. *Social Problems*, 12(4), 436–445. <https://doi.org/10.2307/798843>
- Gutierrez-Montes, I., Emery, M., & Fernandez-Baca, E. (2009). The sustainable livelihoods approach and the community capitals framework: The importance of system-level approaches to community change efforts. *Community Development*, 40(2), 106–113. <https://doi.org/10.1080/15575330903011785>
- Johnson, K. M. (2012). Rural demographic change in the new century: Slower growth, increased diversity. *Carsey Institute*, (44), 1-12. <https://scholars.unh.edu/carsey/159>
- Lamm, K. W., Carter, H. S., Lamm, A. J., & Lindsey, A. B. (2017). Community leadership: A theory-based model. *Journal of Leadership Education*, 16(3), 118–133. https://journalofleadershiped.org/wp-content/uploads/2019/02/16_3_Lamm.pdf
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.
- Pigg, K., Gasteyer, S. P., Martin, K. E., Keating, K., & Apaliyah, G. P. (2013). The community capital framework: An empirical examination of internal relationships. *Community Development*, 44(4), 492–502. <https://doi.org/10.1080/15575330.2013.814698>
- Renkow, M. (2003). Employment growth, worker mobility, and rural economic development. *American Journal of Agricultural Economics*, 85(2), 503–513. <https://doi.org/10.1111/1467-8276.00137>

- Rivera, W. M., & Alex, G. (2007). Extension system reform and the challenges ahead. *The Journal of Agricultural Education and Extension*, 10(1), 23–36.
<https://doi.org/10.1080/13892240485300051>
- Rodríguez-Pose, A., & Hardy, D. (2015). Addressing poverty and inequality in the rural economy from a global perspective. *Applied Geography*, 61, 11–23.
<https://doi.org/10.1016/j.apgeog.2015.02.005>
- Scoones, I. (1998). *Sustainable rural livelihoods: A framework for analysis*. Institute of Development Studies (UK).
<https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/3390>
- Tisenkopfs, T., Kunda, I., Šūmane, S., Brunori, G., Klerkx, L., & Moschitz, H. (2015). Learning and innovation in agriculture and rural development: The use of the concepts of boundary work and boundary objects. *The Journal of Agricultural Education and Extension*, 21(1), 13–33. <https://doi.org/10.1080/1389224X.2014.991115>
- U.S. Census. (2016). *Geography area series: County business patterns by employment size class and legal form organization: 2016*. Annual Economic Surveys.
<https://www.census.gov/programs-surveys/cbp.html>
- United States Department of Agriculture, Economic Research Service. (2017). *2015 county typology codes: Documentation*. <https://www.ers.usda.gov/data-products/county-typology-codes/>
- United States Department of Agriculture, Economic Research Service. (2021). *USDA Economic Research Service: State fact sheets*.
<https://data.ers.usda.gov/reports.aspx?StateFIPS=40&StateName=Oklahoma&ID=17854>

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