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The COVID-19 Pandemic and Family Economic Well-being: Evidence from the Survey of Consumer Finances*

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Abstract

The COVID-19 pandemic caused severe disruptions to the U.S. labor market and economic activity. We establish connections between family experiences of the pandemic, their income under normal conditions, and their later economic well-being using the 2022 Survey of Consumer Finances. By their interview, one-third of families experienced net employment declines, one-third had teleworked, and one-fifth had significant COVID-19-related health events. These experiences strongly reflected families' positions in the income distribution, with lower-income families bearing the brunt. They also tightly predict income and wealth after the initial disruptions, signifying that the pandemic economy likely amplified pre-pandemic differences and fostered new divides.

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I. Introduction

The COVID-19 pandemic severely disrupted the U.S. labor market and broader economic activity. And, although family wealth and income increased, on net, between 2019 and 2022, improvements in economic well-being were not uniform across the population (Aladangady et al., 2023). In fact, mean income growth increased nearly linearly over the income distribution, leading to an increase in income inequality. Of course, families' experiences of the pandemic labor market ranged considerably—some contained frontline workers, others worked in industries that essentially ceased operating, and still others could telework with minimal risk to their health or income—which may help explain this heterogeneity, as these experiences likely factored into families' annual earnings. While these connections remain unestablished empirically, there is evidence of variation in related indicators, such as employment, debt, and consumption, by income and demographic group during the pandemic's initial years (e.g., Cajner et al., 2020; Chetty et al., 2023; Cherry et al., 2021; Finkelstein et al., 2022; Villarreal and Yu, 2022).

This paper makes progress toward understanding the heterogeneous economic impacts of the COVID-19 pandemic in the United States, establishing a connection between families' experiences of the pandemic labor market and their overall economic well-being. The inherent challenge in this pursuit is the scarcity of nationally representative data sources that include high-quality measurements of both pandemic experiences and economic well-being. We overcome this challenge using the Federal Reserve Board's Survey of Consumer Finances (SCF), a triennial cross-sectional survey of U.S. family finances that was most recently conducted in 2022. The SCF is the leading resource for measuring U.S. family wealth and includes several useful family income concepts, including a proxy for permanent income. In 2022, we added special questions that well-capture families' experiences of the unusual pandemic economy along several key dimensions—net change in employment, significant COVID-19-related health events (an infection resulting in hospitalization or persistent symptoms), and telework.[1]

The analysis first documents the breadth of the pandemic's impact on U.S. families between its onset and the time they were interviewed in 2022. More than one-third of families

[1] Federal Reserve Board team members that contributed to the design of these questions include Aditya Aladangady, Jesse Bricker, Andrew Chang, Sarena Goodman, Julia Hewitt, Joanne Hsu, Jacob Krimmel, Kevin Moore, Sarah Reber, Dalton Ruh, Alice Henriques Volz, and Richard Windle.

experienced a net change in their employment status over this period, which, in the majority of instances, was a decrease. Similarly, many families teleworked (about one-quarter of families) and endured significant COVID-19-related health events (about one-fifth of families). Notably, net employment decreases were more common for families that had significant COVID-19-related health events and less common for families that teleworked. We also find that the prevalence of each of these experiences varies with a family's usual income (i.e., the income they would receive in a "normal" year). For example, around one-third of families toward the bottom of the distribution experienced a net decrease in employment versus one-fifth of families at the top decile. Lower-income families were about twice as likely to have been hospitalized or to have developed persistent symptoms from a COVID-19 infection, and around 5 percent as likely to have teleworked, as those in the top income group.

These strong distributional patterns are similar to the shape of mean income growth over the pandemic.[2] Next, we examine how families' broad pandemic experiences map to overall economic well-being. We find that, on average, families that had net employment decreases, families that had significant COVID-19-related health events, and families that did not telework had lower income, were more likely to have unusually low income, and had lower wealth. These relationships hold in the general population and also within usual income group, providing evidence that even within families with similar incomes, these pandemic experiences are linked to lower economic well-being.[3] Of the three categories we examine, we find that the relationship with economic well-being is strongest for a net employment decrease; for example, families that experienced a net employment decrease had 12 percent lower income and 70 percent less wealth than their counterparts in the same part of the income distribution that did not. Overall, our results suggest that the pandemic left a material imprint on both stock and flow measures of economic well-being.

As an extension, we consider the potential influence of two prominent income supports that were included in federal pandemic stimulus—economic impact payments (EIPs or stimulus checks) and temporarily expanded unemployment benefits—on our findings. Each measure

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[2] In contrast, wealth growth rates exhibited an inverse-U shape over the distribution, which likely reflected differential pandemic labor market experiences to some extent but more prominently reflected house and equity price appreciation, as those asset classes are particularly important to middle-income families' balance sheets.
[3] The exception is that conditional on a family's usual income group, average wealth is lower for families that teleworked than those that did not.

affects the results as would be expected given their respective designs, supportive of a direct relationship between the pandemic a family experienced and their economic well-being. They both appear to have helped buffer family cash flows against pandemic headwinds, with the more targeted unemployment program unsurprisingly serving as the better mediator.

