Report on the Economic Well-Being of U.S. Households in 2018

May 2019

Board of Governors of the Federal Reserve System

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Preface

This survey and report were prepared by the Consumer and Community Research Section of the Federal Reserve Board's Division of Consumer and Community Affairs (DCCA).

DCCA directs consumer- and community-related functions performed by the Board, including conducting research on financial services policies and practices and their implications for consumer financial stability, community development, and neighborhood stabilization.

DCCA staff members Alex Durante and Lisa Chen were the lead contributors to this report and survey. Cassandra Duchan, Kimberly Kreiss, Ellen Merry, Barbara Robles, Claudia Sahm, and Mike Zabek were also key staff contributors. Federal Reserve staff members Eric Belsky, Anna Alvarez Boyd, Andrea Brachtesende, David Buchholz, Jeff Larrimore, Madelyn Marchessault, and Susan Stawick provided valuable comments on the survey and report. Katherine Abraham, Mary Burke, Julia Cheney, Keith Ernst, Andrew Figura, Geoff Gerdes, Lisa Lee, Gavin Miller, Joshua Montes, Shannon Nelson, Michael Scherzer, James Spletzer, Alison Weingarden, and Josh Winters provided helpful feedback on new survey questions. The authors would like to thank Bob Torongo, Marlene Rosas, Mansour Fahimi, Frances Barlas, Elisa Chan, and Sergei Rodkin for their assistance fielding the survey.

If you have questions about the survey or this report, please email SHED@frb.gov.

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Executive Summary

This report describes the responses to the sixth annual Survey of Household Economics and Decisionmaking (SHED). The goal of the survey is to share the wide range of financial challenges and opportunities facing individuals and households in the United States.[1] For many, the findings are positive; however, areas of distress and fragility remain. The survey also reveals how households view their own financial lives and the many decisions they face, from education to retirement.

Most measures of economic well-being and financial resilience in 2018 are similar to or slightly better than in 2017. Many families have experienced substantial gains since the survey began in 2013, in line with the nation's ongoing economic expansion during that period. Even so, another year of economic expansion and the low national unemployment rates did little to narrow the persistent economic disparities by race, education, and geography.

A key theme in this year's report is exploring the sources and effects of financial fragility across several domains, from employment to banking to managing expenses. Results from the survey show that many adults are financially vulnerable and would have difficulty handling an emergency expense as small as $400. In addition, volatile income and low savings can turn common experiences—such as waiting a few days for a bank deposit to be available—into a problem for some. At the same time, there is evidence of coping strategies, such as supplementing income through gig work and seeking financial support from family members.

[1] The latest SHED interviewed a sample of over 11,000 individuals—with an online survey in October and November 2018. The anonymized data, as well as a supplement containing the complete SHED questionnaire and responses to all questions in the order asked, are also available at https://www.federalreserve.gov/consumerscommunities/shed.htm.

The survey continues to use subjective measures and self-assessments to supplement and enhance objective measures. One example is trying to understand how close the economy is to full employment. In addition to asking adults whether they are working, the survey asks if they want to work more and what impediments they see to them working. Health limitations, a lack of available work, and family obligations are often cited as reasons for not being fully employed.

Overall Economic Well-Being

A large majority of individuals report that, financially, they are doing okay or living comfortably, and overall economic well-being has improved substantially since the survey began in 2013. Even so, notable differences remain by race and ethnicity, educational attainment, and geography.

- When asked about their finances, 75 percent of adults say they are either doing okay or living comfortably. This result in 2018 is similar to 2017 and is 12 percentage points higher than 2013.
- Adults with a bachelor's degree or higher are significantly more likely to be doing at least okay financially (87 percent) than those with a high school degree or less (64 percent).
- Nearly 8 in 10 whites are at least doing okay financially in 2018 versus two-thirds of blacks and Hispanics. The gaps in economic well-being by race and ethnicity have persisted even as overall well-being has improved since 2013.
- Fifty-six percent of adults say they are better off than their parents were at the same age and one-fifth say they are worse off.
- Nearly two-thirds of respondents rate their local economic conditions as "good" or "excellent," with the rest rating conditions as "poor" or "only

fair." More than half of adults living in rural areas describe their local economy as good or excellent, compared to two-thirds of those living in urban areas.

Income

Changes in family income from month to month remain a source of financial strain for some individuals. Financial support from family or friends to make ends meet is also common, particularly among young adults.

- Three in 10 adults have family income that varies from month to month. One in 10 adults have struggled to pay their bills because of monthly changes in income. Those with less access to credit are much more likely to report financial hardship due to income volatility.
- One in 10 adults, and over one-quarter of young adults under age 30, receive some form of financial support from someone living outside their home. This financial support is mainly between parents and adult children and is often to help with general expenses.

Employment

Most adults are working as much as they want to, an indicator of full employment; however, some remain unemployed or underemployed. Economic well-being is lower for those wanting to work more, those with unpredictable work schedules, and those who rely on gig activities as a main source of income.

- One in 10 adults are not working and want to work, though many are not actively looking for work. Four percent of adults in the SHED are not working, want to work, *and* applied for a job in the prior 12 months, similar to the official unemployment rate of 3.8 percent in the fourth quarter of 2018.
- Two in 10 adults are working but say they want to work more. Blacks, Hispanics, and those with less education are less likely to be satisfied with how much they are working.
- Half of all employees received a raise or promotion in the prior year.
- Unpredictable work schedules are associated with financial stress for some. One-quarter of employees have a varying work schedule, including 17 percent whose schedule varies based on their employer's needs. One-third of workers who do not control their schedule are not doing okay financially, versus one-fifth of workers who set their schedule or have stable hours.
- Three in 10 adults engaged in at least one gig activity in the prior month, with a median time spent on gig work of five hours. Perhaps surprisingly, little of this activity relies on technology: 3 percent of all adults say that they use a website or an app to arrange gig work.
- Signs of financial fragility—such as difficulty handling an emergency expense—are slightly more common for those engaged in gig work, but markedly higher for those who do so as a main source of income.

Dealing with Unexpected Expenses

While self-reported ability to handle unexpected expenses has improved substantially since the survey began in 2013, a sizeable share of adults nonetheless say that they would have some difficulty with a modest unexpected expense.

- If faced with an unexpected expense of $400, 61 percent of adults say they would cover it with cash, savings, or a credit card paid off at the next statement—a modest improvement from the prior year. Similar to the prior year, 27 percent would borrow or sell something to pay for the expense, and 12 percent would not be able to cover the expense at all.
- Seventeen percent of adults are not able to pay all of their current month's bills in full. Another 12 percent of adults would be unable to pay their current month's bills if they also had an unexpected $400 expense that they had to pay.
- One-fifth of adults had major, unexpected medical bills to pay in the prior year. One-fourth of adults skipped necessary medical care in 2018 because they were unable to afford the cost.

Banking and Credit

Most adults have a bank account and are able to obtain credit from mainstream sources. However, substantial gaps in banking and credit services exist among minorities and those with low incomes.

- Six percent of adults do not have a bank account. Fourteen percent of blacks and 11 percent of Hispanics are unbanked versus 4 percent of whites. Thirty-five percent of blacks and 23 percent of Hispanics have an account but also use alternative financial services, such as money orders and check cashing services, compared to 11 percent of whites.
- More than one-fourth of blacks are not confident that a new credit card application would be approved if they applied—over twice the rate among whites.
- Those who never carry a credit card balance are much more likely to say that they would pay an unexpected $400 expense with cash or its equivalent (88 percent) than those who carry a balance most or all of the time (40 percent) or who do not have a credit card (27 percent).
- Thirteen percent of adults with a bank account had at least one problem accessing funds in their account in the prior year. Problems with a bank website or mobile app (7 percent) and delays in when funds were available to use (6 percent) are the most common problems. Those with volatile income and low savings are more likely to experience such problems.

Housing and Neighborhoods

Satisfaction with one's housing and neighborhood is generally high, although notably less so in low-income communities. Renters face varying degrees of housing strain, including some who report difficulty getting repairs done or being forced to move due to a threat of eviction.

- While 8 in 10 adults living in middle- and upper-income neighborhoods are satisfied with the overall quality of their community, 6 in 10 living in low- and moderate-income neighborhoods are satisfied.
- People's satisfaction with their housing does not vary much between more expensive and less expensive cities or between urban and rural areas.
- Over half of renters needed a repair at some point in the prior year, and 15 percent of renters had moderate or substantial difficulty getting their landlord to complete the repair. Black and Hispanic renters are more likely than whites to have difficulties getting repairs done.
- Three percent of non-homeowners were evicted, or moved because of the threat of eviction, in the prior two years. Evictions are slightly more common in urban areas than in rural areas.

Higher Education

Economic well-being rises with education, and most of those holding a postsecondary degree think that attending college paid off. The net financial benefits of education are less evident among those who started college but did not complete their degree; the same is true among those who attended for-profit institutions.

- Two-thirds of graduates with a bachelor's degree or more feel that their educational investment paid off financially, but 3 in 10 of those who started but did not complete a degree share this view.
- Among young adults who attended college, more than twice as many Hispanics went to a for-profit institution as did whites. For young black attendees, this rate was five times the rate of whites.
- Given what they know now, half of those who attended a private for-profit institution say that they would attend a different school if they had a chance to go back and make their college choices again. By comparison, about one-quarter of those who attended public or private not-for-profit institutions would want to attend a different school.

Student Loans and Other Education Debt

Over half of young adults who attended college took on some debt to pay for their education. Most borrowers are current on their payments or have successfully paid off their loans. However, those who failed to complete a degree, and those who attended for-profit institutions, are more likely to have fallen behind on their payments.

- Among those making payments on their student loans, the typical monthly payment is between $200 and $299 per month.
- Over one-fifth of borrowers who attended private for-profit institutions are behind on student loan payments, versus 8 percent who attended public institutions and 5 percent who attended private not-for-profit institutions.

Retirement

Many adults are struggling to save for retirement. Even among those who have some savings, people commonly lack financial knowledge and are uncomfortable making investment decisions.

- Thirty-six percent of non-retired adults think that their retirement saving is on track, but one-quarter have no retirement savings or pension whatsoever. Among non-retired adults over the age of 60, 45 percent believe that their retirement saving is on track.
- Six in 10 non-retirees who hold self-directed retirement savings accounts, such as a 401(k) or IRA, have little or no comfort in managing their investments.
- On average, people answer fewer than three out of five financial literacy questions correctly, with lower scores among those who are less comfortable managing their retirement savings.

Economic Well-Being

The large number of people reporting that they are doing at least okay financially mirrors the results in the prior survey, maintaining the significant gains since the survey began in 2013.[2] This generally positive assessment of economic well-being is consistent with the continued economic expansion and the low national unemployment rate. Even so, the rate of improvement in well-being was small relative to some previous years, and disparities persist across education, race, and neighborhoods.

Current Financial Situation

Three-quarters of adults in 2018 indicate they are either "living comfortably" (34 percent) or "doing okay" financially (41 percent), similar to the rate in 2017. The rest are either "just getting by" (18 percent) or "finding it difficult to get by" (7 percent). The 1 percentage point increase in the fraction doing at least okay financially in 2018 is not statistically significant but leaves this fraction substantially higher than the 62 percent in 2013.

Despite the positive trend, notable differences in economic well-being remain among education and racial groups. Adults with a bachelor's degree or higher are significantly more likely to be doing at least okay financially (87 percent) than those with a high school degree or less (64 percent). Two-thirds of blacks and Hispanics report that they are doing at least okay financially, compared to nearly 8 in 10 whites. The racial disparities also exist within each level of educational attainment (figure 1).

Economic well-being also differs by income, family structure, and neighborhood (table 1). Fifty-six percent of adults with family income less than $40,000 say they are doing okay financially, versus 94 percent of adults with income greater than $100,000. Married individuals, in general, are more likely to report that they are doing at least okay financially (82 percent) than unmarried individuals (66 percent). Of those with children (under age 18), unmarried parents are much less likely to report a positive financial situation (52 percent) than married parents (78 percent). Finally, people living in low-

[2] The survey was fielded from October 11 to November 12, 2018, so references to "during 2018" in the report text are the 12-month period before the survey (typically from October 2017 through October 2018) rather than the precise calendar year.

Figure 1. At least doing okay financially (by education and race/ethnicity)

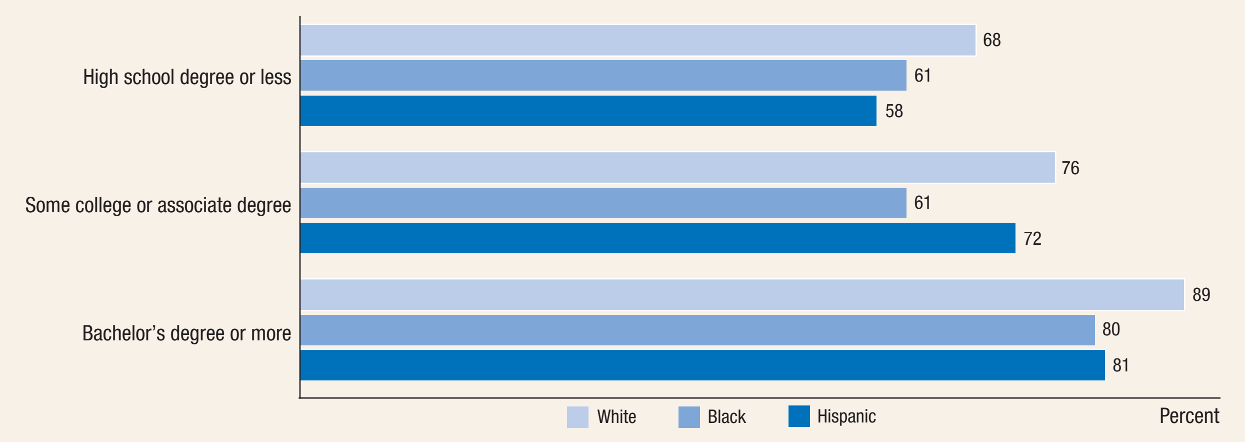

Table 1. Share of adults at least doing okay financially (by demographic characteristics)

Characteristic	Percent in 2018	Change since 2017	Change since 2013
Family income			
Less than $40,000	56	1	14
$40,000–$100,000	79	1	13
Greater than $100,000	94	0	12
Race/ethnicity			
White	78	1	13
Black	66	0	13
Hispanic	67	1	11
Urban/rural residence			
Urban	75	1	12
Rural	71	0	12
Neighborhood income			
Middle or upper income	78	1	n/a
Low or moderate income[1]	65	2	n/a
Family structure			
Married, no children	84	1	10
Married, children	78	3	17
Unmarried, no children	68	2	10
Unmarried, children	52	-4	10
Overall	**75**	**1**	**12**

Note: Census tracts were not included in the 2013 SHED so changes since 2013 are not available. Here and in subsequent tables and figures, percents may not sum to 100 due to rounding and question nonresponse.

1 Low- or moderate-income neighborhoods are defined here as those census tracts with a median family income less than 80 percent of the national median income.

n/a Not applicable.

and moderate-income communities report lower levels of well-being than those living in middle- or upper-income communities.

To learn more about economic well-being, this year's survey also asked individuals to explain "in their own words" how they are managing financially. Text analysis of these responses highlights some of the nuances in how individuals think about their financial situation (box 1).

Changes in Financial Situation over Time

The average well-being in a handful of broad categories across survey years could mask the degree of change—both positive and negative—within specific families. When asked directly about *changes* in their finances, adults in 2018 are twice as likely to report that their finances improved over the prior 12 months (31 percent) than worsened (13 percent).

Table 2. Financial situation compared to parents (by education and race/ethnicity)
Percent

Characteristic	Better off	About the same	Worse off
High school degree or less			
White	52	28	19
Black	61	26	11
Hispanic	54	23	22
Overall	54	26	19
Some college or associate degree			
White	51	26	22
Black	62	21	17
Hispanic	58	19	23
Overall	54	24	21
Bachelor's degree or more			
White	58	24	17
Black	64	16	19
Hispanic	61	19	19
Overall	59	23	18
Overall	**56**	**25**	**19**

The remainder—55 percent of adults—say their finances are about the same as the prior year.

To get a longer perspective than year-to-year changes, individuals also compared their current economic well-being to their parents' at the same age. Looking across a generation, 56 percent of adults say they are better off financially than their parents were (table 2). One-fifth say they are worse off than their parents were. At all levels of education, blacks and Hispanics are more likely than whites to say that they are better off than their parents were. However, in some education groups, minorities are also more likely than whites to say they are worse off than their parents. On net, this measure shows some evidence of narrowing racial disparities across a generation. In addition, having a bachelor's degree or more is generally associated with greater upward economic mobility than having less education.

Local Economic Conditions

Along with questions about their own economic well-being, people are asked to assess their local economy. Nearly two-thirds of respondents rated local economic conditions as "good" or "excellent" in 2018, with the rest rating conditions as "poor" or "only fair."

The assessments differ widely by demographics and geography (table 3). Whereas 68 percent of whites

Table 3. Self-assessment of the local economy as good or excellent (by select characteristics)
Percent

Characteristic	Local economy
Race/ethnicity	
White	68
Black	47
Hispanic	60
Urban/rural residence	
Urban	66
Rural	52
Neighborhood income	
Middle or upper income	71
Low or moderate income	45
Overall	**64**

Note: See table 1 for definitions of low- or moderate-income neighborhoods.

view their local economic conditions as good or excellent, 47 percent of blacks and 60 percent of Hispanics rate their local economies favorably. Not surprisingly, adults who live in low- and moderate-income neighborhoods are much less likely to report favorable local economic conditions than those in middle- or upper-income neighborhoods. Looking across geography, more than half of adults living in rural areas rate their economy as at least good, compared to two-thirds of those living in urban areas.

Subjective measures of local economic conditions—like these self-assessments—can add to our understanding of individual experience. As one example, consider the 21 percent of adults in 2018 who personally know someone addicted to opioids or prescription painkillers. Some research has argued that economic decline in certain communities has contributed to the opioid epidemic.[3] In 2018, those personally exposed to the opioid epidemic are less likely to view the local economy as good or excellent (60 percent) than those not exposed (65 percent). Even after accounting for race, rural or urban status, and neighborhood income, the modest relationship between opioid exposure and self-assessed local economic conditions remains.

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3 See Jeff Larrimore et al., "Shedding Light on Our Economic and Financial Lives?" FEDS Notes (Washington: Board of Governors of the Federal Reserve System, May 22, 2018), https://www.federalreserve.gov/econres/notes/feds-notes/shedding-light-on-our-economic-and-financial-lives-20180522.htm.

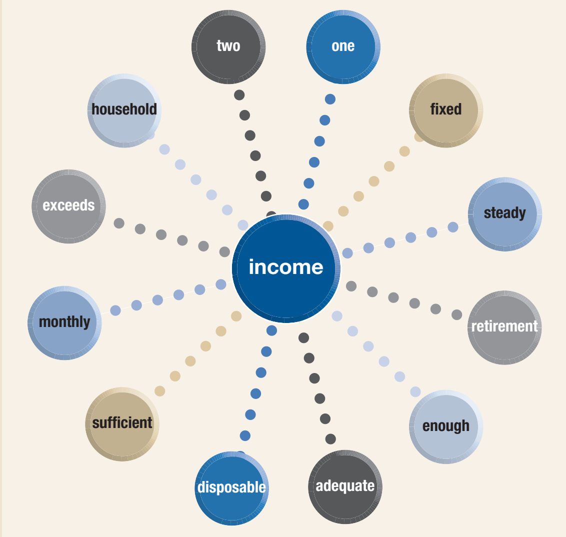
Box 1. Text Analysis of Self-Assessed Well-Being and Income

Surveys, like the SHED, pair most questions with a small set of possible answers from which respondents choose. In some cases, the survey complements these structured questions with open-ended questions, to which respondents answer in their own words. Open-ended questions can provide different insights into how individuals are faring, and can inform the creation of new structured questions. Because of the range of possible responses, however, the results from open-ended questions are challenging to interpret. This box describes one example of how to analyze such text responses in a rigorous and systematic way.

