



DID THE STIMULUS CHECKS IMPROVE HOUSEHOLD BALANCE SHEETS?

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Abstract

Even before COVID-19 brought the economy to a halt, about 40 percent of U.S. households said they lived on such tight budgets that they could not easily smooth small financial shocks. The question is how the pandemic affected the finances of these vulnerable households. On one hand, the shutdown of the economy resulted in salary cuts and job losses that put pressure on many households, leaving them even less prepared for small expenditure shocks. On the other hand, most households received Economic Impact Payments (EIP) totaling several thousand dollars; and those who lost their jobs got expanded Unemployment Insurance (UI) benefits that often more than replaced lost income, at least initially. In addition to preventing economic hardship, the hope was that this financial assistance would improve household balance sheets, enabling them to better weather financial shocks and avoid falling short on longer-term goals such as retirement savings.

The paper found that:

- Most households reported saving most of their second and third EIP checks, and the percentage that felt they were better able to manage unexpected expenses increased.
- Data on household net wealth support these perceptions: balance sheets improved, with high-wealth households gaining an enormous amount from the run-up of housing and equity prices.
- For middle-wealth households, EIP checks accounted for about fifteen percent of balance sheet gains and they saw increased home and stock ownership over the pandemic.
- Low-wealth households were able to break even because the stimulus payments supported earnings losses when supplemental UI stopped and helped meet rising expenditures.

The policy implications of the findings are:

- These results stand in stark contrast to households' experiences after the Great Recession and support the importance of fiscal support and a quick labor market recovery.
- As more complete data become available, the precise impact of EIP and UI benefits will become clearer.

Introduction

Before the COVID-19 pandemic, despite a booming economy, about 40 percent of households said they would have trouble paying a \$400 unexpected expense.¹ Operating under such tight budgets can make it very difficult to save for long-term goals such as retirement. Instead, to cover an unexpected expense, these households are more likely to undermine their balance sheets by taking on high-cost debt, such as leaving their credit card balances unpaid. Over time, households may even dip into assets set aside for retirement to smooth financial shocks.

The question addressed in this paper is whether the stimulus checks helped balance sheets of U.S. households, as measured both by subjective self-assessments and by objective measures of net wealth as reported in national surveys, or merely covered pandemic expenses. The period examined is December 2019-December 2021, which means those with substantial assets benefited from a roaring stock and housing market.² But for those without meaningful assets two opposing forces were at play. On one hand, the shutdown of the economy resulted in salary cuts and job losses that put pressure on many household balance sheets, leaving them even less prepared for small expenditure shocks. On the other hand, most households received stimulus checks totaling several thousand dollars; and those who lost their jobs got expanded Unemployment Insurance (UI) benefits that more than replaced lost income, at least initially. This extra money should provide some much-needed precautionary savings and a boost to their balance sheets.

While the data clearly show that, in the aggregate, household balance sheets were much healthier at the end of 2021 than before the pandemic, the specific issue addressed in this paper is the role played by stimulus checks. Isolating the impact of these payments requires eliminating the change of wealth due to other factors. First, as noted, a substantial portion of the wealth gains since the pandemic is the result of spectacular growth in housing and equity markets. Second, changes in assets could also be due to changes in household expenditures, either because people's spending options were limited by the shutdown of the economy or because their needs

¹ In 2019, 41 percent of households ages 25-64 reported that they could not afford a \$400 unexpected expense (Chen 2021).

² Although much of the equity gains during the pandemic have been erased in 2022, the S&P 500 is still up about 20 percent between December 2019 and September 2022.

to support work from home or school closures increased. Third, declining or increasing wages, and the extent to which UI replaced lost wages, could also have played a role. Further, exploring how the change in balance sheets varied for households in low-, middle-, and high-wealth categories can help inform how fiscal support may be used in future economic downturns.

While a complete assessment of the impact of pandemic relief will take time to observe, this analysis provides an up-to-date picture of how households used their stimulus payments, the extent to which the checks improved perceived financial security, and the actual impact on their net wealth over the two-year period – now that the pandemic supports have mostly ended.

The discussion proceeds as follows. The first section provides an overview of research to date on how the pandemic and fiscal support have impacted household finances. The second and third sections discuss the data and methodology used in the analysis. The fourth section presents the results both for reported use of the Economic Impact Payments (EIP) and their perceived effect on households' financial security as well as their actual effect on the balance sheets for households in the low-, middle-, and high-wealth groups. The final section concludes that while high-wealth households gained an enormous amount from the run-up of housing and equity prices, the stimulus payments clearly helped improve the financial well-being of middle-wealth households and, at the very least, helped low-wealth households to break even – a stark difference from the Great Recession.

Background

Many households live paycheck to paycheck and cannot afford small unexpected expenses (Angeletos et al. 2001; Chen 2019; and Beshears et al. 2020). In 2019, 41 percent of households ages 25-64 reported that they could not cover a \$400 unexpected expense out of cash or cash equivalents.³ Living on such a tight budget can have important implications for short- and long-term financial security. In the short term, households may routinely use high-cost forms of borrowing, such as leaving a portion of credit card balances unpaid (see Box for more detail). In the long term, households may dip into assets set aside for retirement in order to smooth financial shocks (Beshears et al. 2020). More fundamentally, they may have trouble saving for retirement in the first place, making them more reliant on Social Security.

³ U.S. Board of Governors of the Federal Reserve System, *Survey of Household Economics Decisionmaking* (2019).

Low-income households may be unable to afford a \$400 expense because they lack savings or access to good savings vehicles (McKernan et al. 2020).⁴ But the lack of precautionary savings is not just a problem for low-income households (Kaplan, Violante, and Weidner 2014). In fact, 14 percent of households earning more than \$100,000 say they would have trouble with this relatively small \$400 expense (see Figure 2 in Box). One reason that middle- and higher-income households have trouble with such relatively small unexpected expense is debt. While households may hold liquid assets, they also have mortgages, student loans, and/or other installment loans with upcoming payments, constraining household budgets (Chen 2019). These households hold little in liquid assets while simultaneously accumulating illiquid assets such as home equity, resulting in an inability to weather small financial shocks (Beshears et al. 2020).

Box. Precautionary Savings and Credit Card Debt

One important indicator of financial security is whether households have precautionary savings. Such savings help buffer households from financial hardship or from dipping into their retirement savings when faced with modest unexpected expenses – such as a car repair or a leaky roof. Therefore, it is concerning that even before the pandemic, data from the Federal Reserve Board’s *Survey of Household Economics and Decisionmaking* (SHED) shows that 41 percent of households ages 25-64 felt they would have trouble paying for an unexpected \$400 expense.⁵

Many observers have been surprised by the finding that so many households across the income spectrum could struggle with such an expense. And some have doubted the validity of this oft-cited statistic.⁶ But, it turns out that including unpaid credit card debt helps clarify the picture.⁷

A separate survey by the Federal Reserve Board – the *Survey of Consumer Finances* (SCF) – captures how much households *actually* have in their checking and savings accounts.

⁴ In 2019, 6 percent of adults were unbanked while 16 percent had bank accounts but still used alternative financial services products such as payday loans, pawnshops, auto title loans, check cashing services, paycheck advances and tax refund advances (U.S. Board of Governors of the Federal Reserve System 2019).

