

Impact of Inflation on Rural Household Expenses, 2021-2022

How has inflation impacted household budgets of rural Americans? What goods and services are costing more? Has inflation impacted rural areas worse than urban ones? Inflation is a concern for most Americans. Last month, the federal government reported consumer prices rose by 8.6% between May of 2021 and May of 2022. This report provides preliminary estimates of how inflation has impacted rural and urban households.

Inflation is defined as the increase in prices for goods and services. For the past several decades, inflation in the U.S. has been low. However, the rapid rise in inflation over the past year caught many people off-guard. This current round of inflation is caused by three main factors.¹ First, there is strong pent-up demand due to the COVID-19 pandemic. Households reduced purchasing during the pandemic, yet also saved more money due to reduced spending, wage gains, and government payments. Now, households are making these delayed purchases and have the money to bid

up prices. Second, there is a scarcity of goods caused by strong demand, but also a lack of consumer products from continued supply chain disruptions. Third, demand for housing and services has also increased. Home prices and rents have risen as demand for housing has outstripped supply, due 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. Other minor factors include uncertainty in markets due to the war in Ukraine; and also the inflationary impact of pandemic relief payments by the federal government.

Data and Methods

To estimate the impact of current inflation on household budgets, we draw on two data sources from the U.S. Bureau of Labor Statistics. Inflation is measured using percent change in the Consumer Price Index (CPI-U) between May 2021 and May 2022. Next, we apply inflation rates

to household spending patterns from the Consumer Expenditure Survey (CEX) for 2020. We adjust incomes to account for recent wage gains which offset the impact of inflation. Linking inflation rates and spending patterns by specific goods and services allows us to gauge cost of inflation on household budgets. For example, high inflation will have a minimal impact if households spend a small fraction of their income on that good or service. By contrast, moderate inflation will take a bigger bite off household budgets if it is a major expense.

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 Expenses

Rural households are more vulnerable to inflation. In 2021, rural household post-tax income stood at \$58,625. About 84% of rural incomes went towards expenses, leaving \$9,354 in disposable income for savings and unanticipated expenses. However, by 2022 expenses rose by 9.2% overall, but earnings also rose by 2.6%. The net effect cut rural disposable incomes by 38.0%, reducing the cushion to only \$5,800. Expenses now consume 90% of take-home pay.

Urban households are less affected by inflation, having higher post-tax incomes (\$77,756) and more disposable incomes (\$15,390) in 2021. During the past year, expenses rose more slowly at 7.6%, but earnings for urban workers rose by 4.3%. This cut disposable income by only 17.0%, leaving a sizable cushion of \$12,772. See figure 1.

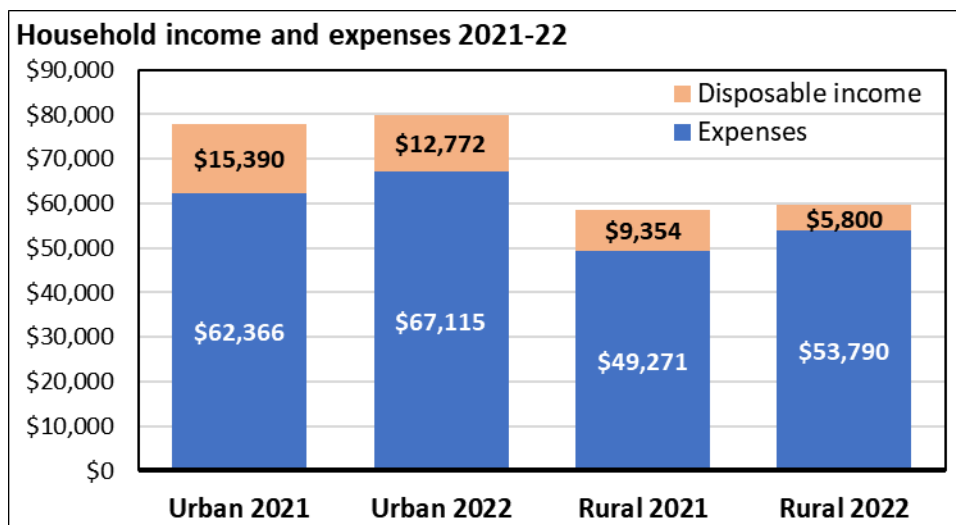


Figure 1. Income and expenses for urban and rural households.

