



Growth Lab

Identifying local opportunities: Otero County

January 2025

Key Takeaways on Otero County's Economic Snapshot



The first part of this presentation provides an economic snapshot of the county. The following key takeaways stand out.

- **Economic cluster:** Otero County is located in southern New Mexico, bordering Texas. Its primary geographic cluster extends beyond Alamogordo's city limits but does not cross county or state boundaries.
 - **Long-term trajectory:** Otero County's population increased significantly between 1940 and 1960, particularly in the 1950s, when it more than doubled. It became one of the largest micropolitan counties and narrowed the gap with the biggest metropolitan areas in New Mexico. However, since then, although the population never declined, growth has been modest.
 - **Recent economic performance:** Over the past few decades, Otero County has exhibited below-average income growth. The lag in performance relative to the state's economy became more pronounced after 2011, when the county experienced a decline that persisted until 2017. Since 2017, has recovered growth, paralleling the statewide trend, though its economy is only slightly larger than its peak in 2011.
 - **Underlying economic engines:** Government activity accounts for more than 60% of the Gross County Product (GCP) and has been growing at the same pace as the overall economy. Although each accounts for less than 5% of the GCP, the information and utilities sectors have consistently grown faster than the average. A larger sector, accounting for approximately 10% and exhibiting consistent growth, has been education and health services. Manufacturing, by contrast, has been steadily declining.
 - **Housing dynamics:** Alongside a recovering economy, housing demand in the county is increasing. Prices are approximately 25% higher now than in 2014, though still below the the pace of increases observed elsewhere in the state. Supply is expanding slowly, with only a 5% increase, driven primarily by additional mobile homes and, to a lesser extent, by additional multifamily units. There is still a high vacancy rate of 25%.
 - **Conclusion:** Otero County's future economic growth depends on its ability to promote further private activity that complements the public sector. Government activity has supported the economy throughout the years; extending the current growth path requires further dynamism of other drivers. Housing prices are not yet significantly constraining this economy.
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Observations on Otero County's Diversification Opportunities



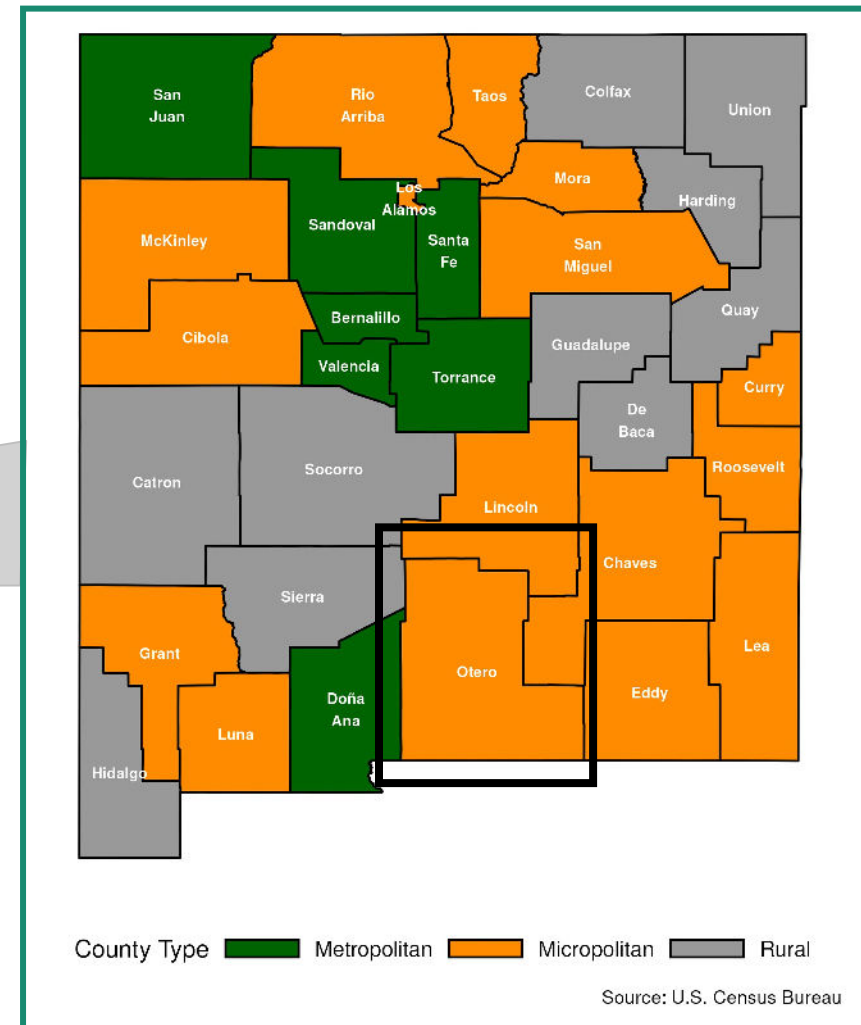
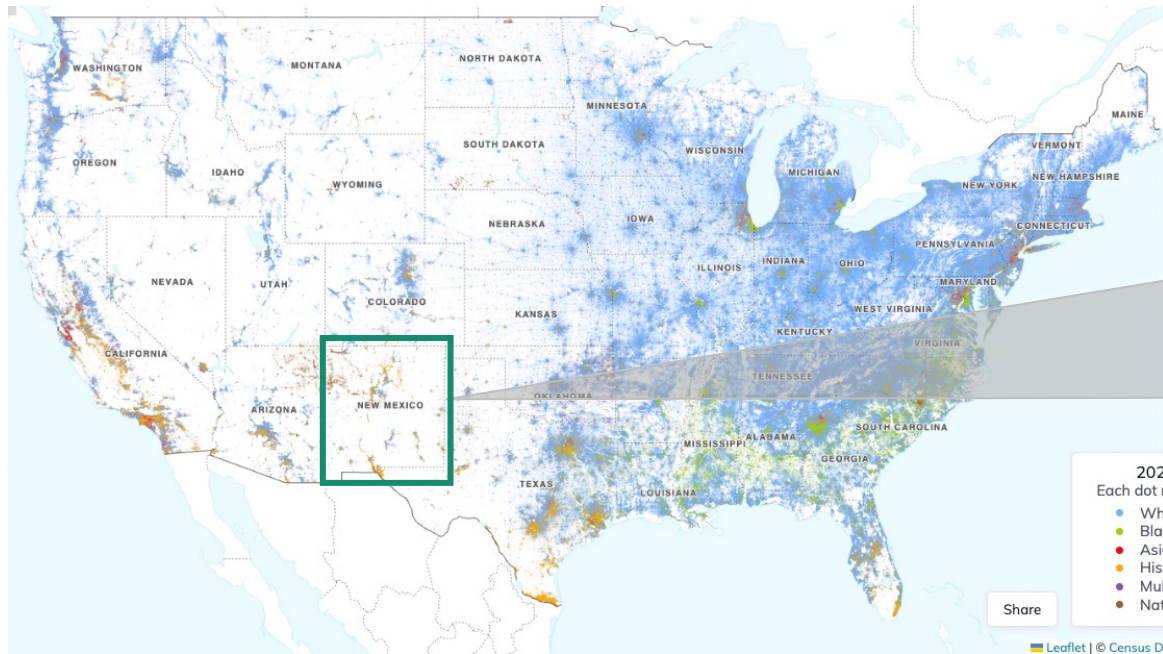
The second part of this presentation provides an analysis of diversification opportunities grounded in an economic complexity approach. This analysis is meant as an input for local strategy rather than a conclusive list. Several observations are noteworthy that may warrant local investigation.

- **The information sector has consistently led growth.** A small sector comprising less than 5% of the economy, it has recorded some of the highest annual growth rates. “Computing Infrastructure Providers, Data Processing, Web Hosting, and Related Services”, a non-tradable industry within the “Publishing and IT services” cluster, has been creating jobs in the commuting zone (CZ), in line with the state’s trend for this industry. A promising tradable industry in the same cluster is “Media Streaming Distribution Services, Social Networks, and Other Media Networks and Content Providers”.
 - **Another small sector leading growth is education and health services.** Slightly larger than the information sector, it has also experienced rapid growth. There are two promising tradable industries, “Colleges, Universities, and Professional Schools” and “Flight Training,” which have already been adding jobs to the CZ. The opportunity of higher education provisions stands out, as the recent expansion in the county contrasts with the overall industry trend for the state.
 - **Manufacturing, even smaller than the previous sectors, has been steadily decreasing in size.** Within the shrinking manufacturing base, some competitive industries, such as “Meat Processed from Carcasses,” have been expanding across the state overall, and particularly in neighboring counties. Otero County may be able to take advantage of this momentum. Promising tradable industries for rebuilding the manufacturing base are linked to wood-products clusters, which could complement logging, forestry, and related activities. Examples include “Sawmills” or “Prefabricated Wood Building Manufacturing,” both of which need relatively less utilities and space.
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County economic snapshot

Unpacking population and economic patterns

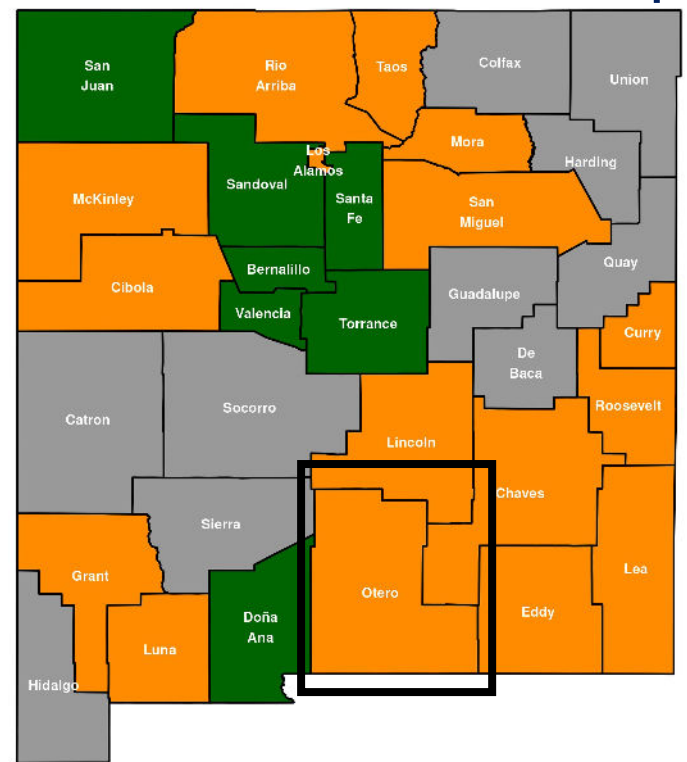
Otero county location



Note: Full map: <https://www.censusdots.com/race/new-mexico-demographics>

Economic cluster – Firms in Otero county & New Mexico

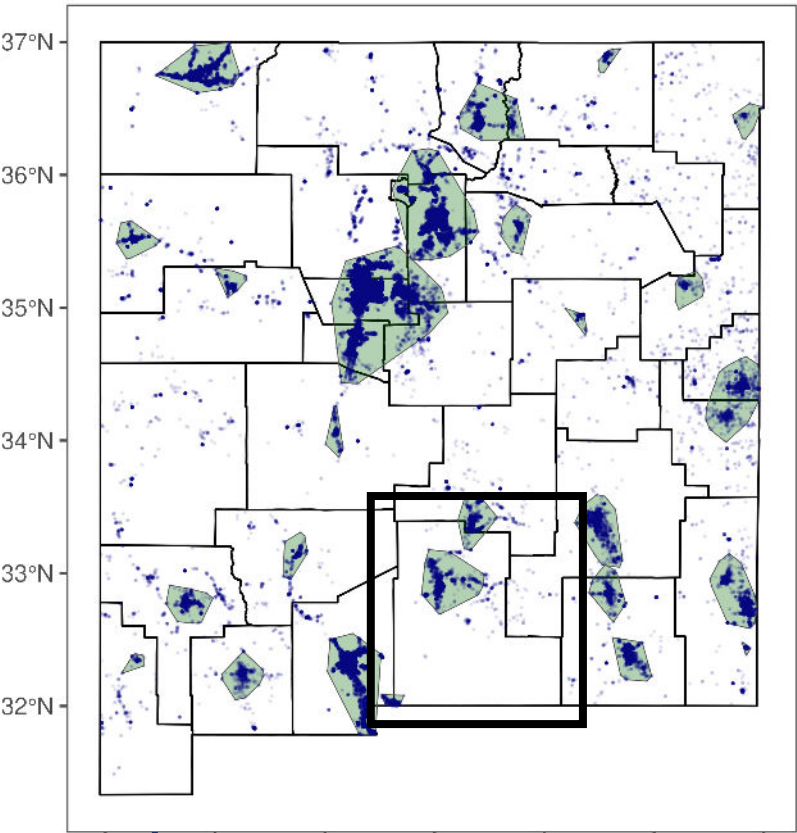
Map of Counties and Statistical Areas in New Mexico



County Type ■ Metropolitan ■ Micropolitan ■ Rural

Source: U.S. Census Bureau

New Mexico Firms' Location

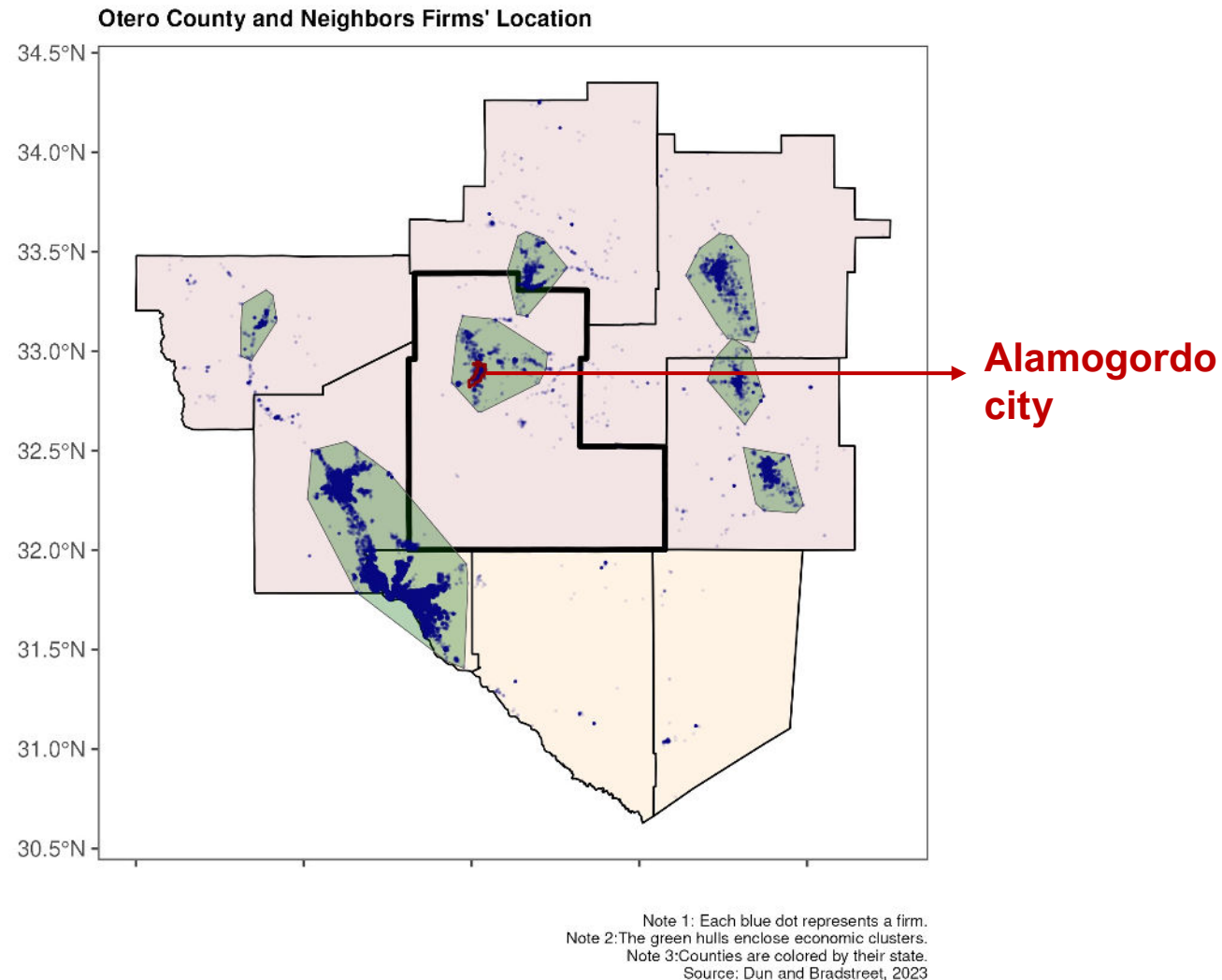


Note 1: Each blue dot represents a firm.
Note 2: The green hulls enclose economic clusters.
Source: Dun and Bradstreet, 2023

The county type definitions are based on the size of local population centers and their connection to larger urban areas. Metropolitan and micropolitan areas differ by the size of their core community, with a threshold of 50,000 residents. In contrast, rural areas do not have a population center with at least 10,000 residents.

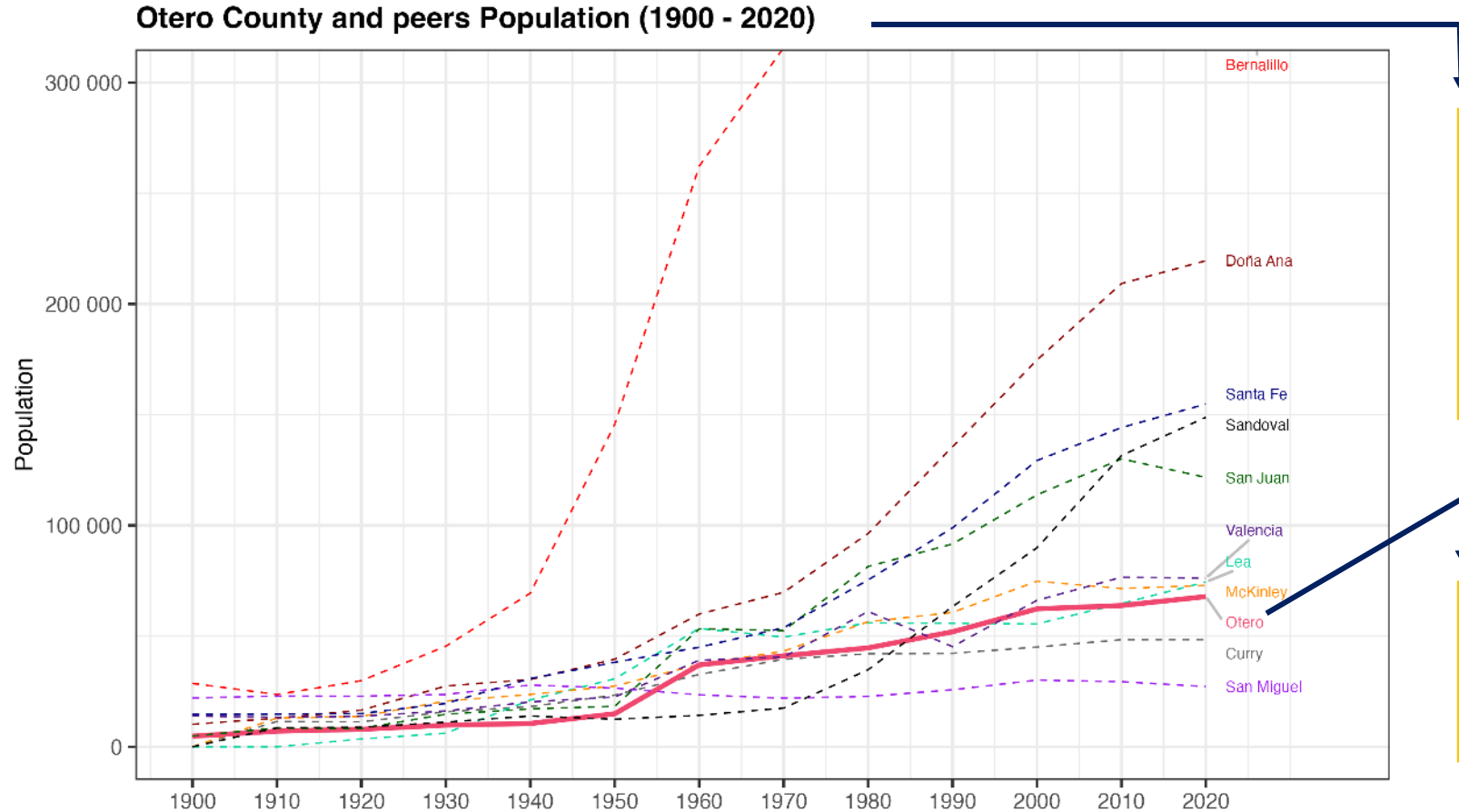
The clusters of economic activity (shown by the green outlines) are defined by the proximity of firms (blue dots). These clusters reveal connections between counties, both within the state and across state borders.

