



IN THE BALANCE | AUGUST 2019

<https://www.stlouisfed.org/publications/in-the-balance/2019/first-generation-college-graduates>

First-Generation College Graduates Get a Financial Boost, but Don't Catch Up

KEY TAKEAWAYS

- Growing percentages of U.S. adults have bachelor's degrees, but the share who are first-generation college graduates has declined.
- College degrees boost income and wealth for first-generation graduate families more in percentage terms than for families with more than one generation of graduates.
- The college degree boost is not enough for first-generation graduates to overcome the head start having college graduate parents provides.



William R. Emmons , Ana Hernández Kent , Lowell R. Ricketts

While more U.S. adults are four-year college graduates than ever before, we find that the share of grads who are first-generation college graduates has fallen across time and across generations.

First-generation (first-gen) college students are a key demographic in higher education because they best exemplify higher education's promise of upward mobility. As the share of first-gen graduates declines, the mobility-boosting rationale for college becomes weaker.

As we show in this article, without a healthy flow of first-gen graduates, college may become as likely to perpetuate intergenerational inequality as to reduce it.

New research from the Center for Household Financial Stability focuses on first-gens' financial outcomes. We find that:

1. **Education is very “sticky.”** The educational attainment of an individual is strongly related to the education of his or her parents: The more familiar and successful the parents are with higher education, the more likely it is the adult child has a four-year degree.
2. **A “parent premium” helps continuing-gen grads.** Even after attaining a degree, families headed by white first-gen grads of all ages have lower income and wealth than do similar continuing-generation (continuing-gen) families—those headed by graduates with at least one parent who also had a four-year degree.¹
3. **A “college premium” helps first-gen grads.** The wealth boost from a college degree tends to be larger for families headed by white first-gen grads than for those headed by white continuing-gen grads. The same pattern appears for income.

Continuing-Gen Growth Propels Rise in College Graduates

We compared first-gen graduates to two peer groups. First-gen graduates are individuals with at least a four-year degree (hereafter, “grads”²) whose parents did not receive a baccalaureate degree.³ The peer groups are continuing-gen grads—who differ from first-gen grads because at least one parent is also a grad—and adults with no college in either their own or their parents’ generation.

Using the Federal Reserve Board’s Survey of Household Economics and Decisionmaking, we found that 16% of adults age 25 to 64⁴ were first-gen grads and 21% were continuing-gen grads in 2018. While the portion of four-year college grads has increased rapidly in recent years—at over 3.5 times the historic average rate for the years between 1989 and 2016—the share who are first-gen has fallen. The rise in college graduates thus stems almost entirely from the surge in continuing-gen grads.

