REDI@CSU Economic Indicator Report for Clear Creek County

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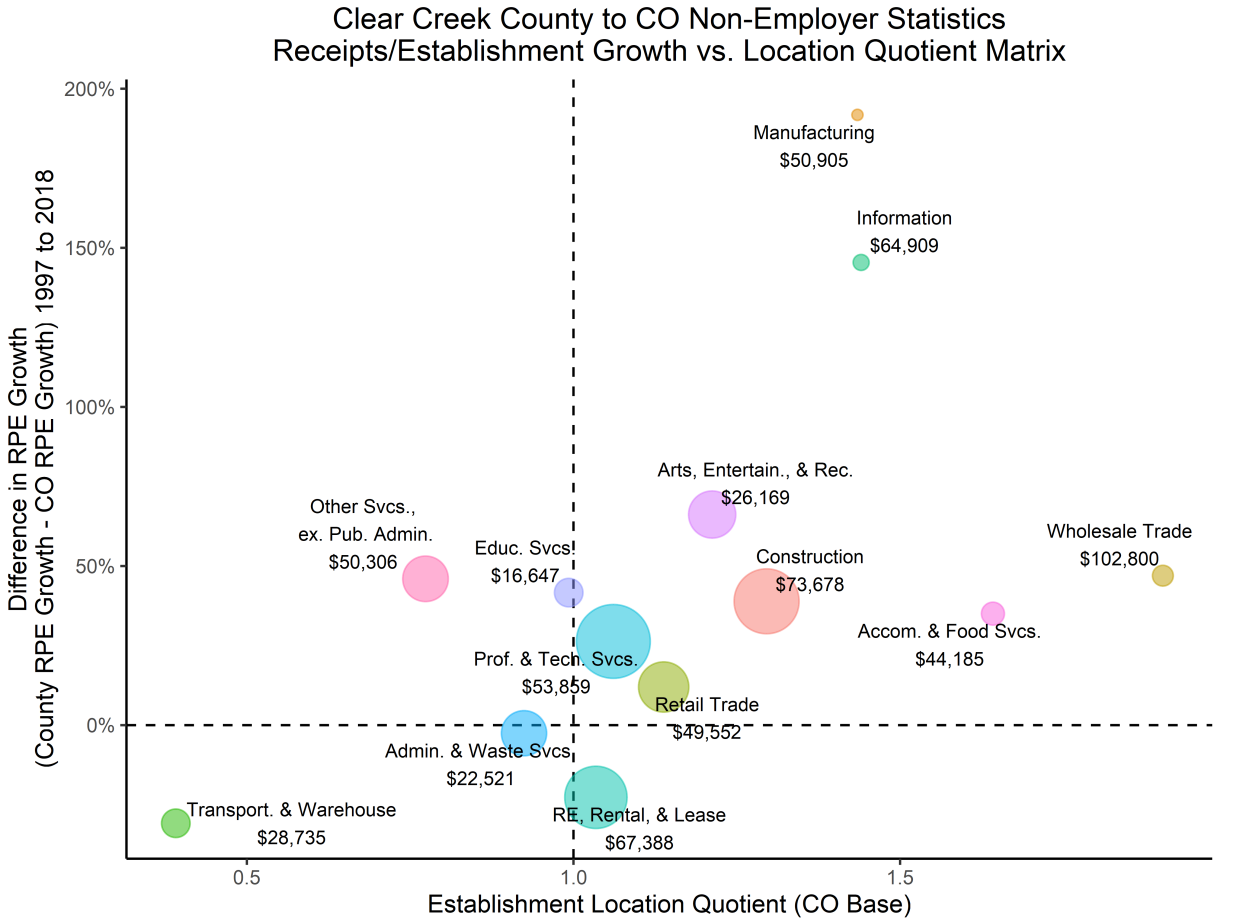
Contents

Non-Employer Bubble Graph

Nonemployers are businesses that have no paid employees. Sole proprietorships are a common example where the business is a self-employed entity without external labor other than the owner themselves. Even though they do not employ workers and are not a part of the business formation application variable, these firms are still subject to income taxes.

This indicator shows the number of non-employing firms in a given industry. The bubble graph is also useful for showing the value of sales for each industry besides the industry's size in terms of establishments in the industry itself. This is helpful in identifying which industries are relatively lucrative while accounting for the size of the industries. This can be gauged through the difference in the sales per establishment growth rate which is along the vertical axis while accounting for the extent of specialization of a particular industry in the county along the horizontal axis in terms of a location quotient. The difference in the sales growth rate begins at 0% while the point of origin for the location quotient is 1. The quadrants represent various combinations of growth and strength in terms of concentration for each industry.

The first Northeast quadrant indicates more concentration of an industry relative to the state as a whole and these industries have experienced positive growth in their sales. The second Northwest quadrant shows the industries that have been experiencing growth in sales but have low concentration within the county. These industries have the potential to expand and move towards the first quadrant over time. Industries in Southwest quadrant three are witnessing a decline in their sales and coupled with the fact that they are already in low concentration within the county could alert to potential closure and loss of business. Industries in the last Southeast quadrant are those that have a strong presence in the county. However, their sales have been declining overtime.



Employer Quadrants

Employers are businesses that have paid employees. This indicator is constructed similarly to the non-employer bubble graph. However, instead of the difference in growth of sales, we have the growth rate of wages and the extent of concentration of the industry in the county relative to the state of Colorado.

Based on the classifications of the quadrants in the employer data, here we have the following implications:

1. Quadrant 1 indicates the industry is **more concentrated** in Clear Creek County than in Colorado, and that wages in the industry have grown **faster** in Clear Creek County than in Colorado.
2. Quadrant 2 indicates the industry is **less concentrated** in the Clear Creek County than in Colorado, but that wages in the industry have grown **faster** in the Clear Creek County than in Colorado.
3. Quadrant 3 indicates the industry is **less concentrated** in Clear Creek County than in Colorado, and that wages in the industry have grown **slower** in Clear Creek County than in Colorado.
4. Quadrant 4 indicates the industry is **more concentrated** in Clear Creek County than in Colorado, but that wages in the industry have grown **slower** in Clear Creek County than in Colorado.