Economic cluster – Firms in Otero county and adjacent counties



Otero's main economic cluster is centered around Alamogordo city but extends beyond the city limits. Although this cluster does not cross county or state lines, clusters that originate in Lincoln (north) and Doña Ana (southwest) cover small parts of the county.

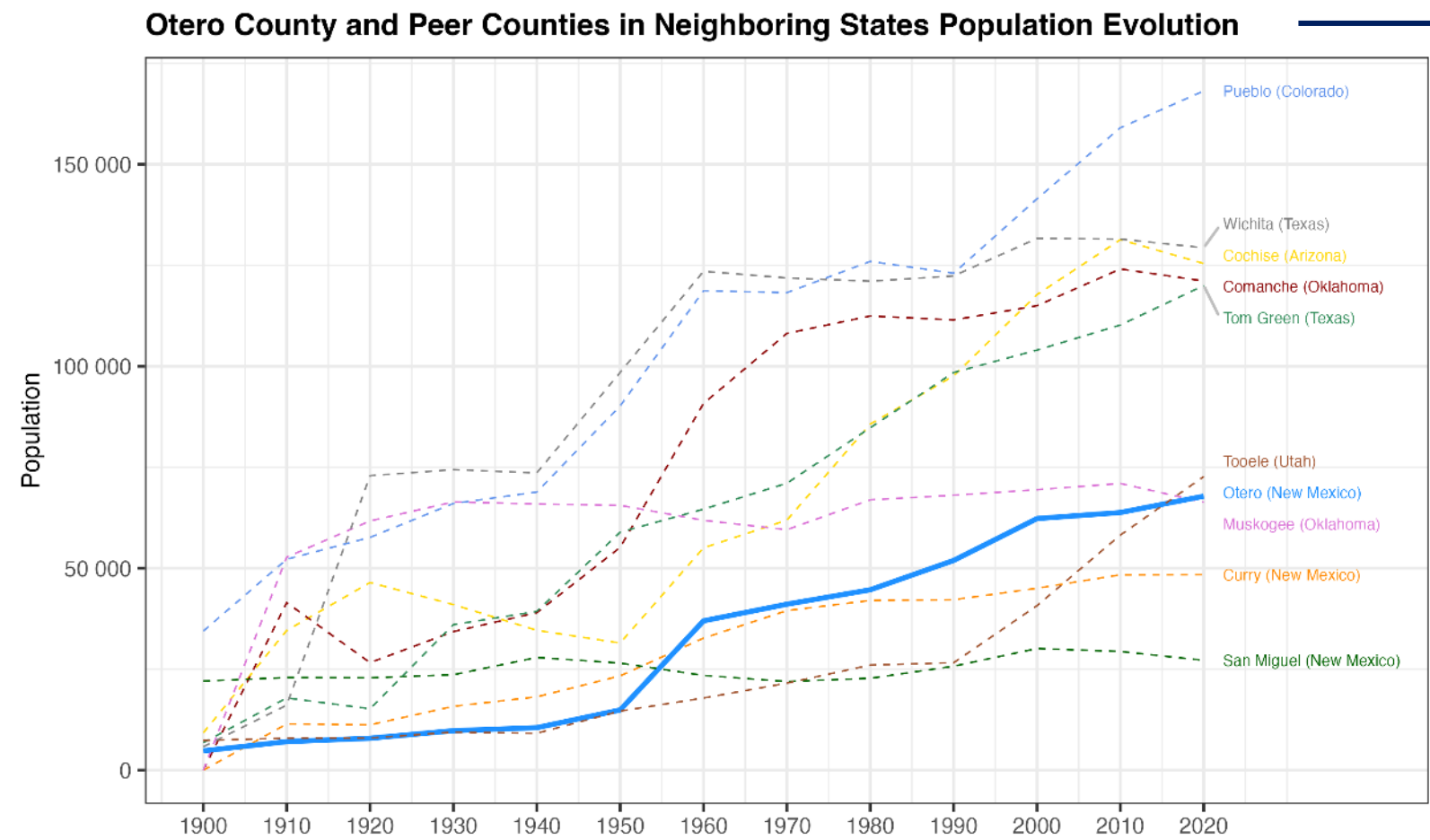
Long-term trajectory – Population growth among New Mexico's counties



Understanding Otero's economy requires looking at the county's long-term evolution. Demographic and economic trends are closely connected: job opportunities attract people and drive population growth, while job losses can lead to outmigration. At the same time, the size and skills of population influences which new economic activities, as critical mass of knowhow and networks enable economic activity.

Otero's long-term population growth is shown alongside New Mexico's other largest counties. (Bernalillo County, not shown for scale, has a much larger population of around 680,000.)

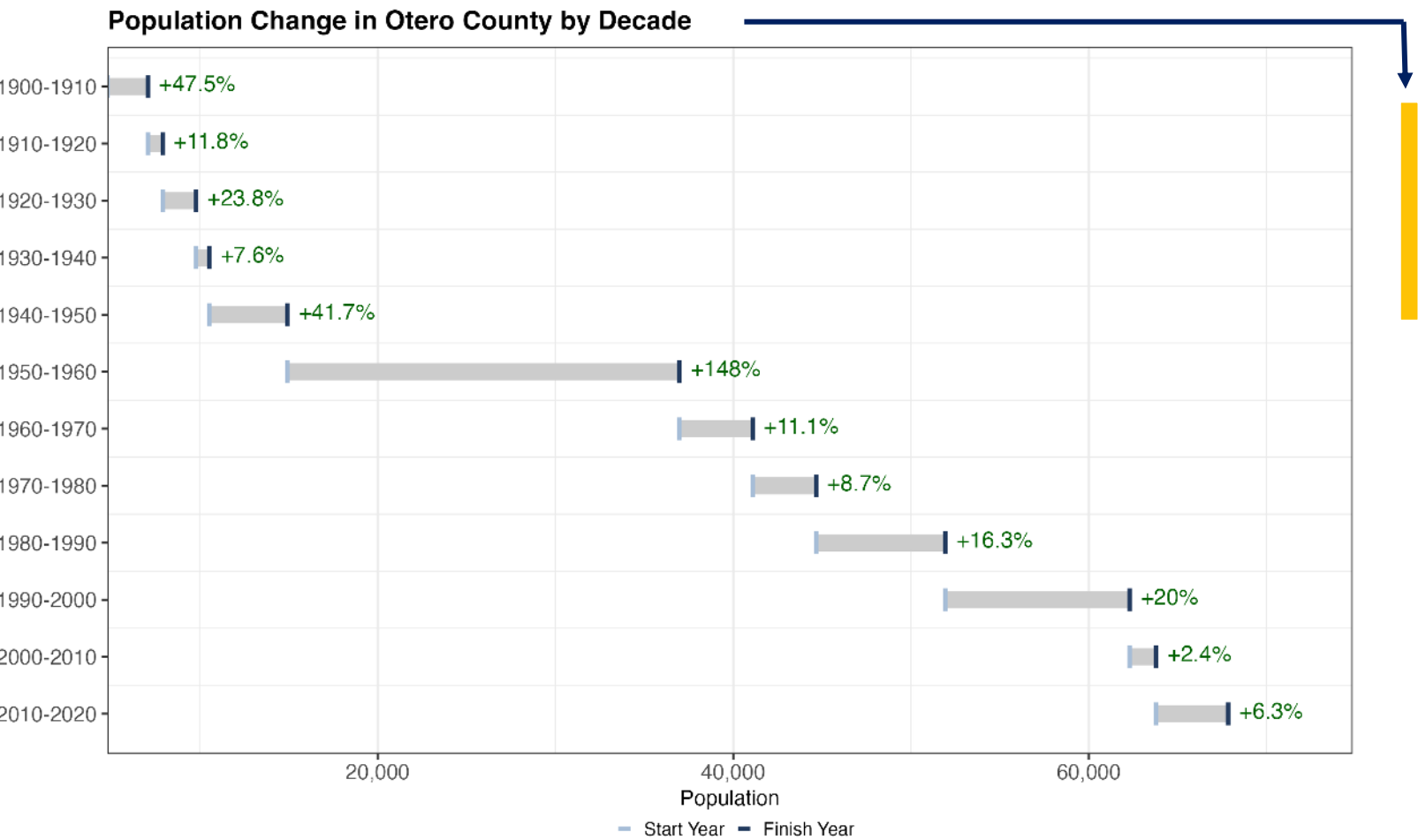
Long-term trajectory – Population growth among peers



The previous slide compared Curry's long-term population growth with other large counties in New Mexico. To give further context, the following analysis looks at a set of peer counties across New Mexico and five neighboring states (Arizona, Colorado, Oklahoma, Texas, and Utah). These counties were selected because they are mid-size counties (micropolitan) and some with military history.

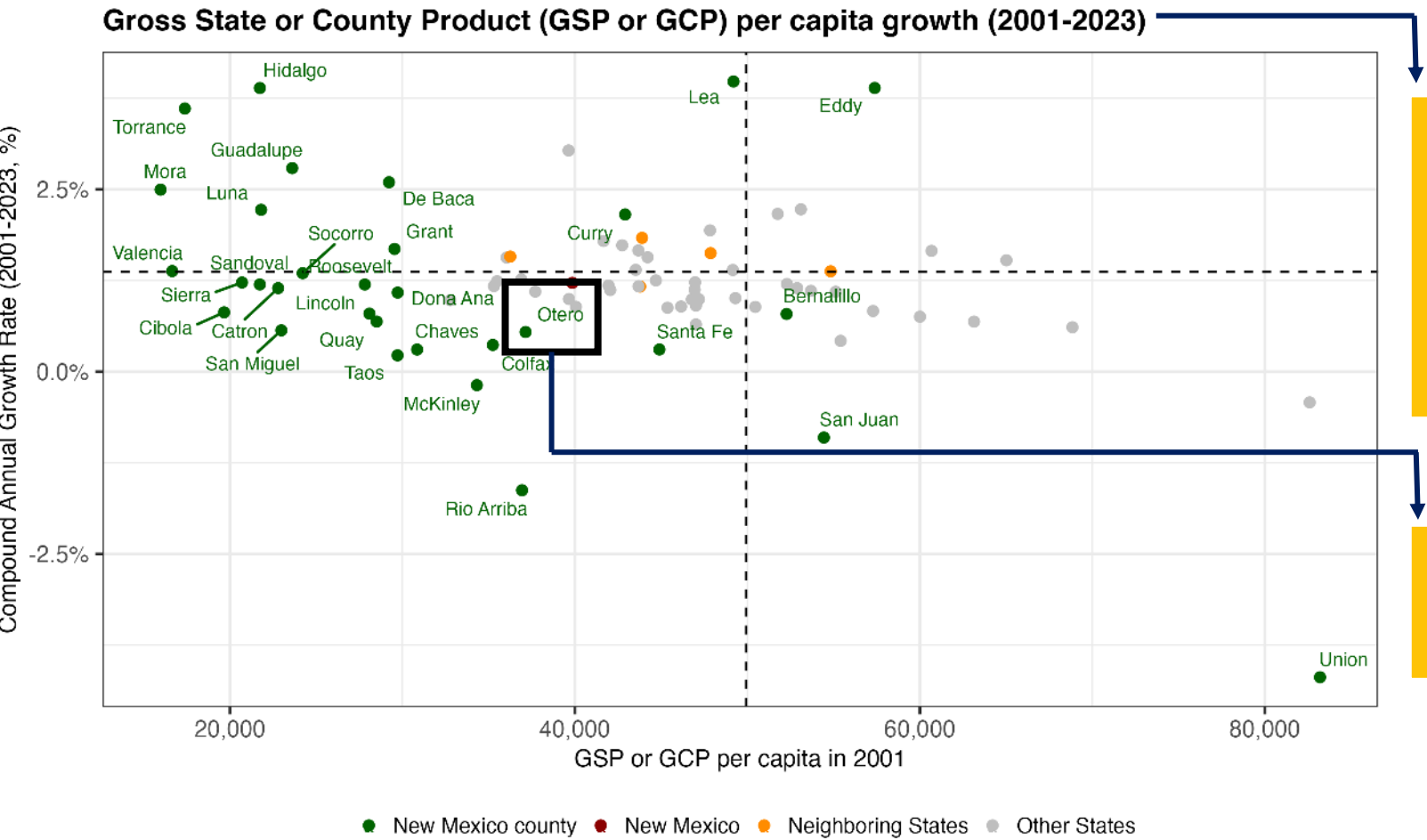
Graph source: Van Leuven, Andrew J, 2024, "Historical U.S. County Population Data: 1900 to 2020"

Long-term trajectory – Population growth by decade



Now, the focus shifts from comparing long-term trends to examining Otero's population changes decade by decade. This graph shows the population at the start and end of each decade, as well as the total growth rate during each period.

Recent economic performance – Income level growth

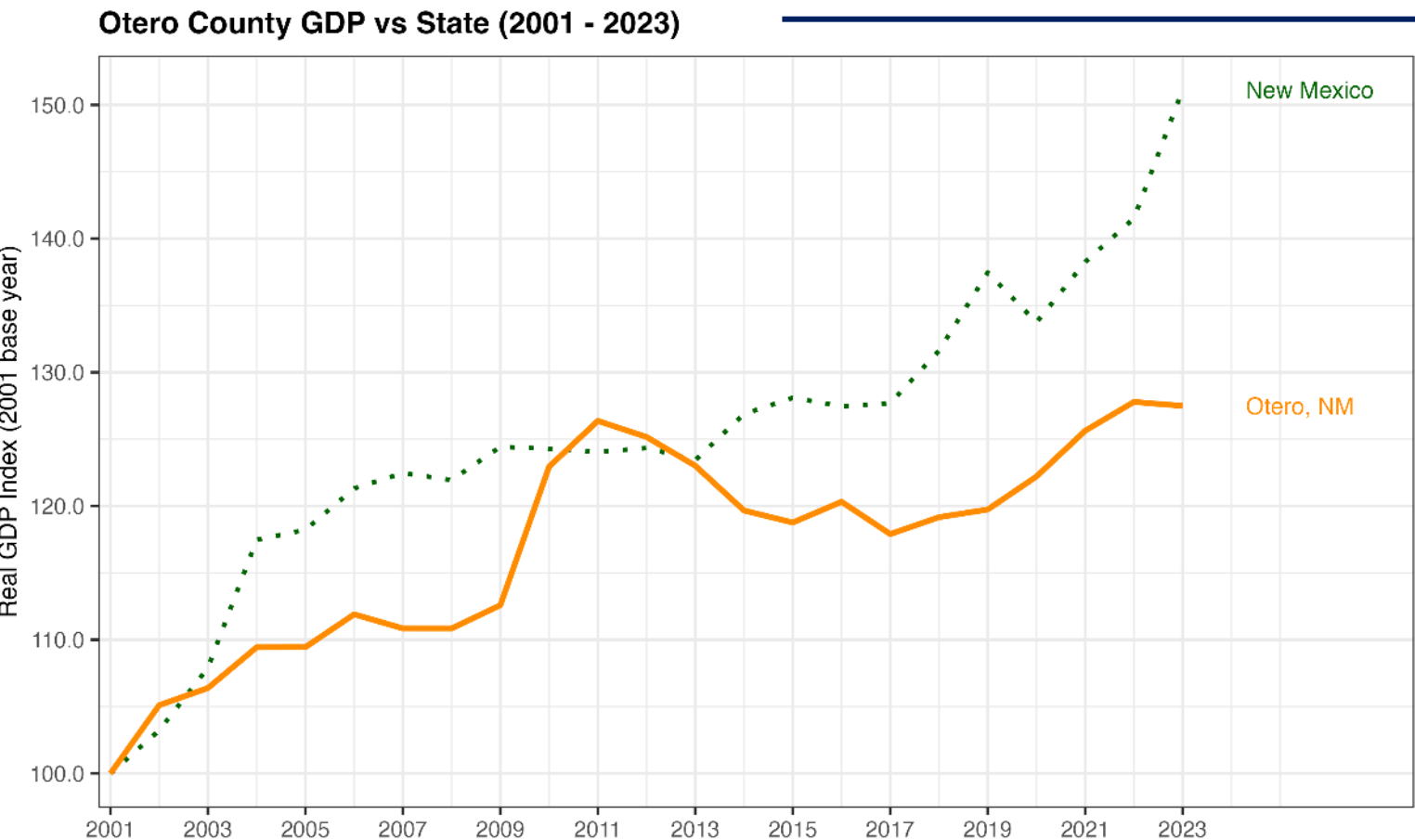


Demographic trends offer a long-term perspective on Otero's economy. For a closer look at more recent decades, Gross County Product (GCP) provides annual data going back to 2001, capturing the value of economic activity produced within the county's borders. Dividing GCP by the local population gives a per capita figure, which serves as income level, a useful benchmark for comparing overall standards of living between places.

Otero's average income growth rate is shown here alongside New Mexico's 32 other counties, the state average, and neighboring states.

