

The Cost of Economic and Racial Injustice IN POSTSECONDARY EDUCATION



GEORGETOWN UNIVERSITY
McCourt School of Public Policy
Center on Education and the Workforce

Anthony P. Carnevale, Kathryn Peltier Campbell, Ban Cheah,
Megan L. Fasules, Artem Gulish, Michael C. Quinn,
Jenna R. Sablan, Nicole Smith, Jeff Strohl, and Sarah Barrese

2021

Reprint Permission

The Georgetown University Center on Education and the Workforce carries a Creative Commons license, which permits noncommercial reuse of any of our content when proper attribution is provided.

You are free to copy, display, and distribute our work, or include our content in derivative works, under the following conditions:



Attribution: You must clearly attribute the work to the Georgetown University Center on Education and the Workforce and provide a print or digital copy of the work to cewgeorgetown@georgetown.edu.

Our preference is to cite figures and tables as follows:

Source: Georgetown University Center on Education and the Workforce, *The Cost of Economic and Racial Injustice in Postsecondary Education*, 2021.



Non-commercial use: You may not use this work for commercial purposes. Written permission must be obtained from the owners of the copy/literary rights and from Georgetown University for any publication or commercial use of reproductions.



Approval: If you are using one or more of our available data representations (figures, charts, tables, etc.), please visit our website at cew.georgetown.edu/publications/reprint-permission for more information.

For the full legal code of this Creative Commons license, please visit creativecommons.org.

Email cewgeorgetown@georgetown.edu with any questions.



The Cost of Economic and Racial Injustice

IN POSTSECONDARY EDUCATION

Anthony P. Carnevale, Kathryn Peltier Campbell, Ban Cheah,
Megan L. Fasules, Artem Gulish, Michael C. Quinn,
Jenna R. Sablan, Nicole Smith, Jeff Strohl, and Sarah Barrese
2021

Acknowledgments

We are grateful to the individuals and organizations whose generous support has made this report possible: Lumina Foundation (Jamie Merisotis and Courtney Brown); the Bill & Melinda Gates Foundation (Patrick Methvin, Jamey Rorison, and Jennifer Engle); the Joyce Foundation (Sameer Gadkaree); and the Annie E. Casey Foundation (Bob Giloth and Allison Gerber). We are honored to be their partners in our shared mission of promoting postsecondary access, completion, and career success for all Americans.

The staff of the Georgetown University Center on Education and the Workforce was instrumental in the production of this report from conception to publication. In particular, we would like to thank

- Martin Van Der Werf for editorial and qualitative feedback;
- Hilary Strahota, Emma Wenzinger, Frank Zhang, Johnna Guillerman, Nuo Tian, Sabrina Alsaffar, and Julia Tolfa for communications efforts, including design development and public relations; and
- Andrew Debraggio and Coral Castro for assistance with logistics and operations.

Many others contributed their thoughts and feedback throughout the production of this report. We especially are grateful to our talented designers, editorial advisors, and printers, whose efforts were vital to its successful completion.

The views expressed in this publication are those of the authors and do not necessarily represent those of Lumina Foundation, the Bill & Melinda Gates Foundation, the Joyce Foundation, or the Annie E. Casey Foundation, or any of their officers or employees. All errors and omissions are the responsibility of the authors.

During the writing of this report, Kathryn Peltier Campbell, Ban Cheah, Megan L. Fasules, Artem Gulish, Michael C. Quinn, Jenna R. Sablan, Nicole Smith, and Jeff Strohl received funding from the Institute for Higher Education Policy for work done on behalf of the Bill & Melinda Gates Foundation.

Contents

Introduction	7
The Monetary Value of Economic and Racial Justice	11
What if we were able to address persistent inequalities in educational attainment?	11
Tax Revenue	16
GDP	16
Criminal Justice Expenditures	16
Public Health Expenditures	16
Federal Public Assistance Program Expenditures	17
Earnings Gaps	17
Potential Cumulative Savings Gaps	17
In the medium-to-long term, the gains associated with educational equity would outweigh the costs.	20
Eliminating student loan debt for the additional low-income credential holders would result in even more societal gains.	22
Closing field-of-study gaps could further narrow earnings gaps.	23
Educational equity would make a big economic difference—but inequality in society would limit its effects.	25
What role can potential cumulative savings play in closing wealth gaps?	27
The Next Frontier: The Nonmonetary Benefits of Postsecondary Education	32
Health Outcomes	33
Crime and Incarceration	36
Family Structure	37
Critical Thinking Skills	39
Civic Engagement	39
Authoritarianism	41
Pluralistic Orientation	42
Agency and Empowerment	43
Happiness	44
Conclusion: The Strong Case for Educational Equity	46
References	47

Figures

- Figure 1.* Among Americans with earnings in the top 60 percent, educational attainment is relatively high. 12
- Figure 2.* A greater proportion of White and Asian adults have postsecondary degrees than adults of all other races and ethnicities. 13
- Figure 3.* If attainment levels rose to match those of the top 60 percent of earners and of White adults, more than half of the population would have an associate’s degree or higher. 14
- Figure 4.* Earnings gaps, such as the gap between Latinx men and White men, would shrink with more equal educational attainment. 18
- Figure 5.* Gaps in the potential to accumulate savings over the course of workers’ remaining careers, such as the gap between Latinx men and White men, would shrink or even be reversed with more equal educational attainment. 19
- Figure 6.* The initial societal benefits associated with increased attainment could outweigh the initial public costs after more than nine years. 21
- Figure 7.* The cumulative benefits of educational equity could exceed the cumulative public costs associated with increased attainment in more than 17 years. 21
- Figure 8.* If all individual wealth connected with education and earnings were equalized, wealth gaps like the gap between Latinx men and White men would narrow considerably, but large gaps would still remain. 30

Tables

- Table 1.* The societal gains associated with achieving equal educational attainment would fall short of the gains associated with achieving equal earnings in addition to equal educational attainment. 26
- Table 2.* Adults nearing the end of their careers (ages 55 to 65) are sharply divided by racial/ethnic and gender gaps in wealth. 28

Introduction

Almost 175 years after Horace Mann declared education “the great equalizer,” equality in both education and society remains an elusive goal.¹ Advocates for economic and racial justice undoubtedly have made significant and hard-won gains. At the same time, economic and racial gaps in educational attainment persist, as do pay disparities and employment discrimination by race, ethnicity, and gender. As inequalities exacerbated by COVID-19 and recent demonstrations for racial justice have made clear, we still have a long way to go to dismantle structural inequality in the United States, including in American postsecondary education.

Many people would agree that all students—regardless of race, ethnicity, or family economic background—should have clear, smooth, and accessible pathways to postsecondary education, should they choose to pursue it. They also should have equal opportunity and equal pay for equal work when they enter the labor market. And yet, the stubborn persistence of inequality too often gives the impression that achieving equal outcomes in postsecondary education would be overly expensive and would take too much time to accomplish, particularly when resources are as scarce as they are during the current COVID-19 recession. But what if we were able to set these objections aside and make educational outcomes more equal?

The view that educational equality is too resource-intensive and expensive to achieve ignores the considerable societal value of equality in postsecondary education. The bottom line: as a society, the United States loses more by not achieving equal educational outcomes than it would spend by investing in educational equality.

The United States loses more by not achieving equal educational outcomes than it would spend by investing in educational equality.

The Georgetown University Center on Education and the Workforce reached this conclusion when we partnered with the Postsecondary Value Commission to investigate what the world would look like if we could use postsecondary education more effectively as a lever for achieving economic and racial justice. We found that while equalizing educational attainment would be costly and time-intensive,

balancing the costs with the potential societal benefits makes it clear that an investment in postsecondary equality is money well spent.

To address the critical question of the extent to which greater equality in higher education can alleviate inequality in society, we simulated the impact of increased postsecondary attainment on various racial, economic, and gender gaps.² The following summary

¹ Quoted in Rhode et al., “The Decline of the ‘Great Equalizer,’” 2012.

² The full results of this investigation, including discussion of our methodology, are available in Carnevale et al., *The Monetary Value of Economic and Racial Justice in Postsecondary Education*, 2021.

describes the conclusions of a thought experiment in which we explored what the world might look like if educational attainment were made more equal by race/ethnicity and economic status³—that is, if all socioeconomic groups had levels of education as high as those of the middle, upper-middle, and upper classes,⁴ and if all racial/ethnic groups had levels of education at least equivalent to those of White adults.

Since the mid-1980s, postsecondary education and training has become the generally accepted pathway to economic opportunity in the United States. At the same time, the postsecondary system plays a big role in widening equity gaps and expanding economic inequality in society. US higher education remains highly stratified, with outcomes that vary by socioeconomic status as well as by race, ethnicity, and gender.⁵ Economists estimate that 60 to 70 percent of the growth in earnings inequality between 1980 and 2005 was due to increases in the college earnings premium.⁶ If nothing changes, earnings inequality that is tied to differences in educational attainment will continue to grow.⁷

Simply put, because higher education plays a growing part in the problem of American economic and racial inequality, it also needs to be part of the solution.

Higher education has the potential to make a big difference, but there are very real limits to that potential: for example, once graduates are in the workforce, equally qualified women earn less than their male counterparts,⁸ and equally qualified Black and Latinx⁹ workers earn less than White workers.¹⁰ On its own, equal educational opportunity cannot compensate for persistent wage gaps by race and gender in our labor markets. Nor can education alone erase huge wealth gaps created through centuries of oppression and discrimination, gaps that are perpetuated through intergenerational transfers of wealth and social and economic systems that protect the assets of the privileged. And while higher education institutions can and should help graduates develop the skills and capacities to promote race and class equity in their workplaces and communities, these learning outcomes alone will not be sufficient to dismantle structural inequality.

Despite its limitations, equality in postsecondary educational outcomes would have significant monetary and nonmonetary value to individuals and society in both the public and private spheres of American life. In fact, over the medium-to-long term, the monetary benefits of postsecondary equity would easily outweigh the cost of achieving it. By allowing postsecondary inequality to persist, society is losing out on considerable economic potential related to such changes as increased tax revenue and GDP; decreased spending on criminal justice, public health, and public assistance programs; and smaller

3 This thought experiment is bound by a number of empirical and analytical constraints, which are discussed in detail in Carnevale et al., *The Monetary Value of Economic and Racial Justice in Postsecondary Education*, 2021.