2015 to 2018

**Share of U.S. adults age 25 to 64
who are college grads**



Up 3.8 percentage points
to 37.4%

**Share of college grads
who are first-gen**



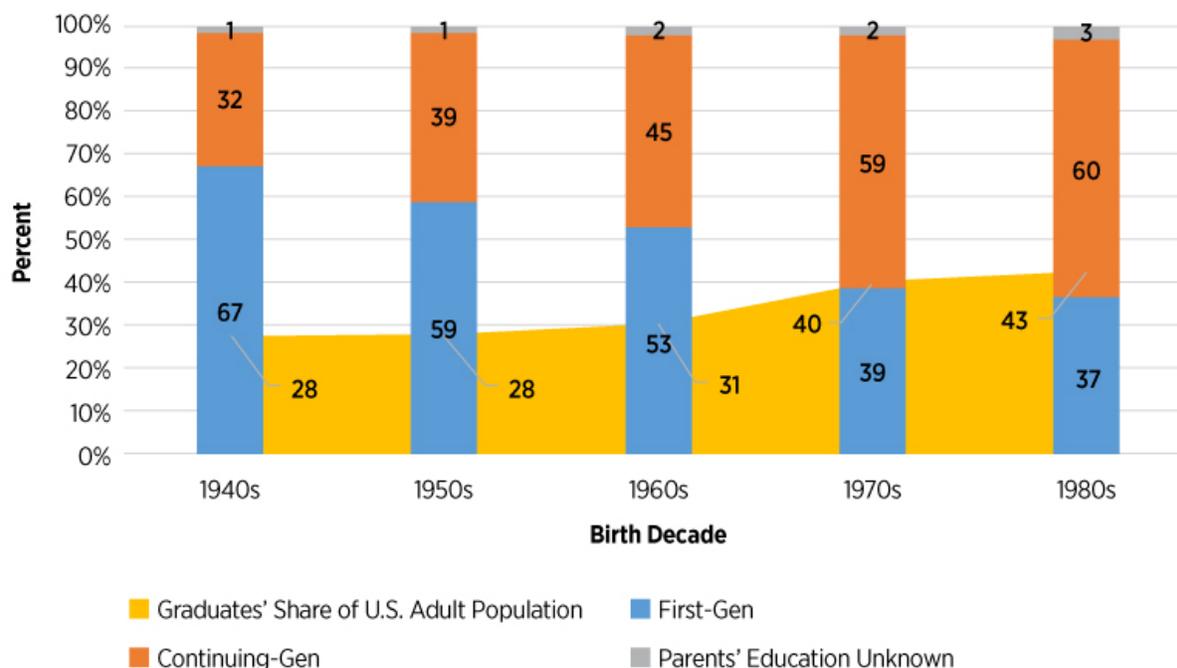
Down 7.1 percentage points
to 41.6%

■ FEDERAL RESERVE BANK OF ST. LOUIS

Likewise, when looking across generations⁵ instead of time, we see a sharp decrease in the share of first-gen graduates and a rapid increase in continuing-gen grads. (See Figure 1.) In 2018, grads born in the 1940s were 31 percentage points more likely to be first-gen than college grad millennials born in the 1980s. The first-gen share steadily declines across successive generations.

Figure 1

Continuing-Gens' Share of College Graduates Is Larger for Younger Generations



■ FEDERAL RESERVE BANK OF ST. LOUIS

SOURCES: Federal Reserve Board's 2018 Survey of Household Economics and Decisionmaking (SHED) and authors' calculations.

NOTE: Figures may not add to 100% due to rounding.

DESCRIPTION: This stacked column and area chart shows the share of college graduates in 2018 by birth cohort. The stacked columns show, from left to right, four-year college graduates born in the 1940s, 1950s, 1960s, 1970s and 1980s. The lower part of each column shows the shares that are first-gen graduates; these were 67, 59, 53, 39 and 37 percent, respectively. The middle part of each column shows the shares that are continuing-gen graduates; these are 32, 39, 45, 59 and 60 percent, respectively. The top part of each column shows the shares of graduates whose parents' education is unknown; these are 1, 1, 2, 2 and 3 percent, respectively. The area chart shows the share of U.S. adults within each cohort who have a four-year college degree; from left to right: 28, 28, 31, 40 and 43 percent.

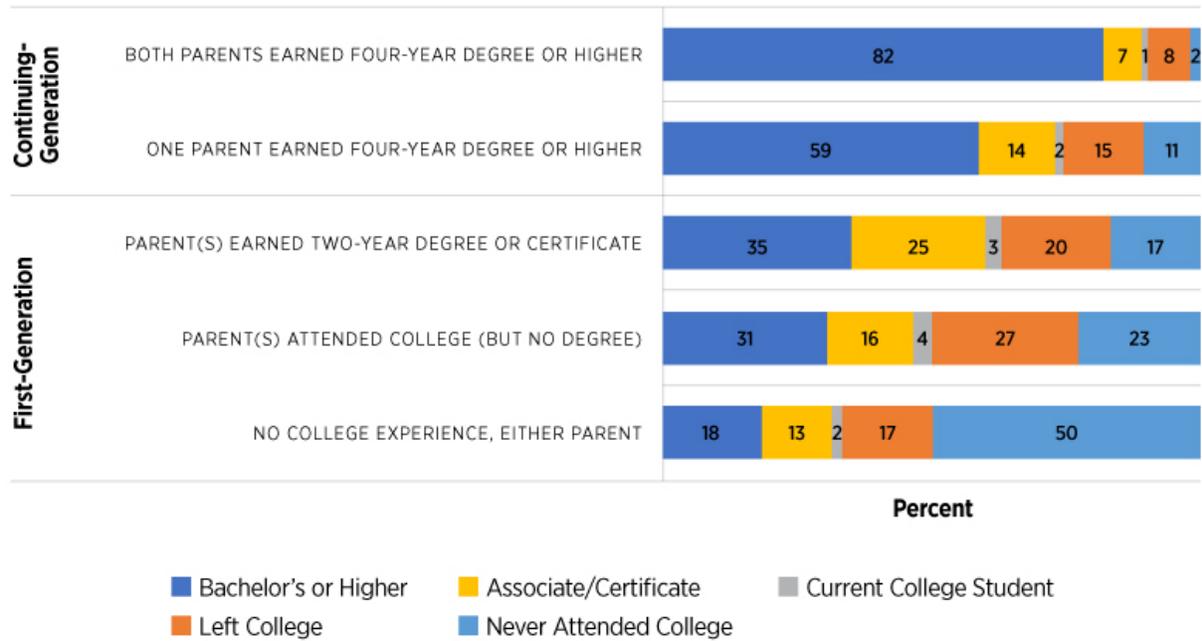
This trend is surprising given that the majority (nearly 2 in 3) of adults age 25 to 64 have first-gen potential, meaning that the adult's parents had less than a four-year degree. The fact that most recent college graduates are continuing-gen illustrates the great "stickiness" of education.

