

Regional Economic Development Forum

27 Oct 2025
Pueblo, CO

CSU Economic
Development Resources

REDI@CSU

Regional Economic Development Institute



COLORADO STATE UNIVERSITY

Colorado State University |
Engagement and Extension

What we do

Engaged research institute

- aims to understand, analyze and inform economic development strategies
- focus on underserved regions and populations in Colorado



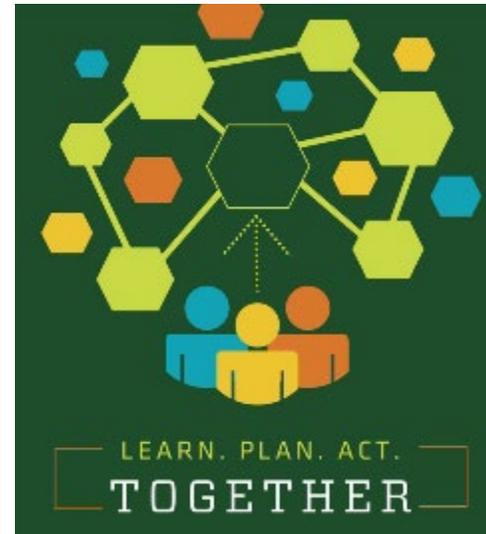
What we do

Engaged research institute

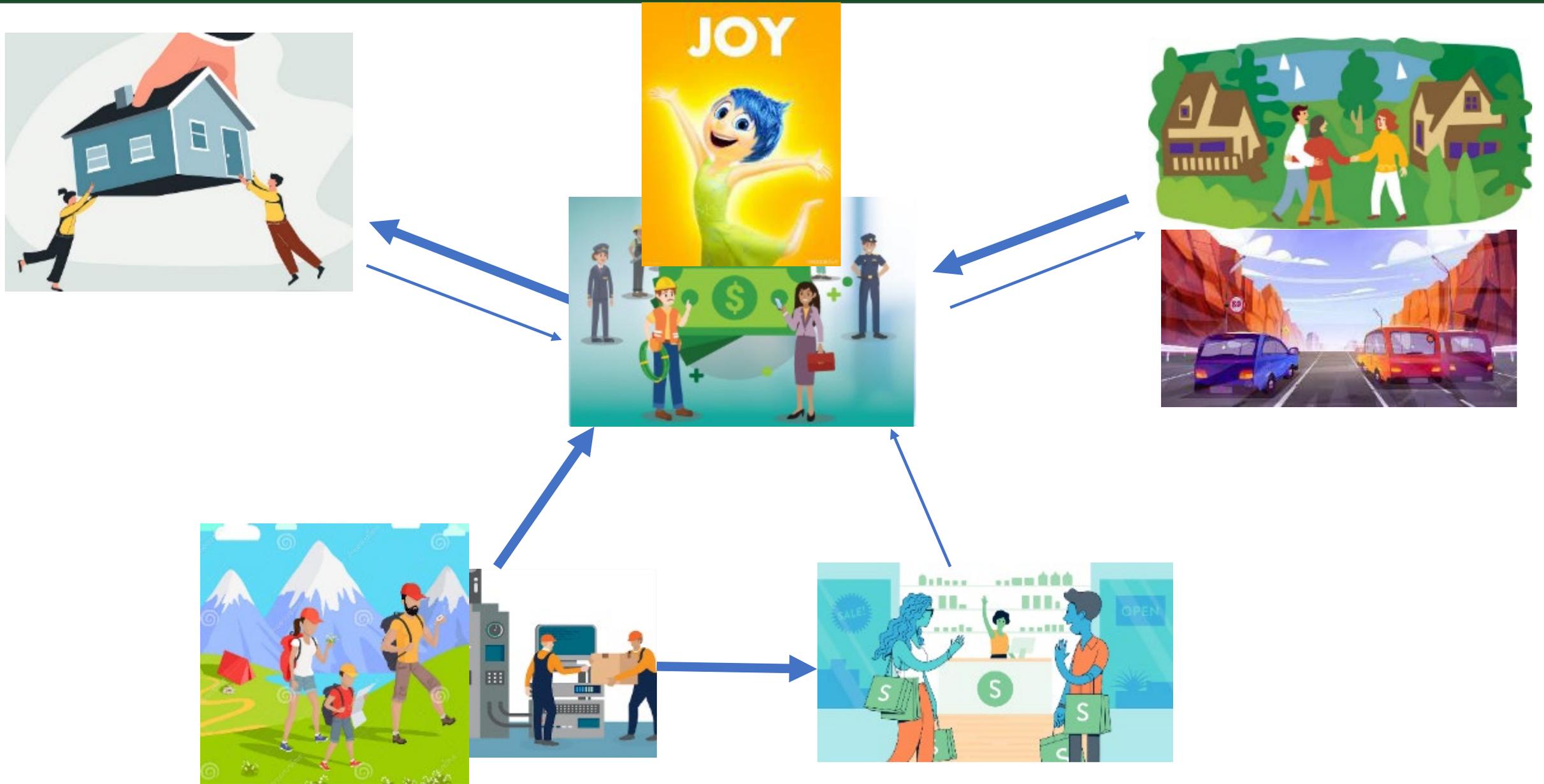
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Engaged Centers Collaborative