4 We define “the middle, upper-middle, and upper classes” as those with earnings within the top 60 percent of all workers.

5 Carnevale et al., *The Merit Myth*, 2020.

6 Goldin and Katz, “Long-Run Changes in the Wage Structure,” 2007; also see Autor, “Skills, Education, and the Rise of Earnings Inequality among the ‘Other 99 Percent,’” 2014.

7 Carnevale et al., *The Unequal Race for Good Jobs*, 2019.

8 Carnevale et al., *Women Can’t Win*, 2018.

9 We use the term Black to refer to people who identify as Black or African American and the term Latinx to refer to people who identify as Hispanic or Latinx. In charts and tables, we use the terms White, Black/African American, Hispanic/Latinx, Asian, AIAN/NHPI (American Indian, Alaska Native, Native Hawaiian, and Pacific Islander), and Other (which includes anyone with a race not otherwise named or more than one race).

10 Carnevale et al., *The Unequal Race for Good Jobs*, 2019.

gaps in earnings and, thereby, potential cumulative savings, which contribute to wealth accumulation. And that's without accounting for the many nonmonetary benefits associated with increased levels of educational attainment, such as better health, reduced crime, more robust civic engagement, greater disinclination toward authoritarian leadership, and increased happiness.

To measure the potential benefits of equality in educational outcomes, we estimated

- the effects of narrowing racial/ethnic, economic, and gender gaps in several areas, postsecondary attainment foremost among them;
- the benefits if, in addition to narrowing gaps in postsecondary attainment, our society was also able to narrow economic, racial/ethnic, and gender gaps in earnings among equally educated individuals;
- how differences in college majors and student loan burdens contribute to differences in earnings and wealth accumulation, as well as what effect leveling these differences would have on earnings and wealth gaps; and
- the potential impact of closing postsecondary equity gaps on achieving other economic outcomes, such as assuring sufficient earnings and wealth to provide upward economic mobility as well as a safety net in case of economic hardship.¹¹

To estimate the impact of each of these factors, we made a number of assumptions based on the best available data.¹² For example, we made assumptions about how much debt students might accrue to earn new credentials (including principal and interest), how quickly they would pay off that debt, how much they would earn once they entered the workforce (based on the current earnings of their demographic group), and how much they could potentially save as a result of their higher earnings. Assumptions like these do not allow us to explore the full complexity of people's lives, but they do help us imagine the potential returns associated with an investment in educational equity.¹³

A strong fiscal case can be made for economic and racial justice in postsecondary education as a public good.

11 In the full experiment, we considered outcomes if all groups had earnings reaching at least the bottom threshold of the current fourth quintile (described there as "economic mobility"), and if all groups had at least the median wealth (described as "economic security"). For those results, see Carnevale et al., *The Monetary Value of Economic and Racial Justice in Postsecondary Education*, 2021. The term "economic mobility" as used in this report is shorthand for the purposes of alignment with the Postsecondary Value Commission's Postsecondary Value Framework. Strictly speaking, however, the economic mobility threshold does not represent mobility for workers whose earnings were above the fourth quintile earnings threshold before the attainment adjustment. In addition, many economists use the term "economic mobility" to refer to intergenerational mobility. The methodology used in this analysis does not account for family income of the households in which individuals were raised, so this threshold cannot be interpreted as reflecting intergenerational mobility.

12 For a complete discussion of the assumptions and methodology underlying the findings summarized here, see Carnevale et al., *The Monetary Value of Economic and Racial Justice in Postsecondary Education*, 2021.

13 This simulation has some precedents. For example, Lawrence Summers calculated the return on investment in girls' education in "Investing in All the People" (1992). More recently, Hershbein et al. conducted a simulation to estimate the effects of higher educational attainment on economic security, poverty, and earnings gaps; see "College Attainment, Income Inequality, and Economic Security," 2020.

The top-line finding of our analysis is that equalizing postsecondary educational attainment by economic status and race/ethnicity would require **an initial public investment of \$3.97 trillion**. Once achieved, that level of attainment would produce **annual societal gains of \$956 billion**.

Those gains would depend on substantial systemic reforms that would allow more low-income students and students from underrepresented racial/ethnic backgrounds to enroll and succeed in the postsecondary education system. Importantly, those kinds of changes wouldn't occur overnight. But if we could achieve the postsecondary attainment outcomes modeled in this thought experiment, it would make a considerable difference to individuals and the public within a single generation. Taking into account the time needed to raise educational attainment levels across the population—which we estimate would be at least 34 years even in the best-case scenario—we would expect the annual monetary gains to society to exceed the annual costs after more than nine years, and the cumulative gains to exceed the cumulative costs after more than 17 years.

In purely monetary terms, an investment in postsecondary equity would pay for itself in a reasonable timeframe.

In short, not only would educational equity improve the lives of many individuals, but it would benefit American society at large. As this summary makes clear, a strong fiscal case can be made for economic and racial justice in postsecondary education as a public good.

This was true before the COVID-19 recession, and it remains true today. If anything, the need for higher education to help address economic disparities in society is even greater than it was before the coronavirus pandemic. Economically and racially marginalized communities have been the hardest hit by both the virus itself and by the economic downturn.¹⁴ At the same time, the workers with the most education—who also are more likely to be members of economically and racially advantaged groups—have generally been the ones most protected, both economically and physically, by the ability to work from home.¹⁵ Meanwhile, police violence has inspired demonstrations for racial justice conducted against the backdrop of the pandemic that have drawn critical attention to how structural racism is built into the very foundations of American society—including in our postsecondary education system.

As postsecondary institutions reinvent themselves for the current era, they have the opportunity to more fully realize the potential of educational equity and recommit to enhancing the public good. Economic and racial justice must be central goals for higher education, not secondary concerns or politically correct conceits unsupported by action.

¹⁴ North, "Every Aspect of the Coronavirus Pandemic Exposes America's Devastating Inequalities," 2020.

¹⁵ Carnevale and Fasules, "Who's Working from Home," 2020.

The Monetary Value

of Economic and Racial Justice

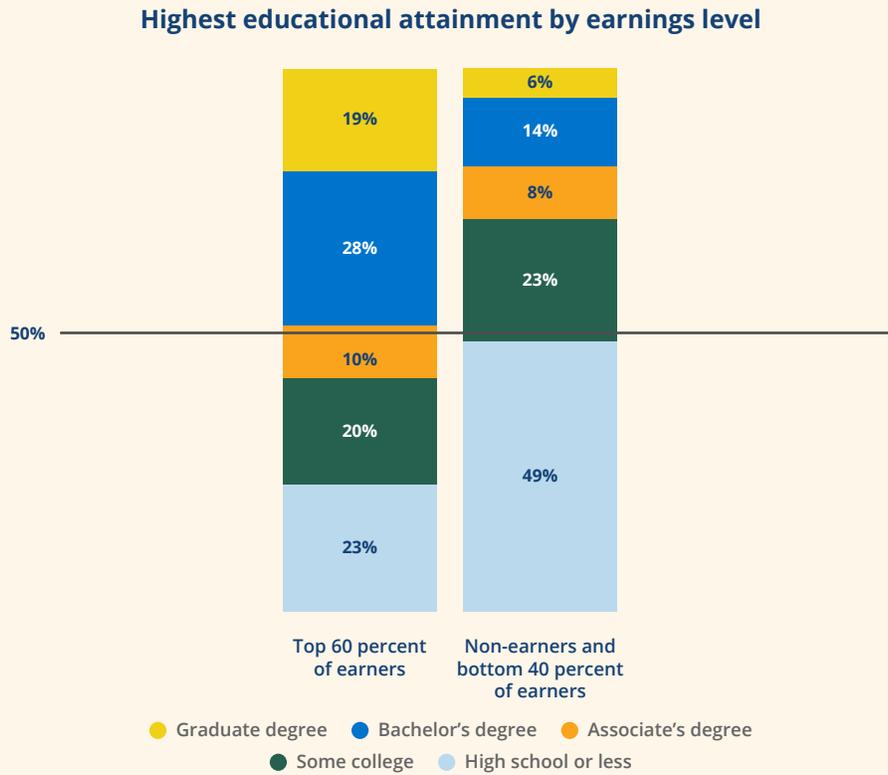


What if we were able to address persistent inequalities in educational attainment?

At a glance, it's easy to see that the United States has a problem when it comes to educational equality. Even after decades of work, large differences in educational attainment remain between people of different income levels (*Figure 1*), as well as between different racial and ethnic groups (*Figure 2*).

Figure 1

Among Americans with earnings in the top 60 percent, educational attainment is relatively high.

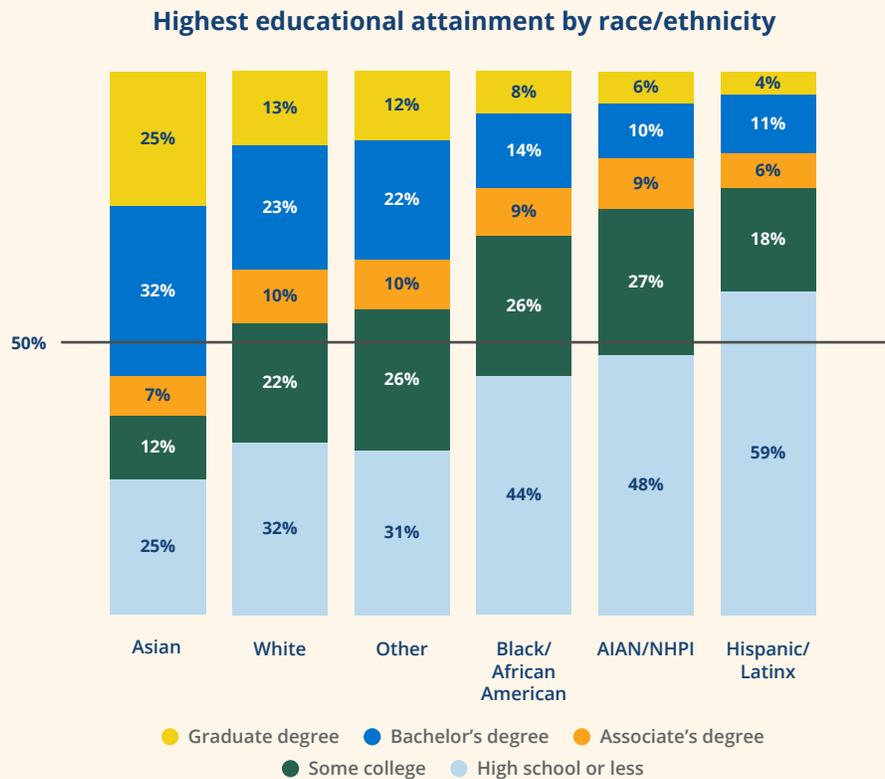


Source: Georgetown University Center on Education and the Workforce analysis of data from the US Census Bureau, American Community Survey (ACS), 2013–17 (pooled).