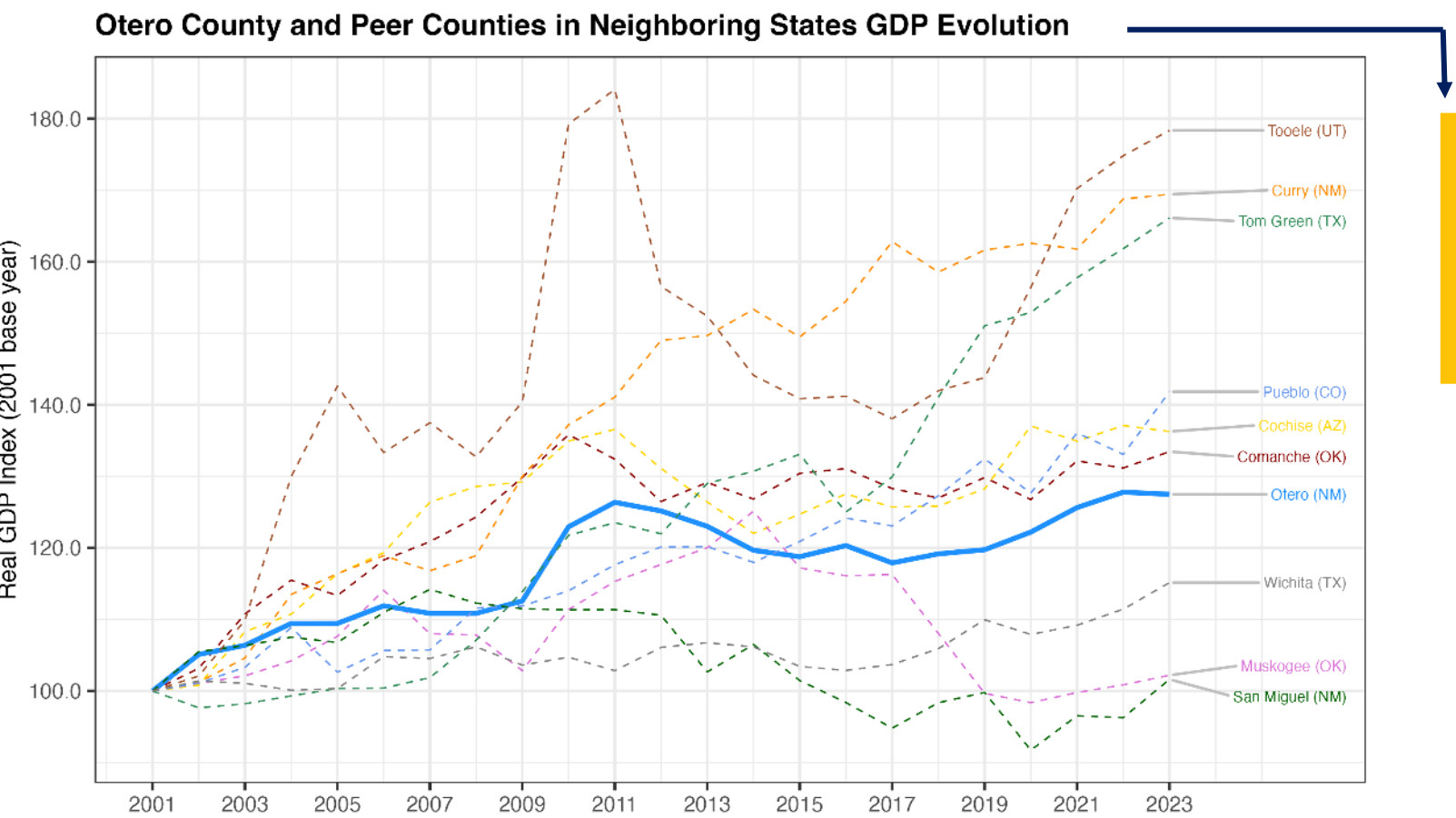
Source: Bureau of Economic Analysis (BEA) and U.S. Census Bureau via FRED
Note: the dotted lines are the averages of GSP growth rate

Recent economic performance – Gross County Product



Shifting from per capita measures to total GCP levels gives a sense of the overall size of the local economy, based on everything produced within the county's borders. To make comparisons between places clearer, GCP is shown as an index using 2001 as the base year. This approach allows for easy tracking of economic trajectories across places of different sizes and helps highlight specific periods when significant changes or challenges occurred. Otero's economic trajectory is shown alongside that of New Mexico as a whole.

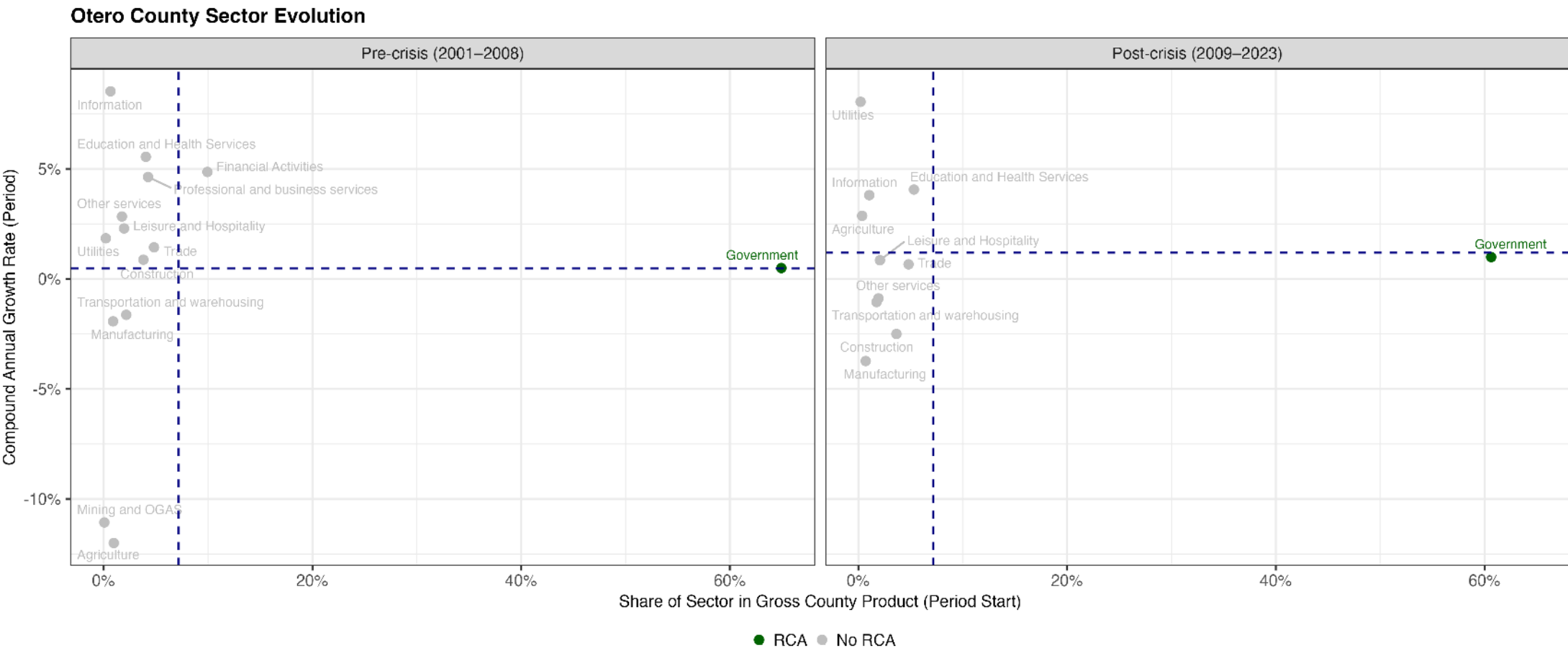
Recent economic performance – GCP trajectory relative to peers



This graph uses the same set of peer counties as in the population comparison but now focuses on economic trends. As with the previous comparison to the state, each county's GCP is indexed to 2001, making it easier to spot major changes and differences in trajectory over time. Otero's GCP is shown alongside that of its peer counties.

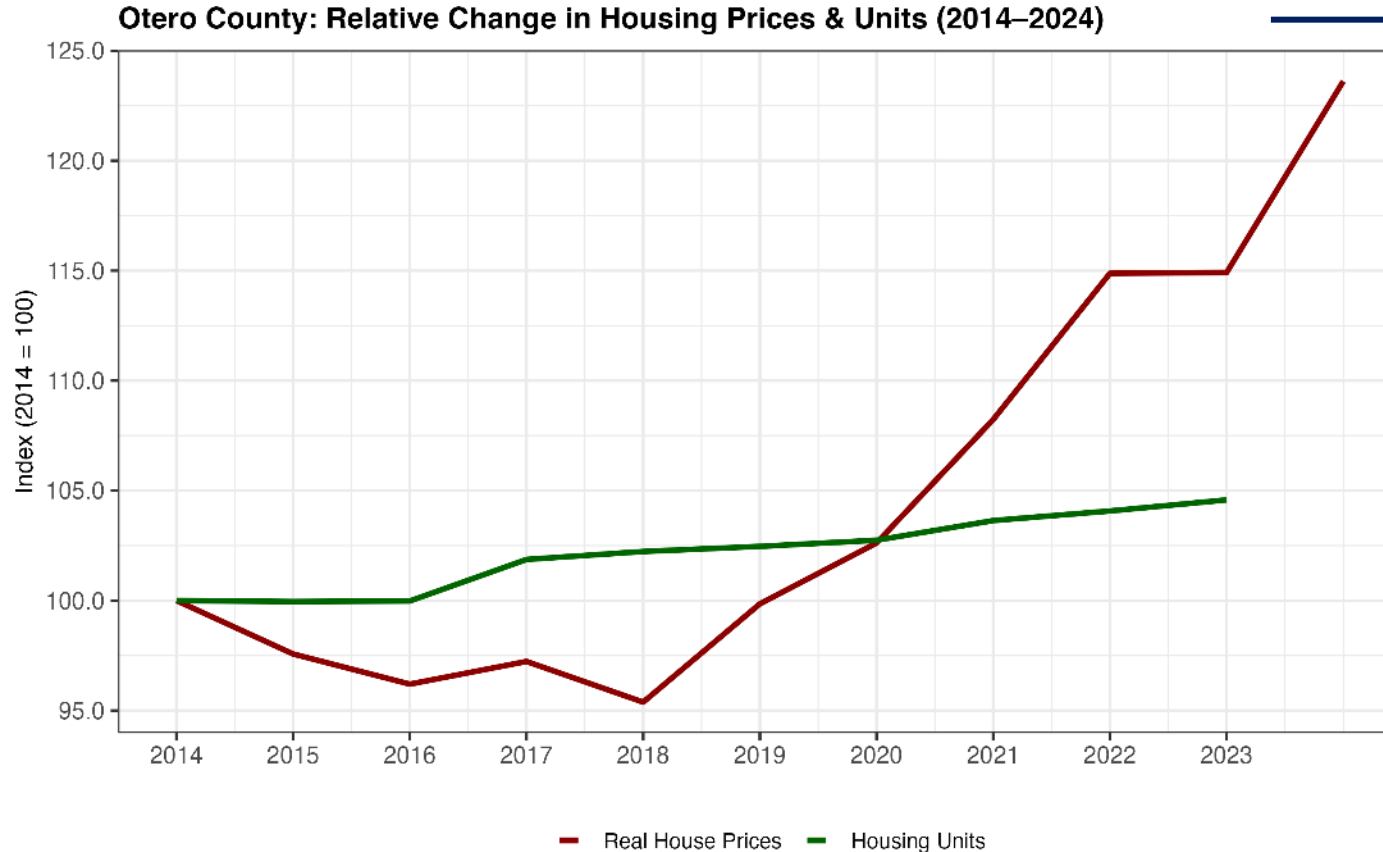
Underlying economic engines

GCP can be broken down into the sectors that drive the local economy. The following graph does this by showing each sector's average growth rate and share of the economy before and after the financial crisis. Each dot is a sector; its position reflects both its average growth and its importance to the county's economy.



Source: Bureau of Economic Analysis (BEA)
Note: This RCA is comparing the county's share vs US to identify the distinctive sectors for the county.
Note 2: Some sectors are not included in both graphs due to data availability

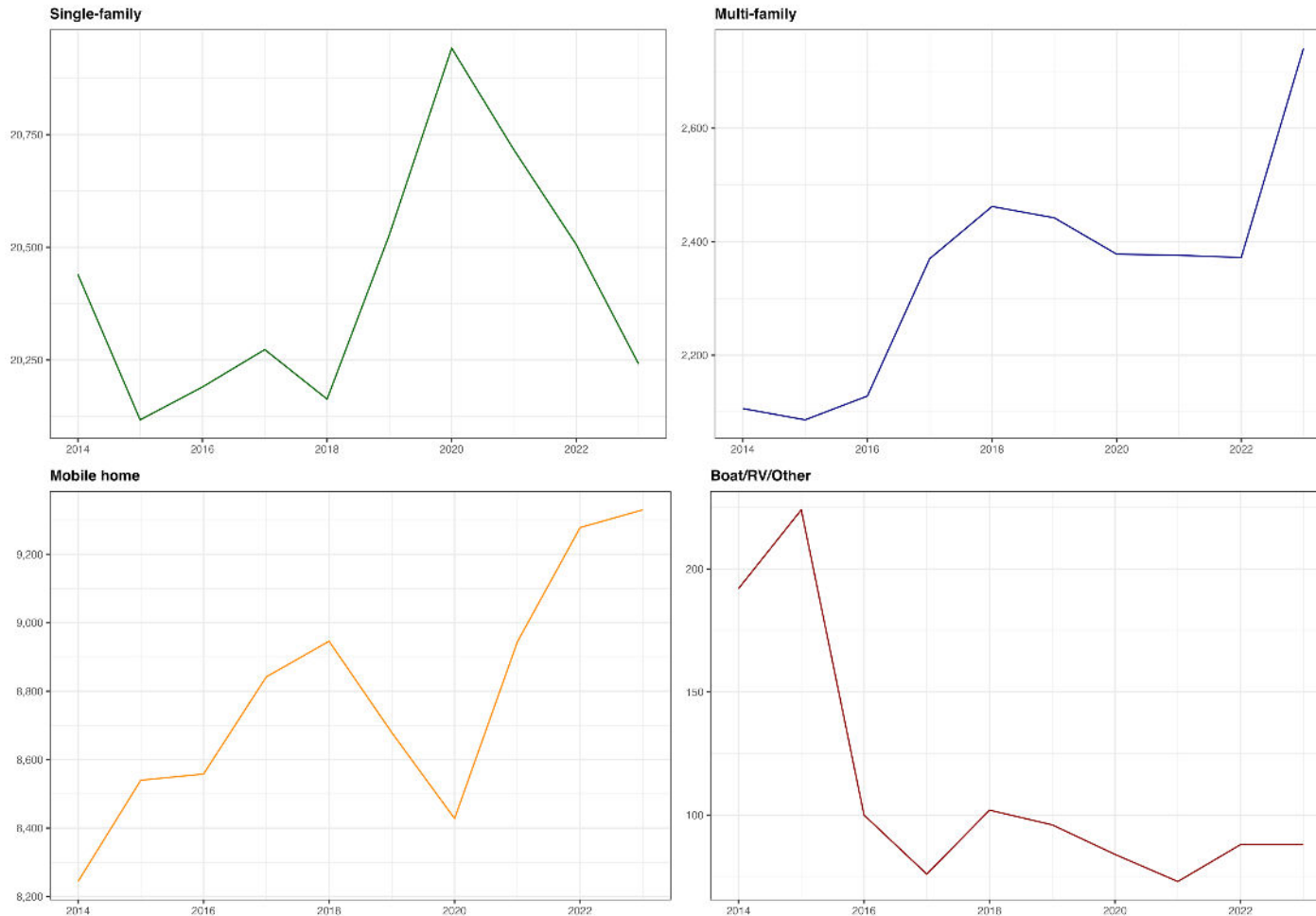
Housing dynamics – local prices and housing supply



So far, the analysis has focused on economic activity as a driver of growth. However, as noted earlier, people are not only drawn by job opportunities, but also by the overall quality of life a place can offer. Factors such as amenities, public services, and housing availability all play a role in where people choose to live. While this analysis doesn't cover every factor, it offers some insight into a community's ability to attract and retain talent by examining trends in housing demand and supply.

Housing dynamics – Breakdown of housing supply

Otero County Housing Units by Type (2014-2023)



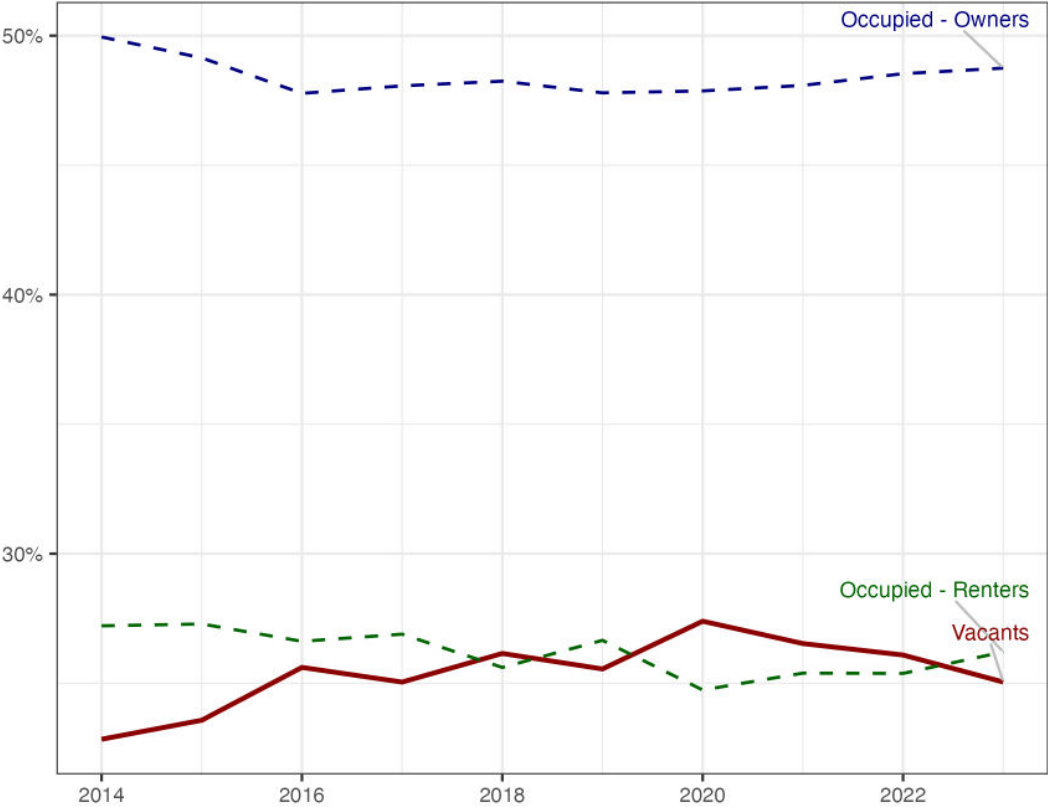
The U.S. Census Bureau classifies the housing structure according to how many units it has: one, two, three and so on. This analysis uses four main categories: Single-family (only one unit), Multi-family (two or more units), Mobile homes and Boat/RV or other types of housing.

