

Definitions

Basic Definitions

Mean is the kind of average you’re most familiar with. Add up all the numbers in a group and divide by how many are in the group to get the mean.

Median is the middle number in a list of numbers that have been arranged in order. If your numbers are 1, 5, 100 the median is 5.

Quintile - A quintile is one fifth of something. Each quintile in this paper is 23 million of the approximately 115 million households in the US.

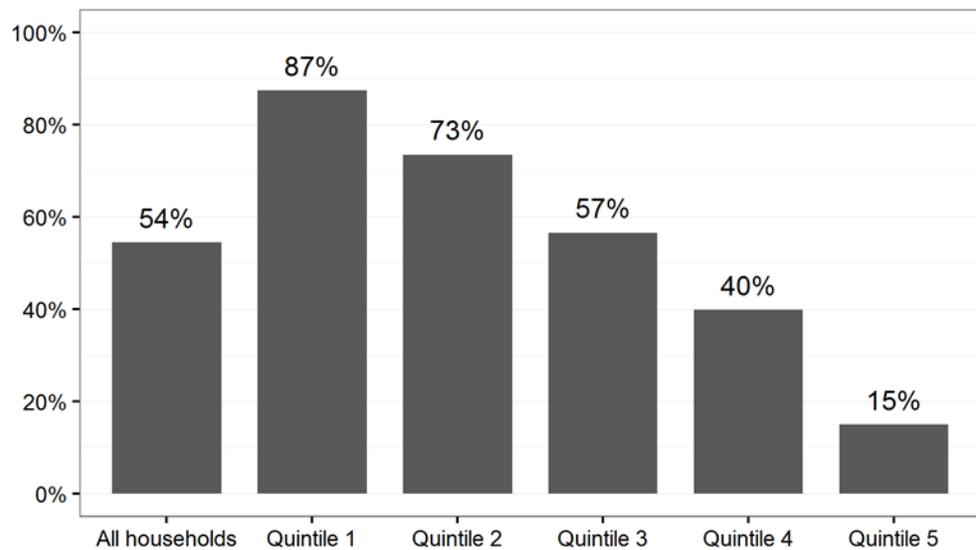
Typical - In this paper the author refers to the median of a group of Households as the “typical” household within that group.

Understanding the Graphs

Bar Graphs

National

Percent of households benefited by policy



Mean net benefit (% of income)	\$17 (0.02%)	\$305 (1.87%)	\$149 (0.42%)	\$39 (0.07%)	-\$74 (-0.09%)	-\$332 (-0.20%)
Median gain (% of income)	\$198 (0.37%)	\$296 (2.06%)	\$208 (0.64%)	\$165 (0.31%)	\$130 (0.16%)	\$91 (0.07%)
Median loss (% of income)	-\$196 (-0.37%)	-\$93 (-0.65%)	-\$113 (-0.34%)	-\$139 (-0.26%)	-\$181 (-0.23%)	-\$325 (-0.23%)
Median HH income % of FPL	320%	95%	200%	320%	479%	818%