This intergenerational persistence is further broken down in Figure 2. The likelihood of an individual having at least a bachelor's degree is closely related to his or her parents' familiarity and success with higher

education. The percentage of four-year college graduates whose parents are both grads is 4.5 times larger than the share of graduates whose parents do not have any experience with college.

Figure 2

Most Adults with College Grad Parents Also Have a College Degree



■ FEDERAL RESERVE BANK OF ST. LOUIS

SOURCES: Federal Reserve Board's 2018 SHED and authors' calculations.

NOTES: Figures may not add to 100% due to rounding. Statistics are for individuals age 25 to 64.

DESCRIPTION: This stacked bar chart shows the educational attainment of U.S. adults age 25 to 64 (from left to right, at least a bachelor's degree; an associate's degree or certificate; a current college student; left college; or never attended college) by the individual's parents' education (from top to bottom). Beginning at the top, with adults whose parents both earned at least a four-year degree, the shares are 82% bachelor's or more; 7% associate's degree or certificate; 1% current college student; 8% left college; and 2% never attended college. When only one of the adult's parents earned a four-year degree, the shares are 59, 14, 2, 15 and 11 percent, respectively. When at least one of the adult's parents earned a two-year degree or certificate, the shares are 35, 25, 3, 20 and 17 percent, respectively. When at least one of the adult's parents attended but did not graduate from college, the shares are 31, 16, 4, 27 and 23 percent, respectively. When neither of the adult's parents attended college, the shares are 18, 13, 2, 17 and 50 percent, respectively.

This association may reflect that families with more college:

- Are better able to help their children navigate the “hidden curriculum” (i.e., unwritten rules including culture, norms and expectations) of a complex higher education system.⁶
- May steer children away from private, for-profit institutions, which have on average less favorable outcomes and higher costs for students than public institutions.⁷ (First-gen individuals are twice as likely to attend these institutions.)
- Have greater wealth, which is tied to college attendance and success.⁸ (E.g., we find that adults whose parents have college degrees are 75% less likely to be college dropouts.)

Parent and College Premiums: First-Gens’ Boost Is Large but Not Equalizing

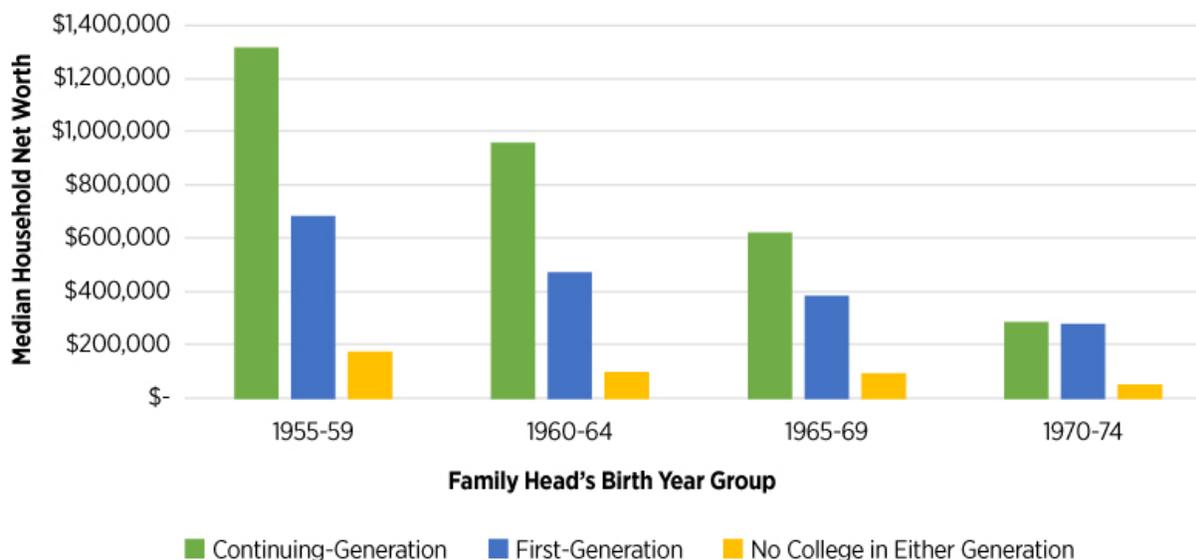
Even after first-gen students persevere in attaining their degrees, they face barriers. We used data from the Federal Reserve Board’s Survey of Consumer Finances to compare first-gen grad families’⁹ income and wealth outcomes to that of two peer groups:

- Continuing-gen grad families (we call the boost from at least one parent having a bachelor’s degree the “parent premium”); and
- Families with no college degree in either generation (hereafter, “no college” families). We term the boost from a family’s own education the “college premium.”

We restricted the following analyses on income and wealth to families headed by middle-aged (40-61) whites, as income and wealth accumulation is very strongly related to age and race.¹⁰ Notably, we find that while the median wealth (or net worth) college premium is quite large, the parent premium persists across generations. (See Figure 3.)

Figure 3

College Premium Is Large, but Parent Premium Persists across Generations



■ FEDERAL RESERVE BANK OF ST. LOUIS

SOURCES: Federal Reserve Board's 2016 Survey of Consumer Finances (SCF) and authors' calculations.

NOTES: The difference between the first and second bars in each group is the parent premium, and the difference between the second and third bars is the college premium. Wealth figures are for middle-aged white family heads.

DESCRIPTION: This bar chart shows the median household wealth for families headed by whites in 2016 by the education of the household head and the household head's parents. Median wealth values are shown by five-year birth groupings. The leftmost bar within each group represents the median wealth of continuing-gen grads; the middle bar within each group represents first-gen grads; and the rightmost bar within each group represents families with no college degree in either generation. Starting from the left, for the 1955-59 group, the bars show \$1,319,000, \$687,000 and \$177,000, respectively. For the 1960-64 group, the numbers are \$961,000, \$473,000 and \$101,000. For the 1965-69 group, the numbers are \$622,000, \$383,000 and \$92,000 and the 1970-74 values are \$283,000, \$278,000 and \$50,000, respectively.

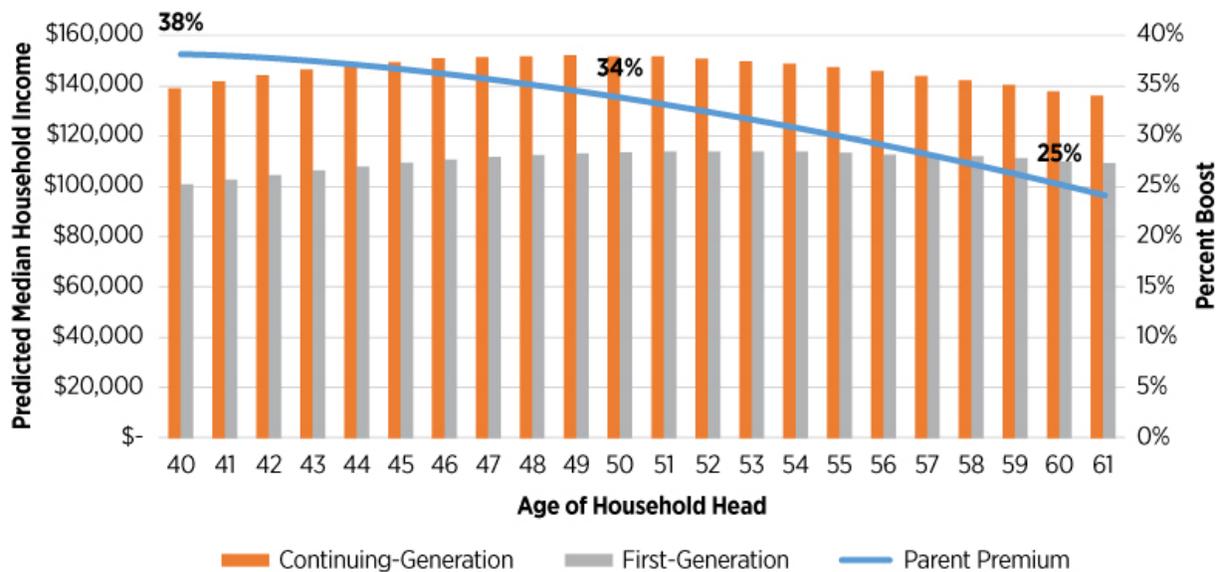
To dive deeper, we estimated median income and wealth levels predicted by age. This gives us a smooth, best-fit line of what we would expect median levels to be at a given age. We separately estimated values for each educational group, thus allowing the models to be flexible. For example, college graduates have steeper income and wealth trajectories across their lifespans than nongrads.