Note: Values may not sum to 100 percent due to rounding.

Figure 2

A greater proportion of White and Asian adults have postsecondary degrees than adults of all other races and ethnicities.



Source: Georgetown University Center on Education and the Workforce analysis of data from the US Census Bureau, American Community Survey (ACS), 2013–17 (pooled).

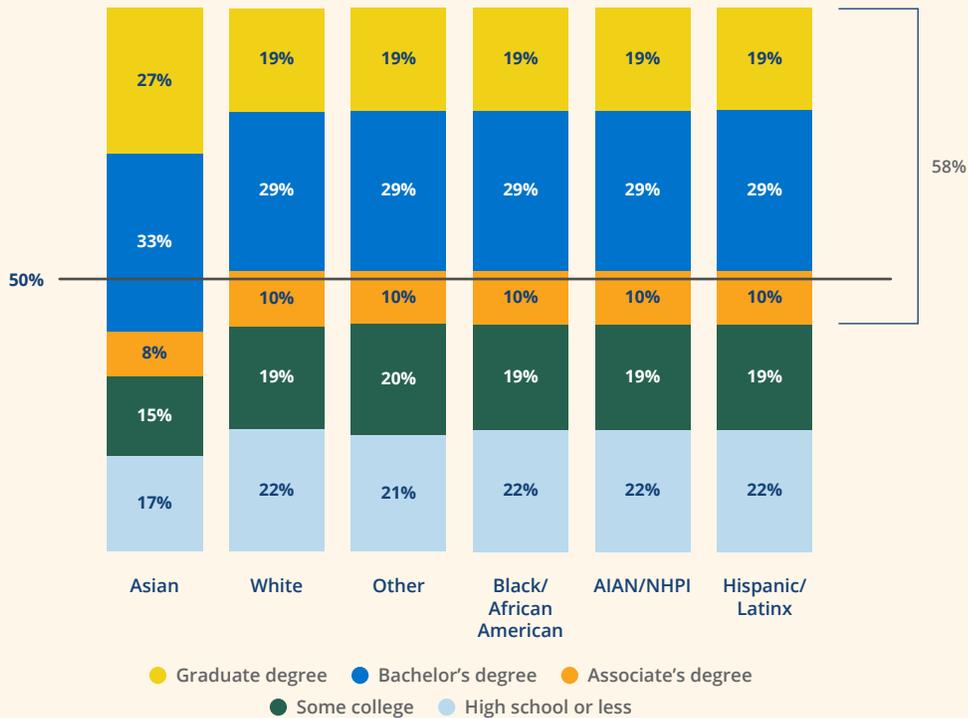
Note: The figure shows the educational distribution in the population ages 25 to 64. AIAN/NHPI stands for American Indian, Alaska Native, Native Hawaiian, and Pacific Islander. Values may not sum to 100 percent due to rounding.

But what if educational outcomes were more equal by earnings and race? That is, what if attainment among non-earners and the bottom 40 percent of earners matched the attainment of the top 60 percent of earners? And what if educational attainment for all racial/ethnic groups was as high as it is for White adults? If these increases in attainment were to occur, at least 58 percent of people would have an associate's degree or higher (Figure 3), compared with 40 percent presently.

Figure 3

If attainment levels rose to match those of the top 60 percent of earners and of White adults, more than half of the population would have an associate’s degree or higher.

Target highest educational attainment distribution by race/ethnicity



Source: Georgetown University Center on Education and the Workforce analysis of data from the US Census Bureau, American Community Survey (ACS), 2013–17 (pooled).

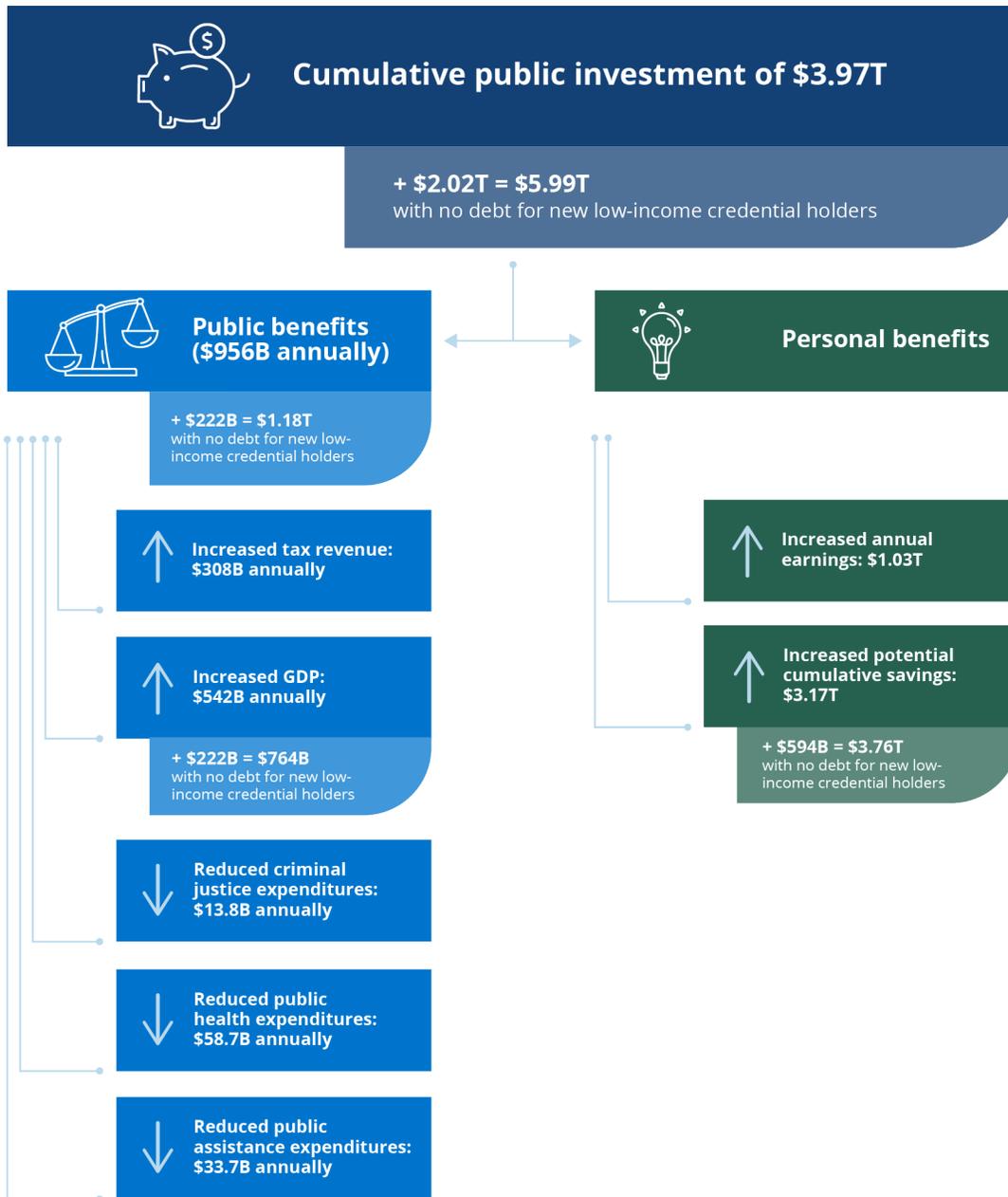
Note: The figure shows an adjustment of the educational distribution in the population ages 25 to 64. AIAN/NHPI stands for American Indian, Alaska Native, Native Hawaiian, and Pacific Islander. Values may not sum to 100 percent due to rounding.

Increasing educational attainment as described above would mean increasing the number of people with an associate’s degree or higher by 12.9 million low-income White individuals, 10.2 million Latinx individuals, 5.9 million Black individuals, 498,000 Asian individuals, 462,000 AIAN/NHPI individuals, and 457,000 individuals of other races and ethnicities.¹⁶ It would require a significant investment (detailed below), but it would also generate considerable gains, both to individuals and to society.

16 We recognize that specific Asian subgroups face educational and economic disparities that are not reflected in the aggregate analysis, but the data did not allow for disaggregation at the Asian subgroup level.

The simulated increase in attainment would result in significant gains at the individual and societal levels. The most direct gains would occur through increased individual earnings brought about by increased education, resulting in an aggregate annual earnings boost of \$1.03 trillion among new credential holders. This earnings boost would generate significant monetary gains to society—**\$956 billion annually**, by our estimate.¹⁷

The \$956 billion in societal gains would result from gains and savings in a number of areas:



¹⁷ Methods and assumptions are documented in detail in Carnevale et al., *The Monetary Value of Economic and Racial Justice in Postsecondary Education*, 2021.



Increasing educational attainment would require a significant investment, but it would also generate considerable gains, both to individuals and to society.

Tax Revenue

Higher earnings contribute to increased tax revenue. The increased earnings could yield a **\$308 billion annual increase** in tax revenue.

GDP

Higher earnings can translate into more money circulating in the economy. The ripple effects of every new dollar spent on goods and services could result in a **GDP boost of \$542 billion annually**.

