



The Prevalence of Hardship by Race and Ethnicity in the USA, 1992–2019

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Abstract

Racial and ethnic inequality continues to be the subject of considerable public interest. We shed light on this issue by examining racial disparities in the prevalence of several types of hardship, such as trouble paying bills and housing problems, in the USA over the 1992–2019 period. Using data from several panels of the Survey of Income and Program Participation, we find that hardships were considerably higher—sometimes double, depending on the measure—among blacks and Hispanics than whites and Asians. Nevertheless, these disparities generally narrowed over time. We find that the decline in these disparities—as indicated by a summary hardship index—exceeded that of the official income poverty ratio. We also find that while Asians were more likely to be poor than whites, they were not more likely to experience hardship. Notably, we also see variation in the experiences of different types of hardship. Specifically, there was little decline in the racial disparity of two of the hardships that tend to be responsive to short-term fluctuations in income—bill-paying and health hardship, as well as fear of crime—but substantial declines in disparities with most other measures. Overall, our findings indicate significant racial differences in the experience of hardship, though with a narrowing of many gaps over time.

Keywords Racial inequality · Hardship · Race and ethnicity · Poverty

Racial and ethnic inequality in the USA is pervasive (Iceland, 2017; Sáenz & Morales, 2019). The successes of the Civil Rights movement raised expectations for a future of not only equal treatment before the law but also rising living standards for African Americans and eventual socioeconomic equality. In some respects this goal was achieved: poverty rates declined for African Americans over the past several

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decades and the black middle class grew appreciably (Landry & Marsh, 2011). However, there has been relatively little progress, or even setbacks, in reducing inequality in a few other areas, including the white-black gap in median household income and wealth (Aladangady & Forde, 2021; Kim, 2010; U.S. Census Bureau, 2020c). Patterns vary for other groups. Whites have higher levels of educational attainment and income than Hispanics but lower levels of each than Asians (Logan & Turner, 2013; National Research Council, 2006; Sakamoto et al., 2009).

Thus, patterns and trends in inequality vary by groups being compared, as well as measures used, and they don't all yield the same story. That not all outcomes align is not altogether surprising, as different measures tap into different dimensions of well-being. Household income and poverty, for example, measures the flow of resources in a given period of time (usually a year) while wealth represents the accumulation of assets. Different studies also focus on different portions of the distribution of a given outcome, such as on the low end vs. the median (Leicht, 2008). Furthermore, many indicators suffer from measurement problems, such as, when it comes to income, the under-reporting of resources (Meyer et al., 2015; Parolin, 2019). They are all affected, to a differing degree, by demographic factors, such as age, nativity, and household composition (Iceland, 2013).

There has been growing interest in another set of indicators of well-being—*hardship* (Beverly, 2001; Heflin et al., 2009; Neckerman et al., 2016; Ziliak, 2021). Hardship indicators measure consumption outcomes that are *intrinsically* important, such as the inability to pay bills or living in substandard housing, rather than, say, income, which is *instrumentally* important because of the things you can do with it, such as purchase goods and services that can enhance well-being (Beverly, 2001). There is only a moderate correlation between hardship and poverty since they tap into different dimensions of well-being and due to the challenges in accurately collecting data on income (Iceland & Kovach, 2019; Mayer & Jencks, 1989). Hardships measures themselves are heterogeneous, with some, such as bill paying and food hardship, representing immediate deprivations while others, such as neighborhood problems and ownership of consumer durables, more likely representing longer-term income deprivation (Iceland & Bauman, 2007).

Thus, the goal of this paper is to examine racial inequality in the experiences of a range of hardships over the 1992 to 2019 period. We are guided by the following specific research questions:

- (1) Are racial disparities in hardship narrowing or increasing?
- (2) Do patterns and trends vary by measure used?
- (3) To what extent do sociodemographic characteristics (such as age, household structure, and nativity) explain these differences?

We address these questions using data from multiple panels of the Survey of Income and Program Participation (SIPP), a nationally representative survey of the U.S. population. We use seven measures of hardship that tap into different dimensions of well-being: food hardship, bill-paying hardship, health hardship,

housing hardship, ownership of consumer durables, neighborhood problems, and fear of crime. We also group these measures into a summary index. Our study is the first to use a nationally representative sample to examine racial and ethnic disparities in trends in hardship over this length of time, using a variety of hardship measures and for the four largest racial/ethnic groups in the U.S.—whites, blacks, Asians, and Hispanics. In doing so, we advance our understanding of the trajectory of racial inequality using intrinsically important measures of well-being.

Background

Trends in Racial Inequality

Few topics have received more attention in recent years than racial and ethnic inequality (Sáenz & Morales, 2019). In the realm of inequality in socioeconomic outcomes, the literature shows large disparities between whites and Asians on the one hand and blacks and Hispanics on the other (Baker et al., 2021; Chetty et al., 2020; Iceland, 2019). In 2020, for example, the median household income of non-Hispanic whites was \$74,912, considerably higher than that of blacks (\$45,870) and Hispanics (\$55,321), though lower than that of Asians (\$94,903) (U.S. Census Bureau, 2020c). Similarly, the poverty rate for non-Hispanic whites in 2020 was 8.2 percent, lower than that of blacks (19.5 percent) and Hispanics (17.0 percent), and virtually the same as that of Asians (8.1 percent) (U.S. Census Bureau, 2020a).

With regards to disparities over time, poverty gaps between groups have generally narrowed (Baker et al., 2021; Iceland, 2019). Racial differentials in highest educational level have generally narrowed as well except that the Asian advantage in college completion has increased (National Center for Education Statistics, 2021; Stanford Center for Education Policy Analysis, 2021). Earnings inequality by race persists although it appears to be mostly explained by compositional factors, such as age and human capital variables, at least among native born (Fryer, 2011; Hall & Farkas, 2011; O'Neill & O'Neill, 2006; Trejo, 1997; Wang & Sakamoto, 2021; Wang et al., 2017). Gaps in median household income have not narrowed appreciably (Semega et al., 2020), while the gap in wealth between whites and blacks and Hispanics grew in the wake of the 2007–2009 recession, exacerbated by general increases in wealth inequality more generally (Aladangady & Forde, 2021).

Ultimately, however, there is no definitive reason or consensus about why all trends in gaps do not point in the same direction. It may be that the expansion of the safety net over the past several decades, especially for working families, has raised the floor for many households, leading to declining disparities at the low end of the income distribution (Wimer et al., 2016). In other words, safety net programs may reduce poverty for all groups—and especially groups concentrated at the lowest end of the income distribution (such as blacks and Hispanics). At the same time, growing income inequality means smaller relative gains for households in the lower half of the income distribution, including those above the poverty line, and this affects racial differentials in median household income. As Manduca (2018: p. 182) argues, “But for the rise in income inequality, the median black–white family income gap

would have decreased by about 30 percent.” Similarly, patterns and disparities in wealth are likely affected by the skewed distribution of wealth overall, with many lower-income households (which are disproportionately black and Hispanic) having zero wealth, as well as patterns of consumption by race and class (Barsky et al., 2002; Charles et al., 2009).

The Importance of Hardship Measures

We extend the literature on socioeconomic outcomes to hardship measures. A basic flaw of income poverty measures is that they capture an outcome of instrumental importance—income compared to a needs standard. The underlying assumption of such measures is that money is important because it can be used to purchase basic goods that are important for survival, such as food, clothing, and shelter. However, a problem with income poverty measures is that they might not accurately capture need. Some households have savings or access to credit, while others of the same income do not (Beverly, 2001; National Research Council, 1995; Ringen, 1988). Moreover, households face different demands on their economic resources, such as health, childcare, and transportation expenses which are often not easy to capture with survey data (Beverly, 2001; Sen, 1999). For example, even households with young children vary in whether they have extended family nearby to help with childcare. Furthermore, there are problems with measurement, including the under-reporting of income in household surveys, which serves to overstate the extent of income poverty (Czajka & Denmead, 2008).

In contrast, hardship measures, such as food insecurity, trouble paying bills, and living in a house or neighborhood with hazardous problems, capture outcomes of *intrinsic* importance. In other words, hardship indicators have the advantage of measuring concrete problems households face rather than being a proxy measure of the resources people have to avoid true hardship (Mirowsky & Ross, 2020; Pilkauskas et al., 2012; Rodems & Shaefer, 2020). As Neckerman and colleagues argue in their study of hardship (Neckerman et al., 2016: p. S53), “...it is important to go beyond income to understand conditions that can reinforce disadvantage and cause families to struggle. Capturing multiple dimensions of disadvantage provides a fuller picture of the challenges and stressors faced by low- and moderate-income families.”

In this spirit, our study analyzes experiences of seven types of hardship over time: food hardship, bill-paying hardship, health hardship, housing hardship, ownership of consumer durables, neighborhood problems, and fear of crime. These indicators have been used by previous researchers examining the incidence of hardship and are available in the SIPP (Beverly, 2001; Heflin, 2017; Heflin et al., 2009; Iceland & Bauman, 2007; Short & Shea, 1995). The Census Bureau, for example, reported on all of these items in one of their first reports on “Beyond Poverty, Extended Measures of Well-Being: 1992” (Short & Shea, 1995). While some of these indicators are more common than others in the hardship literature, such as food insecurity and inability to pay bills, we nevertheless believe that others such as neighborhood conditions and fear of crime also tap into important dimensions of hardship. Living in a neighborhood with toxic conditions, such as trash and litter and smoke/odors,

directly affects one's health and well-being, and historically these have disproportionately affected low-income people and communities of color (Elliott & Frickel, 2013; Woo et al., 2019). Fear of crime is indicator of long-standing interest and concern. As an early study on fear of crime noted "...fear [of crime] is impoverishing the lives of Americans. People stay behind the lock doors of their homes...The general level of sociability is diminished...Society is suffering from what economists label opportunity costs...[people] are not enjoying the opportunities of their communities" (McIntyre, 1967: p. 41) [see also (Clemente & Kleiman, 1977)].