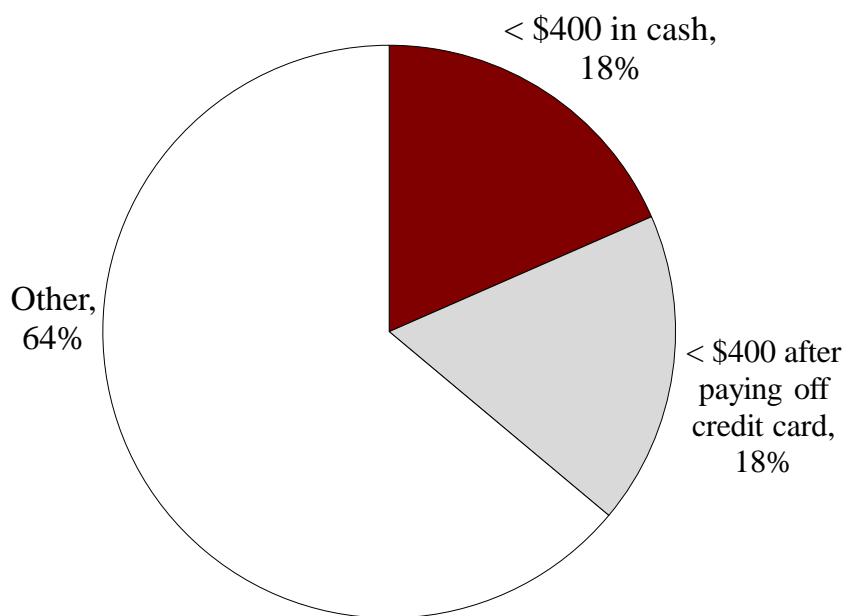
⁵ The specific SHED question is: “Suppose that you have an emergency expense that costs \$400. Based on your current financial situation, how would you pay for this expense?” We categorized households that say they would need to “borrow, sell, stop paying other bills, or just would not be able to pay” as unable to cover the expense.

⁶ Reynolds (2019), Strain (2019), and Kapadia (2019).

⁷ See Chen (2019) for more detail.

The SCF shows that only about 20 percent of households have less than \$400 on hand (see Box Figure 1). However, after deducting outstanding credit card debt from their cash holdings, another 20 percent would have trouble covering an unexpected \$400 expense. That is, even though households in the second group technically have enough cash available to pay a \$400 expense, they appear to mentally allocate the amount in their bank accounts to paying off high-rate credit card debt.

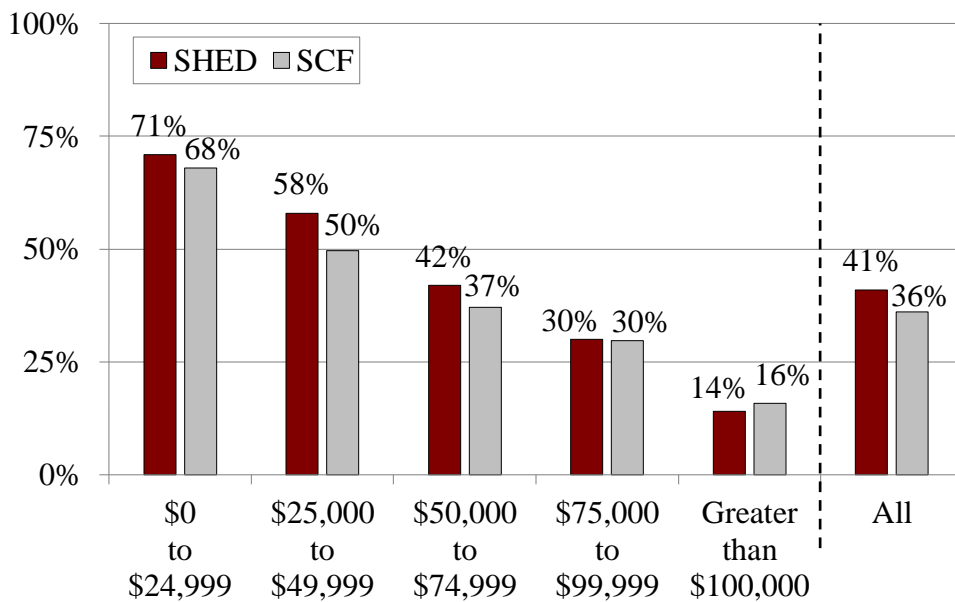
Box Figure 1. *SCF Households Ages 25-64 by Checking/Savings and Unpaid Credit Card Balance, 2019*



Source: U.S. Board of Governors of the Federal Reserve System, *Survey of Consumer Finances* (SCF) (2019).

Some additional evidence that credit card debt plays an important role in households' assessment of their ability to cover a modest unexpected expense across the income spectrum can be seen in Box Figure 2. Combining the two SCF groups (in red and gray) and arraying them by income shows that the percentage of households in the SHED and SCF surveys unable to pay \$400 is nearly identical for each income group. Thus, the burden of credit card debt appears to be an obstacle to households' ability to accumulate adequate precautionary savings.

Box Figure 2. *Percentage of Households Ages 25-64 that Have Trouble Covering a \$400 Emergency Expense, by Income, 2019*



Note: SCF data include households that would have trouble covering an unexpected \$400 expense after accounting for their outstanding credit card debt.

Sources: U.S. Board of Governors of the Federal Reserve System. *Survey of Household Economics and Decision-making* (2019) and SCF (2019).

The pandemic would have stretched the finances of many households as the economy came to a halt and businesses shut down, likely increasing the share of households unable to smooth financial shocks. Fortunately, Congress provided most households, regardless of employment status, with EIPs and expanded UI benefits for those that experienced earnings losses. EIPs provided single households earning less than \$75,000 and married households earning less than \$150,000 with cash payments totaling up to \$3,200 and \$6,400 respectively.⁸ Additionally, households with dependent children received up to \$2,500 more for each child (see Table 1).

For households that kept their jobs, these substantial payments could provide many with a much-needed financial buffer. McKernan et al. (2020) found households with financial cushions

⁸ A back-of-the-envelope estimate using IRS *Statistics on Income* W-2 data shows that between 70-80 percent of taxpayers were eligible for the full EIP checks. A higher share was eligible for full or partial checks.

of just \$250-\$800 are less likely to be evicted, miss a bill payment, or need public benefits after an income shock. Of course, households that experienced a decline in earnings as a result of the pandemic possibly needed the EIP checks to help make ends meet.

In addition to EIPs, Congress also expanded and supplemented UI to help smooth income shocks for households with lost earnings.⁹ Ganong, Noel, and Vavra (2020) estimate that, at least initially, the additional \$600 in UI replaced over 100 percent of pre-pandemic income for 69 percent of workers (see Table 2).¹⁰

With this level of supplemental income support, the hope is that, in addition to supplementing lost income, low- and middle-wealth households would see an improvement in their household balance sheets and be better equipped to weather financial shocks. However, early analysis found mixed evidence of improved balance sheets among households at the bottom of the income and wealth distributions. For example, Greig, Deadman, and Noel (2021) show that while cash balance increases were largest (in percentage terms) among lower-income households after the arrival of the stimulus checks, spend down was also the fastest among these households. This pattern could reflect a number of factors. First, state UI programs faced administrative challenges in meeting the unemployment surge, resulting in delays in payments that were often weeks long (Barnes et al. 2022). Second, the supplemental UI payments were intermittent; without these additional \$600 (and later \$300) in benefits, UI replaces only 41 percent of lost earnings, on average (Goger, Loh, and Bateman 2020).¹¹ Third, after initial

⁹ Most states provide up to 26 weeks of UI benefits. Congress approved a total of 49 additional weeks of federally financed UI benefits for workers who exhaust state benefits (Pandemic Emergency Unemployment Compensation). Congress also provided a total of 75 weeks of temporary UI for workers who are not typically eligible for UI (Pandemic Unemployment Assistance). These workers include the self-employed, independent contractors, gig workers, the partially employed, those unable to work due to COVID-19, and those who are not able to telework. The second and third EIP checks were sent out at the end of December 2020 and March 2021, respectively. The additional \$300 per week in UI benefits came into effect around the same time.

¹⁰ Workers whose hours or earnings were significantly reduced qualified for “partial” benefits under both regular and pandemic unemployment.