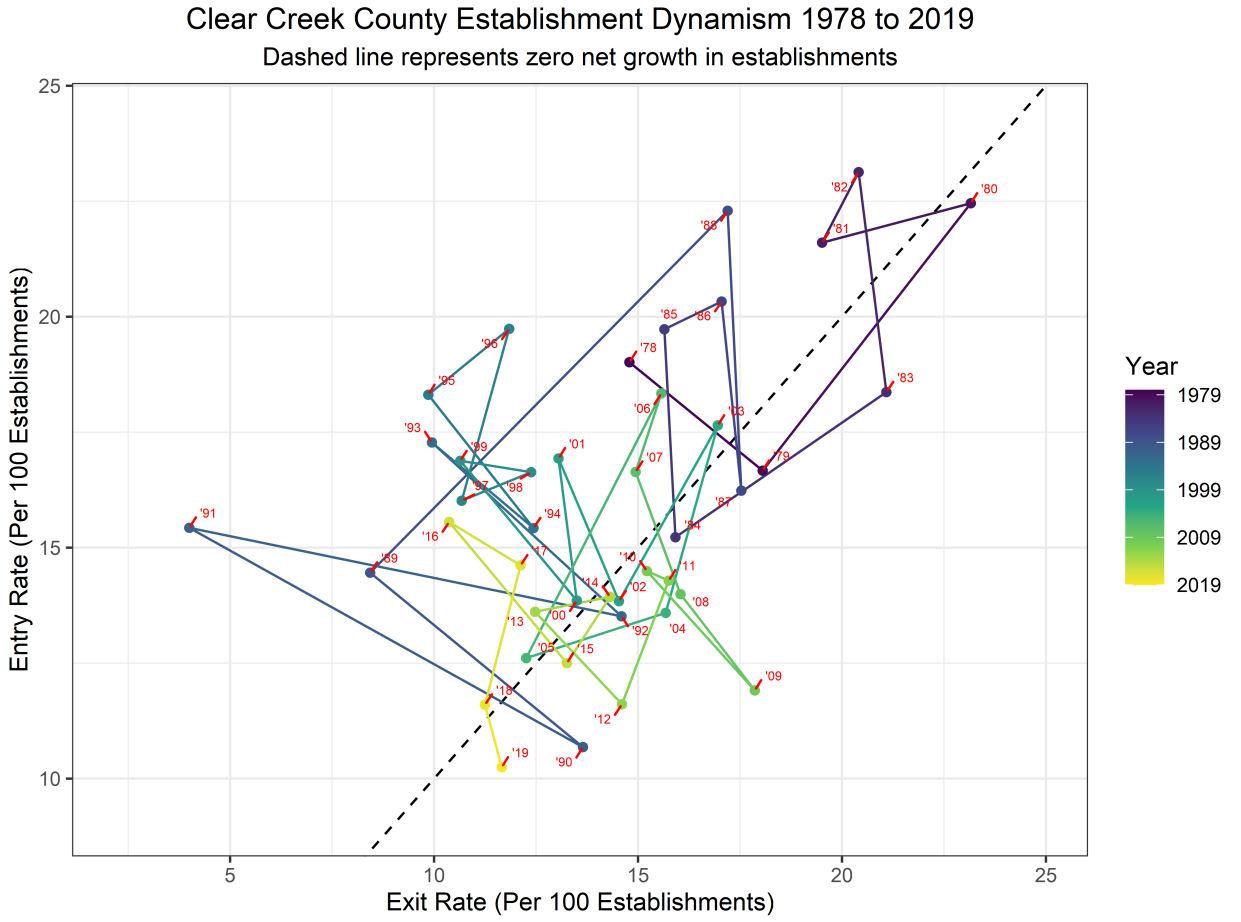
This division allows for a better insight into which firms and industries that are or who have the potential to become large employers in the county. Industries in the first quadrant may be thought of as the ideal industries since they have both a strong employment presence and growth in wages in excess of the industry at large. The industries in the third quadrant would require sufficient attention to bring them out of the low concentration-low wage growth conundrum. Industries along the remaining two quadrants (2 and 4) could go in either or direction.

Table 1: Clear Creek County Employer Bubble Graph Quadrants by Industry

NAICS Sector	Industry Name	Quadrant	NAICS Sector	Industry Name	Quadrant
11	Ag., Forest., Fish & Hunt	NA	53	RE, Rental, & Lease	2
21	Mine, Quarry, and O&G Ext.	1	54	Prof. & Tech. Svcs.	3
22	Utilities	1	55	Mgmt. of Cos. & Enterprises	NA
23	Construction	3	56	Admin. & Waste Svcs.	2
31-33	Manufacturing	2	61	Educ. Svcs.	2
42	Wholesale Trade	2	62	HC & Soc. Assist.	2
44-45	Retail Trade	2	71	Arts, Entertain., & Rec.	1
48-49	Transport. & Warehouse	3	72	Accom. & Food Svcs.	4
51	Information	2	81	Other Svcs., ex. Pub. Admin.	3
52	Fin. & Insurance	3	NA	NA	NA

Establishment Dynamism

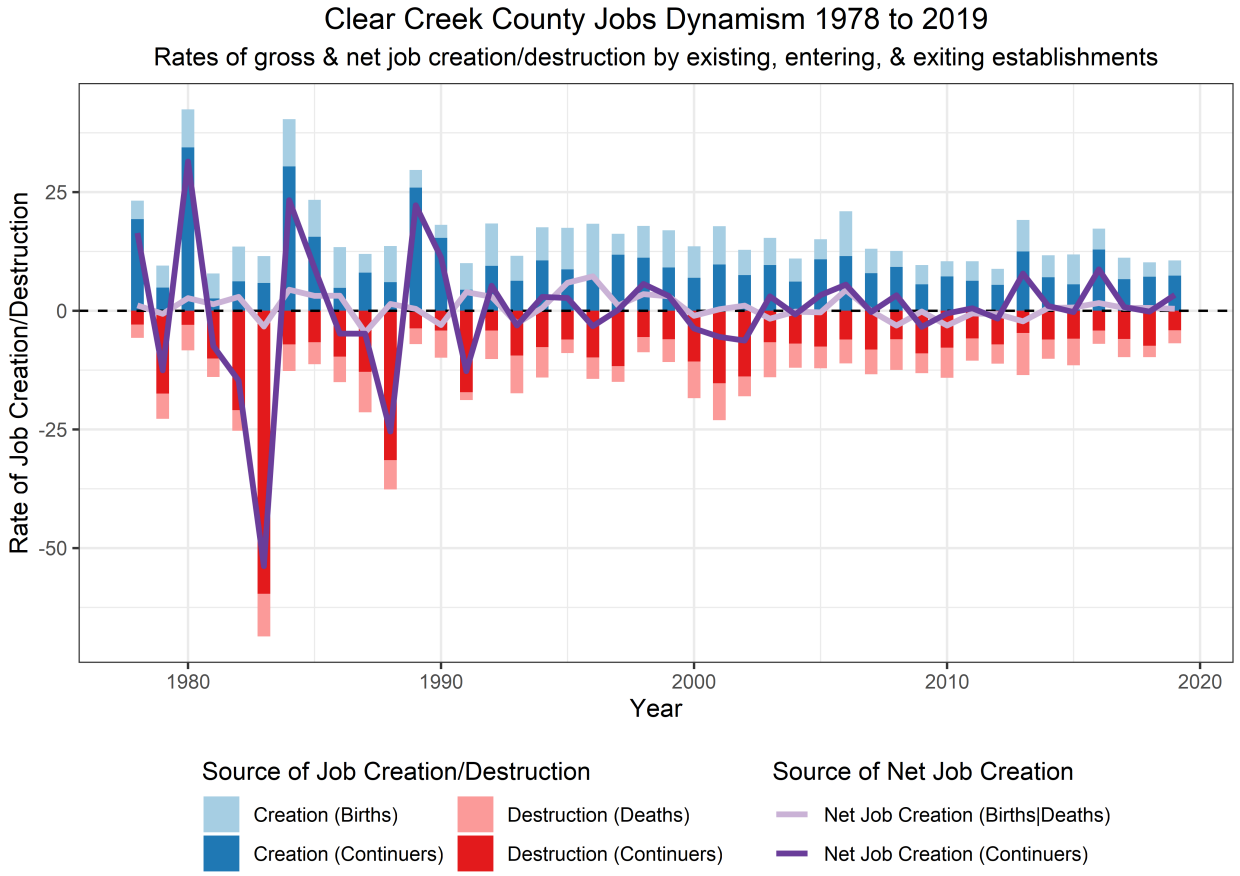
Using data from the Census Bureau's Business Dynamics Statistics (BDS) data series, this indicator shows how the path of dynamism among establishments in all industries in Clear Creek County has evolved since the late 1970s. An establishment may represent a firm (e.g. an independent restaurant), or a firm may have multiple establishments (e.g. a chain restaurant). The dotted line represents "balanced" dynamism, where entries of new establishments exactly offset the exit of prior establishments. Points above the line indicate net growth in the number of establishments, and points below indicate a net decline. The closer the points get to the origin, the slower the rate of entry and exit. Points further away from the origin mean more businesses entering and exiting the market, which is a sign of a more dynamic and healthier economy.