If college were the great equalizer, first-gen grad families would receive a boost from their college degrees that would put their financial outcomes on the same level as those of continuing-gen grad families. Figures 4

and 5 show that this is not the case. Our predictions indicate that the typical family headed by a white continuing-gen grad has a financial advantage over the typical family headed by a white first-gen grad across a wide range of ages. Thus, while families headed by a continuing-gen grad have no control over their parents' education, they nonetheless benefit from the parental premium, or boost, associated with the heads' parent or parents having a four-year degree.

Figure 4

Continuing-Gen Graduates Have an Income Advantage over First-Gen Graduates



■ FEDERAL RESERVE BANK OF ST. LOUIS

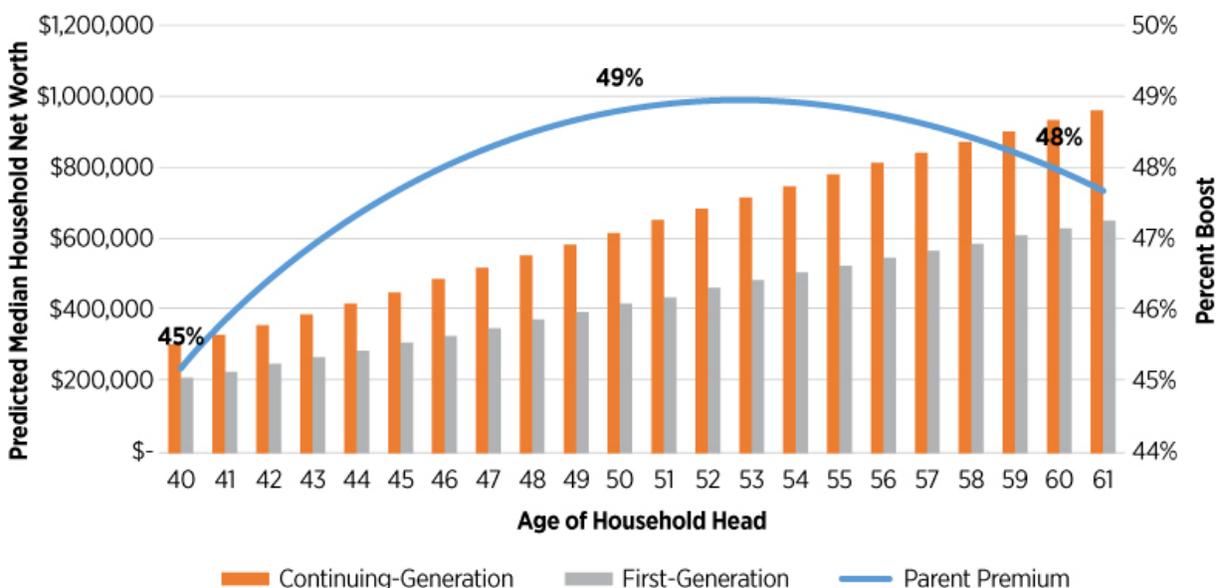
SOURCES: Federal Reserve Board's 2016 SCF and authors' calculations.

NOTES: Parent premium values (percent) are shown at ages 40, 50 and 60. Median income figures are predicted for families headed by white four-year college graduates.

DESCRIPTION: This combined bar and line chart shows the predicted median household incomes of white four-year college graduates in 2016 by the age of the household head. The left bars at each age show the predicted median incomes of continuing-gen graduates, while the right bars at each age show the predicted median incomes of first-gen graduates. The line shows the percent difference, or parent premium, between continuing-gen and first-gen graduates. The parent premiums at ages 40, 50 and 60 are 38, 34 and 25 percent, respectively.