Housing dynamics – Tenure and vacancy

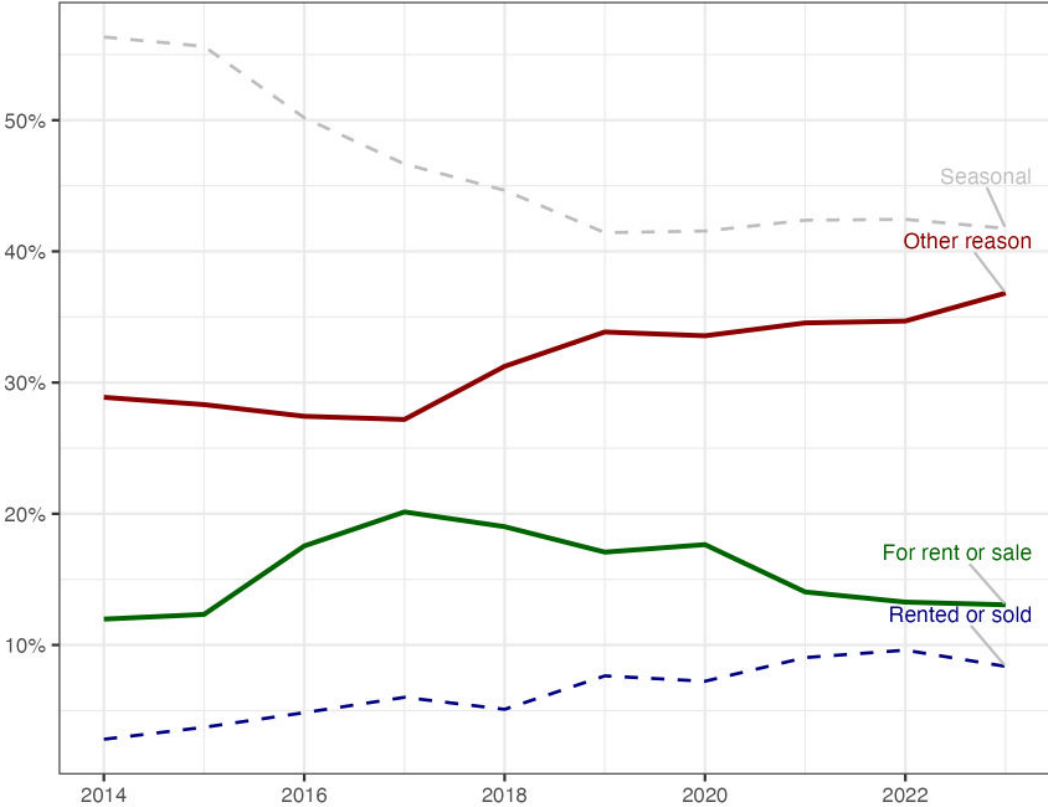


Housing units can be occupied by either owners or renters, while some remain vacant for various reasons. Some vacant units are already taken and are awaiting new residents, while others are actively on the market for rent, for sale, or available seasonally. The most concerning are those listed as vacant for “Other” or unclear reasons.

Otero County Housing Tenure (Percent of Units)



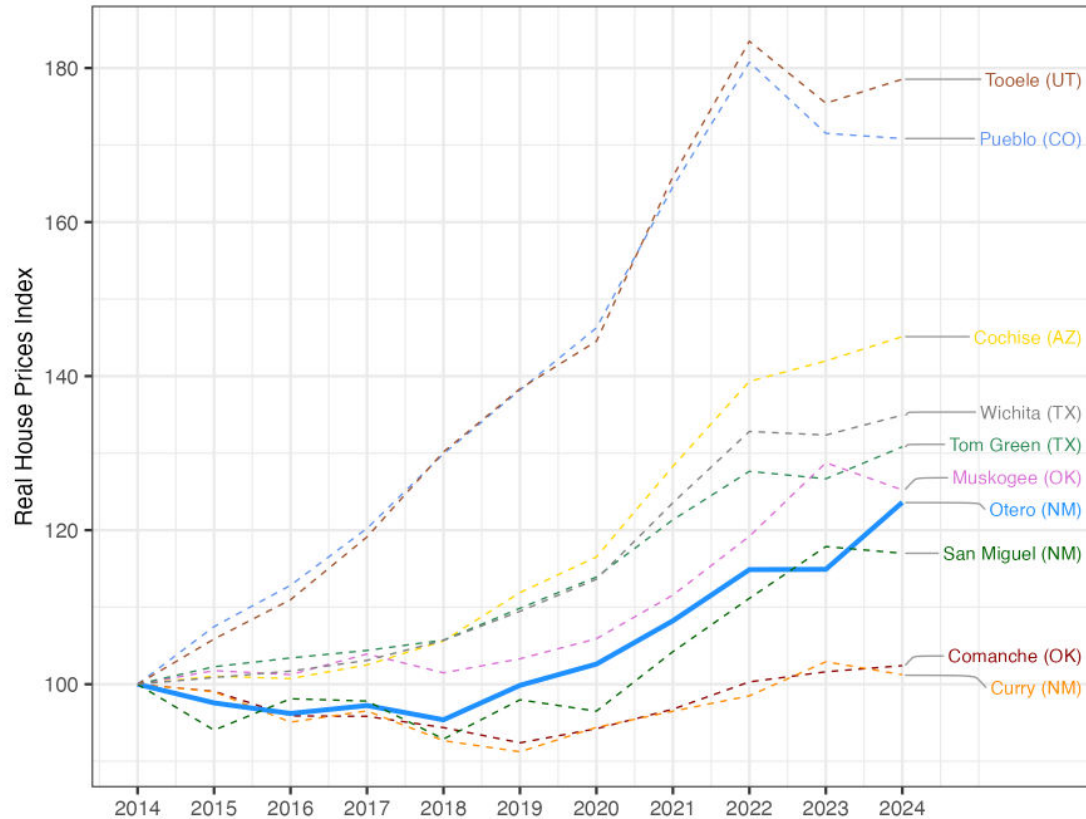
Otero County Housing Vacancy Reasons (Percent of Vacant Units)



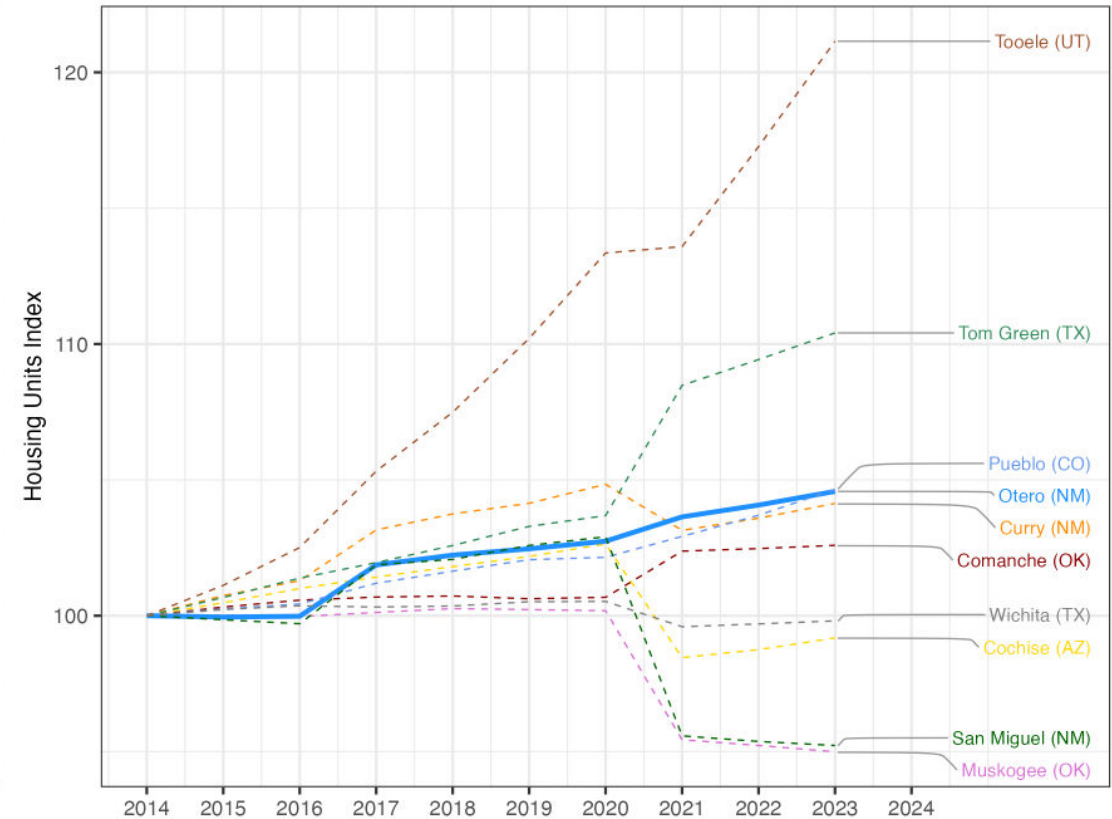
Housing dynamics – Comparison with peers

The previous slides examined Otero County's housing supply and demand on its own. The following graphs add context by comparing these trends to the same peer counties used earlier

Evolution of Real House Prices by County (2014 - 2024)



Evolution of Housing Units by County (2014 - 2024)



Diversification opportunities

Which industries are better positioned to fuel Otero County's economy?

Overview of the selection of promising industries

- **Background.** The prior section, “County Economic Snapshot,” provided a preliminary diagnosis of the county’s current situation by examining main population and economic trends. This analysis helps clarify whether the county faces greater challenges in fostering economic activity or in attracting and retaining workers for future growth. Regardless of these constraints, every community can benefit from identifying which industries are best positioned to bring new jobs.
- **Complement to local knowledge.** While local stakeholders often have valuable insights into which industries could thrive, the sheer number of possible options, over 1,000 industries at the 6-digit NAICS level, means there is room to complement local knowledge with data-driven observations, including some that may not be immediately obvious as a local fit.
- **Selection.** From the whole universe of potential industries, the analysis first identifies the industries the country is already good at and, second, other industries that require similar capabilities to these. Finally, it focuses in on which of these are tradable industries. Within tradable industries that align with the region’s existing capabilities, there are two key groups. “Already Competitive” industries have a strong local presence and serve as current economic strengths. “Potential Opportunities” are industries that are either smaller or not yet established locally, but whose growth requirements closely match the local economy’s current mix of know-how, skills, infrastructure, and other inputs (productive capabilities). These industries may offer pathways for future job creation and diversification.
- **Building blocks.** These groupings are based on an approximation of the local productive capabilities (knowhow, skills, infrastructure and other inputs) and how well these match the needs of different industries. By examining both the mix of existing industries and their broader relationships, the analysis highlights which industries the local economy is best equipped to support, either by reinforcing established strengths or by fostering new sources of job growth.

Our analysis is built on three cornerstones

Local Capabilities



What is Otero good at?

Revealed Comparative Advantage (RCA) or Location Quotient (LQ) as key metric

Industries Relatedness



How interconnected are industries with one another and with Otero's capabilities?

Proximity and Density as key metrics

Tradable Income



Which industries can bring external income to Otero?

Tradable or base industries that export goods and services

Our analysis is built on three cornerstones

Local Capabilities



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*Revealed Comparative Advantage
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Industries Relatedness



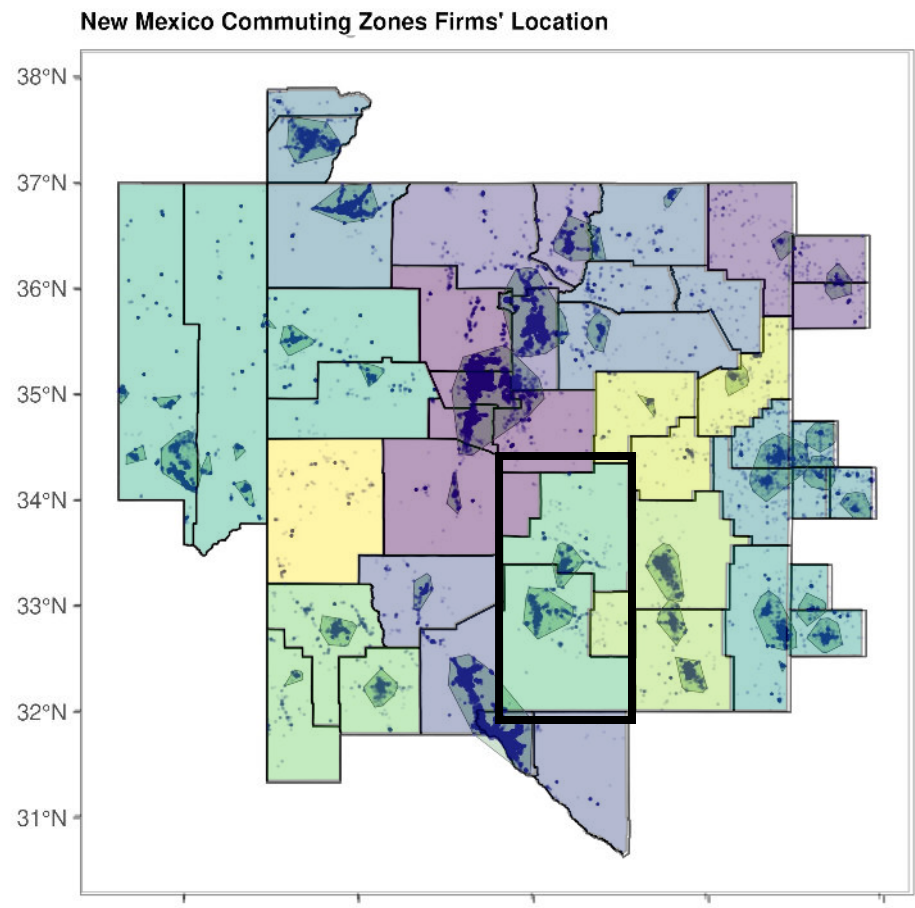
Tradable Income



What is considered “local”? Beyond administrative borders



We think of the local economy as a commuting zone (CZ).



Workers often commute beyond the administrative boundaries of towns and cities. To capture this, the USDA defines commuting zones across the country, grouping areas based on where residents travel for work.

Otero's commuting zone, highlighted by the black square on the left map, includes Lincoln County (NM).

The analysis in this document focuses on Otero's commuting zone (CZ), so references to Otero refer to its CZ

Which are Otero capabilities? Looking for signals

➤ *Productive capabilities could be collective knowhow, skills, infrastructure and other inputs. We cannot observe all, but the current economic activity gives us a hint of which industries they can support.*

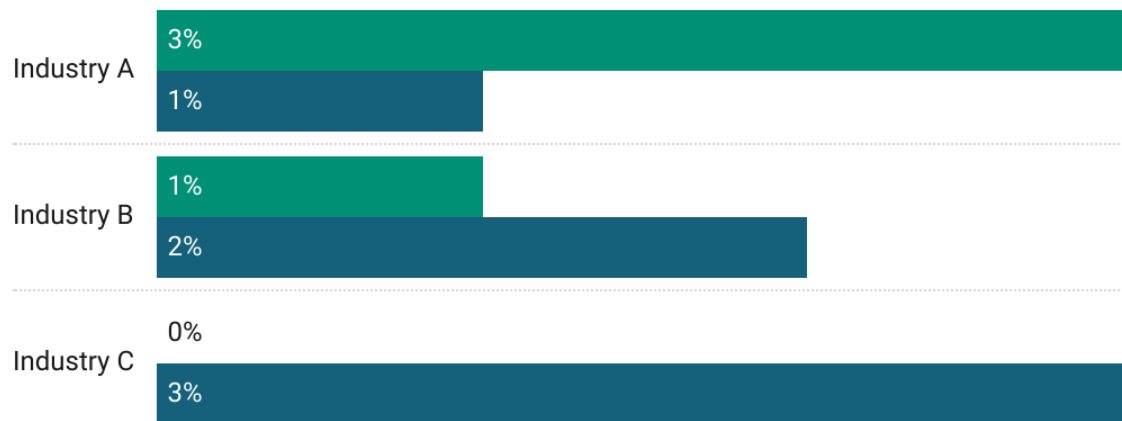
Key metric:

$$RCA = \frac{\% \text{ of CZ Jobs in industry } i}{\% \text{ of US Jobs in industry } i}$$

➤ *By comparing an industry's presence in the CZ relative to its presence nationally, it tells us what is Otero good at.*

For example:

■ County share ■ U.S Share



RCA = 3 (RCA > 1, Competitive edge). The CZ has the capabilities to excel in this industry.

RCA = 0.5 (RCA < 1, Not competitive). The CZ has some capabilities to participate in the industry

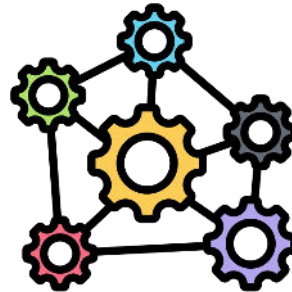
RCA = 0 (No presence). The industry is not currently active, but it could be developed in the future

Our analysis is built on three cornerstones

Local Capabilities



Industries Relatedness



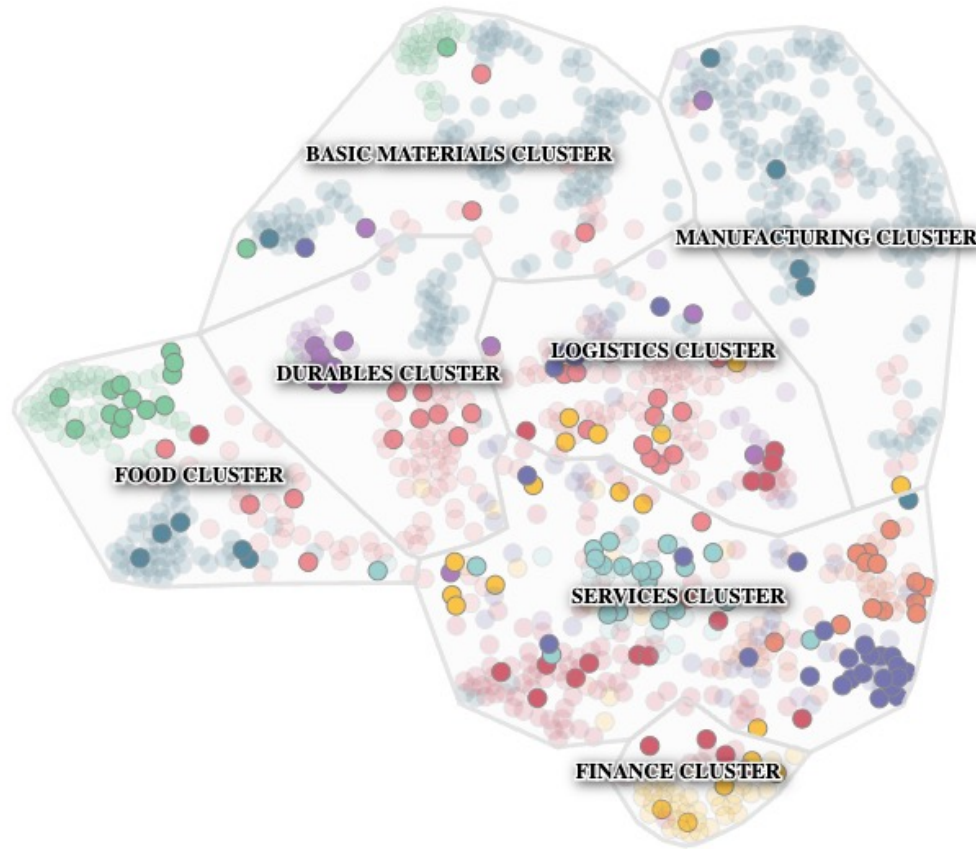
***How interconnected are industries
with one another and with
Otero's capabilities?***
Proximity and Density as key metrics

Tradable Income



What else could Otero capabilities support? Let's start by looking at the relationships between industries

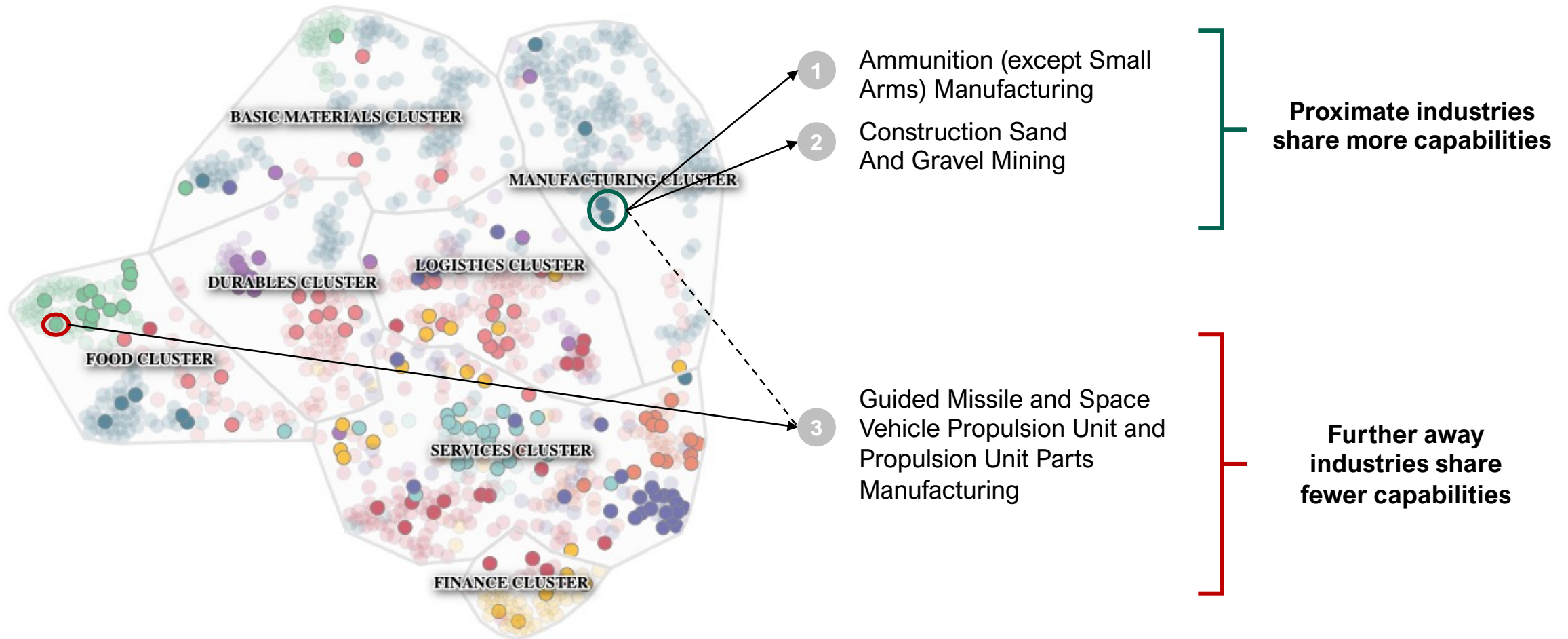
➤ *The industry space is the visual representation of the relatedness between all the existing industries.*



- Each dot represents an industry.
- Each color represents an economic sector
- Each area outlined in grey represents a cluster of economic activity. In each, industries from different economic sectors require similar capabilities.
- The stronger colored dots are industries with a significant presence in Otero County commuting zone relative to the rest of the US (RCA > 1).