Jobs Dynamism

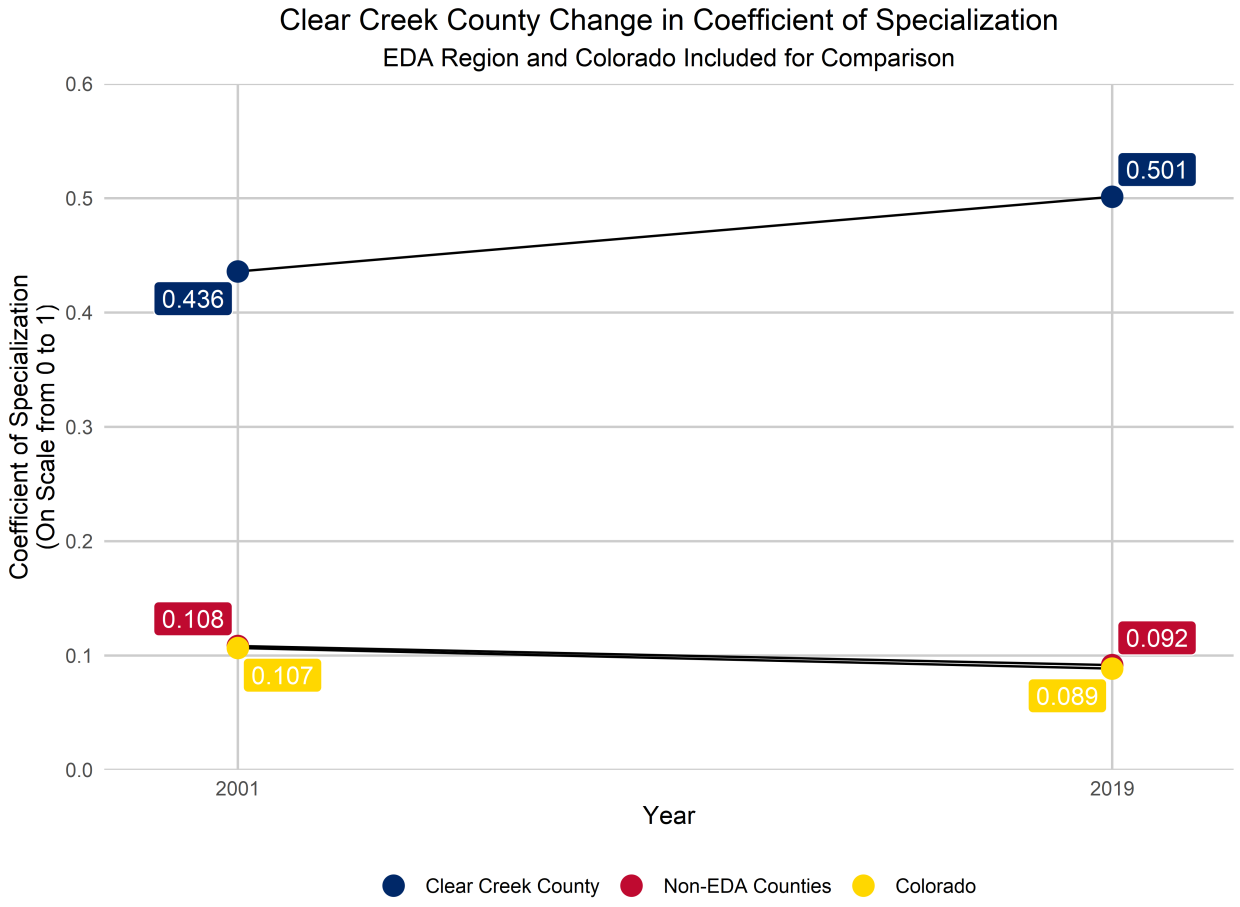
This indicator also uses the BDS data series. However, this indicator is focused on jobs dynamism. It decomposes the net rate of change in the number of jobs into several components. The darker blue and red bars show the rate of job creation and job destruction, respectively, by continuer establishments. These are establishments that were operating the prior year and *continue* to operate through the current year. The lighter blue and red bars show the rate of job creation due to new establishments ("births") and job destruction due to closing establishments ("deaths"), respectively. In other words, the lighter bars indicate how establishment dynamism impacts jobs dynamism.

The total height of the dark/light blue/red bars shows the reallocation rate of workers. Higher reallocation rates can be beneficial for firms if it results in a better match between employee skills and job requirements; it can also be beneficial for workers who may be able to negotiate larger wage increases with a new employer. Higher reallocation rates can have long-run negative impacts though if they are mostly composed of job destruction that results in unemployment or workers accepting lower wages to remain employed. Conversely, lower reallocation rates may indicate greater employment security for those already employed, but may simultaneously indicate that the unemployed or newcomers to the local job market will have a tougher time finding a job.



Coefficient of Specialization

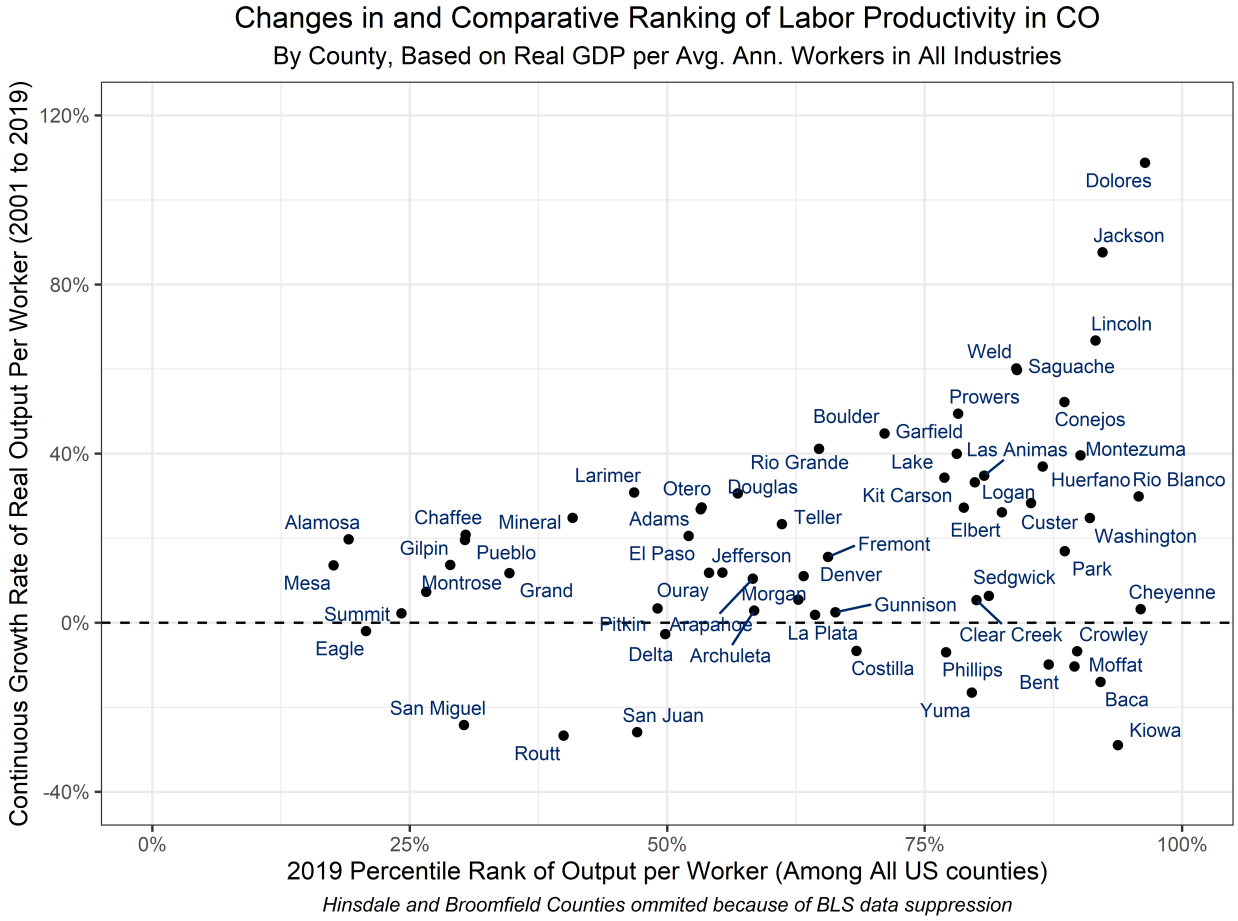
The coefficient of specialization is a way of quantifying and standardizing how specialized or diversified a local economy is based on the share of employment across industries. Higher values are associated with greater specialization. Greater specialization may, in turn, be associated with more volatile aggregate employment numbers and household incomes in the county if the local industry in which employment is concentrated experiences downturns driven by national or global dynamics in that industry. This is analogous to an investor concentrating their portfolio in a small number of risky investments. The coefficient of specialization makes the assumption that the best benchmark for being "well diversified" is to have a local distribution of labor among industries that mirrors a broader region which encompasses the local economy. In our case, we use employment by industry in the US overall as the benchmark. Thus, if the coefficient of specialization is equal to one, then an area is completely concentrated in a single industry. However, if it is equal to zero, then the distribution of workers among industries in the county is exactly the same as in United States overall.



