Inflation Impacts on Rural Households in the U.S. 2020–2022

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2020-2022

How has inflation impacted the household budgets of rural Americans? What goods and services are costing more? Has inflation impacted rural areas worse than urban cities? Inflation is a concern for most Americans. Last month, the federal government reported that consumer prices rose by 6.5% between December 2021 and December 2022, on top of the 7.0% inflation gain the year before. This report provides preliminary estimates of how inflation has likely impacted rural and urban households over the past two years from 2020 to 2022.

Inflation is defined as the increase in consumer prices for goods and services. For the past several decades, inflation in the U.S. has been low. However, the rapid rise in consumer prices over the past year caught many people off-guard. This current round of inflation is caused by three main factors. First, there was strong pent-up demand due to the COVID-19 pandemic. Households reduced purchasing during the pandemic, due to temporary business closures, working from home, and stay-at-home advisories. At the same time, many households saved money due to reduced spending, wage gains, and government payments. Once households decided to start making delayed purchases, they had the savings to bid up prices for a limited supply of consumer products, caused by lingering supply chain disruptions. Second, the war in Ukraine destabilized energy markets and curtailed exports of Russian oil. This, along with increased travel due to fewer COVID restrictions, increased the demand for oil when there was limited global supply. Third, demand for housing and services has also increased. Home prices and rents have risen as demand for housing has outstripped supply, due in part to slow home building caused by the Great Recession of 2008. People are also spending more on experiences than tangible goods. This includes more demand for travel, personal care services, and entertainment. These services were restricted during COVID-19, again resulting in pent-up demand.

Data and Methods

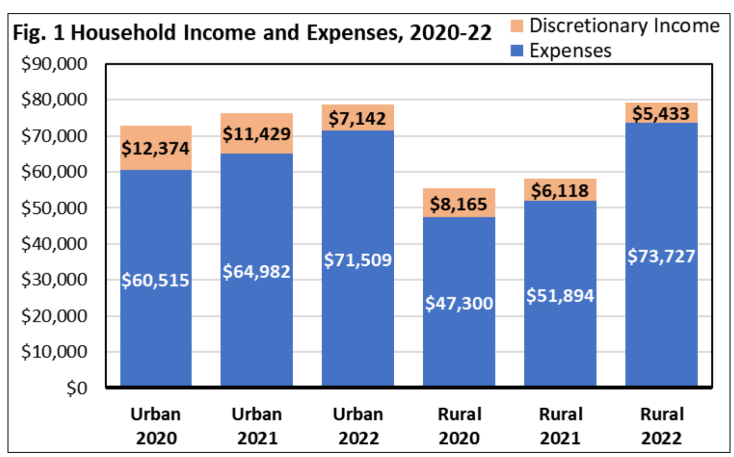
The U.S. government does not measure inflation in rural areas. However, it is possible to *estimate* the impact of inflation on rural household budgets. To do this, we draw on two data sources from the U.S. Bureau of Labor Statistics (BLS). Inflation is measured using percent change in the urban Consumer Price Index (CPI-U) for each month beginning in January 2020 and ending in December 2022. Next, we apply urban inflation rates to both rural and urban household spending patterns from the Consumer Expenditure Survey (CEX) for 2019 through 2021. Linking inflation rates and spending patterns by specific goods and services allows us to estimate the cost of inflation on both rural and urban household budgets. For example, high inflation will have a minimal impact if households spend only a small fraction of their income on that good or service. By contrast, moderate inflation will take a bigger bite of household budgets if it is a major expense. In other words, our findings do not measure rural inflation directly, rather the impact urban inflation may have had on rural spending.

According to BLS, urban households are those living in a metropolitan area, or those living in non-metros in cities of 2,500 or more. Rural households are those living in non-metro areas in towns under 2,500 or the open countryside. Refer to the appendix for more details on the methods.

Income and Expense Trends

Rural households were more vulnerable to inflation, as shown in figure 1. In 2020, rural household post-tax incomes stood at $55,465. About 85% of rural incomes went towards expenses, leaving $8,165 in discretionary income for savings and unanticipated expenses. By 2022, expenses rose rapidly by 56%. Rural earnings, especially from farm sources, also rose rapidly by 43%, but were unable to keep pace with inflation. The net effect cut rural discretionary incomes by 33.5% between January 2020 and December 2022, reducing the cushion to only $5,430 for the year. Expenses now consume 93% of rural take-home pay, up from 85% two years earlier.

