

Responses to Task Force Inquiries and Some Economic “Strawmen” as Examples of Rural Economic Development Analysis

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Rural Economic Opportunities Task Force
Fort Bayard, NM
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Responses

In our last meeting I was asked

- What is the status of the state meat-inspection program?
- How is the university/college assisting rural communities in economic development?

Responses

What is the status of the state meat-inspection program?

- The New Mexico Livestock Board is managing the state inspection program
- The Board has moved forward on adopting the basic rules (governed by USDA FSIS).
- The Board has hired a director

Belinda Garland
Executive Director
New Mexico Livestock Board

- The process of having state certification will take some time (a year for basic setup, several years to have “equal to” status).

Jonathan Coleman
USDA Food Safety and Inspection Service
Federal-State Audit Branch

Responses

How is the university/college assisting rural communities in economic development?





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ACES Impacts

The College of ACES positively affects the health, economy, and environment of New Mexicans. See the following stories that illustrate the College's Impact.



Food & Fiber Production and Marketing

This Pillar addresses the production, protection, and marketing of plant and animal products. College of ACES faculty and staff foster technological innovation to enhance competitiveness and security of New Mexico agriculture, and increase value-added in the state.



Water Use and Conservation

Water is the most limiting resource for New Mexico. All aspects of water use affect agricultural efficiency, profitability, and human health. Water management will become more critical as water demands for urbanization and industrialization increase.



Family Development and Health of New Mexicans

The family is the fundamental institution of society. The College of ACES conducts research on human behavior, child and adolescent development, human nutrition and food science, clothing and textiles, and family resource management. The College's research and Extension programs on human nutrition and wellness are aimed at keeping people from getting sick, and might be considered "preventive medicine" programs.



Environmental Stewardship

Rural and urban human activities affect land, water, and air. Through teaching, research, and Extension programs, the College of ACES is committed to further our understanding, using science-based knowledge, of human impacts on the environment, and to support environmentally-sound agricultural and natural resource practices.

ACES Pillars for Economic and Community Development

Food and Fiber Production and Marketing

Water Use and Conservation

Family Development and Health of New Mexicans

Environmental Stewardship

Foundational Education and Training

Responses

Impact examples

Real-Time GPS Tracking For Livestock Grazing Rangelands

On rural New Mexico rangelands, it is difficult and time-consuming to regularly observe livestock and assess health and well-being. Real-time GPS tracking and sensor data can potentially remotely detect welfare issues for livestock grazing rangelands. Ongoing research at NMSU shows that accelerometers have the potential to detect illness and identify water system failures by monitoring changes in cattle behavior. When developed, these could be a tool to help reduce rancher's labor costs and potentially reduce time to respond to health and well-being issues in cattle.

Derek Bailey - ANRS

Responses

Impact examples

Dietary Nutrients And Amino Acids For Calf Health And Performance

Bovine Respiratory Disease (BRD) is a significant health concern in the cattle industry, affecting more than 20% of cattle and costing the US beef industry more than \$600 million per year. Typically, metaphylactic antibiotic use is employed to prevent feedlot calves from succumbing to BRD. However, consumer pressure to minimize antibiotic use in food-producing animals demands exploration of alternative strategies to prevent BRD and improve animal health. An NMSU researcher is studying to find if nutritional strategies utilizing specific nutraceuticals can be developed to increase immunity and reduce BRD in cattle by 5% annually; this could save the US beef industry more than \$30 million annually.

Clint Loest - ANRS

Responses

Impact examples

Promoting Soil Moisture Sensors And Adopting Deficit Irrigation Strategies

Promoting soil moisture sensors and adopting deficit irrigation strategies could help to irrigate an additional 20-25% of land. Conservation agriculture targeting limited irrigation strategies improves crop water productivity across the Southwestern US. NMSU preliminary results show a water saving of about 25% of seasonal irrigation amount while maintaining crop yield. The extrapolation of this study into the farmers' field targeting the Navajo Agricultural Product Industry (NAPI) with more than 72,000 acres developed, could help in increasing the actual capacity to irrigate additional 15,000-18,000 acres of the 35,000 acres that can be potentially developed by NAPI. Soil moisture sensors help optimizing irrigation management and improving water conservation.