Labor Productivity

Labor productivity is often referred to as real economic output per labor hour. It is viewed as an integral economic indicator that provides an insight into the county's growth and competitiveness. This variable measures the change in the growth of output per worker and presents it as a percentile rank for comparison purposes. Here, the unit of comparison is the US county average. A higher labor productivity value acts as a signal and incentive for firms who are contemplating relocation, expansion and/or establishing new businesses.

The graph provides a comparison of the growth in productivity per worker versus a county's relative productivity ranking. If the relative ranking is above the median (50%), then a county has a higher level of productivity than most other counties in the US. The growth indicates how much labor productivity or output per worker has increased over nearly the last 20 years.

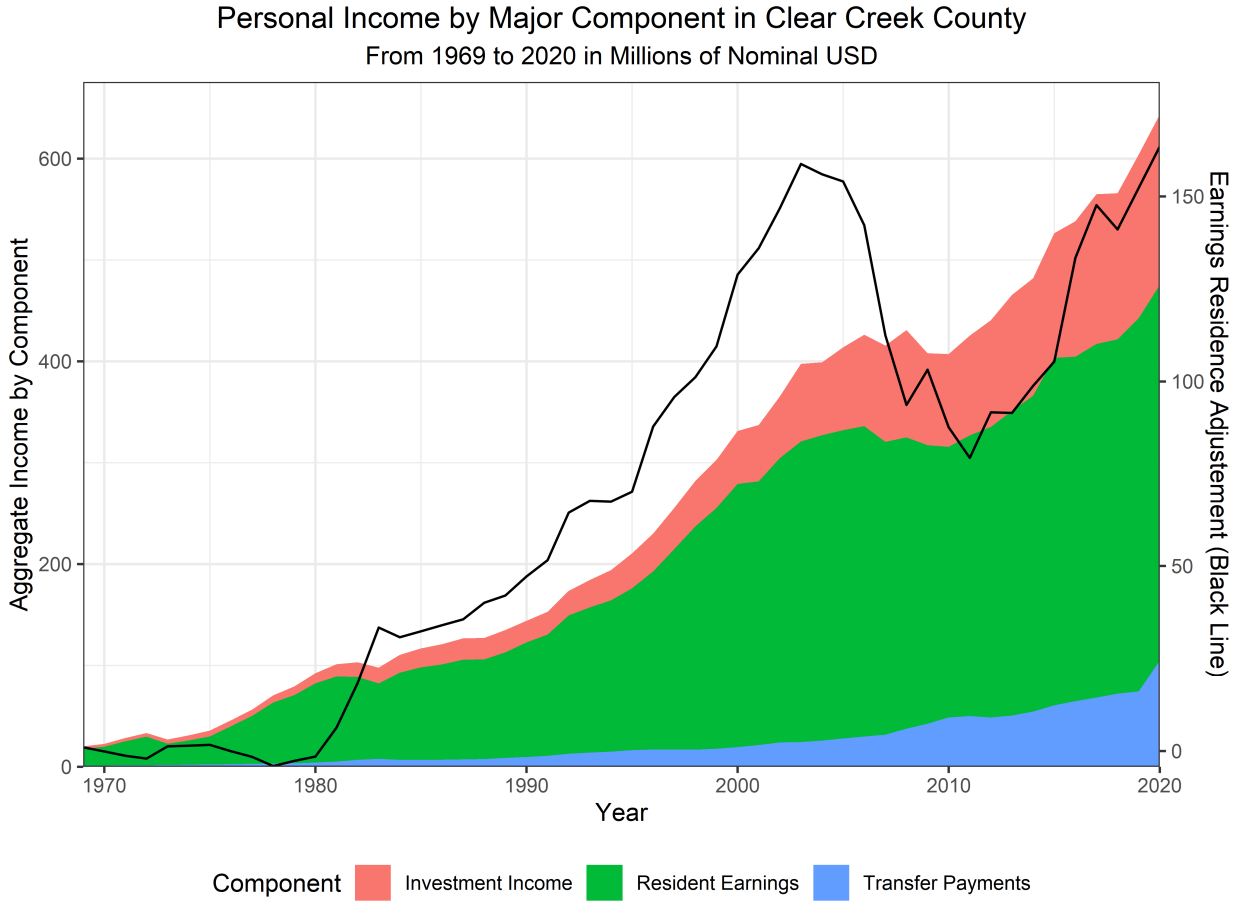


Hinsdale and Broomfield Counties ommited because of BLS data suppression

Personal Income by Major Component

The composition of personal income is split into three broad categories: investment income (i.e. dividends, interest and rental income), resident earnings (i.e. net earnings by place of residence), and transfer payments (i.e. personal current transfer receipts). The first category includes all forms of income an individual receives from their investment assets. Resident earnings is the wages and salaries of employed individuals who reside in the county net of contributions to social insurance (e.g. FICA taxes). Transfer payments are income received by individuals who did not perform a service or otherwise provide labor in the current period to earn said income. This is mostly social security, disability, or pension income. Lastly, the secondary y-axis of the graph below shows the "residence adjustment" to earnings, which reflects the net amount of earnings brought into or taken out of the county as a result commuting workers. A negative value means that more money was earned by people who reside outside the county but work in it as compared to those who reside within the county but work outside of it. The converse is true for positive values.