Criminal Justice Expenditures

The United States has the highest per capita incarceration rate in the world. As a result, we spend a significant amount of money on prisons. Many factors, including racial bias in the criminal justice system, lead to disparate incarceration rates by race and ethnicity.¹⁸ At the same time, data show that people with more education are less likely to be incarcerated, so increased educational attainment could correspond with a **\$13.8 billion annual reduction** in public costs by reducing the number of incarcerated individuals.¹⁹

Public Health Expenditures

People with higher educational attainment tend to have healthier behaviors and better health outcomes: they are less likely to smoke, more likely to exercise regularly, and have a higher life expectancy.²⁰ Hence, public health spending is lower for people with higher levels of educational attainment, potentially resulting in **savings of \$58.7 billion annually** at the target attainment levels.²¹

18 See, for example, Balko, "21 More Studies Showing Racial Disparities in the Criminal Justice System," 2019; Schanzenbach and Yaeger, "Prison Time, Fines, and Federal White-Collar Criminals," 2006.

19 This calculation accounts for different incarceration rates by race and ethnicity at different levels of educational attainment. While increasing educational attainment might lead to reduced overall spending on incarceration, it would not eradicate racism and racial disparities in the criminal justice system, such as those detailed in Balko, "21 More Studies Showing Racial Disparities in the Criminal Justice System," 2019.

20 Trostel, *It's Not Just the Money*, 2015. While Trostel's analysis focuses on correlations, some researchers have explored a causal relationship between increased educational attainment and reduced mortality rates; see Christenson and Johnson, "Educational Inequality in Adult Mortality," 1995; Lleras-Muney, "The Relationship between Education and Adult Mortality in the United States," 2005.

21 This calculation includes Medicare, Medicaid, Veterans Affairs/the Civilian Health and Medical Program of the Department of Veterans Affairs, and other federal, state, local, and miscellaneous public sources.

Federal Public Assistance Program Expenditures

Because of their higher earnings, people with higher educational attainment are less likely to rely on public assistance for such necessities as food and housing, and they are less likely to qualify for the earned income tax credit. As a result, higher attainment levels could result in at least **\$33.7 billion in annual savings** from reduced need for these expenditures.²²

Earnings Gaps

In addition to the increased public revenues and savings associated with an aggregate **earnings increase of \$1.03 trillion**, earnings gaps would shrink as educational attainment became more equal. While all groups would have higher earnings at the target educational attainment, many groups would still have earnings much lower than those of White and Asian men, who are currently the highest-paid workers. This result would occur partly because our model increases attainment for low-income White men and low-income Asian men, leading other racial/ethnic and gender groups to lose ground relative to them (*Figure 4*). It also reflects the persistence of earnings gaps by race/ethnicity and gender within educational attainment groups.

Potential Cumulative Savings Gaps

Higher earnings also translate into greater potential to accumulate savings over the course of a career. Specifically, we estimate that the targeted increases in educational attainment would result in an aggregate **increase in potential cumulative savings of \$3.17 trillion**. With more equitable earnings, gaps in potential cumulative savings among groups would shrink, although significant gaps would still remain (*Figure 5*).

These cumulative savings could help reduce gaps in the portion of wealth that is associated with personal savings from earnings.²³

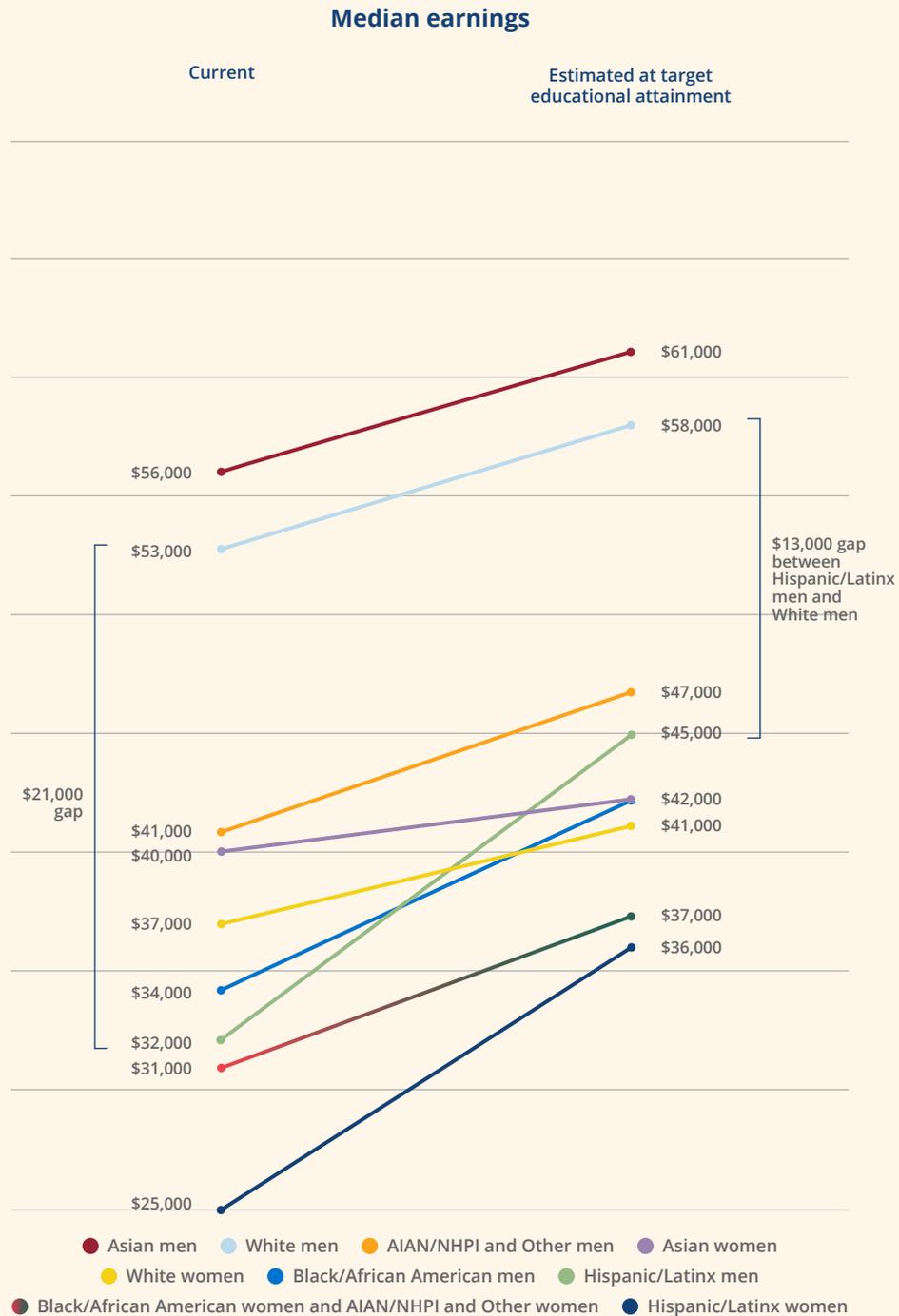
Higher earnings contribute to increased tax revenue and can translate into more money circulating in the economy.

22 This calculation includes per-person and per-family distribution amounts for Temporary Assistance for Needy Families (TANF); the Supplemental Nutrition Assistance Program (SNAP); the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); the Earned Income Tax Credit (EITC); federal housing assistance programs; and free and reduced-price school meals. It does not account for possible reductions in administrative costs.

23 Based on a meta-analysis of research, Kopczuk and Lupton estimate that 35 to 45 percent of wealth is inherited; see "To Leave or Not to Leave," 2005.

Figure 4

Earnings gaps, such as the gap between Latinx men and White men, would shrink with more equal educational attainment.



Source: Georgetown University Center on Education and the Workforce analysis of data from US Census Bureau, American Community Survey (ACS), 2013–17 (pooled).

Note: AIAN/NHPI stands for American Indian, Alaska Native, Native Hawaiian, and Pacific Islander. We have combined the AIAN/NHPI and Other groups here to bolster the sample size.

Figure 5

Gaps in the potential to accumulate savings over the course of workers' remaining careers, such as the gap between Latinx men and White men, would shrink or even be reversed with more equal educational attainment.



Source: Georgetown University Center on Education and the Workforce analysis of data from US Census Bureau, American Community Survey (ACS), 2013-17 (pooled); US Department of Education, National Postsecondary Student Aid Study (NPSAS), 2016; and US Census Bureau, Survey of Income and Program Participation (SIPP), 2014.

Note: AIAN/NHPI stands for American Indian, Alaska Native, Native Hawaiian, and Pacific Islander. We have combined the AIAN/NHPI and Other groups here to bolster the sample size.



We estimate it would take more than nine years to generate an annual surplus and more than 17 years for the benefits to start outpacing the costs.

In the medium-to-long term, the gains associated with educational equity would outweigh the costs.

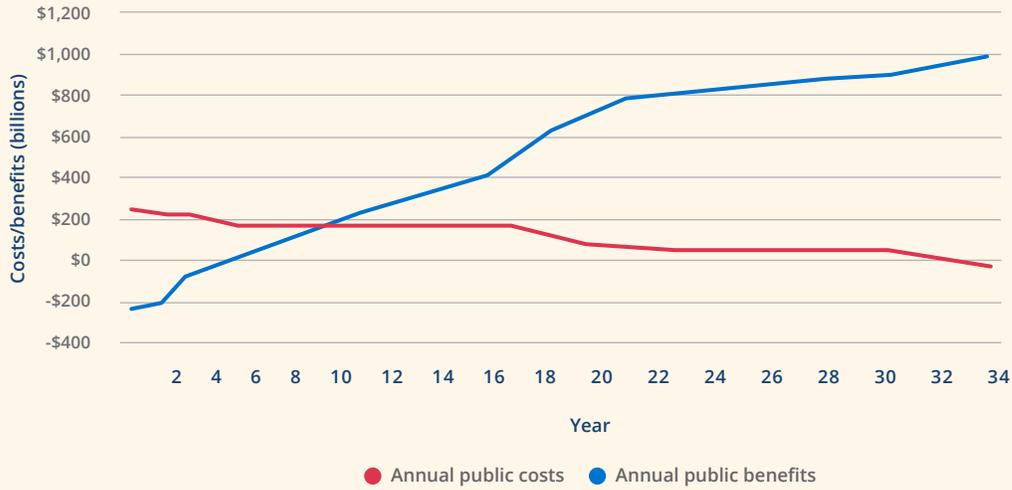
The calculations summarized above indicate that the annual societal gains associated with educational equity would be considerable. If the systemic changes necessary to equalize education outcomes were enacted, how long would it take for these annual gains to outweigh the associated costs?