Our results bring new evidence that families' experiences of the pandemic labor market were tightly linked to their economic well-being, which likely amplified pre-pandemic differences that already existed and potentially fostered new divides. We build on a growing literature that investigates various components of how U.S. families experienced the pandemic economy but has thus far been unable to connect these pieces to each other or to overall economic well-being. This literature has documented that the initial health and economic emergency was marked by substantial adverse health consequences (Finkelstein et al., 2022; Blanchflower and Bryson, 2023), declines in employment (Cajner et al., 2020; Goda and Soltas, 2023; Chetty et al., forthcoming), and changes in work arrangements (Barrero et al., 2021; Marshall et al., 2021), all of which were experienced unevenly across families. Other studies have surmised that the large fiscal response to the pandemic likely altered the trajectories for many households and businesses (Ganong et al., 2020; Cherry et al., 2021; Coombs et al., 2022); that said, the many temporary programs also complicate evidence of economic recovery from the initial emergency period in certain segments (Blanchet et al., 2022; Wheat and Deadman, 2023). We contribute to this literature by directly connecting families' varied pandemic experiences to their income and wealth, helping tie together what's already been documented in the literature to generate a more complete understanding of the pandemic's economic effects on families.

Relative to existing work, the connections between pandemic-related changes in employment status, health events, work arrangements, family income, and wealth that we establish are not only novel in content and scope but also generally more reliable due to our dependence on a single representative data source. Prior findings in this area entail at least one of the following limitations that our study naturally overcomes: aggregated sources of variation that could miss key heterogeneity or introduce measurement error; indirect linkages prone to measurement error based on multiple data sources, proxies for pandemic exposure, and pre-post designs; and data sources that are not necessarily representative and may only offer a partial view of experiences. Thus, where there is conceptual overlap, our findings can help validate and extend those that came before.[4] Moreover, our analysis of the SCF introduces to this literature both a comprehensive wealth measure and an income measure that does not reflect transitory factors. This income concept is particularly important in the context of the pandemic because a remarkably large share of families—over one-quarter—indicated that their income at the time was unusual for them (Aladangady et al., 2023). A measure of income during normal times enables both a more stable ranking of families for distributional analysis as well as additional analysis of economic well-being based on whether a family's income during the pandemic was below their usual income.

II. The Survey of Consumer Finances

The Survey of Consumer Finances (SCF) is a triennial survey of U.S. families with richly detailed information on household balance sheets and is the leading data source to measure U.S. family wealth. Our analysis examines the 4,602 families in the 2022 SCF and, to a lesser extent, the 5,783 families in the 2019 SCF.

Our analysis uses SCF measures of family net worth and income to examine economic well-being.[5] Net worth, which we heretofore refer to as "wealth," is total family assets minus liabilities, and income is total family pre-tax income in the calendar year preceding the survey (thus, 2021 for the 2022 SCF). For distributional analyses, we group families by quintile of "usual income"—an income concept that smooths away transitory shocks from, for example, an unemployment spell, a bonus from an employer, or a capital loss or gain on investments—and further divide the top quintile into deciles. Usual income is measured after income has been reported, if respondents indicate their income in the survey reference year was unusually high or low compared with what they would expect in a normal year.

[4] For example, Finkelstein et al. (2022) estimates qualitatively similar gradients for early employment losses and all-cause mortality by race and education using linked Census and social security datasets, attributing a non-negligible share of these differences to living and working conditions.

[5] Our analysis uses the net worth, income, and other definitions from Aladangady et al. (2023), including adjusting all dollar values to 2022 dollars using the "current methods" version of the consumer price index for all urban consumers (CPI-U-RS). This measure aggregates reported income from specific sources—most of which correspond to items on an income tax form—including wages, self-employment and business income, taxable and tax-exempt interest, dividends, realized capital gains, unemployment insurance, food stamps and other related support programs provided by the government, pensions and withdrawals from retirement accounts, Social Security, alimony and other support payments, and miscellaneous sources. In the 2022 SCF, some of these sources capture pandemic-related fiscal support that families received in 2021, including, for example, enhanced unemployment and food stamp benefits. That said, as the SCF did not systematically collect information on stimulus payments that families received from the government in 2021, such payments are excluded from the SCF income measure.

On its own, the SCF is not particularly well-suited to capture between-survey dynamics at the unprecedented scale of the pandemic. Thus, we added special questions to the 2022 SCF to capture families' pandemic experiences ("COVID-19 questions"). These questions asked respondents to consider their experiences "after the onset of the pandemic in early 2020" and probed health and employment status, payment relief, financial hardship, early stimulus benefits, and child-related responsibilities (see Appendix I for the survey questionnaire). They were drafted in 2021 for inclusion in the 2022 SCF, which was fielded between April 2022 and April 2023. Most interviews—around three-fourths—were conducted in 2022.

We focus on three key dimensions of a family's labor market experience during the pandemic: change in employment status, work arrangement (telework), and significant COVID-19-related health events. The first set of COVID-19 questions asked the survey respondent to describe their employment status and, if applicable, that of their spouse or partner during the pandemic, using any number of 10 possible responses. We classify responses into three mutually exclusive categories that describe a *family's* net employment change—decrease, increase, or no change—based on the first option that the respondent selected for themselves and, if applicable, their spouse or partner (although including the second selection does not materially affect conclusions). Reduced hours, a job or business loss, and entry into retirement are classified as a decrease; increased hours and a new job or business are classified as an increase; and continuing to report (in-person or via telework, including if the telework arrangement was new) and continuing to be unemployed or out of the labor force are classified as no change. Less than 2 percent of families in any group we analyze reported changes in opposite directions between the respondent and their spouse or partner, and these families are included in the "no change" group. For convenience, we also analyze a dichotomous variable indicating a net employment decrease, combining net increase and no net change into one category.

To examine telework, we classify families based on whether any of their selections for the employment status questions included "moving to a new telework schedule" or "continuing to telework," even if it was not the first selection for the respondent or their spouse or partner. We construct two dichotomous variables, any telework and new telework, based on selecting either telework response and based on selecting a new telework schedule, respectively.