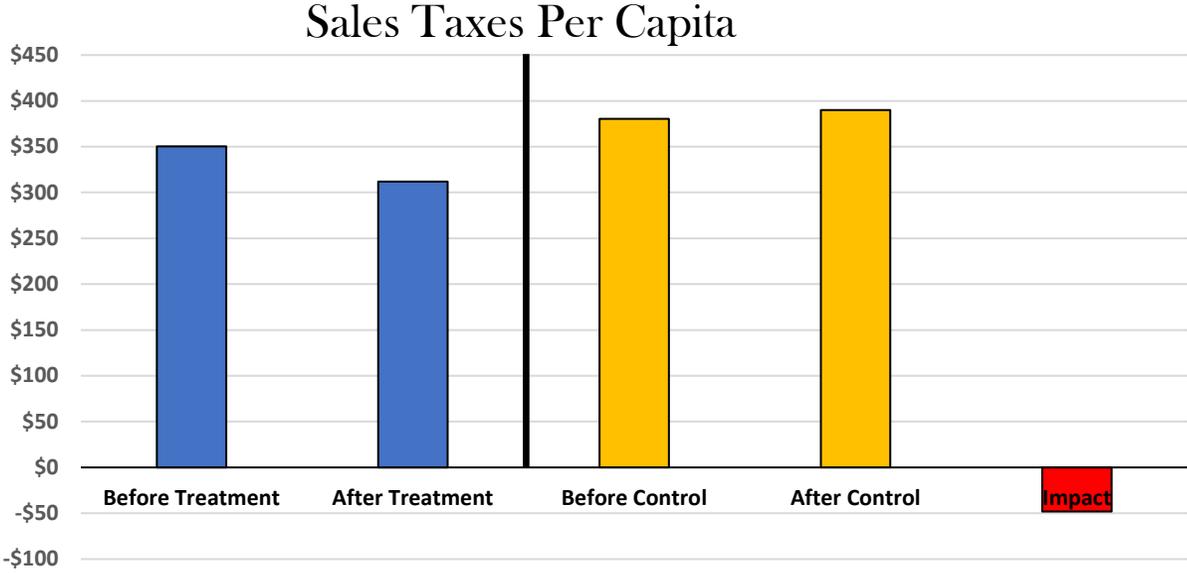
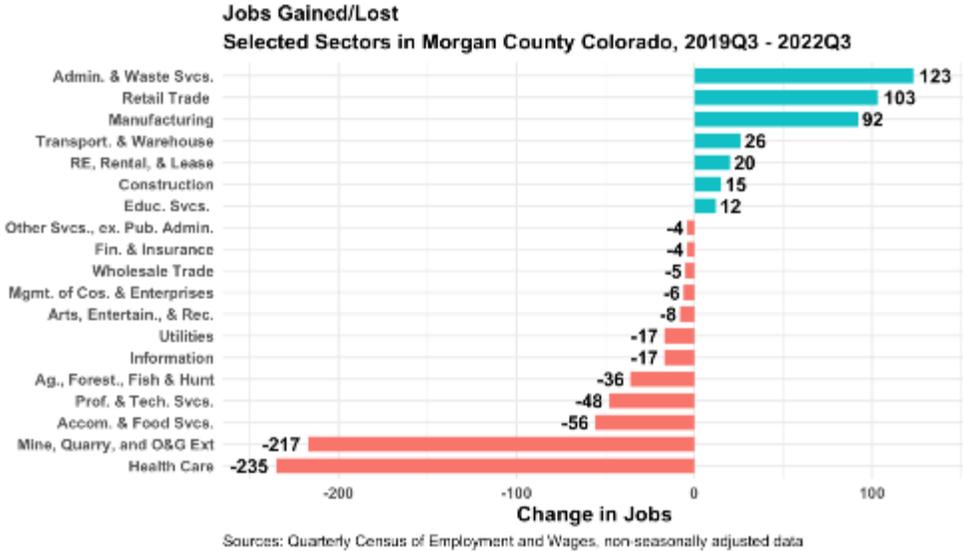
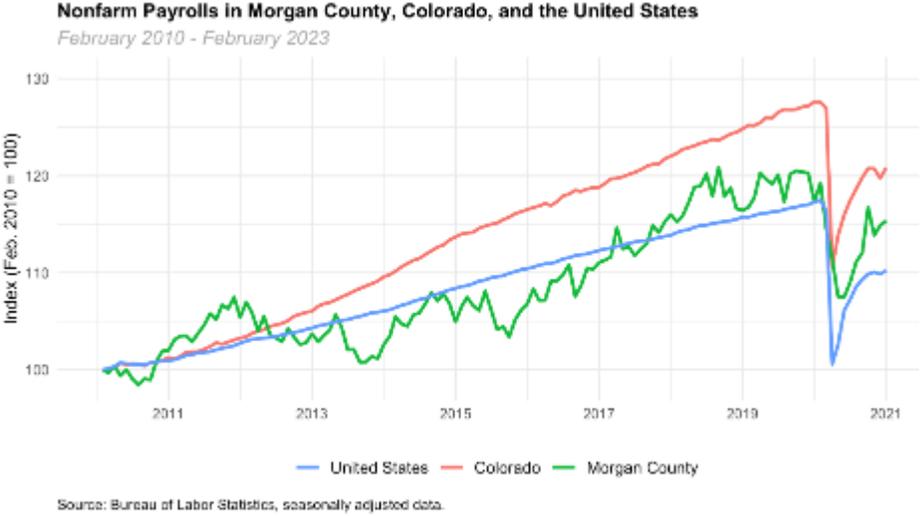