Koffi Djaman - PES

Responses

Impact examples

Retiree Impact On New Mexico's Economy

New Mexico's economic development stakeholders continuously investigate opportunities to strengthen the state's economy and improve the lives of New Mexicans. One economic development strategy that has received attention recently is that of attracting retirees to the state. One way some development organizations are increasing the attractiveness of a geographic location for retirees is through the creation of Certified Retirement Communities. Research conducted by faculty in NMSU's Extension Economics Department provides insights and guidelines relative to the development and management of Certified Retirement Communities. If successful, retirement communities can significantly increase retiree attraction, resulting in increased fiscal and economic benefits to the state.

Jay Lillywhite - AEAB

Strawmen

Normally we think of strawmen as a “weak or imaginary opposition set up only to be easily confuted” (Merriam-Webster).

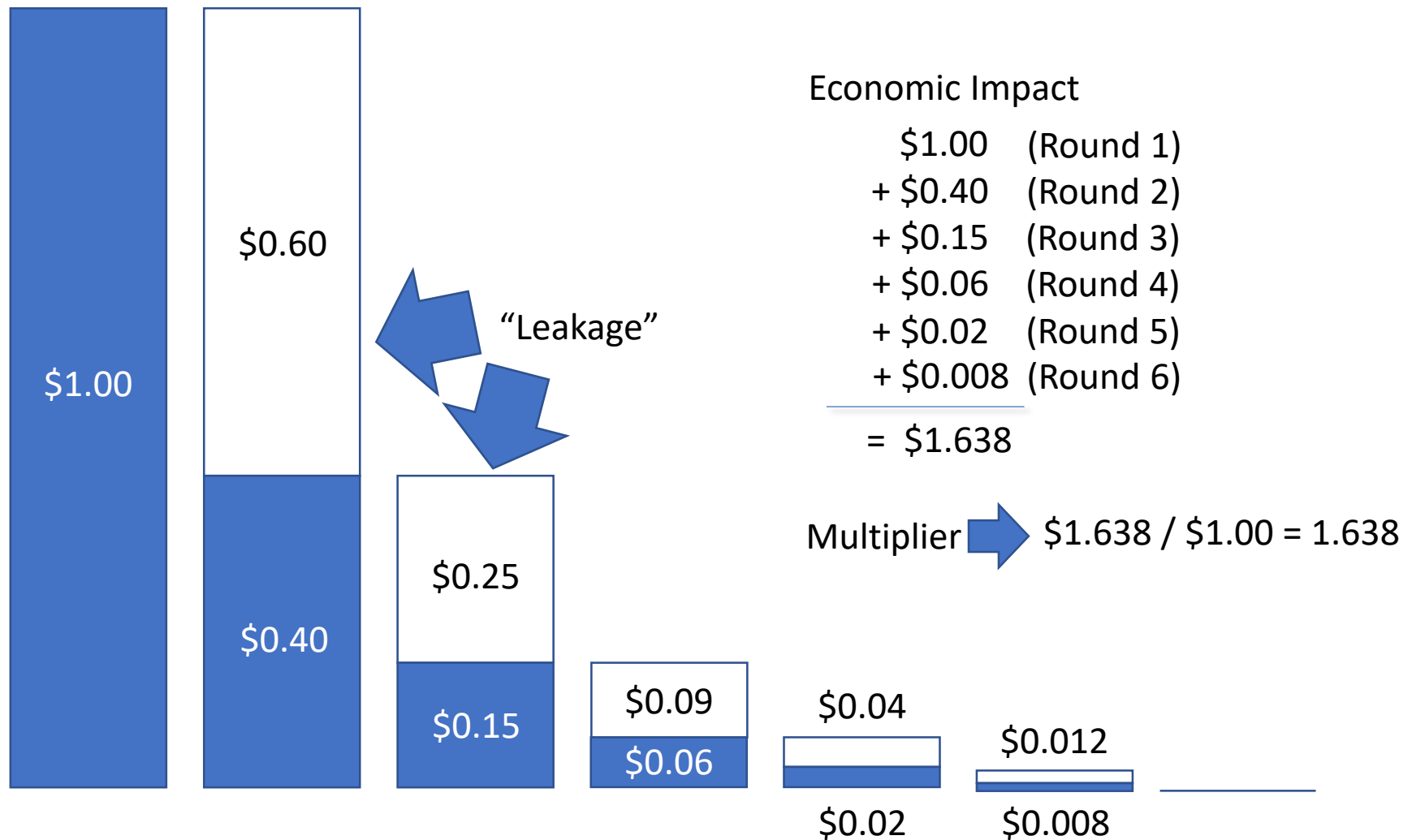
I won’t propose strawmen in this sense, but rather I will provide some examples of the potential economic impacts that could come from successful planning and implementation.