Urban households were also affected by inflation, but have larger discretionary incomes than rural households. Urban residents saw discretionary incomes fall by 42.3%, dropping from $12,375 in 2020 to $7,140 today, but still higher than the rural income cushion. This was caused by an 18% rise in urban expenses over the past two years, while earnings for urban workers only rose by 8%. Urban expenses as a share of post-tax income rose from 83% in 2020 to 91% by 2022.



During the first year of inflation in 2021, rural households were more impacted by price gains. Rural discretionary incomes shrank by 25.1%, compared to a loss of only 7.6% for urban residents. The following year in 2022, however, inflation hit urban households harder. Urban discretionary income fell 37.5% compared to a loss of only 11.2% for rural households. The strong farm economy in 2022 boosted rural incomes, slowing the loss of rural discretionary incomes.

Monthly Inflation Trends

In January 2021, inflation gains only cost rural households an extra $60 for the month. However, inflation accelerated and by December rural people were spending $330 more than they did the previous year in 2020 (see figure 2). Transportation costs accounted for 60-70% of rural inflation gains (this includes gasoline/diesel, vehicle purchases, insurance, and maintenance/repair). Adding up all the monthly expense gains, inflation cost rural households an extra $2,625 during 2021.

Inflation was far worse for rural households in 2022, raising expenses by $5,495 for the year. As shown in figure 2, rural inflation costs rose from an extra $470 in January to a record high of $525 in added expenses for the months of March and June. Transportation costs accounted for 40-50% of these gains during the first half of 2022. Although inflation pressures eased in the last half of 2022, by December rural households were still paying an extra $285 compared to two years ago. As prices for gasoline and diesel fell sharply, inflation began to hit other goods and services. For example, food eaten at home was 2.4 times more expensive than in 2021. The cost of rural housing and utilities was 2 times higher than a year ago; and other household expenses were 1.4 times higher. The cost of rural health insurance also grew fast, but only accounted for a small share of rural inflation gains.

Adding consumer price gains from 2021 and 2022 together, rural households had to pay an extra $8,120 due to inflation, more than the $7,480 paid by urban households.

Rural households fared worse than their urban counterparts during the first half of 2022. As the dashed line in figure 3 shows, urban and rural households were equally affected by price gains through most of 2021. Rural residents had higher transportation costs, but lower housing and household expenses, which resulted in only small net differences between rural and urban places. However, during the first half of 2022, rural households were much worse off, paying an additional $80-90 more per month more than their urban counterparts. Transportation costs drove this difference, as higher fuel costs hurt rural people who must drive more for services and work. By late summer of 2022, the rural disadvantage began to lessen as fuel and vehicle prices dropped; and the cost of urban housing, household expenses, and food began to rise. By December 2022 the situation had reversed, with rural households paying slightly less for expenses than their counterparts in urban cities.

Fig. 2 RURAL Inflation Costs by Month, 2020-22

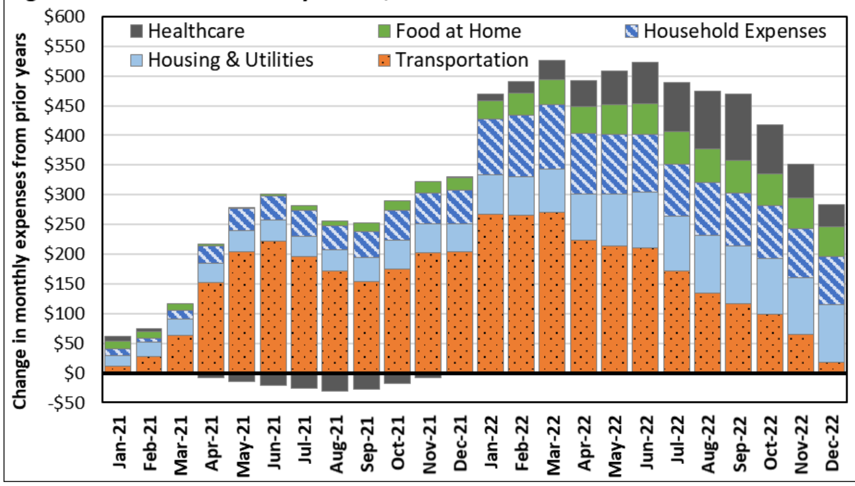
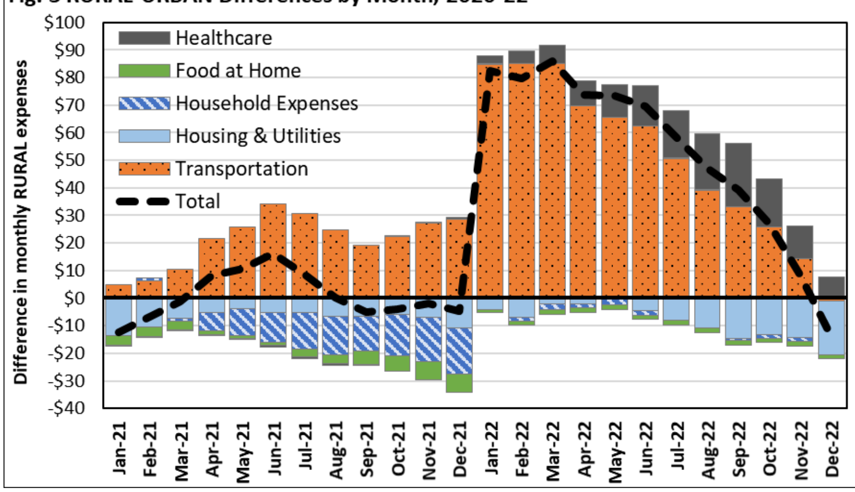