Economic Model and Research



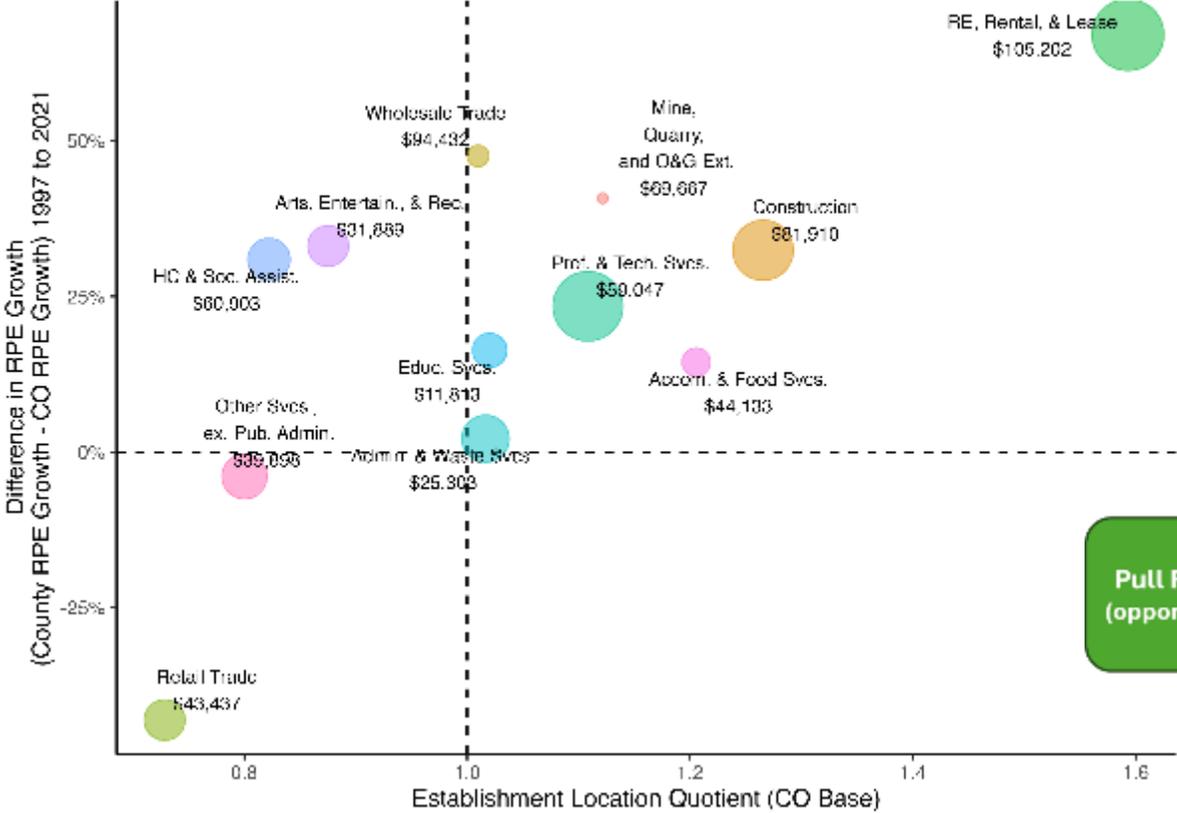
Data and Economic Communication

I-70 Floyd Hill Project

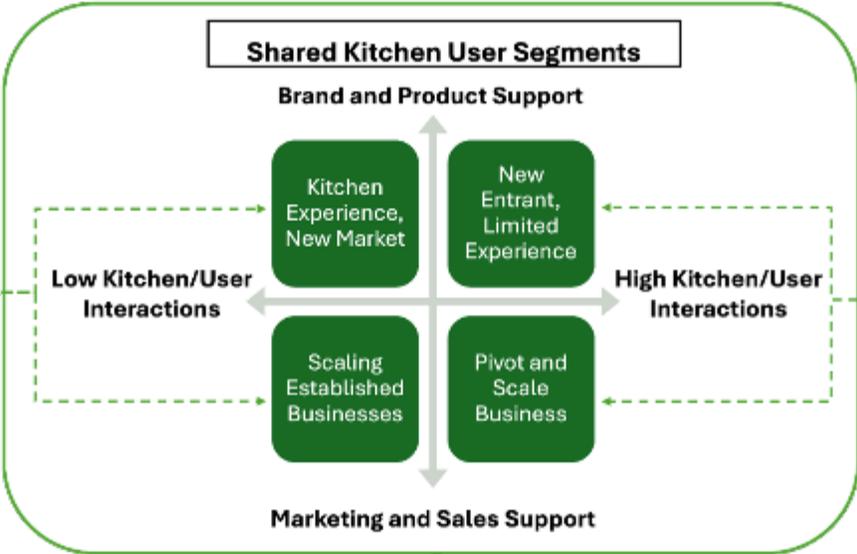


Cluster Analysis

Routt County to CO Non-Employer Statistics
Receipts/Establishment Growth vs. Location Quotient Matrix