Finally, to identify whether a family experienced a significant COVID-19-related health event, we use questions that probed whether the respondent or their spouse or partner was hospitalized due to a COVID-19 infection, which speaks to an acute (potentially shorter-term) event, and whether they experienced persistent symptoms from a COVID-19 infection.

III. Families' Experiences of the COVID-19 Pandemic

The pandemic upended the U.S. labor market along numerous fronts that could have materially affected families' earnings. Most prominently, due to a rapidly changing economy, most families' attachments to and engagements with the labor market likely experienced some turbulence. With the new serious health risk posed by the emergence of COVID-19, early lockdowns aimed to reduce its spread. Many businesses closed or scaled back operations, and the unemployment rate spiked. That said, demand for certain types of workers, such as those in essential industries, increased. On the labor supply side, severe or persistent infections, heightened health concerns, and new household demands restricted ability to (or interest in) work.[6] Buffering these dynamics was the rise of telework, with many employers relaxing on-site requirements, which both enabled continuity of operations while minimizing the spread of COVID-19 (Barrero et al., 2021) and increased workplace flexibility.

The left panels of Figure 1 (and corresponding Appendix Table 1) display the prevalence of net employment changes, significant COVID-19 health events, and telework among U.S. families. Interestingly, despite the disrupted economy, most families did not experience a net change in their employment by the time they were interviewed for the 2022 SCF. Still, more than one-third of families did experience such a change, 81 percent of whom experienced a net decrease. Six percent of families experienced a net increase.

Of course, it was unfortunately common to experience a significant COVID-19-related health event—about one-fifth of families reported that they had either been hospitalized or had persistent symptoms from an infection, largely driven by those with persistent symptoms.[7] A still striking 4 percent of families had been hospitalized due to a COVID-19 infection; for rough context, annual overall hospitalization rates for individuals was 8 percent before the pandemic (Centers for Disease Control and Prevention, 2022). Families that experienced either type of health event were more likely to experience the other one than the rest of the population: 62

[6] In addition, the temporarily expanded unemployment insurance program—which included a supplemental benefit that, in many instances, meant beneficiaries could receive more than 100 percent of their pre-pandemic wages (Ganong et al., 2020)—introduced an added disincentive to work for some period of time that may have led to a reduction in work, which appears to be small (Coombs et al., 2022; Chetty et al., 2023).

[7] Blanchflower and Bryson (2023) estimate similar rates of long COVID within the Census Household Pulse Survey.

percent of families that had been hospitalized had persistent symptoms, and 14 percent of families that had persistent symptoms had been hospitalized. We also find evidence that health status and significant COVID-19 health events are correlated, using questions from the SCF's core survey asking respondents to rate their health status and that of their spouse or partner from poor to excellent.[8] For both health events we consider, about half of families that had an event rated their 2022 health status as fair or poor compared to less than one-third of families that had not. While these differences could reflect increased incidence of severe COVID-19 health events for those with poor health, the fact that this relationship holds within usual income group suggests that significant COVID-19 health events could contribute to downstream adverse effects on health.

Of course, experiencing a significant COVID-19 health event presumably interfered with daily activities for some period of time and likely put pressure on the ability to work (Goda and Soltas, 2023). By 2022, families that had such an event were 10 percentage points (p.p.) more likely to experience a net employment decrease than those that had not (Appendix Table 2). Notably, families that had these events and rated their 2022 health status as fair or poor were over 10 p.p. more likely to experience a net employment decrease than other families with similar health ratings and over 5 p.p. more likely to than families that had these events but had better health ratings.

On the flip side, the rise of telework— 26 percent of families teleworked, 72 percent of whom reported new telework arrangements—likely helped preserve (or even bolster) families' employment situations. Indeed, teleworking families were about half as likely as other families to experience a net decrease in employment (Appendix Table 2).

These experiences of the pandemic were not equally shared across the usual income distribution, and the distributional differences underscore the connection between employment, health, and work arrangement. Figure 1 breaks down prevalence of each measure by the families' location in the usual income distribution. Generally speaking, lower-income families were more likely to experience a net decrease in employment, while higher-income families were more likely to experience both no change and a net increase. Similar gradients are present for significant COVID-19 health events. Among families in the top decile, two percent were

[8] The health status question offers four ratings—excellent, good, fair, and poor—and for these calculations, if the respondent and their spouse or partner differed, the family is categorized as the worse of the two.

hospitalized and 11 percent had persistent symptoms; among families in the bottom quintile, 5 percent were hospitalized and 19 percent had persistent symptoms. Gradients for telework are exceptionally strong. Three percent of the bottom quintile teleworked, compared to *59 percent* of the top decile. Notably, based on reports of a new telework schedule, the pandemic clearly amplified distributional differences in work arrangements that had already existed.[9] Finally, across the board, gradients in education resemble those in usual income (Appendix Table 1).

The SCF can also shed some light on the persistence of pandemic employment changes, using the current employment status questions in the core survey. Just over 90 percent of families that experienced a net employment decrease were employed at the time of their 2022 interview, consistent with the recovered labor market by that point. Indeed, this figure is only a bit below the employed share of families that experienced a net employment increase, and some of the difference is driven by the inclusion of families that entered retirement in the "decrease" category. That said, employment decreases appear to have been somewhat more persistent among the lowest-income families—relative to all other usual income groups, whose outcomes were quite similar, a much lower share (82 percent) of families that experienced a net employment decrease in the bottom quintile were employed at the time of their interview—which may relate to this group's higher incidence of significant COVID-19 health events.[10] These findings complement those from Chetty et al. (2023), which found that only employment at jobs with wages in the bottom quartile of the distribution remained subdued in December 2021, ostensibly due to the larger pandemic shock experienced by that group relative to others.