Meeting attainment targets would involve an initial public investment of at least **\$3.97 trillion**, plus costs associated with maintaining enrollment and completion at the higher levels necessary to sustain attainment goals. This estimate includes the cost of increasing students' educational attainment by the number of levels necessary to meet new attainment goals, as well as adjustments in spending needed to support the graduation rates required to achieve those goals.

Even in the best-case scenario, in which substantial systemic reforms allowed more low-income students and students from underrepresented racial/ethnic backgrounds to enroll and succeed in the postsecondary education system, we expect it to take at least 34 years to graduate enough people at all degree levels to reach our target attainment numbers. This estimate accounts for current education levels within the population, the size of graduating cohorts at each degree level, and constraints related to capacity, readiness, and efficiency. Distributing the total costs over that 34-year period according to the changes needed to reach the target attainment numbers, we estimate it would take more than nine years to generate an annual surplus (*Figure 6*) and more than 17 years for the benefits to start outpacing the costs (*Figure 7*).

Figure 6

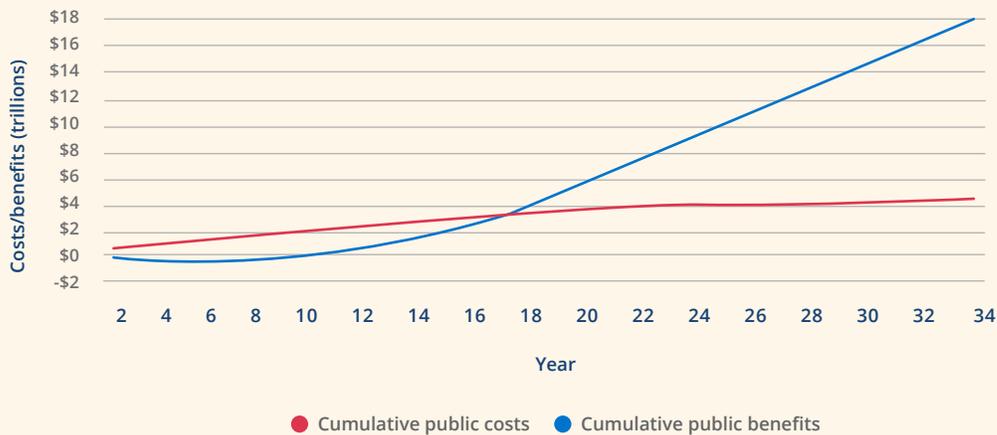
The initial societal benefits associated with increased attainment could outweigh the initial public costs after more than nine years.



Source: Georgetown University Center on Education and the Workforce analysis based on compiled statistics described in Carnevale et al., *The Monetary Value of Economic and Racial Justice in Postsecondary Education*, 2021.

Figure 7

The cumulative benefits of educational equity could exceed the cumulative public costs associated with increased attainment in more than 17 years.



Source: Georgetown University Center on Education and the Workforce analysis based on compiled statistics described in Carnevale et al., *The Monetary Value of Economic and Racial Justice in Postsecondary Education*, 2021.

Eliminating student loan debt for the additional low-income credential holders would result in even more societal gains.



The role of educational debt in individuals' long-term economic outcomes has become increasingly relevant due to rising concerns about college costs and a growing need to finance college through debt. According to the College Board, on average, about 15 percent of college costs are paid through student borrowing. Close to a third comes from family savings and parental loans, and another 28 percent comes from grants and scholarships.²⁴ Federal student loan debt stood at about \$1.5 trillion in 2019, up from \$250 billion in 2004.²⁵ Average cumulative debt at graduation for student borrowers with a bachelor's degree was \$31,790 in 2016, up from \$26,150 in 2000.²⁶

For many people, reliance on student loans may be the only way to access a college education—and the use of loans varies startlingly by race and class. Research shows, for example, that among dependent students who graduated with a bachelor's degree in 2015–16, 68 percent held some student debt, but the share of students with debt varies by income: among those with parental incomes of \$120,000 or more, 59 percent held student loan debt, compared with 75 percent of graduates whose parents had incomes below \$35,000.²⁷ Differences are also apparent by race: four years after graduating from college, Black students have almost twice as much remaining student loan debt on average as their White peers.²⁸ Because Black students take on more debt, the wage discrimination they face in the labor market makes repayment that much more of a financial struggle.

Differences in student loan debt are inextricably tied to differences in student wealth. Relatively low wealth creates a disproportionate burden on low-income and underrepresented racial and ethnic groups, who tend to max out their federal student loans in order to fund their educations.²⁹ The problem is particularly acute for Black students: in general, Black families have fewer resources to draw upon to finance their college educations.³⁰ In addition, once students take on student loans, their debt burden functions as a negative balance against the potential to build wealth. Moreover, Black students have much higher student loan default rates than students from other racial/ethnic groups,³¹ which may impede their ability to obtain credit as a means to build wealth. Thus, the relationship between wealth and student loan debt cuts both ways:

24 Looney and Lee, "Parents Are Borrowing More and More to Send Their Kids to College," 2018.

25 Domestic Policy Council and Council of Economic Advisers, *Taking Action*, 2014; Miller et al., "Addressing the \$1.5 Trillion in Federal Student Loan Debt," 2019.

26 Amounts are in 2018–19 dollars as reported in the National Center for Education Statistics, Digest of Education Statistics Tables, Table 331.95, 2019.

27 Baum et al., *Trends in Student Aid 2019*, 2019.

28 Scott-Clayton and Li, "Black-White Disparity in Student Loan Debt More Than Triples after Graduation," 2016.

29 For more on how differential wealth affects student loan debt, see Huelsman, "The Debt Divide," 2015, and Addo et al., "Young, Black, and (Still) in the Red," 2016.

30 For example, White families have an average of \$155,000 in home equity, while Black families have an average of \$93,000. Kahn et al., *Bridging Progressive Policy Debates*, 2019.

31 Miller, "The Continued Student Loan Crisis for Black Borrowers," 2019.

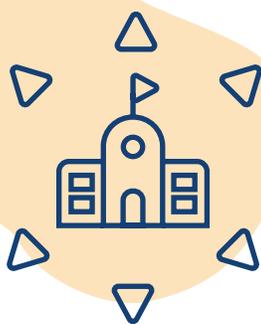
wealth lessens the need for students to take on debt, and those who take on debt are hindered in their ability to accrue wealth.

We know that eliminating student loan debt would have substantial implications for individuals. But how would society benefit?

The principal and interest associated with eliminating student loan debt for the new low-income credential holders (non-earners and those in the bottom 40 percent of earnings) in our thought experiment would be an additional cost to the government of \$2.02 trillion.³² Adding these costs to the estimated \$3.97 trillion initial investment required to equalize attainment, we would need a total initial public investment of \$5.99 trillion. This investment would correspond with annual societal gains totaling \$1.18 trillion (\$222 billion more than if new low-income credential holders took on student debt).

Without the burden of loan payments, new low-income credential holders would have more money to spend in the economy and more money to save. As a result, both GDP and potential cumulative savings would increase:

- GDP would increase by \$764 billion annually from earnings increases (\$222 billion more than would occur if the new low-income credential holders took on student debt).
- Potential cumulative savings would grow by \$3.76 trillion (\$594 billion more than would occur if the new low-income credential holders took on student debt). All groups except for Asian men and Asian women would see gains in their savings power compared with White men, with the gaps in potential cumulative savings additionally reduced by between 1 percentage point (for White women) and 7 percentage points (for men and women who identify as AIAN/NHPI or other races and ethnicities). For Black men and women, the gap would shrink by 3 percentage points; for Latinx men and women, it would shrink by 3 percentage points and 4 percentage points, respectively.



Closing field-of-study gaps could further narrow earnings gaps.

Increasing attainment and canceling loans are not the only possible ways for postsecondary education to affect earnings gaps. Colleges could also have an impact by influencing (through counseling, advising, and guided career pathways) the distribution of fields of study, which is fairly consistent across different racial ethnic/groups but varies greatly by gender at the associate's degree

³² For the purposes of this thought experiment, we made simplified assumptions about student loan debt—specifically, that student debt would involve a standard 10-year repayment period with interest rates of 4 percent for undergraduate student loans and 7 percent for graduate loans. At this stage in our analysis, we consider the costs associated with these loans to be covered by public expenditures rather than assumed by low-income credential recipients. We assume that the money that additional low-income credential holders would have spent on loan payments would instead be directed toward consumption and potential cumulative savings.

and bachelor's degree levels.³³ Choice of field of study can have a significant impact on a person's potential earnings. Therefore, when exploring the possible effects of closing gaps in postsecondary attainment, it's logical to consider the additional effects of closing gaps in field of study.

Preliminary analyses confirm that closing gaps in field of study in addition to gaps in degree attainment would result in significant earnings changes across groups. For example, at the baccalaureate level, women are underrepresented relative to men in some high-paying fields of study: 10 percent of men major in engineering and 6 percent in computer science, compared with 2 percent of women who major in engineering and 1 percent in computer science. With higher representation in these fields, women could potentially obtain higher earnings.³⁴

The exact nature of these changes, however, would depend on a complicated set of dynamics related to supply and demand, labor-market discrimination, current wage penalties in female-dominated fields, and a variety of other factors that affect wage gaps. In other parts of our analysis, we interpreted current outcomes for White men as the goals for other race/gender groups because White men have experienced historical advantages due to systemic racism and sexism. But applying that approach at the level of field distribution is especially problematic. For one thing, women tend to be concentrated in fields that have high social value but low wages.³⁵ Redistributing women's fields of study according to the distribution among White men would create shortages in some fields that are currently female-dominated, such as education. Shortages in these fields could lead to increased demand and, perhaps, a related increase in wages.