In short, our study includes an array of measures of different dimensions of well-being. These also are differentially correlated with income. Health, food, and bill-paying hardship are more affected by short-term shortfalls in income, such as a sudden health crisis, while the other four are more related to longer-term income flows that affect the stock of consumer durables households have or the neighborhoods in which they can afford to live (Iceland & Bauman, 2007).

Race and Hardship

Racial and ethnic disparities in socioeconomic outcomes have many causes that also vary across the groups being considered. Among these are racism and discrimination, human capital differences, the immigrant assimilation process for groups that have many foreign-born members, and possibly culture (Iceland, 2017; Quillian et al., 2017), although the last is difficult to measure (Kiley & Vaisey, 2020). These factors are not all independent from each other, as racism, for example, can affect human capital development, and the context of reception can affect immigrant assimilation (Hamilton, 2019: pp. 79–80). We situate our analysis within the context of these broader causal mechanisms but the ultimate goal of this study is *not* to investigate these factors per se or to adjudicate among them. More narrowly, our goal is to more descriptively examine patterns and trends in hardship by race, given how little is known about them, and also to see if these measures yield a different understanding of material well-being by race from perhaps the most common indicator used today—the official poverty measure. We hope that this examination will lay the groundwork for additional research on the mechanisms involved in shaping hardship outcomes for different groups.

Studies of hardship generally find cross-sectional disparities by race that broadly resemble those of other outcomes, such as higher levels of hardship among Hispanics and blacks than whites, especially when examined without covariates. For example, a Census Bureau report on hardship based on the SIPP found that whites are less likely than blacks and Hispanics to lack a variety of consumer appliances and have more housing problems, trouble meeting basic needs, and fear of crime in their neighborhoods (Siebens, 2013) [see also (Karpman et al., 2018)]. This report did not show patterns for Asian respondents, and, more generally, there are many fewer studies of hardship among Asians. One study that examined hardship among households with children that included Asians found that Asian households were less likely to report at least one of

several types of hardship than whites (24 percent vs. 28 percent), who in turn were much less likely to report a hardship than blacks or Hispanics (both about 51 percent) (Rodems & Shaefer, 2020).

With regard to the role of race in multivariate analyses, racial and ethnic disparities are not the focus of existing studies, but they are included as covariates in an examination of other factors that determine hardship. They tend to show that hardship is more common among blacks, followed by Hispanics, and with relatively few differences between whites and Asians. Nevertheless, there is variation in the statistical significance of these differences, as studies often include different measures of hardship and were conducted at different times. Among these studies, Heflin (2016, 2017) found that blacks and Hispanics were more likely to experience food insecurity than whites, while Asians were not significantly different than whites. Unexpectedly, blacks were less likely to report a health hardship—defined as occurring when a household member was not able to see a doctor, dentist or hospital when they needed care—than whites, and there was no differences between whites and Asians and Hispanics. Somewhat similarly, Lerman and Zhang (2014) found higher reports of bill-paying hardship among blacks than whites, and less unmet medical/ dental need among blacks and Hispanics than whites.

Iceland (2021) also found higher reports about bill paying hardship among blacks than whites, but no significant difference between whites and Hispanics and Asians. That study did not focus on hardships by race over time, as it focused on differences in hardship by nativity in 2010 and 2013. Similarly, another informative paper on hardship by Altman and coauthors (2021) that examined trends from 1996 to 2008 focused on differences by nativity and citizenship status, though not by race. Hernández and colleagues (2016) found that blacks are more likely to report energy insecurity than whites, though there were no differences by race with regard to rent burden (defined as a family spending more than 30% of household income on rent). Van Hook and Balistreri (2006), in a study of households with children, found that black households are more likely to report food insecurity than whites, but there was no significant difference between whites and Hispanics. Ziliak (2021) reported higher levels of food insufficiency among blacks and Hispanics than whites during the COVID-19 pandemic (with a small gap among Hispanics and whites and blacks and whites). Using an index of material hardship, Neckerman et al. (2016) and Despard et al. (2018) found higher hardship among blacks and Hispanics than whites, while Pilkauskas et al. (2012) found higher hardship among blacks than whites though little difference between Hispanics and whites. Overall, these studies suggest consistent differences by race, and especially between blacks and whites, when using measures that feature immediate need, such as food security and trouble paying bills, with the exception of medical need.

There have been few studies that have examined *trends* in hardship by race over time. In a study of hardship among people with disabilities (that did not have a specific focus on race), which is of course a relatively small and specific subset of the total population, Drew (2015), found that blacks and Hispanics were more likely to report any of several kinds of hardships (food, bill-paying, health, and housing hardship) than whites, but the former two groups experienced declines in hardship between 1993 and 2010, while whites did not.

Contributions of the Current Study

We build on the existing literature by examining trends in hardship among all households and investigating many different indicators of hardship using data that extend to 2019. Our study includes Asians who have been omitted in most existing studies. We expect that racial differences in hardship, if they mirror trends in income poverty, will decline over time, indicative of a declining significance of race. However, it is possible that hardship differentials may not change much if they are more akin to median household income. Our study will be the first to shed light on this issue.

We also investigate whether differentials persist after controlling for other household characteristics. Among these, age and education have a positive association with well-being, and these characteristics vary by race, with whites having the highest median age and whites and Asians having higher levels of educational attainment than blacks and Hispanics (Schaeffer, 2019; U.S. Census Bureau, 2020b). Married-couple households are also less likely to be poor than other household types, and household structure also varies by race/ethnicity (McLanahan & Percheski, 2008; Raley et al., 2015). Thus, we also control for these and other household characteristics to examine the extent to which they explain differential in hardship. We note that this analysis is limited by the omission of unmeasured characteristics, such as access to credit and social networks.

Data and Methods

We use data from several panels of the Survey of Income and Program Participation (SIPP), a nationally representative household survey conducted in the USA (U.S. Census Bureau, 2001). The SIPP is a longitudinal survey, where panels last from three to five years. It is a rich source of data on income, program participation, labor force activity, and is one of the relatively few surveys that collects information on experiences with various kinds of hardship.

The data on hardships from pre-2014 panels come from the topical module on Adult Well Being, which was typically administered once per panel. Each wave of the pre-2014 SIPP panels used in this study covers a four-month period, and, in some analyses, we use one year's worth of data (or three waves) to examine experiences of income poverty. Specifically, we use data from the following waves of the pre-2014 SIPP panels: 1992 (waves 3, 4 and 5), 1996 (waves 6, 7 and 8), 2001 (waves 6, 7 and 8), 2004 (waves 3, 4 and 5), and 2008 (waves 4, 5, 6.). As a result, our hardship indicators from the Adult Well Being Topic Model provide information on hardships experienced in 1992, 1998, 2003, 2005, and 2010.

We also used 2013 and 2016 data from the 2014 panel (this panel asks about hardships in the previous year), and 2019 data from wave 3 of the 2018 panel and wave 1 of the 2020 panel. The 1992–2008 panels have the advantage of having information on a wide range of hardships. After the 2008 SIPP panel, the SIPP was redesigned and shortened, and most of the topical modules were eliminated. As a result, the 2014 panel contains a smaller set of measures of hardship, though it of course has the advantage of having more recent information.

Our sample includes respondents who were in the SIPP survey during the wave that the topical module was administered and who provided valid answers to the hardship questions and covariates in our multivariate analyses. We use households as the units of analysis, as hardships are reported for the household. The sample sizes for the panels range from 15,467 to 37,368 (sample sizes for each panel are shown in Table 1).¹ We use weights for the householder provided by the SIPP for a given wave (1992–2008 panels) or last month of the panel (2014–2019).

Measures of Hardship

When using the earlier SIPP panels—1992–2008—we analyze seven types of hardship for most years. For each type of hardship, there are a series of questions, and we categorize a household as experiencing a hardship if they answer affirmatively to a certain number of questions, typically based on how previous studies have measured such hardships (Heflin, 2017; Iceland & Bauman, 2007) and yielding percentages that somewhat approximate poverty rates. The hardships are defined as follows in the 2008 panel:

- (1) Health hardship (one or more of the following): did not see or go to a doctor/hospital when needed care, did not see a dentist when needed care
- (2) Food hardship (two or more): food did not last (and didn't have money for more), could not afford balanced meals, cut or skipped meals, ate less than should, did not eat for a full day
- (3) Bill-paying hardship (one or more): did not pay utility bill, phone disconnected, did not pay rent/mortgage
- (4) Housing hardship (one or more): pests, leaks, broken windows, plumbing problems, cracks in walls, holes in floor
- (5) Consumer durables (lacks five or more): computer, dishwasher, air conditioner, dryer, washer, microwave, cell phone, telephone, refrigerator, color television, VCR/DVD, stove, food freezer
- (6) Neighborhood problems (two or more): noise, street repair problems, trash/litter, abandoned buildings, would like to move, smoke/odors
- (7) Fear of crime (two or more): afraid to walk alone at night, stay at home for fear, goes out with others to stay safe, neighborhood is unsafe, carries something for protection, unsatisfied with crime, home is unsafe

¹ The Census Bureau imputes missing data for core variables and there was no missing data from 2005 onwards. There were some variables from the topic modules in the 1992–2001 panels with missing data that were not imputed by the Census Bureau, including the hardship measures themselves to varying degrees in 1992 and the nativity variable in 1992 to 2001. We omitted observations with missing data on these variables, which reduced the overall sample pooled across years from 214,277 to 207,667 when using the hardship index as the dependent variable which requires no missing data on any of the constituent hardship indicators. In addition, there were missing values for our poverty variable in 1992–2010 in cases where income data were not available for all months in the previous year, and those observations were also omitted from the poverty-specific regressions, but not from the models with our main hardship dependent variables. In models where poverty is the dependent variable, we have a sample size of 198,641. The sample sizes in each of the regression models are listed in Tables 4 and 5.