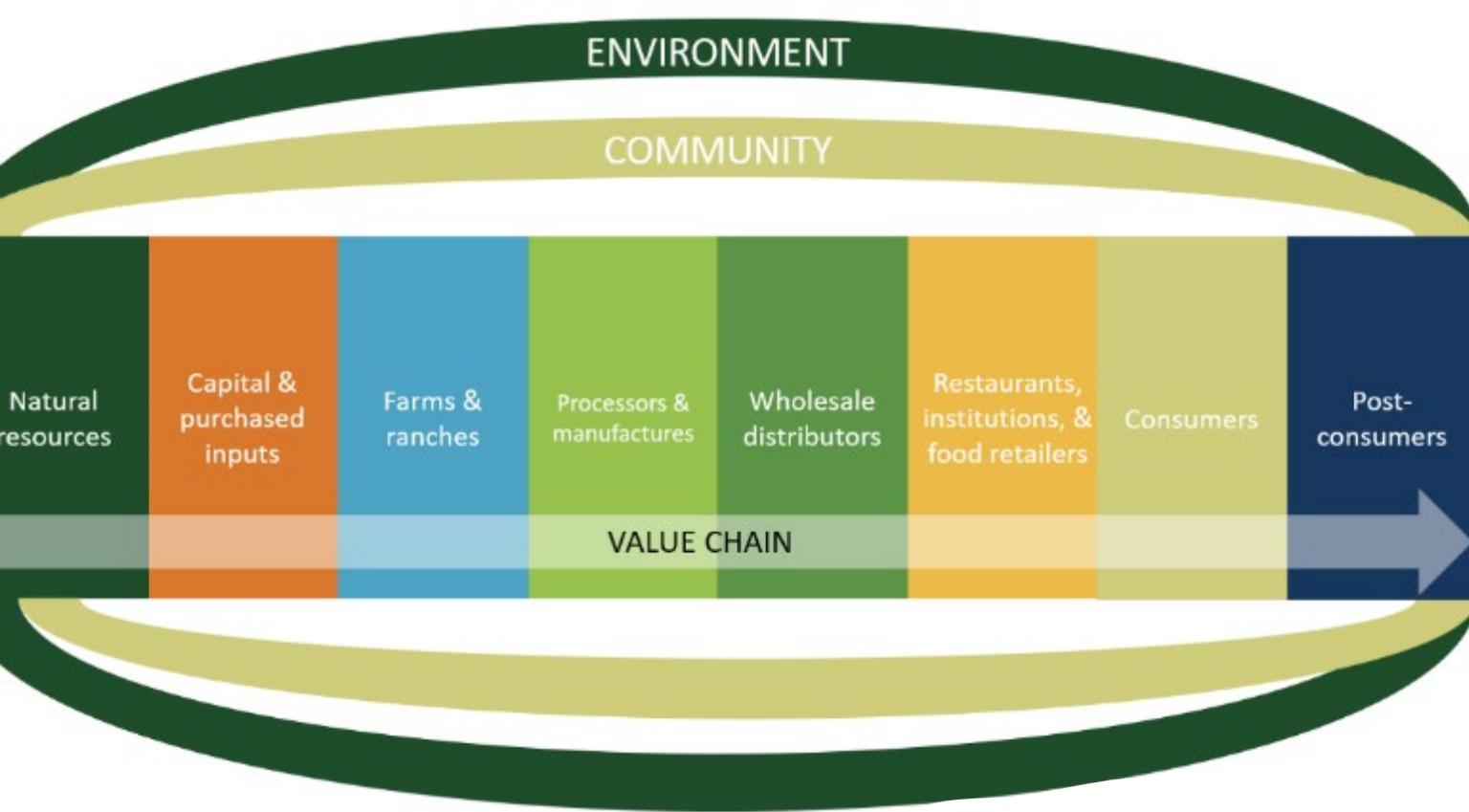


Pull Factors (opportunities)



Push Factors (constraints)

Shared Kitchen Typologies
(commissary, incubator/accelerator, community/nonprofit, hybrid)



The Colorado Blueprint of Agriculture and Food

Key assets, emerging issues, and shared priorities for future investments in food and agriculture around the state

Blending Community Conversations and Data

https://foodsystems.colostate.edu/wp-content/uploads/2018/05/Colorado-Blueprint_FINAL.pdf

Qualitative Analysis and Story Maps

Led by USDA Food Business Center Audrey Welsh and Jayna Mallon



Roaring Fork Mill

Ancient and Heritage Grains | Organic | Family-based | Regenerative



Taste
Iceland

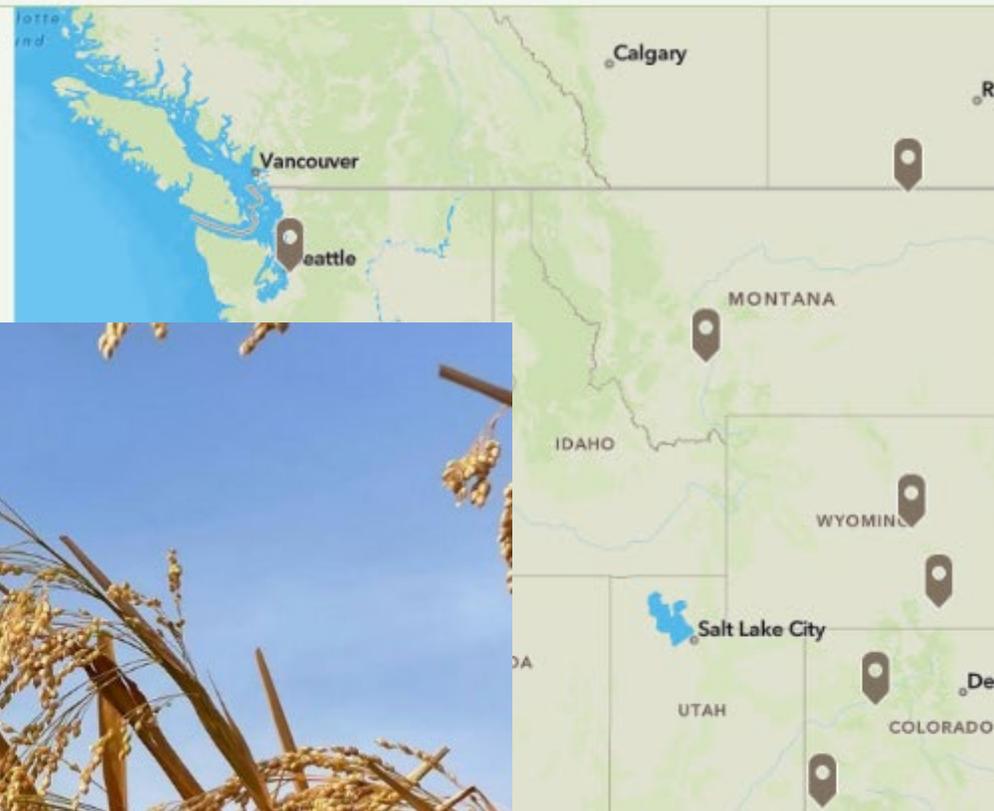


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Community

The Roaring Fork Valley is home to a localized agricultural community with a deep-rooted history of potato and grain farming as well as ranching. With its short growing season and challenging climate, farmers and ranchers take pride in what they produce. Organic and regenerative practices play a big role in the community's commitment to preserving and cultivating the land.

The community also knows the importance of collaboration. Local farms work together to share resources, such as creating a community



Framing Community Conversations and Preferences



Family Leadership Training Institute of Colorado (FLTI)

Learn. Plan. Act. **TOGETHER**

Bridging the Gap Between Community
Members & Local Decision-Makers



**CENTER FOR
PUBLIC DELIBERATION**
COLORADO STATE UNIVERSITY

The CPD serves as an impartial resource for the Northern Colorado community, focused on elevating the quality of public engagement on our shared wicked problems. We analyze issues and then design, convene, facilitate, and report on innovative public forums.