IV. Implications for Economic Well-being

Similar to the pandemic experiences analyzed in the previous section, mean income growth over the initial years of the pandemic also exhibited a strong distributional pattern (Aladangady et al., 2023; Appendix Figure 1). Such growth was generally either absent or more-modest

[9] This finding is broadly in line with the 2020 Census Pulse Survey (Marshall et al., 2021) and the 2021 Survey of Household Economics and Decisionmaking (Federal Reserve Board, 2022) as well as predictions based on the 2019 SCF (Helppie-McFall and Hsu, 2021).

[10] Two-thirds of families that experienced a hospitalization were employed at the time of the interview (versus 75 percent that did not), and 80 percent of families that had persistent symptoms were employed at the time of the interview (versus 73 percent of families that did not).

among lower-income families and very strong among the highest-income families.[11] The resemblance of this gradient to those documented above could suggest that a family's pandemic experiences left a meaningful imprint on their economic well-being.

To analyze this possibility, we focus on the 2022 SCF measures of 2021 income and 2022 wealth. The former provides insight as to the degree to which a family's cash flows amid a still-recovering labor market reflected their pandemic experiences, and the latter provides a cumulative snapshot of where families' balance sheets stood with respect to these experiences after the labor market had largely recovered.

Table 1 presents regression results for natural-log-transformed income (top panel), an indicator for lower-than-usual income (middle panel), and inverse-hyperbolic-sine-transformed wealth (bottom panel) (Bellemare and Wichman, 2020), where the key independent variable is 1 of 3 indicators characterizing a family's pandemic experiences (net employment decrease, significant COVID-19 health event, and any telework) under 3 specifications (without controls, with a control for the natural log of usual income, and with usual income group fixed effects). The coefficients can be interpreted as the degree to which family economic well-being was better or worse, on average, among families that had a particular pandemic experience compared to those that did not. The usual income controls refine these comparisons to be between families that under normal conditions would have similar income (or be in similar income groups), which is important partly because, as shown in the previous section, families' experiences of the pandemic varied considerably by their usual income but also because families with similar incomes under normal conditions are generally more directly comparable along other dimensions.

The top panel of Table 1 shows that each indicator is highly correlated with 2021 income in the expected direction. Families that had net employment decreases, non-teleworking families, and families that experienced a significant COVID-19 health event, on average, all had significantly lower income than other families. That said, as one might also expect, controlling for usual income, either loglinearly or by group, shrinks the coefficients measurably. For example, the regression without controls indicates that families that experienced a net

[11] In comparison, mean wealth growth—which, for most groups, was larger than mean income growth—exhibited an inverse-U shape over the usual income distribution, with sizable appreciation in house and equity prices, asset classes important to middle-income families' portfolios, somewhat overshadowing the role of income growth.

employment decrease had, on average, 26 percent lower income in 2021 than families that did not, but, accounting for distributional differences, the differential is closer to 11 percent. But, importantly, the coefficients generally maintain both their signs and predictive power across specifications, suggestive of an independent relationship between the corresponding indicator and income. The only exception is the health event specifications, under which the baseline coefficient was small enough that even though it maintained its negative sign, it became statistically insignificant at conventional thresholds when controlling for usual income. This could mean that significant COVID-19-related health events transmitted to income primarily through the employment channel; indeed, adverse health events in general lead to significant earnings declines (Dobkin et al., 2018).

The top panel results suggest that families' pandemic experiences left an imprint on their 2021 cash flows. It could be the case, though, that even if their income was, on average, lower, families that had these experiences were still earning their usual income amount (or more) at the same rate as others that did not have them. Thus, the middle panel of Table 1 analyzes another dimension of economic well-being captured in families' 2021 cash flows, whether their income that year was below their usual income. Each pandemic experience is highly predictive of a family having lower-than-usual income, and the relationships are stable upon inclusion of usual income controls. The magnitude is largest when the key variable is the net employment decrease indicator, which intuitively has the most direct correspondence to income loss: families that experienced a net employment decrease were 17 p.p. more likely to have lower-than-usual income in 2021, even within usual income group. Overall, 17 percent of families had lower than usual income; thus, families that experienced a net employment decrease were twice as likely to have unusually low income. Families that had a significant COVID-19-related health event were about 7 p.p. more likely to have lower-than-usual income, and families that teleworked were about 6 p.p. *less* likely to. Altogether, our income results indicate that not only did families with these experiences have lower income, on average, than their counterparts, their income was also considerably more likely to be below the amount they would ordinarily earn.

The bottom panel of Table 1 indicates that 2022 wealth, like 2021 income, tended to be lower for families that experienced net employment decreases, non-teleworking families, and families that experienced significant COVID-19 health events, though the implied differences in wealth are much larger than the implied differences in income. For example, families with a net employment decrease had 81 percent less wealth than families without, while for significant health events, families had 70 percent less wealth. Moreover, the coefficients on net employment decrease and presence of a significant COVID-19 health event remain fairly stable with the addition of usual income controls, such that the health event indicator remains independently predictive of wealth even with these controls. Interestingly, for telework, upon the inclusion of usual income group effects, the sign flips, indicating that within usual income group, telework is associated with higher income but lower wealth. All in all, the results are consistent with families who bore the brunt of the pandemic economy along the dimensions we consider having, on average, less financial cushion in 2022 than their peers.