Which industries are more alike? It's all about their position

➤ *Proximity tells us how similar two industries are.*

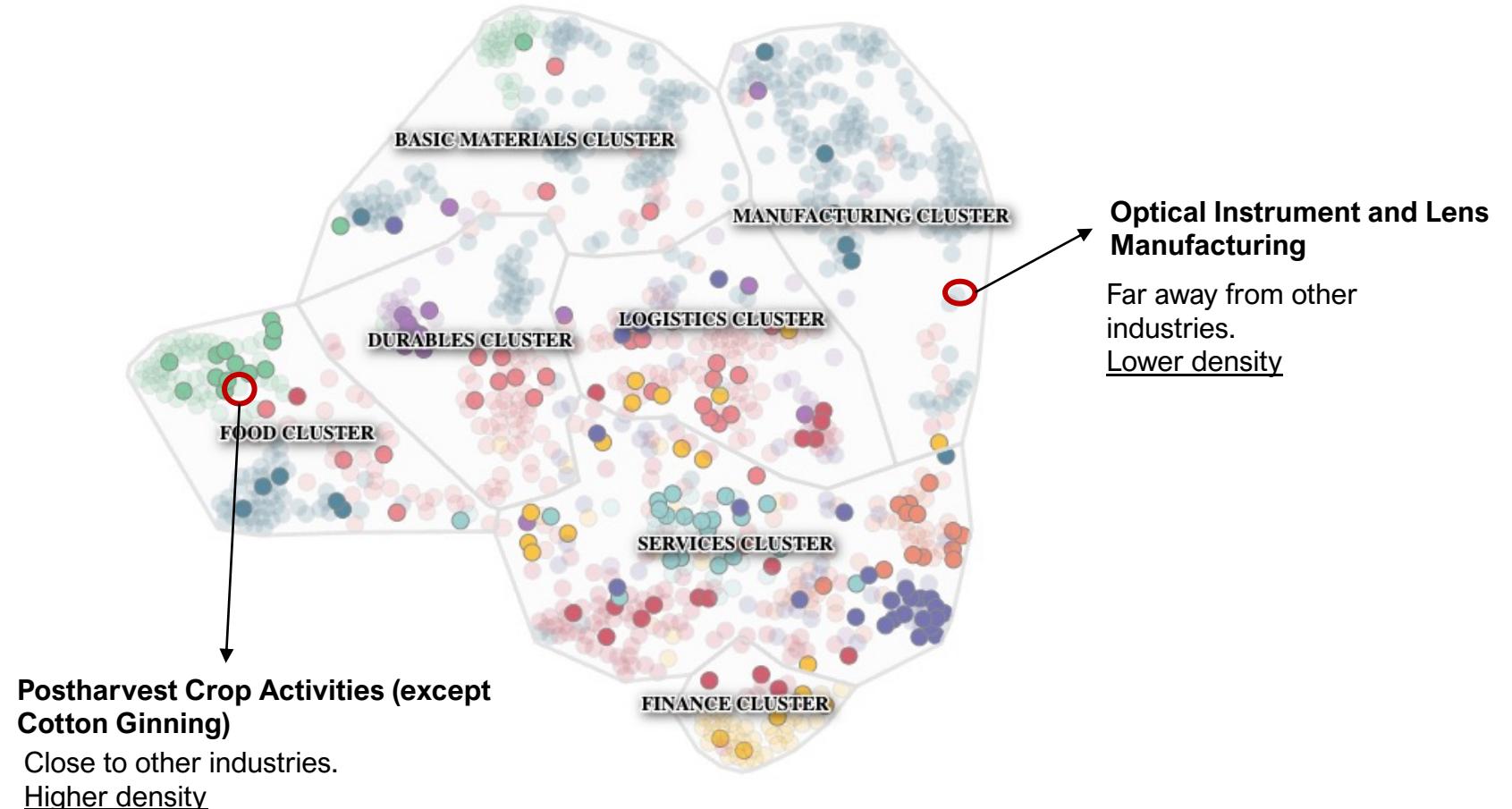


What industries require similar capabilities as those found at Otero?

Depends on their proximity to current industries

➤ ***Density considers the connections between an industry and the CZ's current economic activity. It provides a notion of which other industries the productive capabilities could support.***

When thinking about new industries, development will be easier if the industry is located in a part of the industry space where Otero already has significant economic activity and strong capabilities. Regions typically grow by developing these



Our analysis is built on three cornerstones

Local Capabilities



Industries Relatedness



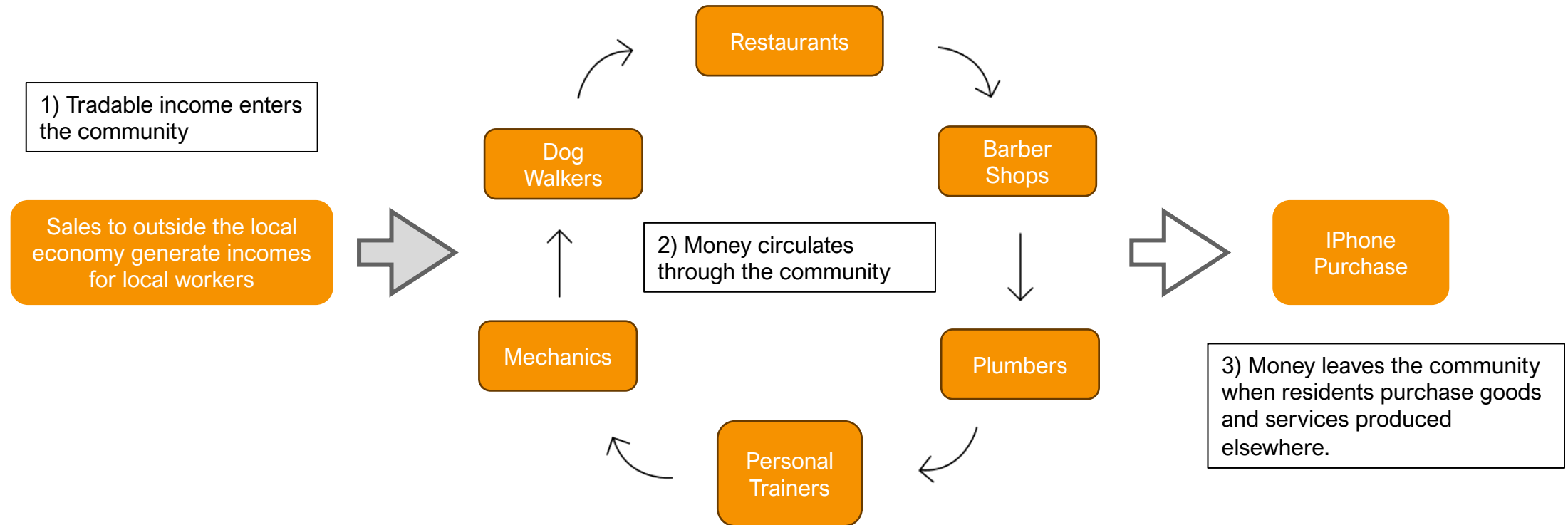
Tradable Income



Which industries can bring external income to Otero?
Tradable or base industries that export goods and services

What are the industries that could bring external income to Otero? The relevance of tradable income

➤ ***Tradable income is jargon for money generated from stuff that a local economy sells beyond its borders. It essential for economic survival as it allows to purchase goods and services that are not produced locally and creates local jobs.***



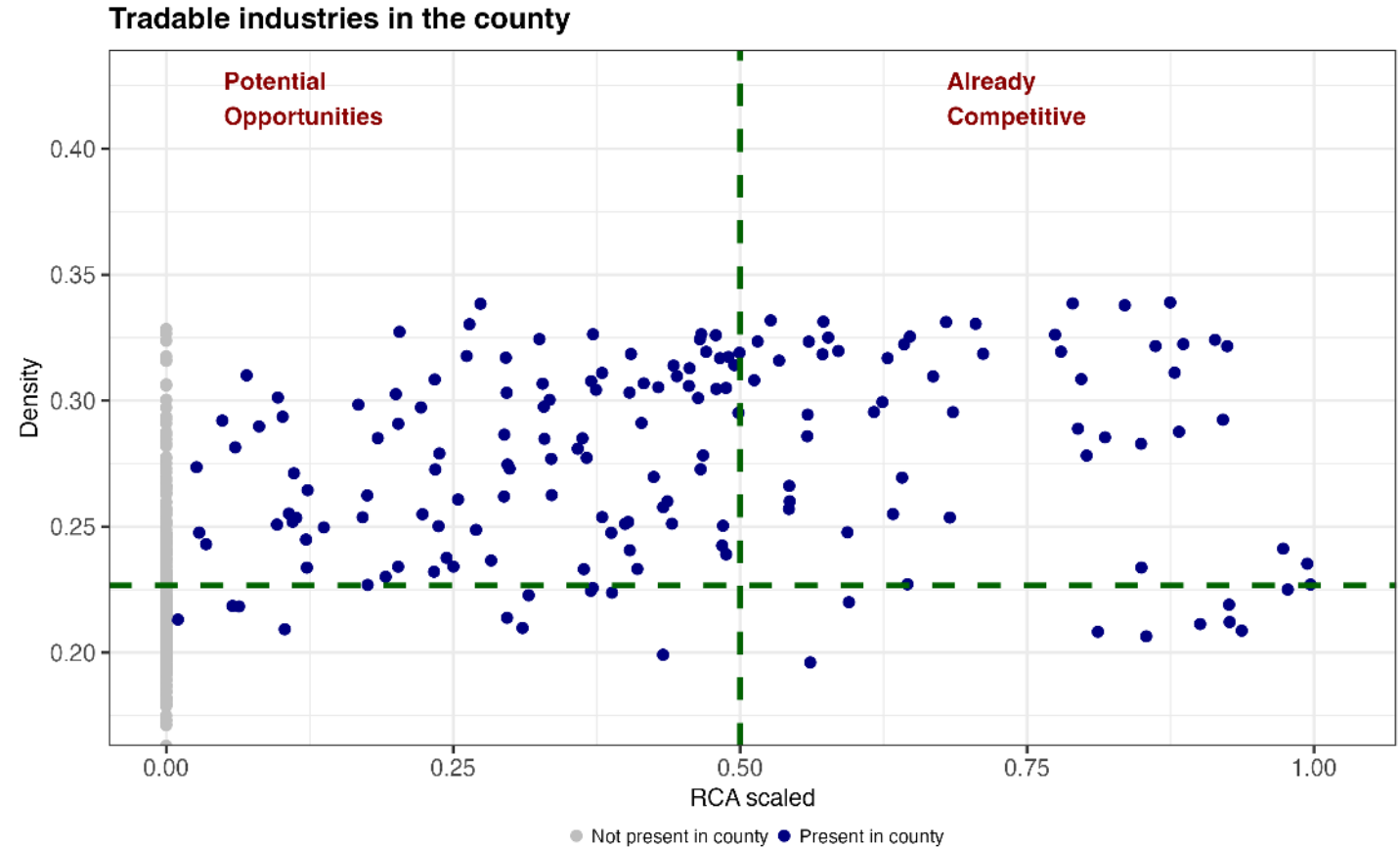
There are 1012 industries (6-digit NAICS 2022 code). Using County Business Pattern (CBP) dataset from Eckert et al. (2021), Growth Lab research has determined that 52% of them are tradable.

What are the opportunities in the tradable sector? RCA and Density as criteria

Remember:

- 1 **RCA.** What is Otero good at?
- 2 **Density.** How close is an industry to the Otero's existing capabilities?

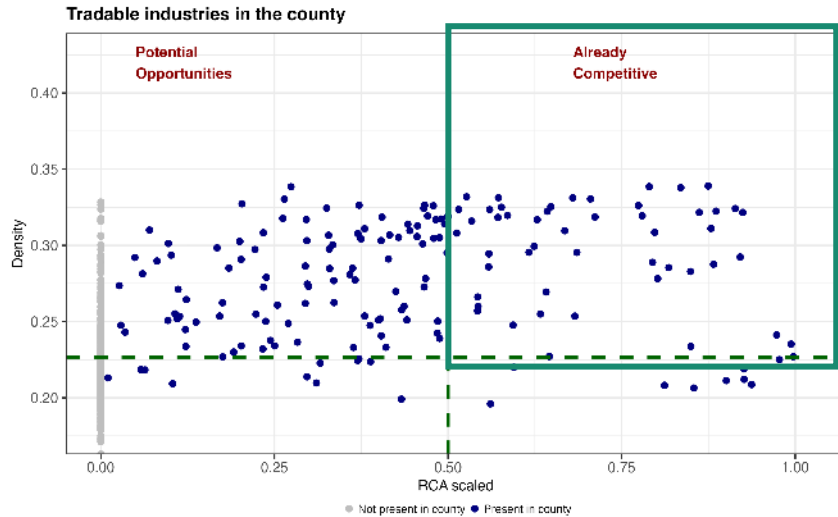
Defining the groups. The first threshold for group definitions is set at $RCA = 1$ (or 0.5 on the scaled horizontal axis), separating industries with relatively larger and smaller local presence. The second threshold uses the median density among all tradable industries to identify those most similar to the local productive capabilities. The focus is on industries above the median density, as they are more closely aligned with existing capabilities.



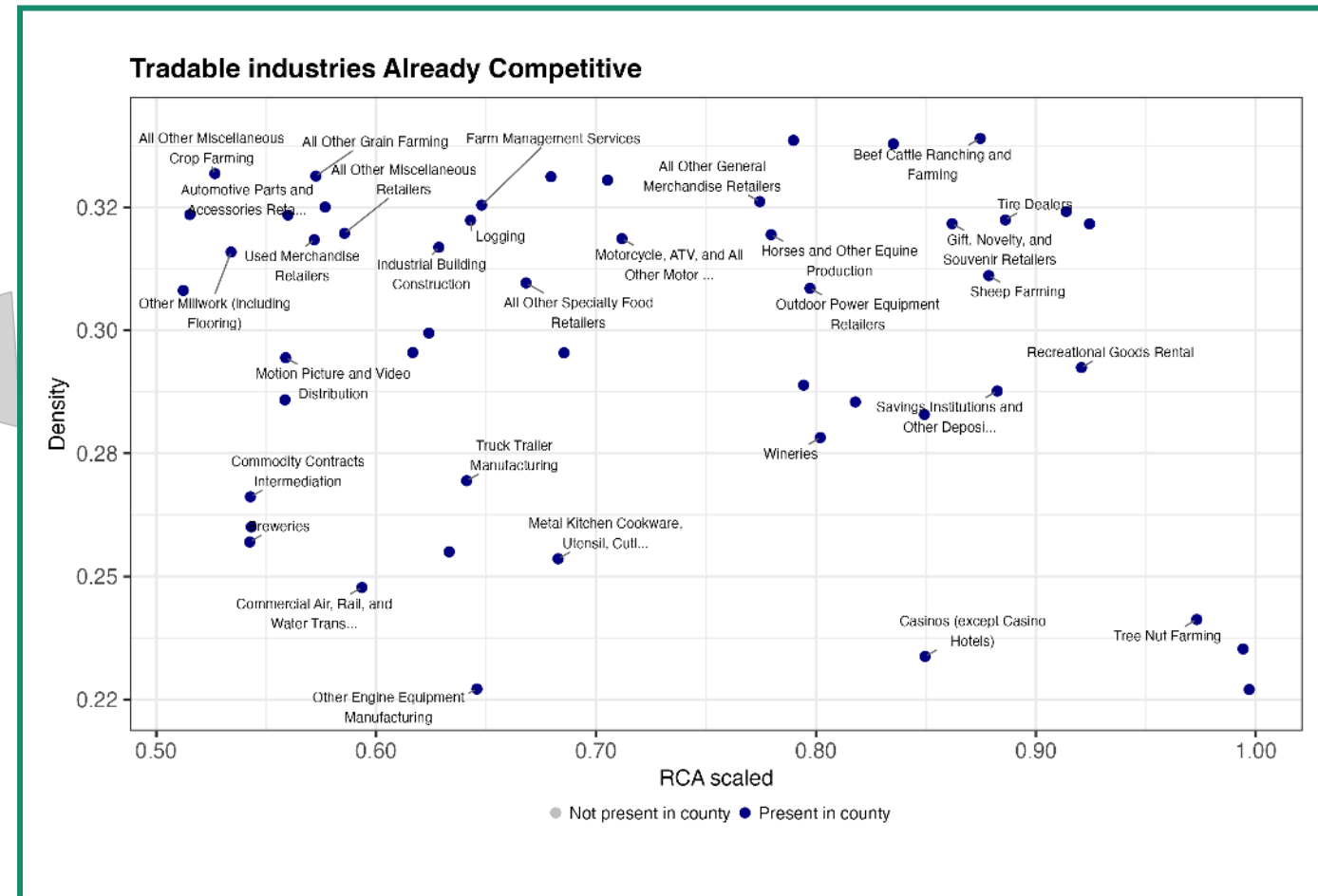
How to start exploring promising industries