¹¹ Several temporary COVID-19 UI programs aided the unemployed. The CARES Act provided most UI claimants with an additional \$600 per week. These additional benefits expired on July 25, 2020. The Continuing Assistance Act provided an additional \$300 per week from December 27, 2020 to March 14, 2021. There was no Congressional approval of supplemental UI benefit between July and December 2020; however, President Trump issued a presidential memorandum that allowed the Federal Emergency Management Agency to provide grants to states to supplement weekly benefits for certain UI claimants. The grants provided an additional \$300 per week in UI benefits. Practically, the impact of the grants was limited because the funding could only provide additional benefits between August 26, 2020 and September 6, 2020. The American Rescue Plan Act provided an additional \$300 per week in benefits starting on March 14, 2021; this provision expired on September 4, 2021. However, 26 states sought to terminate temporary pandemic UI programs by June or July 2021. See Whittaker and Isaacs (2021a, 2021 b) and Isaacs and Whittaker (2021) for more details.

reductions earlier in the pandemic, households in the bottom half of the income distribution increased their consumption to more than pre-pandemic levels (Greig, Deadman, and Noel 2021).

Although lower-income households saw rapidly depleting checking balances as spending jumped, administrative data from JP Morgan show that the checking accounts of all households, even lower-income households, were still higher at the end of 2021 relative to the end of 2019 (Greig, Deadman, and Sonthalia 2021). The JP Morgan findings require a caveat, however. Households holding bank accounts, and particularly bank accounts at JP Morgan Chase, are more financially secure than their low-income counterparts without such accounts (Barnes et al. 2022), so the picture of lower-income households among JP Morgan Chase clients may be too positive to reflect the general population. Additionally, checking accounts are only a small part of household balance sheets; and low-income households could be taking on more debt or depleting savings in other ways.

In short, much remains unknown about the impact of the pandemic and EIP payments on household balance sheets. This project provides an up-to-date and complete view of the health of household finances across the wealth distribution using both subjective and objective measures.

Data

The analysis relies on data from the *Household Pulse Survey* (HPS) and the *Survey of Household Economic Decisionmaking* (SHED) to inform on how stimulus payments impact subjective measures of household finances and from the *Panel Study of Income Dynamics* (PSID) and the *Consumer Expenditure Survey* (CEX) to evaluate objective resources.

Household Pulse Survey

The HPS is a high-frequency survey produced by the U.S. Census Bureau to capture the experiences of households during COVID-19. It asks questions about the social and economic impact of the pandemic, including how households used their EIP checks, as well as questions on demographic and economic characteristics of the households. The survey, which began on April 23, 2020, interviews between 40,000 to 110,000 respondents sporadically. This project uses data from weeks 1-40, which includes interviews up through December 13,

2021. Since we are interested in how people used their EIP payments, we restrict our sample to households ages 25-64 that have received EIP checks, resulting in a final sample of 2,954,235 households across 40 weeks.

Survey of Household Economics and Decisionmaking

The SHED, an annual survey conducted by the Federal Reserve Board every year since 2013, asks over 11,000 households subjective and objective questions about their financial well-being. This analysis uses the 2018-2021 SHED surveys as well as the April and July 2020 COVID supplements to inform on households' perceived ability to manage unexpected expenses. The sample of households ages 25-64 in 2021 was 7,930.

Panel Study of Income Dynamics

The PSID is a household panel survey, administered every two years since 1968, that collects in-depth information on household finances as well as socioeconomic and demographic characteristics. This analysis focuses on data from the 2015-2019 surveys as well as the 2021 wealth and COVID-19 early release. The PSID is the only nationally representative panel survey available with detailed post-pandemic household financial data and provides a crucial first look at how household balance sheets changed since the pandemic. The survey includes 9,531 households ages 25-64 observed in years 2015-2021. However, since households in our analysis must be observed in 2021 and at least once pre-pandemic, our final sample is reduced to 6,420 households.

Consumer Expenditure Survey

The CEX collects detailed consumption and socioeconomic data from U.S. consumers. The CEX is a rotating panel of approximately 6,000 households, in which 25 percent of households are new each quarter. Our analysis is cross-sectional and makes use of the interview surveys from Q1 of 2015 to Q3 of 2021. Once again, we restrict our analysis to households ages 25-64, resulting in a sample of around 3,500 households per quarter or a total of 41,304 households. The CEX is also the only nationally representative survey with detailed post-pandemic consumption data currently available.

Methods

The project examines both how households perceive that the stimulus impacted their finances as well as actual changes to their balance sheets.

Perceived Impact of EIPs

The subjective analysis focuses on two questions: 1) How did households use/plan to use their EIPs?; and 2) Did households' own perceived financial stability improve after receiving stimulus payments?

The first question can be answered using the HPS, which asks respondents directly how they used/planned to use each stimulus check. The analysis estimates three probit regressions that take the following form:

$$E(y_i) = \Phi(\beta_0 + \beta_1 E_i + \beta_2 X_i + \beta_3 S_i + \epsilon_i) \quad (1)$$

where y_i is whether the household used their EIP to spend, save, or pay down debt. Economic characteristics are represented by E_i (i.e., income, sector, job loss); demographic controls (i.e., age, race/ethnicity, marital status) are captured by X_i ; and S_i controls for differences in state-level economic characteristics and unemployment generosity.

How households used the stimulus does not necessarily tell us whether they are better able to cope with financial shocks or whether their balance sheets improved. The next step is to examine how the stimulus payments changed their perceived ability to meet immediate financial obligations or smooth small financial shocks. During 2020, the *SHED* conducted two additional surveys to assess the financial security of households during the pandemic – one in March and one in July – in addition to their normal 2020 survey. These additional surveys allow us to examine whether the share of households who would have to defer paying a bill or say they are unable to afford a \$400 expense has changed after the onset of the pandemic (April 2020 survey), after receiving the first stimulus check (July 2020 survey), after the extra UI benefits expired (2020 survey, released in November), and in 2021 a few months after all three EIP checks were sent out.

Improvements in Household Balance Sheets

While the subjective indicators of financial wellness are informative, we ultimately want to know whether the stimulus checks actually improved household balance sheets. Assessing the change in net wealth is straightforward: simply compare the wealth holdings for the same households in 2019 and December 2021. Estimating how much households got in EIPs is also straightforward because the amount is a simple formula based on marital status, income in 2019, and number of dependent children. Yet neither of these two simple measures tells us the impact of EIPs on household balance sheets because high-wealth households likely saw large gains from the asset markets while low-wealth households may have been forced to use EIPs to replace lost earnings or cover increased spending needs.

Isolating the impact of the stimulus payments on household balance sheets requires estimating three separate equations. The first equation shows the total change in net wealth between 2019 and 2021. The second equation estimates the change in net wealth excluding gains due to rising asset prices during the pandemic by substituting 2021 housing and equity holdings with 2019 levels. The third equation then estimates changes in consumption that also could have contributed to changes in net wealth. The residual effect on household balance sheets from combining results from these three equations with EIPs is earnings changes and the extent to which UI replaced lost earnings.

Using the 2015-2021 *PSID*, changes in the total household balance sheet are estimated using the following fixed-effects equation:

$$y_{it} = \beta_0 + \gamma T_t + \alpha_i + \varepsilon_{it} \quad (2)$$

where y_{it} represents real household net wealth.¹² T_t is a dummy for 2021. The coefficient of interest is γ , which estimates net wealth changes for each household after the pandemic. As noted, the regression includes household fixed-effects, denoted by α_i , to capture any time-invariant unobservable characteristics that impact y_{it} . We cluster errors by household and use

¹² Net wealth is defined as all assets minus all debt. The analysis uses the early release of the 2021 PSID. While it has most components of net wealth, the early release data do not have information on 401(k) balances. To estimate the increase in 401(k) balances, we assume that households contributing to their 401(k) will continue contributing through the pandemic. We also assume that their contribution rates remain the same. We apply average market growth rates by asset class to estimate the growth in balances.

family level weights. The equation is estimated separately for households with low, middle, and high wealth to see how the effects vary by tercile.

Next, we re-estimate equation (2) by wealth tercile but replace the 2021 value of the housing, brokerage, and 401(k)/IRA components of net wealth (y_{it}) with their values in 2019. Specifically, we replace 2021 housing and stock holdings with their values from the 2019 survey to remove growth in the asset markets over this period.¹³ We then add back in contributions to 401(k)/IRA accounts.¹⁴ The coefficient γ of this new equation removes the impact of asset growth and therefore shows how much of the changes in net wealth after the onset of the pandemic are due to the stimulus, changes in consumption, or changes in earnings.