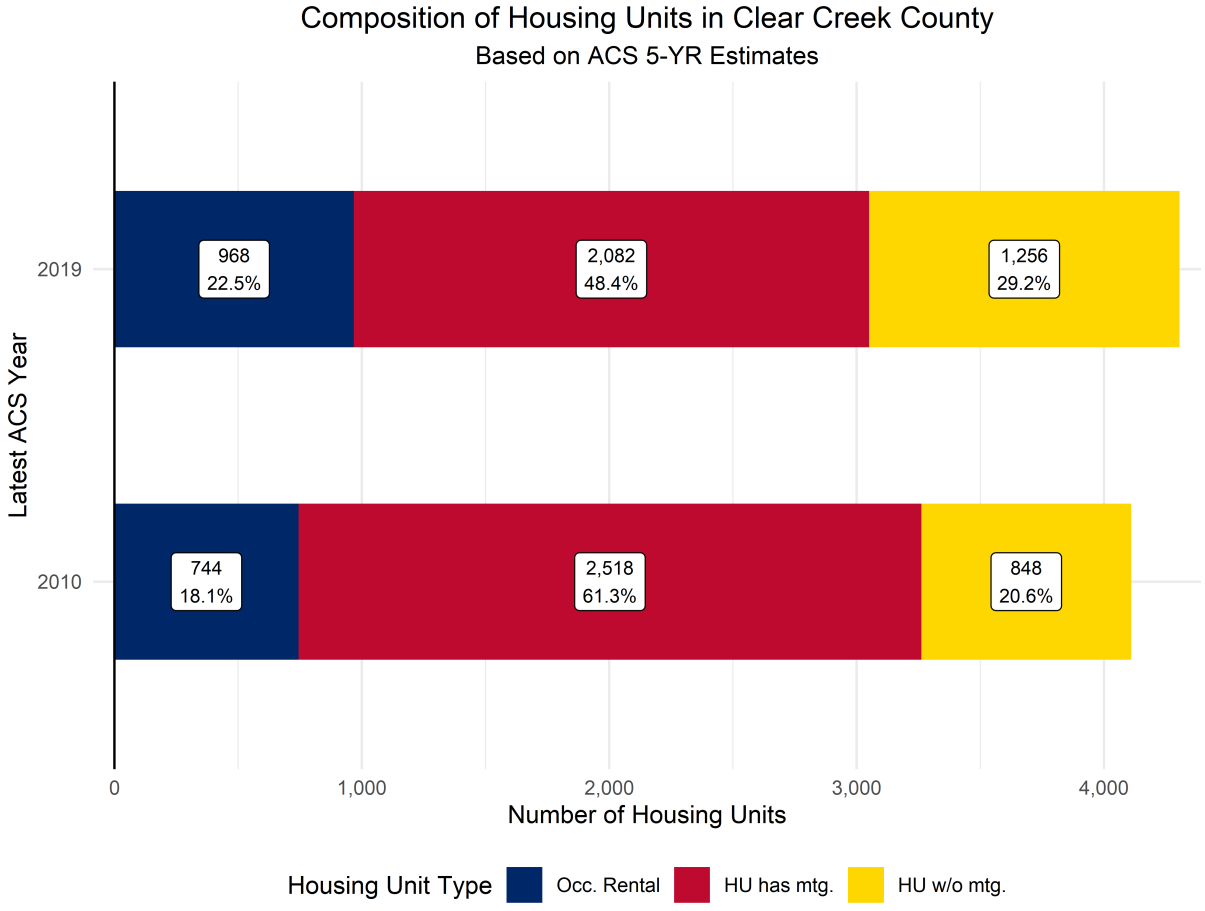
The composition of income alludes to the structure of the regional economy. If the investment income component makes up a significant proportion of the total income, then it is suggestive of a significant proportion of wealthy individuals. If resident earnings are large relative to total income, this is indicative of a substantial working age population whose incomes are more sensitive to the performance of local industries. High proportions of transfer payments income indicates an older population that has stable but slowly growing or fixed per capita incomes, which may constrain local government efforts to finance services through policies like sales or property tax increases. Lastly, the scale and sign of the residence adjustment provides insight into the degree and direction of interconnectedness with the wider regional economy.



Housing Affordability

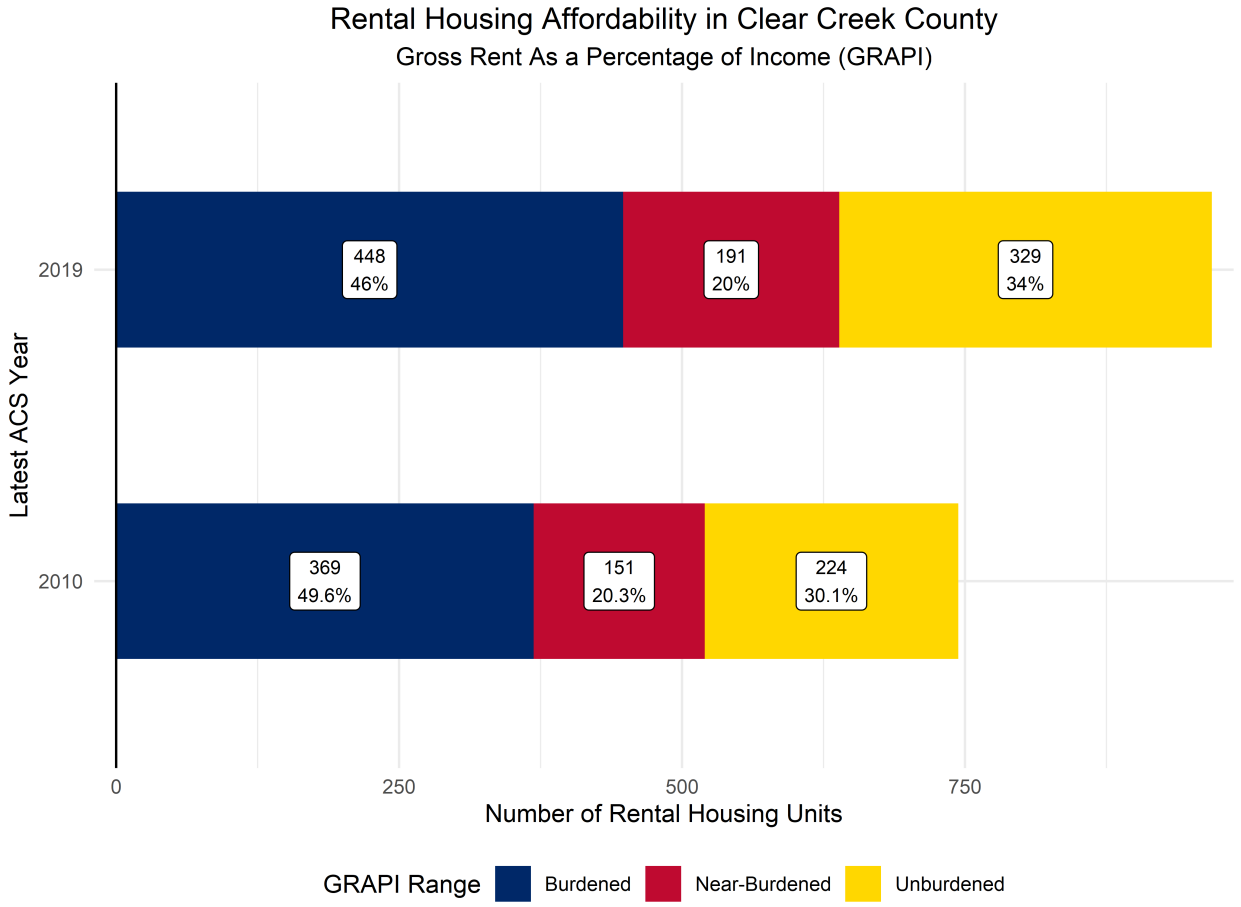
Housing affordability is used to provide an outlook of the current purchasing power of a typical family unit from the perspective of owning a house or renting an apartment. It is viewed as the changes in an individual's ability to afford housing. This statistic takes into account both home-owners and renters. Occupants in these different types of housing may face substantially different economic contexts, including how much they earn and how often the housing costs may adjust (e.g. renters may see rent adjusted annually, whereas a homeowner's mortgage will stay the same for many years). Since there are various types of housing units, lumping them all under the same category could miss critical nuances regarding housing affordability in the county.

The graph below for the county shows the share of total occupied housing units with respect to the type of resident. This allows for a better understanding of the affordability in relation to the occupancy type. By decomposing housing like this, local governments and other stakeholders can better direct and apportion resources in pursuit of improvements in housing affordability.