Fig. 3 RURAL-URBAN Differences by Month, 2020-22

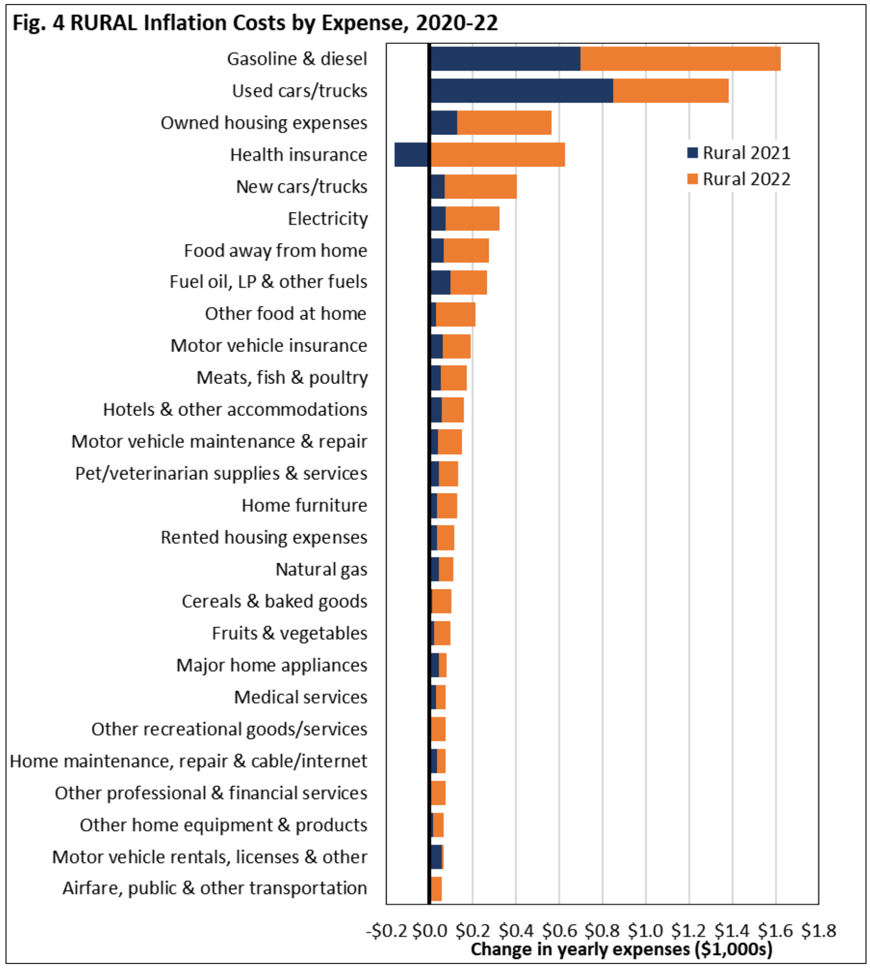


Inflation Gains by Expense

As shown in figure 4, the largest inflationary impact on rural households has been the increased cost of transportation. This is essential in rural areas where residents have to drive longer distances to work, school, or to shop for daily needs. Over the past two years, rural residents paid $1,620 more for gasoline and diesel fuels than they did in 2020. Fuel costs rose by $700 in 2021, then by an additional $930 in 2022. The cost of used vehicles also rose sharply, now costing rural households an extra $1,380 since 2020. Used car prices rose in both 2021 and 2022. The cost of new vehicles has risen more slowly, being up only $410 from 2020, with nearly all the gains occurring during 2022.