Third, to determine whether changes in consumption behavior are driving potential changes to the household balance sheet, the analysis examines changes in total consumption in the *CEX* by estimating the following OLS regression:

$$y_{it} = \beta_0 + \beta_1 T_t + \beta_2 T_t \times Y_t + \beta_3 Q_i + \epsilon_i, \quad (3)$$

where y_{it} represents real consumption, T_t is a dummy for any quarter after March 2020. Real consumption might change from year-to-year, even in the absence of a pandemic so we include year dummies, Y_t . But since annual consumption increases might look different in the pre-and post-pandemic period, we interact Y_t with our pandemic dummy T_t , to try and distinguish the trends. Consumption can fluctuate from quarter to quarter so a quarter-of-year indicator, Q_i , is also included. Pandemic-specific changes in household spending patterns, from March 2020 to December 2021, that deviate from the trend are captured by β_1 . Similar to equation (2), equation (3) is also estimated separately by wealth tercile.

The difference between changes in total net worth (γ from equation (1)) and what households received in EIP (estimated based on household income and number of children) is attributable to the growth in asset markets, consumption, or the unexplained. Growth in asset markets is estimated by γ from equation (2), so subtracting that from the above will leave the

¹³ This method will miss the impact on people who use the stimulus to buy more assets. However, current data do not allow us to distinguish between growth in assets and new asset purchases. This issue will be discussed more later.

¹⁴ We assume that contribution rates in 2020 and 2021 are the same as 2019 since we do not observe 401(k) contributions in 2021.

difference that is due to changes in consumption or other factors. Changes in consumption comes from β_1 in equation (3). The residual effect on household balance sheets from combining results from these three equations with EIPs is earnings changes and the extent to which UI surpassed or fell short of earnings losses.

Results

Results are presented separately for households' perceptions of how EIP affected their finances and for changes in objective measures of household net wealth.

Perceptions

Beginning with the perceived impact of stimulus payments on household financial wellness, we see improvements in the percentage of households that feel capable of handling financial shocks. Figure 1 shows that 36 percent of households in 2021 would have trouble paying for an unexpected expense, down from 41 percent in 2019. This change corresponds with how households said they used/planned to use their EIP checks. While most households, particularly those that experienced a job loss during the pandemic, spent their first EIP checks, the overwhelming majority of households saved their second and third checks or used them to pay down debt (see Figure 2). However, how households used their stimulus payments varied substantially by income level, with households earning less than \$35,000 and between \$35,000-\$74,999 being 13 percent and 7 percent more likely to spend their stimulus payments than households making more than \$150,000 (see Table 3).¹⁵ Despite this pattern, households across the income distribution, including low- and moderate-income households, report slight improvements in their ability to handle unexpected expenses in 2021 relative to the pre-pandemic period (see Figure 3).

Reality

Households perceive their financial situations have improved since the pandemic, but have they actually improved? A fixed-effect regression of total net wealth shows that households in the middle and highest wealth terciles did indeed experience gains in their balance sheets of about \$38,000 and \$1.7 million, respectively, over the period December 2019-

¹⁵ Households making more than \$150,000 did not receive full EIP checks.

December 2021.¹⁶ Households in the lowest-income tercile, however, showed no statistically significant change over the same period (see Table 4). At the same time, low-wealth households received an average of \$5,400 from stimulus checks; medium-wealth households received about \$5,900; and high-wealth households received \$4,400 (see Table 5).¹⁷ Why did the net worth of low-wealth households not improve despite the EIP? And what accounts for the additional money for middle- and high-wealth households?

As discussed above, in addition to EIPs, three other factors can also result in a change in net wealth: 1) growth in asset markets; 2) changes in consumption; and 3) changes in earnings. Much of the observed increase in wealth for middle- and, particularly, high-wealth households is likely due to the spectacular performance of the housing and equity markets. This assumption is borne out when the same equation is re-estimated, replacing 2021 housing and equity holdings with 2019 values. The gain in net worth for the highest wealth tercile is no longer statistically significant (see Table 6). In contrast, households in the middle tercile see a statistically significant \$12,400 increase in their balance sheets in the pandemic period, even after removing asset market gains. These results can be interpreted as the impact of stimulus payments, changes in consumption, and changes earnings.

It is surprising that lower-wealth households do not see improvements in their wealth because much of the stimulus and relief payments were aimed at providing the most support for the most vulnerable. One explanation is that the consumption of lower-income households was very constrained before the pandemic or they faced higher costs during the pandemic.¹⁸ Analysis of the CEX confirms part of the story (see Table 7). Average per quarter consumption decreased by about \$180 (\$420 - \$600) in 2020 and increased by \$420 in 2021. Since there were three pandemic quarters in 2020 and we observe households for three quarters in 2021, total consumption increased by \$720, relative to 2019, during the pandemic period for households in the lowest wealth tercile. The increases in consumption for low-wealth households are driven by increases in food and housing (see Appendix Tables A1 and A2).¹⁹

¹⁶ Regression estimates are averages and there is a long tail for the top tercile.

¹⁷ Middle-wealth households received more EIP money than low-wealth households because they are much more likely to be married and EIP checks were scaled based on the number of working adults in 2019.

¹⁸ A recent Washington Post analysis of CoStar data shows that rents of low-quality homes increased during the pandemic while rents for high-quality homes decreased (Rampell 2021).

¹⁹ For other major spending categories see Appendix Tables A3-A7

Consumption among households in the middle tercile grew by a similar amount during the pandemic period, \$780 (\$130 x 6) while households in the top tercile reduced their consumption by \$5,320 in 2020 (\$1,780 x 3) before it resumed to 2019 levels in 2021.²⁰

A summary of all the regression estimates can be found in Table 8. For households across the wealth distribution, a portion of pandemic wealth changes remain unexplained and can be attributed to two factors. The first, which cannot be measured with currently available data, is changes in earnings (and the extent to which UI replaced lost earnings). The second factor is new purchases of housing or equities.²¹

Low-wealth households have an unexplained \$4,700 loss in net wealth, after accounting for EIPs, asset markets, and consumption. Most of this unexplained factor is likely due to earnings losses during the pandemic, because, as previously discussed, supplemental UI was intermittent and often delayed. Without the additional benefits, typical UI payments replaced less than half of pre-pandemic earnings. Additional analysis also shows limited increases in asset ownership among this group (see Tables 9 and 10).

Middle-wealth households have an unexplained \$7,190 gain in net wealth. Some of this gain is the result of new home and stock purchases. Homeownership rates increased by 7 percentage points and stock ownership rates by 4 percentage points for the middle-wealth group during the pandemic (see Tables 9 and 10). High-wealth households are estimated to have \$9,750 more than what can be explained. Similar to middle-wealth households, some of this gain is the result of new home and stock purchases.²² What remains unknown until more data become available is the portion of unexplained gains that can be attributed to new asset purchases versus earnings gains for middle and high-wealth households.

Discussion and Conclusion

Even before COVID-19 brought the economy to a halt, about 40 percent of U.S. households lived on such tight budgets that they could not easily smooth small financial shocks.

²⁰ It is important to note that we only observe households for three quarters in 2021. Expenditures among highest terciles started increasing in the second quarter of 2021 and skyrocketed in the third quarter of 2021. Assuming this trend continues, their average pandemic expenditures will be less negative.

²¹ Our method assumes all growth in housing and equity assets is the result of growth in assets holdings in 2019 and does not account for additional or new purchases between 2019 and 2021.

²² The unexplained portion for high-wealth households is almost trivial relative to their total wealth gains during the pandemic period (roughly 0.5%) and so could be the result of reporting error.

The pandemic would have stretched their finances even further. Fortunately, Congress provided substantial fiscal support with the three EIP checks totaling more than \$850 billion, additional UI benefits totaling \$442 billion, and expanded UI eligibility resulting in \$131 billion of additional benefits.²³ The hope was that this infusion of money, in addition to preventing economic hardship during the pandemic, may also improve balance sheets, enabling households to better weather financial shocks and hopefully set them up to save for longer-term goals such as retirement.