Table 1 Percentage reporting material hardships, by hardship and year, 1992–2019

	1992	1998	2003	2005	2010	2013	2016	2019
Hardship index	18.9	15.6	12.3	12.8	12.9	13.5	11.4	11.9
Poverty	10.1	9.9	9.7	10.0	11.6	14.2	11.2	10.3
Bill-paying hardship (one or more)	14.2	12.3	11.7	13.3	14.6	12.4	8.7	8.6
Did not pay utility bill	9.9	9.1	8.5	9.8	10.4	10.7	7.0	6.8
Phone disconnected	3.6	3.8	4.1	4.2	3.6			
Did not pay mortgage/rent	7.8	5.3	5.4	6.1	7.9	7.3	4.7	4.7
Health hardship (one or more)	12.9	10.3	9.7	11.1	12.3	NA	NA	NA
Did not see a dentist	10.3	7.8	7.4	8.5	9.6			
Did not see a doctor	7.9	6.0	6.2	6.8	7.9			
Food hardship (two or more)	8.9	8.9	8.0	9.0	10.9	12.9	9.8	9.2
Food did not last	11.3	11.3	10.1	11.2	13.4	14.8	11.3	10.6
Did not eat balanced meals	9.6	9.6	8.9	9.7	12.1	13.1	10.6	10.2
Skipped meals	4.3	4.3	3.9	4.7	5.1	8.2	6.5	5.9
Ate less than should	4.5	4.5	4.3	5.0	5.4	8.1	6.3	5.9
Did not eat whole day	1.2	1.2	1.3	1.6	1.4			
Housing hardship (one or more)	26.6	20.7	16.2	15.9	14.1	16.7	15.3	16.5
Insect, pest problems	14.5	12.6	9.5	9.8	7.5	9.5	8.9	9.8
Roof leak	8.6	6.9	5.4	4.9	4.9			
Broken windows	7.5	4.1	3.0	3.0	2.8			
Plumbing problems	4.9	2.6	2.0	1.9	1.9	6.1	5.2	5.9
Cracks in wall	4.5	4.0	2.9	2.8	2.6	7.1	6.3	6.2
Holes in floor	1.1	0.9	0.6	0.6	0.7	1.4	1.5	1.3
Lack of consumer durables (five or more)	22.6	22.0	13.5	12.1	13.0	NA	NA	NA
Computer	78.4	57.9	36.7	32.9	24.8			
Dishwasher	49.4	43.4	37.5	36.0	30.7			
Air conditioner	30.5	22.2	15.2	14.3	11.5			

Table 1 (continued)

	1992	1998	2003	2005	2010	2013	2016	2019
Dryer	21.6	13.1	10.7	10.4	16.8			
Washer	14.8	9.0	7.6	7.5	14.7			
Microwave	17.4	9.2	4.1	3.6	2.9			
Cell phone	–	63.6	37.3	28.7	12.8			
Telephone	4.8	3.7	5.7	9.4	25.0			
Refrigerator	0.8	0.7	0.7	0.7	0.7			
Color TV	3.4	1.6	1.2	1.1	1.5			
VCR/DVD	25.4	14.8	10.0	7.8	7.9			
Stove	0.9	1.3	1.2	1.2	1.4			
Food freezer	63.1	64.9	62.7	63.4	62.1			
Neighborhood problems (2 + in 2010, 1 + in 2016–2018)	19.2	15.8	13.1	13.0	10.9	16.9	15.9	17.2
Noise problems	24.0	21.4	18.3	18.1	13.4	13.6	12.8	13.9
Street repair problems	19.4	16.4	14.0	12.9	12.0			
Trash, litter	11.0	8.1	7.4	7.3	5.9	7.5	7.0	7.2
Abandoned buildings	10.0	8.0	7.0	7.0	7.1			
Would like to move	7.2	5.7	5.1	5.7	4.7			
Smoke, odors	7.0	4.9	3.7	3.4	2.8			
Fear of crime (2 + in 2010, 1 + in 2016–2018)		19.2	14.3	15.6	14.5	8.7	7.5	7.8
Afraid to walk alone at night		28.8	22.0	22.5	20.6			
Stay at home for fear		12.9	9.6	10.8	10.5	5.5	4.8	5.4
Goes out with others		11.5	8.1	9.3	8.6			
Neighborhood is unsafe		8.6	7.2	7.7	7.1	5.6	4.8	4.4
Carries something for protection		7.5	5.7	5.6	6.3			
Would like to move due to crime		4.4	3.9	4.5	4.1			

Table 1 (continued)

	1992	1998	2003	2005	2010	2013	2016	2019
Home is unsafe		4.1	3.2	3.0	3.0			
N	15,467	28,298	24,159	37,368	34,850	29,662	16,938	21,971

Sources: 1992, 1996, 2001, 2004, and 2008, 2014, 2018, and 2020 SIPP panels

NA not available; due to item nonresponse for hardships in 1992, the sample sizes for that year vary from 15,385 to 15,598 across the hardship measures. Hardship index: mean percent of summary hardships experienced. See text for details

The indicators in bold represent the summary poverty and hardship measures used in the subsequent multivariate analysis

The early panels are all virtually identical in the measures except that the 1992 panel does not have information on food hardship and fear of crime.

The 2014–2020 panels have fewer measures of hardship. Specifically, they have no items at all for health hardships and consumer durables. They also have fewer items for: food hardship (4 in 2014 vs. 5 in 2008), bill paying (1 vs. 3), housing (4 vs. 6), neighborhood problems (2 vs. 6), and fear of crime (2 vs. 7). Our summary indicators of hardship therefore incorporate different thresholds, including neighborhood problems and fear of crime (1 or more for each of these in 2014 vs. 2 or more in 2010). The wording on some of the questions also differs slightly, including the accounting period for a few of them (e.g., previous year versus previous month). Thus, we emphasize that *the summary measures of the prevalence of hardships are not directly comparable across these two sets of panels*. We can look at trends within the two time periods covered—1992–2010 and 2013–2019—but there is a disjuncture between them. Even the poverty measure based on annual income is not directly comparable across panels, as the earlier panels had more frequent data collection and may have captured more non-earnings income than later panels (National Academies of Sciences, Engineering, 2018).

However, while this limits our ability to draw clear conclusions about long-term trends in hardship (and poverty), they do not affect comparisons by race over time since data collection within any given panel does not vary by race. In other words, the focus of our study is on differences in hardship by race over time, not the overall trend in hardship over time. So, for example, if we have more neighborhood hardship in 2013 as compared to 2010 due to a measurement change, this would affect the trend in hardship, but there is no reason to believe that it would affect changes in the hardship gap between any two given groups over the period, as the change in the indicator used applies to all racial and ethnic groups.

We also use a *hardship index* to provide an overall picture of hardship experiences. We calculate it by first counting the number of summary hardships experienced by households—which is up to 7 in 1998–2010 and up to five in 1992 and 2013–2019. Because the number of summary indicators varies across years, we then create a summary variable indicating the percent of the five to seven hardships (depending on the year) experienced in every year in the analysis. This variable thus varies from 0 to 100. We also created an alternative hardship index where all of the hardships that go into each of the seven domains are counted separately (up to 42, depending on the year), summed, and divided by the total number of hardship indicators. Analyses with this measure yields similar results to the index we report on below.

For the purposes of comparison, we also show trends in poverty by race/ethnicity using the official U.S. poverty measure. Briefly, the official poverty measure, originally devised in the 1960s, has two components: poverty thresholds and the definition of income that is compared to these thresholds, using a one year accounting period. The thresholds remain the same over time, updated only for inflation. While the official poverty measure uses families as the unit of analysis, here we use households to use comparable units for both the hardship and poverty measures (since hardships are measured at the household level). The thresholds vary by household size and number of children. The definition of income used in the official poverty

measure includes income from all cash sources, such as earnings, Social Security income, and investment income in the previous year.

Independent and Control Variables

We examine differences in hardship by race of the householder, defined as non-Hispanic white, non-Hispanic black, non-Hispanic Asian, and Hispanic. We also include non-Hispanic other category, though we do not focus on this group since its measurement varied over time (for example it included multiracial individuals in later but not earlier years).²

We include a number of control variables in our models, including: year of data collection; age of the householder, defined as under 25 years old, 25–34, 35–44, 45–54, 55–64, and 65+; education of the householder, defined as less than high school, high school diploma, 1–3 years of college, B.A. degree or more; household type, defined as married couple (with and without children), single female parent with children, and other household types; employment status of householder, defined as employed full time, employed part time, unemployed, and out of the labor force; lives in a nonmetropolitan area dummy variable; region, with the categories of Northeast, Midwest, South, and West; number of people in household; child under 18 present in the household; person 65 years or older present in the household; disabled individual present in the household; and nativity of the householder (native-born or not).³

Analytical Strategy

We begin by presenting descriptive statistics of hardships by race/ethnicity, as well as poverty for comparison. Our subsequent multivariate analyses include estimating OLS regression when the hardship index is the dependent variable, and logistic models when dichotomous hardship indicators and poverty are the outcome. Our key independent variables of interest are the indicators of race/ethnicity. To determine whether racial gaps declined over time, we also include race by year interaction terms. So if, for example, there is a significant, negative interaction term between black householder and 2019 (with white and 1992 being the reference categories), we would then infer that the likelihood that a black householder reported a hardship relative to whites was lower in 2019 than in 1992. We run one set of models with race, year, and the interaction terms, and then a second that adds the full set of controls to see other household characteristics help explain the race-hardship relationship.

² We also examined if our results vary if we omit households where householders have partners of a different race than their own. Our conclusions remain the same with this omission. This is in part due to the fact that only about 4.6 percent of households had a householder and partner of different races/ethnicities over the 1992–2019 period, rising from 2.7 percent in 1992 to 6.4 percent in 2019.

³ Our results are very similar whether we include a control for nativity versus models that include only native-born respondents.