Figure 5*

Continuing-Gen Graduates Have a Wealth Advantage over First-Gen Graduates



■ FEDERAL RESERVE BANK OF ST. LOUIS

SOURCES: Federal Reserve Board's 2016 SCF and authors' calculations.

NOTES: Parent premium values (percent) are shown at ages 40, 50 and 60. Median household net worth figures are predicted for families headed by white four-year college graduates.

DESCRIPTION: This combined bar and line chart shows the predicted median wealth of white four-year college graduates in 2016 by the age of the household head. The left bars show the predicted median wealth of continuing-gen graduates, while the right bars show the predicted median wealth of first-gen graduates. The line shows the percent difference, or parent premium, between continuing-gen and first-gen graduates. The parent premiums at ages 40, 50 and 60 are 45, 49 and 48 percent, respectively.

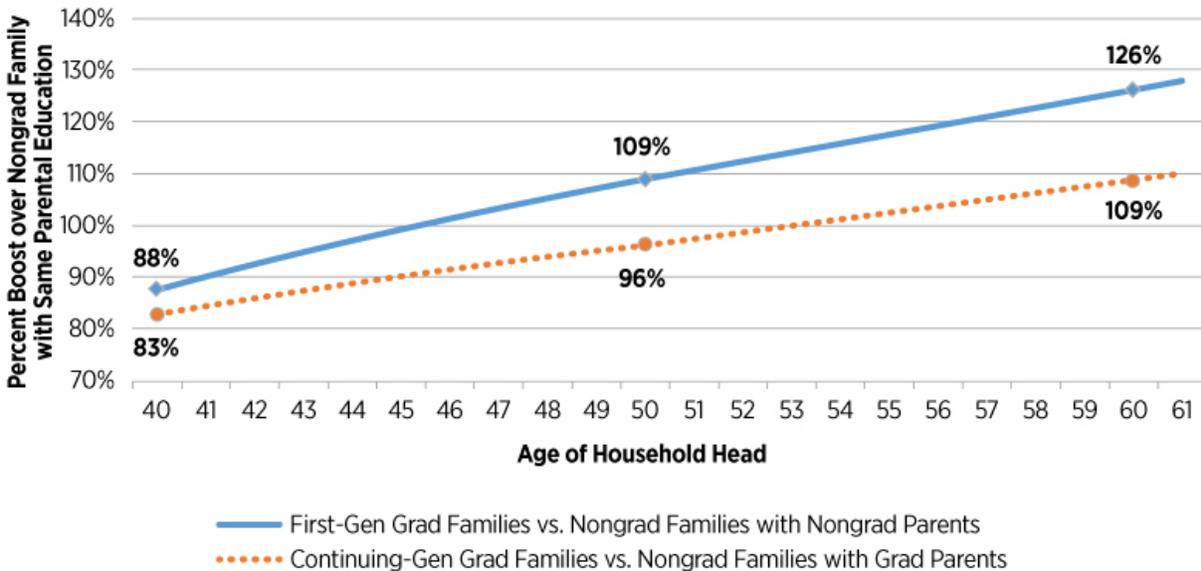
Families cannot control the parent premium, but they can influence the college premium. It is therefore useful to know whether or not a family head's own college degree is financially "worth it." We find that for the typical grad family, it is. Middle-aged, white first-gen grad and continuing-gen grad families both have large income college premiums: roughly double the median income of nongrad families with the same parental education. Their median wealth college premiums are even larger.

However, the magnitude of these premiums varies by age and parental education. Families headed by first-gen grads who were between 40 and 61 in 2016 (born between 1955 and 1976) have larger predicted income and wealth college premiums than families headed by continuing-gen grads. (See Figures 6 and 7.) Supporting earlier research, we find the financial boost from a college degree (over a similar nongrad family with the same parental education) is bigger for first-gen grad families than for continuing-gen grad families.

Additionally, college premiums for both groups increase with age and are larger for older families. This finding is consistent with past work that shows the return on a college degree has declined across generations.