In this survey, everyone chooses from four pre-set answers ("finding it difficult to get by," "just getting by," "doing okay," and "living comfortably") to describe their financial situation. Then respondents are asked to explain in a sentence or two why they selected their response. To illustrate the uses of text analytics, consider explanations that include "income"—one of the most commonly used words. One in 10 adults who say that they are "doing okay" or "living comfortably" use the word "income" in their open-ended response. Those who are "just getting by" or "finding it difficult to get by" mention "income" twice as often.[1]

This text analysis uses word pairs—also referred to as bigrams—that include "income" to unpack these open-ended responses.[2] Bigrams are pairs of successive words. For example, the text response "my income covers my expenses" is broken into the following bigrams: "my income," "income covers,"

Figure A. Income-related word pairs among those "doing okay" or "living comfortably"



"covers my," and "my expenses."[3] Not surprisingly, the words individuals use to describe their income differ substantially across the pre-set choices of "finding it difficult to get by" or "living comfortably."

Descriptions of both the level and variability of income differ by self-assessed well-being. Among adults who say they are at least doing okay financially, common words include "adequate," "sufficient," and "exceeds" to describe their income (figure A).

(continued on next page)

1 Unlike the rest of the report, this analysis of open-ended text response questions is unweighted.

2 Studying the frequency of bigrams is one form of text analysis; see also Julia Silge and Dave Robinson's *Text Mining with R* at https://tidytextmining.com.

3 Bigrams where either the first or the second word does not provide contextual information, such as "the" and "are," are omitted.

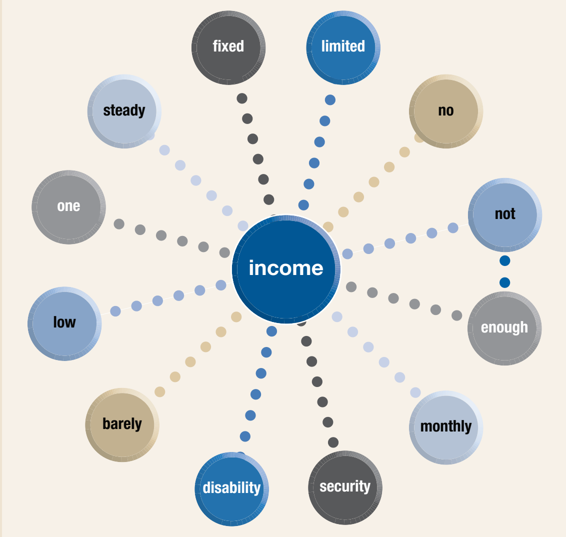
Box 1. Text Analysis of Self-Assessed Well-Being and Income—*continued*

On the other hand, those just getting by or worse use words like "low," "limited," and "barely" (figure B). Both well-being groups use "enough" and "steady" when talking about income, yet nearly every instance in the lower well-being group is preceded by the word "not," "no," or "need."

The sources of income that individuals use to explain economic well-being also differ. Those who are not doing okay financially often mention "social security" and "disability" along with income, suggesting that social safety net programs are an important source of income for many of these respondents. Among those doing okay financially, "social security" is a common phrase, but they often mention it along with other retirement income sources like pensions or investment income. Those doing better financially are also more likely to point to having "two" incomes, such as from a spouse or partner also working, in their household. In contrast, "one" income is more common among those doing worse financially.

The kind of text analysis in this one example can be applied to other open-ended responses across a range of issues. This analysis often confirms what is understood from structured questions, but sometimes suggests nuances or new developments that merit further inquiry.

Figure B. Income-related word pairs among those "just getting by" or "struggling to get by"



Income

Income is central to most people's economic well-being. The ability to meet current expenses and save for the future typically depends on income being sufficient and reliable. Some families also depend on financial support from, or provide such support to, their family or friends. Frequent changes in the level of family income, referred to here as "income volatility," can be a source of economic hardship.

Level and Source

Family income in this survey is the income from all sources that the respondent and his or her spouse or partner received during the previous year. Income is reported in dollar ranges as opposed to exact amounts. One-quarter of adults had a family income of less than $25,000 during 2018, and 37 percent had less than $40,000 (figure 2).[4]

Wages and salaries are the most common source of family income: nearly 7 in 10 adults and their spouse or partner received wage income during 2018 (table 4). Yet, many families also receive non-wage income, and the sources of non-wage income vary substantially with age. Among young adults (ages 18 to 29), other paid activities—often referred to as

[4] The income distribution in the SHED is largely similar to the 2018 March Current Population Survey, although a higher fraction of adults in the SHED have family incomes above $40,000 and a lower fraction have incomes below $40,000. The higher income may partly reflect the fact that unmarried partners are treated as one family in the SHED, while the Current Population Survey treats them as two separate families.

Figure 2. Family income distribution

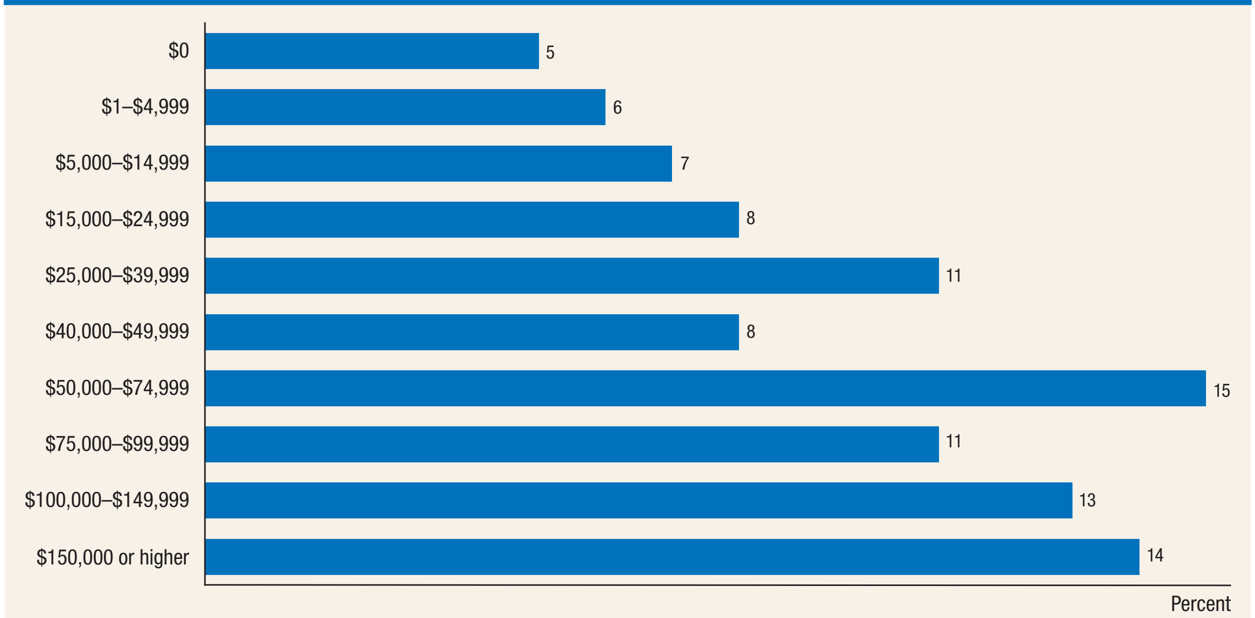


Table 4. Family income sources (by age)
Percent

Income source	18–29	30–44	45–59	60+	Overall
Wages or salaries	77	83	80	38	68
Self-employment	14	19	19	14	16
Other paid activities	19	13	9	7	12
Interest, dividends, or rental income	15	21	29	44	28
Social Security (including old age, SSI, and DI)	4	7	14	76	28
Unemployment income	3	3	3	2	3
Pension	1	2	9	51	18
Any other income	7	6	7	15	9

Note: Respondents can select multiple answers.

gig work—is the most common source of non-wage income. Among middle-age adults (ages 30 to 59), the percent with gig income is lower, while the percent with interest, dividend, and rental income is higher. Finally, 83 percent of adults age 60 and older received Social Security or pension income. The common sources of income and its distribution are similar to previous surveys.

Financial Support

One in 10 adults received some form of financial support during 2018 from someone living outside of their home. Over one-quarter of young adults receive such support (table 5). Among young adults with incomes under $40,000, nearly 4 in 10 receive some support from outside their home. Conversely, adults age 30 or older are more likely to provide financial support to individuals outside their home. Two in 10 adults ages 45 to 59 financially support others in this way.

This financial support is mainly between parents and adult children. Of those receiving family support, nearly two-thirds receive it from parents. Of those under age 30 who receive support, 8 in 10 receive it from parents. For many older adults, the flow reverses: among adults age 60 and older who receive family assistance, 6 in 10 receive it from their adult children.

Table 5. Receiving and providing financial support outside of the home (by age)
Percent

Age	Receive support	Provide support
18–29	27	9
30–44	9	13
45–59	5	21
60+	5	16
Overall	**11**	**15**

Financial support from family and friends takes many forms. Six in 10 of those receiving financial support receive money for general expenses, and over one-third receive help with their rent or mortgage (figure 3). In addition, nearly one-quarter of all recipients, and over one-third of recipients under age 30, receive help with educational expenses or student loan payments.

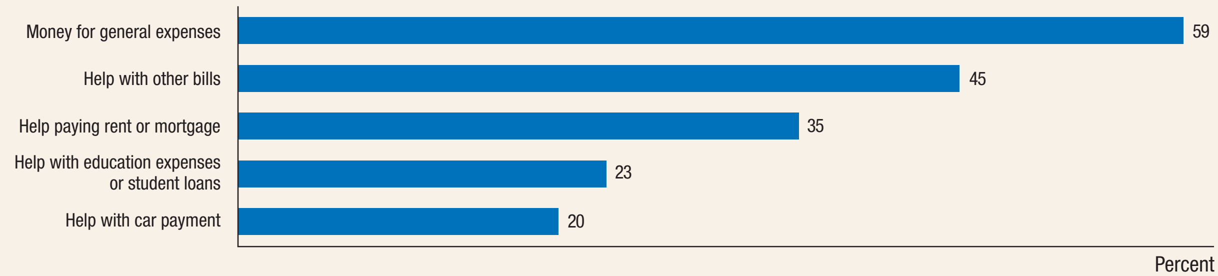
Income Volatility

The level of income during the year as a whole may mask substantial changes in income from month to month. The survey considers how mismatches between the timing of income and expenses lead to financial challenges.

Income in 2018 was roughly the same from month to month for 7 in 10 adults. It varies occasionally for 2 in 10, and varies quite often for 1 in 10. Some families can manage these frequent changes in income easily, but for others this may cause financial hardship. In fact, one-third of those with varying income, or 1 in 10 adults overall, say they struggled to pay their bills at least once in the prior year due to varying income.

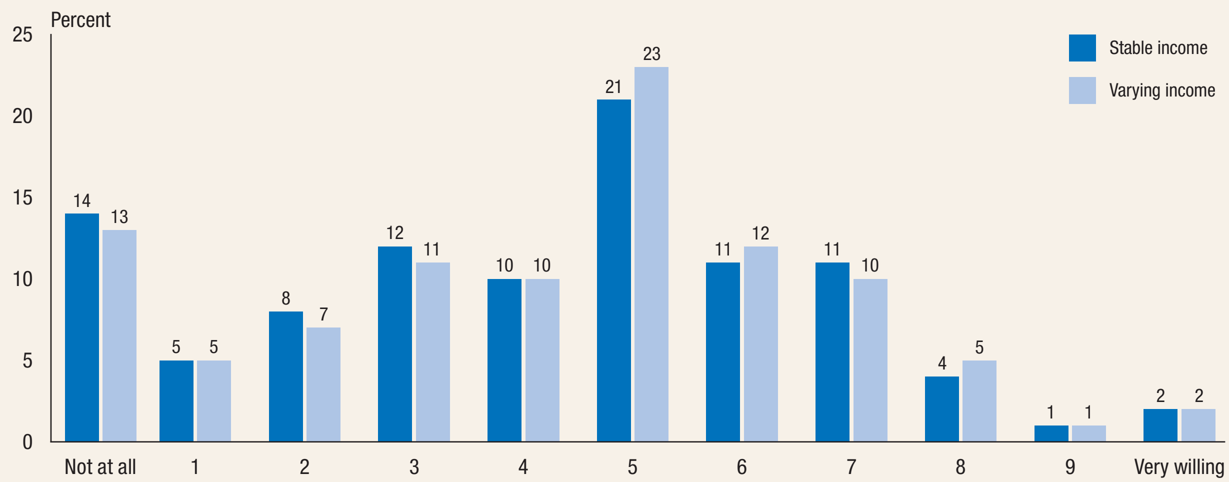
Those with less access to credit are much more likely to report financial hardship due to income volatility. For example, one-fourth of adults who are not confident in their ability to get approved for a credit card have experienced hardship from income volatility in the prior year, versus 6 percent of those who are con-

Figure 3. Forms of financial support received from someone outside of the home



Note: Among adults receiving any support from outside the home.

Figure 4. Willingness to take financial risks (by income volatility)



fident in their credit availability (table 6). (Access to credit is discussed further in the "Banking and Credit" section of this report.)

More risk-tolerant individuals may be willing to accept income that is more volatile. On a scale of zero to ten, with "zero" being unwilling to take risks and "ten" being very willing to take risks, more risk-tolerant individuals are somewhat more likely to have varying income than those who are less risk tolerant (figure 4). However, the difference in income volatility by risk tolerance is modest. This suggests that factors other than individual risk preferences likely drive income volatility.

Table 6. Income volatility and related hardship (by credit confidence)
Percent

Expect credit card application would be approved	Stable income	Varying income	
		No hardship	Causes hardship
Confident	73	20	6
Not confident	64	9	26
Overall	**71**	**19**	**9**

Note: Among adults receiving any support from outside the home.

Employment

In this survey, the majority of adults report working as much as they want, and half of employees received a raise or promotion during the prior year. Even with the strong labor market, some still face challenges in finding quality jobs. For example, variable work schedules, temporary contracts, and gig work activities as a main source of income are often associated with less financial security than are more traditional work arrangements.

Work and Well-Being

Two-thirds of adults report that they are working as much as they want—a sign that they are fully employed. One in 10 adults are not working and want to work, though many are not actively looking for work.[5] Four percent of adults in the SHED are not working, want to work, *and* applied for a job in the prior 12 months. Two in 10 adults are working but say they want to work more hours.

Individuals in these latter two groups, who want to work more, have less education than those working as much as they want. Notably, after several years of economic expansion, 38 percent of adults with less than a bachelor's degree want more work, versus 23 percent of adults with a bachelor's degree.

Education is not the only gap. Within education levels, racial differences in having as much work as desired are also evident (figure 5). Half of blacks and Hispanics with a high school degree or less want more work, versus 3 in 10 whites with the same education. Moreover, blacks and Hispanics with a bachelor's degree or more are about as likely as whites with a high school degree or less to want more work.

Work status affects individuals and their families in many ways. Those who want more work report lower levels of well-being than those who are satisfied with their working hours (table 7). For example, the group of adults who are not working and want to work is

[5] This statistic includes individuals who have not looked for work recently and thus is not directly comparable to the 3.8 percent national unemployment rate in the fourth quarter of 2018 (or alternate measures of labor utilization) published by the Bureau of Labor Statistics.

Figure 5. Want to work more than currently (by education and race/ethnicity)

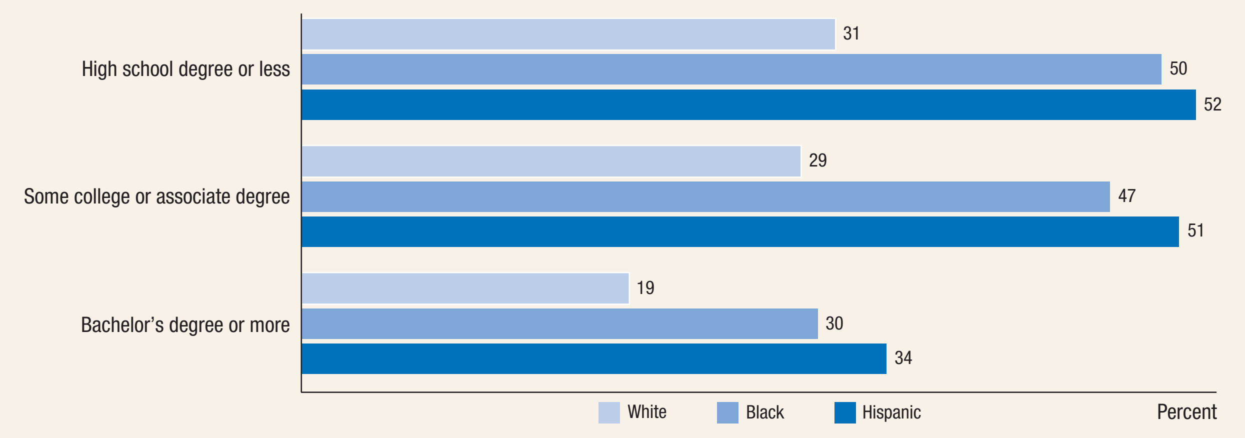


Table 7. Self-assessment of well-being and social class (by work status)
Percent

Form of employment	Not doing okay financially	Bottom half of social ladder	Worse off than parents
Not working, want work	51	60	27
Working, want more work	38	50	25
Not working, don't want more work	20	35	14
Working, don't want more work	14	26	17

three and a half times as likely to report that they are not doing okay financially (51 percent) than the group that is working and does not want more work (14 percent).

But work is not enough to guarantee economic well-being. Those who are working and want to work more hours are worse off than those who are not working and do not want to work. In terms of self-assessed social status, those who are not fully employed are more likely to view themselves on the bottom half of a social ladder. They are also more likely to say that they are worse off than their parents were at the same age. It is worth noting, however, that even among those who want more work, the vast majority see themselves as better off or the same as their parents were.

Given the importance of work, it is also worth understanding why some adults, particularly in their prime years (ages 25 to 54), are not working. Despite a strong labor market, 24 percent of prime-age adults in 2018 report not working in the month prior to the survey, split about evenly between those who want to work and those who do not.

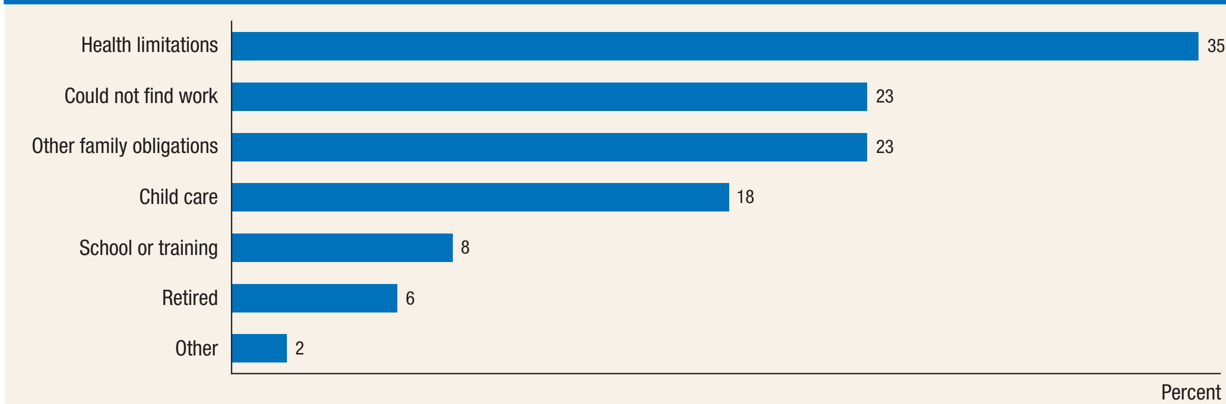
Over one-third of prime-age adults who are not working cite a health limitation as a reason, and nearly one-quarter say they could not find work (figure 6). Women not working in this age group are much more likely (42 percent) to cite child care or other family obligations as a reason than men (16 percent) are. Older adults (age 55 and older) are most likely to cite retirement as their reason for not working (80 percent), and younger adults (under age 25) are more likely to be out of the labor force because they are in school or training (60 percent).