The economic impacts will be illustrated using IMPLAN. Before we get to specific examples, it is instructive to review the types of results you will see.

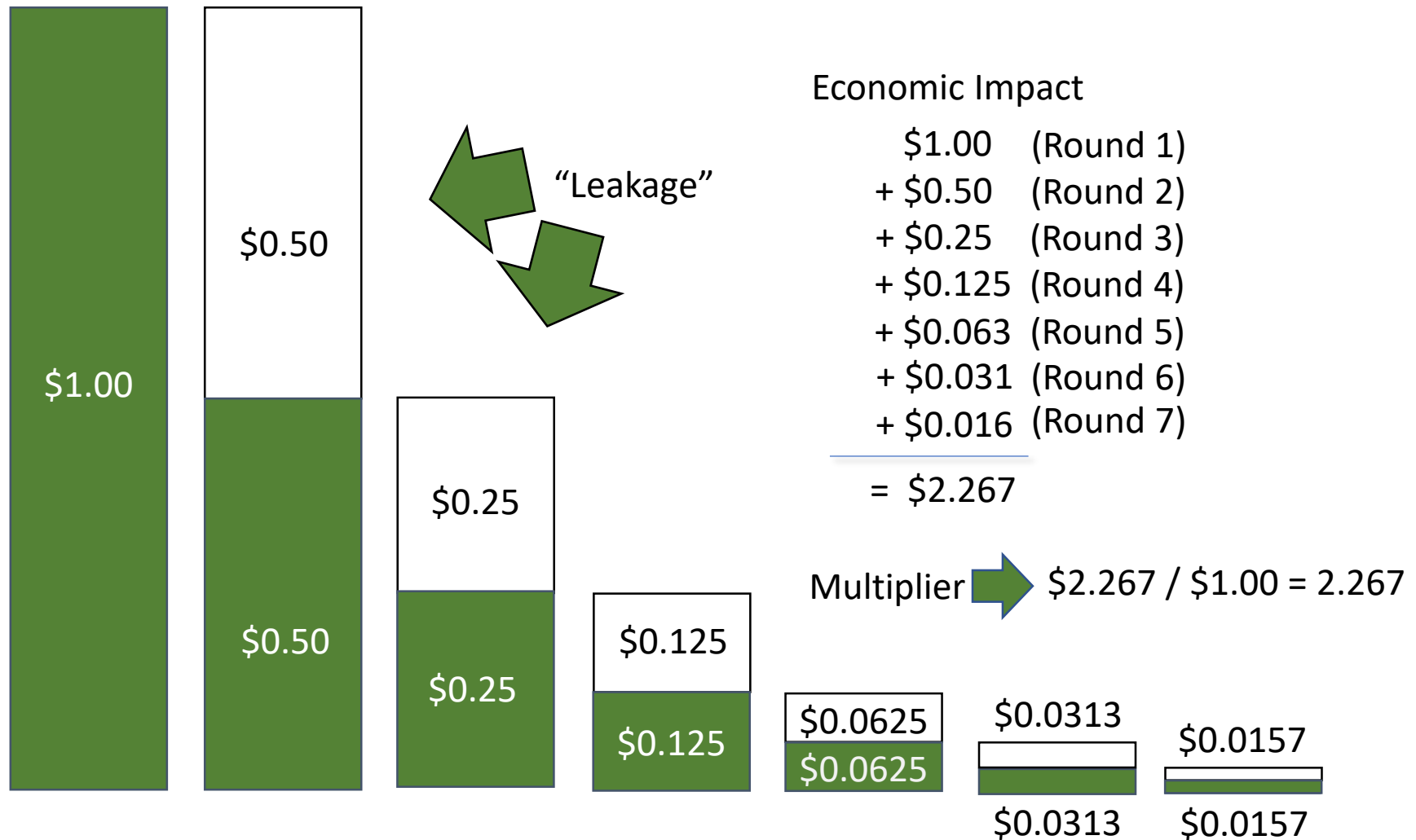
Input-Output Analysis

- Input-output analysis is commonly used to estimate economic impacts and has a long history of successful use.
- Terms include:
 - **Output** – The value of production (revenues + Inventory change)
 - **Value added** – Gross output less intermediate inputs (contribution to GDP)
 - **Labor Income** – Employee compensation + proprietor income
 - **Multiplier** – a measure of the economic impact to the larger economy via a direct effect
- Effect (impact) classifications include:
 - **Direct** – A change in industry expenditures
 - **Indirect** – Business-to-business purchases
 - **Induced** – Household spending from labor income

Factors impacting economic impact & multipliers



Factors impacting economic impact & multipliers



Hypothetical examples

The last grocery store in the region exists, requiring rural residents to travel to a nearby urban area.

Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	184	\$6,016,855	\$9,018,360	\$15,266,742
Indirect	21	\$717,963	\$1,377,795	\$3,295,306
Induced	19	\$639,252	\$1,428,635	\$2,503,458
	224	\$7,374,070	\$11,824,791	\$21,065,506

Grants County, NM (2022 values using 2020 economic structure)

Hypothetical examples

The last grocery store in the region exists, requiring rural residents to travel to a nearby urban area.

Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	184	\$6,851,360	\$9,018,360	\$15,266,742
Indirect	177	\$77,795	\$3,295,306	
Total	361	\$7,629,155	\$12,313,666	\$21,065,506

(2020 economic structure)

Numbers above are from an “industry contribution,” i.e., all grocery stores leave the county.

Hypothetical examples

The last grocery store in the region exists, requiring rural residents to travel to a nearby urban area.

Industries impacted

Industry Display	Employment			Total
	Direct	Indirect	Induced	
1 Food and beverage stores	184.47	0.00	0.00	184.47
2 Other real estate	0.00	5.90	0.48	6.39
3 Business support services	0.00	1.84	0.14	1.98
4 Management of companies and enterprises	0.00	0.98	0.19	1.16
5 Commercial machinery repair	0.00	0.96	0.06	1.02
6 Independent artists, writers, and performers	0.00	0.90	0.17	1.07
7 Services to buildings	0.00	0.81	0.09	0.90
8 Warehousing and storage	0.00	0.63	0.01	0.65
9 Accounting (bookkeeping, payroll, tax)	0.00	0.59	0.10	0.69
10 Employment services	0.00	0.58	0.17	0.75
⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮
Total	184.47	21.24	18.54	224.25

Grants County, NM (2022 values using 2020 economic structure)

Hypothetical examples

A trailer manufacturing business fails to locate to New Mexico because the community lacks basic infrastructure and services

Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	20	\$1,401,889	\$3,343,279	\$8,713,601
Indirect	7.62	\$416,269	\$703,256	\$1,538,260
Induced	7.48	\$337,791	\$635,545	\$1,122,325
	35.09	\$7,374,070	\$4,682,080	\$11,374,185

New Mexico (2022 values using 2020 economic structure)

Hypothetical examples

A trailer manufacturing business fails to locate to New Mexico because the community lacks basic infrastructure and services

Industries impacted

Industry Display	Employment			Total
	Direct	Indirect	Induced	
1Truck trailer manufacturing	20.00	0.00	0.00	20.00
2Motor vehicles, parts, and supplies	0.00	1.12	0.01	1.13
3Other durable goods merchant wholesalers	0.00	0.71	0.03	0.73
4Limited-service restaurants	0.00	0.08	0.50	0.58
5Motor vehicle and parts dealers	0.00	0.50	0.07	0.57
6Full-service restaurants	0.00	0.14	0.38	0.52
7Truck transportation	0.00	0.43	0.06	0.49
8 Other real estate	0.00	0.26	0.20	0.46
9Securities and commodity contracts	0.00	0.37	0.05	0.42
10Hospitals	0.00	0.00	0.41	0.41
⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮
Total	20.00	7.62	7.48	35.09

New Mexico (2022 values using 2020 economic structure)

Hypothetical examples

Attracting a retiree household to a rural community (Rio Arriba)

Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	.42	\$17,192	\$17,751	\$40,000
Indirect	.08	\$2,576	\$5,117	\$19,522
Induced	.21	\$8,354	\$16,062	\$29,417
	.72	\$28,122	\$38,930	\$79,939

Rio Arriba (2022 values using 2020 economic structure)

Hypothetical examples

Attracting a retiree household to a rural community (Rio Arriba)

Summary

Impact	Employment	Labor Income	Value Added	Output
Direct	.42	\$17,192	\$17,751	\$40,000
Indirect		\$5,117	\$5,117	\$19,522
Induced		\$6,062	\$6,062	\$29,417
Total		\$28,371	\$28,930	\$79,939

(Using 2020 economic structure)

Construction effect occurs only in the first year (during home construction).