Figure 6*

First-Gen Grads Have Larger Predicted Median Income College Premiums than Continuing-Gen Grads



■ FEDERAL RESERVE BANK OF ST. LOUIS

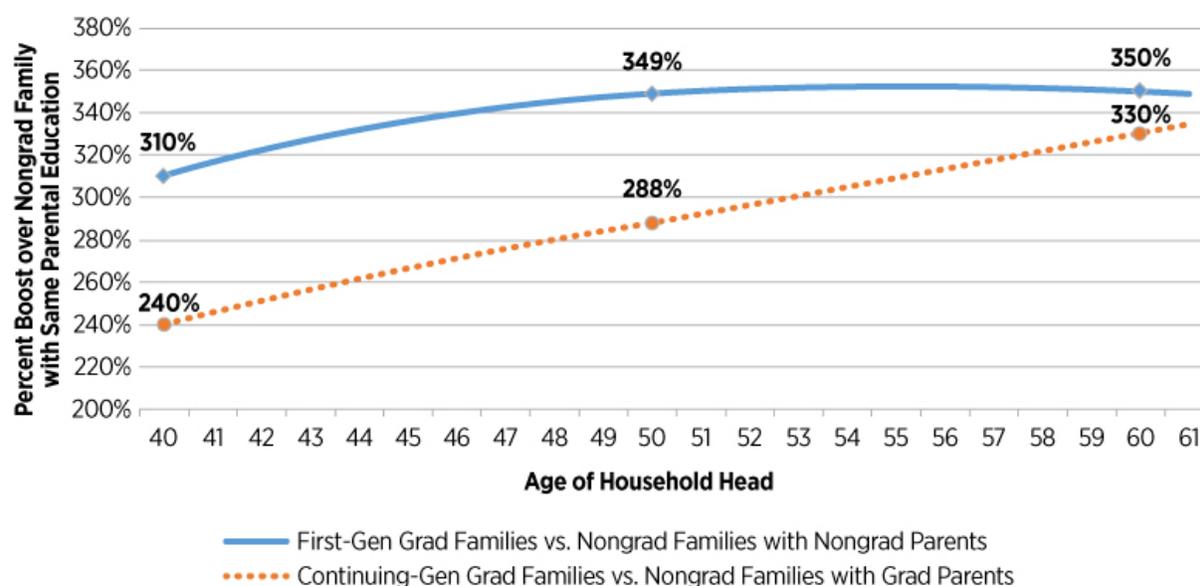
SOURCES: Federal Reserve Board's 2016 SCF and authors' calculations.

NOTE: Predicted median income boosts are for white four-year college graduates age 40 to 61 in 2016.

DESCRIPTION: This line chart shows the predicted median household income boost from a four-year college degree (versus no college degree) for white families age 40 to 61 in 2016. The solid line shows the college premium (or percent boost) of first-gen graduates over families with no four-year college degree in either generation. The dashed line shows the college premium of continuing-gen grads over families headed by nongrads with at least one college-educated parent. First-gen median income college premiums at ages 40, 50 and 60 are 88, 109 and 126 percent, respectively. Continuing-gen college premiums at the same ages are 83, 96 and 109 percent, respectively.

Figure 7

Middle-Aged First-Gen Graduates Have Larger Wealth Premiums than Continuing-Gen Grads



■ FEDERAL RESERVE BANK OF ST. LOUIS

SOURCES: Federal Reserve Board's 2016 SCF and authors' calculations.

NOTE: Predicted median net worth boosts are for white four-year college graduates age 40 to 61 in 2016.

DESCRIPTION: This line chart shows the predicted median household wealth boost from a four-year college degree (versus no college degree) for white families age 40 to 61 in 2016. The solid line shows the college premium (or percent boost) of first-gen graduates over families with no four-year college degree in either generation. The dashed line shows the college premium of continuing-gen grads over nongrad families whose parents are also college-educated. First-gen median wealth college premiums at ages 40, 50 and 60 are 310, 349 and 350 percent, respectively. Continuing-gen college premiums at the same ages are 240, 288 and 330 percent, respectively.

College Is Worth It, but the Parent Premium Persists

We found that the education of the family and the education of the family head's parents are both related to financial outcomes. Various channels may explain this relationship, including the great "stickiness" of education, which may raise class barriers by making it difficult to achieve upward educational mobility.

In support of this theory, we found that first-gen shares of graduates are declining. Increasing college attainment in the population is thus due primarily to the increase in continuing-gen grads. We also found that families headed by white continuing-gen grads of all ages tend to have higher income and wealth than families headed by white first-gen grads (i.e., a parent premium). The strong relationships between parents'

education, wealth and a family head's own education (which we cannot fully disentangle using this dataset) raise concerns about a strengthening feedback loop that may harden class barriers and make mobility more difficult for future generations.