More generally, these analyses point to notable gaps in both stock and flow measures of families' economic well-being based on pandemic experiences, even accounting for distributional differences in their incidence. Further, in specifications that include all 3 measures, each remains independently predictive, with coefficients in line with those in Table 1 (not shown). Of the measures we consider, a family's net employment change is unsurprisingly the most closely linked to economic well-being, as even within-usual-income-group differences remained quite large. Separately, the finding that differences based on health events did not map as directly to the flow measure (income) as they did to the stock measure (wealth) could reflect the fact that health events can produce a wide array of economic consequences on the family, beyond changes in labor supply. For example, severe health events, such as hospitalizations, can increase medical expenditures, decrease credit access, and increase probability of bankruptcy (Dobkin et al., 2018), all of which could be reflected in a family's wealth.

Pandemic stimulus. As a financial buffer against the economic and health disruptions brought about by the pandemic, the federal government provided multiple rounds of stimulus that factored into many families' cash flows and potentially their decision-making. Two of the widest-reaching income support measures were 1) economic impact payments (EIPs) or "stimulus checks," and 2) a temporarily expanded and more generous unemployment insurance (UI) program, either of which could influence the degree to which differences in a family's income translate to differences in their overall cash flows.[12] Table 2 considers how our income

[12] The 2022 SCF also asked about other key early stimulus measures for families. The Paycheck Protection Program (PPP) allowed business owners to apply for funds to maintain their workforce. PPP loans were more concentrated at the top, reflecting patterns in business ownership (Aladangady et al., 2023). Payment relief programs offered an

results change under alternative definitions of family income that adjust for these programs, with two objectives.[13] First, the findings can shed light on the degree to which each of these large, very differently structured programs mediated the relationships between pandemic experiences and family economic well-being in a general sense. Second, evidence that these programs operate on our main results as would be expected given their designs can lend credence to the link between pandemic experiences and economic well-being that our analysis thus far suggests.

Families received up to 3 EIPs, which were issued beginning in March 2020, beginning in December 2020, and beginning in March 2021. The payment amounts were based on a family's income, tax filing status, and number of children (or qualifying dependents) but, importantly, were otherwise not targeted to families with particular experiences of the pandemic. These payments are excluded from the SCF income measure, due to potential reporting concerns, but families were separately asked if they received any of the EIPs. About 80 percent of families reported receiving at least one payment, with incidence relatively stable across the income distribution but dropping off precipitously toward the top (Appendix Table 1), consistent with published figures. For a coarse-but more-complete measure of 2021 cash flows, we distribute the second and third EIPs to SCF families with assistance from NBER TAXSIM.[14]

As the middle panel of Table 2 shows, augmenting family income with EIPs do not produce meaningfully different coefficients as compared with our base income measure. The fact that coefficients remain largely unchanged could reflect the widespread nature of EIP receipt, with the changes reflecting the degree to which a given pandemic experience prevailed in the segments of the distribution that received payments.

Relative to the EIPs, the UI stimulus was designed to reach a much smaller share of families and while eligibility was expanded beyond the standard program rules, it was still targeted

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additional buffer to pandemic disruptions. Ten percent of families reported receiving relief on housing—that is, mortgage or rent—payments, and 13 percent of families reported receiving relief on auto or other installment loan, credit card, or utility payments, with 17 percent of families overall receiving some form of payment relief. (Student loans, most of which were automatically placed in forbearance, are excluded from this calculation.) More families in the bottom segments of the distribution received relief of each type. The SCF did not systematically collect information on another key policy, the 2021 Child Tax Credit expansion.

[13] For simplicity, we focus on the income specifications and leave the implications for wealth for future study.

[14] Nearly all eligible families received the second-round EIP payment in January 2021, and all eligible families received the third-round EIP payment starting in March 2021. The SCF/TAXSIM algorithm estimates that 83 percent of families received an EIP payment in 2021. The algorithm uses a family's adjusted gross income (AGI) as computed by TAXSIM based on more granular SCF income components, along with the filing status and number of dependents, to determine eligibility for and the amount of each EIP.

toward the unemployed. Around 16 percent of SCF families reported receipt of these benefits over the period between the pandemic's onset and their interview, with modestly higher incidence in the middle of the distribution than in the tails (Appendix Table 1), in line with other estimates (Carey et al., 2021). While there is considerable overlap, this pattern departs from the one observed for net employment decreases among families along two dimensions. First, the incidence of UI receipt is more muted throughout, which is unsurprising even amid expanded eligibility for benefits. Second, compared with the incidence of net employment decreases, families in the bottom quintile of the income distribution and families without a high school degree had much lower UI rates, perhaps reflecting increased irregular or informal employment within these groups.

Even though the most generous phase of the UI stimulus ended in 2020, expanded benefits continued well into 2021, likely buoying income in that year for many families, particularly those that experienced net employment decreases. In contrast to the EIPs, the SCF family income measure includes unemployment compensation and, by extension, the expanded benefit. Given the connection between a family experiencing an employment decrease and receiving unemployment compensation, we flip the analysis above and consider how removing unemployment compensation (entirely) from 2021 income affects results. Unsurprisingly, with this change, the negative relationship between a net employment decrease and income becomes considerably stronger. All of the coefficients grow in magnitude, and all are statistically significant at conventional levels, consistent with unemployment insurance working as it "should", to provide a buffer for families who experienced employment loss. While we cannot examine it, these discrepancies would presumably be even larger in an analysis of 2020 income.

Interestingly, mean income growth takes on a more linear shape over the distribution when fully excluding unemployment compensation, as nearly half of the growth among families in the second usual income quintile is erased (Appendix Figure 1). The overall shape more closely resembles the incidence of net employment decreases over the distribution, again consistent with the program operating on our findings as expected. Further, because income *growth* also seems connected to pandemic experiences, there is a separate implication that differences in cash flows may have extended beyond 2021.