Wage Growth and Work Arrangements

Wage growth is a key feature of a strong labor market. In 2018, half of all employees received a raise or promotion in the prior year, but some groups are less likely to experience such gains.

Blacks were less likely to have received a raise in the prior year than whites were, regardless of educational attainment (figure 7). Hispanics with some college education or a bachelor's degree were less likely than either whites or blacks with similar education to have received a raise. However, among workers with a high school degree or less, Hispanics were the most likely to have seen their wages rise. Beyond education and race, employees living in low- and-moderate income neighborhoods were less likely to have received a raise (44 percent) than those living in more well-off communities (50 percent). The experi-

Figure 6. Reasons for not working among ages 25–54



Note: Respondents can select multiple answers.

Figure 7. Received a raise (by education and race/ethnicity)

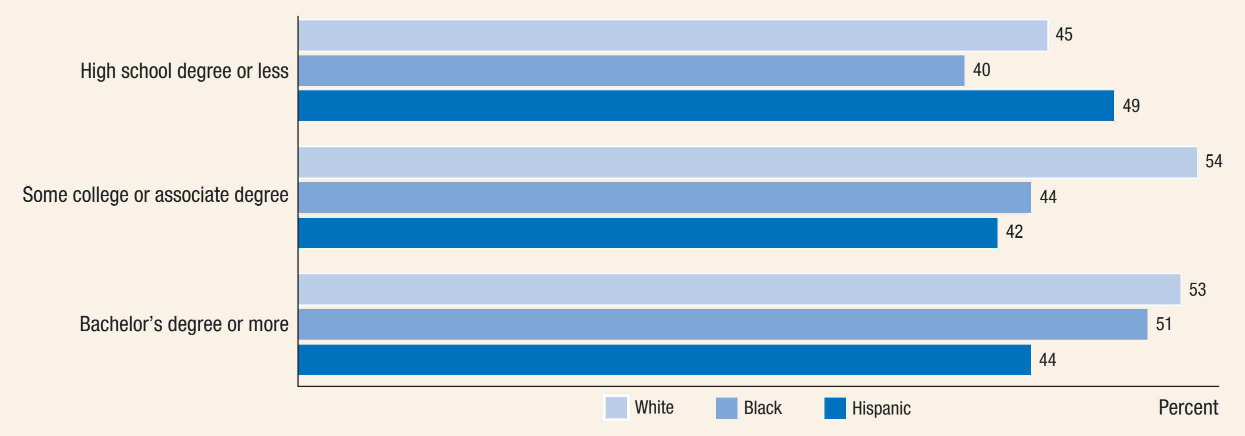


Figure 8. Employees "just getting by" or "finding it difficult to get by" (by work schedule)

ences were similar for those in urban (49 percent) and rural areas (48 percent).

Temporary work contracts are often associated with lower economic well-being than are more stable work arrangements. The same is true for work schedules that vary with little advance notice. Among those working, 8 percent say that their main job—the one from which they receive the most income—was a temporary job. The self-employed are more likely to view their work as temporary, but some employees also work on short-term contracts.[6]

Work schedules are another source of unpredictability. One-quarter of employees have a varying work schedule, including 17 percent whose schedule varies based on their employer's needs. Of the latter group of people who do not set their schedule, one-third say they are not doing okay financially (figure 8), versus one-fifth of employees with stable schedules or varying schedules that they control.

Workers with schedules that vary based on their employer's needs may report lower economic well-being because they receive short notice of when they will work. Among this group, nearly half are told when they will work three days or fewer in advance.

Those with less education are more likely to have these irregular schedules and receive short notice of when they will work. Of those with a high school degree or less, 22 percent had a job that varied by their employer's needs, compared to 11 percent of those with a bachelor's degree or higher. Workers with these types of irregular schedules are concentrated in certain industries. One-third of employees in the retail or accommodations (lodging and related services) sectors have a varying schedule set by their employer.

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6 The rates of temporary work in the SHED are higher than in some surveys. For example, the "Contingent Worker Supplement" from the Bureau of Labor Statistics in May 2017 found that 3.8 percent of all workers (including the self-employed) did not expect their current, main job to last.

Table 8. Share of adults with gig work

Activities	Percent
Service activities	
Child care or elder care services	5
Dog walking, feeding pets, or housesitting	3
House cleaning, yard work, or other property maintenance work	6
Driving or ride-sharing, such as with Uber or Lyft	3
Paid tasks online	2
Other personal tasks, such as deliveries, running errands, or helping people move	4
Goods activities	
Sold goods yourself at flea markets or garage sales	5
Sold goods at consignment shops or thrift stores	3
Sold goods online, such as on eBay or Craigslist	10
Rented out property, such as your car or house	4
Other activities	
Any other paid activities not already mentioned	2

Note: Respondents can select multiple answers.

Gig Work and Informal Paid Activities

Informal, infrequent paid activities—referred to here as gig work—are another source of income for some adults. In this survey, gig work covers personal service activities, such as child care, house cleaning, or ride-sharing, as well as goods-related activities, such as selling goods online or renting out property (table 8).[7] This definition of gig work includes both online and offline activities, underscoring the fact that most of these activities predate the internet. Many adults who engage in gig work use it to supplement their income, but some rely on it for their main source of income. Finally, these gig activities are often done occasionally and do not take much time, and thus may not fit neatly in a standard concept of what is considered to be "work."

Overall in 2018, 3 in 10 adults engaged in at least one of these gig activities in the month before the survey.[8] Fifteen percent of people engaged in a service activity, and 17 percent engaged in a goods activity. Younger individuals are more likely to perform gig work: 37 percent of those ages 18 to 29 performed gig work, but 21 percent of those age 60 or older did so (table 9).

Table 9. Gig work (by age)
Percent

Activities	18–29	30–44	45–59	60+
Service activities	23	17	13	9
Goods activities	19	22	16	12
Use website or mobile app to find customers	5	4	2	1
Any informal activities	**37**	**34**	**27**	**21**

Note: Respondents can select multiple answers.

The relatively high prevalence rates of gig work in this survey likely reflect the broad set of activities covered. Some studies of gig work, instead, focus only on those who use a website or mobile app to connect with customers. Using this narrower definition, 3 percent of adults in this survey say that they participated in gig work enabled by these technologies.[9]

It is not clear that all individuals who participate in gig activities view those activities as the equivalent of traditional paid work. In fact, over one-quarter of those doing gig activities had reported earlier in the survey that they do *not* "work for pay or profit."[10]

Workers participate in the gig economy for a variety of reasons. To earn extra money is the most common reason that individuals engage in gig work (figure 9).

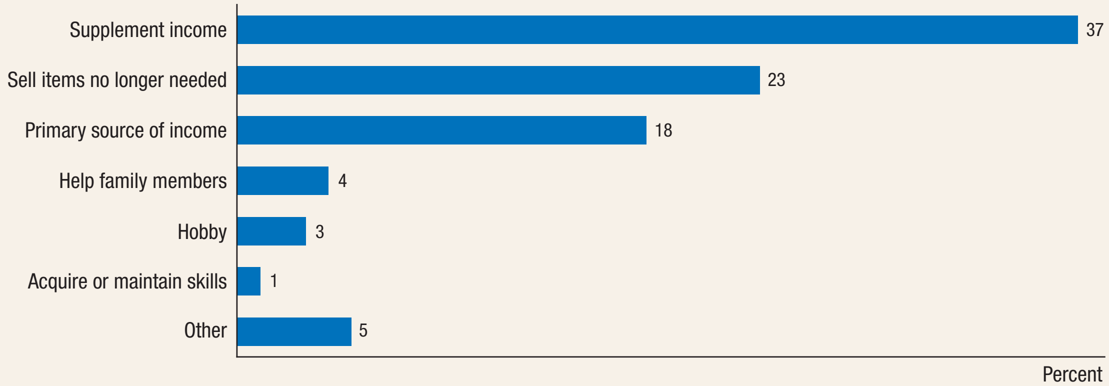
7 The list of gig activities is similar to those in Anat Bracha and Mary Burke, "Informal Work in the United States: Evidence from Survey Responses," *Current Policy Perspectives* (Boston: Federal Reserve Bank of Boston, 2014), https://www.bostonfed.org/publications/current-policy-perspectives/2014/informal-work-in-the-united-states-evidence-from-survey-responses.aspx. For the further development of the gig questions now used in the SHED, see Barbara Robles and Marysol McGee, "Exploring Online and Offline Informal Work: Findings from the Enterprising and Informal Work Activities (EIWA) Survey," Finance and Economics Discussion series 2016-089 (Washington: Board of Governors, October 2016), https://www.federalreserve.gov/econresdata/feds/2016/files/2016089pap.pdf.

8 The overall prevalence of gig work in 2018 was 2 percentage points lower than in 2017, but changes in the question wording complicate year-over-year comparisons. That said, 9 percent of adults reported spending more time on these activities relative to last year and 10 percent reported spending less time, a sign of slightly less gig work.

9 As a comparison, the JPMorgan Chase Institute study *The Online Platform Economy in 2018: Drivers, Workers, Sellers, and Lessors* by Diana Farrell, Fiona Greig, and Amar Hamoudi (https://www.jpmorganchase.com/corporate/institute/report-ope-2018.htm) found that 1.6 percent of families had received income from an online platform in the first quarter of 2018. Similarly, the "Contingent Worker Supplement" from the Bureau of Labor Statistics found that 1.0 percent of workers in May 2017 engaged in electronically mediated work.

10 Other surveys have also encountered challenges in measuring the gig economy, likely due to differences in terms and concepts. See Katherine Abraham and Susan Houseman, "Making Ends Meet: The Role of Informal Work in Supplementing Americans' Income," Working Paper (December 2018).

Figure 9. Main reason for gig work



Note: Among gig workers in the past month.

When asked about their main reason for engaging in gig activities, less than two-fifths of gig workers (11 percent of adults overall) are doing gig activities to supplement their income. For nearly one-fifth of gig workers (5 percent of adults), this is their primary source of income. Nearly one-quarter of gig workers (7 percent of adults) say that selling items that they no longer need is their main reason for gig work.

For most gig workers, this activity is occasional rather continuous, and for many, this work generates only a modest share of family income. Thirty percent of gig workers indicate that they earned income from these activities in all or most months during the year. Among gig workers who say how much time they spend on gig activities, the median number of hours worked in the prior month was five. For 55 percent of gig workers, these activities account for under 10 percent of their family income. Six percent of the gig workers rely on these activities for 90 percent or more of their family income. However, gig workers with less education are more likely to rely on gig work for a larger fraction of their income. For gig workers with a high school degree or less, 14 percent rely on gig work for at least half of their income, compared to 8 percent for those with a bachelor's degree or higher. The extent to which individuals rely on gig work for income is also associated with differences in their financial fragility (box 2).

Box 2. Financial Fragility and Gig Work

A decade after the Great Recession, financial fragility and economic insecurity remain concerns for many households.[1] The adults engaged in gig activities are a segment of the population that may be experiencing heightened financial fragility.

Two measures of financial fragility are used here to examine gig workers: a) some difficulty handling a $400 unexpected expense and b) using alternative financial services, such as purchasing money orders or cashing a check at a place other than a bank. Adults doing gig work are slightly more likely to say they would borrow, sell something, or could not pay the $400 expense (42 percent) compared to those not doing gig work (38 percent). The use of alternative financial services is somewhat higher among gig workers (24 percent) relative to non-gig workers (16 percent).

The degree of financial fragility among gig workers varies considerably by the reasons for doing gig work. For those doing gig work as their *primary* source of income, 58 percent would have difficulty handling the unexpected expense, compared to 44 percent of those doing gig work to *supplement* their income (figure A). For adults doing gig work to sell items they no longer need, 36 percent would have difficulty with the unexpected expense—a lower fraction than those not doing gig work at all.

The use of alternative financial services, due to their nature and cost compared to bank and credit union services, is also sometimes viewed as an indicator of financial fragility. Use of alternative financial services by gig adults also varies by the motives for gig work (figure B). Those doing gig work as a primary income source (33 percent) use alternative financial services and products to a greater degree than those supplementing their income (26 percent) or selling items they no longer need (19 percent).

Gig work—on its own—is not a uniform sign of financial fragility. Doing gig activities to earn money, in particular as a primary source of income, is associated with more fragility, but selling items that are no longer needed is associated with about the same fragility as non-gig workers.

[1] Andrea Hasler, Annamaria Lusardi, and Noemi Oggero, *Financial Fragility in the U.S.: Evidence and Implications* (Washington: Global Financial Literacy Excellence Center, the George Washington University School of Business, November 2017), https://www.nefe.org/_images/research/Financial-Fragility/Financial-Fragility-Final-Report.pdf.

Figure A. Gig work and some difficulty handling an unexpected expense (by reasons for doing gig work)

Note: Respondents can select multiple reasons for gig work. "Some difficulty" is defined as borrow, sell something, or cannot pay.

Figure B. Gig work and use of alternative financial services (by reasons for doing gig work)

Note: Respondents can select multiple reasons for gig work.

Dealing with Unexpected Expenses

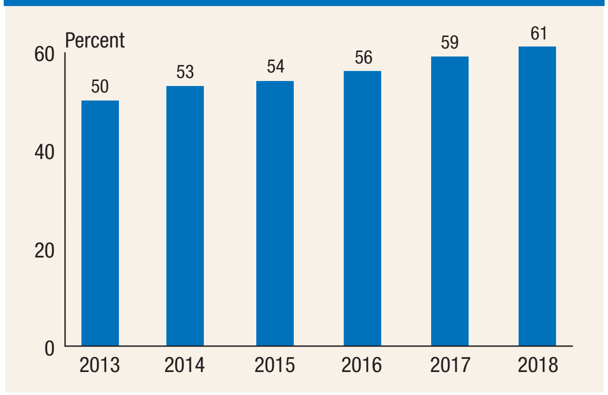
Results from the survey indicate that many adults are not well prepared to withstand even small financial disruptions, though the ability to pay current bills and to handle unexpected expenses has improved markedly since 2013. Despite the positive trends, financial challenges remain, especially for those with less education and for minorities.

Small, Unexpected Expenses

Relatively small, unexpected expenses, such as a car repair or replacing a broken appliance, can be a hardship for many families without adequate savings. When faced with a hypothetical expense of $400, 61 percent of adults in 2018 say they would cover it, using cash, savings, or a credit card paid off at the next statement (referred to, altogether, as "cash or its equivalent")—a 2 percentage point increase from 2017 (figure 10). In 2013, half of adults would have covered such an expense in the same way.

Among the remaining 4 in 10 adults who would have more difficulty covering such an expense, the most common approaches include carrying a balance on credit cards and borrowing from friends or family (figure 11). Twelve percent of adults would be unable to pay the expense by any means. Although so many incurring additional costs for a modest expense is disconcerting, it is possible that some would choose to borrow even if they had $400 available, preserving their cash as a buffer for other expenses.[11]

Figure 10. Would cover a $400 emergency expense using cash or its equivalent (by survey year)



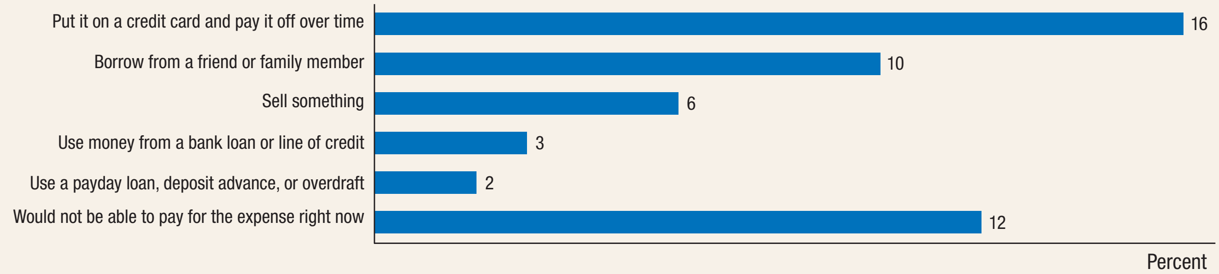
While the prior question asks about a hypothetical expense, the survey results indicate that a number of people struggle to pay their actual bills. Even without an unexpected expense, 17 percent of adults expected to forgo payment on some of their bills in the month of the survey. Most frequently, this involves not paying, or making a partial payment on, a credit card bill (table 10). Four in 10 of those who are not able to pay all their bills (7 percent of all adults) say that their rent, mortgage, or utility bills will be left at least partially unpaid.

Another 12 percent of adults would be unable to pay their current month's bills if they also had an unexpected $400 expense that they had to pay. Altogether, 3 in 10 adults are either unable to pay their bills or are one modest financial setback away from hardship, slightly less than in 2017 (33 percent).

Those with less education in particular are less able to handle these expenses. Thirteen percent of adults with a bachelor's degree or more do not expect to pay their current month's bills or would be unable to

[11] For example, Neil Bhutta and Lisa Dettling estimate in 2016, using the Survey of Consumer Finances, that 76 percent of households had $400 in liquid assets (even after taking monthly expenses into account), which is higher than the 56 percent of adults in the 2016 SHED who say they would cover a $400 expense with cash or its equivalent ("Money in the Bank? Assessing Families' Liquid Savings using the Survey of Consumer Finances," FEDS Notes (Washington: Board of Governors, November 19, 2018), https://www.federalreserve.gov/econres/notes/feds-notes/assessing-families-liquid-savings-using-the-survey-of-consumer-finances-20181119.htm). David Gross and Nicholas Souleles first identified the "credit card debt puzzle" in which some households hold both high-interest credit card debt *and* low-return liquid assets that could be used to pay down those debts ("Do Liquidity Constraints and Interest Rates Matter for Consumer Behavior? Evidence from Credit Card Data," *Quarterly Journal of Economics* 117, Issue 1 (February 2002): 149–85.)

Figure 11. Other ways individuals would cover a $400 emergency expense



Note: Respondents can select multiple answers.

Table 10. Bills to leave unpaid or only partially paid in the month of the survey
Percent

Bill	Among adult population	Among those who expect to defer at least one bill
Housing-related bills		
Rent or mortgage	4	22
Water, gas, or electric bill	6	33
Overall	7	39
Non-housing-related bills		
Credit card	7	42
Phone or cable bill	5	32
Student loan	2	12
Car payment	3	19
Other	1	3
Overall	11	67
Unspecified bills	4	25
Overall	**17**	**100**

Note: Respondents can select multiple answers. "Unspecified bills" reflects those who said they would not be able to pay bills in full but then did not answer the type of bill.

if faced with an unexpected $400 expense, versus 42 percent of those with a high school degree or less. Racial and ethnic minorities of each education level are even less able to handle a financial setback (figure 12).