Hypothetical examples

A trailer manufacturing business fails to locate to New Mexico because the community lacks basic infrastructure and services

Industries impacted

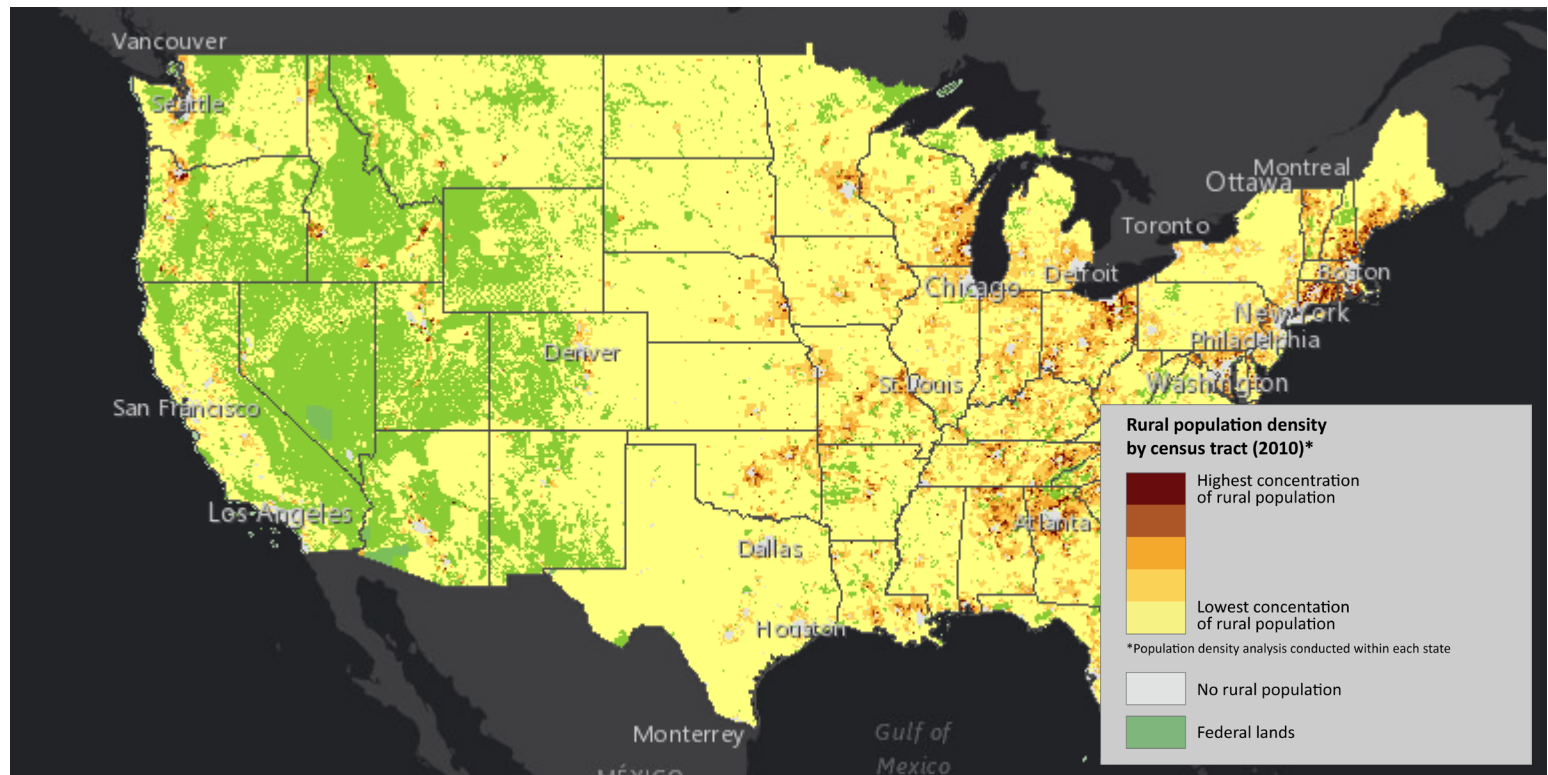
Industry Display	Employment			Total
	Direct	Indirect	Induced	
1 Construction of residential structures	0.42	0.00	0.00	0.42
2 Building and garden equipment stores	0.00	0.04	0.00	0.04
3 Limited-service restaurants	0.00	0.00	0.02	0.02
4 Individual and family services	0.00	0.00	0.02	0.02
5 Hospitals	0.00	0.00	0.02	0.02
6 General merchandise stores	0.00	0.00	0.01	0.01
7 Religious organizations	0.00	0.00	0.01	0.01
8 All other crop farming	0.00	0.01	0.00	0.01
9 Full-service restaurants	0.00	0.00	0.01	0.01
10 Outpatient care centers	0.00	0.00	0.01	0.01
⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮
Total	0.42	0.08	0.21	0.72

Rio Arriba (2022 values using 2020 economic structure)

A rural/tribal institute

Why a rural/tribal institute?