Increases in Rural Expenses

The biggest inflation impact on rural households has been the increased cost of motor vehicle fuels (e.g. gasoline and diesel). Rural people are paying \$919 more for gasoline than they did one year ago. The cost of used vehicles and healthcare insurance rose has risen by about \$515 each. Rural housing costs have also risen. Fuel oil for home heating now costs an extra \$262. The costs of owning a home rose by an extra \$256 (includes home maintenance, repair, and other services), and electricity bills are now \$207 higher than one year ago. The cost of prepackaged and frozen meals, snacks, condiments, desserts, and non-alcoholic beverages is up \$186. It also costs more to decorate a home. Home furnishings, appliances, and electronics now cost rural households an extra \$174 compared to 2021. See figure 2.

Urban household also saw gains in motor vehicle fuels, health insurance, owner-occupied and rental home expenses, new and used vehicles, prepackaged and processed foods, and electricity. However, the amount of these price increases differed in rural and urban places.

Rural vs. Urban Differences

All Americans are 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 calculate the differences in costs of living gains between rural and urban households (see figure 3). Rural America is seeing faster gains in the cost of home fuel oil for heating, gasoline and diesel, purchases of used vehicles, and pet and veterinary services (a sizable expense in rural areas). Costs also grew faster for electricity and housekeeping supplies (e.g. cleaning, lawncare, and other household supplies). All of these make living in rural places more expensive in 2022 than one year ago,

On the other hand, costs grew slower in rural areas for both owned and rented housing expenses, new vehicle purchases, food away from home (e.g. restaurants), home furnishings and appliances, and natural gas. In other words, inflation made living in urban places more expensive for these expenses, mainly because urban residents pay more for these goods and services than rural people.

Summary and Implications

The current wave of inflation has made rural families more vulnerable than urban families to rising gasoline prices, higher fuel oil costs to heat their homes, and the ability to purchase less expensive used cars. Increased transportation costs are especially worrisome. Rural people have longer commutes to work, have to travel farther for daily needs like grocery shopping, and have to drive to larger cities for education and

healthcare services. These expenses cannot be avoided, resulting in less disposable income for rural people.

Overall, inflation has severely reduced the disposable incomes of rural Americans, while the impact on urban households has been less severe because of higher incomes. This means that rural families have less money to save for their retirement or their children's college – both needed for the future economic security of themselves and their children. Less ability to pay unexpected healthcare

costs not covered by insurance, putting at risk their health and ability to work. Less ability to pay for emergency home repairs that may put them at risk for homelessness. Less ability to pay for big-ticket car repairs or needed used car purchases, jeopardizing their ability to work and to obtain essential goods and services, like groceries or healthcare. Not having this extra financial cushion puts rural families at greater risk for increased debt, default, and potential bankruptcy.

References

¹ “Here’s What You Need to Know About America’s Super-Hot Inflation”. *New York Times*, 6/11/2022. <https://www.nytimes.com/article/inflation-us-prices.html>

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Annual Gains in Rural Household Expenses 2021-22