Some financial challenges require more preparation and advanced planning than a relatively small, unexpected expense would. One common measure of financial preparation is whether people have savings sufficient to cover three months of expenses if they lost their job. Half of people have set aside dedicated emergency savings or "rainy day" funds. As was the case with smaller financial disruptions, some would deal with a larger shock by borrowing or selling assets; one-fifth say that they could cover three months of expenses in this way. In total, 7 in 10 adults could tap savings, would need to borrow or sell assets if faced with a financial setback of this magnitude.

Figure 12. Not able to fully pay current month's bills (by education and race/ethnicity)

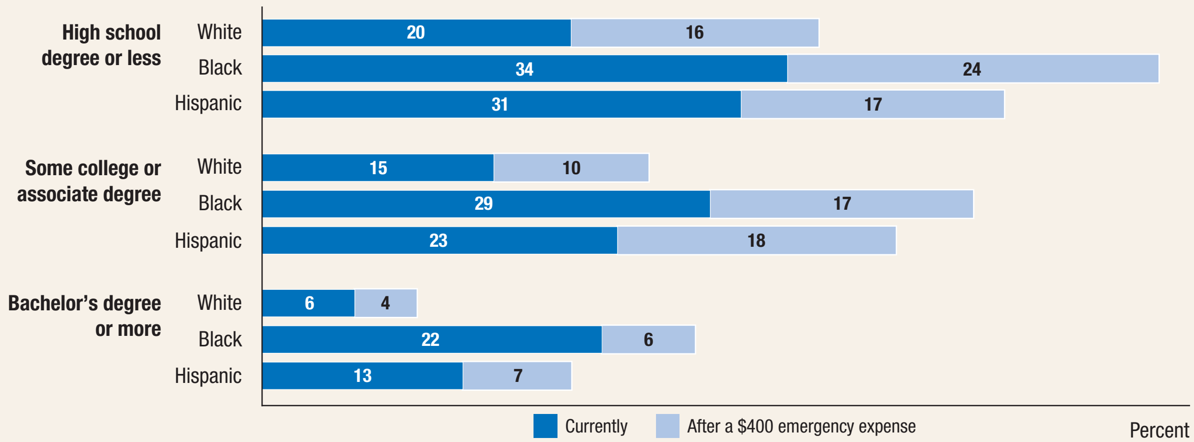
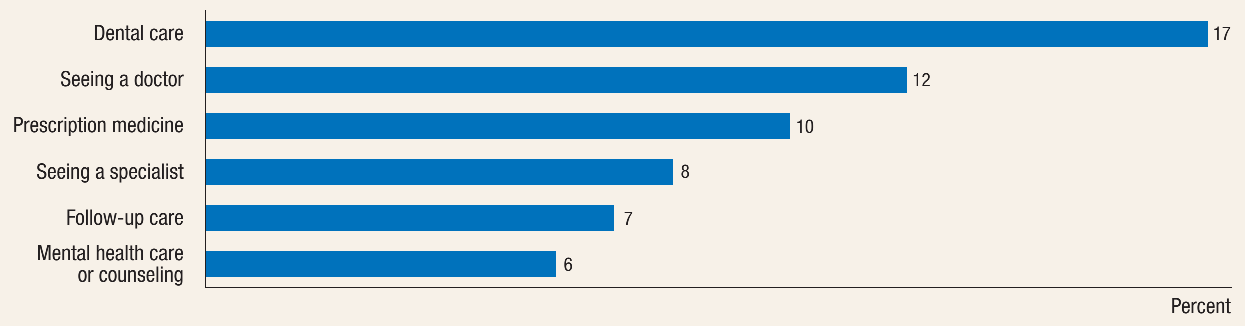


Figure 13. Forms of skipped medical treatment due to cost



Health Care Expenses

Out-of-pocket spending for health care is a common unexpected expense that can be a substantial hardship for those without a financial cushion. As with the small financial setbacks discussed above, many adults are not financially prepared for health-related costs. During 2018, one-fifth of adults had major, unexpected medical bills to pay, with the median expense between $1,000 and $4,999. Among those with medical expenses, 4 in 10 have unpaid debt from those bills.

In addition to the financial strain of additional debt, 24 percent of adults went without some form of medical care due to an inability to pay, down from 27 percent in 2017 and well below the 32 percent reported in 2013. Dental care was the most frequently skipped treatment (17 percent), followed by visiting a doctor (12 percent) and taking prescription medicines (10 percent) (figure 13).

There is a strong relationship between family income and individuals' likelihood of receiving medical care. Among those with family income less than $40,000, 36 percent went without some medical treatment in 2018, down from 39 percent in 2017. This share falls to 24 percent of those with incomes between $40,000 and $100,000 and 8 percent of those making over $100,000.

Health insurance is one way that people can pay for routine medical expenses and hedge against the financial burden of large, unexpected expenses. In 2018, 90 percent of adults had health insurance. This includes 57 percent of adults who have health insurance through an employer or labor union and 22 percent who have insurance through Medicare. Four percent of people purchased health insurance through one of the health insurance exchanges. Those with health insurance are less likely to forgo medical treatment due to an inability to pay. Among the uninsured, 38 percent went without medical treatment due to an inability to pay, versus 22 percent among the insured.[12]

[12] Since the survey asks respondents about their current health insurance status, but also asks about whether they missed medical treatments in the previous year, it is possible that some respondents who currently have insurance were uninsured at the point at which they were unable to afford treatment.

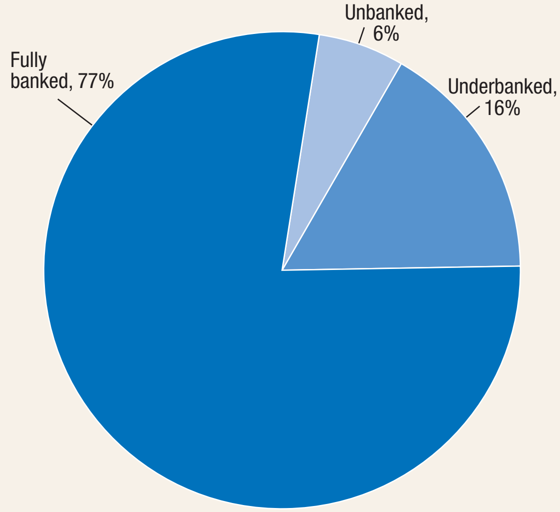
Banking and Credit

Most adults have a bank account and are able to obtain credit from mainstream sources, but notable gaps in access to basic financial services still exist among minorities and those with low incomes. On average, individuals with capacity to borrow on a credit card are more prepared for financial disruptions.

Unbanked and Underbanked

Although the majority of U.S. adults have a bank account and rely on traditional banks or credit unions to meet their banking needs, gaps in banking access remain. Six percent of adults do not have a checking, savings, or money market account (often referred to as the "unbanked"). Two-fifths of unbanked adults used some form of alternative financial service during 2018—such as a money order, check cashing service, pawn shop loan, auto title loan, payday loan, paycheck advance, or tax refund advance.[13] In addition, 16 percent of adults are "underbanked": they have a bank account but also used an alternative financial service product (figure 14).[14] The remaining 77 percent of adults are fully banked, with a bank account and no use of alternative financial products.

Figure 14. Banking status



Note: Fully banked individuals have a bank or credit union account and have not used an alternative financial service in the past year.

The unbanked and underbanked are more likely to have low income, less education, or be in a racial or ethnic minority group. One percent of those with incomes over $40,000 are unbanked, versus 14 percent of those with incomes under that threshold. Similarly, 14 percent of blacks and 11 percent of Hispanics are unbanked, versus 4 percent of whites (table 11).

Individuals who use alternative financial services (one-fifth of adults) may need or prefer to conduct certain financial transactions through providers other than traditional banks and credit unions. The vast majority (89 percent) of people using alternative financial services use transaction services such as purchasing a money order or cashing a check at a place other than a bank (table 12). Twenty-eight percent borrowed money using an alternative financial service product, including payday loans or

[13] This fraction using alternate financial services was somewhat lower in 2018, but the latest survey clarified that only check cashing or money order services not conducted at a bank should be included. Thus, the two years of data are not directly comparable.

[14] The most recent FDIC National Survey of Unbanked and Underbanked Households in 2017 found that a similar 6.5 percent of households were unbanked and 18.7 percent of households were underbanked. However, the FDIC uses a broader underbanked definition, which includes international remittances and rent-to-own services as alternative financial services. See Federal Deposit Insurance Corporation, *2017 FDIC National Survey of Unbanked and Underbanked Households* (Washington: Federal Deposit Insurance Corporation, October 2018), https://www.economicinclusion.gov/surveys/2017household/.

Table 11. Banking status (by family income, education, and race/ethnicity)
Percent

Characteristic	Unbanked	Underbanked	Fully banked
Family income			
Less than $40,000	14	21	64
$40,000–$100,000	2	17	80
Greater than $100,000	1	7	92
Education			
High school degree or less	13	21	66
Some college or associate degree	4	18	77
Bachelor's degree or more	1	9	89
Race/ethnicity			
White	4	11	85
Black	14	35	50
Hispanic	11	23	66
Overall	**6**	**16**	**77**

paycheck advances, pawn shop or auto title loans, and tax refund advances.

Credit Outcomes and Perceptions

The majority of U.S. adults who applied for credit in 2018 were able to obtain it, but a sizable share report barriers or limitations to borrowing. During 2018, more than one-third of adults applied for some type of credit. Of those who applied for credit, 23 percent were denied at least once in the prior year, and 31 percent were either denied or offered less credit than they requested.

The incidence of denial or limitations on credit differs by the family income of the applicants and by their race and ethnicity. Lower-income individuals are substantially more likely to experience adverse outcomes with their credit applications than those with higher incomes. Among applicants with incomes under $40,000, 37 percent were denied credit, versus 10 percent of applicants with incomes over $100,000. Within each income bracket, black and Hispanic individuals are more likely to report an adverse credit outcome, relative to white adults (table 13).

Table 12. Forms of alternative financial services used
Percent

Alternative financial service	Among adult population	Among those using any alternative financial services
Money order, not from a bank	12	63
Cash a check, not at a bank	8	45
Transaction services	**16**	**89**
Payday loan or paycheck advance	3	17
Pawn shop or auto title loan	2	13
Tax refund advance	1	8
Borrowing services	**5**	**28**

Note: Respondents can select multiple answers.

Table 13. Credit applicants with adverse credit outcomes (by family income and race/ethnicity)
Percent

Characteristic	Denied	Denied or approved for less than requested
Less than $40,000		
White	31	40
Black	59	70
Hispanic	39	59
Overall	37	48
$40,000–$100,000		
White	16	22
Black	41	52
Hispanic	29	42
Overall	22	30
Greater than $100,000		
White	8	12
Black	21	28
Hispanic	17	23
Overall	10	15
All incomes		
White	18	24
Black	45	55
Hispanic	31	45
Overall	23	31

Note: Among adults who applied for some form of credit in the past 12 months.

Negative perceptions may be an additional barrier to credit. About 1 in 10 adults put off at least one credit application because they thought that their application would be denied. This includes 5 percent who applied for some credit, but opted against submitting additional applications because they expected to be denied and 3 percent who desired credit but did not apply at all for fear of denial.

Although some people are forgoing credit applications because they expect a denial, most adults (79 percent) are at least somewhat confident that they could obtain a credit card if they were to apply for one. Those with low incomes are substantially less confident about being approved than those with

Table 14. Confidence that a credit card application would be approved (by family income and race/ethnicity)
Percent

Characteristic	Confident	Not confident	Don't know
Less than $40,000			
White	67	24	9
Black	46	39	14
Hispanic	57	29	14
Overall	61	27	12
$40,000–$100,000			
White	88	8	3
Black	74	20	6
Hispanic	81	15	4
Overall	85	11	4
Greater than $100,000			
White	95	3	2
Black	91	6	2
Hispanic	93	5	1
Overall	95	3	2
All incomes			
White	84	12	5
Black	63	27	10
Hispanic	72	20	8
Overall	79	15	6

Note: "Confident" includes people reporting that they are either very confident or somewhat confident.

high incomes (table 14). Additionally, credit perceptions differ by race and ethnicity, although these gaps are at least partially attributable to other socioeconomic factors that also vary by race.[15] The patterns in 2018 are consistent with those seen in recent years.

Credit Cards

In people's financial lives, credit cards can serve different functions at different times. For people who pay their balances off each month, credit cards are mainly a form of payment convenience and can be thought of more or less the same as using cash. For those who carry a balance, however, the card represents borrowing and carries a cost in the interest payment and any fees that are incurred.

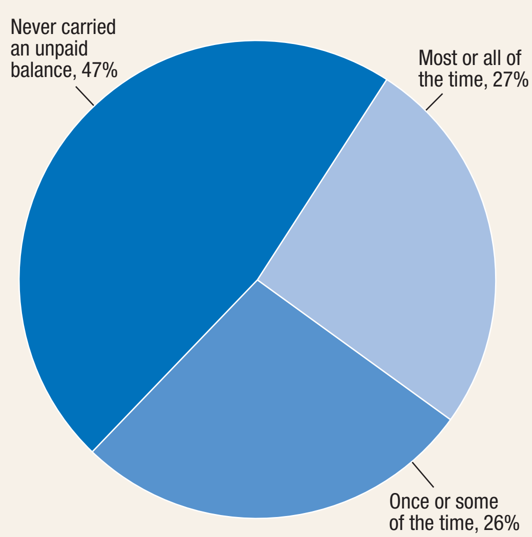
Overall, 8 in 10 adults have at least one credit card, and the share with a credit card is higher among those with higher incomes, more education, or who are white (table 15). Among those with a credit card, 47 percent had paid their bill in full every month in the prior year. One-quarter carried a balance once or some of the time in that year; the remaining 27 percent carried a balance most or all of the time (figure 15). The frequency of regular borrowing with credit cards during 2018 is similar to 2017.

Table 15. Has at least one credit card (by family income, education, and race/ethnicity)

Characteristic	Percent
Family income	
Less than $40,000	61
$40,000–$100,000	90
Greater than $100,000	98
Education	
High school degree or less	69
Some college or associate degree	80
Bachelor's degree or more	95
Race/ethnicity	
White	85
Black	68
Hispanic	72
Overall	**81**

On average, individuals with capacity to borrow on a credit card are more prepared for financial disruptions. Transactional users of credit cards who never carry a balance are much more likely to say that they would pay an unexpected $400 expense with cash or

Figure 15. Frequency of carrying a balance on one or more credit cards in the past 12 months



Note: Among adults with at least one credit card.

[15] In a regression including marital status, age, education, income, employment status, region, and urban/rural residence, the difference in confidence between black and white adults narrows but remains significant. The gap between Hispanics and white adults is largely accounted for by these demographic factors.

its equivalent, compared to those who carry a balance most or all of the time or who do not have a credit card (table 16).

Similar patterns are evident across these groups for other ways of coping with financial shocks, such as having a three-month rainy day savings fund and expressing confidence that their application for a credit card would be accepted. Financial buffers are also related to the incidence of problems in access to funds in a bank account (see box 3).

Table 16. Financial preparedness measures among adults (by credit card use)

Percent

Credit card access and payment patterns	Pay unexpected $400 expense with cash or equivalent	Have 3-month rainy day savings fund	Confident credit card application would be approved
Have a credit card, frequency of carrying balance			
Never carried an unpaid balance	88	78	95
Once or some of the time	63	53	87
Most or all of the time	40	29	78
Do not have a credit card	27	17	36
Overall	**61**	**51**	**79**

Note: "Confident" includes people reporting that they are either very confident or somewhat confident. Frequency of carrying a balance is for the past 12 months.

Box 3. Problems with Accessing Account Funds, Income Volatility, and Rainy Day Savings

Problems accessing funds in a bank account can affect anyone but may have consequences that are more serious for people with unpredictable incomes or low savings. New results from the 2018 survey show that people with volatile incomes are more likely to report problems accessing funds in a bank account. Adults with highly volatile incomes are more likely to have problems accessing a bank account even if their level of income is high or they have a buffer of savings.

With bank accounts, the timing of when deposited money is available to use depends on a number of different factors, and some delay is common. Withdrawals that occur when deposited money is not yet available for use can result in overdraft fees, and repeated overdrafts can lead to longer delays for future deposits.[1] Other circumstances that can restrict customer access to funds in an account include fraud or suspected fraud and outages of bank computer systems.

To learn about problems accessing funds, the survey asks individuals with a bank account if they had difficulty getting money out of their bank account in the prior 12 months. Overall incidence is relatively low: 13 percent of adults with a bank account report at least one problem in accessing account funds. Problems with a bank website or mobile app (7 percent) and deposit holds or other delays in when funds were available to use (6 percent) are the most common problems. Smaller shares report that an account was locked or frozen (3 percent) or had other problems (1 percent).

Incidence of problems accessing account funds is higher for younger adults and minorities, but is only moderately related to income (table A). Among adults with a bank account, 18 percent of adults under age 30 report a problem accessing funds in a bank account, more than twice the rate of adults age 60 or older. Nineteen percent of blacks and 17 percent of Hispanics with a bank account report difficulty accessing funds, compared to 11 percent of whites.

Table A. Adults reporting problems accessing funds in an account in the past 12 months

Characteristic	Percent
Age	
18–29	18
30–44	16
45–59	12
60+	8
Race/ethnicity	
White	11
Black	19
Hispanic	17
Family income	
Less than $40,000	15
$40,000–$100,000	14
Greater than $100,000	10
Overall	**13**

Note: Among adults with a bank account.

Low-income (less than $40,000) and middle-income ($40,000 to $100,000) adults with a bank account report problems at similar rates. A lower share of adults with high incomes (greater than $100,000) report problems.

Income volatility is more strongly associated with problems accessing funds than is the level of income (figure A). For each income group, the incidence of difficulties accessing funds is lowest for those who say their income was “roughly the same” from month to month, and increases for those who say their income “occasionally varies” or “varies quite often.” Among those who have the same degree of income volatility, the shares reporting a problem accessing funds are similar for those in the low- and middle-income groups. The high-income group is less likely to report problems for each degree of income volatility. Even so, high-income adults with highly volatile income report problems at about the same rate as low-income adults with stable income.

(continued on next page)

[1] For an overview of rules on deposit availability, see https://www.federalreserve.gov/pubs/regcc/regcc.htm.

Box 3. Problems with Accessing Account Funds—*continued*

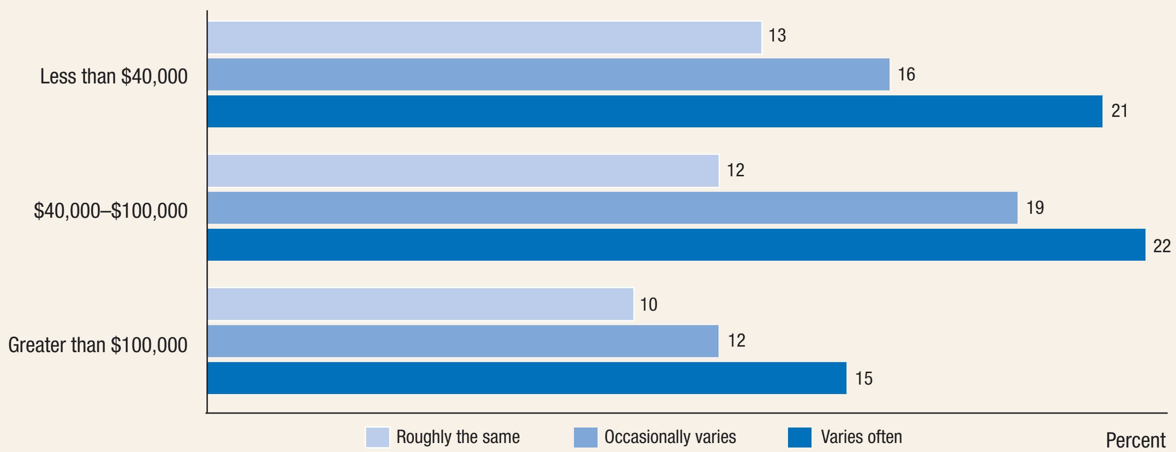
Having savings as a financial buffer helps some people manage fluctuations in income and reduce the urgency in accessing funds. Among those who say their income "occasionally varies," those who had three months of expenses set aside in "rainy day" savings are about half as likely (11 percent) to report difficulties accessing funds compared to those who did not have that financial buffer (21 percent).[2] However, among those account holders who say their income "varies quite often," a buffer of savings does not lower the incidence of problems accessing account funds.