It is now more expensive to live in rural areas. The costs of owning a rural home rose by an extra $570, with 80% of the gains happening in 2022. These expenses include home mortgages and insurance, home maintenance and repair, and other home services. Rural electricity bills are now $320 higher than two years ago, with almost all price gains happening this year. Prices for fuel oil and liquefied petroleum/propane (LP) gas for heating rural homes was extremely volatile during 2022. Inflation gains peaked in May-June at over 70%, but have fallen sharply since then. Despite these price swings, fuel oil and LP heating costs in rural America only increased by $260 since 2020.

Health insurance for rural people is also getting more expensive, but the trends are complicated. Health insurance costs actually fell by $160 during 2021. However, over the past year the cost of health insurance rose sharply by $630, a sizable price spike for rural families. The cost of feeding a rural family is also up sharply in 2022. The cost of food eaten at home is up $585 from 2020, with 80% of the price gains happening this past year. Food items with the fastest inflation gains include packaged and semi-processed foods (labeled as other food at home) and meat and fish. Food away from home, such as at restaurants, also costs more than it did two years, being up $275 from 2020.



All Americans were affected by rising gasoline, health insurance, and housing costs. To better understand if inflation is making it more or less expensive to live in rural places, we calculated the difference in cost of living gains between rural and urban households (see figure 5). A large share of rural income is spent on transportation, so high gasoline and diesel prices strained rural household budgets. Rural Americans saw faster gains in the cost of used and new cars and trucks than those living in cities. Rural people also paid more for fuels, especially for motor vehicles and to heat their homes. The cost of maintaining health insurance coverage was more expensive for rural residents. One explanation is that rural workers tend to be self-employed and are responsible for a paying most of the premiums, unlike many wage and salary jobs where the employer often contributes.

On the other hand, the cost of housing is far less expensive in rural areas than in large urban cities. In particular, rural rental costs fell sharply during 2022. This may make the rural housing market more attractive to urban residents, potentially resulting in population gains. On a smaller scale, rural households were less affected by inflation gains in utilities and food.

Summary and Implications

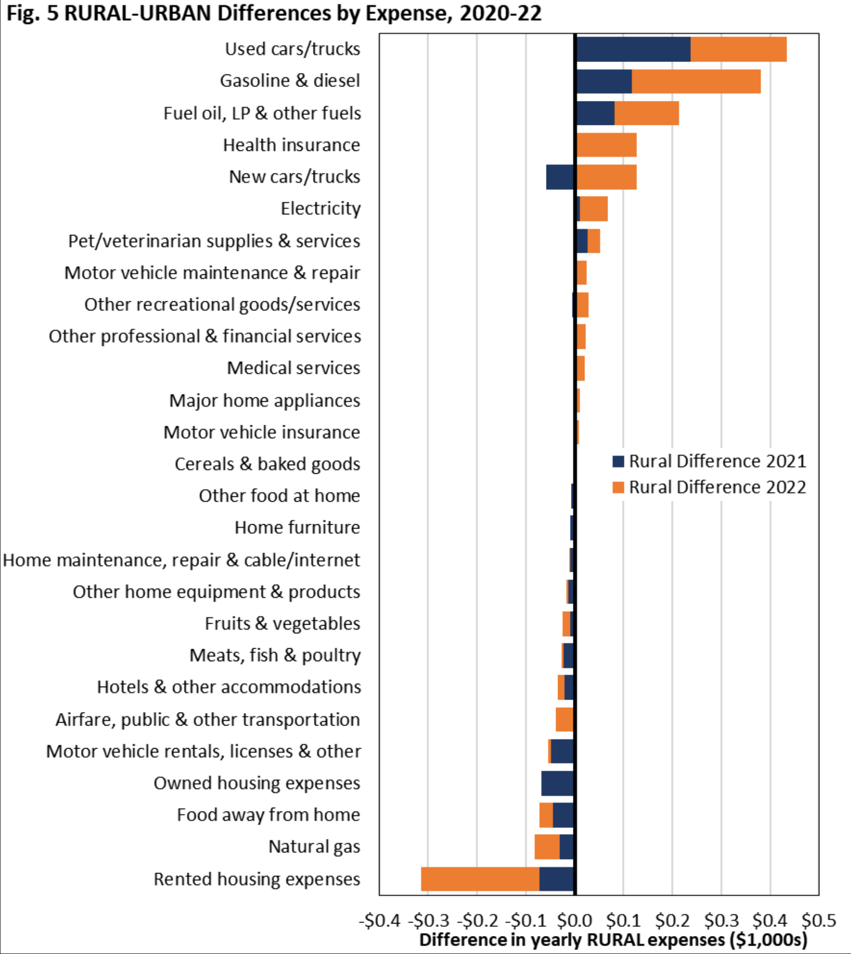
Consumer price inflation is estimated to have cost rural households an extra $2,625 in 2021, plus an additional $5,495 in 2022. Taken together, inflation over the past two years has taken a $8,120 bite out of rural household incomes. While transportation costs fueled rural inflation over the past two years, during 2022 rural people also had to contend with growing costs for housing, household expenses, food at home, and health insurance.