- **Wide set of possibilities.** The analysis highlights over 200 potential industries for growth (either by supporting industries already established locally or by creating conditions for new ones with potential to thrive). Ultimately, choosing which industries to pursue depends on local priorities, assets, and experience. The following slides and the [attached dataset](#) offer multiple ways to explore these opportunities. There is not a unique way of using these resources.
 - **First pass.** If you're unsure where to begin, start by reviewing the visuals that display all opportunities by category (Manufacturing, Trade, Services, and Natural Resources) to get a sense of the landscape. Alternate between the visuals and the dataset, and make note of any industries that immediately catch your attention for further exploration. The dataset provides several variables for each industry, but at this stage, simply flag those that seem particularly relevant or interesting for your context. You can later assess which of these options are most practical or realistic based on the specific conditions required for development.
 - **Exercise caution with opportunities that feel off.** Promising industries are identified based on their similarity to the local economy's capabilities, but a perfect fit is uncommon: some capabilities (skills, infrastructure, or inputs) may still be missing, especially for new or emerging sectors. The next step is to identify and assess these gaps with input from local firms and industry partners. In some cases, missing capabilities (like climate conditions for "Cotton Ginning") or unfavorable market conditions (as with "Support Activities for Coal Mining") mean the opportunity isn't realistic or practical. It is recommended to set aside options that clearly do not fit local conditions and instead focus on opportunities that align better with community strengths and potential.
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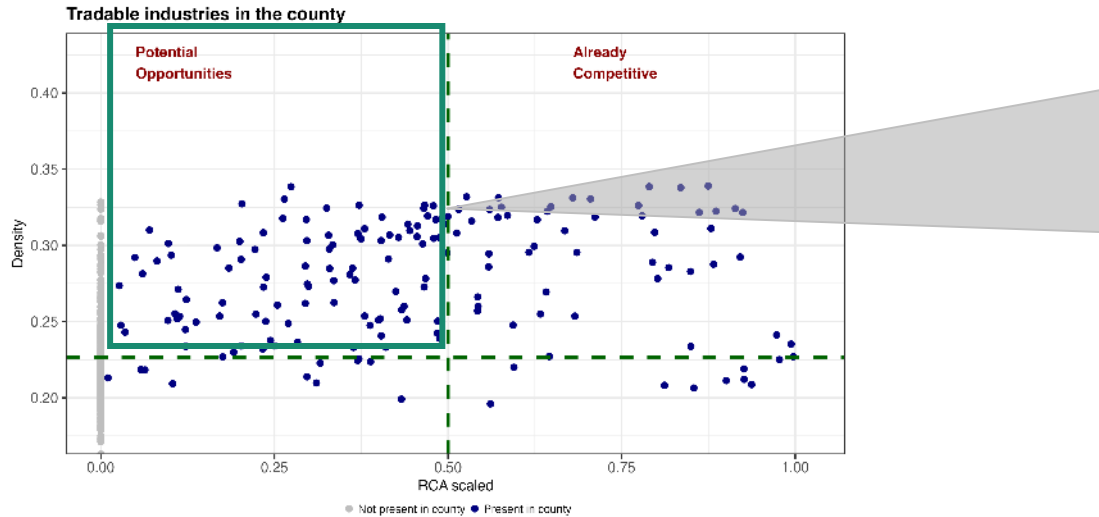
Already competitive industries in Otero's commuting zone



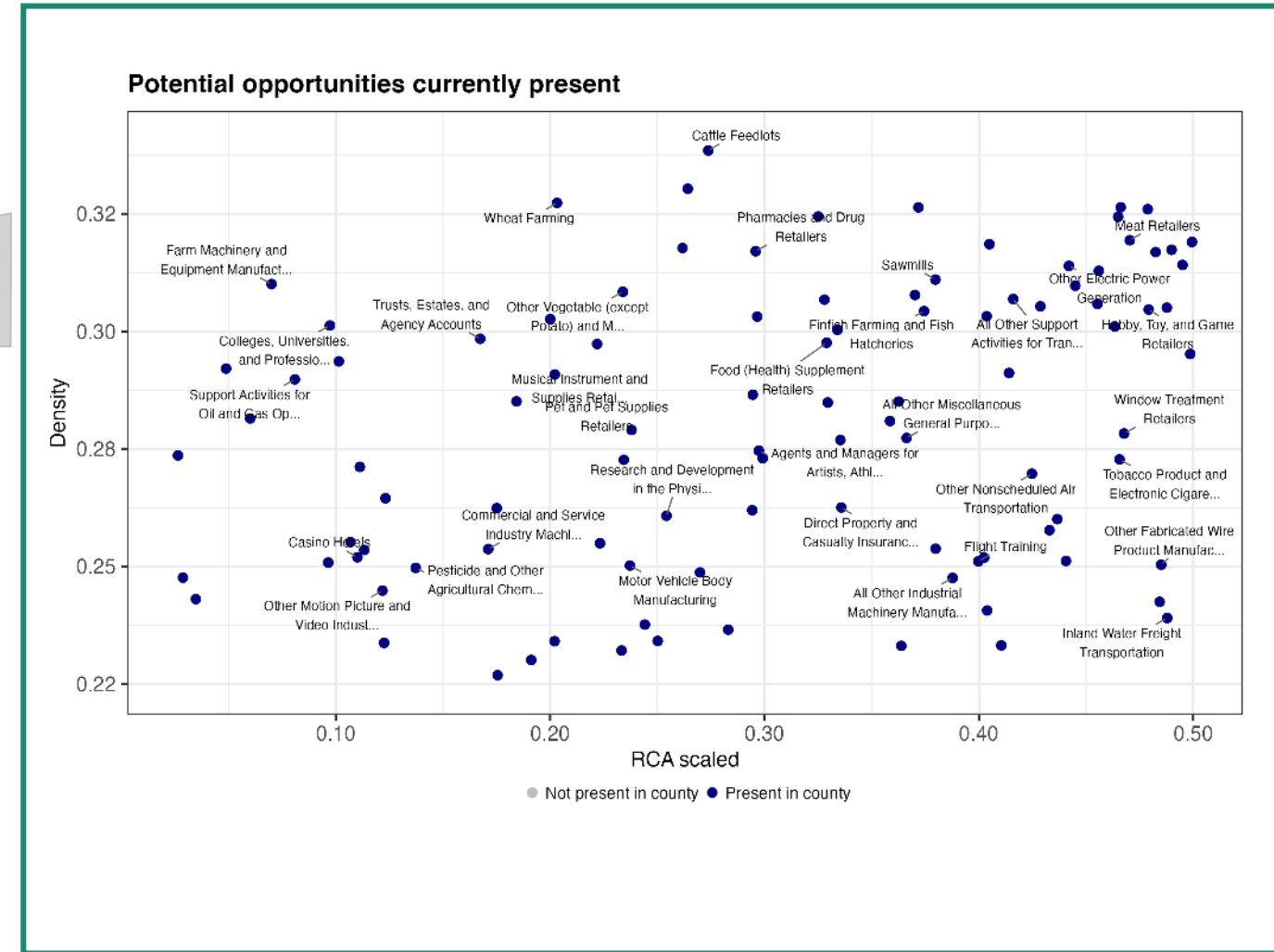
Industries in the top-right quadrant already have a strong foothold in Otero (RCA > 1 or RCA scaled > 0.5). A development strategy could focus on creating the right conditions – such as infrastructure, skilled workforce, and supportive policies – to help them grow and thrive even further.



Potential opportunities currently present in the county

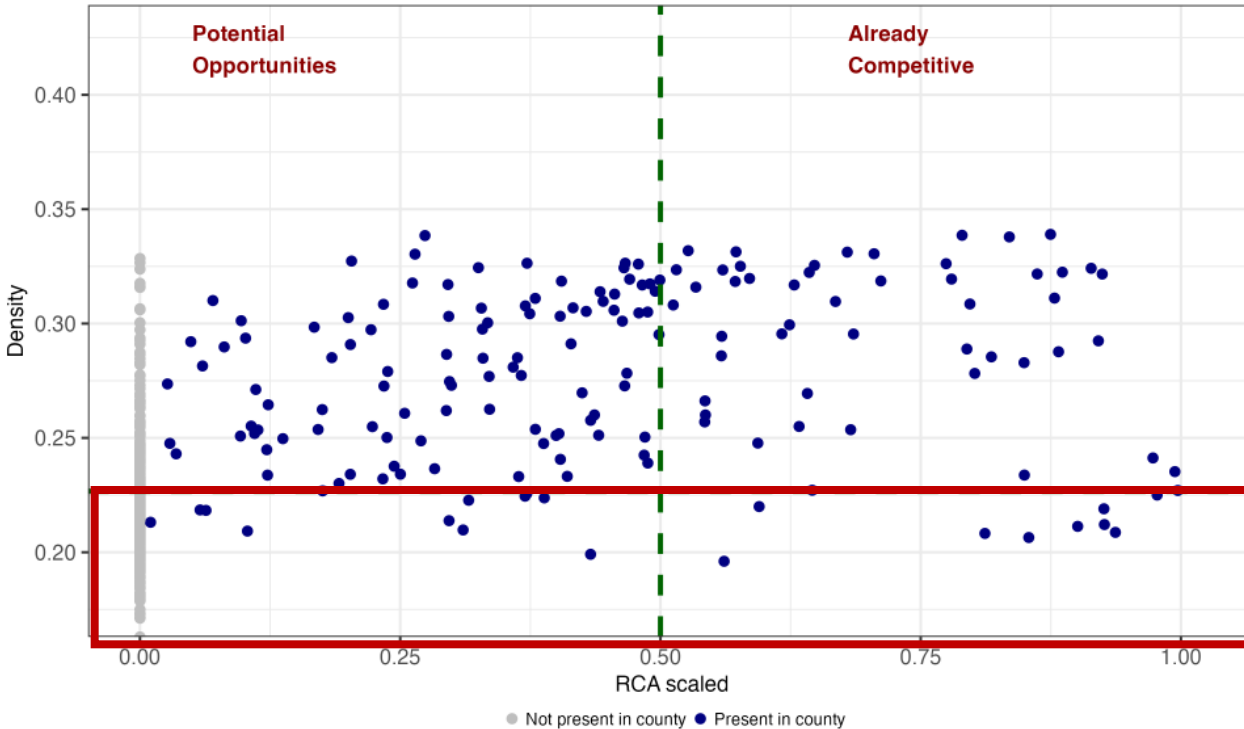


Industries in the top-left quadrant are particularly relevant for the county's development strategy because they already have some presence and are closely related to existing capabilities. In other words, they hold significant potential for growth. A development strategy could focus on creating the right conditions to help these industries flourish.



Industries further away from Otero's capabilities

Tradable industries in the county



The analysis does not focus on this set of industries because their requirements are not closely aligned with Otero's current capabilities. Industries with little local presence are unlikely to take root, while those with a larger footprint but a weak fit are more likely to shrink or eventually leave the community.

We identify 213 industries with potential opportunities.

Four major categories.



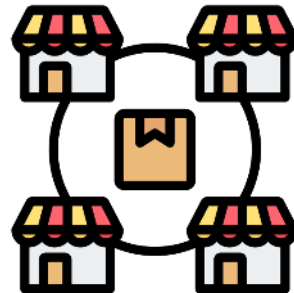
Several industries in Otero offer emerging and new promising opportunities for increased tradable income. While these industries are not yet as competitive in Otero as in other parts of the U.S., they share capabilities with industries that are already strong locally. This means they could expand relatively easily if the right conditions are in place.

Manufacturing



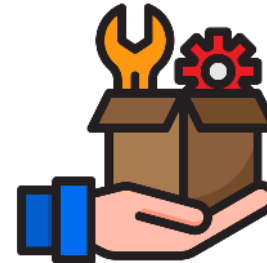
92 industries as potential opportunities

Trade



34 industries in retail and wholesale

Services



38 industries across different sectors

Natural Resources



49 industries in Agriculture and mining

Potential opportunities with high and medium-level wages.

153 industries across categories

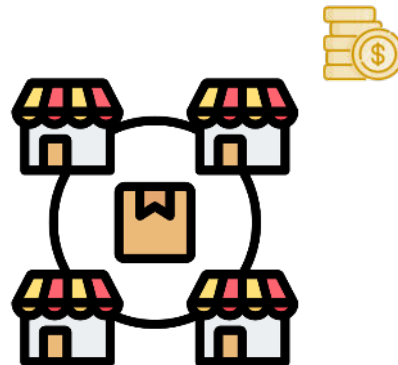
➤ ***Industries are grouped by wage levels using U.S. averages: the top 25% are classified as high-wage, the bottom 25% as low-wage, and the rest as medium-wage. The analysis focuses on high- and medium-wage industries, as these are more likely to provide quality jobs and stronger economic benefits for the community.***

Manufacturing



88 industries as potential opportunities

Trade



12 industries in retail and wholesale

Services



35 industries across different sectors

Natural Resources



18 industries in Agriculture and mining

Potential opportunities with high and medium level wages.

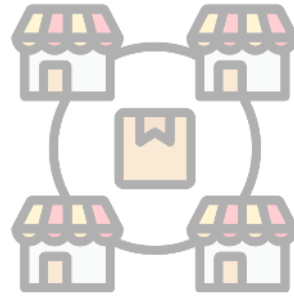
153 industries across categories

Manufacturing

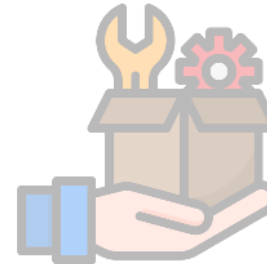


88 industries as potential opportunities

Trade



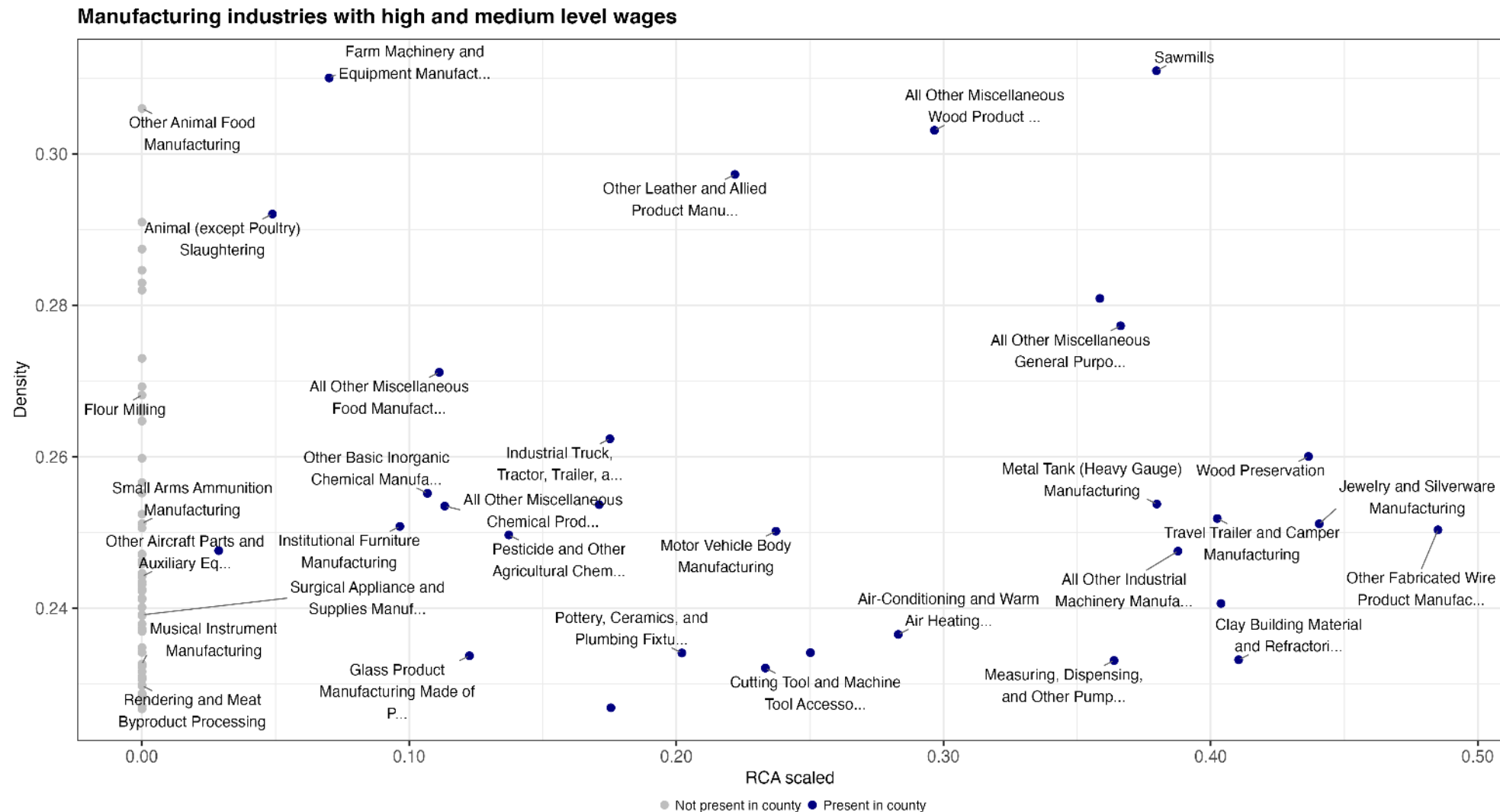
Services



Natural Resources



High and medium wages opportunities. 88 manufacturing industries Growth Lab



Main sources: Bureau of Economic Analysis (BEA) and Dun & Bradstreet.

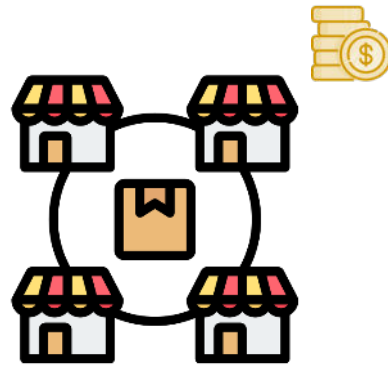
Potential opportunities with high and medium level wages.