Financial service providers can help to mitigate some of these problems as well. Improvement to U.S. payment systems may benefit consumers with volatile incomes by making income available more quickly and increasing the transparency of the payments process.[3] Efforts by banks and other financial service providers to minimize outages of computer systems and to detect and quickly address fraudulent account activity also can have a positive impact, particularly on consumers who may have few options for substituting to another account and less ability to wait for problems to be resolved.

[2] This result is consistent with the analysis from Farrell and Greig (2015) arguing that financial buffers are an important strategy for handling sizeable fluctuations in both income and consumption for households. See Diana Farrell and Fiona Greig, *Weathering Volatility: Big Data on the Financial Ups and Downs of U.S. Individuals* (JPMorgan Chase Institute, May 2015), https://www.jpmorganchase.com/content/dam/jpmorganchase/en/legacy/corporate/institute/document/54918-jpmc-institute-report-2015-aw5.pdf.

[3] For example, the Faster Payments Task Force, convened by the Federal Reserve, noted that "Unbanked and underbanked consumers might particularly benefit from faster, safe payment products with features such as faster access to funds and timely payment notification to facilitate easier cash-flow management." See Faster Payments Task Force, *The U.S. Path to Faster Payments, Final Report Part One: The Faster Payments Task Force Approach* (January 2017), https://fasterpaymentstaskforce.org/wp-content/uploads/faster-payments-final-report-part1.pdf.

Figure A. Had problem accessing funds in past 12 months (by family income and income volatility)



Note: Among adults with a bank account.

Housing and Neighborhoods

People's housing and living arrangements can affect their financial lives, access to desired amenities and resources, and overall happiness. Nearly three-quarters of adults are currently satisfied with their housing, and a similar share are satisfied with their neighborhood. However, satisfaction with either is notably lower in low-income communities. Renters, in particular, are less likely to be satisfied with their housing quality than homeowners, and some report difficulties with their landlords.

Living Arrangements

The decision of who to live with often relates to an individual's network of support. Fifteen percent of adults are living alone, and half are living in a household solely with their spouse or partner and/or children under age 18 (referred to as a nuclear family). The remaining one-third of adults have living arrangements with other people that extended beyond the traditional concept of a nuclear family. Twelve percent of adults live with their parents, 10 percent live with an adult child not in school, 7 percent live with extended family members, and 5 percent live with roommates (table 17).

For young adults, the transition from living with their parents to living independently often depends on economic circumstances. The majority of adults under age 25 still live with their parents, but that fraction falls to one-quarter in their late 20s and about 1 in 10 in their 30s (table 18). Black and Hispanic young adults (under age 30) are nearly twice as likely to live with their parents than white young adults. Adults in their late 20s who no longer live with their parents are much more likely to say that they are doing okay financially (76 percent) than those still living with their parents (54 percent).

A substantial majority of young adults living with their parents say that saving money is a reason for the living arrangement. As people age, however, the financial relationship flips for some families. Nearly two-fifths of young adults living with their parents in their late 20s provide financial assistance to their family. Of adults in their 30s who live with their parents, more than one-third choose this living arrangement at least in part to care for family members or friends.

The decision of whether to own or rent one's housing is another fundamental choice. Homeownership varies widely across the population (table 19). In 2018, 64 percent of adults own a home, 27 percent rent, and 9 percent have some other arrangement. Homeownership increases steadily with age, from nearly 3 in 10 young adults (ages 18 to 29) to 8 in 10 older adults (age 60 and older). In fact, the majority of

Table 17. People living in household

Category	Percent
Live alone	15
Spouse or partner	65
Children under age 18	26
Adult children (all in school full time)	4
Adult children (at least one not a full-time student or unknown)	10
Parents	12
Extended family	7
Roommates	5
Other	4

Note: Respondents (other than those who live alone) can select multiple answers.

Table 18. Reasons for living with parents (by age)
Percent

Category	18–21	22–24	25–29	30–39
To save money	63	83	86	60
To provide financial assistance	15	29	38	42
To care for family member or friend	13	20	25	36
To receive help with child care	3	5	8	14
Prefer living with others	31	37	33	20
Percent living with parents	**61**	**51**	**26**	**13**

Note: Reasons are among adults who live with their parents. Respondents can select multiple reasons for living with others.

Table 19. Housing tenure (by age and family income)
Percent

Characteristic	Own	Rent	Neither own nor rent
Age			
18–29	28	45	26
30–44	60	34	6
45–59	75	21	4
60+	81	16	3
Family income			
Less than $40,000	40	41	18
$40,000–$100,000	69	27	4
Greater than $100,000	88	11	1
Overall	**64**	**27**	**9**

adults over age 30 are homeowners. Young adults are the most likely to have other housing arrangements than owning or renting. Those with incomes under $40,000 are less than half as likely to be homeowners as those with incomes greater than $100,000.

Rental Affordability, Rental Repairs, and Eviction

Rental affordability is an issue for many. This is especially true for those with lower incomes, who are also more likely to rent than own their home. The median monthly rent is between $750 and $999, and among low-income renters whose income is below $40,000 per year, the median monthly rent is between $500 and $749. Over 7 in 10 low-income renters spend more than 30 percent of their monthly income on rent, which is a commonly used benchmark for measuring the financial burden of housing.[16] Among renters with incomes between $40,000 and $100,000, about one-quarter are rent burdened.

One way to assess the quality of rental housing is whether the landlord makes repairs promptly.[17] Over half of renters experienced a problem with their rental unit, such as a leak or a broken appliance, during the year prior, and one-fourth experienced at least a little difficulty working with their landlord to get the repair done. Fifteen percent of all renters (or 33 percent of those who requested a repair) experienced moderate or substantial difficulty.

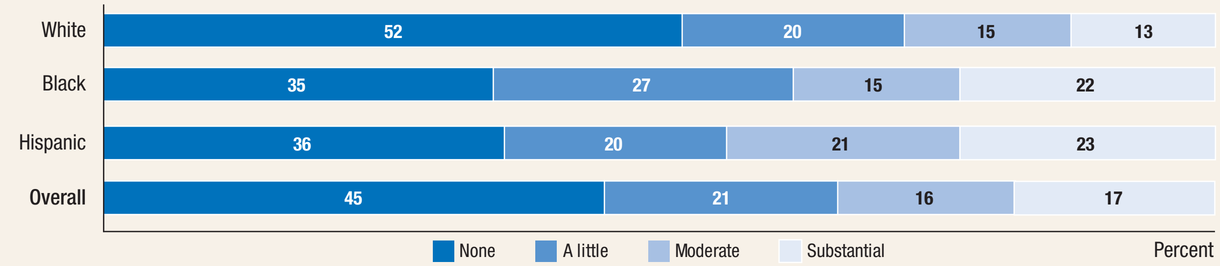
Among renters requesting a repair from their landlord, white renters are more likely to say that those repairs were completed without any difficulty. One-quarter of white renters (or half who requested a repair) had no problems getting it completed, compared to 17 percent of black renters and 14 percent of Hispanic renters. The extra burden on black and Hispanic renters shows up in the full range of difficulties to get repairs done (figure 16).

Eviction is a less common, but more acute, sign of strain among renters and among those who previously rented but now rely on others for housing. Three percent of non-homeowners were evicted or moved because of the threat of eviction in the prior two years—which represents 10 percent of all non-homeowners who moved from another rental unit over this time. These evictions contributed to slightly more moves in urban areas (11 percent) than in rural

[16] Rent-to-income ratios are calculated based on the midpoints of the ranged income and rent responses. Renters who report no income are excluded. Including those who report no income raises the fraction of rent burdened to 76 percent of low-income renters. See Jeff Larrimore and Jenny Schuetz, "Assessing the Severity of Rent Burden on Low-Income Families," FEDS Notes (Washington: Board of Governors, December 22, 2017), https://www.federalreserve.gov/econres/notes/feds-notes/assessing-the-severity-of-rent-burden-on-low-income-families-20171222.htm, for a discussion of rent burdens among low-income families.

[17] Matthew Desmond, *Evicted: Poverty and Profit in the American City* (New York: Crown, 2016), highlights the challenges of rental housing repairs among low-income renters.

Figure 16. Difficulty getting landlord to fix problems with rental unit (by race/ethnicity)



Note: Among all renters who contacted their landlord about a repair.

Figure 17. Satisfied with local neighborhood and housing characteristics

Note: Satisfaction with the cost of own house or apartment excludes those who do not own and are not paying rent.

areas (9 percent). Overall, the frequency of eviction remains unchanged from 2017 to 2018.

Satisfaction with Neighborhoods and Housing

The quality of people's neighborhood, as well as the quality of their housing, is an important marker of both their current finances and their opportunities for the future. The neighborhood affects the quality of a child's school, personal safety, and the availability of important amenities like healthy, affordable food.

Overall, 76 percent of adults are either somewhat or very satisfied with the quality of their neighborhood, and a similarly high share are satisfied with the quality of their home or apartment. Most are also satisfied with specific aspects of their neighborhood—including local schools, safety, and other amenities (figure 17).

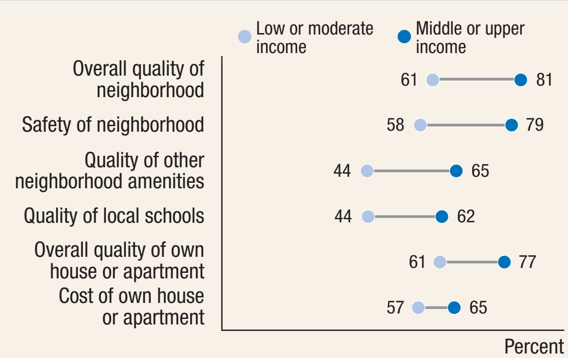
There are relatively small differences in how satisfied people are with their neighborhoods and with their housing in different parts of the country. People's satisfaction with their housing does not appear to vary much between more expensive and less expensive cities (see box 4). Additionally, people are about as satisfied with their neighborhoods in urban areas (76 percent) as in rural areas (73 percent).

There are big differences, however, in people's satisfaction with their housing across neighborhoods. Adults living in low- and moderate-income neighborhoods are much less likely to be satisfied with their neighborhood (61 percent) than those in middle- and upper-income communities (81 percent).[18] Satisfaction with specific amenities, such as neighborhood safety and the quality of local schools, also varies with neighborhood income (figure 18).

Neighborhood satisfaction is also lower among blacks and Hispanics than among whites, though this is also associated with differences in their own incomes and in the average income of their neighborhood. Eight in 10 whites are satisfied with their

[18] Low- and moderate-income neighborhoods are census tracts with median family income less than 80 percent of the national median income. Middle- and upper-income neighborhoods are those with family median income above the threshold. Neighborhood designations are calculated with the five-year averages from the 2012–16 American Community Survey. An alternate definition of low- and moderate-income neighborhoods based on average incomes relative to the surrounding area, rather than relative to national averages, produces similar results.

Figure 18. Satisfied with local neighborhood and housing characteristics (by neighborhood income)



Note: Satisfaction with the cost of own house or apartment excludes those who do not own and are not paying rent. See table 1 for definitions of low- or moderate-income neighborhoods.

Box 4. Housing Satisfaction in Expensive Cities

Who can find affordable housing in expensive cities like Washington, New York, or Los Angeles? Some researchers have begun to connect rising rents in these more expensive, "superstar cities" with the decreasing rates of mobility across metropolitan areas. Less geographic mobility can lead to persistent economic differences across the country and limit economic growth.[1]

Rising rents in more expensive cities force people to trade off the benefits of moving to economic opportunities in prosperous labor markets, on the one hand, against the higher costs of housing when those labor markets are in more expensive cities. This tradeoff may be particularly difficult for people with lower incomes since they tend to spend a higher portion of their income on housing. So it is helpful to understand how satisfied people with lower incomes are with their housing in more expensive and less expensive areas.

Despite higher housing costs, adults with low incomes relative to others in their metro or micropolitan area—low-relative income adults—report being slightly *more* satisfied with the quality of their housing and neighborhoods in more expensive cities than in less expensive cities (figure A).[2] And it does not appear that they are giving up other things to pay for housing. Adults with low-relative incomes in more expensive cities are as likely to say that they are doing at least okay financially as those in less expensive cities.

People appear satisfied with their housing in more expensive cities despite being less likely to own their homes and living in a city with higher rents. People with low-relative incomes are 4 percentage points less likely to own their own homes in expensive cities than in less expensive cities like Detroit, Charlotte, and San Antonio (figure B).[3] People, perhaps surprisingly, also are about as satisfied with the cost of their housing in a more expensive city. Again, the lower rate of homeownership does not translate to lower housing satisfaction or economic well-being.

Adults with relatively low income for their city are slightly more satisfied with their housing and neighborhoods in more expensive cities. So it seems that something besides high housing costs restricts people's geographic mobility. And it is important to understand other factors that keep people out of these higher cost cities.

Figure A. Satisfaction with housing and economic well-being among low-relative income adults (by type of city)

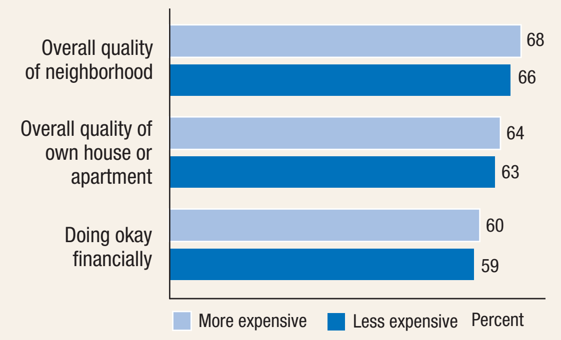
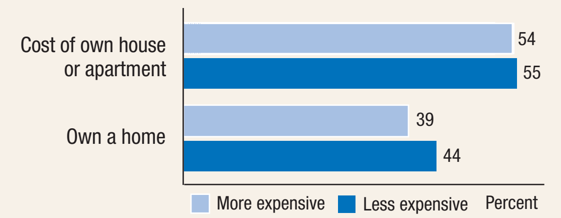


Figure B. Homeownership and satisfaction with cost of housing among low-relative income adults (by type of city)



Note: Satisfaction with the cost of own house or apartment excludes those who do not own and are not paying rent.

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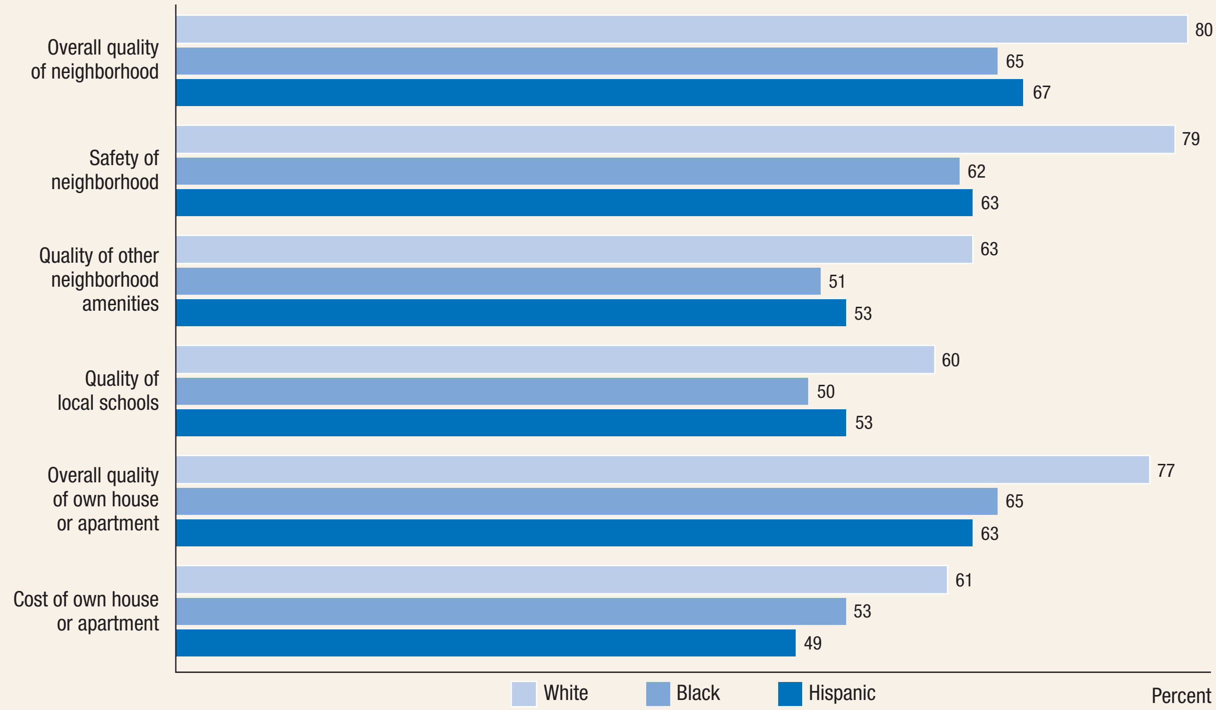
1 Several studies suggest that differences in housing costs have kept people out of economically productive areas. Most of these studies emphasize workers with lower incomes who tend to be less geographically mobile and who typically spend higher fractions of their budgets on housing. Among others, these include Chang Tsai Hsei and Enrico Moretti, "Housing Constraints and Spatial Misallocation," *American Economic Journal: Macroeconomics* (forthcoming); and Adrien Bilal and Esteban Rossi-Hansberg, "Location as an Asset," NBER Working Paper (2018).

2 "Cities," as used here, are metropolitan or micropolitan statistical areas (including suburbs) based on the boundaries used by the 2017 American Community Survey (https://www.census.gov/geographies/reference-files/time-series/demo/metro-micro/delineation-files.html), and median rents in the American Community Survey determine whether a city is more expensive or less expensive. Cities with median rents above the national median of $1,012 are classified as expensive. For example, Madison, Wisconsin, is slightly below and Nashville, Tennessee, is slightly above this number. Similarly, adults with low-relative incomes have family incomes below the median family income for SHED respondents who live in their city.

3 Neil Bhutta, Steven Laufer, and Daniel Ringo also find that homeownership among lower-income households is particularly sensitive to rising house prices in "Are Rising Home Values Restraining Homebuying for Lower-Income Families?" *FEDS Notes* (Washington: Board of Governors, September 28, 2017), https://www.federalreserve.gov/econres/notes/feds-notes/are-rising-home-values-restraining-home-buying-for-lower-income-families-20170928.htm.

Figure 19. Satisfied with local neighborhood and housing characteristics (by race/ethnicity)



Note: Satisfaction with the cost of own house or apartment excludes those who do not own and are not paying rent.

neighborhood, compared to two-thirds of blacks and Hispanics. The racial gaps in neighborhood satisfaction extend to specific amenities, including local schools and safety (figure 19).

In evaluating the desirability of neighborhoods, people focus on different amenities that are most important to their lifestyle. The importance of some specific amenities varies by age.