Results

Table 1 shows the percentage of respondents reporting specific hardships as well as the summary hardship indicators. As noted in the data and methods, there are fewer hardship measures in 1992 and 2013 and onwards, and the measures collected beginning in 2013 are not directly comparable to the earlier ones. Thus, these data should not be used to look at trends in hardship over the entire period; rather, the focus below is on racial/ethnic differences over time. For the measures that are comparable, we tend to see declines in the hardship index from 1998 to 2005, and a small increase by 2010. There was also a decline in the index from 2013 to 2016, with slight uptick up to 2019. According to the hardship index, as of 2019, householders reported experiencing, on average, 11.9 percent of the major hardships. When examining specific hardships, health, housing, lack of consumer durables, and neighborhood hardships declined from 1992 to 2010. Bill-paying hardship fluctuated with no substantial overall change in that time period, and food hardship increased from 1998 to 2010. Bill-paying and food hardship declined over the 2013–2019 period, with relatively small trends in housing hardship, neighborhood problems, and fear of crime. The trends for individual hardships within a summary measure tend to closely track each other and thus the summary indicator.

Table 2 shows how the summary hardship measures varied by race/ethnicity and year. Overall, hardships are more prevalent among blacks and Hispanics than Asians and whites. According to the hardship index, for example, whites, on average, reported experiencing 9.8 percent of the hardships in 2019, similar to Asians (8.8 percent), but considerably lower than blacks (18.2 percent) and Hispanics (15.7 percent). These differences tend to extend to the more detailed hardship indicators. Patterns and trends are illustrated in Figs. 1, 2, 3, 4, 5, 6, 7, 8 and 9. Many of the figures show declining racial differentials, such as Fig. 1 with the hardship index and Fig. 6 with housing hardships. However, others, such as food hardship (Fig. 5), show little discernible trend in the racial gap. To test which of these differences are statistically significant, and the role of other factors in explaining them, we now turn to results from the multivariate analyses.

Multivariate Analyses

Table 3 provides descriptive statistics for the independent variables in the analyses. The percentage of householders who are white declined from 80.0 percent in 1992 to 65.7 percent in 2019, while the percentage of other groups, including Hispanics and Asians, increased. The percentage of householders who are native-born declined, and the population generally aged. As expected, educational attainment increased, and the proportion of households with a married couple declined. Households generally declined in size, and the percentage with a disabled member increased.

Table 4 shows results for regressions with the hardship index (ranging from 0 to 100) and poverty as the dependent variables. In OLS models with the hardship index, we see that blacks and Hispanics experienced a higher percentage of hardships, while there is no statistically significant difference between whites and

Table 2 Hardship by race/ethnicity and year, 1992–2019

	1992	1998	2003	2005	2010	2013	2016	2019
Hardship index								
Whites	16.2	12.9	10.1	10.3	10.5	11.1	9.7	9.8
Blacks	33.4	25.6	21.2	21.8	20.1	20.7	16.6	18.2
Asians	16.6	12.7	9.7	9.7	11.1	9.0	7.5	8.8
Hispanics	31.2	25.6	19.2	18.8	19.0	19.0	15.1	15.7
Poverty								
Whites	6.8	6.8	6.8	6.7	8.3	10.5	8.6	7.6
Blacks	25.1	22.0	22.6	21.5	21.5	24.0	18.3	18.6
Asians	11.7	9.9	9.7	10.2	11.2	14.9	12.5	9.9
Hispanics	22.1	20.8	17.0	17.5	21.0	22.2	15.9	15.2
Bill-paying hardship								
Whites	11.7	9.4	8.9	9.9	11.3	9.5	7.0	6.2
Blacks	29.2	25.9	26.1	27.9	26.2	22.3	15.9	18.2
Asians	7.3	4.8	5.4	5.2	8.5	5.5	2.4	4.1
Hispanics	23.7	21.2	16.7	18.7	21.9	18.6	11.1	11.8
Health hardship								
Whites	12.1	9.3	8.8	10.0	11.0	NA	NA	NA
Blacks	18.1	13.6	12.9	14.2	14.7	NA	NA	NA
Asians	7.8	7.3	6.5	6.4	8.8	NA	NA	NA
Hispanics	15.7	14.6	13.7	13.5	17.0	NA	NA	NA
Food hardship								
Whites	NA	6.4	5.9	6.6	8.5	10.4	8.1	7.2
Blacks	NA	17.4	15.8	16.8	17.8	20.9	16.2	16.3
Asians	NA	7.9	6.1	5.7	8.3	5.4	4.2	4.1
Hispanics	NA	19.0	13.8	14.8	18.2	18.7	12.8	13.1
Housing hardship								
Whites	22.9	18.4	14.1	13.9	12.5	14.5	13.6	14.7
Blacks	43.3	26.8	23.4	21.5	17.7	21.7	18.5	21.8
Asians	29.8	19.6	15.8	13.8	13.1	13.5	12.7	14.0
Hispanics	43.2	31.3	22.7	21.6	17.8	22.0	20.2	19.8
Lack of consumer durables								
Whites	17.5	17.0	9.6	8.3	9.3	NA	NA	NA
Blacks	44.5	38.0	25.4	21.4	21.4	NA	NA	NA
Asians	25.2	22.1	12.3	12.8	16.7	NA	NA	NA
Hispanics	49.1	43.5	27.4	25.7	24.8	NA	NA	NA
Neighborhood problems								
Whites	16.9	13.7	11.4	10.9	9.4	14.8	14.1	15.2
Blacks	32.7	26.0	19.5	22.2	17.1	22.9	20.9	22.9
Asians	17.5	10.4	10.0	10.7	8.9	12.6	12.8	14.1
Hispanics	26.9	22.1	18.5	15.9	13.0	22.4	20.1	21.4
Fear of crime								
Whites	NA	16.4	11.7	12.3	11.6	6.5	5.9	6.0
Blacks	NA	31.5	25.4	28.9	25.4	15.8	11.8	11.6
Asians	NA	17.1	12.5	13.5	13.2	8.0	5.5	7.7
Hispanics	NA	27.8	21.6	21.6	20.3	13.3	11.4	12.6

Table 2 (continued)

Sources: 1992, 1996, 2001, 2004, 2008, 2014, 2018, and 2020 SIPP panels

Whites, blacks, and Asians include only those who do not report being Hispanic. Hardship index: mean percent of summary hardships experienced. See text for details

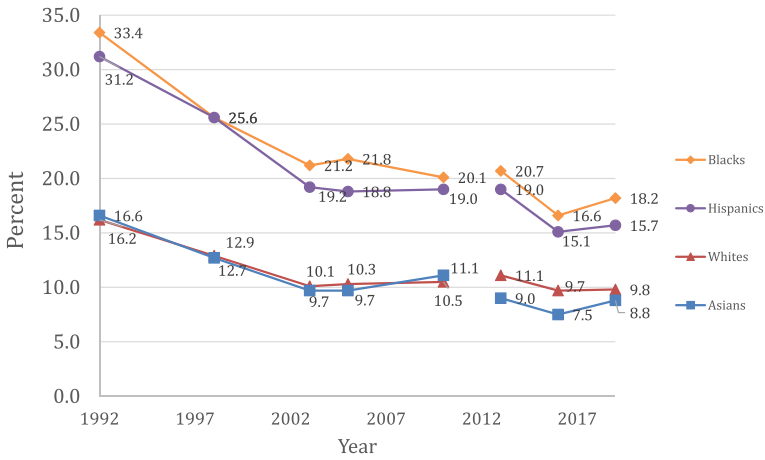


Fig. 1 Hardship index, by race/ethnicity and year

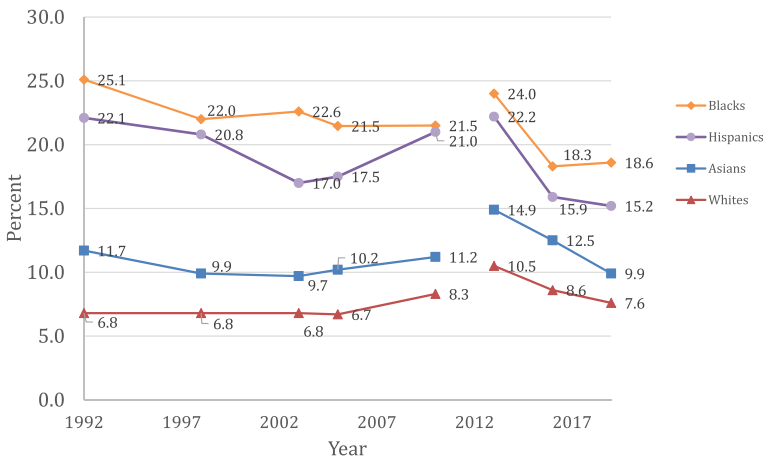


Fig. 2 Percentage of households that are poor by race/ethnicity and year

Asians. Also of key interest, we see that the likelihood of hardships among blacks relative to whites declined over the period, as indicated by the negative and statistically significant interaction terms between year and black householder. So while in Model 1 blacks reported 17.19 percentage points more hardships than whites in 1992 (where 17.19 is the coefficient for black and 1992 and white are the omitted

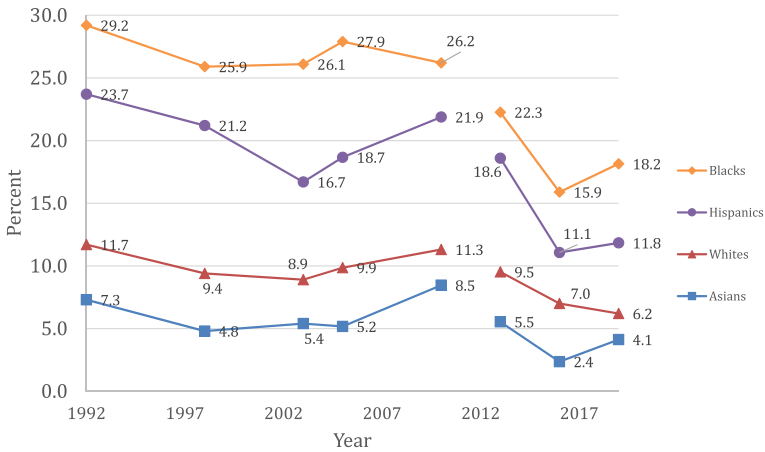


Fig. 3 Percentage of households reporting bill-paying hardship by race/ethnicity and year

