

Impact of Rising Gas Prices on Below-Poverty Commuters

One in a Series of Occasional Fact Sheets from the Low-Income Working Families Project
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While the increase in gas prices has increased costs for all commuters, workers from households whose income is below the federal poverty level pay a larger proportion of their income for gas.¹ This fact sheet uses data from the 2006 American Community Survey to quantify the relative burden of gas use for commuting.

Findings

- The majority of workers, with incomes both above (78.9 percent) and below the poverty level (64.7 percent), commute to work by car, alone;
- Low-income commuters on average have slightly shorter commutes (19.5 minutes) than those with incomes above the poverty level (23 minutes);
- However, because their incomes are much lower, poor commuters spend a much higher proportion of their wages on gas (8.6 versus 2.1 percent at \$4/gal);
- As gas prices double, the increase in costs represents a disproportionate increase in the burden for below-poverty commuters—from \$2/gal, the increase takes 4.3 percent of income from below-poverty commuters and 1.0 percent from those above poverty;
- There are some variations in commuting times, income, and gas cost burden by race/ethnicity and geographic area, though the variations are much less than the gap between those above and those below the poverty line;
- The estimated numbers may actually understate the relative burden on the poor, since we assume exactly the same gas mileage for commuters in the two groups—if lower-income people tend to have older, less well-maintained (therefore, less fuel-efficient) cars, they will tend to get lower gas mileage.

Data Source: The American Community Survey

The American Community Survey's public use microdata provide information at the person and household level on travel time to work, means of travel, income, and other demographic characteristics. Because the ACS does not collect information on automobile gas use, this fact sheet looks at travel time to work as a proxy for the gas burden. Obviously, this approach obscures the differences between city and highway

¹ The minimum income necessary to maintain an adequate standard of living, varying by household size.

mileage, or average mileage for different cars. While there may be significant differences between the above- and below-poverty populations in these factors, the ACS cannot be used to detect them. Also, this approach estimates gas used for commuting only, not total household gas use.

Estimated Gas Cost Burden

Although commuters below the poverty level had slightly shorter commutes than those above poverty, lower travel times do not necessarily mean that a lower share of income will be spent on fuel. Table 1 shows average personal income from wages for poor versus nonpoor commuters, by race.

Table 1. Average Income from Wages, by Race

	<u>Above Poverty</u>	<u>Below Poverty</u>
Non-Hispanic white	41,606	7,187
Non-Hispanic black	34,258	8,453
Hispanic	31,415	9,998
Non-Hispanic Asian	47,514	8,447
Non-Hispanic, other	34,604	7,665
Total	37,990	7,435

Source: 2006 American Community Survey

The substantial difference in income indicates that an increase in gas prices has a much greater impact on the proportion of income spent on gas by poor workers, compared with the nonpoor. Although we cannot know actual gas use based only on travel times, we can make a few assumptions to illustrate the difference between the two groups.²

For instance, if we assume that every commuter is able to average 30 mph on each commute, and drives a car that gets 25 mpg over the course of the commute,³ table 2 shows the percentage of wage income that would be spent on gas at two different prices, on average.

² Since we cannot determine the amount of gas used for a particular commute and are assuming that 20 minutes of travel time for one commuter has the same cost as 20 minutes for another, the numbers used in the example only illustrate the differences in proportional gas cost, not actual proportions. Cases are included only if travel time was three minutes or more, and wage income was greater than \$0.

³ An average U.S. car gets 27 mpg highway, 21 mpg city. Average travel speed of 30 mph is a rough estimate, based on highway speed limits of 55 to 65 mph and city/town speed limits of 20 to 25 mph with traffic stops.

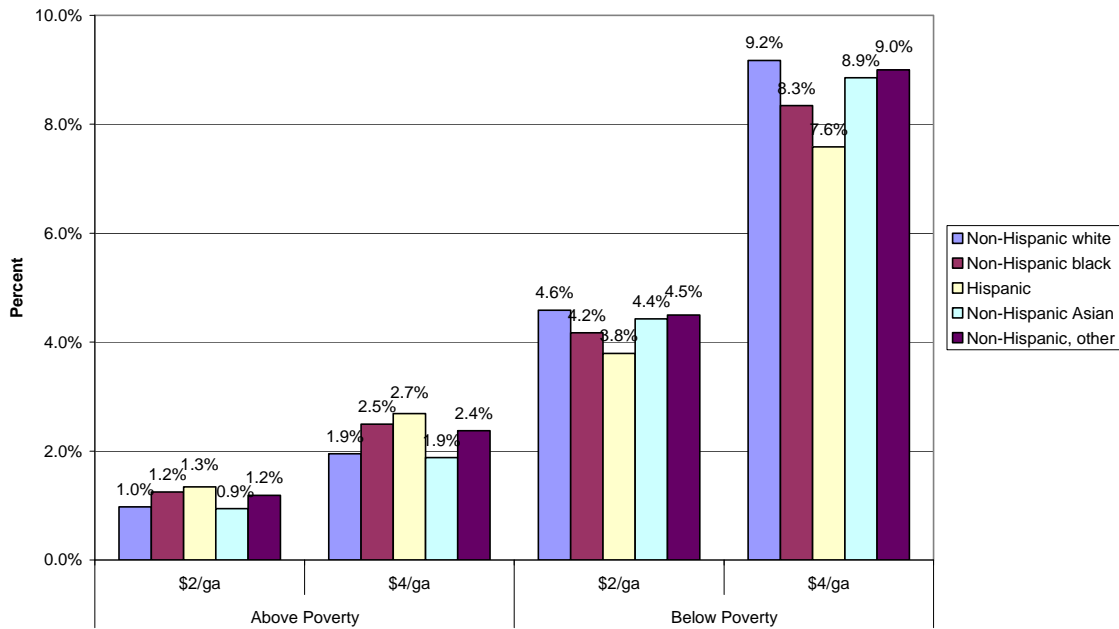
Table 2. Percent of Income Spent on Gas Commuting to Work, on Average, by Race