People of all ages think that it is at least moderately important to have a grocery store in their neighborhood and to have shops or restaurants nearby. However, while a local bank or credit union is important to those of all ages, it is less important to younger age cohorts than it is to those over age 60. Similarly, older age groups consider it more important to have a church or place of worship nearby. Conversely, younger adults—and especially those ages 30 to

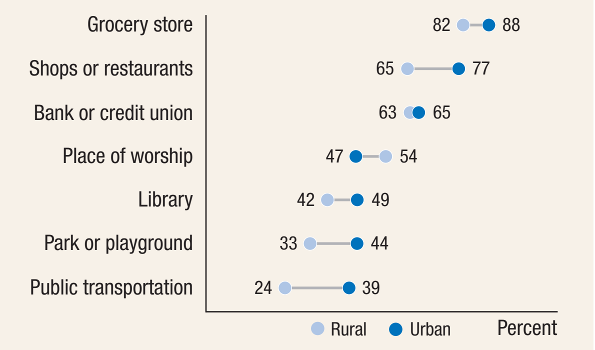
Table 20. Neighborhood amenities that are moderately or very important (by age)
Percent

Category	18–29	30–44	45–59	60+	Overall
Grocery store	88	84	87	90	87
Shops or restaurants	75	74	75	76	75
Bank or credit union	60	57	66	75	65
Place of worship	38	42	50	57	48
Library	47	52	46	48	48
Park or playground	49	53	40	32	43
Public transportation	39	38	36	34	37

44—place a higher premium on local parks and playgrounds than do older individuals (table 20).

The importance of neighborhood amenities also differs across urban and rural environments. Rural residents place a greater importance on a local church or place of worship than urban residents, but are less likely than urban residents to cite each of the other amenities considered as important to their location decision (figure 20).

Figure 20. Neighborhood amenities that are moderately or very important (by urban/rural residence)



Higher Education

A college education is widely recognized as a path to higher income and greater economic well-being. Indeed, two-thirds of graduates from private not-for-profit and public institutions view the financial benefits of their education as larger than the costs. To those who started college but did not complete their degree and to those who attended private for-profit institutions, however, the net benefits of their education are less clear-cut.

Value of Higher Education

Among all adults, 7 in 10 have ever enrolled in an educational degree program beyond high school and one-third have received a bachelor's degree. Economic well-being rises strongly with education. Those without any college are the least likely to be doing well financially. Associate degree holders are somewhat more likely to be at least doing okay financially than those with some college or less, although a larger increase is associated with a completion of a bachelor's (figure 21).

Among those who have attended at least some college, over half say that the lifetime financial benefits of their higher education exceed the financial costs, versus 1 in 5 who say that the costs are higher. The rest see the benefits as about the same as the costs.

Table 21. Self-assessed value of higher education (by education level)
Percent

Education	Benefits larger	About the same	Costs larger
Some college, not enrolled, and no degree	30	37	29
Associate degree	48	33	17
Bachelor's degree or more	66	17	16

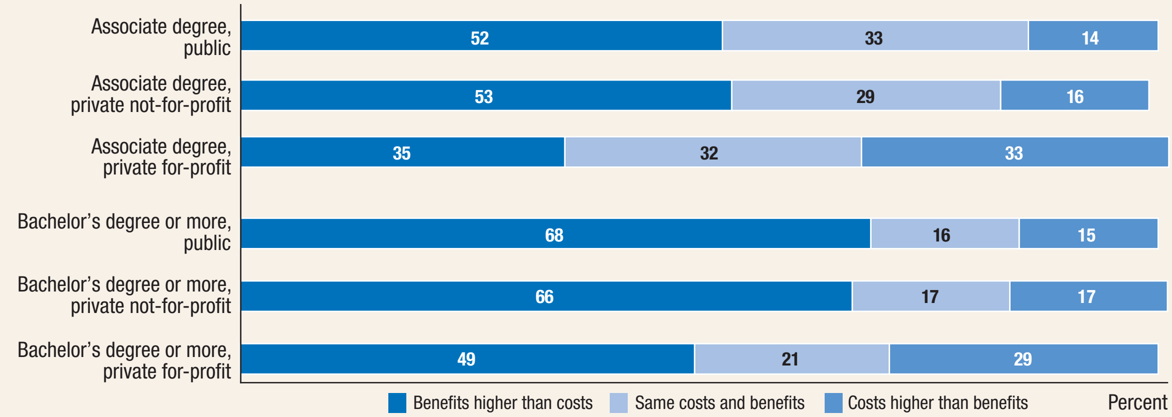
Note: Among adults who attended college.

These self-assessments of the value of education have changed little since the question was first asked in 2014.

The self-assessed value of higher education, while generally positive, depends on several aspects of a person's educational experience. Most importantly, those who complete their program and receive a degree are more likely to see net benefits than non-completers. For example, among those who previously attended college and did not complete at least an associate degree, 3 in 10 say that the benefits of their education were greater than the cost. This fraction jumps to nearly half of those with just an associate degree and two-thirds among those with at least a bachelor's degree (table 21).

Figure 21. At least doing okay financially (by education)

Figure 22. Self-assessed value of higher education (by degree and institution type)



Note: Among adults who completed at least an associate or bachelor's degree. Degree holders are asked specifically about the value of their associate or bachelor's degree, rather than their higher education as a whole.

The value of higher education also differs by the type of institution attended.[19] Two-thirds of those with bachelor's degrees from public and private not-for-profit institutions see their educational benefits as greater than their costs, versus half from for-profit institutions (figure 22).

This difference is not driven by for-profit schools being less selective in the students they admit. Public and private not-for-profit institutions that are less selective—based on lower standardized test scores of admitted students—also outperform less selective for-profit institutions on perceived value.[20] Among students who attended less selective institutions, 55 percent of graduates from public or private not-for-profit schools say the benefits of their education outweigh the costs, well above the 36 percent share of graduates from for-profit institutions with this view.

The self-assessed value of higher education also varies by field of study (figure 23). Among those who completed a bachelor's degree, the share reporting benefits larger than costs range from 81 percent for engineering to 55 percent for vocational or technical fields and the humanities.

Older adults are more likely to report net benefits from their education than are younger adults. Nearly 8 in 10 individuals age 50 or older with a bachelor's degree say that the lifetime benefits of their degree are larger than the costs, versus over half of those under age 30 (figure 24). The age differences could reflect smaller net benefits from education among younger graduates, or the fact that younger graduates have not had enough time to fully experience the financial benefits of their education.

Look Back on Education Decisions

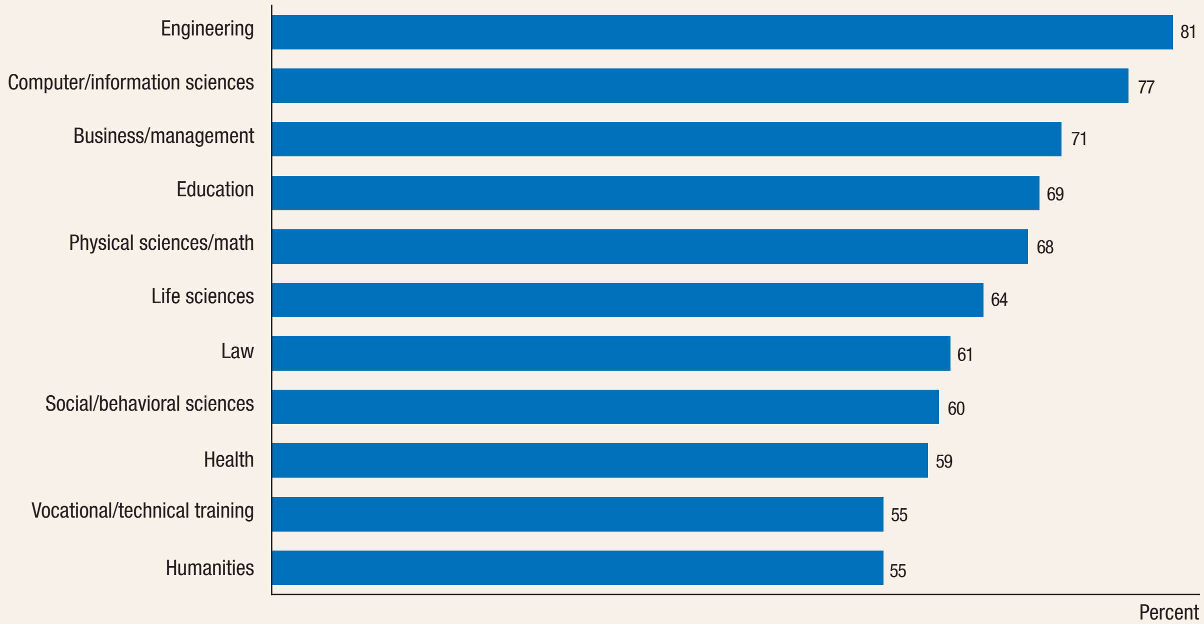
Most people value the education they have, yet with the benefit of hindsight and life experience, it is also common to think that different educational decisions would have been better. Among those without a college degree, nearly three-quarters would like to have completed more education, and 12 percent would rather have completed less education in general or not have attended college (table 22). The strong desire for additional education is similarly true among those who feel that the education they received did not pay off.

Likewise, among those who completed at least an associate degree, the most common desired change (40 percent) is to have completed more education, followed by choosing a different field of study (36 percent). Nine percent of those with an associate

[19] Individuals do not self-report the type of institution in the survey. Instead, the institution type is assigned by matching the name and location of the college reported by the individual with data from the Center on Postsecondary Research at the Indiana University School of Education.

[20] Selective institutions, as defined by the Carnegie Classification, are those whose first-year students' test scores are in the middle two-fifths of baccalaureate institutions; more selective institutions are in the top fifth of baccalaureate institutions. See also "Carnegie Classification of Institutes of Higher Education," web page, http://carnegieclassifications.iu.edu/. The remainder are referred to here as "less selective" institutions.

Figure 23. Benefits of education outweigh costs (by field of study)



Note: Among adults who completed at least a bachelor's degree.

degree, and 6 percent of those with at least a bachelor's degree, would prefer to have had less education.

The reassessment of education decisions also varies by the type of institution attended. Half of those who attended a private for-profit institution say they would like to have attended a different school, versus nearly one-fourth of those attending a private not-for-profit or public institution (figure 25). This difference remains even after accounting for the selectiveness of the institution, level of education completed, the parents' level of education, and demographic characteristics of the student.

College Attendance

Having parents who are college graduates noticeably increases one's own likelihood of obtaining a college degree. Among young adults (ages 22 to 29) who have a parent with a bachelor's degree, 7 in 10 received a bachelor's degree themselves, and less than 1 in 10 have a high school degree or less (figure 26).[21]

[21] Individuals ages 18 to 21 are excluded here from the category "young adults" to reflect that many individuals in that age cohort have not yet completed their education. Results are also similar if individuals up through age 24 are excluded.

Figure 24. Lifetime financial benefits of bachelor's degree exceed the costs (by age)

Note: Among adults who completed at least a bachelor's degree.

Table 22. Changes would make now to earlier education decisions (by education)
Percent

Change	No degree, not enrolled	Associate degree	At least a bachelor's degree
Completed more education	73	64	33
Not attended college or less education	12	9	6
Chosen a different field of study	39	33	37
Attended a different school	34	23	22

Note: Among adults who completed at least some college. "Degree" denotes at least an associate degree or a bachelor's degree. Respondents can select multiple answers.

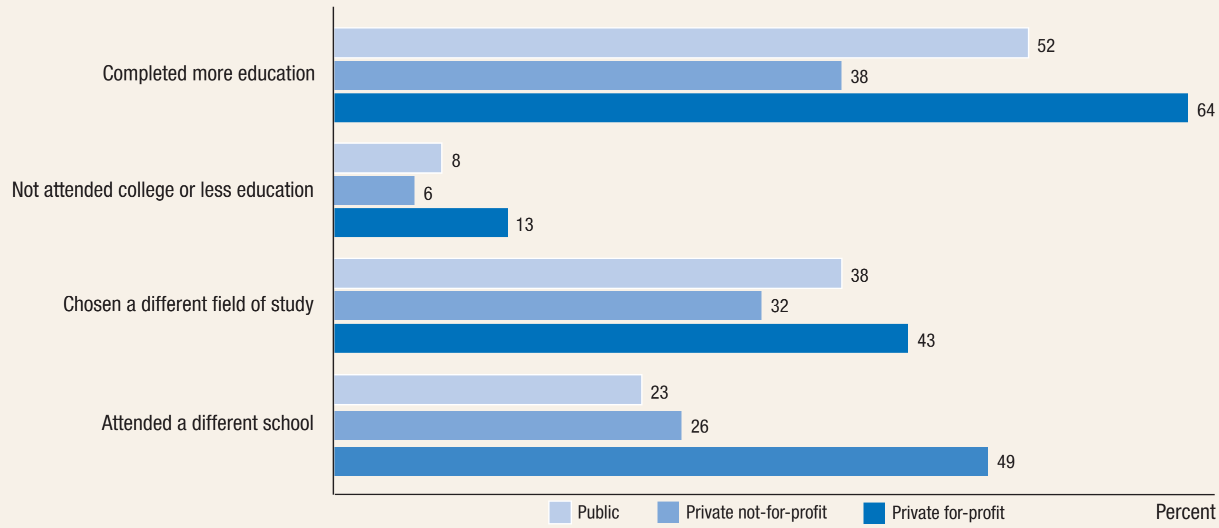
In contrast, 17 percent of young adults whose parents did not attend college obtained a bachelor's degree, and 6 in 10 have a high school degree or less.

The type of institution attended also varies with parental education. Young adults whose parents did not attend college are more likely to attend a private for-profit institution than those who have a parent with a bachelor's degree—13 percent versus 2 percent, respectively (figure 27).[22]

Across all racial and ethnic groups, the majority of young adults who attended college went to public institutions. Yet more than twice as many Hispanic young adults who attended college went to a for-profit institution compared to whites, and five times as many black college-goers did so (figure 28). Differences in the quality of institutions attended likely contribute to disparities in economic well-being by race and ethnicity, even within educational groups, as discussed elsewhere in this report.

[22] This gap is wider among people currently in their 30s, among whom over one-fifth of those with parents who did not go to college attended a for-profit, versus 7 percent of those with a parent who has a bachelor's degree.

Figure 25. Changes would make now to earlier education decisions (by institution type)



Note: Among adults who completed at least some college. Respondents can select multiple answers.

Figure 26. Educational attainment of young adults ages 22–29 (by parents' education)

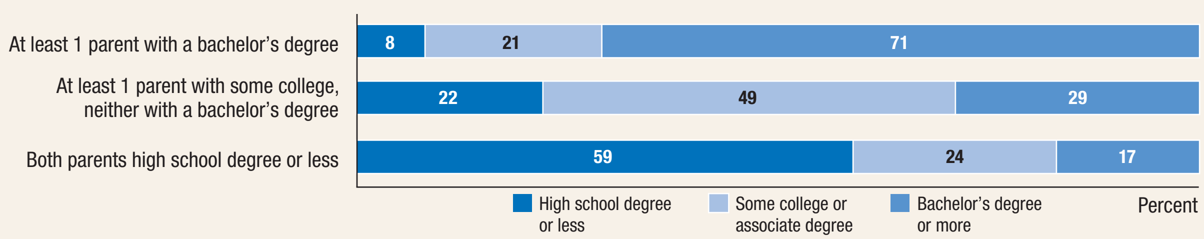
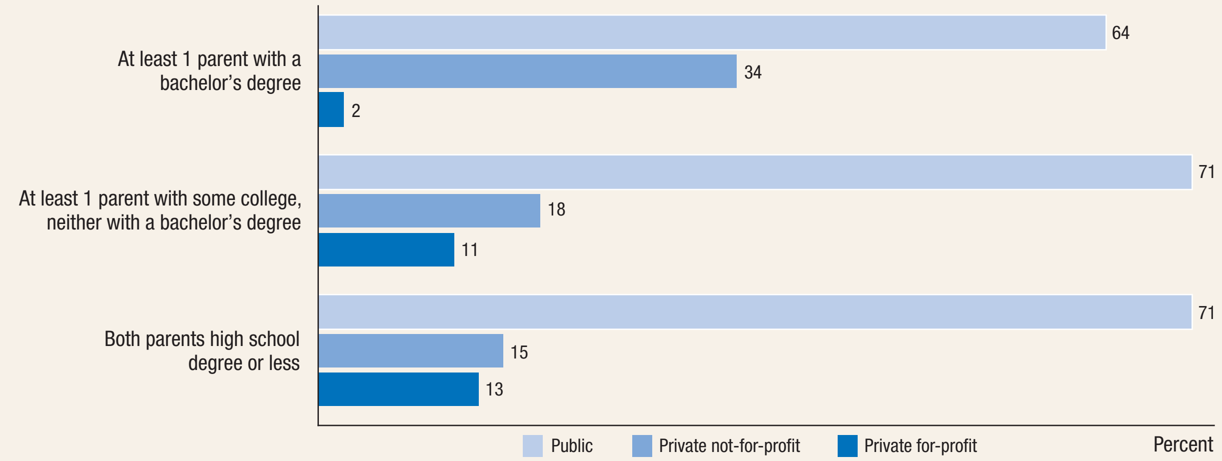
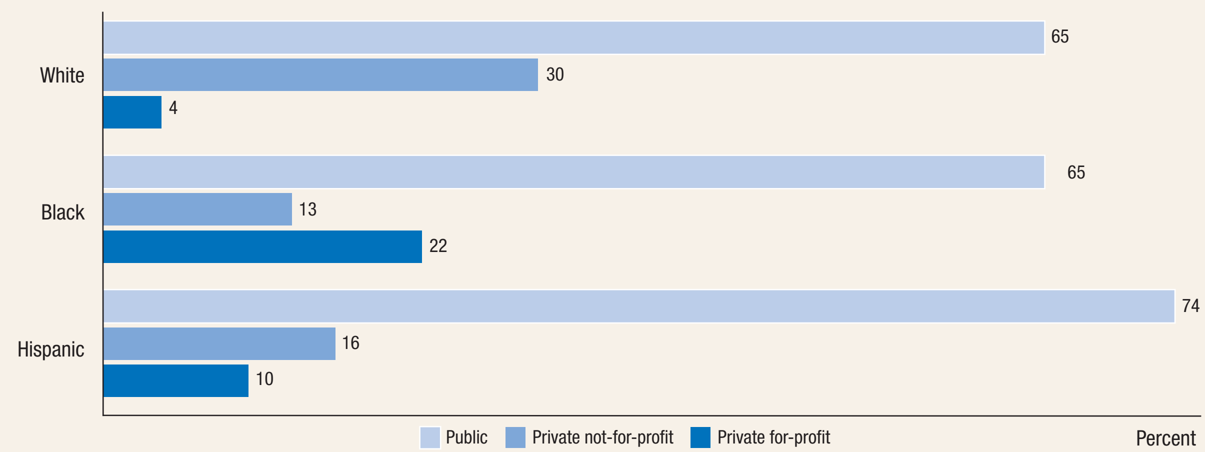


Figure 27. Institutions attended by young adults ages 22–29 (by parents' education)



Note: Among adults who completed at least some college.

Figure 28. Institutions attended by young adults ages 22–29 (by race/ethnicity)



Note: Among adults who completed at least some college.

No College Degree

A wide range of reasons including financial costs, life events, or a lack of interest can explain why some people do not attend college or complete a degree (table 23). Financial considerations, including costs being too expensive or a need to earn money, are the most common reasons, cited by 67 percent of young adults who did not attend college and 62 percent of those who did not complete their degree. A lack of interest in college, a desire to work, or family responsibilities such as child care are also important factors for some.