- New Mexico has a significant proportion of rural/tribal communities (ranked 30/50 in terms of non-urban %).



Source: U.S. Census Bureau

A rural/tribal institute

Why a rural/tribal institute?

- New Mexico has a significant proportion of rural/tribal communities (ranked 30/50 in terms of non-urban %).

New Mexico's rural-urban divide is getting deeper.

While the state grew by 58,343 people between 2010 and 2020, the influx occurred in more urban areas — at the same time more rural parts of the state saw their populations shrink, according to U.S. Census Bureau data released Thursday.

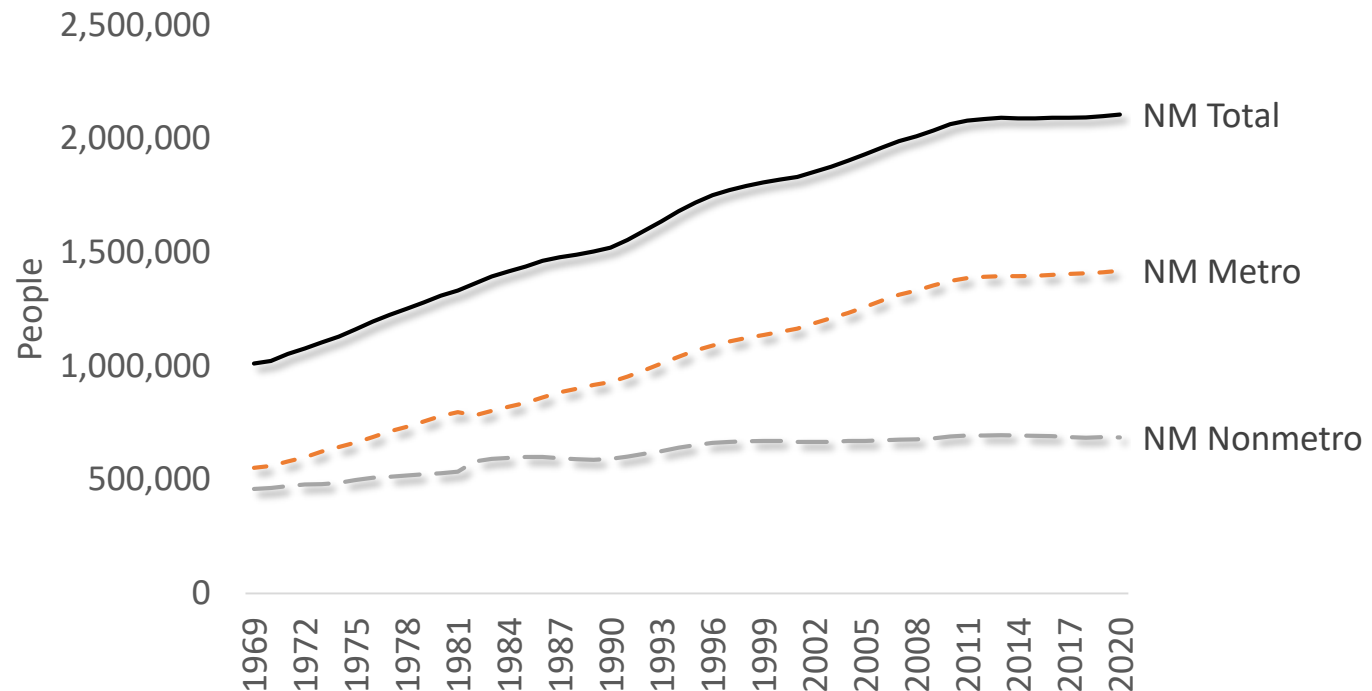
Twenty of New Mexico's 33 counties posted population declines during the 10-year period, the data shows. Though there were a few exceptions, it was rural New Mexico that experienced the biggest departure of residents, mirroring a nationwide trend as more people flock to cities to live and work.

Daniel J. Chacon "[Census: Rural New Mexico becoming more rural.](#)" Santa Fe New Mexican. September 17, 2022.