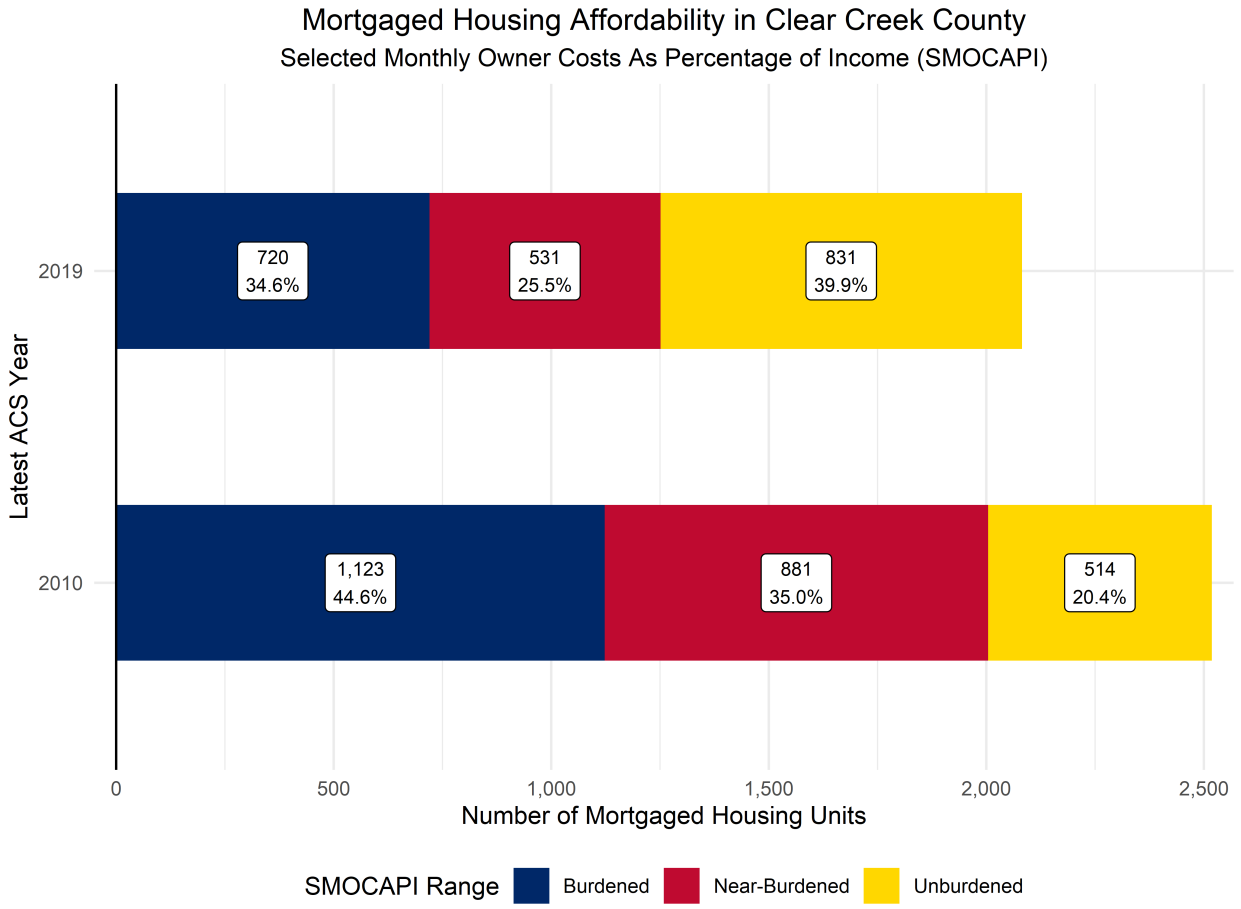
Rental housing affordability is used to express whether a typical individual is able to comfortably afford renting. The standard cut-off for determining affordability is whether the average individual is spending more than 30% of their income on rental housing.

This indicator shows the amount of total rental housing units split according to affordability based on gross rent as a percentage of income. This approach allows for the calculation of the share of income that goes towards gross rent. If the share of rent is greater than 30%, then the individual or family is defined as "Burdened". This implies unaffordable housing. If the share is between 20% to 30% of their income, then the individual or family is categorized as "Near-Burdened". There is a significant probability of these individuals falling into the burdened category should housing prices and consequently gross rent increase. The "Unburdened" category includes all individuals and families who spend less than 20% of their income on gross rent.



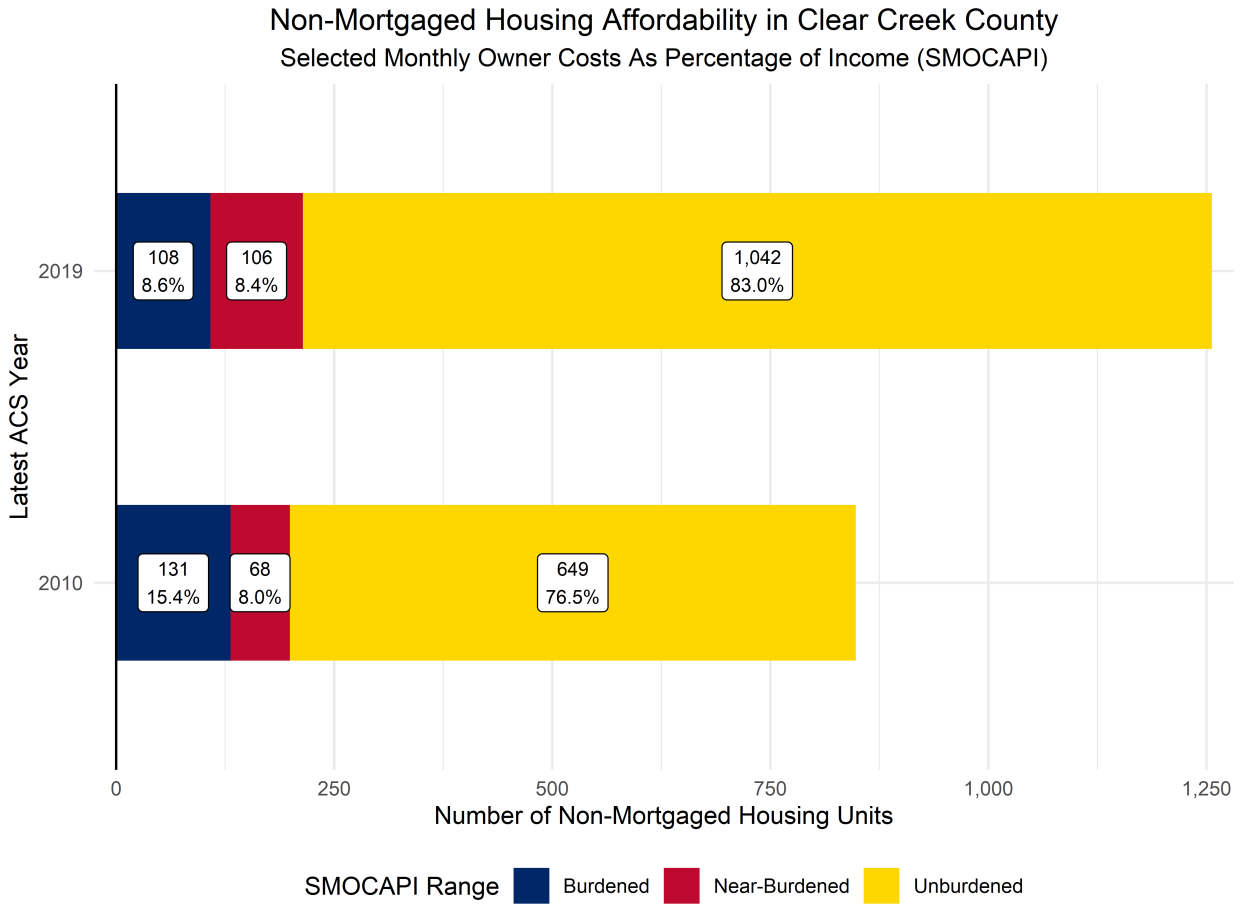
Mortgage housing affordability is used to express whether a typical individual is able to comfortably afford their mortgage. Similar to the rental housing affordability statistic, the cut-off is 30% of one's income. That is, whether or not they are spending above the cut-off of 30% of their income on their monthly mortgage payments.