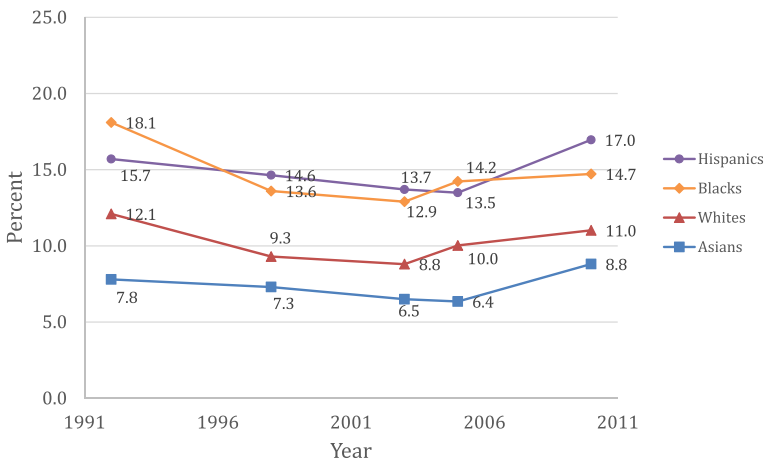


Fig. 4 Percentage of households reporting health hardship by race/ethnicity and year

categories in the regression), by 2019 this was down to 8.39 percentage points more ($17.19 - 8.80 = 8.39$, where 17.19 is the coefficient for black and $- 8.80$ is the coefficient for the $black * 2019$ interaction term in Model 1). The pattern among Hispanics is similar: while Hispanics reported 14.97 percentage points more hardships than whites in 1992 (where 14.97 is the coefficient for Hispanic in model 1, and 1992 and white are the omitted categories), by 2019 this was down to 5.97 percentage points ($14.97 - 9.00 = 5.97$, where 14.97 is the coefficient for Hispanic and $- 9.00$ is the coefficient for $Hispanic * 2019$ interaction term in Model 1). Most of the interaction terms for Asians were not significant, though in a couple of years (2013 and 2016) Asians reported relatively fewer hardships than whites as compared to in 1992.

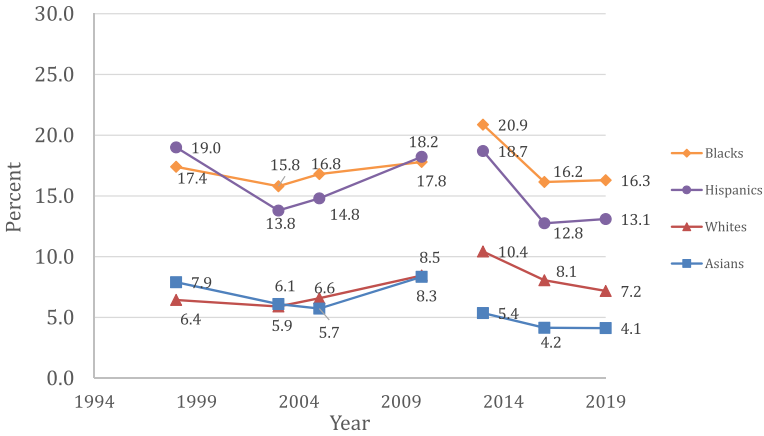


Fig. 5 Percentage of households reporting food hardship by race/ethnicity and year

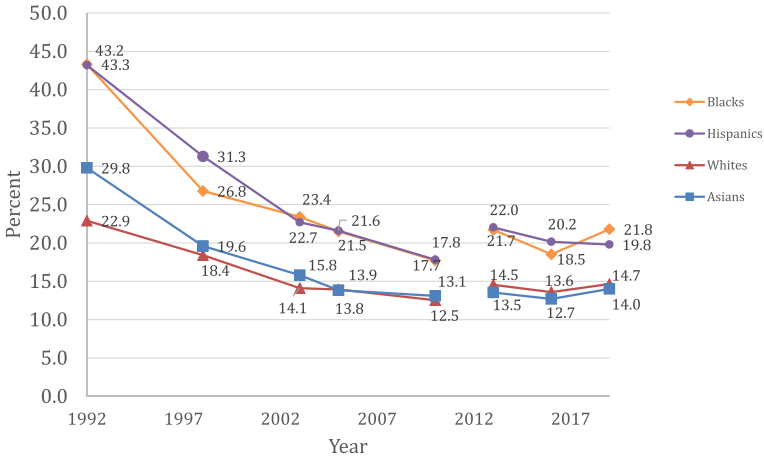


Fig. 6 Percentage of households reporting housing hardship by race/ethnicity and year

The results for poverty are similar to those for the hardship index in many ways, though with a couple of differences. Among the similarities, blacks and Hispanics are more likely to be poor than whites. In addition, disparities for both groups with whites also declined over the period, as indicated by the negative and statistically significant race by year interaction terms for the respective groups. One difference between the hardship index and poverty regressions is that the substantive narrowing of the racial gap tended to be larger when using the hardship index. For example, while the interaction term between 2019 and race reduced the association between hardship and black householder by about half (the interaction term is $- 8.80$ while the first order term is 17.19) and the association between hardship and Hispanic householder was reduced by about 60 percent (the interaction term is $- 9.0$ and the

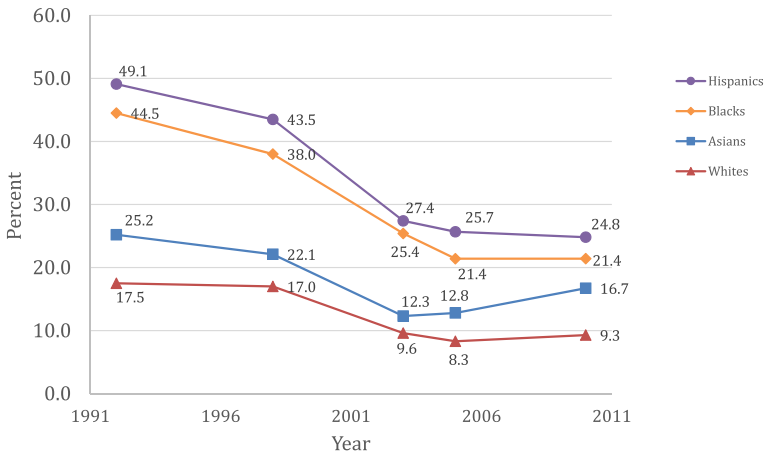


Fig. 7 Percentage of households lacking consumer durables by race/ethnicity and year

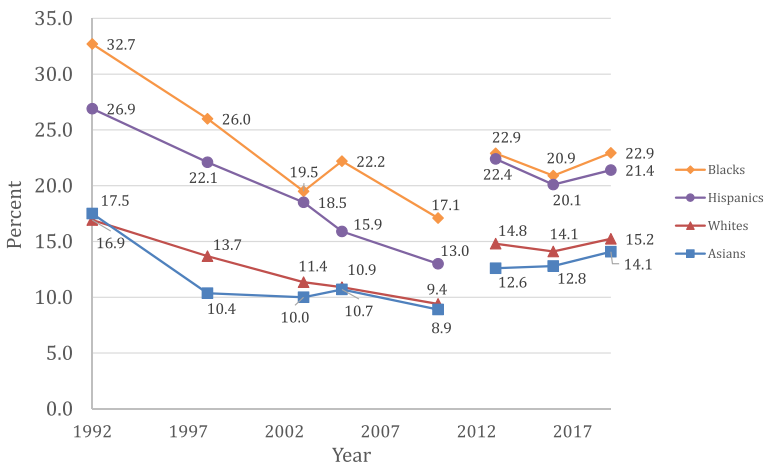


Fig. 8 Percentage of households reporting neighborhood problems by race/ethnicity and year

first-order term is 14.97), the similar interaction term for poverty reduces the race differential by a third for black householders and just over 40 percent for Hispanic householders.⁴ Another notable difference is that while Asians are more likely to be

⁴ Testing the statistical significance of the differences in the interaction terms in the poverty and hardship models is not straightforward since the poverty and hardship variables have different ranges and are estimated via logistic regression vs. OLS. In addition to the substantive comparisons in the text, to conduct a formal test of significance we used a continuous version of the poverty variable—the income to poverty threshold ratio. We then standardized both the hardship and poverty indicators, with a mean of zero and standard deviation of 1 so they have more similar ranges. We then re-ran OLS regressions for both income variables and conducted t-tests for differences in the race*year interaction coefficients yielded by these models. Confirming our substantive conclusion in the text, we found that the

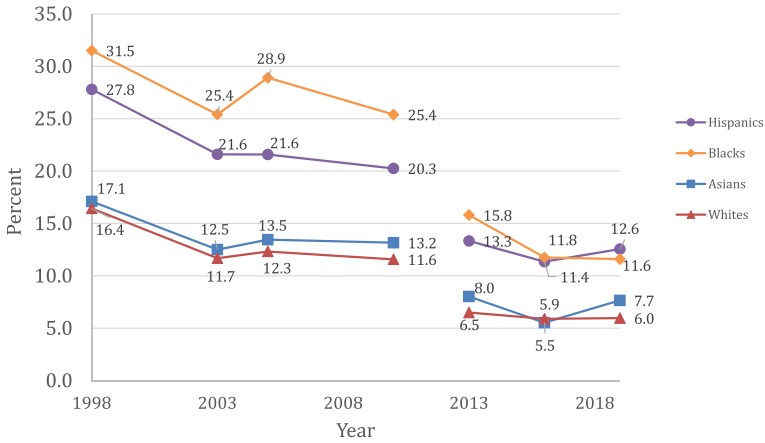


Fig. 9 Percentage of households reporting fear of crime hardship by race/ethnicity and year

poor than whites, there is no statistically significant difference between whites and Asians when it comes to hardship.

The inclusion of control variables in our models have a moderate impact on the association between race and hardship. The coefficients for black and Hispanic respondents between model 1 and model 2 in Table 4 where the hardships index is the dependent variable fall by about a quarter, compared to about a 40 percent decline between model 3 and model 4 where poverty is the dependent variable. The controls have little impact on the coefficient for Asians between models 1 and 2, and reduces the Asian coefficient by about a fifth between models 3 and 4. The impact of including control variables on the interactions terms tends to be modest. Thus, while factors such education, region, family structure, age, and disability status play some role in explaining group differences, their effects are moderate over the period.