V. Conclusion

The COVID-19 pandemic unleashed widespread havoc on the broader U.S. economy, substantially changing the labor market landscape. Using new COVID-19 questions we implemented in the 2022 Survey of Consumer Finances, we document novel evidence that the pandemic economy left a material imprint on U.S. families, many of whom experienced declines in employment, changes in working arrangements, and significant health setbacks. Using the rich income and wealth measures in the SCF, we not only show that lower-income families bore the brunt of the adverse pandemic conditions, but also fill a large gap in the literature by directly linking families' experiences of the pandemic to differences in economic well-being. Future research can work towards identifying causal parameters behind these relationships. In addition, isolating the mechanisms through which the COVID-19 pandemic contributed to the evolution of family wealth over time and how they might differ by family characteristics is crucial for a broader understanding of the lasting impacts of the pandemic on the U.S. economy.

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Table 1: Relationship between Pandemic Experiences and Economic Well-being

Dependent Variable	Pandemic Experience								
	Net Employment Decrease			Significant COVID-19 Health Event			Any Telework		
ln(income)	-0.296	-0.114	-0.124	-0.175	-0.044	-0.040	0.987	0.105	0.133
	(0.036)	(0.023)	(0.029)	(0.043)	(0.024)	(0.026)	(0.032)	(0.019)	(0.022)
1=(income less than usual income)	0.172	0.174	0.172	0.074	0.075	0.073	-0.056	-0.069	-0.064
	(0.014)	(0.014)	(0.014)	(0.016)	(0.016)	(0.017)	(0.012)	(0.013)	(0.014)
IHS(wealth)	-1.646	-1.257	-1.205	-1.182	-0.900	-0.844	1.948	0.002	-0.393
	(0.221)	(0.210)	(0.203)	(0.265)	(0.251)	(0.242)	(0.152)	(0.224)	(0.176)
Controls									
ln(usual income)		X			X			X	
usual income group FE			X			X			X

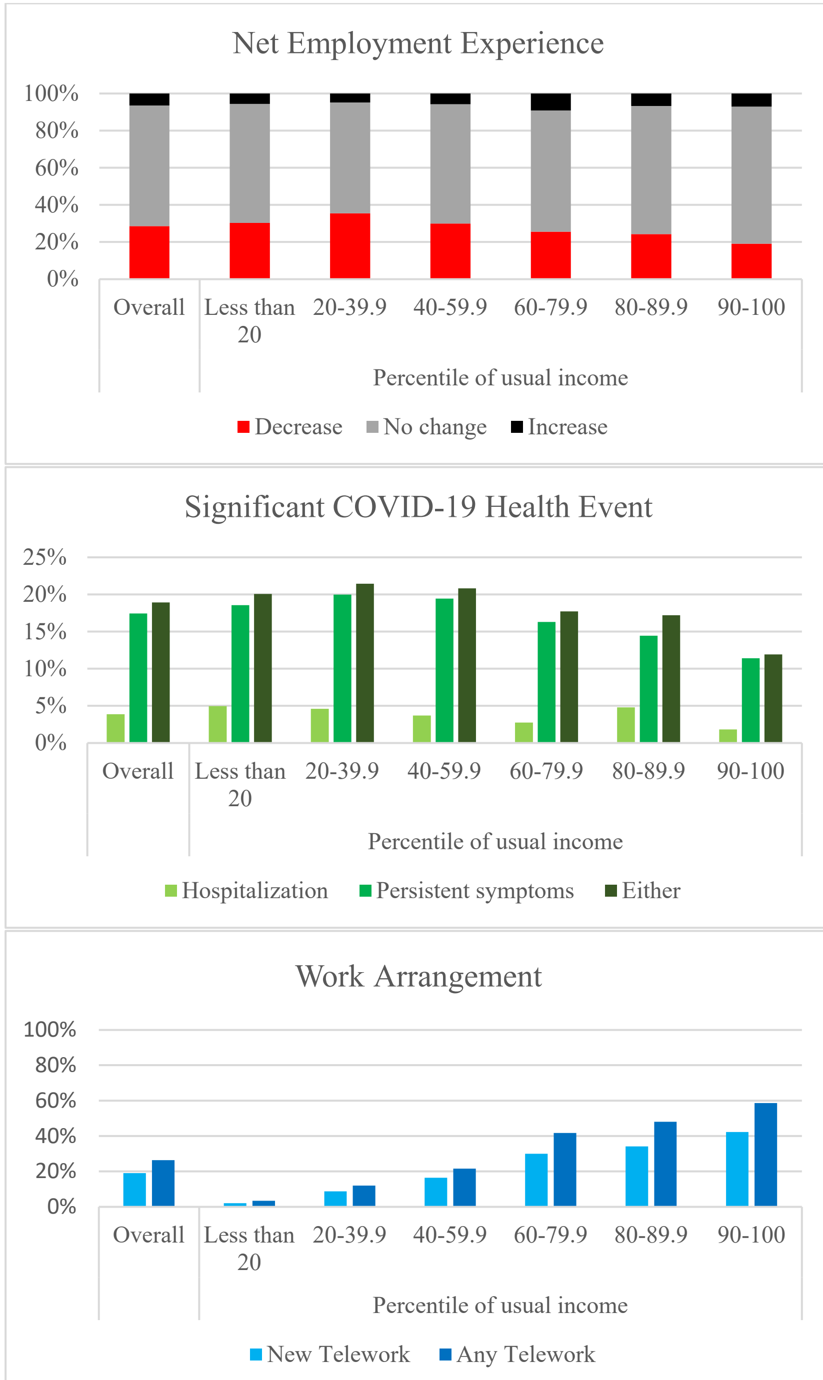
Note: Bootstrapped standard errors corrected for survey imputation and sampling variance. Mean of *ln(income)* is 11.138, mean of *1=(income less than usual income)* is 0.173 and mean of *IHS(wealth)* is 10.956.