	When Gas Is \$2/Gallon		When Gas Is \$4/Gallon	
	Above Poverty	Below Poverty	Above Poverty	Below Poverty
Non-Hispanic white	1.0	4.6	1.9	9.2
Non-Hispanic black	1.2	4.2	2.5	8.3
Hispanic	1.3	3.8	2.7	7.6
Non-Hispanic Asian	0.9	4.4	1.9	8.9
Non-Hispanic, other	1.2	4.5	2.4	9.0
Total	1.0	4.3	2.1	8.6

Assuming 25 mpg, 30 mph
Source: 2006 American Community Survey

At \$2 per gallon, the estimated burden for the nonpoor averages about 1 percent of wage income, with the highest burden being 1.3 percent for Hispanics. The average burden jumps to 4.3 percent for those below poverty, ranging from a low of 3.8 percent for Hispanics to a high of 4.6 percent for whites (figure 1). Doubling the price of gas to \$4 per gallon doubles the proportion of wage income spent on gas, so that the average for those above poverty is 2.1 percent of wage income, and is 8.6 percent for those below poverty.

Figure 1. Estimated Percentage of Wages Spent on Gas for Commuting, by Race



Source: 2006 American Community Survey

Regional Differences

Applying the same assumptions to the nine Census Bureau regional categories, known as divisions, shows a similar pattern.⁴ For the above poverty population, estimated gas costs at \$2/gallon are just above 1 percent of wages, and rise to around 2 percent for \$4/gallon—ranging from 1.9 percent in New England and the West North Central division to 2.6 percent in the East North Central division (Illinois, Indiana, Michigan, Ohio, and Wisconsin) (table 3). For below-poverty commuters, estimated costs at \$2/gallon range from 3.9 percent of income in the West South Central division (Arkansas, Louisiana, Oklahoma, and Texas), to 5.2 percent in the New England division. At \$4/gallon, costs range from 7.9 to 10.5 percent of wage income.

Table 3. Percent of Income Spent on Gas Commuting to Work, on Average, by Census Division

	When Gas Is \$2/Gallon		When Gas Is \$4/Gallon	
	Above Poverty	Below Poverty	Above Poverty	Below Poverty
New England	1.0	5.2	1.9	10.5
Middle Atlantic	1.0	4.5	2.0	9.0
East North Central	1.3	4.5	2.6	9.0
West North Central	1.0	4.0	1.9	8.0
South Atlantic	1.1	4.6	2.2	9.1
East South Central	1.1	4.5	2.2	9.0
West South Central	1.1	3.9	2.2	7.9
Mountain	1.0	4.0	2.1	8.0
Pacific	1.0	4.1	2.0	8.2
Total	1.0	4.3	2.1	8.6

Assuming 25 mpg, 30 mph
Source: 2006 American Community Survey

Means of Travel

Commuting to work by car, with no passengers, is the most common choice for both above- and below-poverty commuters. Among nonpoor workers, 78.9 percent drive to work alone and 21.1 percent choose other options. A lower percentage of low-income workers, but still a majority, drive alone, 64.7 percent (figure 2). The remainder use car pools (15 percent) or other types of transportation (20.3 percent). The percentage of commuters choosing options other than driving alone increased slightly from the 2004 ACS survey, from 20 percent for nonpoor and from 32.2 percent for poor commuters.

⁴ The divisions are New England (ME, NH, VT, MA, RI, CT), Middle Atlantic (NY, NJ, PA), East North Central (IL, IN, MI, OH, WI), West North Central (IA, KS, MN, MO, NE, ND, SD), South Atlantic (DE, FL, GA, MD, NC, SC, VA, WV), East South Central (AL, KY, MS, TN), West South Central (AR, LA, OK, TX), Mountain (AZ, CO, ID, MT, NV, NM, UT, WY), and Pacific (AK, CA, HI, OR, WA).