A rural/tribal institute

Why a rural/tribal institute?

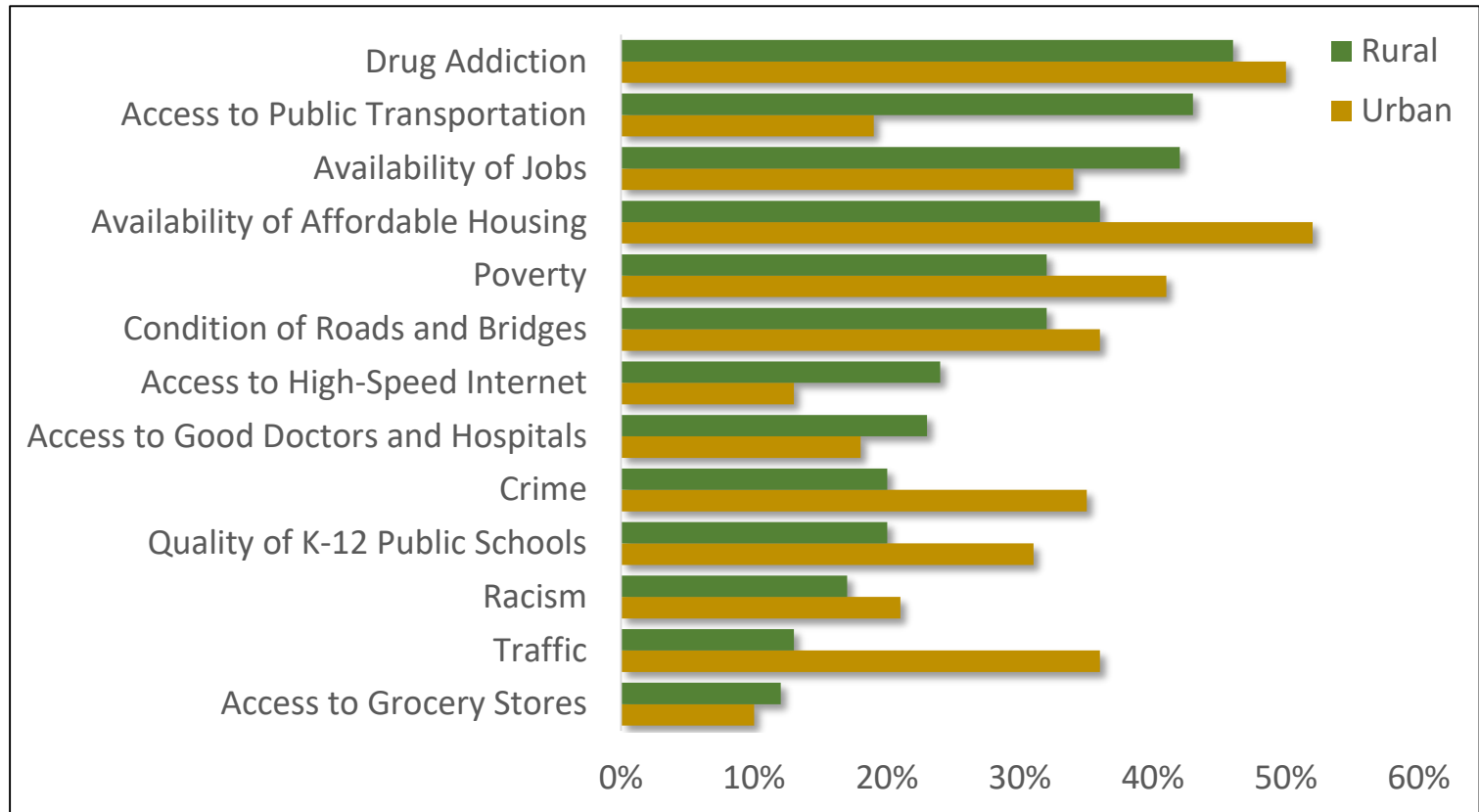
- New Mexico rural and tribal areas lag behind urban areas in terms of growth



A rural/tribal institute

Why a rural/tribal institute?