Table 5 shows results for the different types of hardship. They are all similar in that blacks and Hispanics are more likely to report all hardships than whites in models with no controls. However, there are distinct variations in trends in the gap over time. There are relatively small changes in the gap of two of the shorter-term hardships—bill-paying and health hardship—for both blacks and Hispanics. In addition, as is fairly consistent with previous literature, with controls there are no statistically significant differences between whites and blacks and Hispanics in reports of health hardship (Heflin, 2016, 2017)—the only hardship where we see this pattern. For the third shorter-term hardship, food hardship, we see declines in the gap between whites and blacks and Hispanics. In contrast, Asians are less likely to experience bill-paying and health hardship than whites, with little trend over time. Asians are not significantly different from whites with regard to food hardship initially, but are

Footnote 4 (continued)

black*2019 and Hispanic*2019 interaction terms were larger in the hardship models than poverty models, indicating larger declines in black-white and Hispanic-white hardship gaps than analogous poverty gaps, in both models with and without controls, and all significant at the 0.01 level.

Table 3 Descriptive statistics, 1992–2019

	1992	1998	2003	2005	2010	2013	2016	2019
Race								
Non-Hispanic white	80.0	76.7	74.3	71.5	70.6	67.4	66.5	65.7
Non-Hispanic black	9.4	11.5	11.3	12.0	12.0	12.8	12.5	12.4
Non-Hispanic Asian	2.5	2.5	3.2	2.8	3.2	4.6	5.1	5.2
Non-Hispanic other	0.5	0.8	0.9	2.7	2.5	2.2	2.5	2.4
Hispanic	7.6	8.5	10.2	10.9	11.7	12.9	13.5	14.2
Native-born	89.9	89.4	88.8	87.0	86.1	85.0	84.8	85.7
Age								
Under 25 (omitted)	4.5	4.0	4.1	4.2	3.5	5.3	3.8	3.0
25–34	20.3	17.0	15.9	15.7	14.4	14.3	11.7	10.8
35–44	23.6	23.1	21.6	20.5	17.7	16.6	14.3	13.6
45–54	17.2	19.7	21.2	21.5	21.4	19.1	17.2	15.5
55–64	13.0	13.0	14.9	16.3	19.0	19.5	21.1	20.7
65+	21.4	23.1	22.4	21.8	23.9	25.3	32.0	36.4
Education								
Less than high school	21.1	17.4	14.5	12.9	10.8	11.1	9.9	8.9
High school	30.5	29.4	28.4	24.5	23.9	27.4	26.2	24.1
Some college	23.3	28.7	30.0	35.7	35.0	29.1	29.4	28.4
BA+	25.0	24.5	27.1	26.9	30.3	32.4	34.6	38.7
Household structure								
Married couple household	56.0	53.3	52.2	50.8	49.4	47.7	46.4	46.4
Female-headed household	11.9	12.0	11.7	12.3	12.9	13.0	12.4	11.7
Other household type	32.2	34.7	36.0	37.0	37.7	39.3	41.2	41.9
Labor force status								
Full-time employed	59.9	56.9	54.8	52.8	49.5	48.0	48.6	49.7
Part-time employed	8.6	9.8	10.8	12.9	13.2	13.9	13.8	13.2
Unemployed	2.4	2.8	3.2	2.0	4.5	3.5	2.0	1.5
Out of labor force	29.1	30.4	31.3	32.3	32.7	34.5	35.6	35.5
Household size								
Children under 18 present	34.7	34.4	32.6	32.6	30.4	31.5	30.6	28.0
Person over 65 present	27.4	27.8	27.1	27.1	28.1	28.6	33.0	34.1
Disabled person present	18.7	15.7	15.8	20.0	19.8	23.5	29.4	27.0
In nonmetro area	25.0	20.3	23.0	16.9	17.0	20.4	20.7	20.2
Region								
Northeast	19.9	19.7	19.3	18.9	18.3	18.2	17.4	17.1
Midwest	25.5	24.8	23.1	22.6	22.3	21.9	22.0	21.8
South	33.7	34.7	36.1	36.7	37.3	37.4	37.7	38.6
West	20.9	20.8	21.5	21.9	22.2	22.4	22.9	22.5
<i>N</i>	15,467	28,298	24,159	37,368	34,850	29,662	16,938	21,971

Sources: 1992, 1996, 2001, 2004, 2008, 2014, 2018, and 2020 SIPP panels

Age, race, education, and labor force status refer to the characteristics of the householder

Table 4 Regressions predicting hardships and poverty

	Hardship index				Poverty			
	Model 1		Model 2		Model 3		Model 4	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Race/ethnicity								
White (omitted)								
Black	17.19	0.84	13.07	0.78	1.53	0.07	0.95	0.08
Asian	0.43	1.18	0.53	1.11	0.59	0.16	0.47	0.22
Hispanic	14.97	0.88	10.94	0.84	1.36	0.08	0.80	0.10
Other	10.26	0.47	6.69	0.43	0.91	0.05	0.46	0.06
Year								
1998	-3.18	0.23	-2.83	0.22	0.02	0.05	0.03	0.05
2003	-6.13	0.24	-5.53	0.22	0.01	0.05	-0.02	0.05
2005	-5.94	0.22	-5.69	0.21	0.00	0.04	-0.04	0.05
2010	-5.72	0.23	-5.28	0.21	0.21	0.04	0.18	0.05
2013	-5.01	0.24	-4.80	0.23	0.48	0.04	0.39	0.05
2016	-6.48	0.27	-6.43	0.26	0.26	0.05	0.16	0.06
2019	-6.42	0.25	-5.66	0.24	0.11	0.05	0.12	0.05
Black*year interactions								
Black*1998	-4.60	0.95	-4.62	0.88	-0.20	0.09	-0.17	0.10
Black*2003	-6.04	0.96	-6.24	0.89	-0.15	0.09	-0.12	0.11
Black*2005	-5.59	0.92	-5.24	0.86	-0.20	0.09	-0.10	0.10
Black*2010	-7.60	0.92	-7.47	0.86	-0.41	0.09	-0.36	0.10
Black*2013	-7.67	0.95	-7.24	0.88	-0.54	0.09	-0.49	0.10
Black*2016	-10.26	1.04	-9.59	0.97	-0.67	0.11	-0.61	0.12
Black*2019	-8.80	1.00	-8.05	0.94	-0.50	0.10	-0.39	0.11
Asian*year interactions								
Asian*1998	-0.71	1.35	-0.90	1.27	-0.21	0.21	-0.08	0.27
Asian*2003	-0.70	1.32	-0.52	1.24	-0.21	0.21	0.06	0.26

Table 4 (continued)

	Hardship index				Poverty			
	Model 1		Model 2		Model 3		Model 4	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Asian*2005	-0.97	1.29	-0.31	1.21	-0.15	0.21	0.10	0.26
Asian*2010	0.17	1.29	0.78	1.20	-0.25	0.20	0.10	0.25
Asian*2013	-2.61	1.29	**	1.21	-0.19	0.19	0.05	0.24
Asian*2016	-2.64	1.35	*	1.28	-0.18	0.22	0.15	0.27
Asian*2019	-1.41	1.31	-0.23	1.23	-0.29	0.21	0.06	0.26
Hispanic*year interactions								
Hispanic*1998	-2.36	1.02	**	0.96	-0.10	0.10	-0.10	0.13
Hispanic*2003	-5.82	1.00	***	0.95	-0.33	0.11	***	0.13
Hispanic*2005	-6.40	0.99	***	0.93	-0.28	0.10	***	0.13
Hispanic*2010	-6.45	0.98	***	0.92	-0.27	0.10	***	0.12
Hispanic*2013	-7.14	0.99	***	0.93	-0.47	0.10	***	0.12
Hispanic*2016	-9.60	1.05	***	0.99	-0.66	0.11	***	0.13
Hispanic*2019	-9.00	0.99	***	0.94	-0.57	0.11	***	0.13
Controls included			X				X	
Constant	16.19	0.20	***	26.88	-2.62	0.04	***	-1.02
N	207,667		207,667		198,641		198,641	

Sources: 1992, 1996, 2001, 2004, 2008, 2014, 2018, and 2020 SIPP panels

Hardship index: mean percent of summary hardships experienced. See text for details

*** $p < 0.01$

** $p < 0.05$

* $p < 0.1$

Table 5 Logistic regressions predicting summary hardship indicators

	Bill hardship				Health hardship				
	Model 1		Model 2		Model 3		Model 4		
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	
Race/ethnicity									
White (omitted)									
Black	1.14	0.07	***	0.07	0.76	0.07	***	0.08	0.08
Asian	-0.52	0.21	**	0.21	-0.51	0.21	**	0.20	0.21
Hispanic	0.85	0.08	***	0.08	0.46	0.08	***	0.09	0.10
Other	1.03	0.04	***	0.05	0.67	0.05	***	0.05	0.06
Year									
1998	-0.24	0.04	***	0.04	-0.22	0.04	***	0.04	0.04
2003	-0.30	0.04	***	0.04	-0.26	0.04	***	0.04	0.04
2005	-0.19	0.04	***	0.04	-0.18	0.04	***	0.03	0.04
2010	-0.04	0.03		0.04	0.00	0.04		0.03	0.04
2013	-0.23	0.04	***	0.04	-0.18	0.04	***	0.03	0.04
2016	-0.56	0.05	***	0.05	-0.54	0.05	***	0.03	0.04
2019	-0.70	0.05	***	0.05	-0.58	0.05	***	0.03	0.04
Black*year interactions									
Black*1998	0.08	0.08		0.09	0.04	0.09		0.10	0.10
Black*2003	0.15	0.09	*	0.09	0.10	0.09		0.10	0.11
Black*2005	0.12	0.08		0.09	0.13	0.09		0.09	0.10
Black*2010	-0.11	0.08		0.09	-0.13	0.09		0.10	0.10
Black*2013	-0.13	0.08		0.09	-0.14	0.09		0.10	0.10
Black*2016	-0.22	0.11	**	0.12	-0.23	0.12	*	0.10	0.10
Black*2019	0.08	0.10		0.11	0.11	0.11		0.10	0.10
Asian*year interactions									
Asian*1998	-0.20	0.28		0.28	-0.20	0.28		0.25	0.26
Asian*2003	-0.02	0.28		0.28	0.06	0.28		0.26	0.27