The good news is that households report saving most of the stimulus payments, and at the end of 2021 more households felt like they could handle unexpected expenses after the EIP checks. Equally important, actual balance sheets showed improvements. The top-wealth group saw tremendous growth in their net wealth, almost all of which was due to the spectacular performance of asset markets over the pandemic. Middle-wealth households also benefited from gains in the housing and equity markets; about a third of their increase in net wealth can be attributed to EIP payments or higher wages. This group also saw increased home and stock ownership, which can result in longer-lasting improvement in balance sheets. For low-wealth households, the EIPs supported earnings losses where intermittent UI supplements fell short and also helped with rising expenditures, allowing them to break even. As more and better data on households become available in the future, researchers can better assess total earnings gains and losses and the extent to which UI replaced lost earnings throughout the pandemic.

Despite what is still unknown, these results stand in stark contrast to households' experiences after the Great Recession and is evidence of the important role of fiscal support and a speedy labor market recovery in allowing middle-wealth households to potentially build long-term wealth gains and preventing the financial deterioration of low-wealth households.

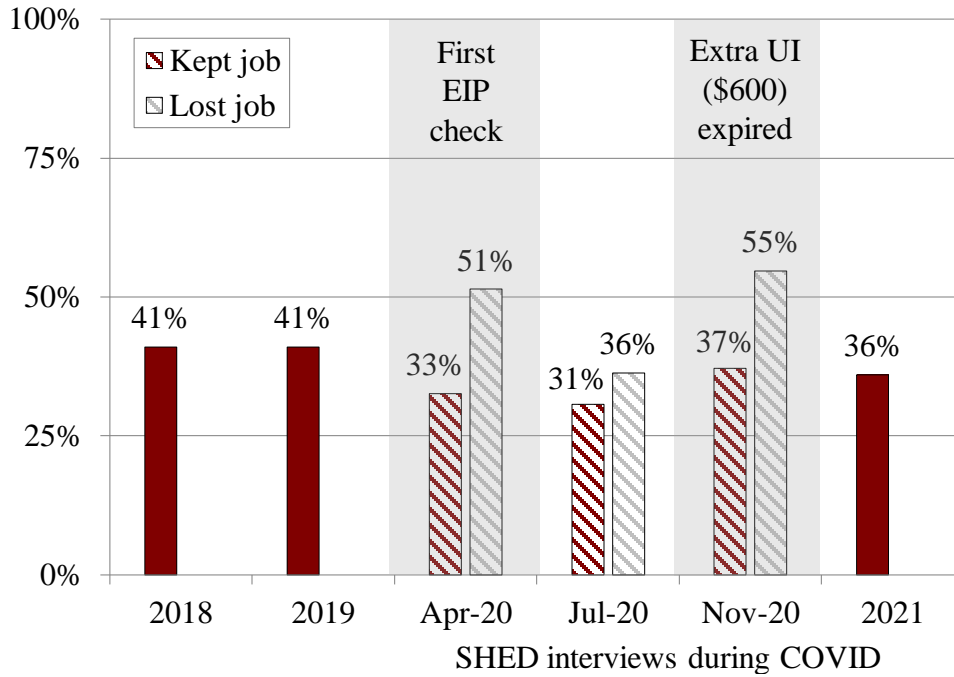
²³ Barnes et al. (2022) and Whittaker and Isaacs (2022).

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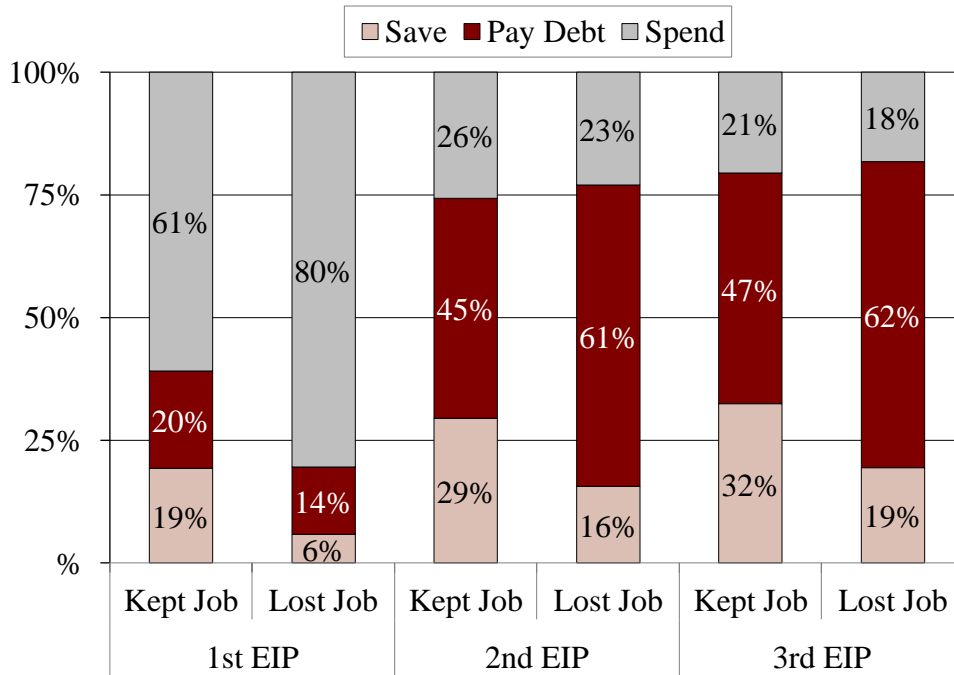
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Figure 1. *Percentage of Households Ages 25-64 that Have Trouble Covering a \$400 Emergency Expense Before and After First EIP Check, by Job Status, 2018-2021*



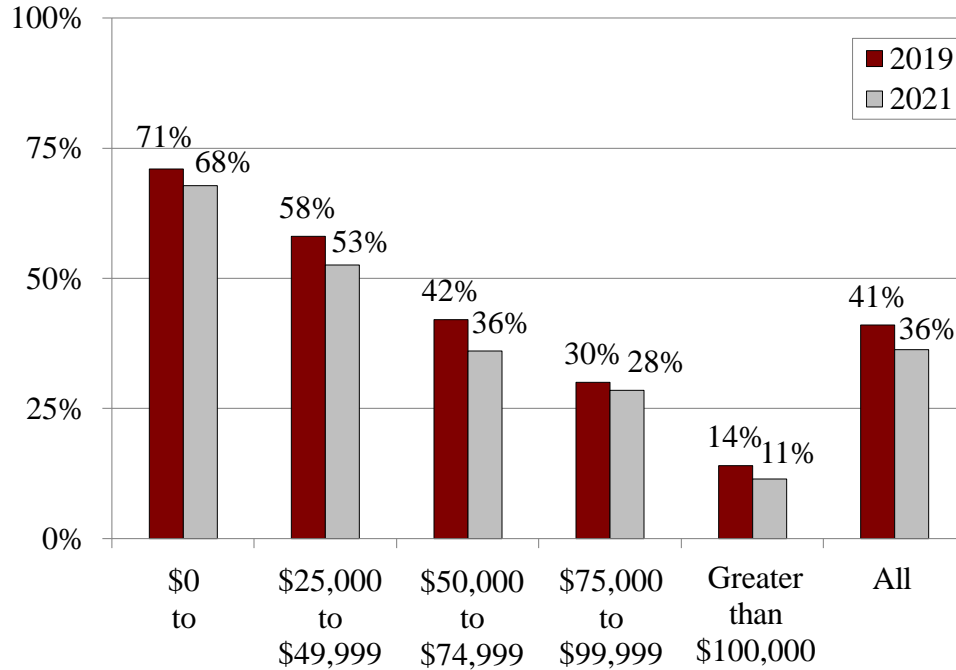
Source: U.S. Census Bureau, *Survey of Household Economic Decisionmaking (SHED)* (2018-2021).

Figure 2. *How Households Used Any of Their EIP, by Job Status*



Source: U.S. Census Bureau, *Household Pulse Survey (HPS)* (2020-2021).