Figure 2. Means of Transportation to Work

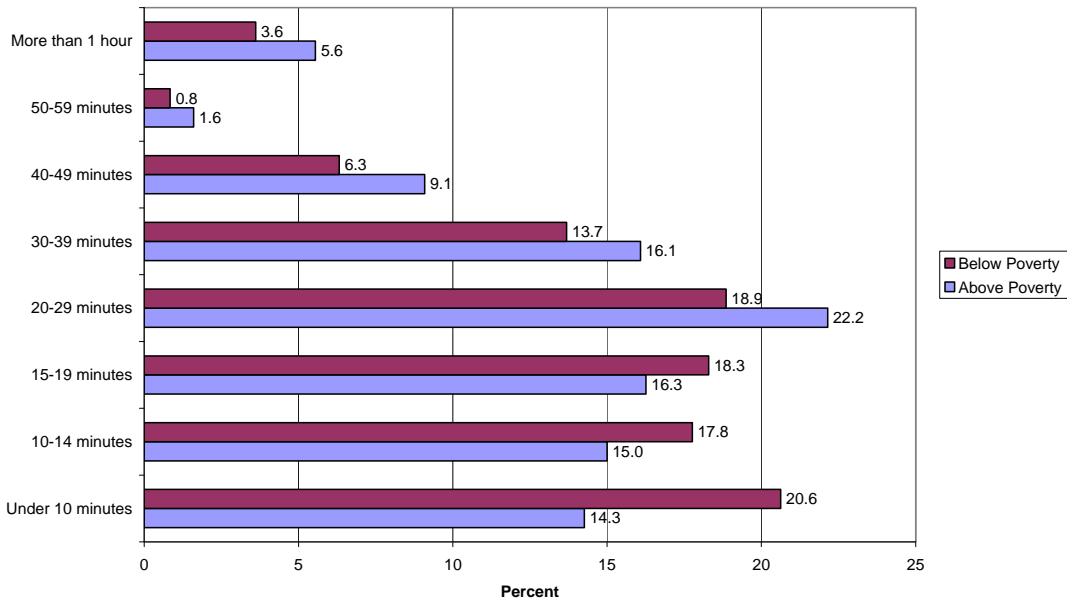


Source: 2006 American Community Survey

Average Travel Time

On average, solo drivers below the poverty line spend less time commuting than those above the poverty line, 19.5 minutes compared with 23 minutes. Figure 3 illustrates that the distribution of commute times for poor workers is significantly directed to shorter commutes than the above-poverty population. Compared with 2004, average travel times have increased slightly for nonpoor commuters (from 22.7 minutes), but decreased slightly for poor commuters (from 19.9 minutes).

Figure 3. Travel Time to Work, Workers Travelling by Car, Alone



Source: 2006 American Community Survey

Travel Times by Race

Table 4 shows that the pattern of shorter commute times for below-poverty workers is true across racial-ethnic lines, although there are variations by race. Non-Hispanic Asians have the longest average travel times among the above-poverty population (25.2 minutes), while among poor workers, Hispanics (21.6 minutes) and non-Hispanic Asians (21.4 minutes) have the longest commutes. Non-Hispanic whites have the shortest commutes in both groups (22.6 and 18.4 minutes).

Table 4. Average Travel Time to Work, by Race

	<u>Above Poverty</u>	<u>Below Poverty</u>
Non-Hispanic white	22.6	18.4
Non-Hispanic black	24.1	19.9
Hispanic	23.8	21.6
Non-Hispanic Asian	25.2	21.4
Non-Hispanic, other	22.9	19.2

Source: 2006 American Community Survey

Travel Times by Region

There is some variation of average commute times by Census division. Among poor workers, those in the South Atlantic (Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia) and the Pacific divisions have the longest average commutes of about 20.8 minutes. Those in the West North Central (Iowa, Kansas, Minnesota, Montana, Nebraska, North Dakota, and South Dakota) have the shortest average travel times (16.1 minutes). The distribution is similar for the above-poverty group, although the Middle Atlantic (New York, New Jersey, and Pennsylvania) has the second longest commute (24.1 minutes) after the South Atlantic division (24.5 minutes).

Travel Times by Family Type

For above-poverty commuters, single (21.7 minutes) and widowed persons (20.8 minutes) had lower average commuting times than those married (23.6 minutes) or divorced (23.4 minutes). Among below-poverty workers, commuting times ranged from 18.1 minutes for singles to 22.1 minutes for married persons, with others clustered at around 20 minutes.

The Low-Income Working Families project investigates the risks faced by millions of families and their children whose household earnings are insufficient to meet their basic needs. The project applies rigorous research methods and crosscutting expertise, from housing to health care, to identify private and public strategies that can improve these families' well-being.

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