This indicator shows the amount of the total mortgage housing units split according to affordability based on selected monthly owner costs as a percentage of income. This approach allows for the calculation of the share of income that goes towards monthly owner costs. If the share of mortgage to income is greater than 30%, then the individual or family is defined as "Burdened". This means their housing is not affordable. If the share is between 20% to 30% of their income, then the individual or family is categorized as "Near-Burdened". There is a significant probability of these individuals falling into the burdened category should income decrease. The "Unburdened" category includes all individuals and families who spend less than 20% of their income on their monthly mortgage costs.



Non-mortgaged housing affordability is used to express whether a typical individual is able to comfortably afford their housing. Similar to the mortgage and rental housing statistic, the cut-off is 30% of one's income.

This indicator shows the amount of the total non-mortgage housing units split according to affordability based on selected monthly owner costs as a percentage of income. This approach allows for the calculation of the share of income that goes towards monthly owner costs. If the share of owner costs is greater than 30%, then the individual or family is defined as "Burdened", indicating unaffordable housing. If the share is between 20% to 30% of their income, then the individual or family is categorized as "Near-Burdened". There is a significant probability of these individuals falling into the burdened category should income decrease or costs – such as property taxes - increase. The "Unburdened" category includes all individuals and families who spend less than 20% of their income on their monthly owner costs.



Commuting Flows

Commuting flows show how labor and earnings from employment move between the county and the broader economic region. If outflows are greater than inflows, then the county is a net provider of labor to other counties and is a net source of jobs if inflows are greater than outflows. These flows are derived from earnings data, so flows between very distant counties may reflect telecommuting rather than physical commuting.

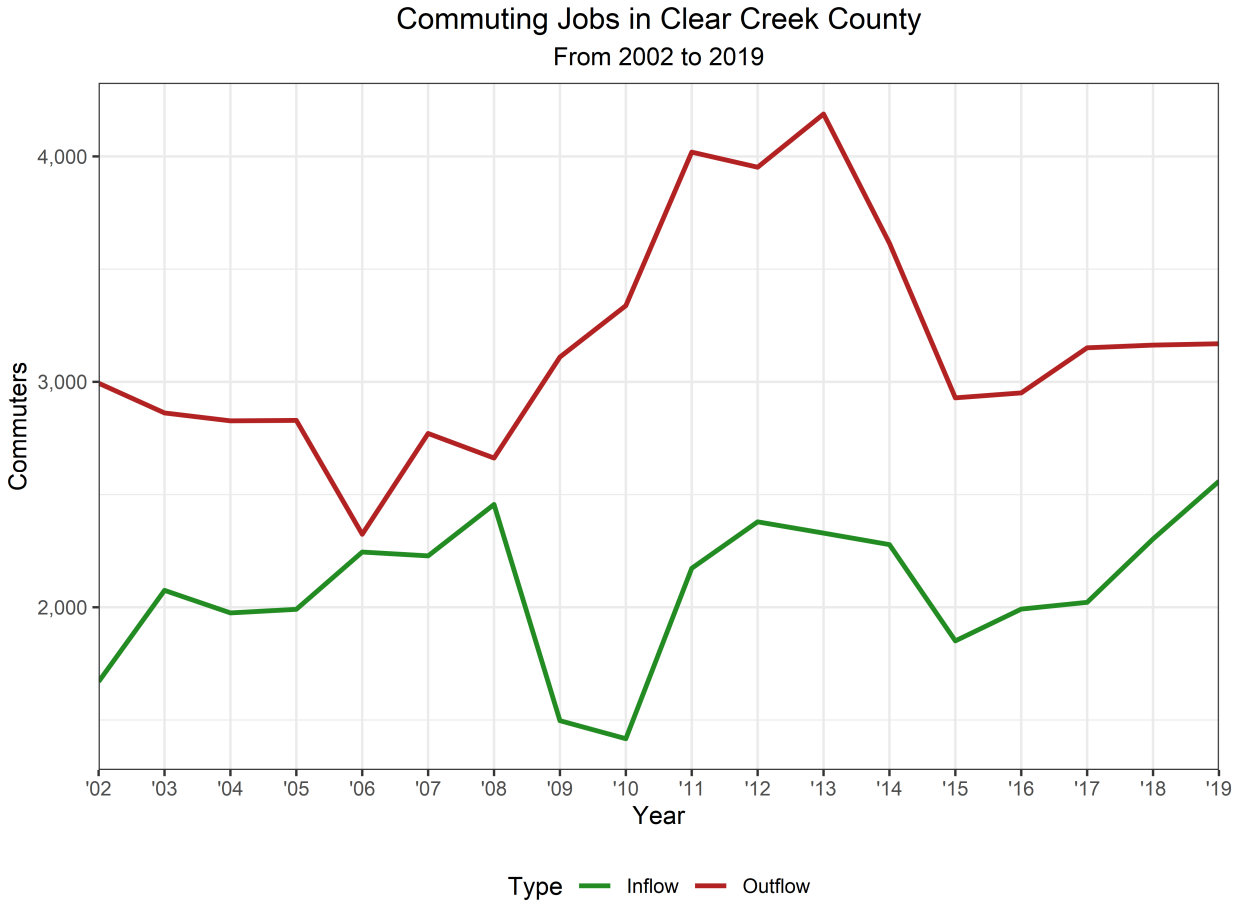
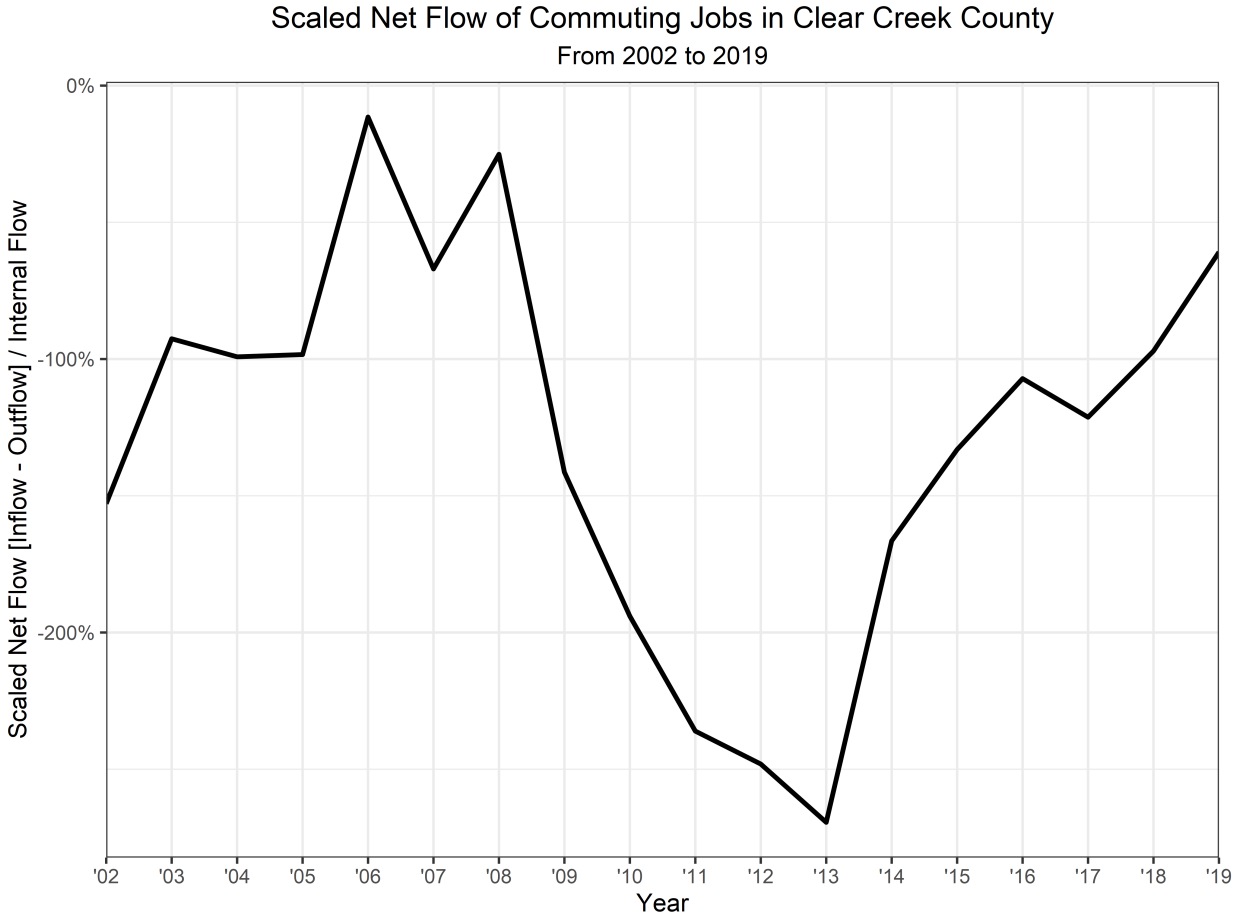