Figure 3. *Percentage of SHED Households Ages 25-64 Reporting that They Could Not Cover a \$400 Unexpected Expense, by Income, 2019 and 2021*



Source: SHED (2019-2021).

Table 1. *Economic Impact Payments for Single (< \$75,000) and Married (< \$150,000) Households*

Payments	Date	Amount per adult		Amount per dependent child
		Single	Married	
1st	4/20/20	\$1,200	\$2,400	\$500 (under age 16)
2nd	12/29/20	600	1,200	600 (under age 16)
3rd	3/11/21	1,400	2,800	1,400 (no age limit)
Total		\$3,200	\$6,400	

Note: Payments were phased out for workers making above the income limits.
Source: Internal Revenue Service (2021).

Table 2. *Distribution of UI Replacement Rates*

Percentile	UI Replacement Rate
25 th	91%
50 th	134
75 th	200
Share with UI RR over 100%	69%

Note: Accounting for payroll tax and forms of non-wage compensation.
Source: Ganong, Noel, and Vavra (2020).

Table 3. *Marginal-effect of Main Use for EIP Checks*

	Spend	Save	Pay debt
Income: \$0-34,999	0.133*** (0.010)	-0.204*** (0.007)	0.084*** (0.009)
Income: \$35,000-74,999	0.071*** (0.008)	-0.151*** (0.005)	0.105*** (0.008)
Income: \$75,000-149,999	0.024*** (0.007)	-0.067*** (0.005)	0.067*** (0.007)
Private sector	0.026*** (0.006)	-0.020*** (0.004)	-0.005 (0.006)
Self employed	0.071*** (0.009)	-0.058*** (0.006)	-0.016* (0.009)
Homeowner, no mortgage	-0.057*** (0.008)	0.078*** (0.006)	-0.024*** (0.008)
Homeowner, w/ mortgage	-0.024*** (0.006)	-0.000 (0.004)	0.028*** (0.006)
Ages 35-44	0.016** (0.007)	-0.021*** (0.005)	0.005 (0.006)
Ages 45-54	0.053*** (0.007)	-0.067*** (0.005)	0.013** (0.006)
Ages 55-64	0.059*** (0.008)	-0.068*** (0.005)	0.007 (0.007)
Black	0.030*** (0.009)	-0.084*** (0.006)	0.044*** (0.008)
Asian	0.043*** (0.011)	-0.028*** (0.007)	-0.017* (0.010)
Hispanic	-0.005 (0.008)	-0.058*** (0.006)	0.058*** (0.007)
Other, combination	0.015 (0.012)	-0.055*** (0.009)	0.039*** (0.011)
Married	-0.004 (0.006)	0.002 (0.004)	0.002 (0.005)
Has kids	0.052*** (0.005)	-0.042*** (0.004)	-0.011** (0.005)
Observations	263,663	263,663	263,663
Robust SE	Yes	Yes	Yes
Weights	Yes	Yes	Yes
State FE	Yes	Yes	Yes

Notes: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.
 Source: Authors' calculations.

Table 4. *Fixed-effect Regression of Change in Net Wealth During the Pandemic, by Net Wealth Quintile, Households Ages 25-64*

	Lowest tercile	Middle tercile	Highest tercile
2021 dummy	1,066.7 (2,369.5)	38,748.1*** (1,897.1)	1,731,171.7* (1,043,441.3)
Constant	-19,104.0*** (488.0)	66,811.7*** (353.8)	827,704.8*** (208936.2)
N	11,587	9,014	6,861
R-sq	0.000	0.200	0.003

Notes: Dollar amounts are all inflation adjusted to reflect 2019 dollars. Standard errors in parentheses. *** p<0.01, * p<0.1.

Source: Authors' calculations.

Table 5. *Average EIP and Family Structure, by Net Wealth Quintile, Households Ages 25-64*

Wealth tercile	Average EIP	Percentage married	Number of dependent children			
			None	One	Two	More than two
Lowest	\$5,404	20%	66%	15%	10%	9%
Middle	5,963	43	61	15	15	8
Highest	4,426	73	59	17	16	8

Source: Authors' calculations.

Table 6. *Fixed-effect Regression of Change in Net Wealth During the Pandemic, Removing the Effect of Pandemic Asset Market Boom, by Net Wealth Quintile, Households Ages 25-64*

	Lowest tercile	Middle tercile	Highest tercile
2021 dummy	-888.0 (2,388.3)	12,376.9*** (1,172.3)	770,533.6 (636,314.2)
Constant	-19,038.2*** (491.9)	66,944.0*** (218.6)	846,564.0*** (127,414.1)
N	11,587	9,014	6,861
R-sq	0.000	0.033	0.001

Notes: Dollar amounts are all inflation adjusted to reflect 2019 dollars. Standard errors in parentheses. *** p<0.01.

Source: Authors' calculations.

Table 7. *OLS Regression of Per-Quarter Change in Total Consumption During the Pandemic, by Net Wealth Quintile, Households Ages 25-64*

	Lowest tercile	Middle tercile	Top tercile	Lowest tercile	Middle tercile	Top tercile
Pandemic dummy	417.5*	128.9*	294.7	589.5***	199.2	286.1
	(146.5)	(54.23)	(950.0)	(91.04)	(112.9)	(944.4)
2015 x pre- pandemic	-656.3*	-718.0**	-444.6	-670.1**	-653.2**	-600.9
	(247.5)	(185.3)	(375.5)	(166.1)	(119.6)	(371.2)
2016 x pre- pandemic	-758.7***	-575.2	-449.0	-640.5***	-405.3	-432.9
	(110.9)	(329.3)	(203.4)	(70.16)	(311.7)	(246.4)
2017 x pre- pandemic	-509.2*	-556.1	723.4	-467.4*	-403.6	752.8
	(197.7)	(292.1)	(579.3)	(175.6)	(283.7)	(545.4)
2018 x pre- pandemic	-504.7**	-477.9	846.1***	-447.1**	-339.9	818.9**
	(140.3)	(366.9)	(133.0)	(94.99)	(352.1)	(158.1)
2020 x pre- pandemic	209.9	85.56	-360.6	198.3	105.9	-412.8
	(132.9)	(181.6)	(343.6)	(95.55)	(181.6)	(340.1)
2020 x pandemic	-600.6***	-555.0	-1773.9*	-780.4***	-472.1	-1809.0*
	(82.08)	(349.3)	(708.6)	(116.6)	(289.7)	(742.2)
Income decrease				-902.9***	-1155.2***	-1237.3**
				(123.2)	(154.7)	(244.2)
Houseowner				1607.0**	-135.9	-335.5
				(331.9)	(76.82)	(356.3)
Has student loans				1133.9***	1351.6**	682.6
				(118.8)	(390.5)	(647.8)
Has credit card debt				1418.3***	563.6**	242.8
				(123.7)	(113.6)	(417.9)
Has kids				2067.2***	3444.4***	5825.4***
				(29.06)	(90.08)	(355.0)
2nd quarter	157.3***	377.1***	811.9***	220.6***	411.7***	870.4***
	(11.81)	(29.88)	(40.89)	(21.62)	(38.62)	(50.72)
3rd quarter	364.3***	836.4***	2538.3***	376.9***	883.4***	2537.2***
	(11.52)	(47.72)	(83.66)	(17.54)	(47.24)	(91.83)

-continued-

Table 7. *OLS Regression of Per-Quarter Change in Total Consumption During the Pandemic, by Net Wealth Quintile, Households Ages 25-64 (continued)*

4th quarter	110.0*** (13.74)	474.9*** (58.00)	891.1*** (119.5)	176.1** (30.58)	581.6*** (58.57)	1020.0*** (139.0)
Year	9913.0*** (132.9)	12190.9*** (181.6)	17091.6*** (343.6)	9173.9*** (94.20)	11024.3*** (230.9)	15271.2*** (593.7)
Constant	33150 0.002	32393 0.002	35141 0.005	32796 0.027	32010 0.038	34715 0.042
N	33,150	32,397	35,142	32,796	32,014	34,716
R-sq	0.002	0.002	0.003	0.026	0.041	0.037

Note: Dollar amounts are all inflation adjusted to reflect 2019 dollars. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Source: Authors' calculations.