In an ideal world, of course, jobs in the caring professions would be compensated at higher wages that reflect their true social value.³⁶ But the evidence suggests that these jobs may instead be compensated based on who fills them: occupations with higher shares of women tend to have lower wages than those with higher shares of men,³⁷ and wages tend to fall as women enter male-dominated professions.³⁸ On the other hand, women have carved out relatively high-paying niches in the sub-baccalaureate sector, particularly in healthcare, and field equalization would squeeze women out of these jobs.

Within occupations, women generally have lower wages than men, and workers in racial and ethnic minority groups generally have lower wages than White workers. For example, among equally qualified, full-time, full-year workers, women earn 91 cents for every dollar paid to men working within the same occupations. When earnings are aggregated across occupations so that differences in pay among fields come into play, the gaps are even more pronounced. Compared with White men's earnings, White women earn 74 cents on the dollar, Asian women earn 82 cents on the dollar, Black women earn 62 cents on the

33 See Tables 16 and 17 in Carnevale et al., *The Monetary Value of Economic and Racial Justice in Postsecondary Education*, 2021.

34 Carnevale et al., *Women Can't Win*, 2018.

35 Carnevale et al., *Women Can't Win*, 2018.

36 In addition to being undercompensated relative to their societal value, these professions burden their workers with substantial job-related costs—one consequence of public policy that underfunds social services. Carnevale et al., *Educational Adequacy in the Twenty-First Century*, 2018.

37 Carnevale et al., *Women Can't Win*, 2018.

38 Levanon et al., "Occupational Feminization and Pay," 2009.

dollar, and Latinx women earn 52 cents on the dollar.³⁹ Black men earn 73 cents on the dollar compared with White men, and Latinx men earn 71 cents on the dollar. Asian men are the only group that outearns White men, earning \$1.24 for every dollar that White men earn.⁴⁰

Regardless of earnings potential, people should have the freedom to set their educational attainment goals and choose their field of study based on their talents, ambitions, and interests. Unfortunately, the evidence suggests that field choice is presently constrained by systemic and societal barriers, including socialization and discrimination.⁴¹ Too often, implicit bias among faculty, administrators, and students or “chilly climates” within certain fields or on a campus can discourage students from pursuing their areas of interest.⁴² Postsecondary providers could move the needle toward equity by ensuring that all students have equal opportunity to thrive in their chosen fields of study, regardless of their gender, race, or socioeconomic status.



Educational equity would make a big economic difference—but inequality in society would limit its effects.

While more equitable outcomes in postsecondary educational attainment would have great value for both individuals and society, this achievement would not completely level the playing field. In fact, the effects of equitable educational attainment would fall short of the effects of directly addressing equity shortfalls in the labor market and closing gaps in personal wealth. To demonstrate this shortfall, we measured the potential outcomes associated with target gains in other areas.

For example, we asked how much more society would gain if, after increasing educational attainment to meet our target goals, workers’ earnings also increased so that men and women of all races and ethnicities had earnings that at least matched those of White men with the same educational credentials. Even after reaching our target educational attainment, we found that societal gains would still fall short of what would be possible with equality in earnings (*Table 1*).⁴³ Equalizing earnings in addition to attainment would result in total public benefits of \$3.43 trillion—which is \$2.47 trillion more than the public benefits associated with equitable educational attainment alone.

39 Carnevale et al., *Women Can't Win*, 2018.

40 Georgetown University Center on Education and the Workforce analysis of data from the US Census Bureau, Current Population Survey (CPS), March Supplement, 2017. Comparable figures for AIAN/NHPI and Other groups are not included due to data limitations.

41 Carnevale et al., *Women Can't Win*, 2018.

42 For a discussion of how STEM culture and campus culture interact to affect diversity in STEM, see Griffin, *Achieving Diversity at the Intersection of STEM Culture and Campus Culture*, 2019.

43 For more on the impact of discrimination on earnings, see Carnevale et al., *The Unequal Race for Good Jobs*, 2019, and Carnevale et al., *Women Can't Win*, 2018.

Table 1

The societal gains associated with achieving equal educational attainment would fall short of the gains associated with achieving equal earnings in addition to equal educational attainment.

	Gains with equitable attainment distributions by class and race/ethnicity	Gains with equitable educational attainment and equitable earnings distributions by class, race/ethnicity, and gender	Total gains
Public investment (cumulative)	(\$3.97 trillion)	N/A	(\$3.97 trillion)
Personal benefits			
Aggregate earnings	\$1.03 trillion	+ \$2.29 trillion	\$3.32 trillion
Aggregate potential cumulative savings	\$3.17 trillion	+ \$9.81 trillion	\$13.0 trillion
Public benefits (annual)			
Tax revenue (increase)	\$308 billion	+ \$686 billion	\$994 billion
GDP (increase)	\$542 billion	+ \$1.76 trillion	\$2.30 trillion
Criminal justice expenditures (decrease)	\$13.8 billion	N/A	\$13.8 billion
Public health expenditures (decrease)	\$58.7 billion	+ \$18.1 billion	\$76.8 billion
Public assistance expenditures (decrease)	\$33.7 billion	+ \$9.33 billion	\$43.0 billion
Total public benefits (annual)	\$956 billion	+ \$2.47 trillion	\$3.43 trillion

Source: Georgetown University Center on Education and the Workforce analysis based on compiled statistics described in Carnevale et al., *The Monetary Value of Economic and Racial Justice in Postsecondary Education*, 2021.

Note: Values may not sum to totals due to rounding.

The continued presence of significant gaps after equalizing educational attainment speaks to the powerful impact of factors such as labor-market discrimination. Even among people who have the same level of educational attainment, gaps in earnings still exist. On average, women earn less than men with the same credentials,⁴⁴ and Black and Latinx workers earn less than White workers with similar educational attainment.⁴⁵ Some of these gaps can be explained by differences in the occupations and fields favored by different groups; others are attributable to persistent wage discrimination that keeps disadvantaged groups from fully benefiting from their educational achievements.⁴⁶ These labor-market factors significantly limit the societal gains that are possible from increases in educational attainment.

What role can potential cumulative savings play in closing wealth gaps?

Wealth gaps in the United States are untenable: on the whole, the top 1 percent holds 40 percent of all wealth, while the bottom 90 percent holds less than a quarter.⁴⁷ Wealth gaps are the best cumulative indicator of intergenerational racial/ethnic and class inequality in economic opportunity, and they are unlikely to be appreciably affected by improvements in college-going without also dismantling systemic discrimination.⁴⁸ Differences in wealth matter because they translate into differences in social mobility: those who have less wealth have less of a safety net, as well as less capital to invest. Thus narrowing wealth gaps is essential to establishing equity in society.

Measured in deciles, the wealth gaps by race/ethnicity and gender near the end of workers' careers (ages 55 to 65) are dramatic (*Table 2*).⁴⁹ Within this age band, White and Asian adults are more heavily concentrated in the upper deciles of wealth distribution, while Black and Latinx adults are more heavily concentrated in the lower deciles, along with AIAN/NHPI adults and adults of other races and ethnicities. At the extremes, 18 percent of Black adults have negative wealth when nearing the end of their careers, and only 2 percent (3 percent of Black men and 2 percent of Black women) have wealth in the top decile (above \$826,700, with a median of \$1,357,900). In contrast, 15 percent of Asian adults (22 percent of Asian men and 11 percent of Asian women) have wealth in the top decile, while 8 percent (5 percent of Asian men and 9 percent of Asian women) have negative wealth. Women generally have less wealth than men of the same race and ethnicity, although White and Asian women are more heavily concentrated at higher deciles than women of all other racial/ethnic groups.



44 Carnevale et al., *Women Can't Win*, 2018.

45 Carnevale et al., *The Unequal Race for Good Jobs*, 2019.

46 For more on the impact of discrimination on earnings, see Carnevale et al., *The Unequal Race for Good Jobs*, 2019, and Carnevale et al., *Women Can't Win*, 2018.

47 Leiserson et al., "The Distribution of Wealth in the United States and Implications for a Net Worth Tax," 2019.

48 Darity and Mullen, *From Here to Equality*, 2020.

49 We measure wealth gaps at the end of workers' careers to capture most savings from earnings and most transmitted inheritances. According to the Federal Reserve, the average age at which people receive an inheritance is 40; see Yellen, "Perspectives on Inequality and Opportunity from the Survey of Consumer Finances," 2014.

Table 2

Adults nearing the end of their careers (ages 55 to 65) are sharply divided by racial/ethnic and gender gaps in wealth.

Decile	Median	Asian		White		AIAN/NHPI and Other		Hispanic/Latinx		Black/African American	
		Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
1st	-\$6,700	5%	9%	6%	7%	14%	12%	9%	12%	18%	18%
2nd	\$0	5%	15%	6%	8%	25%	18%	20%	25%	26%	22%
3rd	\$8,700	12%	8%	8%	9%	11%	9%	21%	16%	9%	12%
4th	\$36,300	8%	7%	10%	8%	8%	12%	15%	13%	10%	12%
5th	\$76,000	4%	9%	9%	11%	14%	7%	10%	11%	8%	10%
6th	\$127,300	8%	4%	10%	11%	7%	12%	7%	10%	9%	8%
7th	\$205,300	15%	9%	10%	12%	6%	10%	6%	4%	7%	6%
8th	\$327,100	8%	10%	12%	12%	6%	7%	6%	2%	6%	5%
9th	\$564,500	13%	17%	13%	11%	2%	3%	4%	4%	4%	4%
10th	\$1,357,900	22%	11%	14%	10%	8%	8%	2%	3%	3%	2%
Total	\$100,200	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Mean	\$465,100	\$354,200	\$494,200	\$328,300	\$363,500	\$366,400	\$110,600	\$144,400	\$86,200	\$97,000

Source: Georgetown University Center on Education and the Workforce analysis of data from US Census Bureau, Survey of Income and Program Participation (SIPP), 2014.