In some cases, women and men have different reasons for not attending college or not completing a college degree. For example, women are much more likely than men to cite family responsibilities as a factor. In contrast, men are more likely than women to indicate a lack of interest in college (table 24).

Table 23. Reasons for not attending college or not completing college degree
Percent

Reason	Did not attend college	Did not complete degree
Financial considerations		
Too expensive	47	39
Needed to earn money	38	48
Did not think benefits outweighed costs	23	19
Family responsibilities		
Had to take care of child(ren)	15	22
Supported or cared for parents or siblings	8	5
Lack of interest in college, desire to work		
Simply was not interested in college	29	30
Wanted to work	18	31
Educational ability		
Was not admitted	1	n/a
Low grades	n/a	15
Illness or health issues	13	13
Other	2	7

Note: Among adults ages 22 to 29. Among those who did not attend college or who went to college but did not complete their degree and are not currently enrolled in school. Respondents can select multiple answers.

n/a Not applicable.

Table 24. Reasons for not attending college or not completing college degree (by gender)
Percent

Reason	Men	Women
Financial considerations		
Too expensive	40	47
Needed to earn money	37	47
Did not think benefits outweighed costs	25	18
Family responsibilities		
Had to take care of child(ren)	5	30
Supported or cared for parents or siblings	6	6
Lack of interest in college, desire to work		
Simply was not interested in college	37	23
Wanted to work	25	21
Educational ability		
Was not admitted	*	2
Low grades	14	16
Illness or health issues	14	12
Other	1	7

Note: Among adults ages 22 to 29. Among those who did not attend college or who went to college but did not complete their degree and are not currently enrolled in school. Respondents can select multiple answers.

* Less than 1 percent.

Student Loans and Other Education Debt

Fifty-four percent of young adults who went to college took on some debt, including student loans, for their education. Repayment of this debt can be challenging. In 2018, 2 in 10 of those who still owe money are behind on their payments—little changed from the prior year. Individuals who did not complete their degree or who attended a for-profit institution are more likely to struggle with repayment than those who completed a degree from a public or private not-for-profit institution, even including those who took on a relatively large amount of debt.

Overview

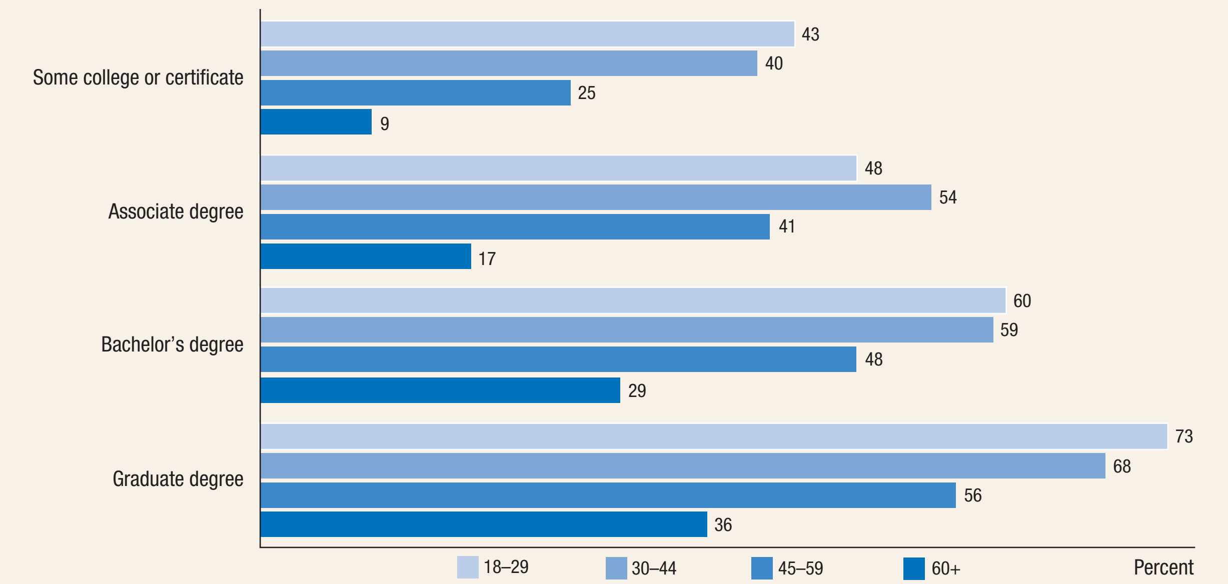
Forty-three percent of those who attended college, representing 30 percent of all adults, have incurred at least some debt for their education. This includes 22 percent of college attendees who still owe money and 21 percent who have already repaid their debt.

Adults under the age of 30 who attended college are more likely to have taken out loans than older adults, consistent with the upward trend in educational borrowing over the past several decades (figure 29).[23]

Many forms of debt finance education. Student loans are by far the most common form, held by 93 percent of those with their own education debt outstanding. In addition, 31 percent have some other form of debt for their education, including 24 percent who have borrowed with credit cards, 7 percent with a home equity line of credit, and 12 percent with some other form (table 25). The typical amount

[23] Student loan borrowing has declined since its peak in 2010–11 but remains substantially above the levels from the mid-1990s (Sandy Baum, Jennifer Ma, Matea Pender, and Meredith Welch, *Trends in Student Aid 2017* (New York: The College Board, 2017), https://trends.collegeboard.org/sites/default/files/2017-trends-student-aid.pdf).

Figure 29. Acquired debt for own education, including repaid (by age and highest degree completed)



Note: Among adults who attended college.

Table 25. Type of education debt (by whose education funded)
Percent

Form of debt	Own education	Child's/ grandchild's education
Student loan	93	81
Credit card	24	15
Home equity loan	7	11
Other loan	12	9

Note: Among adults who have at least some debt outstanding for their own education or a child's or grandchild's education. Some people have more than one type of debt.

of education debt in 2018 among those with any outstanding was between $20,000 and $24,999.[24]

Nearly 3 in 10 adults with outstanding education debt are not currently required to make payments on their loans. Such deferments are common for those still in college. Of those who are making payments, the typical monthly payment is between $200 and $299 per month.

Education debt is also taken out to assist family members with their education (either through a co-signed loan with the student or a loan taken out independently). Although this is less frequent than borrowing for one's own education, 5 percent of adults owe money for a spouse's or partner's education, and 6 percent have debt that paid for a child's or grandchild's education. Similar to debt outstanding for the borrower's education, debt for a child's or grandchild's education can be in forms other than a student loan (table 25).

Student Loan Payment Status

Among those with outstanding student loans from their own education, 2 in 10 adults are behind on their payments. Those who did not complete their degree are the most likely to be behind. Thirty-seven percent of adults with college student loans outstanding, not enrolled, and less than an associate degree are behind. This compares to 21 percent of borrowers with an associate degree. The delinquency rate is even lower among borrowers with a bachelor's degree (10 percent) or graduate degree (6 percent).

Perhaps counterintuitively, those with more debt are not more likely to have difficulty with repayments. This is likely to be the case because the level of education, and the associated earning power, generally rise with debt levels. Eighteen percent of borrowers with less than $10,000 of outstanding debt, and 22 percent of those with between $10,000 and $24,999 of debt, are behind on their payments. Among those with $100,000 of debt or more, 16 percent are behind on payments.

Among those who ever incurred debt for their education, including those who have completely repaid that debt, 10 percent are currently behind on their payments, 43 percent have outstanding debt and are current on their payments, and 48 percent have completely paid off their loans.

Borrowers who were first-generation college students are more likely to be behind on their payments than those with a parent who completed college.[25] Among borrowers under age 30, first-generation college students are more than twice as likely to be behind on their payments as those with a parent who completed a bachelor's degree (figure 30).

Difficulties with repayment also vary by race and ethnicity. Black and Hispanic education borrowers are more likely than white borrowers to be behind on their loan repayment and are also less likely to have repaid their loans (figure 31). These patterns partly reflect differences in rates of degree completion, wages, and family support.

Repayment status also differs by the type of institution attended. Over one-fifth of borrowers who attended private for-profit institutions are behind on student loan payments, versus 8 percent who attended public institutions and 5 percent who attended private not-for-profit institutions (table 26).

[24] Education debt levels and monthly payments are asked in ranges rather than exact dollar amounts.

[25] First-generation college students are defined here as those who do not have at least one parent who completed a bachelor's degree.

Greater difficulties with loan repayment among attendees of for-profit institutions may partly reflect the lower returns on these degrees.[26] It could also relate to differences in the aptitude and educational preparation of students across institutions, which in turn could affect earnings potential and repayment ability.

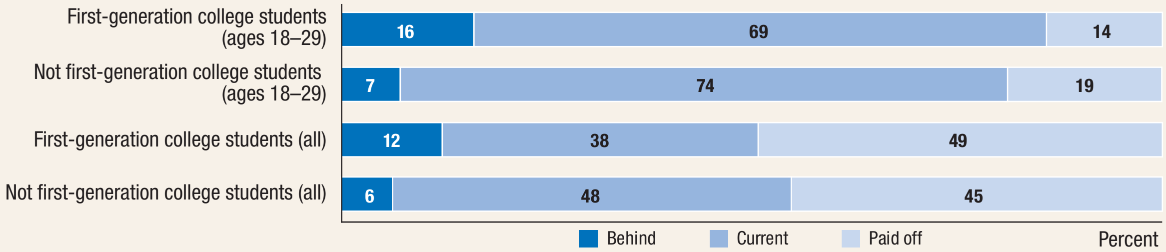
[26] See David J. Deming, Claudia Goldin, and Lawrence F. Katz, "The For-Profit Postsecondary School Sector: Nimble Critters or Agile Predators?" *Journal of Economic Perspectives* 26, no. 1 (Winter 2012): 139–64, for a discussion of the rates of return by education sector.

Table 26. Payment status of loans for own education (by institution type)
Percent

Characteristic	Behind	Current	Paid off
Public	8	44	48
Private not-for-profit	5	42	53
Private for-profit	22	40	38
Overall	**8**	**43**	**48**

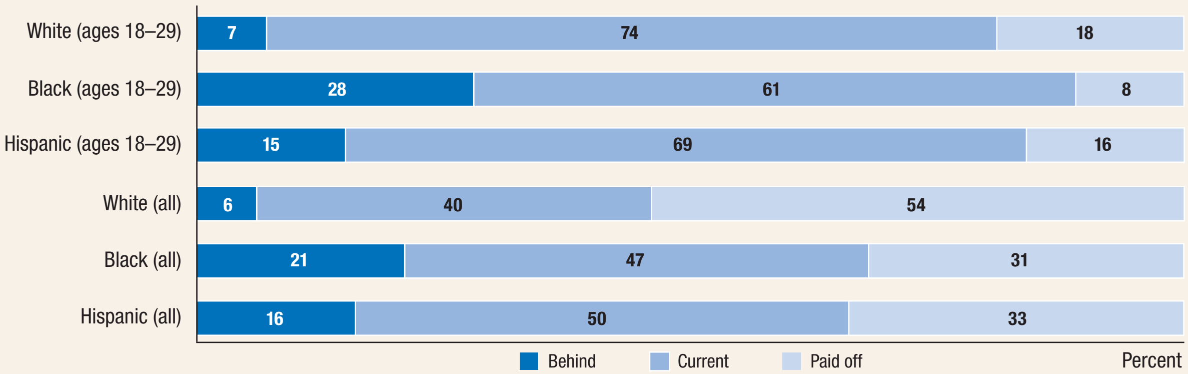
Note: Among adults who borrowed to pay for their own education.

Figure 30. Payment status of loans for own education (by parents' education and current age)



Note: Among adults who borrowed for their own education.

Figure 31. Payment status of loans for own education (by current age and race/ethnicity)



Note: Among adults who borrowed for their own education.

Retirement

Many adults are struggling to save for retirement and feel that they are not on track with their savings. While preparedness for retirement increases with age, concerns about inadequate savings are still common for those near retirement age. Current retirees are, on average, managing somewhat better financially than non-retirees, but economic well-being in retirement varies substantially with the reason for retirement.

Retirement Savings

Because retirement saving strategies differ by circumstances and age, survey respondents are asked to assess whether or not they feel that they are on track, however they define that for themselves. Thirty-six percent of non-retired adults think their retirement saving is on track, 44 percent say it is not on track, and the rest are not sure.

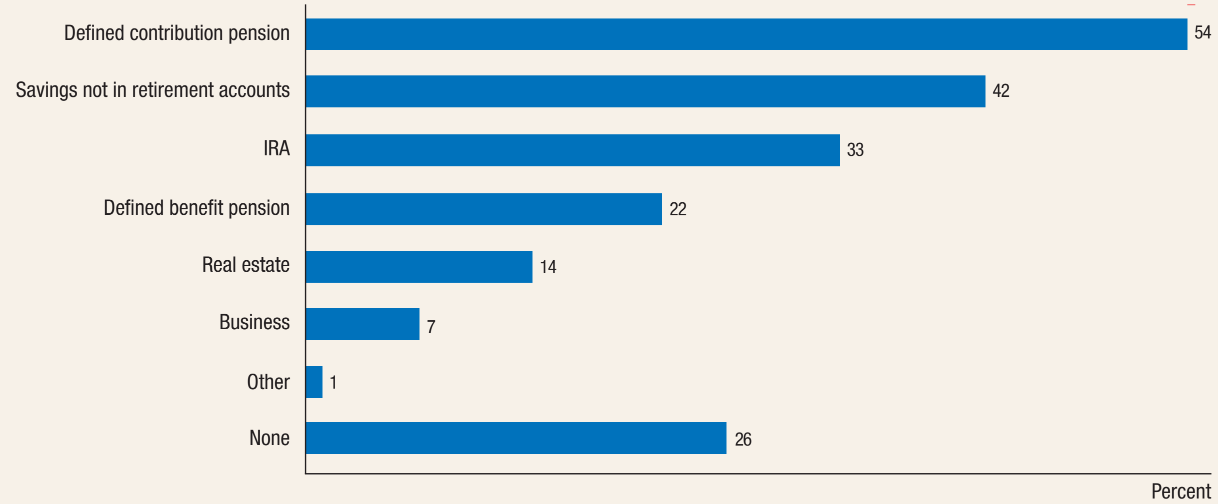
The amount currently saved for retirement is another way to assess preparedness. One-quarter of the non-retired indicate that they have no retirement savings or pension whatsoever. Of the non-retired age 60 and older, 13 percent have no retirement savings or pension.

Among those non-retirees who do have retirement savings, a "defined contribution" plan, such as a 401(k) or 403(b) plan, is the most common type. Fifty-four percent of non-retirees have money in this form (figure 32). These accounts are more than twice as frequent as traditional "defined benefit" plans, such as a pension, which are held by 22 percent of non-retirees.

Older adults are more likely to have retirement savings and to view their savings as on track than younger adults. Nevertheless, even among non-retirees in their 60s, 13 percent do not have any retirement savings and 45 percent think their retirement savings are on track (figure 33).

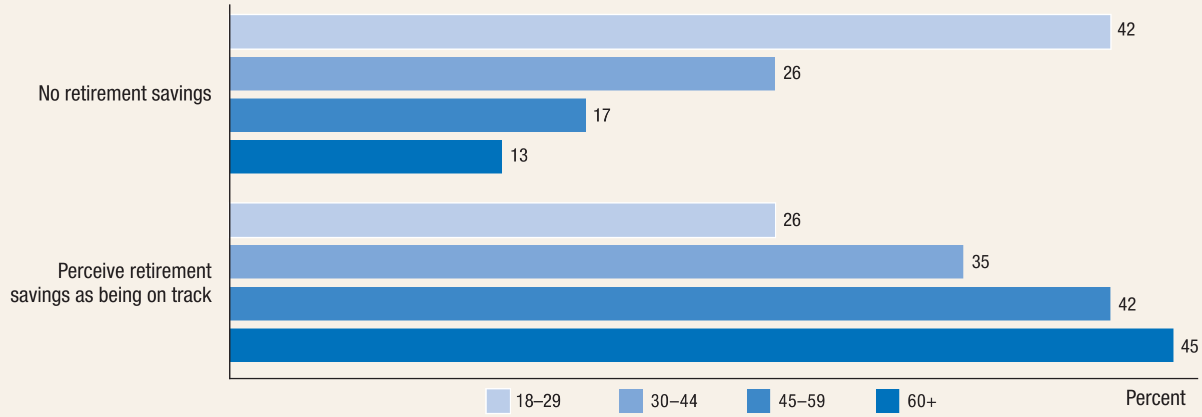
Additionally, retirement savings differ by race and ethnicity. Blacks and Hispanics are more likely than whites to have no retirement savings, and are less

Figure 32. Forms of retirement savings among non-retirees



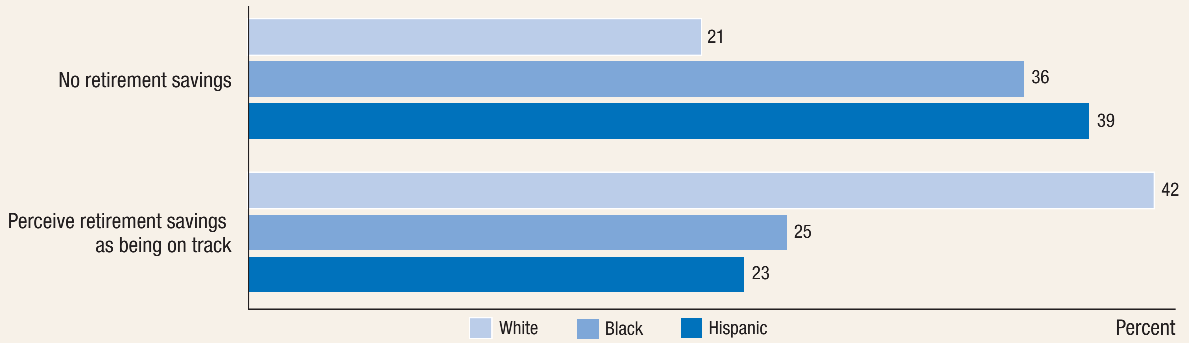
Note: Among non-retirees. Respondents can select multiple answers.

Figure 33. Lack of retirement savings and self-assessed preparedness (by age)



Note: Among non-retirees.

Figure 34. Lack of retirement savings and self-assessed preparedness (by race/ethnicity)



Note: Among non-retirees.

likely to view their retirement savings as on track (figure 34). This partly reflects the fact that blacks and Hispanics are, on average, younger than whites; however, even within age cohorts, significant differences remain in retirement savings by race and ethnicity.

Self-assessments of retirement preparedness vary with the amount of current savings and with time remaining until retirement. Young adults under age 30 typically believe that their savings are on track if they have at least $10,000 set aside for retirement (table 27).[27] The amount of retirement savings required for most to report being on track increases with age. Adults ages 45 to 59 who say their retirement savings are on track typically have at least $250,000 saved.

Just over 2 in 10 non-retirees under age 45 have retirement savings that meet their age-specific "on track" thresholds. The fraction rises with age to 27 percent of adults ages 45 to 59. The threshold for most to view savings as on track rises more rapidly

Table 27. Retirement savings in self-directed accounts are on track (by age)

Category	18–29	30–44	45–59
Amount seen as on track by majority	$10,000 or more	$100,000 or more	$250,000 or more
Percent with on track amount saved	22	22	27

Note: Among non-retirees. Value of any defined benefit pensions, real estate, or business not included in the retirement savings amounts.

27 These results only refer to non-retired adults with retirement savings in self-directed accounts, including 401(k)s, IRAs, and savings outside of retirement accounts.

with age than the fraction reaching that level of retirement savings.