Table 8. *Fixed-effect Regression of Percent Stock Owners, by Net Wealth Quintile, Households Ages 25-64*

	Lowest	Middle	Highest	Data source
Total change in net worth	0	38,748	1,731,171	Table 4
Estimated EIP	5,404	5,963	4,426	Table 5
Difference				
Growth in housing + equity	0	26,371	1,731,171	Table 4 – Table 6
Increase (decrease) in consumption	705	773.4	-5,319	Table 7
Unexplained (earnings, UI, new assets)	-4,699	7,187	-9,745	Residual

Source: Authors' calculations.

Table 9. *Fixed-effect Regression of Percent Homeowners, by Net Wealth Quintile, Households Ages 25-64*

	Lowest tercile	Middle tercile	Highest tercile
2021 dummy	0.0279*** (0.00817)	0.0685*** (0.0123)	0.0184** (0.00746)
Constant	0.119*** (0.00168)	0.611*** (0.00228)	0.900*** (0.00149)
N	11,584	9,011	6,860
R-sq	0.005	0.016	0.002

Notes: Dollar amounts are all inflation adjusted to reflect 2019 dollars. Standard errors in parentheses. *** p<0.01, ** p<0.05.

Source: Authors' calculations.

Table 10. *Fixed-effect Regression of Percent Stock Owners, by Net Wealth Quintile, Households Ages 25-64*

	Lowest tercile	Middle tercile	Highest tercile
2021 dummy	0.00947* (0.00483)	0.0413*** (0.0110)	0.0334** (0.0139)
Constant	0.0214*** (0.000992)	0.0616*** (0.00204)	0.289*** (0.00276)
N	11,582	9,008	6,846
R-sq	0.001	0.010	0.002

Notes: Dollar amounts are all inflation adjusted to reflect 2019 dollars. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Source: Authors' calculations.

Appendix

Table A1. OLS Regression of Per-Quarter Change in Food Expenditures During the Pandemic, by Net Wealth Quintile, Households Ages 25-64

	Lowest tercile	Middle tercile	Top tercile
Pandemic dummy	194.8*** (15.05)	62.58** (15.15)	124.2 (110.2)
Income decrease	-126.8*** (12.45)	-87.39** (21.19)	-105.8* (34.30)
Houseowner	82.82* (31.02)	72.57** (12.81)	146.3* (50.15)
Has student loans	28.47 (33.68)	34.62 (24.89)	77.80 (49.40)
Has credit card debt	128.6* (43.38)	19.23 (13.66)	-29.20 (24.21)
Has kids	521.1*** (6.348)	692.8*** (11.38)	986.8*** (36.77)
2015 x pre- pandemic	-105.3*** (13.57)	-110.6*** (15.63)	-89.78* (35.34)
2016 x pre- pandemic	-82.41** (15.85)	-56.27* (22.71)	-83.59 (48.60)
2017 x pre- pandemic	-88.41** (20.96)	-87.68* (28.32)	-30.66 (41.47)
2018 x pre- pandemic	-89.04** (21.85)	-22.85 (24.94)	69.53 (59.68)
2020 x pre- pandemic	-34.34** (9.718)	5.106 (15.92)	50.54 (43.33)
2020 x pandemic	-263.1*** (17.48)	-56.79** (13.68)	-370.0** (86.33)
2nd quarter	54.24*** (2.103)	69.27*** (3.056)	173.5*** (4.455)
3rd quarter	68.38*** (2.391)	90.69*** (2.751)	249.9*** (10.11)
4th quarter	8.256* (3.405)	9.955* (4.023)	89.34*** (14.10)
Constant	1748.5*** (10.42)	1900.7*** (15.46)	2335.7*** (72.71)
N	32,796	32,010	34,715
R-sq	0.044	0.072	0.073

Notes: Dollar amounts are all inflation adjusted to reflect 2019 dollars. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Source: Authors' calculations.

Table A2. OLS Regression of Per-Quarter Change in Housing Expenditures During the Pandemic, by Net Wealth Quintile, Households Ages 25-64

	Lowest tercile	Middle tercile	Top tercile
Pandemic dummy	358.0*** (35.30)	261.9** (45.50)	219.5 (246.4)
Income decrease	-200.9** (36.74)	-370.5*** (53.17)	-558.6*** (61.64)
Houseowner	103.0 (106.8)	-781.7*** (25.95)	-1437.3*** (204.1)
Has student loans	413.0** (91.32)	680.8*** (51.46)	406.7 (269.2)
Has credit card debt	390.1** (92.45)	167.0*** (11.53)	199.4 (88.42)
Has kids	823.2*** (22.69)	1186.8*** (39.07)	2062.1*** (92.29)
2015 x pre- pandemic	-330.2** (82.42)	-199.1* (80.50)	-272.5* (115.1)
2016 x pre- pandemic	-287.8*** (15.43)	-19.57 (130.8)	-101.5 (100.3)
2017 x pre- pandemic	-187.9** (36.51)	-26.85 (106.1)	324.7 (205.5)
2018 x pre- pandemic	-184.7** (35.54)	-125.4 (108.7)	262.1* (99.56)
2020 x pre- pandemic	-5.740 (32.29)	24.95 (78.46)	204.4 (103.4)
2020 x pandemic	-296.4*** (29.89)	-80.12 (101.8)	-345.1 (197.9)
2nd quarter	26.92*** (4.166)	133.6*** (10.52)	390.7*** (10.69)
3rd quarter	105.4*** (3.864)	200.2*** (13.96)	744.5*** (24.76)
4th quarter	92.87*** (6.607)	171.3*** (13.09)	374.8*** (36.27)
Constant	3982.3*** (44.06)	4708.1*** (59.95)	7105.5*** (211.1)
N	32,796	32,010	34,715
R-sq	0.025	0.044	0.032

Notes: Dollar amounts are all inflation adjusted to reflect 2019 dollars. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Source: Authors' calculations.

Table A3. OLS Regression of Per-Quarter Change in Health Care Expenditures During the Pandemic, by Net Wealth Quintile, Households Ages 25-64

	Lowest tercile	Middle tercile	Top tercile
Pandemic dummy	-14.68 (9.124)	1.082 (18.89)	5.870 (50.32)
Income decrease	-34.69** (7.058)	-38.91* (16.28)	-29.05 (17.80)
Houseowner	268.4*** (36.61)	189.0*** (14.49)	368.9*** (37.33)
Has student loans	67.70 (32.77)	44.12 (29.76)	-37.71 (73.04)
Has credit card debt	165.7** (44.09)	160.0*** (13.90)	77.24 (81.72)
Has kids	109.7** (22.54)	298.4*** (6.977)	338.1*** (30.09)
2015 x pre- pandemic	-103.8*** (15.65)	-56.50** (17.56)	-112.7* (37.95)
2016 x pre- pandemic	-65.32** (20.09)	0.845 (20.24)	-13.16 (33.77)
2017 x pre- pandemic	-70.56*** (9.867)	1.516 (25.89)	-33.54 (32.08)
2018 x pre- pandemic	-76.24*** (6.274)	23.32 (20.18)	-10.28 (35.42)
2020 x pre- pandemic	-82.46*** (4.626)	12.18 (14.28)	-21.89 (25.76)
2020 x pandemic	-3.847 (5.199)	27.73 (33.58)	-129.3** (40.32)
2nd quarter	-6.564*** (0.887)	-3.313 (1.860)	-36.69*** (2.818)
3rd quarter	-27.82*** (0.855)	-0.649 (4.176)	-23.96** (4.969)
4th quarter	-33.68*** (1.754)	-2.191 (5.232)	-15.92* (5.695)
Constant	600.1*** (10.78)	806.9*** (11.18)	1230.8*** (16.54)
N	32,796	32,010	34,715
R-sq	0.009	0.018	0.010

Notes: Dollar amounts are all inflation adjusted to reflect 2019 dollars. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Source: Authors' calculations.

