

## Peaks and Valleys: Income inequality in Colorado

Colorado's physical geography is distinguished by its enormous variation: some high altitude areas and some moderate altitude areas, certain regions that are relatively level and others that are very uneven whatever their altitude, and overall high and low altitudes varying by more than a 4-to-1 ratio.

Colorado's topography of prosperity is similarly varied. Per capita incomes in the richest county are 4 times what they are in the poorest county, and the degree of income equality varies widely within individual counties as well. A new study by CRCE research associates Jerry Eckert (Professor of Agricultural Economics) and Elizabeth Garner (Coordinator of CSU Cooperative Extension's County Information Service) highlights the latest information on income inequality in Colorado. The analysis puts Colorado's status in a national context, and relates inequality issues to other indicators of prosperity and poverty. "Both inequality and poverty are significant in parts of the state," says Prof. Eckert.

### Measuring inequality

The study uses income and census information from 1999 and 2000, organized according to the 63 counties that Colorado had at that time. Income levels were adjusted for local cost of living (see CRCE Update, December 2002). Eckert and Garner used the data to calculate Gini Ratios, a common measure of income inequality that allows easy comparison between populations with very different average income levels, and even among countries with different currencies.

Theoretically, a Gini Ratio can range from zero (for a totally equal distribution) to one (the opposite extreme). In reality, Gini Ratios between 0.25 and 0.35 signal significantly egalitarian distributions, while values greater than 0.50 indicate serious inequality. "The highest ever measured at a national level," observes Prof. Eckert, "was a figure of 0.72 for South Africa under apartheid, with all the discriminations that implied."

Eckert and Garner estimated Colorado's Gini Ratio to be 0.432 for the state as a whole. Considered county by county, ratios ranged from 0.349 for Moffat County, to 0.496 for San Miguel County. Ten counties have Gini Ratios below 0.40, and 15 have values above 0.45.

### Comparison to other states

Colorado's inequality index is midway among the 50 states. The study notes that the most egalitarian states are Alaska and Utah, with Gini Ratios of 0.408 and 0.409, respectively. New York and Louisiana are the states with the least equal distributions, with respective values of 0.488 and 0.476, while the District of Columbia's number of 0.530 makes it worse than all the 50 states as well as most countries.

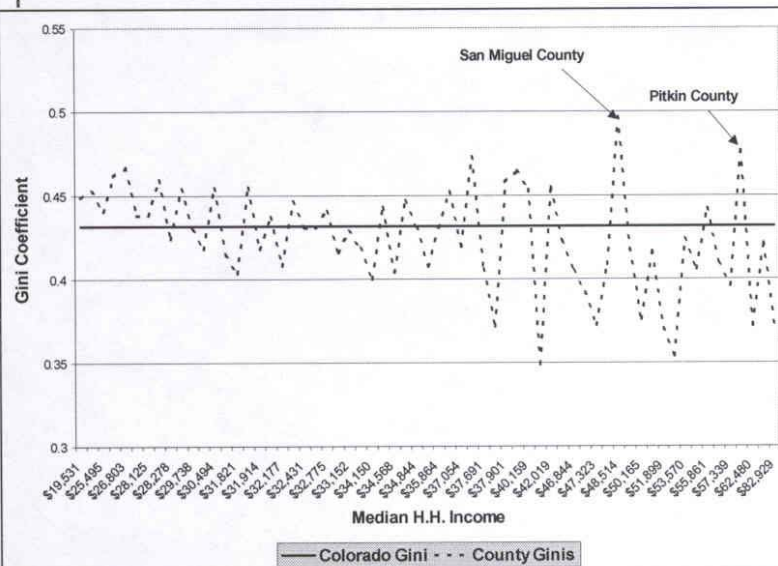
The Gini Ratio reflects particular distribution patterns that also can be examined using other statistics. Prof. Eckert says that another common indicator is how much of society's total income is received by the poorest 40 percent of the population. In Colorado, the poorest 40 percent receive 13.9 percent of the income, while in Alaska and Utah combined the corresponding group receives 15.1 percent, and in New York and Louisiana they receive 11.1 percent. "At the other end of the scale," says Eckert and Garner, "the richest 10 percent of Coloradans receive more than 32 percent of household income in the state."

### Inequality and affluence by county

The data indicate that some of Colorado's counties have much more equal income distributions than others. The most unequal counties are San Miguel, Pitkin, Hinsdale, Crowley, Denver, and Huerfano. This group includes some very affluent as well as some very poor counties. On the other hand, the most equal counties are Moffat, Gilpin, Douglas, Park, Elbert, Rio Blanco, and Adams. This group includes the most affluent county in the state and in the nation (Douglas), and all are among the richer half of Colorado counties.

Economists have frequently studied the relationship between prosperity in general, and income inequality. A graph of the Colorado data is shown below.

Eckert and Garner point out that Pitkin and San Miguel counties have unusual economic characteristics that make them outliers in the general pattern. If those two counties are set aside, both the graph and a more sophisticated regression analysis indicate a clear trend: though individual counties may vary, the general tendency is that more affluent counties have more equal distributions of their incomes.



However, the variability suggests that additional factors come into play. The researchers found that among counties with high Gini Ratios, some have inequality that is "poverty driven" (that is, due mostly to large poor populations) and others have "bi-polar" inequality (that is, sizable poor populations along with sizable rich populations). In fact, this second group tended to have higher Gini Ratios than the first.

Garner and Eckert's study explored several additional dimensions of the inequality story, including the implications for economic development needs. "The health of the state's economy and the welfare of all its citizens would benefit if some corrective change occurred where needed," they say.

Perhaps the ideal Colorado would continue to involve its stunning topographical contrast between its peaks and plains, but a bit more leveling of its income distribution.

For more information about this study, including more discussion of Gini Ratios and county-by-county details, contact Dr. Jerry Eckert at 970-491-6133 or [Jerry.Eckert@ColoState.edu](mailto:Jerry.Eckert@ColoState.edu); or Elizabeth Garner at 970-491-5706 or 303-866-3096 or [Elizabeth.Garner@ColoState.edu](mailto:Elizabeth.Garner@ColoState.edu).