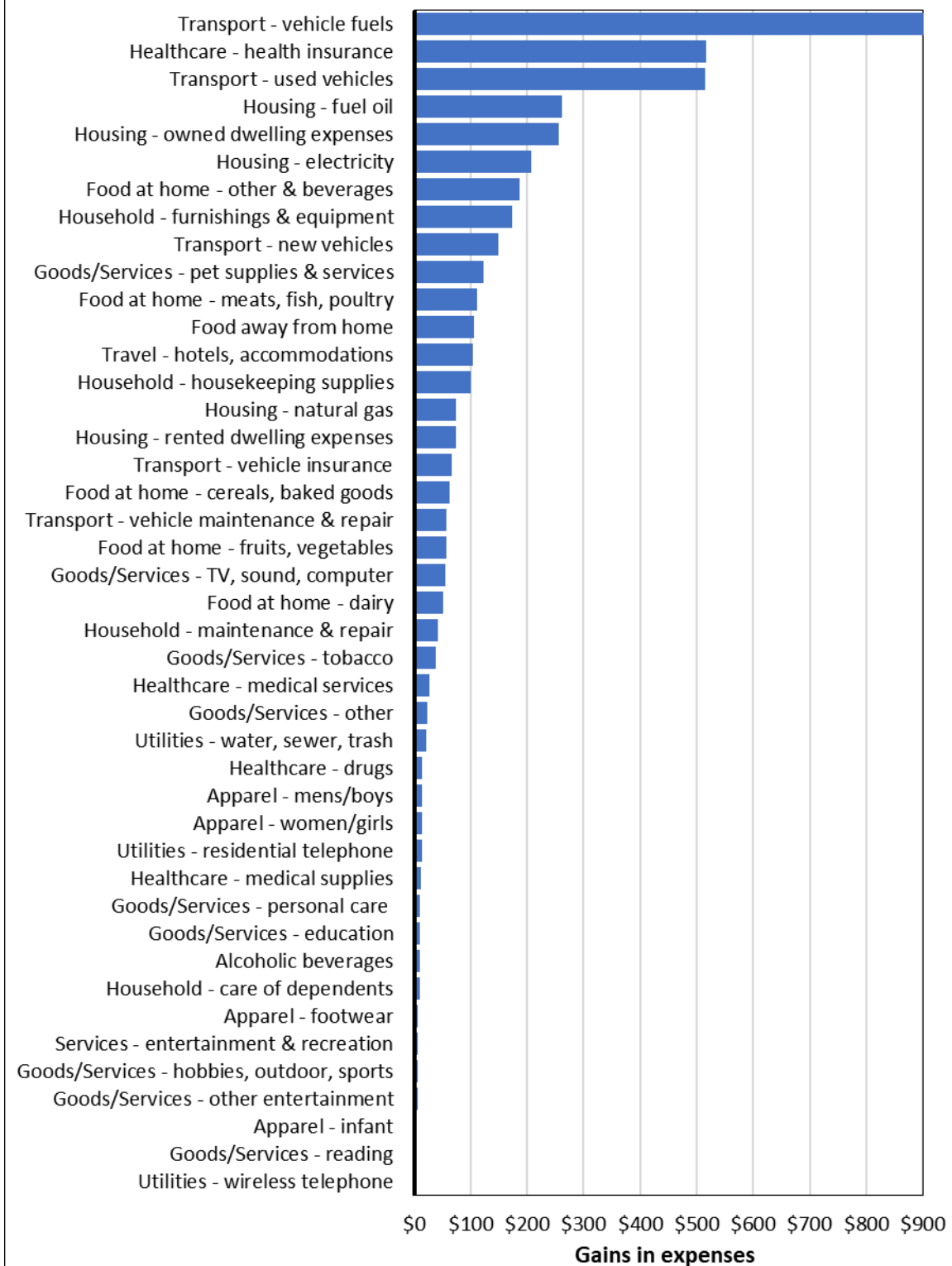


Figure 2. Change in annual expenses for rural households between 2021 and 2022.