	Option A	Option B	No change
Length of the river section that will be restored	2 km 	0.5 km 	0 km
Walking along the river	Yes 	No 	No
Swimming in the river	Yes 	No 	No
Barbecuing on the river bank		Yes 	No
Biodiversity	High 	Medium 	Low
Increase in canton taxes	100 / year	50 / year	0 / year
Which option would you prefer?	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> Neither A nor B

Economic Contribution and Impact Analysis

Worked on Economic Contribution and Impacts Analysis:

- Proposed policies e.g. slaughterhouse ban in Denver
- Recreation e.g. winter sports, river access, etc.
- Agritourism
- Hemp industry
- Festivals
- Food System Initiatives

Regional Economic Analysis

- A type of study which estimates the economic effect of an event in a specified geographic region
- To quantify these effects, we use Input-Output (IO) analysis
 - A method of systematically quantifying the mutual interrelationships among various sectors of a complex economic system

Linkages are Key to Input-Output Modeling

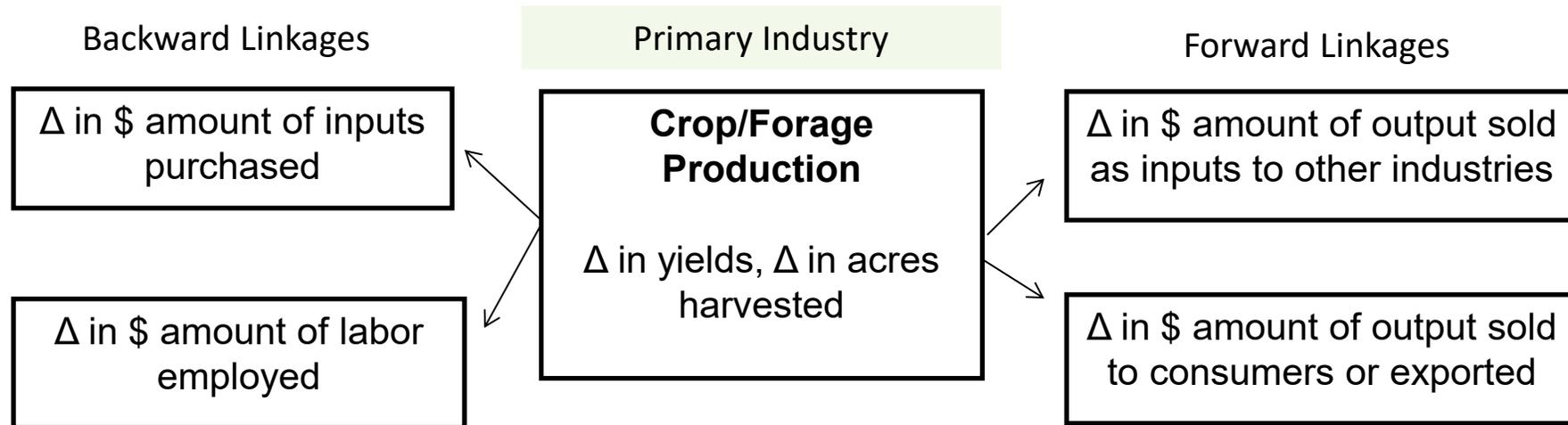
Backward Linkages

- IO (Input-Output) is a demand side model which quantifies the backward linkages effect of production

Forward Linkages

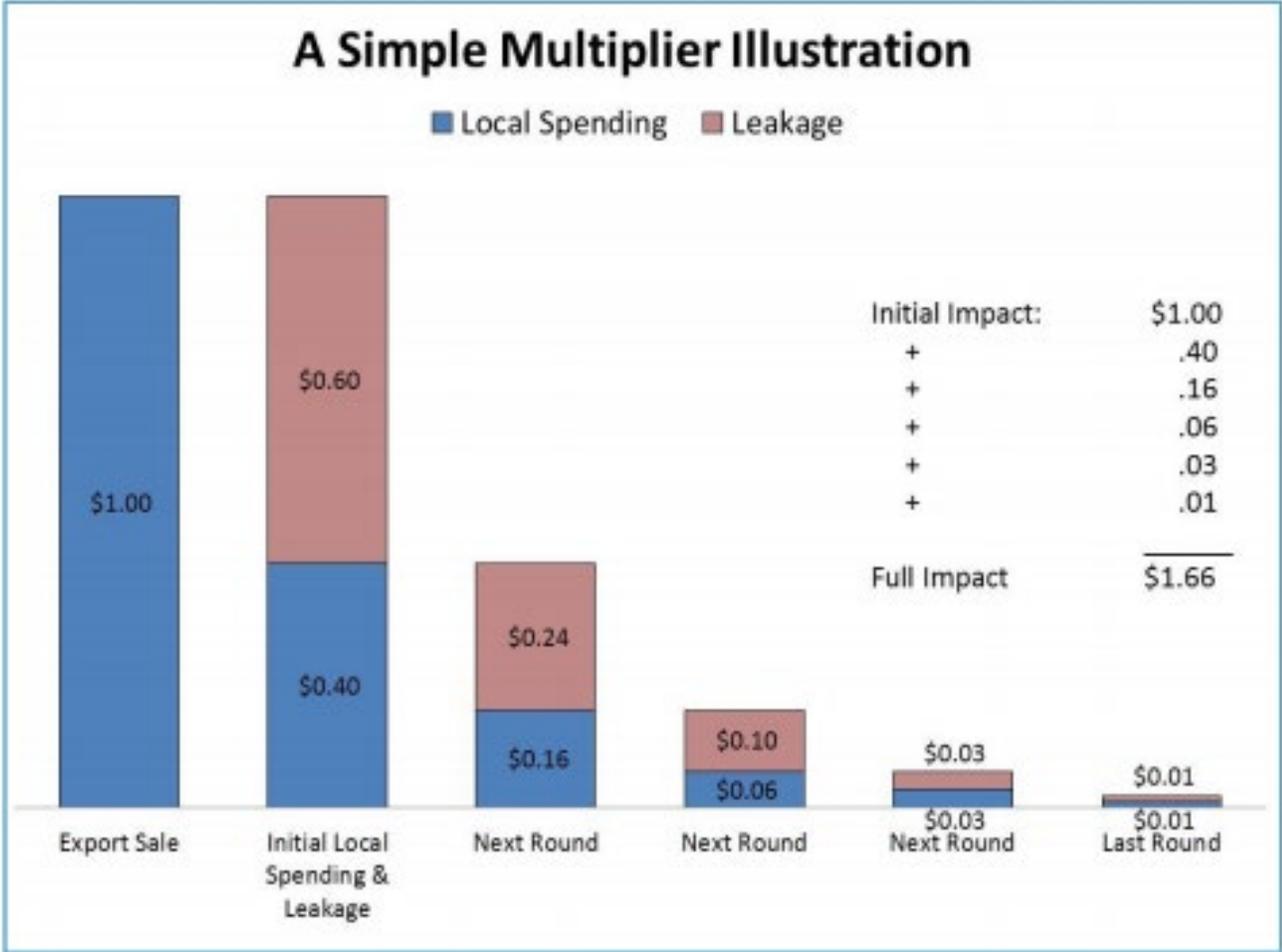
- Forward linkages look at how an industry's production is used as an input for other production processes or for final use
- Not quantified in IO

Using the Input-Output Model



Start at the point of production from which you would like to estimate backward linkages.