Table A4. *OLS Regression of Per-Quarter Change in Durables Expenditures During the Pandemic, by Net Wealth Quintile, Households Ages 25-64*

	Lowest tercile	Middle tercile	Top tercile
Pandemic dummy	135.7*** (9.675)	188.7*** (16.15)	170.2** (32.32)
Income decrease	-112.7*** (18.09)	-161.2*** (18.34)	-202.9*** (20.12)
Houseowner	253.1** (63.91)	120.1** (28.24)	247.0*** (33.86)
Has student loans	98.84** (22.85)	37.17** (7.490)	-55.62 (59.77)
Has credit card debt	52.61** (9.430)	49.12* (16.20)	95.15** (24.40)
Has kids	53.03** (13.53)	86.77*** (8.375)	150.4*** (23.94)
2015 x pre- pandemic	-31.89 (14.54)	-53.17 (33.83)	-134.9*** (19.75)
2016 x pre- pandemic	1.453 (21.96)	-4.769 (40.01)	-123.5 (54.01)
2017 x pre- pandemic	5.241 (17.92)	-10.63 (48.60)	-75.17 (40.77)
2018 x pre- pandemic	-1.998 (20.51)	-38.61 (42.43)	-29.96 (51.37)
2020 x pre- pandemic	-0.355 (10.39)	38.35 (28.68)	-97.13** (25.12)
2020 x pandemic	-79.12*** (12.67)	-121.8* (50.93)	-175.8 (97.82)
2nd quarter	2.131 (1.962)	75.47*** (3.122)	175.5*** (11.34)
3rd quarter	15.90*** (1.846)	74.09*** (6.290)	136.4*** (14.46)
4th quarter	31.25*** (2.893)	101.9*** (7.277)	169.3*** (18.14)
Constant	231.6*** (15.80)	301.5*** (13.25)	403.8*** (32.21)
N	32,796	32,010	34,715
R-sq	0.011	0.009	0.006

Notes: Dollar amounts are all inflation adjusted to reflect 2019 dollars. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Source: Authors' calculations.

Table A5. OLS Regression of Per-Quarter Change in Transit Expenditures During the Pandemic, by Net Wealth Quintile, Households Ages 25-64

	Lowest tercile	Middle tercile	Top tercile
Pandemic dummy	55.06 (46.01)	32.81 (135.0)	-2.855 (361.3)
Income decrease	-398.6*** (62.80)	-507.8** (101.1)	-280.0 (147.9)
Houseowner	1157.3** (208.4)	425.6** (74.47)	556.8** (170.8)
Has student loans	159.9 (101.7)	363.0 (268.2)	-15.73 (318.8)
Has credit card debt	562.8** (175.7)	150.0 (118.5)	45.87 (274.3)
Has kids	516.7*** (34.17)	939.2*** (74.85)	1246.2*** (77.03)
2015 x pre- pandemic	-149.6 (121.2)	-247.6 (127.9)	-205.2 (199.2)
2016 x pre- pandemic	-241.3** (68.93)	-377.3 (245.1)	-350.8* (146.4)
2017 x pre- pandemic	-96.23 (104.4)	-266.6 (200.5)	53.20 (212.7)
2018 x pre- pandemic	-62.74 (52.26)	-215.9 (245.2)	159.7 (77.39)
2020 x pre- pandemic	204.9** (64.38)	193.5 (127.1)	-494.7** (151.7)
2020 x pandemic	-48.84 (48.17)	-302.3 (135.3)	-593.5 (252.6)
2nd quarter	132.3*** (12.92)	175.1*** (27.42)	417.9*** (37.88)
3rd quarter	86.95*** (9.283)	356.3*** (26.16)	720.3*** (38.29)
4th quarter	16.29 (14.26)	212.5*** (35.27)	281.1** (56.10)
Constant	1775.4*** (34.49)	2274.9*** (205.7)	2469.3*** (303.6)
N	32,796	32,010	34,715
R-sq	0.007	0.007	0.008

Note: Dollar amounts are all inflation adjusted to reflect 2019 dollars. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Source: Authors' calculations.

Table A6. OLS Regression of Per-Quarter Change in Leisure Expenditures During the Pandemic, by Net Wealth Quintile, Households Ages 25-64

	Lowest tercile	Middle tercile	Top tercile
Pandemic dummy	213.9* (69.89)	-86.25 (74.77)	8.063 (419.1)
Income decrease	-145.5*** (19.73)	-141.7** (25.24)	-152.7** (37.08)
Houseowner	117.3** (27.33)	-89.34* (37.26)	-83.62 (78.24)
Has student loans	265.5** (54.25)	253.1* (88.96)	22.30 (79.00)
Has credit card debt	227.8** (52.45)	114.4** (26.30)	105.4 (78.49)
Has kids	127.1*** (13.83)	333.6*** (33.51)	880.7*** (101.2)
2015 x pre- pandemic	-53.42* (17.15)	-103.4* (42.51)	-71.99 (82.15)
2016 x pre- pandemic	-25.15 (38.79)	31.51 (75.09)	-18.32 (51.80)
2017 x pre- pandemic	-46.89* (17.15)	-75.69 (51.24)	168.0* (70.21)
2018 x pre- pandemic	-48.13 (27.56)	0.758 (59.20)	272.9 (172.0)
2020 x pre- pandemic	-16.09 (12.88)	-140.2** (43.87)	-172.1 (118.8)
2020 x pandemic	-502.2** (86.09)	-353.5* (146.7)	-1116.1* (383.3)
2nd quarter	127.6*** (4.557)	257.3*** (12.27)	432.7*** (17.60)
3rd quarter	206.8*** (10.18)	343.3*** (19.87)	831.5*** (44.65)
4th quarter	125.6*** (13.83)	209.2*** (21.75)	284.1** (63.36)
Constant	1061.2*** (16.36)	1540.7*** (58.98)	2615.8*** (182.8)
N	32,796	32,010	34,715
R-sq	0.010	0.013	0.017

Note: Dollar amounts are all inflation adjusted to reflect 2019 dollars. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Source: Authors' calculations.

Table A7. OLS Regression of Per-Quarter Change in Alcohol and Tobacco Expenditures During the Pandemic, by Net Wealth Quintile, Households Ages 25-64

	Lowest tercile	Middle tercile	Top tercile
Pandemic dummy	4.316 (5.632)	-7.358 (10.24)	-10.12 (12.39)
Income decrease	-13.35*** (1.561)	-9.355** (2.612)	-9.476 (8.079)
Houseowner	0.0464 (4.402)	-32.39*** (2.605)	-31.64* (10.47)
Has student loans	23.85** (4.354)	23.59** (6.766)	22.90** (6.197)
Has credit card debt	19.67*** (2.276)	14.95* (5.504)	20.06** (5.275)
Has kids	-50.90*** (3.746)	-27.07*** (2.393)	-6.717 (3.987)
2015 x pre- pandemic	-4.296 (5.996)	-6.175 (3.796)	-10.16** (2.510)
2016 x pre- pandemic	-2.076 (3.852)	-3.607 (4.959)	-12.31* (4.893)
2017 x pre- pandemic	-2.354 (3.175)	-10.81* (3.564)	-5.590 (2.819)
2018 x pre- pandemic	-0.111 (2.955)	-1.415 (4.279)	7.062 (6.431)
2020 x pre- pandemic	4.623 (2.861)	7.619 (3.436)	6.889 (3.106)
2020 x pandemic	-24.83** (5.346)	-13.72 (9.770)	-46.70* (14.72)
2nd quarter	11.87*** (0.286)	15.45*** (0.628)	17.59*** (0.461)
3rd quarter	5.520*** (0.598)	14.36*** (1.129)	29.22*** (1.607)
4th quarter	0.585 (0.697)	4.736* (1.597)	10.63*** (1.708)
Constant	114.2*** (2.446)	157.7*** (3.418)	238.5*** (13.56)
N	32,796	32,010	34,715
R-sq	0.014	0.009	0.004

Notes: Dollar amounts are all inflation adjusted to reflect 2019 dollars. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Source: Authors' calculations.

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