Annual Gains in Household Expenses, Rural vs. Urban Differences

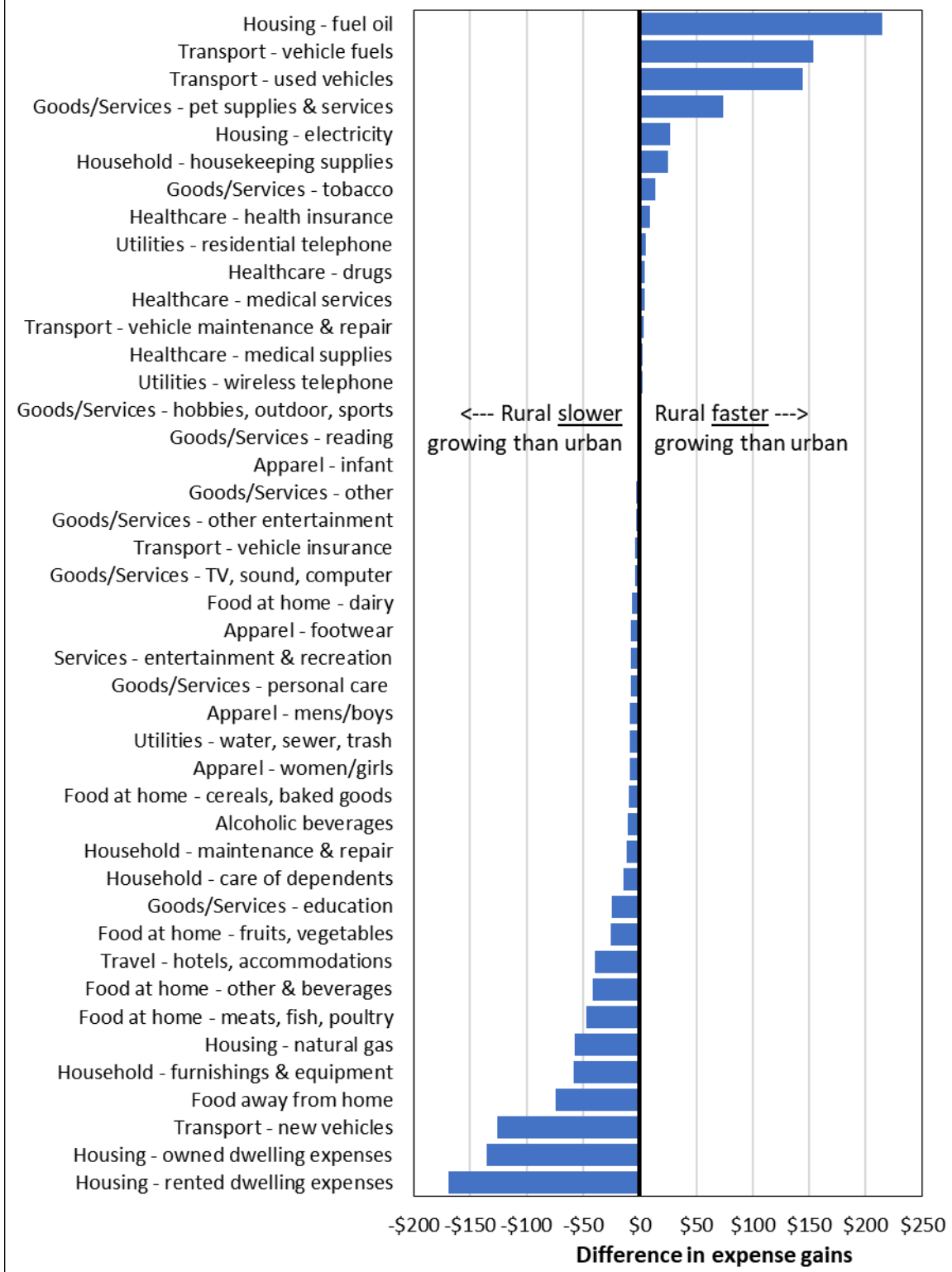


Figure 3. Rural-urban differences in change of annual household expenses between 2021 and 2022.

Table 1. Inflation rates, expenses, and changes in expenses between 2021 and 2022.

EXPENSE	CPI % Change	Urban Households			Rural Households		
		2021	2022	Change	2021	2022	Change
Food at home - cereals, baked goods	11.6	\$624	\$696	\$72	\$542	\$605	\$63
Food at home - meats, fish, poultry	14.2	\$1,123	\$1,282	\$159	\$788	\$900	\$112
Food at home - dairy	11.8	\$499	\$558	\$59	\$443	\$496	\$52
Food at home - fruits, vegetables	8.2	\$998	\$1,080	\$82	\$690	\$746	\$57
Food at home - other & beverages	12.6	\$1,809	\$2,036	\$228	\$1,478	\$1,664	\$186
Food away from home	7.4	\$2,432	\$2,612	\$180	\$1,429	\$1,535	\$106
Alcoholic beverages	4.0	\$499	\$519	\$20	\$246	\$256	\$10
Housing - owned dwelling expenses	5.1	\$7,671	\$8,062	\$391	\$5,026	\$5,282	\$256
Housing - rented dwelling expenses	5.2	\$4,677	\$4,921	\$243	\$1,429	\$1,503	\$74
Travel - hotels, accommodations	19.3	\$748	\$893	\$144	\$542	\$647	\$105
Housing - fuel oil	75.9	\$62	\$110	\$47	\$345	\$607	\$262
Housing - electricity	12.0	\$1,497	\$1,676	\$180	\$1,724	\$1,931	\$207
Housing - natural gas	30.2	\$437	\$568	\$132	\$246	\$321	\$74
Utilities - residential telephone	4.7	\$187	\$196	\$9	\$296	\$310	\$14
Utilities - wireless telephone	-0.7	\$1,247	\$1,239	-\$9	\$936	\$930	-\$7
Utilities - water, sewer, trash	4.4	\$686	\$716	\$30	\$493	\$514	\$22
Household - care of dependents	6.5	\$374	\$399	\$24	\$148	\$157	\$10
Household - maintenance & repair	4.8	\$1,123	\$1,176	\$54	\$887	\$929	\$43
Household - housekeeping supplies	9.2	\$811	\$885	\$75	\$1,084	\$1,184	\$100
Household - furnishings & equipment	9.8	\$2,370	\$2,602	\$232	\$1,774	\$1,948	\$174
Apparel - mens/boys	7.3	\$312	\$335	\$23	\$197	\$211	\$14
Apparel - women/girls	4.1	\$561	\$584	\$23	\$345	\$359	\$14
Apparel - footwear	4.5	\$312	\$326	\$14	\$148	\$154	\$7
Apparel - infant	10.2	\$62	\$69	\$6	\$49	\$54	\$5
Transport - new vehicles	12.6	\$2,183	\$2,458	\$275	\$1,183	\$1,331	\$149
Transport - used vehicles	16.1	\$2,308	\$2,679	\$372	\$3,203	\$3,718	\$516
Transport - vehicle fuels	49.1	\$1,559	\$2,325	\$766	\$1,872	\$2,792	\$919
Transport - vehicle maintenance & repair	6.1	\$873	\$926	\$53	\$936	\$993	\$57
Transport - vehicle insurance	4.5	\$1,559	\$1,629	\$70	\$1,478	\$1,545	\$67
Healthcare - medical services	2.7	\$873	\$897	\$24	\$1,035	\$1,063	\$28
Healthcare - health insurance	13.8	\$3,680	\$4,187	\$508	\$3,745	\$4,261	\$517
Healthcare - drugs	2.3	\$437	\$447	\$10	\$641	\$655	\$15
Healthcare - medical supplies	4.7	\$187	\$196	\$9	\$246	\$258	\$12
Services - entertainment & recreation	3.2	\$437	\$451	\$14	\$197	\$203	\$6
Goods/Services - TV, sound, computer	5.6	\$1,060	\$1,120	\$59	\$985	\$1,041	\$55