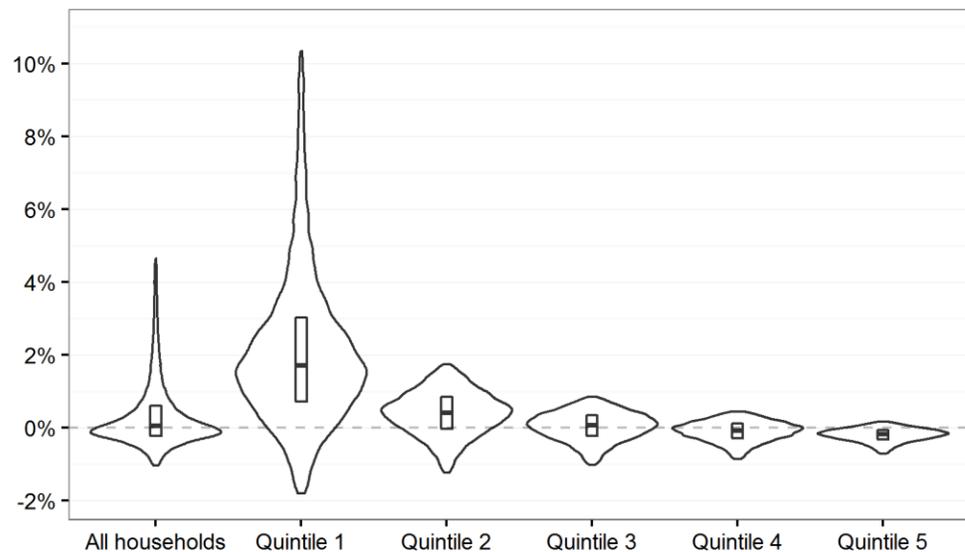
- Mean Net Benefit (% of income): The average benefit or loss for the group. For example, in Quintile 1, the average benefit is \$305 a year, and this constitutes 1.87% of the income of those households (HH).
- Median Gain (% of income): This figure is only for those households that show a net gain. So in Quintile 1, 87% of the Quintile shows a net gain, and the median gain for that 87% is \$296 or 2.06% of income. The Median Net Gain then represents the gain for a HH in the middle of this group. Note: The mean can be higher or lower than the median.
- Median Loss (% of income): This figure is only for those households that show a net loss. The median loss here for Quintile 1 of \$93 (0.65% of income) is much less than the median gain, in part because the quintile as a whole does well. In contrast, in Quintile 5, the median loss is much greater than the median gain as overall the quintile loses.
- Median HH Income % of FPL: FPL is the Federal Poverty Level, and is currently \$24,250 for a family of four (see [2016-Poverty-Level-Chart](#)) and \$11,770 for a family of one. This figure tells you how the typical HH income of this quintile compares to the federal poverty level. For Quintile 1 the value is 95%, meaning that half of these households make less than 95% the federal poverty line and half make more. In quintile 5, half the households make less than 81% the federal poverty line and half make more.

Violin Graphs

The Violin Graphs depict similar information as the bar chart above, but they provide both additional information and a good visual picture of the general financial effects of CF&D. The following definitions and descriptions apply to the data in the violin graph below.

National

Distribution of net financial benefit as % of household income



	All households	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Percent of HH's benefited	54%	87%	73%	57%	40%	15%
Mean net benefit (% of income)	\$17 (0.02%)	\$305 (1.87%)	\$149 (0.42%)	\$39 (0.07%)	-\$74 (-0.09%)	-\$332 (-0.20%)
Median gain (% of income)	\$198 (0.37%)	\$296 (2.06%)	\$208 (0.64%)	\$165 (0.31%)	\$130 (0.16%)	\$91 (0.07%)
Median loss (% of income)	-\$196 (-0.37%)	-\$93 (-0.65%)	-\$113 (-0.34%)	-\$139 (-0.26%)	-\$181 (-0.23%)	-\$325 (-0.23%)
Median HH income % of FPL	320%	95%	200%	320%	479%	818%

- **Percent HH Benefited:** This represents the percent of HH with a net benefit from CFD.
- The Mean Net Benefit (% of income), Median Gain (% of income), Mean Loss (% of income), and Median HH Income % of FPL are defined exactly as above for the bar chart.
- **The Violin** – The shape itself provides information on how many households benefit at different levels of benefit (or loss). For Quintile 1, you can see that most households gain about 1-3% of their income, but a few people gain as much as 10%. A few households in this quintile (13%) show losses but none more than 2% of their income.
- **Bars** - The bars within the violin represent 1) 75th percentile of the distribution (top of bar), 2) 25th percentile (bottom of bar) and 3) median (line in middle of bar).

Note: To enhance the visual portrayal of the distribution, two adjustments were made. First, the distributions are truncated at the 97.5th and 2.5th percentile (the outliers are cut off) so they don't get too long. Also, the width of each violin is constrained to the size shown. Regardless, each contains about 21M observations and the shape of the distribution