Economic Inter-Linkages



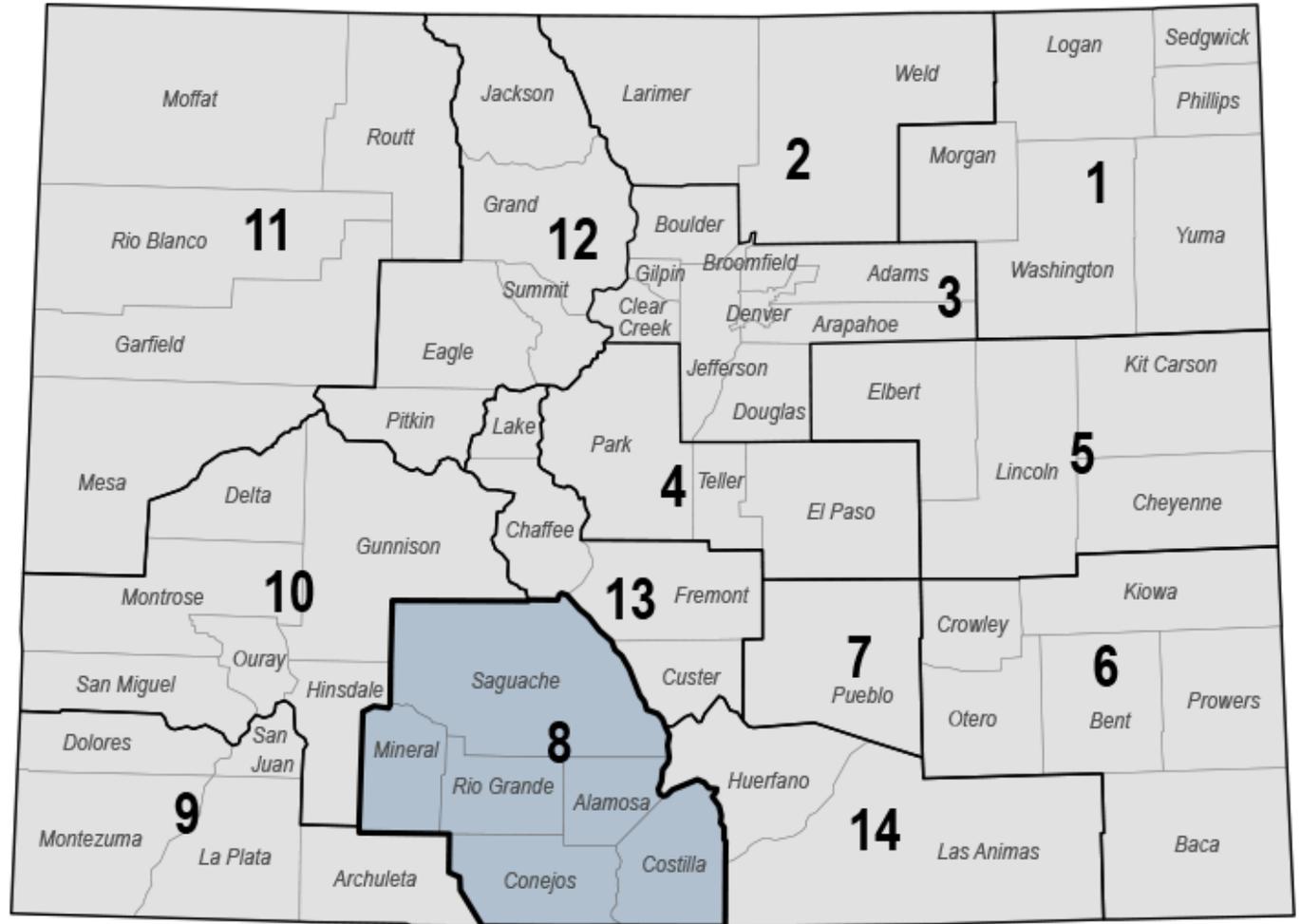
Economic Impact Analysis

- **Impact** a specific event or change in behavior
 - Often referred to as a **Shock or Event**.
 - For example, a business within the community makes a major investment and hires 50 new workers, or the federal government provides a grant to incentivize the development of a food hub
- Consequently, **impact assessment** is comparing what a community looks like before and after a particular event or change in behavior

San Luis Valley Example

San Luis Valley

- 6 Counties
- 8,200 sq miles of land
- \$3.32 Billion



State of Colorado, Region 8

Hypothetical Scenarios

Hypothetical Goal: Reduce consumptive
by 24,500 acre feet.

Approaches

1. Equal Acre Feet Among Crops
2. All Reductions from Alfalfa
3. Acres Rotate From Alfalfa to Wheat
4. CREP enrollment to reduce CU.

Linkages to the Local Economy

- Direct Activity
 - Crop Sales (Gross Revenues)
- Indirect Effects
 - Fertilizer, Seed, Chemical Sales
 - (but margins only)
 - Transportation
 - Real Estate Services
 - Ag Consultants
- Induced Effects
 - Wages Spent with Local Businesses
- When is generated economic activity high?
 - High value crops sold outside the region.
 - Revenues spent on locally produced inputs.
 - Local support industries use local labor and inputs.