153 industries across categories

Manufacturing

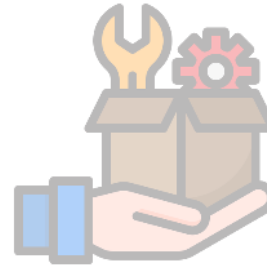


Trade



*12 industries in retail and
wholesale*

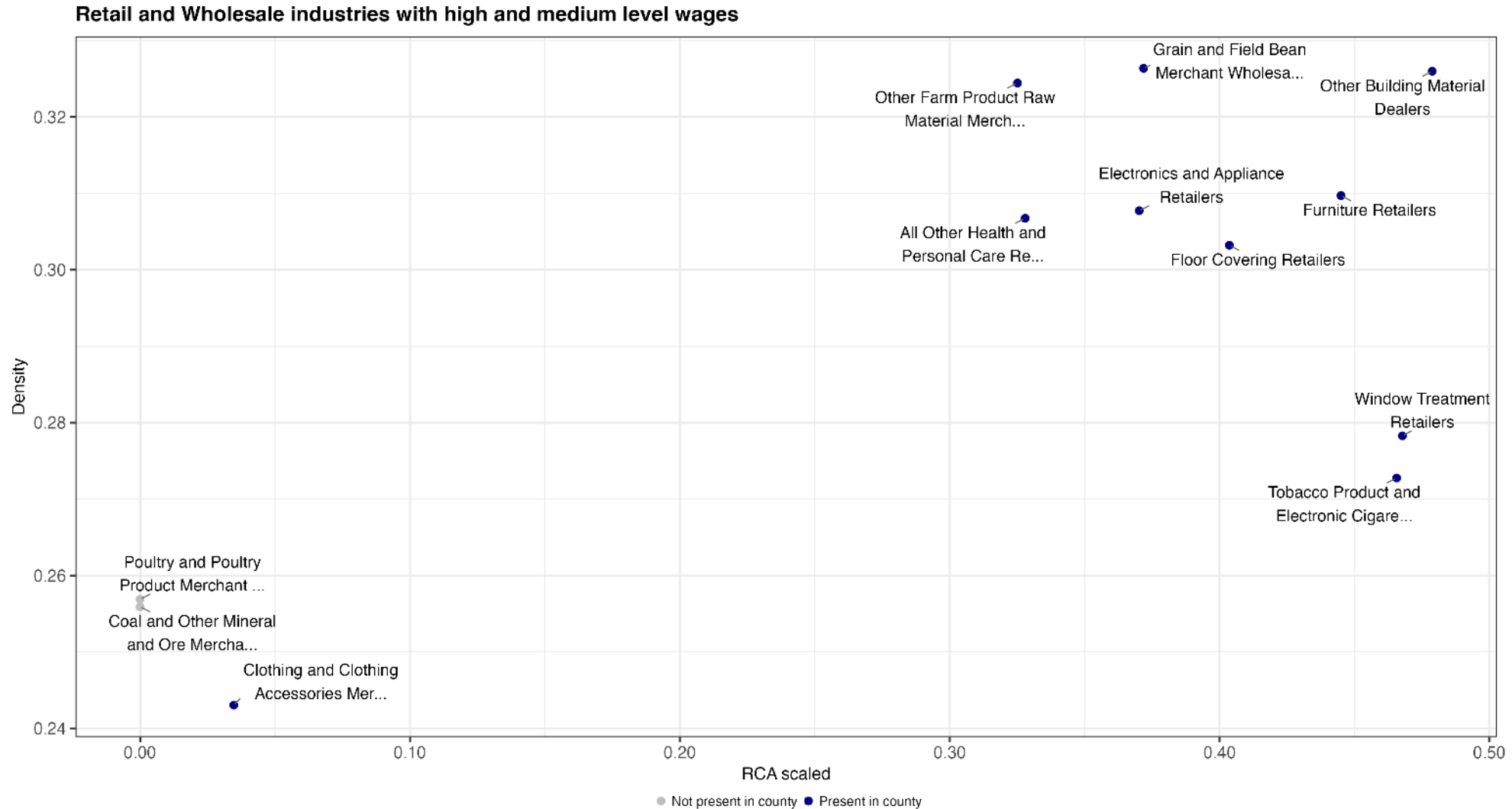
Services



Natural Resources



High and medium wages opportunities. 12 retail and wholesale trade industries



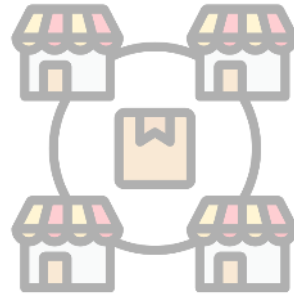
Potential opportunities with high and medium level wages.

153 industries across categories

Manufacturing



Trade



Services



*35 industries across
different sectors*

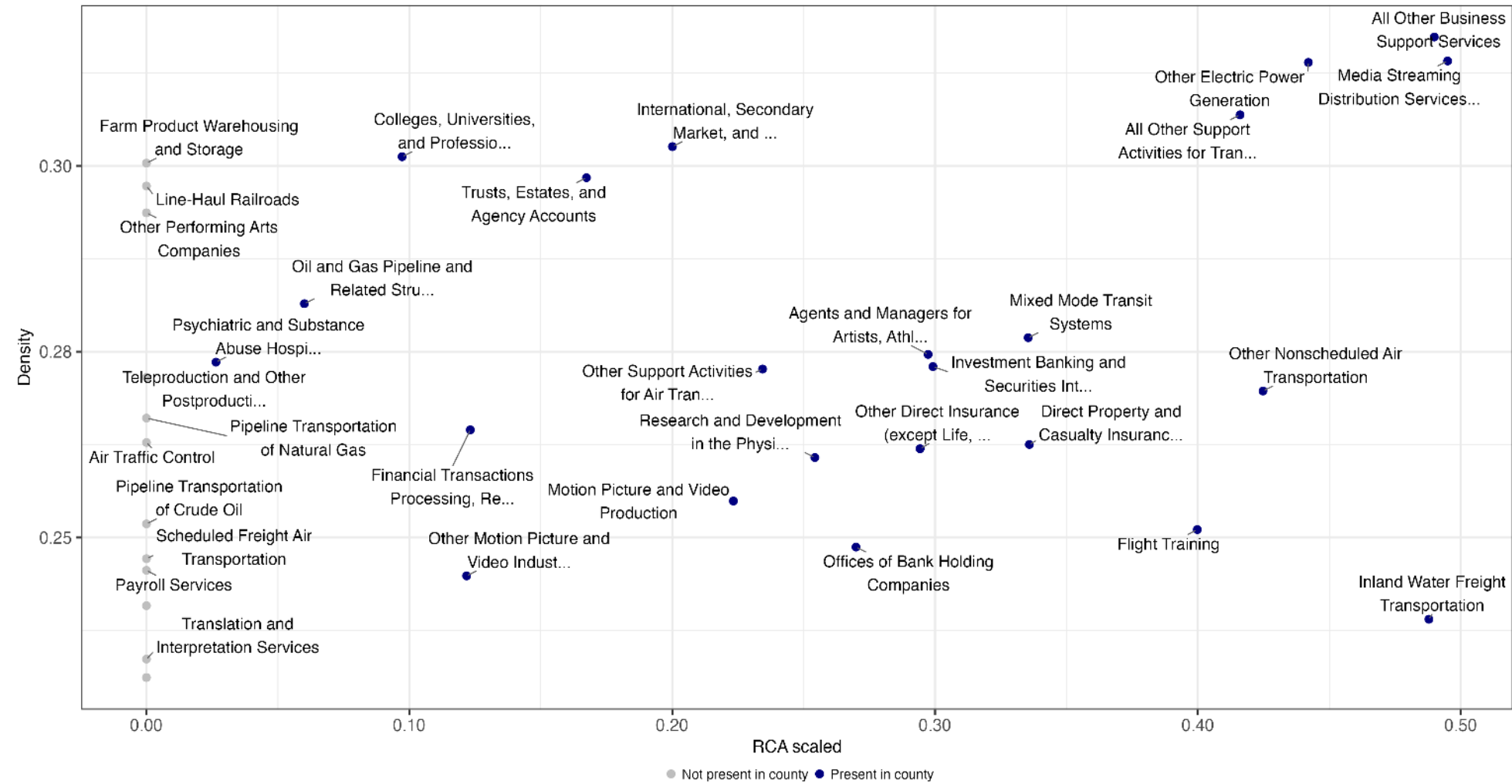
Natural Resources



High and medium wages opportunities. 35 services industries



Services industries potential opportunities with high and medium level wages



Main sources: Bureau of Economic Analysis (BEA) and Dun & Bradstreet.

Potential opportunities with high and medium level wages.

153 industries across categories

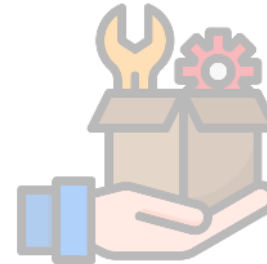
Manufacturing



Trade



Services

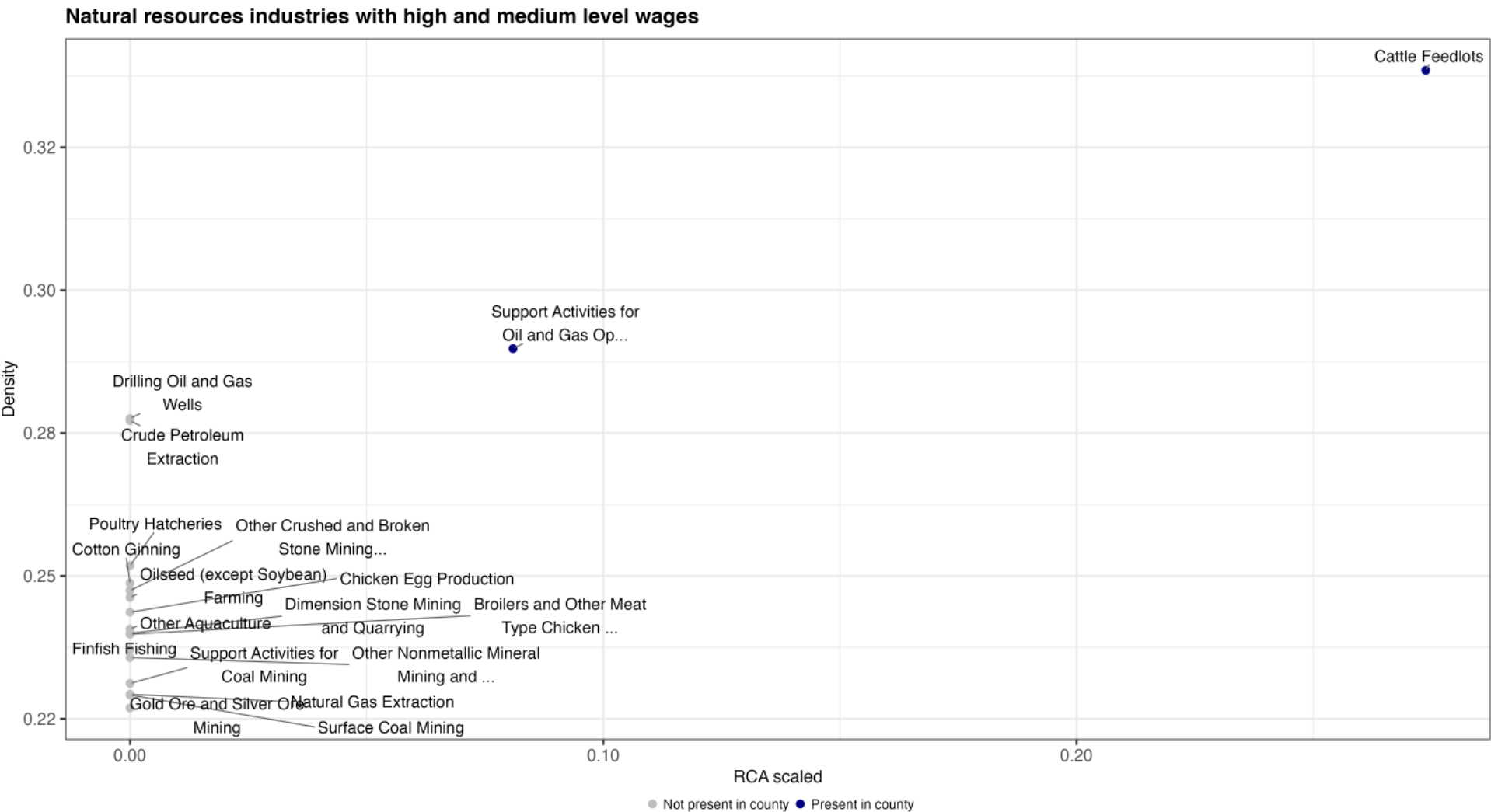


Natural Resources



*18 industries in
Agriculture and mining*

High and medium wages opportunities. 18 extractive industries

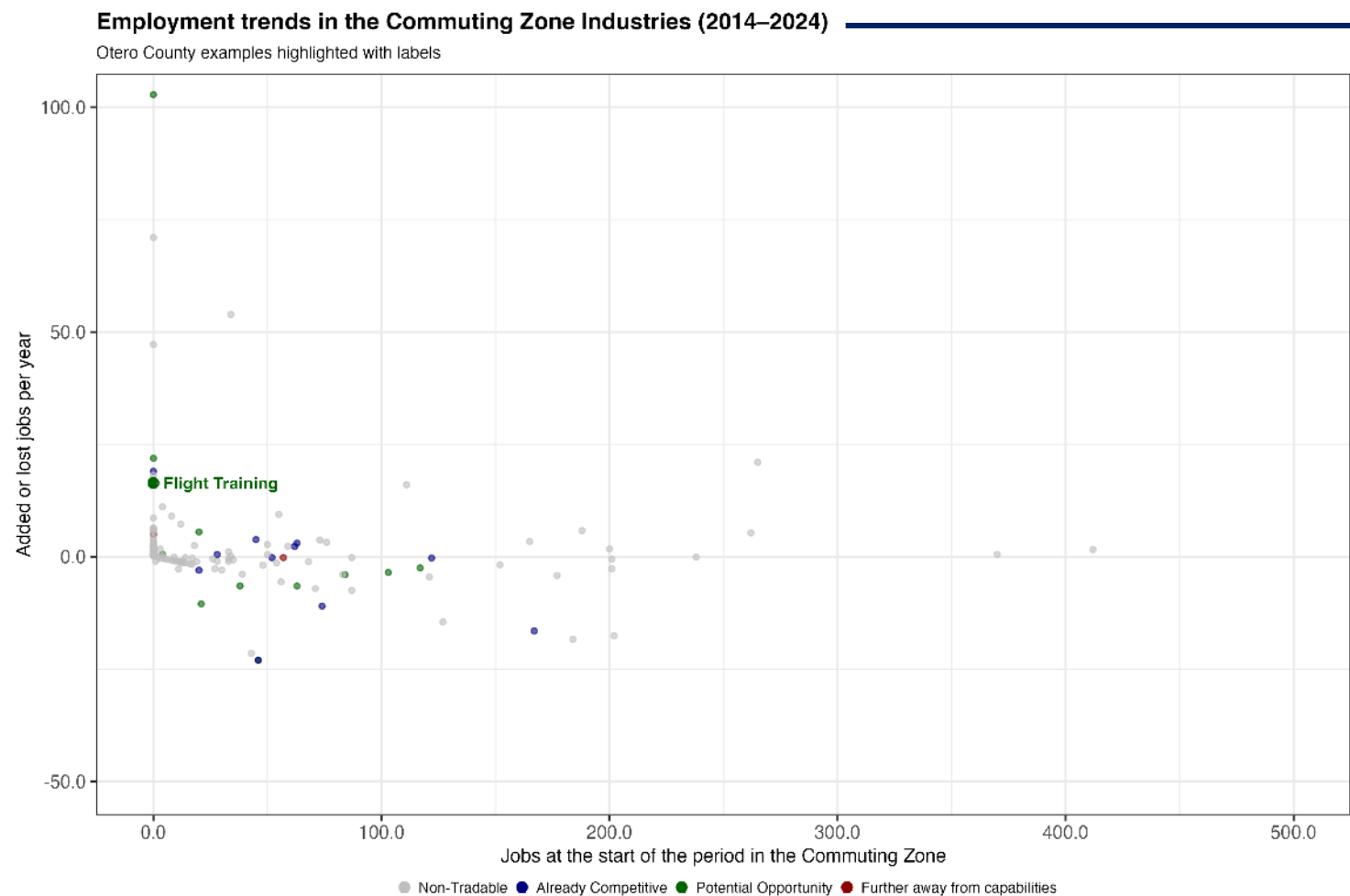


Main sources: Bureau of Economic Analysis (BEA) and Dun & Bradstreet.

How to further assess the selected options

- **Background.** After selecting a list of industries that feel particular relevant or attractive, the next step is to figure out which are the missing capabilities and what can be done, if anything, to provide them.
 - **Dataset as a reference.** The dataset provides useful information about potential gaps in productive capabilities, such as electricity needs or supply chain positioning, but it is not meant to offer all the answers. Instead, it serves as a starting point for further questions and discussions among local stakeholders. For instance, while the data show which industries have added or lost jobs in recent years, understanding the underlying reasons requires local and industry insights.
 - **Examples as guidance rather than prescription.** External analysis cannot replace local insight or dictate which industries to target. The following slides highlight selected industries and explore various dimensions of each, not to prescribe priorities, but to demonstrate how to use the dataset's variables to prompt questions and guide decision-making. The examples focus on “Potential Opportunities” with medium or high wages that already have some local presence. The industries are drawn from sectors highlighted in the previous section, and Manufacturing because this sector offers additional variables to consider.
 - **Review process.** The examples start by comparing job trends at the local, regional, and state levels to provide an overview of growing industries and to prompt consideration of the factors enabling or hindering growth. For some industries, job data may not be available. In these cases, reaching out, perhaps with help from the local Economic Development Organization (EDO), to firms already active in the industry can offer valuable qualitative insight. The examples then explore additional variables that assess industry attractiveness and specific requirements.
 - **Build your own story.** Apply this approach to other industries of interest by examining all available variables in whatever order makes the most sense for your context. Engage local partners early and often to provide further insight and complement the analysis. The aim is to use this process to spark productive questions, identify the most promising opportunities, and guide actionable next steps for supporting industry growth in the community.
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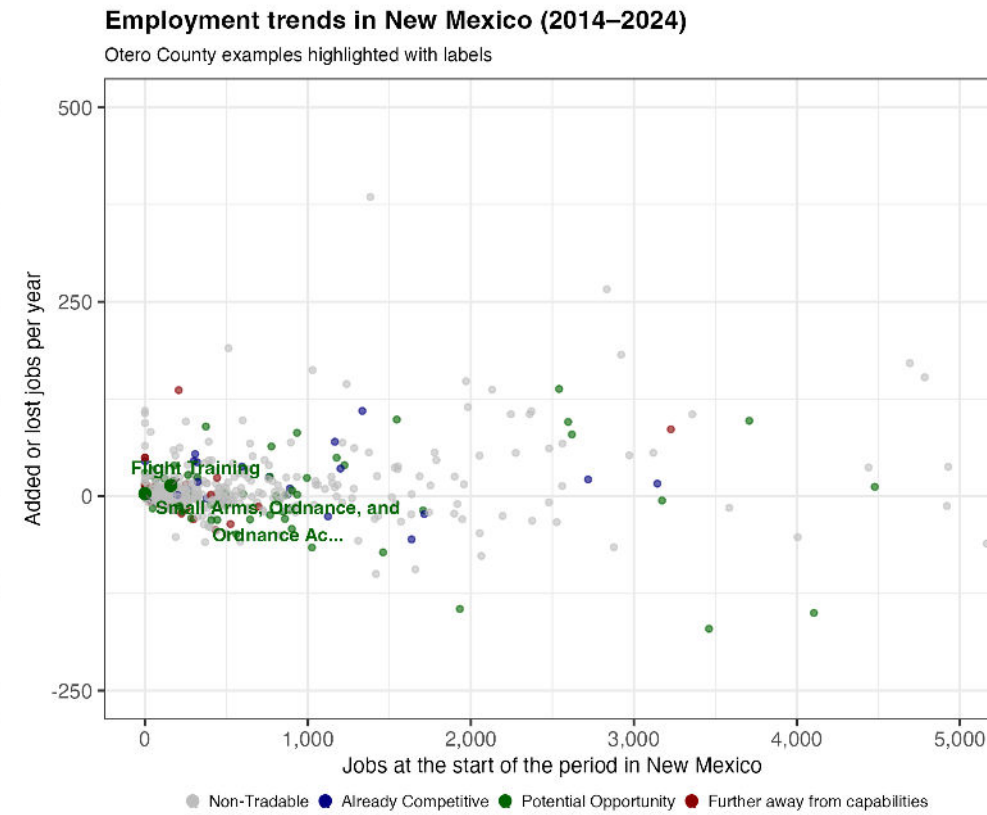
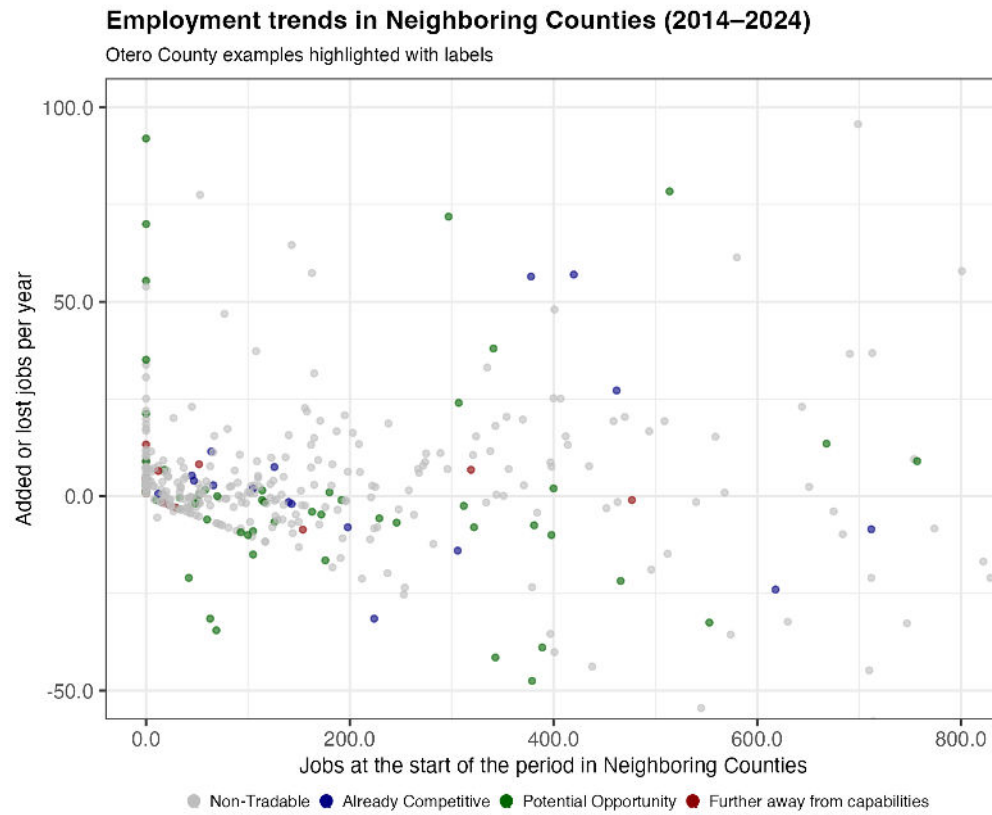
Are local conditions favorable or holding this industry back?