Table 5 (continued)

	Bill hardship				Health hardship			
	Model 1		Model 2		Model 3		Model 4	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Asian*2005	-0.18	0.26	-0.04	0.26	-0.02	0.24	0.14	0.25
Asian*2010	0.20	0.24	0.40	0.24	0.24	0.23	0.42	0.23
Asian*2013	-0.06	0.25	0.13	0.26				*
Asian*2016	-0.62	0.34	-0.37	0.35				
Asian*2019	0.10	0.27	0.32	0.27				
Hispanic*year interactions								
Hispanic*1998	0.10	0.10	0.09	0.11	0.21	0.11	0.18	0.12
Hispanic*2003	-0.13	0.10	-0.18	0.11	0.21	0.11	0.17	0.12
Hispanic*2005	-0.12	0.10	-0.12	0.10	0.03	0.11	0.05	0.11
Hispanic*2010	-0.06	0.09	-0.10	0.10	0.21	0.10	0.19	0.11
Hispanic*2013	-0.07	0.09	-0.11	0.10				
Hispanic*2016	-0.35	0.12	-0.33	0.13				
Hispanic*2019	-0.13	0.11	-0.14	0.11				
Controls included								
Constant	-2.02	0.03	-1.68	0.08	-1.98	0.03	-1.11	0.08
N	208,713		208,713		140,179		140,179	
Food hardship								
Model 5		Model 6		Model 7		Model 8		
Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	
Race/ethnicity								
White (omitted)								
Black	1.11	0.06	0.60	0.06	0.94	0.06	0.70	0.06
			***		***		***	***

Table 5 (continued)

	Food hardship			Housing hardship					
	Model 5			Model 6		Model 7		Model 8	
	Coeff.	SE		Coeff.	SE	Coeff.	SE	Coeff.	SE
Asian	0.21	0.15		0.21	0.16	0.35	0.12	0.36	0.12
Hispanic	1.22	0.06	***	0.74	0.07	0.94	0.07	0.69	0.07
Other	1.06	0.05	***	0.66	0.05	0.76	0.04	0.51	0.04
Year									
1998						-0.27	0.03	-0.24	0.03
2003	-0.09	0.05	**	-0.08	0.05	-0.59	0.03	-0.57	0.03
2005	0.02	0.04		-0.02	0.04	-0.61	0.03	-0.62	0.03
2010	0.27	0.04	***	0.25	0.04	-0.73	0.03	-0.73	0.03
2013	0.51	0.04	***	0.50	0.04	-0.55	0.03	-0.55	0.03
2016	0.24	0.05	***	0.18	0.05	-0.65	0.04	-0.67	0.04
2019	0.10	0.05	**	0.15	0.05	-0.55	0.03	-0.53	0.03
Black*year interactions									
Black*1998						-0.47	0.08	-0.50	0.08
Black*2003	-0.02	0.09		-0.07	0.09	-0.32	0.08	-0.37	0.08
Black*2005	-0.06	0.08		-0.02	0.08	-0.41	0.08	-0.41	0.08
Black*2010	-0.24	0.08	***	-0.23	0.08	-0.53	0.08	-0.55	0.08
Black*2013	-0.29	0.08	***	-0.23	0.08	-0.46	0.08	-0.45	0.08
Black*2016	-0.33	0.10	***	-0.26	0.11	-0.56	0.10	-0.55	0.10
Black*2019	-0.18	0.09	*	-0.10	0.10	-0.45	0.09	-0.43	0.09
Asian*year interactions									
Asian*1998						-0.29	0.15	-0.31	0.16
Asian*2003	-0.20	0.22		-0.10	0.24	-0.22	0.16	-0.19	0.16
Asian*2005	-0.36	0.21	*	-0.23	0.22	-0.36	0.16	-0.31	0.16

Table 5 (continued)

	Food hardship				Housing hardship							
	Model 5		Model 6		Model 7		Model 8					
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE				
Asian*2010	-0.21	0.19	-0.01	0.20	-0.30	0.15	**	0.15	**			
Asian*2013	-0.92	0.21	***	0.22	-0.45	0.15	***	-0.35	0.16			
Asian*2016	-0.92	0.26	***	0.27	-0.42	0.18	**	-0.32	0.19			
Asian*2019	-0.79	0.23	***	0.25	-0.40	0.15	**	-0.30	0.16			
Hispanic*year interactions												
Hispanic*1998					-0.25	0.08	***	-0.28	0.09			
Hispanic*2003	-0.29	0.09	***	0.10	-0.36	0.09	***	-0.40	0.09			
Hispanic*2005	-0.32	0.09	***	0.09	-0.40	0.09	***	-0.41	0.09			
Hispanic*2010	-0.32	0.08	***	0.09	-0.53	0.09	***	-0.56	0.09			
Hispanic*2013	-0.53	0.08	***	0.09	-0.44	0.08	***	-0.43	0.08			
Hispanic*2016	-0.71	0.11	***	0.11	-0.46	0.10	***	-0.41	0.10			
Hispanic*2019	-0.54	0.09	***	0.10	-0.57	0.09	***	-0.54	0.09			
Controls included			X									
Constant	-2.67	0.03	***	0.09	-1.21	0.02	***	-1.13	0.07			
N	193,246		193,246									
	Consumer durable hardship				Neighborhood hardship				Fear of crime hardship			
	Model 9		Model 10		Model 11		Model 12		Model 13		Model 14	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Race/ethnicity												
White (omitted)												
Black	1.33	0.06	***	1.22	0.07	***	0.87	0.07	***	0.85	0.04	***
Asian	0.47	0.12	***	0.50	0.14	***	0.04	0.14	0.05	0.11	0.03	0.11

Table 5 (continued)

	Consumer durable hardship						Neighborhood hardship						Fear of crime hardship						
	Model 9		Model 10		Model 11		Model 12		Model 13		Model 14		Model 13		Model 14				
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE			
Hispanic	1.52	0.07	***	1.29	0.08	***	0.59	0.08	***	0.44	0.08	***	0.67	0.05	***	0.42	0.06	***	
Other	0.92	0.05	***	0.78	0.06	***	0.64	0.05	***	0.45	0.05	***	0.65	0.05	***	0.43	0.05	***	
Year																			
1998	-0.02	0.03		0.01	0.03		-0.25	0.03	***	-0.23	0.03	***							
2003	-0.68	0.04	***	-0.71	0.04	***	-0.46	0.03	***	-0.43	0.03	***	-0.39	0.03	***	-0.39	0.03	***	***
2005	-0.86	0.03	***	-0.90	0.04	***	-0.52	0.03	***	-0.50	0.03	***	-0.34	0.03	***	-0.38	0.03	***	***
2010	-0.73	0.03	***	-0.74	0.04	***	-0.68	0.03	***	-0.65	0.03	***	-0.41	0.03	***	-0.45	0.03	***	***
2013							-0.16	0.03	***	-0.14	0.03	***	-1.04	0.04	***	-1.13	0.04	***	***
2016							-0.22	0.04	***	-0.21	0.04	***	-1.13	0.05	***	-1.24	0.05	***	***
2019							-0.13	0.03	***	-0.08	0.04	**	-1.12	0.04	***	-1.19	0.04	***	***
Black*year interactions																			
Black*1998	-0.24	0.08	***	-0.27	0.09	***	-0.07	0.08		-0.09	0.08								
Black*2003	-0.18	0.08	**	-0.29	0.09	**	-0.23	0.09	***	-0.27	0.09	***	0.09	0.07		0.07	0.07		
Black*2005	-0.22	0.08	***	-0.30	0.09	***	-0.02	0.08		-0.03	0.08		0.21	0.06	***	0.24	0.06	***	***
Black*2010	-0.35	0.08	***	-0.44	0.09	***	-0.18	0.08	**	-0.19	0.08	**	0.11	0.06	*	0.12	0.06	*	*
Black*2013							-0.33	0.08	***	-0.34	0.08	***	0.15	0.07	**	0.19	0.07	**	**
Black*2016							-0.39	0.10	***	-0.38	0.10	***	-0.11	0.10	***	-0.06	0.10	***	***
Black*2019							-0.35	0.09	***	-0.34	0.09	***	-0.13	0.09	***	-0.10	0.09	***	***
Asian*year interactions																			
Asian*1998	-0.15	0.16		-0.20	0.18		-0.35	0.19	*	-0.36	0.20	*							
Asian*2003	-0.19	0.17		-0.21	0.19		-0.19	0.19		-0.19	0.19		0.03	0.16		0.05	0.16		
Asian*2005	0.03	0.16		-0.04	0.19		-0.06	0.18		-0.02	0.18		0.06	0.15		0.14	0.15		
Asian*2010	0.22	0.15		0.21	0.17		-0.10	0.18		-0.07	0.18		0.10	0.14		0.19	0.15		

Table 5 (continued)

	Consumer durable hardship			Neighborhood hardship			Fear of crime hardship													
	Model 9			Model 10			Model 11			Model 12			Model 13			Model 14				
	Coeff.	SE		Coeff.	SE		Coeff.	SE		Coeff.	SE		Coeff.	SE		Coeff.	SE			
Asian*2013																				
Asian*2016																				
Asian*2019																				
Hispanic*year interactions																				
Hispanic*1998	-0.20	0.08	**	-0.24	0.10	**	-0.01	0.09		-0.01	0.10		-0.18	0.18		0.19	0.16		0.16	*
Hispanic*2003	-0.26	0.09	***	-0.41	0.10	***	-0.03	0.10		-0.05	0.10		-0.09	0.21		-0.13	0.23		0.24	
Hispanic*2005	-0.17	0.09	*	-0.21	0.10	**	-0.15	0.10		-0.15	0.10		-0.07	0.18		0.21	0.17		0.17	**
Hispanic*2010	-0.34	0.08	***	-0.43	0.10	***	-0.23	0.10	**	-0.24	0.10	**				0.00	0.07		0.08	
Hispanic*2013							-0.09	0.09		-0.08	0.09					0.13	0.08		0.08	**
Hispanic*2016							-0.17	0.11		-0.13	0.11					0.03	0.11		0.11	
Hispanic*2019							-0.17	0.09	*	-0.14	0.10					0.14	0.09		0.09	
Controls included				X			X			X			X			X			X	
Constant	-1.55	0.02	***	0.23	0.08	***	-1.59	0.02	***	-1.17	0.07	***	-1.63	0.02	***	-0.91	0.08	***	0.08	***
N	140,172			140,172			208,632			208,632			193,246			193,246			193,246	

Sources: 1992, 1996, 2001, 2004, 2008, 2014, 2018, and 2020 SIPP panels

1992 is the omitted year for health and bill hardships; 1998 is the omitted year for food hardship

1998 is the omitted year for fear of crime hardship, while 1992 is the omitted year for other hardships

*** $p < 0.01$

** $p < 0.05$

* $p < 0.1$

less likely to experience this hardship than whites by 2019 (this finding is evident if we re-estimate the regression using 2019 as the omitted year).