Table 2: Relationship between Pandemic Experiences and 2021 Income (Alternate Measures)

Dependent Variable	Pandemic Experience								
	Net Employment Decrease			Significant COVID-19 Health Event			Any Telework		
ln(income)	-0.296	-0.114	-0.124	-0.175	-0.044	-0.040	0.987	0.105	0.133
	(0.036)	(0.023)	(0.029)	(0.043)	(0.024)	(0.026)	(0.032)	(0.019)	(0.022)
ln(income+EIP)	-0.239	-0.086	-0.074	-0.165	-0.055	-0.035	0.908	0.179	0.108
	(0.027)	(0.017)	(0.017)	(0.037)	(0.019)	(0.018)	(0.027)	(0.033)	(0.016)
ln(income-UI)	-0.375	-0.191	-0.200	-0.204	-0.072	-0.067	1.014	0.127	0.150
	(0.041)	(0.028)	(0.033)	(0.050)	(0.031)	(0.033)	(0.033)	(0.021)	(0.023)
Controls									
ln(usual income)		X			X			X	
usual income group FE			X			X			X

Note: Bootstrapped standard errors corrected for survey imputation and sampling variance. Mean of *ln(income)* is 11.138, mean of *ln(income+EIP)* is 11.240, and mean of *ln(income-UI)* is 11.108.

Figure 1: Family Pandemic Experiences, by Usual Income Group



Note: COVID-19 question categories defined over the Survey of Consumer Finances (SCF) respondent (and their spouse or partner, if applicable). Employment experience classifications use the first response to the employment status question from each person. "No change" in employment refers to either no change or the small percentage of families (less than 2 percent of families in each grouping we consider) that reported both a reduction and increase across spouses or partners. Hospitalization and persistent symptoms are not mutually exclusive categories. Telework leverages the full menu of possible responses to employment status (as opposed to just the first response).

Appendix:

I. COVID-19 Questions added to the 2022 Survey of Consumer Finances

Survey respondents were asked the following questions after those gathering information on members of the family and before those on expectations for the economy:

The COVID-19 pandemic significantly affected American households. We would like to ask you the following questions about the experiences you (and your family living here) had after the onset of the pandemic in early 2020.

X19000/X19001/X19002/X19003/X19004/X19005/X19006/X19007/X19008/X19009

Which of the following describes your employment status during the pandemic?

CODE ALL THAT APPLY: CODE RESPONSES IN THE ORDER THEY ARE GIVEN.

1. Permanently lost a job or closed a business
2. Became temporarily unemployed or temporarily closed a business
3. Started a new job or established a new business
4. Began a new telework schedule
5. Continued teleworking
6. Continued reporting to a place of business
7. Continued to be unemployed or out of the labor force
8. Reduced hours
9. Increased hours
10. Entered retirement

-7. OTHER

X19010/X19011/X19012/X19013/X19014/X19015/X19016/X19017/X19018/X19019

Which of the following describes your (husband's/wife's/spouse's/partner's) employment status during the pandemic?

CODE ALL THAT APPLY: CODE RESPONSES IN THE ORDER THEY ARE GIVEN.

1. Permanently lost a job or closed a business
2. Became temporarily unemployed or temporarily closed a business
3. Started a new job or established a new business
4. Began a new telework schedule
5. Continued teleworking
6. Continued reporting to a place of business
7. Continued to be unemployed or out of the labor force
8. Reduced hours
9. Increased hours
10. Entered retirement

-7. OTHER

0. Inap. (No spouse/partner)

X19020/X19021/X19022/X19023/X19024/X19025/X19026

During the pandemic, some households had difficulty paying their bills. Did you (or your husband/wife/spouse/partner) renegotiate payments for, or otherwise receive forbearance or relief on, any of the following loans or accounts?

CODE ALL THAT APPLY: CODE RESPONSES IN THE ORDER THEY ARE GIVEN.

1. Mortgage
2. Rent
3. Auto loans
4. Credit cards
5. Student loans
6. Other loans
7. Utilities

-1. None of these

IF ANY OF X19020-X19026=1 THEN ASK X19027:

X19027. For how many months did you (or your husband/wife/spouse/partner) receive mortgage forbearance?

NUMBER OF MONTHS:

-2. Renegotiated payments
0. Inap (X19020-X19026^=1)

IF ANY OF X19020-X19026=2 THEN ASK X19028:

X19028. For how many months did you (or your husband/wife/spouse/partner) receive rent relief?

NUMBER OF MONTHS:

-2. Renegotiated payments
0. Inap (X19020-X19026^=2)

X19029/X19030/X19031

Did you (or your husband/wife/spouse/partner) receive any of the following during the pandemic?

CODE ALL THAT APPLY: CODE RESPONSES IN THE ORDER THEY ARE GIVEN.

1. Unemployment insurance or UI benefits
2. Stimulus payment(s) from the government
3. Paycheck Protection Program or PPP loan(s)

-1. None of these

IF ANY OF X19029-X19031=1 THEN ASK X19032:

X19032. For how many total months did you (and your husband/wife/spouse/partner) receive unemployment insurance (UI) benefits? (Include period that benefits were delayed if eventually paid).

IF BOTH R AND SPOUSE RECEVIED UI BENEFITS: TAKE THE TOTAL NUMBER OF MONTHS FOR EACH INDIVIDUALLY AND ADD THEM TOGETHER.