Note: AIAN/NHPI stands for American Indian, Alaska Native, Native Hawaiian, and Pacific Islander. We combined AIAN/NHPI and Other groups here to bolster the sample size. Values may not sum to 100 percent due to rounding.

So what role can higher education play in narrowing these gaps? Education affects an individual's ability to build wealth through savings, and for many people, it can make a huge difference: for the 90 percent of the population that holds less than one-fourth of all wealth, earnings may be the primary means of building wealth. Because higher education correlates with higher earnings, individuals with more education tend to have more potential cumulative savings. At the same time, an estimated 45 percent of wealth on average is intergenerational, bequeathed by one generation to another.⁵⁰ Societal investments can affect only the portion of wealth that is not associated with inheritance—that is, the portion people can accrue through earnings.⁵¹



Education affects the ability to build wealth through savings, but it cannot close wealth gaps associated with inheritance.

When we examined the maximum amount of the median-to-median wealth gap that could be closed by equalizing the portion of wealth that is attributable to earnings, we found that this adjustment would narrow the gap but could not close it. (For this part of our analysis, we raised the wealth attributable to education and earnings for all racial/ethnic and gender groups to match that of White men; we did not simulate changes in wealth for Asian men because their individual wealth already exceeds that of White men.) If all groups had at least as much wealth from earnings as White men, aggregate wealth would increase by \$2.29 trillion, but large gaps would still remain, particularly for Latinx, Black, and AIAN/NHPI and Other individuals (*Figure 8*).⁵²

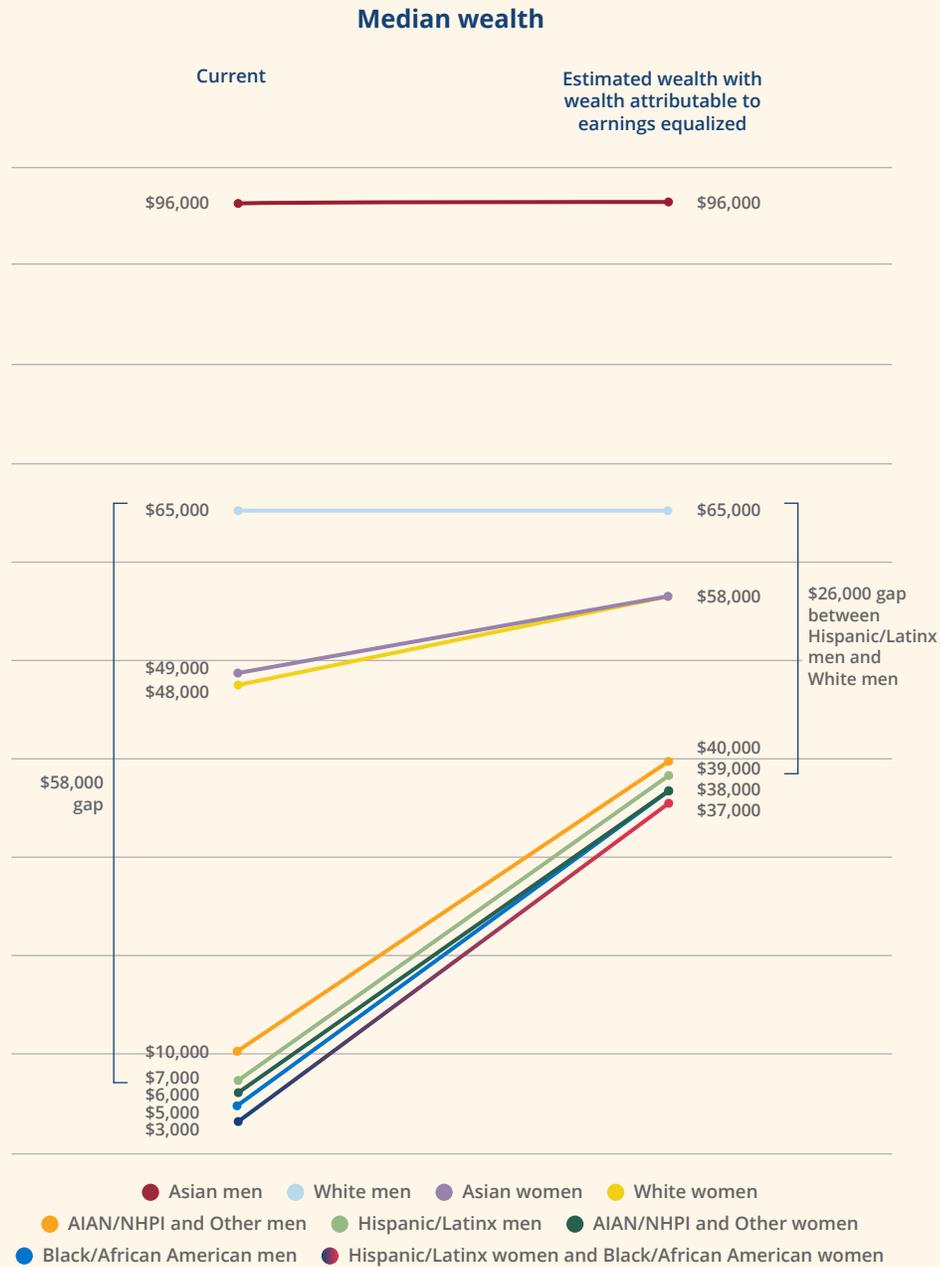
50 This estimate is based on the upper end of the range established by Kopczuk and Lupton, “To Leave or Not to Leave,” 2005.

51 Future research should consider the racial gaps in the share of wealth attributable to inheritance; for more about this recommendation, see Appendix A in Carnevale et al., *The Monetary Value of Economic and Racial Justice in Postsecondary Education*, 2021.

52 We assume that 45 percent of wealth among all groups is attributable to inheritance because our data set does not allow us to establish differences in inheritance among groups. As a result, these estimates may overstate the percentage of wealth attributable to inheritance for some groups and understate it for others. For additional analysis related to this consideration, see Appendix A in Carnevale et al., *The Monetary Value of Economic and Racial Justice in Postsecondary Education*, 2021.

Figure 8

If all individual wealth connected with education and earnings were equalized, wealth gaps like the gap between Latinx men and White men would narrow considerably, but large gaps would still remain.



Source: Georgetown University Center on Education and the Workforce analysis of data from US Census Bureau, American Community Survey (ACS), 2013–17 (pooled); US Department of Education, National Postsecondary Student Aid Study (NPSAS), 2016; and US Census Bureau, Survey of Income and Program Participation (SIPP), 2014.

Note: AIAN/NHPI stands for American Indian, Alaska Native, Native Hawaiian, and Pacific Islander. We have combined the AIAN/NHPI and Other groups here to bolster the sample size.

This simulation shows that the societal value of closing gaps in the portion of wealth that can be affected by earnings would be significant. In fact, economists at the Federal Reserve Bank of Cleveland have found that the racial earnings gap plays a larger role in maintaining the wealth gap than bequests or rates of return on investments.⁵³ Moreover, for those at the lower end of the wealth distribution—who have little or no wealth to begin with—closing earnings gaps can result in real, material improvements in their overall wealth.⁵⁴ For the many people without wealth or savings, the increased earnings described in this experiment would represent a life-altering economic opportunity.

At the same time, the numbers above illustrate the strength of intergenerational transfer in maintaining personal racial wealth gaps, which contribute to gaps in educational and economic opportunity in a self-reinforcing cycle that perpetuates inequality for generations.⁵⁵ The same Federal Reserve Bank of Cleveland study found that after closing racial earnings gaps, the racial wealth gap would narrow but would take approximately 100 years to close entirely.⁵⁶ Clearly, to fully address the disparities caused by historical injustices, we would need to do more than close the portion of the wealth gap that can be affected by education and earnings. Postsecondary equity would have great societal value, but it would not create a completely equal world.

To fully address the disparities caused by historical injustices, we would need to do more than close the portion of the wealth gap that can be affected by education and earnings.

53 Aliprantis et al., “The Dynamics of the Racial Wealth Gap,” 2019. Other researchers have estimated that 26 percent of the racial wealth gap is attributable to “intergenerational transfers of wealth”; see Ashman and Neumuller, “Can Income Differences Explain the Racial Wealth Gap?,” 2020.

54 For example, Hershbein and colleagues found that increased educational attainment rates would significantly increase economic security and reduce poverty for low-income individuals, as well as shrink earnings gaps between low-income individuals and the 90th percentile of earners; see Hershbein et al., “College Attainment, Income Inequality, and Economic Security,” 2020.

55 Sullivan et al., *The Racial Wealth Gap*, 2016.

56 In a contrasting simulation, researchers found that closing the wealth gap without closing the earnings gap would allow the wealth gap to reoccur and approach its former size within 50 years. See Aliprantis et al., “The Dynamics of the Racial Wealth Gap,” 2019. Thompson and Suarez also provide a useful discussion of racial wealth gaps in *Exploring the Racial Wealth Gap Using the Survey of Consumer Finances*, 2015.

The Next Frontier:

The Nonmonetary Benefits of Postsecondary Education



It is all too easy to fixate on the monetary value of postsecondary education: the monetary benefits of postsecondary attainment are straightforward and clear, and even the value of nonmonetary outcomes like public health can seem clearer when measured in monetary terms. Assigning monetary value to educational attainment also seems appropriate because, in a capitalist democracy in which education is the primary pathway to the workforce, we tend to view postsecondary education as a financial investment in the future. As individuals, we are often compelled to weigh this investment in terms of its market value as well as, or even instead of, its value to personal or societal well-being, particularly as the costs of education rise.

Although our focus in this report has primarily been on the monetary benefits to society of economic and racial justice in postsecondary education, we should not ignore those outcomes that are difficult to measure in dollars and cents. A robust body of additional research is needed in order to model these returns in the same manner we have done for monetary returns. While such analysis is beyond the scope of this project, we provide general context here by briefly summarizing some of the existing research on the nonmonetary benefits associated with educational attainment.

We present this summary with a series of caveats.