However, we also found that for the typical middle-aged white family, a college degree awards first-gen graduates with higher income and wealth outcomes than families with no college in either generation. Furthermore, these first-gen college premiums are larger than for continuing-gen grads. This hopeful finding suggests that college may thus be even more financially beneficial for first-gen grads than for continuing-gen grads.

Notwithstanding, these college boosts do not fully eliminate the parent premiums. Thus college may be considered a “little” equalizer as opposed to the “great” equalizer. That a college degree is not fully equalizing speaks to the important role of other factors with regard to a household's income and wealth. See our Demographics of Wealth series for a more in-depth discussion of some of these factors.

* A previous version of Figure 5 had an incorrect axis label. A previous version of Figure 6 had incorrect information in the legend. The figures have been amended.

Endnotes

1. Continuing-gen families are equivalent to the “persister” family terminology used in a previous *In the Balance* article. See <https://www.stlouisfed.org/publications/in-the-balance/2019/children-of-college-graduates>.
2. While roughly 14% of families are headed by someone with an associate degree, certificate or technical degree and may also be considered college graduates, we find that these families' wealth outcomes more closely mirror the wealth of families with at most an on-time high school degree or some college but no degree. Thus, for shorthand we define “college graduates” in this report as those with at least a four-year degree. See Kent, Ana H. and Ricketts, Lowell R. “What Wealth Inequality in America Looks Like: Key Facts & Figures.” St. Louis Fed *Open Vault Blog*, Aug. 14, 2019. <https://www.stlouisfed.org/open-vault/2019/august/wealth-inequality-in-america-facts-figures>.
3. This matches the definition used for TRIO programs and to determine eligibility for Pell Grants, federal programs that support low-income students. See Dortch, Cassandra. “The TRIO Programs: A Primer.” *Congressional Research Service Report*, March 16, 2018. <https://fas.org/sgp/crs/misc/R42724.pdf>.
4. In the first section of this article, we look at adults age 25 to 64, the core of the active labor force. While some people graduate from college after the age of 25, we begin our analysis at this age to allow traditional high school-to-college students enough time to complete their degrees. This age range is therefore a conservative estimate of the share of younger adults who will ever become college graduates. To the extent that first-gen students enter college later and take longer to graduate, their shares may also be underestimated for younger adults.
5. We group individuals and families by the decade or half decade in which the respondent was born and restrict our findings to those born between 1940 and 1989. Older respondents were in their 80s and 90s in 2018, and their estimates would likely be biased given that education and longevity are closely related. Younger respondents are excluded because a large portion have not yet had time to complete a four-year college degree. (E.g., the youngest born in the 1990s decade were 19 in 2018.)
6. See <https://firstgen.naspa.org/blog/defining-first-generation> for a discussion of first-gen definitions and “hidden curriculum.”
7. Deming, David; Goldin, Claudia; and Katz, Lawrence. “For-Profit Colleges.” *The Future of Children*, Spring 2013. Vol. 23, No. 1, pp. 137-163.
8. Pfeffer, Fabian. T. “Growing Wealth Gaps in Education.” *Demography*, June 2018. Vol. 55, Issue 3, pp. 1033-68.
9. We use “families” throughout as a shorthand to indicate “family heads.” The Survey of Consumer Finances is weighted to be representative of the U.S. household population. In this section we reference the education of the family head and his or her parents' education.
10. Families are categorized by their primary racial or ethnic identification. Results for other racial and ethnic groups will be covered in subsequent work.

ABOUT THE AUTHORS



William R. Emmons

Bill Emmons is an assistant vice president and economist in the Supervision Division at the Federal Reserve Bank of St. Louis.



Ana Hernández Kent

Ana Hernández Kent is the senior researcher for the Institute for Economic Equity at the Federal Reserve Bank of St. Louis. Her research interests include economic disparities and opportunity, class and racial biases, and the relationship between psychological factors and the household balance sheet. [Read more about Ana's research.](#)



Lowell R. Ricketts

Lowell R. Ricketts is the data scientist for the Institute for Economic Equity at the Federal Reserve Bank of St. Louis. His research has covered topics including the racial wealth divide, growth in consumer debt, and the uneven financial returns on college educations. [Read more about Lowell's research.](#)