Table 2: Top 10 Inflow/Outflow Counties for Clear Creek County Commuters

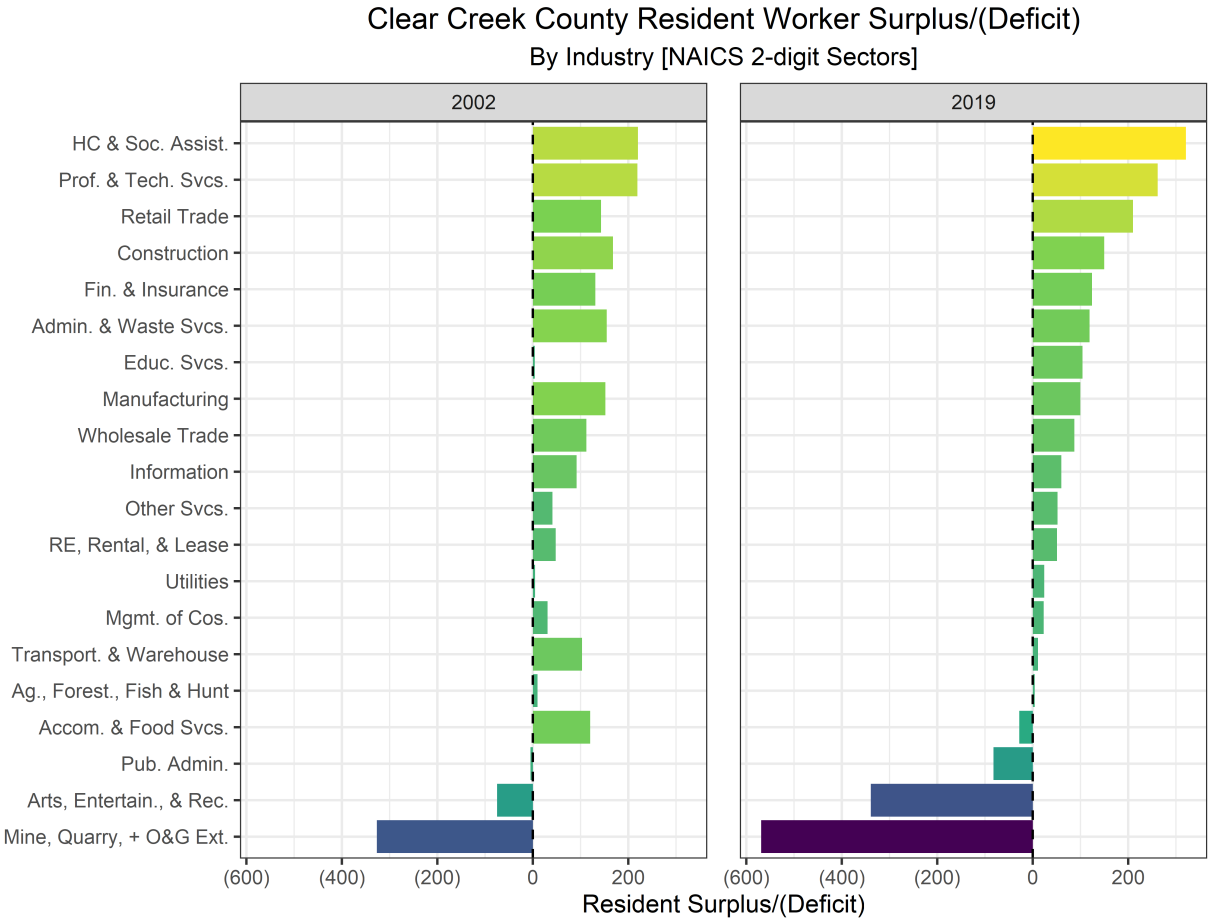
	Inflow Source		Outflow Destination	
Rank	County	Commuters	County	Commuters
1	Jefferson County, CO	868	Jefferson County, CO	935
2	Denver County, CO	224	Denver County, CO	667
3	Lake County, CO	186	Arapahoe County, CO	348
4	Adams County, CO	150	Adams County, CO	228
5	Arapahoe County, CO	150	Summit County, CO	176
6	Douglas County, CO	105	Boulder County, CO	160
7	Weld County, CO	94	Douglas County, CO	144
8	Boulder County, CO	81	Gilpin County, CO	99
9	El Paso County, CO	77	Larimer County, CO	98
10	Chaffee County, CO	73	El Paso County, CO	83

Scaled net flows are way of providing context to the absolute numbers provided in the inflow/outflow data. The sign of the of net flow describes the net direction of commuter flows. If it is positive, then there is a net inflow of commuters working or at least earning a wage in the county. If it is negative, then there is a net outflow of commuters working or at least earning a wage outside the county. The net flow is then scaled by the number jobs held by peopling living and commuting within the county, which we refer to as in internal flow. If most jobs within the county are staffed by residents of the county, or if the inflows and outflows mostly offset one another, then the scaled net flow will be close to zero. The further scaled net flow is away from zero, the more connected the county is to the broader regional economy.



Most people intuitively recognize that industry employment in a specific location is very likely impacted and supplemented by broader regional pools of labor that commute into or outside of that specific location. That is not how most location-specific industry employment data is presented though. Each industry's **Resident Surplus** measures the excess (deficit) of jobs held by residents of Clear Creek County in that year as compared to the jobs held by people working in Clear Creek County in that same year. If resident surplus for an industry is *positive*, then Clear Creek County is *exporting labor* to the broader regional economy and *importing wages and salaries*. Conversely, if resident surplus is *negative*, then Clear Creek County is *importing labor* from the broader regional economy and *exporting wages*. The reasons for this imbalance between residents and workers may include but is not limited to: regional variation in real wages compared to housing costs, endowments of natural assets such as mineral deposits or forests, as well as comparative advantages in education, entrepreneurship, and employment opportunities.

These intraregional flows of labor and wages can create both threats and opportunities for local governments, businesses, and communities. For example, a large and positive resident surplus could indicate that possibility of attracting more businesses in that industry to the local economy where they would be in closer proximity to potential employees. Or large and negative resident surplus could mean the industry is at greater risk of labor disruptions due to natural disasters or increased commuting costs. These flows also facilitate the transmission of nearby shocks in the broader regional economy to the local economy.



Scaled resident surplus contextualizes the resident surplus measure presented above. For each industry in Clear Creek County the scaled resident surplus measures how much larger (smaller) the resident employed labor pool is *relative* to the local workforce for that industry. For example, if 100 people worked in an industry in Clear Creek County and only 50 people who live in Clear Creek County also worked in that industry, then the scaled resident surplus would be -0.5 and the industry would depend on the wider regional economy to staff half of it's workforce. If instead there were 150 people that live in Clear Creek County and worked in that industry, then scaled resident surplus would be 0.5 since the resident employed labor pool would be 50% larger than the local workforce for that industry.