Goods/Services - pet supplies & services	7.8	\$624	\$672	\$49	\$1,577	\$1,700	\$123
Goods/Services - hobbies, outdoor, sports	2.9	\$187	\$193	\$5	\$197	\$203	\$6
Goods/Services - other entertainment	1.4	\$624	\$632	\$9	\$394	\$400	\$6
Goods/Services - personal care	2.8	\$686	\$705	\$19	\$394	\$405	\$11
Goods/Services - reading	2.7	\$125	\$128	\$3	\$99	\$101	\$3
Goods/Services - education	2.5	\$1,372	\$1,406	\$34	\$394	\$404	\$10
Goods/Services - tobacco	7.9	\$312	\$336	\$25	\$493	\$532	\$39
Goods/Services - other	2.8	\$935	\$962	\$26	\$838	\$861	\$23

Notes: 2021 and 2022 numbers are total annual expenses. Change is annual gain or loss.

Appendix

Inflation rates are taken from the Bureau of Labor Statistics Consumer Price Index for urban consumers (CPI-U) between May 2021 and May 2022, the most current estimates at time of publication (<https://www.bls.gov/news.release/cpi.to2.htm>). Household spending patterns are taken from the Bureau of Labor Statistics Consumer Expenditure Survey (CEX) for urban and rural consumers in 2020 (table 1720 at <https://www.bls.gov/cex/tables.htm#crosstab>), again the most current data as of publication. To account for increases in earnings (wages, salaries, self-employment) between 2020 to 2022, we use data from the Bureau of Labor Statistics Current Employment Survey (CES), which tracks wages and salaries on a monthly basis (table B-3 at <https://www.bls.gov/ces/data/employment-situation-table-download.htm>).

We match CPI inflation rates to CEX spending patterns by detailed goods and services. The categories across the data programs are not always identical. When specific matches are not possible, we use the aggregated category. Not all expenses are adjusted for inflation because CPI only reports rates for the most common or most important goods and services. Thus, our inflation estimates should be considered a lower-bound estimate.

Household income from CEX in 2020 is adjusted to 2022 using CES wage gains. CES only tracks wage and salary jobs, excluding self-employed persons, but it is the only data source that provides monthly estimates of wage changes. Since 95% of jobs in the U.S. are wage and salary, we assume growth in these wages reflects growth in self-employment earnings. We apply change in weekly earnings from May 2020 to May 2021, and from May 2021 to May 2022 for both metropolitan and non-metropolitan areas. We apply these growth rates to the earnings portion of household income (around 63.3% of income), and assume change in other income has remained stable since we have no current data to warrant adjustment. We also assume that post-tax income remained stable as there has been no major federal tax changes during the past two years.

Findings from this report should be considered preliminary estimates, as the federal government will provide final numbers in 2023.

About Rural Sociology at Iowa State University

Rural Sociology at Iowa State University has a long history, being one of the first programs in the nation. The research and extension programs were established in 1915 and 1922, respectively, in the College of Agriculture. The Bachelor of Science degree in rural sociology was established in 1919, the Master of Science in 1920, and the Ph.D. in 1940. At present, there are four rural sociology faculty members who engage in teaching, research, and extension activities in the sociology of agriculture, rural communities, and population studies. Long-term research and extension projects in rural sociology include the Iowa Farm and Rural Life Poll since 1982; and Iowa Small Towns Poll since 1994.