When considering longer-term hardships in the second panel of Table 5, results for blacks and Hispanics for housing hardship and consumer durables resemble those when using the hardship index: significant differences from whites, and declining disparities over time. Asians are *more* likely than whites to report these hardships (in contrast to all of the other hardship measures), though with declining disparities with whites in housing hardship in particular. For blacks, neighborhood hardship follows the pattern for housing hardship and consumer durables. For Hispanics, there is not much of a decline in neighborhood hardship with whites over time. Finally, for fear of crime, blacks and Hispanics are more likely to report fear of crime than whites, with Asians being no different than whites, and with no distinct trends in the gaps for any of the groups over the period.

One interesting pattern that emerges from these results is the role of controls in explaining the association between race and hardship. Specifically, controls generally play a larger role in explaining the association black-white and Hispanic-white differences in the shorter-term hardship measures (bill, health, and food hardship) than the longer-term ones. For example, the inclusion of controls in models 2, 4, and 6 reduced the coefficient for blacks and Hispanics anywhere between 33 percent and over 100 percent. There are no significant differences in health hardships between whites and blacks and Hispanics once controls are introduced. In contrast, the coefficients for blacks and Hispanics are reduced by between 8 and 37 percent in models with housing hardship, ownership of consumer durables, neighborhood hardship, and fear of crime. Overall, the larger effect of controls in explaining poverty than the hardship index (shown in Table 4), seems to apply more to the shorter-term hardships (where controls explain a larger proportion of the racial disparities) than the longer-term ones. Finally, the inclusion of controls has little effect on Asian-white differences in the likelihood of experiencing various types of hardships.

Discussion and Conclusion

The goal of this study is to document racial disparities in the experiences of hardship—a set of outcomes, such as trouble paying bills or living in substandard housing—of intrinsic importance. We used data from multiple panels of the Survey of Income and Program Participation covering the 1992–2019 period to track trends in the experiences of seven types of hardship and a summary hardship index. We find that racial differences in hardship generally track those of poverty: hardships are higher among blacks and Hispanics than whites and Asians. Even in 2019 the level of hardship among blacks is about double that of whites (depending on the measure) with hardship among Hispanics only somewhat lower than among blacks. Nevertheless, disparities have generally narrowed over time. Moreover, we find that the decline in racial disparities in hardship—as indicated by a summary hardship index—exceeded the reduction in official poverty. In addition, our study reveals that while Asians are more likely to be poor than whites, Asians are not more likely to experience hardship. This result may help to explain why Chetty et al. (2020) find

much higher levels of intergenerational mobility among poor Asians compared to poor whites.

We see additional variation in the experiences of hardship when we examine specific indicators. While blacks and Hispanics are more likely to experience all seven hardships (bill-paying, health, food, housing, lack of consumer durables, neighborhood problems, and fear of crime) than whites (in models without controls), the decline in the *gap* with whites is evident in most, but not all, hardships. Specifically, there is little decline in two of the hardships that tend to be most indicative of short-term fluctuations in income: bill-paying and health hardship, as well as fear of crime. We observe notable reduction in gaps in other hardship outcomes.

Why is there little decline in the racial gap in these two short-term hardships? While our analysis does not directly shed light on this question, it could be that while blacks and Hispanics have experienced increasing standards of living (as indicated, for example, by declines in poverty and increases in median income) they remain vulnerable to short-term fluctuations in income and the hardships that such fluctuations bring. This could be exacerbated by the widely documented racial wealth gap (Aladangady & Forde, 2021; Conley, 2010). For example, if white and Asian respondents have more wealth than black and Hispanic respondents, then they could dip into savings to meet these short-term hardships (such as paying bills when income is short) as they occur. However, it would be more difficult to use that wealth to address, say, neighborhood conditions, without making a more radical and costlier change such as moving to a new neighborhood. We believe that future research on the differences in trends by race across short-term and long-term hardship measures would be useful.

While Asians do not differ from whites in overall hardship, as indicated by results when using the hardship index, we also see variation by type of hardship. Asians are less likely to experience bill-paying and health hardships, no difference in food hardship, neighborhood hardship, and fear of crime, and are more likely to experience housing hardship and lack of consumer durables. Why the variation? It could be that Asians are more likely to be willing to incur hardship in terms of lacking consumer durables and housing quality (especially if they are more likely to live in high-cost metropolitan areas) and have the ability and wealth and credit to avoid short-term hardship such as bill-paying and health hardship. This is consistent with differences in hardship found by Iceland (2021) by nativity, where the foreign-born were much more likely to lack consumer durables but less likely to experience bill-paying hardship than the native-born.

The distinctiveness of Asians suggests an additional factor that may be partly cultural since effects among Asian Americans are also evident in the realm of education, social class differentials, and parenting styles (Liu & Xie, 2016). In regard to bill-paying, evidence indicates that Asian Americans have a higher level of “financial literacy” than many other groups (Lusardi, 2011; Lusardi & Mitchell, 2011; p. 504). Knowledge of finances has a positive effect on wealth accumulation (Behrman et al., 2012; Lusardi, 2015). Conversely, costly financial practices such as being unbanked, using pawn shops, or taking out high-interest loans (e.g., “payday” loans and auto-title loans), can create a vicious cycle whereby higher-cost borrowing reduces savings or “rainy day” funds which increases the

need to engage in further borrowing (Lusardi, 2011). Racial and ethnic differences in financial knowledge and habits may be an area for further research. In addition, it will be important to track fear of crime among Asians given the rise in hate crimes against Asians since the COVID pandemic (Lee, 2021).

Another novel finding our analysis is that the inclusion of controls—such as education, region, age, and household structure—reduced differences hardship between whites and blacks and Hispanics by a moderate amount—about 25 percent of the difference in the hardship index. Notably, the controls explained a larger proportion of racial differences in poverty and short-term hardships (and completely explained the difference in health hardship) than the long-term ones. This suggests that differences in the likelihood of longer-term hardships are more a function of unobserved variables. We can only speculate what these are, but they may include differences in wealth, access to credit, and neighborhood poverty levels, among others. This likewise would be a fruitful avenue for future research. Finally, sociodemographic characteristics played little role in explaining any of the relatively small gaps between whites and Asians, perhaps indicative of the greater similarity in, or offsetting nature of, many of these characteristics.

Overall, our results are consistent with previous work indicating a decline in racial disparities in socioeconomic outcomes, especially those focusing on well-being at the lower end of the distribution such as poverty (Baker et al., 2021; Iceland, 2019). They are also consistent with studies showing that Asian Americans today are not disadvantaged compared to whites (Sakamoto et al., 2009; Woo et al., 2012). Our study builds on these by highlighting the variation in disparities by different kinds of hardship indicators, with little change in disparities according to some, like trouble paying bills, but distinct declines in gaps with regards to others, such as housing problems and ownership of consumer durables. Few previous studies of hardship have included Asians in their analyses, so our research provides an important baseline for understanding patterns of hardship among the fastest-growing racial group in America.

Our study also highlights the importance of using measures of well-being of *intrinsic* importance—such as food insecurity and difficulty paying bills—as opposed to traditional income poverty measures which measure an outcome of instrumental importance—the ratio of income-to-needs. The latter often provides an imprecise and imperfect measure of well-being because it omits resources such as wealth and access to credit, it may not accurately measure a household's true level of need because, for example, some otherwise similar households might be able to draw on extended family for childcare while others cannot, and income is often mis-reported in household surveys (Beverly, 2001; Czajka & Denmead, 2008; National Research Council, 1995). Thus, while trends in poverty and hardship often track each other to some extent, we find some differences described above.

Our study is not without limitations. The focus of this analysis has been on documenting patterns and trends in disparities; future studies should focus on the factors explaining patterns and trends across groups over time, such as the roles that racism, human capital differences, and neighborhood poverty levels (and their interconnections) play in racial inequality in hardship. While our analysis showed that basic

sociodemographic factors, such as education, age, and household structure explained a moderate portion of the hardship gap, and a more significant portion of the gap when considering short-term hardships, future work should more fully explore the roles that these and other characteristics play in explaining racial differences in a more comprehensive, and causal, manner. In addition, future work could analyze the extent to which we see intra-group variation in outcomes, as the experiences of, for instance, people of Mexican origin likely differs from that of people of Cuban origin (National Research Council, 2006). Tracking trends in hardship in wake of the COVID-19 pandemic is also an issue of considerable concern (Ziliak, 2021). Finally, future research could consider additional measures of hardship included in other datasets, such as transportation hardship (Gould-Werth et al., 2018; Murphy et al., 2021).

Overall, we hope that this study spurs additional research on racial and ethnic differences in experiences with hardship and its sources. We find that disparities between white and Asians versus blacks and Hispanics are considerable, though they have declined over time. To the extent to which we will continue to see progress in achieving greater racial equality in the USA in the coming years is an issue of vital importance.

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