Crop	Economic Activity (\$/ac)	Output Multiplier
Barley	\$844	1.43
Alfalfa	\$856	1.52
Potatoes	\$3,846	1.47
Wheat	\$1,035	1.43

Hypothetical Scenario 1: Equal AF

	Acreage Change	Economic Output (Sales) Change	Percent Change in Economic Output (Sales)
Barley	-4,224	\$ (3,565,926)	-9%
Alfalfa	-2,500	\$ (2,140,000)	-2%
Potatoes	-5,104	\$ (19,631,282)	-11%
Wheat	-4,224	\$ (4,372,341)	-72%
Total	-16,052	\$ (29,709,549)	

Hypothetical Scenario 1: Equal AF

	Direct	Indirect	Induced	Total
Total Output (Mill\$)	-\$29.71	-\$7.50	-\$6.31	-\$43.52
Employment	-134	-104	-56	-294
Value Added (Mill \$)	-\$14.41	-\$4.37	-\$3.46	-\$22.23
Non-Property Tax	-\$17,605	-\$257,402	-\$399,816	-\$674,822

Hypothetical Scenario 1: Equal AF

Sector Name

Results of Shocks by Sector

Potato	-\$19,885,983
Wheat	-\$4,374,384
Barley	-\$3,709,481
Support activities for agriculture and forestry	-\$2,784,953
Alfalfa	-\$2,247,348
Wholesale trade	-\$1,530,791
Owner-occupied dwellings	-\$1,074,411
Real estate	-\$531,026
Maintenance/repair of nonresidential structures	-\$473,072
Hospitals	-\$466,753

'What-If' Tool for SLV

SUMMARY RESULTS: Outcome values from specified changes in economic activity

	Direct	Indirect	Induced	Total
Total Output	\$ -	\$ -	\$ -	\$ -
Employment	0.0	0.0	0.0	0.0
Value Added	\$ -	\$ -	\$ -	\$ -
Non-Property Tax	\$ -	\$ -	\$ -	\$ -

User scenarios - Shocks to Economic Activity

Industry Name	User Inputted Shocks	Results of shocks by industry	Total Output Multiplier
Barley		\$ -	1.4
Potato		\$ -	1.5
Wheat		\$ -	1.4
Alfalfa		\$ -	1.5
Oilseed farming		\$ -	1.3
Greenhouse, nursery, and floriculture production		\$ -	1.3
Beef cattle ranching		\$ -	1.6
Dairy cattle and milk production		\$ -	1.4
Poultry and egg production		\$ -	1.5
Animal production, except cattle and poultry and eggs		\$ -	1.2

- Represents economic connections in 6 counties
- 184 industry sectors represented in the What-If Tool
- Data is compiled from 2013 IMPLAN software

Rifle Mountain Park Economic Impact

Impact	Employment	Labor Income	Value Added	Output
Direct	2.6	\$110,387.45	\$157,804.59	\$295,934.14
Indirect	0.57	\$24,911.00	\$39,560.29	\$86,291.78
Induced	0.31	\$15,070.50	\$29,811.59	\$50,486.71
Total	3.48	\$150,368.96	\$227,176.47	\$432,712.63

- Employment: an Industry-specific mix of full-time, part-time, and seasonal employment
Labor Income: All forms of employment income, including wages, salary, benefits, and proprietor income
- Value Added: Industry GDP
- Output: GDP plus intermediate inputs (business to business spending)

Questions?

What resources would
be helpful in your
communities?

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Economic and Community Data Platforms

Food and Agriculture Mapper and Explorer (FAME)

ABOUT

The Food and Agriculture Mapper & Explorer (FAME) brings together data from dozens of publicly available datasets to make it easy for food systems practitioners to search and visualize up-to-date information on Local and Regional Food Systems in the US.

FAME can be used for program design, grant writing, advocacy, or simply learning about the state of local food systems in your area. Most of the data in the explorer is at the County level, but it also contains some National and State-level data for comparison.

Data will be updated periodically, with the latest update at the bottom of this page.

Using this dashboard: Click on the Expand icon in the top right corner of a box to explore and interact with the data visualization. Within the expanded view, select values in the filters you'd like to view. Click on the Collapse icon in the top right corner of the expanded view to return to this page.

Indicator Map
A full set of food system indicators by county
Expand the view to select different indicators

Current Indicator Selected: Food insecurity rate, child, 2021

© 2025 Mapbox © OpenStreetMap

Local Foods Markets Map
Point-level information on local food markets
Expand to select different markets and drill down on location

Current Location Type Selected: Farmers Market

Key Food Metrics
A select set of food system indicators
Expand to select different indicators and drill down on states

Current Indicator Selected: Food insecurity rate, child, 2021

State	Food Insecurity Rate (Child, 2021)
Alabama	~12%
Alaska	~10%
Arizona	~11%
Arkansas	~13%
California	~14%
Colorado	~15%
Connecticut	~16%
Delaware	~17%
District of Columbia	~18%
Maine	~19%

USDA Agricultural Marketing Service | Colorado | UK | DATA ELEVATES | Data last synced: 09/16/2024

View on Tableau Public | Share

Using the Food and Agriculture Mapper and Explorer to Support Grant Applications & Reporting

Featuring: **Annelise Straw and Libby Christensen**

Brought to you by:

USDA Agricultural Marketing Service | Colorado | UK

Watch on YouTube

- Includes over 600 indicators for all counties in the US!
- Updates coming 2026!

<https://localfoodeconomics.com/data/food-and-agriculture-data-explorer/>

Assumptions in Input-Output Modelling

- Constant Returns to Scale
- No Supply Constraints
- Fixed Commodity Inputs
- Homogenous Sector Output
- Homogenous Industry Technology

Constant Returns to scale

- Production functions are linear
- In English – if you increase output all inputs increase proportionally
 - If it takes 1.2 hours of labor to harvest one acre, it takes 2.4 to harvest 2 acres
 - No returns to scale

No Supply Constraints

- Unlimited access to raw materials
 - Assuming that if the material is not available from within the region can get it from outside the region
- In general:
 - Contractions are not a concern
 - Small expansion ok, but large expansions might be problematic

Fixed Input Structure

- Changes in prices of inputs do not cause a firm to buy substitute goods
 - So, changes in economy will effect the output but not the mix of commodities it takes to produce that output
- Makes model static and not good at prediction
 - In reality firms will adapt to price changes

Homogenous Sector Output

- Proportions of all commodities produced by an industry remain the same, regardless of total output.
 - An industry will not increase the output of one product without proportionately increasing output of all its products

Homogeneous Industry Technology

- Industry uses same technology to produce products regardless of output
 - Again a reason why input-output modelling is not appropriate for longer term forecasting