In this graph, the x-axis shows the number of starting jobs in each industry, providing a sense of the industry's initial size and its potential contribution. The y-axis displays the average number of jobs added or lost per year, rather than growth rates, since several industries began with zero employment. The total was divided by the number of years between the earliest and latest data points for each industry. The axes were capped to improve visualization.

Is the industry facing a different situation elsewhere?

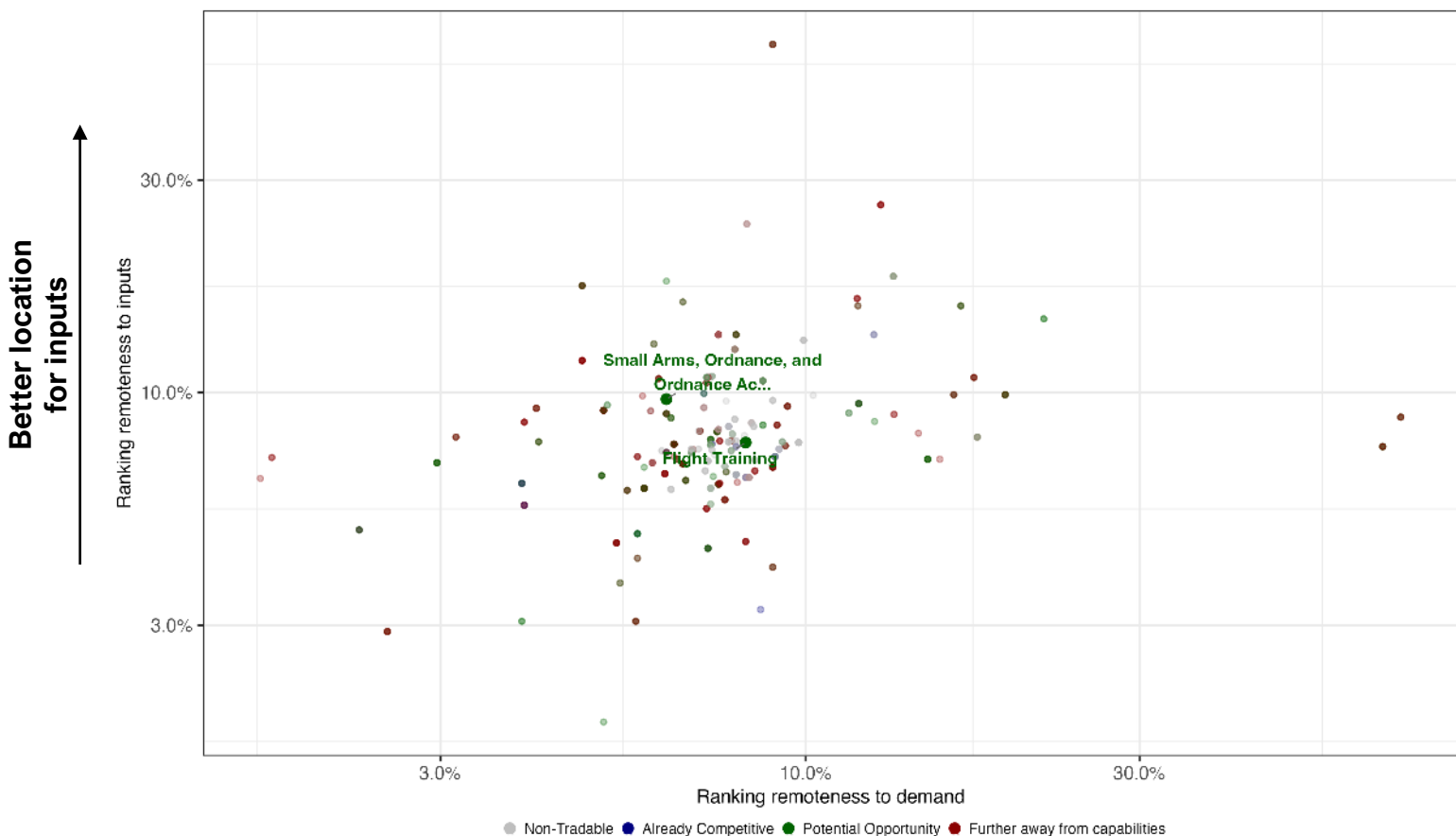
Same axes as the previous graph, but for different regions. For neighboring counties, only those that share a border, whether in-state or out-of-state, and are not part of the commuting zone were included. In this case, the selected counties are Doña Ana, Eddy, and Chaves in New Mexico, and El Paso, Hudspeth, and Culberson in Texas. While barriers to growth may not be obvious across all industries, they may be more evident in some than in others.



How attractive is Otero's location for the industry?

Otero County location attractiveness by industry

Otero County examples highlighted with labels



The competitiveness of some industries depends more on proximity to inputs, while others rely on being close to consumers. By identifying each industry's main inputs and where they are produced and then calculating the driving time from the county to those locations, a "remoteness to inputs" score is created. A similar score for demand is based on the location of main consumers. Together, these scores allow the county's position to be ranked relative to others in terms of access to both inputs and markets.

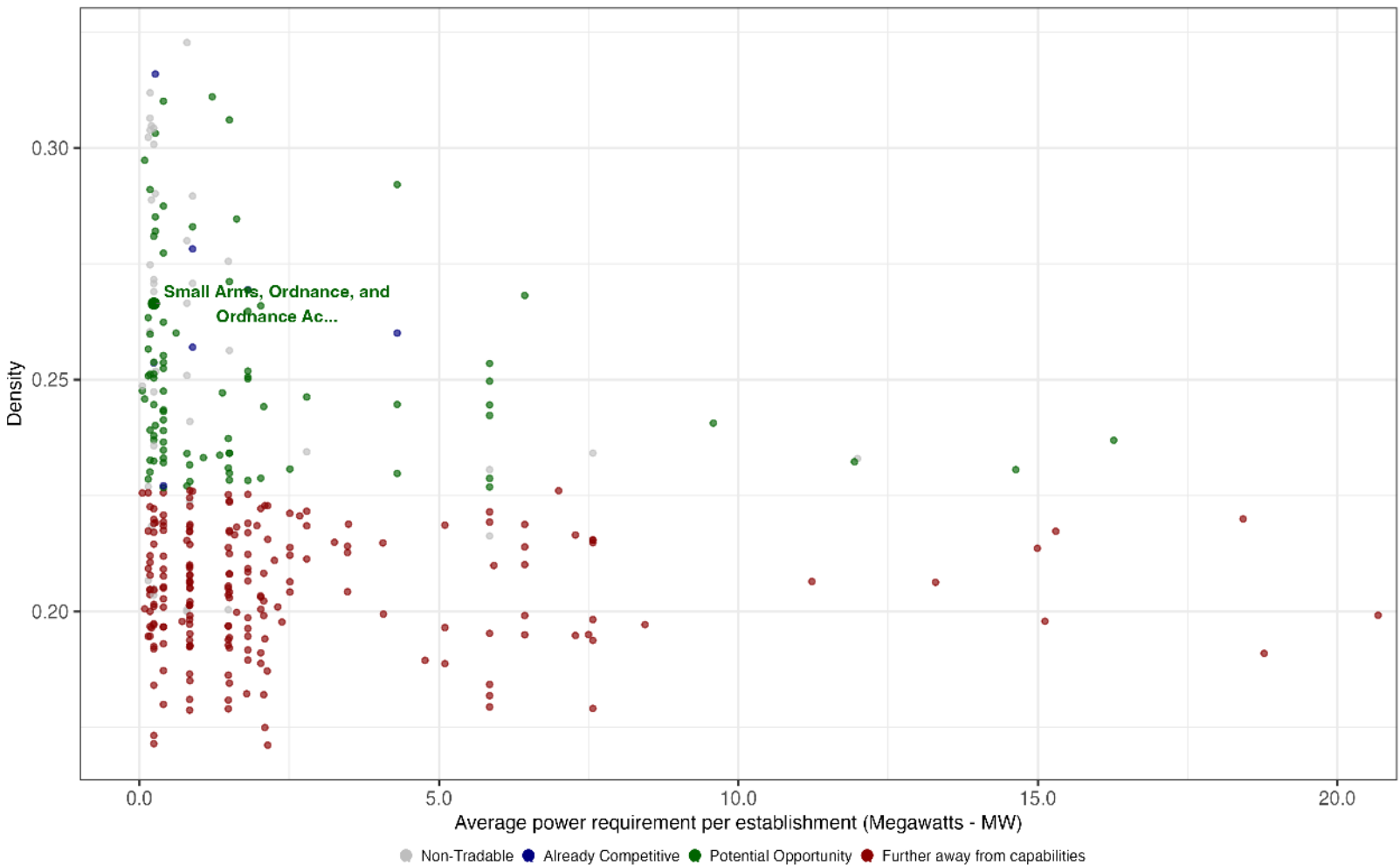
Otero's commuting zone is closer to the required inputs for "Small Arms, Ordnance, and Ordnance Accessories Manufacturing" than almost 10% of U.S. counties, and closer to the demand than 6% of other counties.

Can Otero meet the electricity needs of the manufacturing industry?



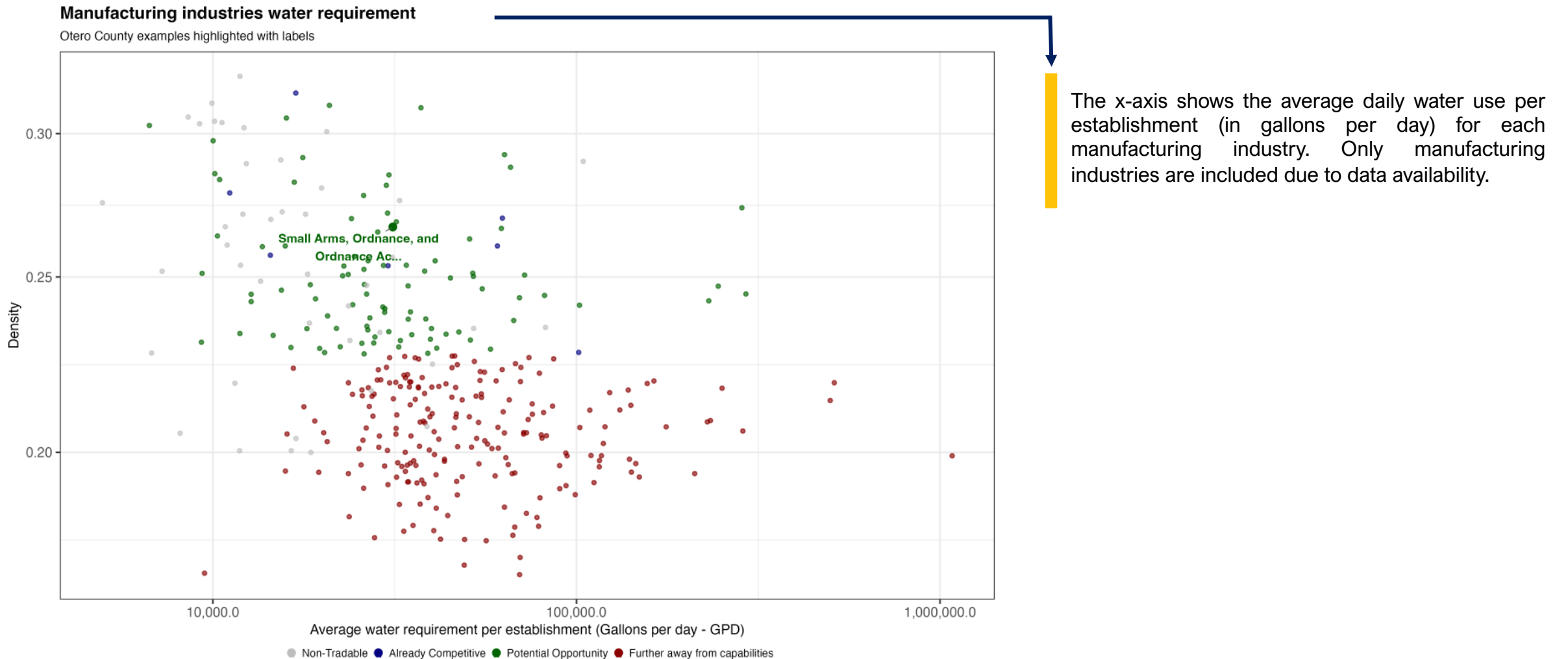
Manufacturing industries power requirement

Otero County examples highlighted with labels

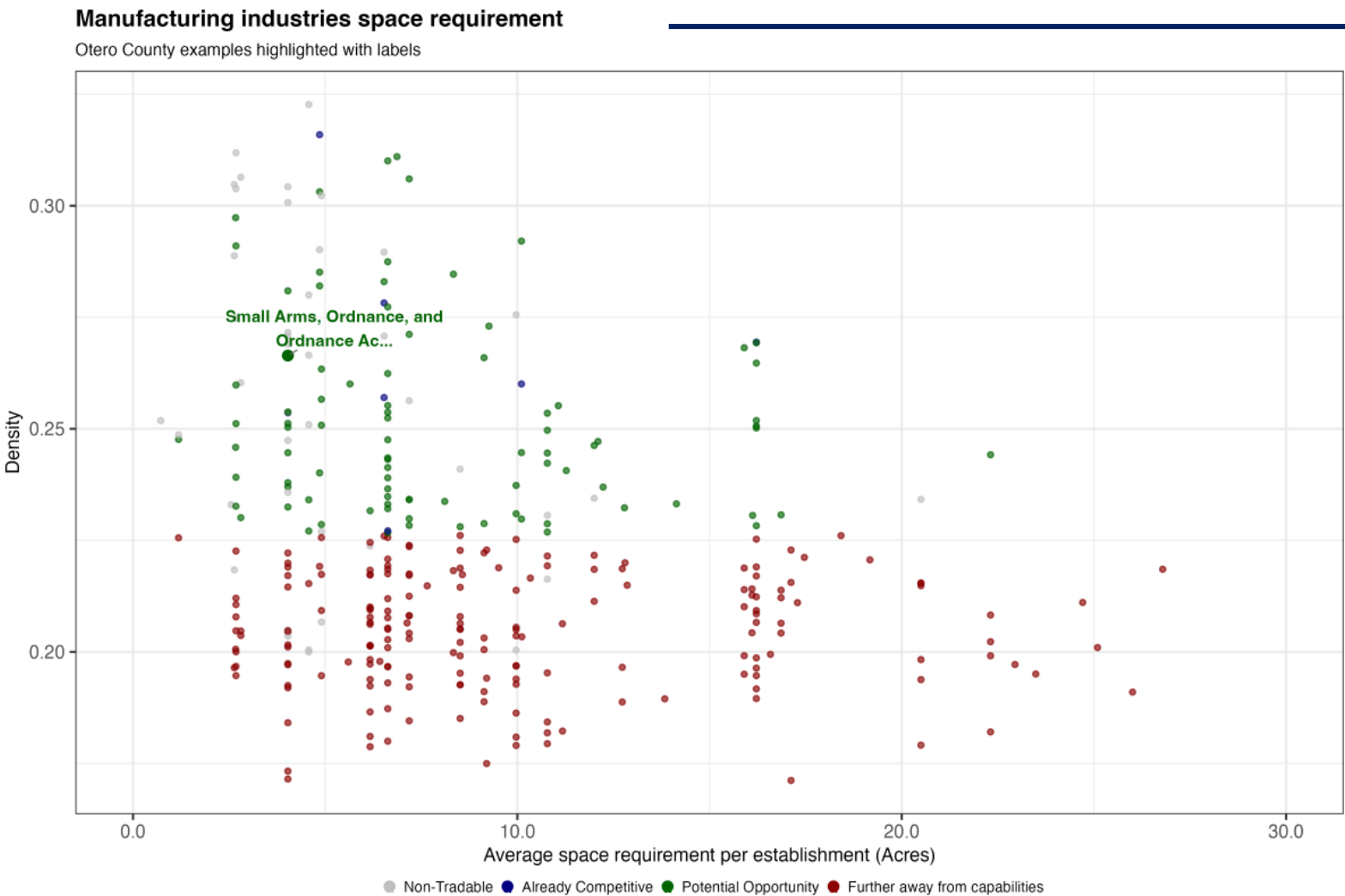


The x-axis shows the average power demand per establishment (in megawatts) for each manufacturing industry. Measuring in MW provides a standard metric to compare how much electricity a typical facility would draw from the grid during operating hours. Only manufacturing industries are included due to data availability. Some industries may be feasible with existing capacity and others could require major upgrades or entirely new infrastructure.

Is Otero equipped to supply the manufacturing industry with enough water?



Can Otero provide the necessary space for the manufacturing industry?



The x-axis shows the average land needed per establishment (in acres) for each manufacturing industry. These estimates assume low-density facilities, typically single-story buildings that are more spread out and need extra space for parking, trucks, and outdoor operations. Beyond utilities, communities must have suitable sites ready to host new or expanding businesses, with the right access to essential services.



Growth Lab

Identifying local opportunities: Otero County

January 2025