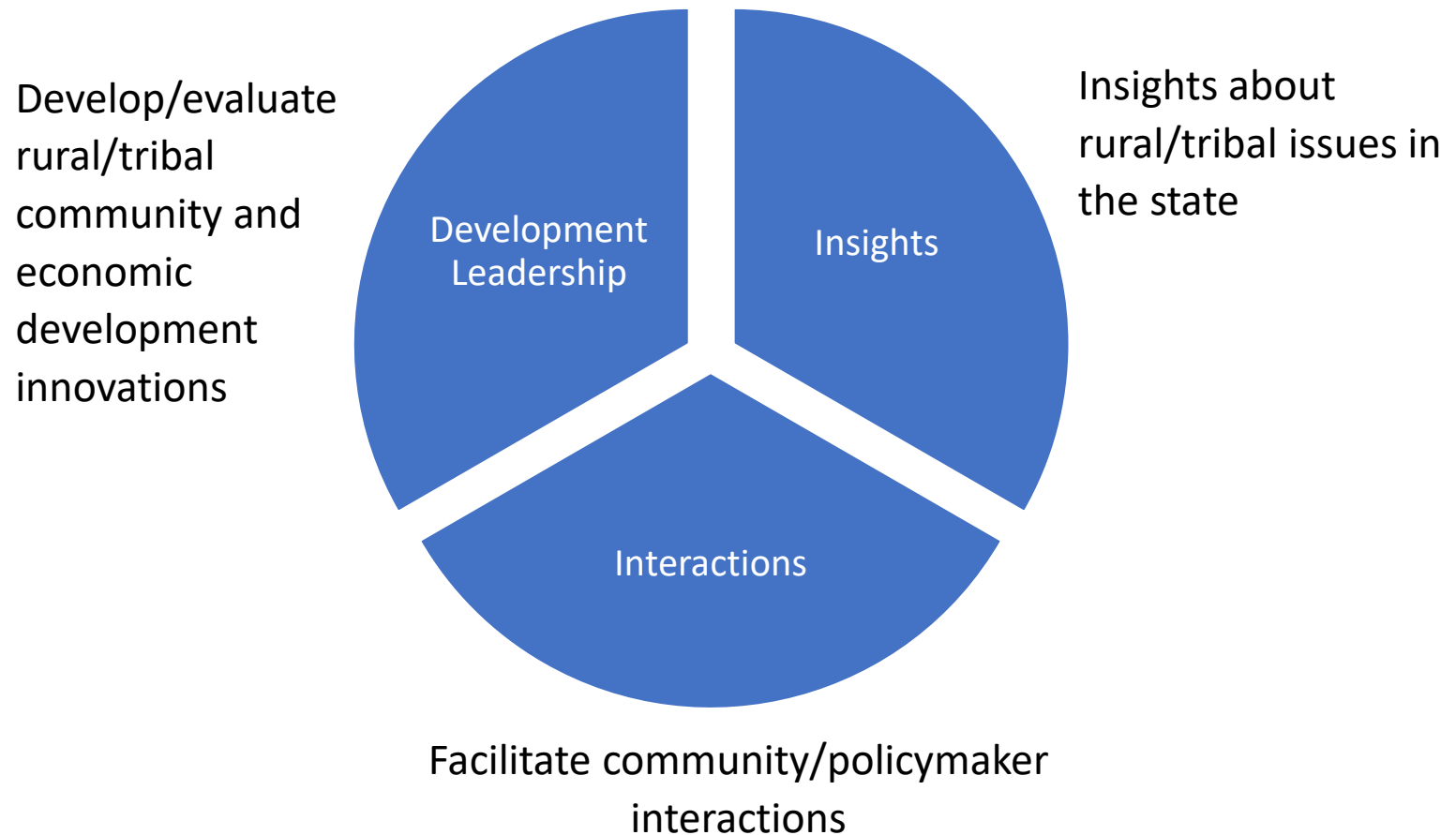
- Rural/tribal communities face different challenges



Parket et al., 2018 (Pew Research Center)

A rural/tribal institute

What could a rural/tribal institute offer?



A rural/tribal institute

What could a rural/tribal institute offer?

Information Examples

- A periodic rural-urban survey that highlights issues faced by New Mexico communities, with a focus on rural communities
- An online survey panel. Community members would agree to participate in surveys distributed by the institute promptly, allowing institute faculty and staff to address issues in a more timely manner
- A “community development index” that measures rural/tribal community economic and community development impacts
- Reports that highlight conditions faced by rural communities and potential solutions to solve rural inequalities

A rural/tribal institute

What could a rural/tribal institute offer?

Education/Interaction Examples

- A rural internship program where students can work with community leaders in solving real-world problems facing rural New Mexico communities.
- Training for community leaders (NM Edge, NMSU-Online certificates)
- Annual community forums (listening sessions) and a community policy symposium