Some people withdraw money from their retirement accounts early for purposes other than retirement, despite the fact that they may incur a substantial tax penalty. Overall, 5 percent of non-retirees have borrowed money from their retirement accounts in the prior year, 4 percent have permanently withdrawn funds, and 1 percent have done both. Those who have withdrawn early are less likely to view their retirement savings as on track than those who have not—27 percent versus 37 percent.

Investment Decisions and Financial Literacy

Those with self-directed retirement savings (nearly 7 in 10 non-retired adults) have to make decisions about how the money is invested. The level of comfort in managing these investments varies. Six in 10 non-retirees with these accounts expressed low levels of comfort in making investment decisions with their retirement accounts.

On average, women of all education levels, and less-educated men, are less comfortable managing their retirement investments (figure 35). While 58 percent of men with at least a bachelor's degree are mostly or very comfortable making these investment decisions, 38 percent of men with a high school degree or less are that comfortable. Women with any level of education are less comfortable making investment decisions than men. Thirty-two percent of women with a bachelor's degree are comfortable managing their investments. Women's comfort with investing does rise with additional educational attainment, but this increase is markedly more muted than is the case with men.

Self-assessed comfort in financial decisionmaking may or may not correlate with actual knowledge about how to do so. To get some sense of individuals' financial acumen, respondents are asked five questions commonly used as measures of financial literacy (table 28).[28] The average number of correct answers is 2.8, and 22 percent of adults get all five correct.

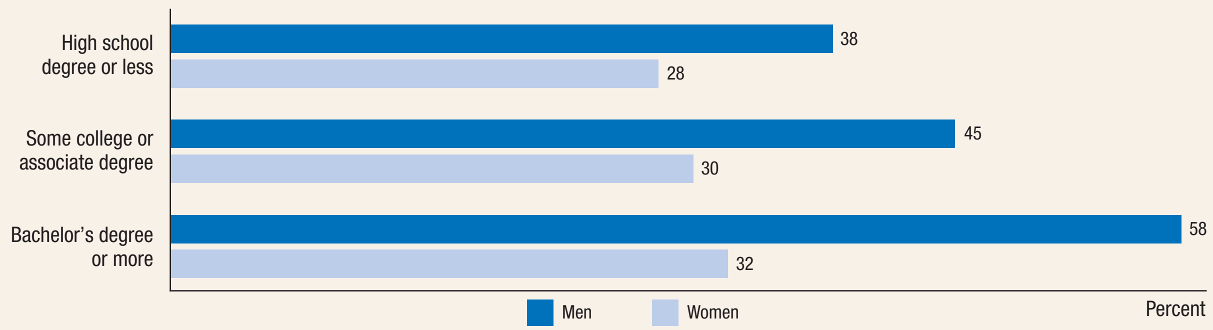
Using these measures, it appears that those expressing more comfort managing their retirement accounts also demonstrate more financial knowledge. Among those who have self-directed retirement accounts, those who express decisionmaking comfort answer more questions (3.7 out of 5) correctly, on average, than those who express little or no comfort (2.9 out of 5) (table 29).

Notably, the number of incorrect answers does not vary with investment comfort. Instead, the number of "don't know" responses falls as investment comfort rises. Overall, however, non-retirees with such accounts still answer more financial literacy questions correctly, on average, than either non-retirees who do not have such accounts or people who are already retired.

Gender differences in financial literacy mirror differences in being comfortable with the investment

[28] Three of these questions were developed by Annamaria Lusardi and Olivia Mitchell (see "Financial Literacy around the World: An Overview," *Journal of Pension Economics and Finance* 10, no. 4 (2011): 497–508) and have been widely used to study financial literacy.

Figure 35. Mostly or very comfortable investing self-directed retirement savings (by gender and education)



Note: Among non-retirees with a self-directed retirement account.

Table 28. Financial literacy questions
Percent

Question	Correct	Incorrect	Don't know
Housing prices in the United States can never go down. (False)	61	17	22
Buying a single company's stock usually provides a safer return than a stock mutual fund. (False)	47	3	49
Considering a long time period (for example, 10 or 20 years), which asset described below normally gives the highest returns? (Stocks)	42	18	39
Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account? (Less than today)	59	12	27
Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow? (More than $102)	70	11	18
Overall	**56**	**12**	**31**

Note: Correct answers provided in parentheses. For each question, less than 2 percent of respondents did not reply.

Table 29. Financial literacy (by retirement savings and comfort investing)
Number of answers out of five

Investment comfort and presence of retirement savings	Correct	Incorrect	Don't know
Has self-directed retirement savings	3.2	0.5	1.2
Mostly or very comfortable investing	3.7	0.5	0.8
Not or slightly comfortable investing	2.9	0.6	1.5
No self-directed retirement savings	1.8	0.7	2.5
Retired	2.9	0.7	1.5
Overall	**2.8**	**0.6**	**1.6**

decisions. Women, on average, answer fewer financial literacy questions correctly (2.5) than men (3.1). Women are also more likely to select "don't know" (1.9) than men (1.3). As a result, women, on average, express less comfort making retirement investment decisions and exhibit somewhat lower levels of financial literacy. Some evidence suggests that one driver of this gender difference may relate to different levels of experience with financial decisions.[29]

[29] Some of the gender gap in financial literacy might be due to specialization in financial tasks within a household, with women being less likely to handle the finances. Joanne W. Hsu finds that women's financial literacy increases after the death of a spouse (see "Aging and Strategic Learning: The Impact of Spousal Incentives on Financial Literacy," *Journal of Human Resources* 51, no. 4 (Fall 2016): 1036–67).

Table 30. Reasons for when to retire (by age retired)
Percent

Reason	Don't know	61 or earlier	62–64	65+
Wanted to do other things	47	55	56	58
Wanted to spend more time with family	50	51	53	55
Poor health	57	40	31	27
Family responsibilities	44	32	31	25
Didn't like the work	30	30	24	21
Forced to retire or lack of available work	35	21	24	18

Note: Among retirees. Respondents can select multiple answers.

Well-Being in Retirement

Over one-quarter of adults consider themselves to be retired. This report's discussion of current retirees includes everyone who considers themselves to be retired, even though some also report that they are still working in some capacity. Seventeen percent of retirees (5 percent of all adults) say that they had done some work for pay or profit in the prior month. Retirees are somewhat more likely to report that they are at least doing okay financially (78 percent) than non-retirees (74 percent). Retirees who are still working report even higher levels of well-being.

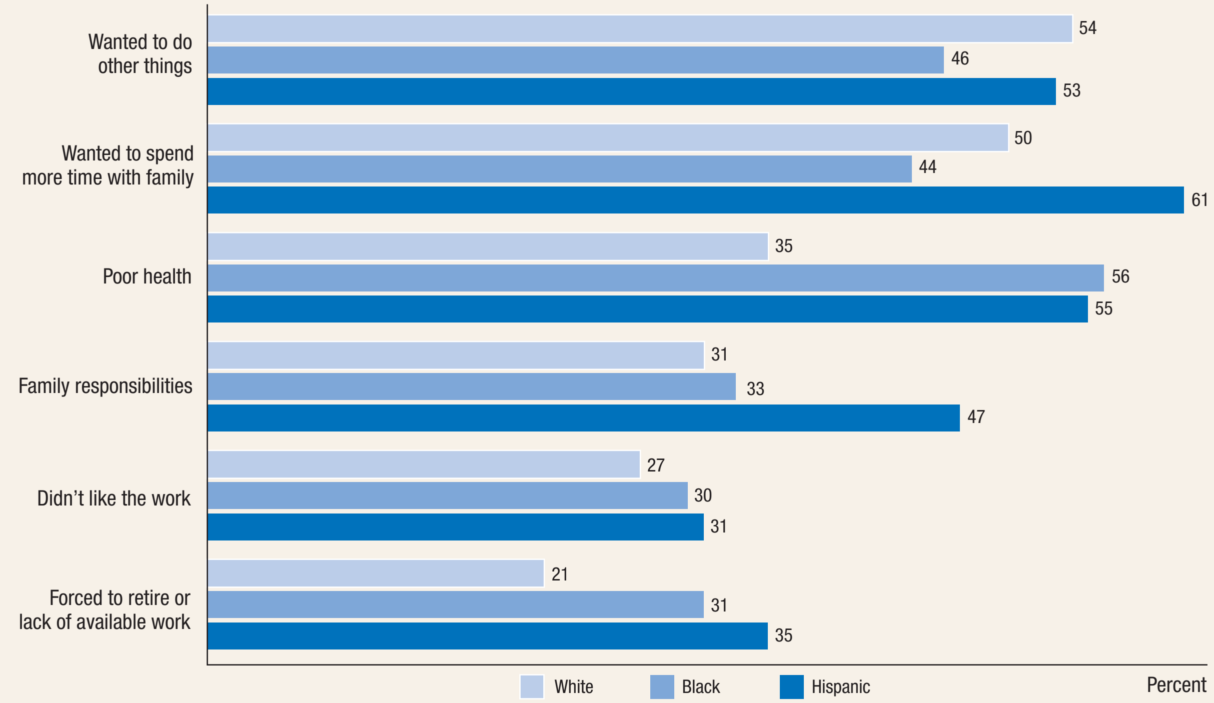
Nearly half of retirees in 2018 retired before age 62, and one-fourth retired between the ages of 62 and 64.[30] Average retirement ages differ by race and ethnicity, with black and Hispanic retirees more likely to have retired before age 62 (61 percent and 55 percent, respectively) than white retirees (45 percent). Overall, early retirees report similar levels of economic well-being as later retirees.

In deciding when to retire, a desire to do other things than work, or to spend time with family, are the most common factors. In addition, 4 in 10 retirees before age 62—and 3 in 10 between ages 62 and 64—say poor health contributed to their retirement. More than one-fifth of those who retired before age 65 say the lack of available work contributed to their decision (table 30).

Economic well-being varies considerably by the reasons for retirement. Nine in 10 retirees who say doing something else was very important in their retirement decision are at least doing okay finan-

[30] The tabulations of retirement ages exclude the 14 percent of retirees who do not know the age at which they retired.

Figure 36. Reasons for early retirement (by race/ethnicity)



Note: Among retirees who retired before age 65.

cially, versus more than half of those who retired due to poor health.

Among blacks and Hispanics who retired early (before age 65), health concerns are a more common factor than among white early retirees (figure 36). Conversely, whites who retired early are more likely to have retired, at least in part, because they wanted to do other things than work.

Description of the Survey

The Survey of Household Economics and Decisionmaking was fielded from October 11 through November 12, 2018. This is the sixth year of the survey, conducted annually in the fourth quarter of each year since 2013.[31] Staff of the Federal Reserve Board write the survey questions in consultation with other Federal Reserve System staff, outside academics, and professional survey experts.[32]

Ipsos, a private consumer research firm, administers the survey using its KnowledgePanel, a nationally representative probability-based online panel. Ipsos selects respondents for the KnowledgePanel based on address-based sampling (ABS).[33] SHED respondents are then selected from this panel.

Survey Participation

Participation in the 2018 SHED depends on several separate decisions made by respondents. First, they agreed to participate in Ipsos' KnowledgePanel and then they completed an initial demographic profile survey. According to Ipsos, 12.5 percent of individuals contacted to join KnowledgePanel agreed to join (recruitment rate), and 64.2 percent of recruited participants completed the initial profile survey and became a panel member (profile rate). Finally, selected panel members agreed to complete the 2018 SHED.

Of the 21,137 panel members contacted to take the 2018 SHED, 11,440 (excluding breakoffs) participated, yielding a final-stage completion rate of 54.1 percent. All the stages taken together, the cumulative response rate is 4.3 percent. The final sample used in the report includes 11,316 respondents.[34]

Targeted Outreach and Incentives

To increase survey participation and completion among hard-to-reach demographic groups, Board staff and Ipsos developed a new communication plan and targeted monetary incentives. The target groups—young adults ages 18 to 29, adults with less than a high school degree, and minorities—received frequent email reminders and text messages, as well as increasing monetary incentives. The incentives to take the survey for these groups started at $5 and in some cases increased modestly. Respondents outside the target groups received less frequent communication and a nominal monetary incentive.

Of the nonrespondents in the target groups—slightly more than one-quarter of the survey sample—who were offered an incentive, 14.5 percent took the survey and received the incentive. Half accepted the second offer, while the rest split about evenly between the first and third offers.

Targeted incentives markedly improved the completion rate for the target groups (table 31). More than 53.4 percent of the target groups as a whole completed the survey, up from 43.7 percent achieved in the 2017 survey, a nearly 10 percentage point increase. The increase in completion rates was largest for those with less-than-high-school-degree group (13.5 percentage points) and young adults (12.8 percentage points). The completion rate for minorities increased 6.0 percentage points.

Altogether, the new communication plan and targeted incentives reduced the differences in response

[31] Data and reports of survey findings from all past years are available at https://www.federalreserve.gov/consumerscommunities/shed.htm.

[32] The survey instrument was also available for public comment through the Federal Reserve Board's website.

[33] Prior to 2009, respondents were also recruited using random-digit dialing.

[34] Of the 11,440 respondents who completed the survey, 124 are excluded from the analysis in this report due to either leaving responses to a large number of questions missing, completing the survey too quickly, or both.

Table 31. Survey completion rate by incentive groups

Characteristic	2017			2018		
	Number sampled	Completed responses	Completion rate (percent)	Number sampled	Completed responses	Completion rate (percent)
Target group	9,432	4,121	43.7	8,812	4,707	53.4
Ages 18–29[1,2]	3,862	1,471	38.1	2,879	1,466	50.9
Less than high school degree[1,2]	815	338	41.5	886	487	55.0
Minorities[2]	4,755	2,312	48.6	5,047	2,754	54.6
Non-target group	12,923	8,125	62.9	12,325	6,733	54.6
Overall	**22,355**	**12,246**	**54.8**	**21,137**	**11,440**	**54.1**

Note: To avoid double counting, any panel member who could be in more than one target group is counted in the following order: ages 18 to 29, less than high school degree; minorities.

1 This group received a modest, non-contingent payment prior to the survey in 2018.

2 Nonrespondents in this group were offered incentives in 2018.

rates across subpopulations and improved the quality of the final data.

Survey Questionnaire

The median time to complete the survey in 2018 was 21 minutes, 3 minutes shorter than the previous survey. The shorter interview length reflects an effort to lessen respondent burden. The number of questions was reduced and the length of the questionnaire was shortened. Working with survey design experts at NORC at the University of Chicago, Board staff also made the question wording clearer to improve comprehension. Most new survey questions went through this technical review, as well as review by subject-matter experts, to minimize potential confusion among respondents.

Because one motivation for the survey is to understand where there may be vulnerabilities or weaknesses in the economy, one priority in selecting questions is to provide information on the financial experiences and challenges among low- and moderate-income populations. The questions are intended to complement and augment the base of knowledge from other data sources, including the Board's Survey of Consumer Finances. In addition, some questions from other surveys are included to allow direct comparisons across datasets.[35] The full survey questionnaire can be found in appendix A of the supplemental appendixes to this report (see https://www.federalreserve.gov/consumerscommunities/shed_publications.htm).

Survey Mode

The SHED is administered to respondents entirely online. Online interviews are less costly than telephone or in-person interviewing, and can still be an effective way to interview a representative population.[36] Ipsos' online panel offers some additional benefits. Their panel allows the same respondents to be re-interviewed in subsequent surveys with relative ease, as they can be easily contacted for several years.

Furthermore, internet panel surveys have numerous existing data points on respondents from previously administered surveys, including detailed demographic and economic information. This allows for the inclusion of additional information on respondents without increasing respondent burden. The respondent burdens are further reduced by automatically skipping irrelevant questions based on responses to previous answers.

The "digital divide" and other differences in internet usage could bias participation in online surveys, so recruited panel members who do not have a computer or internet access are provided with a laptop and access to the internet to complete the surveys. Even so, individuals who complete an online survey

35 For a comparison of results to select overlapping questions from the SHED and Census Bureau surveys, see Jeff Larrimore, Maximilian Schmeiser, and Sebastian Devlin-Foltz, "Should You Trust Things You Hear Online? Comparing SHED and Census Bureau Survey Results," FEDS Notes (Washington: Board of Governors, October 15, 2015), https://www.federalreserve.gov/econresdata/notes/feds-notes/2015/comparing-shed-and-census-bureau-survey-results-20151015.html.

36 See David S. Yeager et al., "Comparing the Accuracy of RDD Telephone Surveys and Internet Surveys Conducted with Probability and Non-Probability Samples," *Public Opinion Quarterly* 75, no. 4 (2011): 709–47.

Table 32. Survey sample and response disposition

Sample type	Number sampled	Completed responses	Completion rate (percent)
Main	17,232	9,547	55.4
Lower-income oversample	3,905	1,893	48.5
Overall	**21,137**	**11,440**	**54.1**

may have greater comfort or familiarity with the internet and technology than the overall adult population.

Sampling and Weighting

The SHED sample is designed to be representative of adults ages 18 and older living in the United States. It includes a main sample and an oversample (table 32) of individuals with a household income less than $40,000 per year ("lower-income oversample"). The completion rate is somewhat lower among the lower-income oversample (48.5 percent) than the main sample (55.4 percent), reflecting the fact that these lower-income adults are harder to reach in surveys.

The Ipsos methodology for selecting a general population sample from KnowledgePanel ensures that the resulting sample behaves as an equal probability of selection method (EPSEM) sample. This methodology starts by weighting the entire KnowledgePanel to the benchmarks in the latest March supplement of the Current Population Survey along several geodemographic dimensions. This way, the weighted distribution of the KnowledgePanel matches that of U.S. adults. The geo-demographic dimensions used for weighting the entire KnowledgePanel include gender, age, race, ethnicity, education, census region, household income, homeownership status, and metropolitan area status.

Using the above weights as the measure of size (MOS) for each panel member, in the next step a probability proportional to size (PPS) procedure is used to select study specific samples. Since this survey includes a lower-income oversample, the departures caused by this oversample from an EPSEM design are corrected by adjusting the corresponding design weights accordingly with the Current Population Survey benchmarks serving as reference points.

After the survey collection is complete, statisticians at Ipsos adjust weights in a post-stratification process that corrects for any survey nonresponse as well as any non-coverage or under- and over-sampling in the study design. The following variables were used for the adjustment of weights for this study: age, gender, race, ethnicity, census region, residence in a metropolitan area, education, and household income. Demographic and geographic distributions for the noninstitutionalized, civilian population age 18 and older from the March Current Population Survey are the benchmarks in this adjustment.

Although weights allow the sample population to match the U.S. population (not in the military or in institutions, such as prisons or nursing homes) based on observable characteristics, similar to all survey methods, it remains possible that non-coverage, nonresponse, or occasional disparities among recruited panel members result in differences between the sample population and the U.S. population. For example, address-based sampling likely misses homeless populations, and non-English speakers may not participate in surveys conducted in English.[37]

Despite an effort to select the 2018 SHED sample such that the unweighted distribution of the sample more closely mirrors that of the U.S. adult population, the result shows that there is room for further improvement. This likely reflects the fact that the distribution of the survey respondents is influenced by the composition of the KnowledgePanel, from which the survey sample is drawn, and is the final step of a multistage process.

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[37] For example, while the survey does weight to match the race and ethnicity of the entire U.S. adult population, there is evidence that the Hispanic population in the survey is somewhat more likely to speak English at home than the overall Hispanic population in the United States. Sixty-five percent of Hispanics who responded to the SHED speak Spanish at home, versus 72 percent of the overall Hispanic population who do so based on the 2017 American Community Survey. See table B16006 at https://factfinder.census.gov.

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