NUMBER OF MONTHS:

0. Inap (X19029-X19031^=1)

X19033/X19034/X19035/X19036/X19037/X19038/ X19039

Did you (or your husband/wife/spouse/partner) experience any of the following challenges during the pandemic?

CODE ALL THAT APPLY: CODE RESPONSES IN THE ORDER THEY ARE GIVEN.

1. Missed a regular payment on rent or mortgage
2. Missed a regular payment on a credit card, auto loan, or other debt
3. Missed a regular payment on utilities
4. Delayed a payment on, or were unable to pay, a medical bill
5. Struggled to afford food
6. Had trouble buying food even though you had money

-1. No hardship
-7. Other hardship (specify)

IF NUMBER OF CHILDREN > 0 THEN ASK X19040- X19045:

The pandemic disrupted childcare and added virtual instruction responsibilities for many households that may have made working difficult.

X19040. What was the most significant impact of increased child-related responsibilities on your employment: did you stop working, work fewer hours, work the same numbers of hours, but were less focused, change jobs, or no disruption?

1. Stopped working
2. Worked fewer hours
3. Worked the same amount but was less focused
4. Changed jobs
5. No disruption
0. Inap. (No children in home)

X19041. What was the mo
st significant impact of increased child-related responsibilities on your (husband's/wife's/spouse's/partner's) employment: did your (husband/wife/spouse/partner) stop working, work fewer hours, work the same numbers of hours, but was less focused, change jobs, or no disruption?

1. Stopped working
2. Worked fewer hours

3. Worked the same amount but was less focused
4. Changed jobs
5. No disruption
0. Inap. (No spouse/partner; No children in home)

X19042 X19043/X19044/X19045

Did you do any of the following in response to childcare or schooling disruptions during the pandemic?

CODE ALL THAT APPLY: CODE RESPONSES IN THE ORDER THEY ARE GIVEN.

1. Move to be closer to family or friends for help
2. Have family members move to you so they could help
3. Enroll in a school that had in-person classes
4. Hire or share a nanny or educator
-1. None of these
0. Inap. (No children in home)

X19046 Have you (or your husband/wife/spouse/partner) ever been diagnosed with COVID-19?

INCLUDE POSITIVE RESULTS FROM EITHER LAB OR SELF-ADMINISTERED TESTS

1. Yes
5. No

IF X19046=1 THEN ASK X19047 & X19048:

X19047. Were you (or your husband/wife/spouse/partner) ever hospitalized due to COVID-19?

1. Yes
5. No
0. Inap. (X19046=5)

X19048. Have you (or your husband/wife/spouse/partner) suffered any persistent symptoms due to your COVID-19 infection, such as shortness of breath or fatigue?

1. Yes
5. No
0. Inap. (X19046=5)

X19049 Did someone who was living with you during the pandemic die from COVID-19 or an illness that you suspect was COVID-19?

1. Yes
5. No

Appendix Table 1: Families' Pandemic Experiences, by Family Characteristics

	All	Percentile of usual income						Education of SCF reference person			
		Less than 20	20-39.9	40-59.9	60-79.9	80-89.9	90-100	No high school diploma	High school diploma	Some college	College degree
	Percent of families in group										
Employment Experience											
Net decrease	29	30	35	30	26	24	19	35	34	30	23
Net increase	6	6	5	6	9	7	7	3	5	6	8
No change	65	64	60	64	65	69	74	61	61	64	69
Telework											
New Telework	19	2	9	16	30	34	42	2	7	15	33
Any Telework	26	3	12	22	42	48	59	5	11	20	45
Health Experience											
Hospitalization	4	5	5	4	3	5	2	8	4	5	2
Persistent symptoms	17	19	20	19	16	14	11	24	20	19	14
Stimulus											
Unemployment benefits	16	11	20	20	17	16	9	10	20	18	14
Direct stimulus payment	78	80	89	85	85	75	30	82	87	82	70
Paycheck Protection Program (PPP) loan	4	2	2	1	4	7	13	3	2	2	6

Note: COVID-19 question categories defined over the Survey of Consumer Finances (SCF) respondent (and their spouse or partner, if applicable). Employment experience classifications use the first response to the employment status question from each person. "No change" in employment refers to either no change or the small percentage of families (less than 2 percent of families in each grouping we consider) that reported both a reduction and increase across spouses or partners. Hospitalization and persistent symptoms are not mutually exclusive categories. Telework leverages the full menu of possible responses to employment status (as opposed to just the first response). Income is measured for the calendar year before the survey. All values expressed as percentages.

Appendix Table 2: Share of Families with Given Change in Employment, By Health and Work Arrangement

	Employment Experience		
	Net decrease	Net Increase	No Change
Significant COVID-19 Health Event			
No	27	6	67
Yes	37	9	55
Persistent Symptoms			
No	27	6	67
Yes	38	9	53
Hospitalization			
No	28	7	65
Yes	36	3	60
Any Telework			
No	32	6	61
Yes	18	7	75
New telework			
No	31	6	62
Yes	17	8	76

Note: COVID-19 question categories defined over the Survey of Consumer Finances (SCF) respondent (and their spouse or partner, if applicable). Employment experience classifications use the first response to the employment status question from each person. "No change" in employment refers to either no change or the small percentage of families (less than 2 percent of families in each grouping we consider) that reported both a reduction and increase across spouses or partners. “Significant COVID-19 Health Event” refers to the presence of either hospitalization or persistent symptoms. Hospitalization and persistent symptoms are not mutually exclusive categories. Telework leverages the full menu of possible responses to employment status (as opposed to just the first response). All values expressed as percentages.

Appendix Figure 1: Growth in Real Income and Wealth, by Usual Income Group