Definitions of Key Terms

Key Definitions

- Direct impacts
 - Economic impacts associated with the economic change that is being measured
- Indirect impacts
 - The impact of local industries buying goods and services from other local industries. The cycle of spending works its way backward through the supply chain
- Induced impacts
 - Response due to re-spending (employee compensation) through household spending patterns

Value Added

- Net revenues – difference between what they sell the good for and what they paid for all the components to produce the good
- Measure of GDP
- IMPLAN includes four VA sub-components:
 - Employee compensation
 - Proprietary/proprietor's income
 - Other property type income
 - Taxes on production (used to be referred to as indirect business taxes)

Output and Employment

- Output:

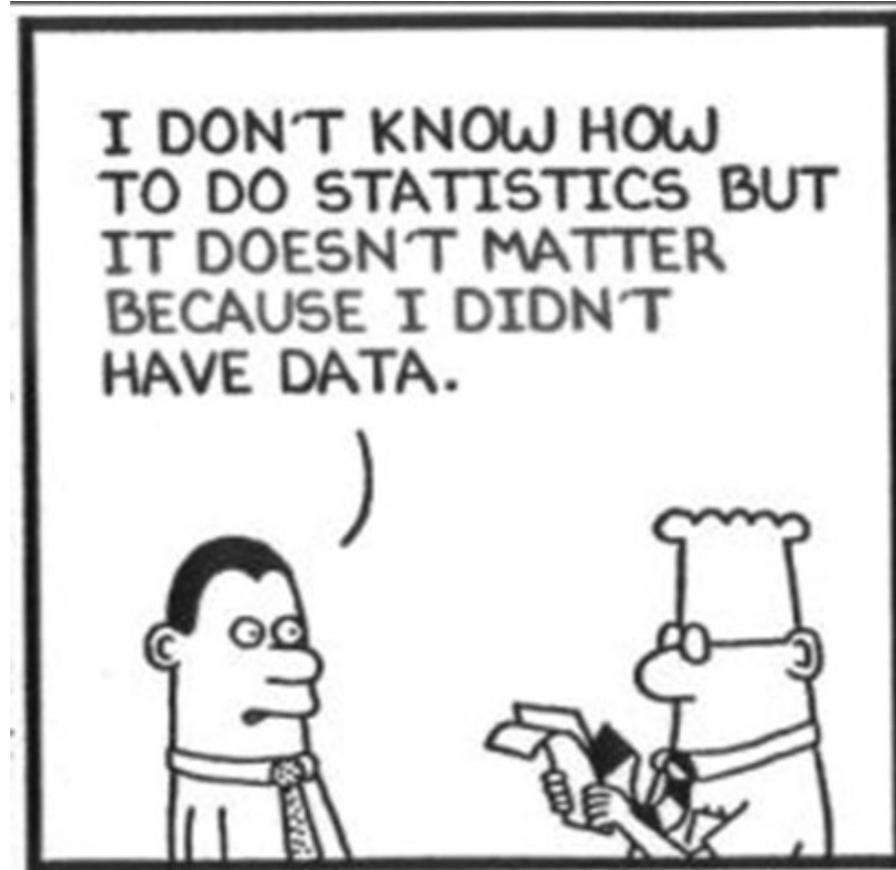
- The sales revenue or value of production
- Gross expenditures (including value added)

- Employment

- Represents the annual average of monthly jobs
- NOT FTE

Framing an Economic Impact Assessment

- Estimating the economic impacts can be challenging!



IMPLAN

- We typically use a software called IMPLAN to evaluate economic impacts
 - Contains interconnected relationships in regional economies of 528 unique sectors
 - Often customize this initial data to fit our individual situations

Main Event Types

- Industry event – analyzing a change in an industry's production
 - IMPACTS
- Industry contribution events – estimating the effect of an existing industry's production
 - CONTRIBUTIONS
- *** Other less common event types not covered today: Labor income events, Household income events, institutional spending pattern events, Commodity output events

Examples of Events

- Construction and operation of a new business
- Impacts from new investments (such projects from grant dollars)
- Economic Impacts of visitor spending – due to an event, industry or business
- Spending changes due to population fluctuations
- Contributions of an existing company or industry
- Impacts from Environmental changes

Small Group Session

- In small groups
 - What events might you want to evaluate in your communities
 - Pick one of your ideas to develop further during the rest of this workshop

IO Is not a feasibility analysis

- IO assumes no supply constraints, so you first must determine that there is sufficient workforce and other resources for the event
- Important that you have already determined there is demand for the production

What Industries are Affected?

- How will the activities be represented?
 - What industries are impacted
- Does your question fit one of the existing industries?
 - Do local food producers have different expenditure patterns?
 - Have new or deeper business linkages emerged with community planning and investments?

What is your Region?

- What is the appropriate region?
 - Where the impact takes place, and where you want to understand the effect
 - This determines the boundary for quantifying spending supported by your event.
 - Spending that does not generate effects in the selected region is called leakage

Opportunity Costs

- One word of caution...these shocks do not happen in isolation, and there are very few scenarios where a shock would have only positive local economic impacts.
- Opportunity Cost: the benefit that is lost when one opportunity is chosen over another

Net effects

- Consider the **opportunity cost** or **countervailing effects** of any policy is critical!
 - e.g., farmers' decision to plant additional acreage in fruits and vegetables may mean less acreage planed in corn or soy. Likewise, the decision of the Federal government to stimulate the development of a food hub may have negative impacts on the local wholesale sector.
- Both positive and negative impacts need to be included
 - Will business be taken from something else?

Small Group Session

- Take the ideas you created in the last session and brainstorm the following:
 - Am I looking for a feasibility study not an IO study?
 - What industries will be impacted?
 - What region is most appropriate?
 - What are some of the opportunity costs I need to consider?

What's Next

- Frame your scenarios
 - Identify and collect needed data
 - Is secondary data available?
- Different types of scenario shocks:
 - Change in output?
 - Change in employment?
 - Change in employee compensation?
 - Change in proprietor Income?
- Each scenario may have multiple shocks
 - Remember opportunity costs

Your Purpose

- What is the purpose of the study?
 - What are you trying to communicate?
 - Who are the stakeholders?
-
- Your purpose can help guide the depth and scope of the study