Increased transportation costs are especially worrisome. Rural people have longer commutes to work, they have to travel farther for daily needs like grocery shopping, and they have to drive to larger cities for critical services like education and healthcare. These expenses cannot be avoided, resulting in less discretionary income for rural households. Another worrying trend is the sharp rise in rural health insurance costs, which include premiums, deductibles, and co-insurance. If costs continue to rise, low-to-moderate income rural households may elect to reduce or stop health insurance coverage to save money, but also puts them at greater health and financial risk.

Inflation also cut into the financial cushion of many rural households. Price gains cut rural discretionary incomes by one-third since 2020, reducing the financial cushion to only $5,430 for the year to cover unexpected or emergency expenses. However, the situation would have been far worse if not for strong gains in rural incomes last year, especially for the farm sector. By contrast, urban households have a larger discretionary income cushion at $7,140 in 2022, although it has shrunk by over 40% over the past two years due to inflation.

Loss of discretionary income means rural households have less money to pay for unexpected healthcare costs not covered by insurance, putting at risk their health and ability to work, as well as the health of their family. This is especially important when you consider the rapid rise in rural health insurance costs. If rural households reduce coverage, they might not have the financial cushion to cover uninsured costs. Loss of discretionary income means less money to pay for emergency home repairs that may put them at risk for living in substandard homes or even risk of homelessness. For example, not having the means to replace a furnace would be catastrophic in some rural climates. Further, lack of maintenance may decrease the value of the home, usually a household's greatest asset, perhaps to the point that the mortgage is underwater. Limited savings means less money to pay for big-ticket car repairs or needed used car purchases, jeopardizing a rural household's ability to work and to obtain essential goods and services, like groceries or healthcare. Long distances to services and lack of rural public transportation makes having a car a necessity. Lastly, the loss of discretionary income means rural people have less ability to save for their retirement or their children's college – both needed for the future economic security of themselves and their children. In short, not having this extra financial cushion puts rural families at greater risk for increased debt, default, and potential bankruptcy.

Fig. 5 RURAL-URBAN Differences by Expense, 2020-22



This is not to say that urban America is immune from inflation's perils, rather inflation has different impacts across places. During 2021, rural and urban inflation gains were mostly similar. However, inflation had a much more severe impact in rural places during the first half of 2022, largely driven by high fuel and energy prices. Since then, fuel prices have fallen that helped rural households; while gains in housing and household expenses have harmed urban household budgets. At present, rural and urban inflation are at parity, being no better or worse than the other. If current trends continue, inflation in 2023 will likely have a more negative impact on urban people and places in the U.S.

Appendix

Inflation rates are taken from the Bureau of Labor Statistics (BLS) Consumer Price Index for urban consumers (CPI-U) between January 2020 and December 2022. CPI-U tables include inflation rates by detailed expenses. BLS only produces CPI data for urban areas, so in this report we assume urban CPI rates are a sufficient indicator of non-existent rural CPI rates. BLS CPI table: https://www.bls.gov/bls/newsrels.htm

Household spending patterns are taken from the BLS Consumer Expenditure Survey (CEX) for urban and rural consumers in 2019 through 2021 (table 1720), the most current data as of publication. We matched 2020 CEX spending patterns to 2020-21 CPI-U inflation rates, and 2021 CEX to 2021-22 CPI-U. Use of 2021 CEX data accounts for shifts in spending behavior due to 2020-21 inflation gains. Exact matches for some detailed goods and services was not possible across the CPI and CEX data programs. To address this, we either used the aggregated category or combined CPI rates as a weighted average using CPI's importance factors. Expense categories used in this report account for 98% of household expenses reported by CEX. Excluded expenses include state and federal taxes and mandatory contributions to pensions and personal insurance. BLS CEX table: https://www.bls.gov/cex/tables.htm

Given the lack of actual rural CPI data, findings from this report should be considered preliminary estimates.

Acknowledgements

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