First, it is difficult, if not impossible, to establish causal relationships between higher education and nonmonetary benefits. In many cases, it is also difficult to distinguish between direct and indirect benefits, including those that might accrue as a result of the higher earnings associated with higher educational attainment rather than directly from educational attainment itself. In addition, in some areas, the effects of postsecondary education are both monetary and nonmonetary, and many outcomes can be interpreted as both private and public. Some researchers have attempted to disentangle public and private effects in these areas,⁵⁷ but most of the research summarized here does not make such distinctions. Finally, while we don't address these dynamics at length, it is important to acknowledge that complicated factors related to race, class, and gender—including longstanding and persistent discrimination in the labor market and society—limit the extent to which many individuals are able to fully realize the nonmonetary benefits associated with higher education.

Our summary encompasses research on nine topics: health, crime and incarceration, family structure, critical thinking, civic engagement, authoritarianism, pluralistic orientation, agency and empowerment, and happiness.

Many potential benefits of economic and racial justice in postsecondary education are difficult to measure in dollars and cents.



Health Outcomes

Postsecondary education has a relationship with numerous positive health outcomes, including better self-reported health status, lower incidence of mortality, and a greater chance of healthy behaviors.⁵⁸ According to Trostel's analysis, approximately 73 percent of working-age individuals with a bachelor's degree and no further education self-reported a "very good" or "excellent" health status, compared with only 55 percent of individuals whose education ended

57 For example, Münich and Psacharopoulos differentiate at a theoretical level between the gains experienced by those who receive an education and the "spillover" gains that accrue to society at large, noting that nonmonetary public benefits are particularly difficult to measure. Münich and Psacharopoulos, "Education Externalities," 2018.

58 Cutler and Lleras-Muney, "Education and Health," 2006; Trostel, *It's Not Just the Money*, 2015; Groot and Maassen van den Brink, "The Health Effects of Education," 2007.



Postsecondary education has a relationship with numerous positive health outcomes.

with a high school diploma.⁵⁹ Furnée and colleagues use a fixed-effects model to estimate the marginal effect of education on self-reported health status and find a positive and significant impact. They note, however, that responses may show bias related to respondents' education levels, as some evidence suggests that better-educated individuals are more likely to accurately report their health status.⁶⁰

In general, life expectancy appears to be positively correlated with educational attainment. For example, Meara and colleagues use 2000 US Census data to estimate life expectancies at age 25 and find that life expectancy is seven years longer for individuals who have enrolled in at least some college coursework than for individuals who never enrolled in college. In fact, they find that the educational gap in health returns is growing even as racial and gender gaps related to health are decreasing or remaining constant.⁶¹ On average, women with at least 13 years of education live approximately five years longer than women with 12 or fewer years. Among men, that disparity jumps to approximately eight years, with the difference slightly larger for Black men than for White men.⁶² In contrast, Everett and colleagues reach a different conclusion, finding that Black men have lower health returns from education than White men or women of either race.⁶³

Studies also indicate that mortality rates are inversely correlated with educational attainment.⁶⁴ For example, citing Phelan and colleagues, Hummer and Hernandez note that among adults between the ages of 45 and 64, the risk of mortality from "highly preventable causes of death" is 93 percent higher for those with nine to 11 years of schooling than for their counterparts with 17 years or more of schooling. These causes of death include preventable diseases (e.g., diabetes and lung cancer), respiratory diseases, and external incidents (e.g., accidents or homicides).⁶⁵ Cutler and Lleras-Muney find a similar relationship between education and incidence of chronic diseases, noting that attending college is associated with an increase in life

59 Trostel, *It's Not Just the Money*, 2015. Throughout this literature review, "working-age" is defined as adults between the ages of 27 and 66.

60 Furnée et al., "The Health Effects of Education," 2008.

61 Meara et al. indicate that racial gaps related to health are narrowing within as well as across different educational attainment groups. Meara et al., "The Gap Gets Bigger," 2008.

62 Meara et al., "The Gap Gets Bigger," 2008.

63 Everett et al., "The Nonlinear Relationship between Education and Mortality," 2013.

64 Trostel, *It's Not Just the Money*, 2015; Meara et al., "The Gap Gets Bigger," 2008; Hummer and Hernandez, "The Effect of Educational Attainment on Adult Mortality in the United States," 2013; Everett et al., "The Nonlinear Relationship between Education and Mortality," 2013.

65 This study measured education attainment levels by years of schooling instead of by completion of credentials. See Hummer and Hernandez, "The Effect of Educational Attainment on Adult Mortality in the United States," 2011, and Phelan et al., "Fundamental Causes' of Social Inequalities in Mortality," 2004.

expectancy. Specifically, they estimate that four additional years of school at any level moderates the risk of heart disease by 2.16 percentage points and reduces the risk of diabetes by 1.3 percentage points. This effect dissipates with less-preventable diseases, like certain forms of cancer.⁶⁶

Educational attainment is associated with health behaviors that contribute to some of the leading causes of mortality. Multiple studies establish that those who attended college are less likely to smoke,⁶⁷ develop alcoholism,⁶⁸ use drugs,⁶⁹ and consume unhealthy diets.⁷⁰ Kenkel was among the earliest to specifically examine the positive relationship between educational attainment and healthy behaviors with a focus on the role that health knowledge plays in that association. His findings support the theory that the knowledge gained from additional years of education is a key factor in reductions in smoking and alcohol use and increases in exercise.⁷¹ Specifically, Cutler and Lleras-Muney estimate that four additional years of education are associated with an 11-percentage-point decrease in the likelihood of smoking relative to a mean of 23 percent, a 5-percentage-point decrease in the likelihood of being overweight relative to a mean of 23 percent, and a half-percentage-point decrease in the likelihood of using illegal drugs relative to a mean of 5 percent.⁷²

Aizer and Stroud examine the effect of the 1964 Surgeon General's Report on Smoking and Health on pregnant women's smoking behaviors and find that more-educated mothers reduced smoking at greater rates following the report: before 1964, about 47 percent of American women smoked while pregnant, and there was little difference in smoking patterns between women who had completed high school and those who had not, but by 1966, a 10-percentage-point gap in smoking rates had opened up between women who completed high school and those who had not.⁷³

In their recent book focused on the welfare of the White working class in the United States, Case and Deaton find that the share of White individuals between the ages of 45 and 54 who report suffering from chronic pain is approximately 15 percentage points higher among those without college degrees than among college graduates.⁷⁴ White individuals with a college education are also less likely to report depression than White individuals with lower levels of educational attainment, and that gap is widening.⁷⁵

Educational attainment is also associated with better health through increased investment in preventive care and avoidance of risky situations.⁷⁶ Vila demonstrates that better-educated individuals are more likely to avoid living in polluted areas and less likely

66 Cutler and Lleras-Muney, "Education and Health," 2006. This study did not differentiate between primary, secondary, and postsecondary effects.

67 Sander, "The Effects of Schooling and Cognitive Ability on Smoking and Marijuana Use by Young Adults," 1998.

68 Sander, "Cognitive Ability, Schooling and the Demand for Alcohol by Young Adults," 1999.

69 Cutler and Lleras-Muney, "Education and Health," 2006.

70 Sander, "Cognitive Ability, Schooling and the Demand for Alcohol by Young Adults," 1999; Mokdad et al., "Actual Causes of Death in the United States," 2004; Cutler and Lleras-Muney, "Education and Health," 2006.

71 Kenkel, "Health Behavior, Health Knowledge, and Schooling," 1991.

72 Cutler and Lleras-Muney, "Education and Health," 2006.

73 Aizer and Stroud, "Education, Knowledge and the Evolution of Disparities in Health," 2010.

74 Case and Deaton, *Deaths of Despair and the Future of Capitalism*, 2020.

75 Case and Deaton, *Deaths of Despair and the Future of Capitalism*, 2020.

76 Vila, "The Non-Monetary Benefits of Education," 2000; Lochner, "Nonproduction Benefits of Education," 2011; Cutler and Lleras-Muney, "Education and Health," 2006.

to take jobs with significant working hazards.⁷⁷ Cutler and Lleras-Muney find that four additional years of education are associated with an increased likelihood of obtaining regular flu shots, mammograms, Pap smears, and colonoscopies. Four additional years of education also increase seat belt usage by 12 percentage points relative to a mean of 68 percent. Individuals with higher levels of education are also less likely to self-report having depression or anxiety. However, Cutler and Lleras-Muney note that further research needs to examine whether there is variation in the effect of additional years of schooling at every level or if an additional year of high school, for example, has a greater effect than an additional year of college.⁷⁸ In an earlier study, Hartog and Oosterbeck find evidence that secondary education has more of an impact on health than other levels of education.⁷⁹



Crime and Incarceration

A substantial body of research indicates that education contributes to a safer society.⁸⁰ Lochner and Moretti present a comprehensive analysis of the relationship between educational attainment and criminal activity, finding an association between lower levels of education and a higher likelihood of being arrested for murder, assault, and motor vehicle theft.⁸¹ However, their findings suggest diminishing returns for additional education: based on Lochner and Moretti, Trostel estimates that the reduction in crimes due to high school completion is 5.4 times higher than the reduction due to completing college. He also estimates that there are four fewer murders, 406 fewer assaults, and 648 fewer property crimes for every 100,000 bachelor's degrees issued nationally.⁸²

If higher levels of education are associated with lower levels of criminal activity, it logically follows that there would be a strong negative association between educational attainment and incarceration.⁸³ Lochner and Moretti confirm this relationship for men, finding that the incarceration rate falls from just under 4 percent for male high school dropouts to 0.75 percent for male high school graduates without a college degree. Though incarceration rates decline with increasing education across racial groups, Black men are incarcerated more frequently than their White counterparts at every level of educational attainment.⁸⁴ In fact, Lochner and Moretti find that White male high school graduates without any further education are incarcerated at approximately half the rate of Black male college graduates.⁸⁵ Differences in incarceration rates may reflect differential treatment in the criminal justice system: in their research on sentencing for

77 Vila, "The Non-Monetary Benefits of Education," 2000.

78 Cutler and Lleras-Muney, "Education and Health," 2006. The finding of a negative relationship between educational attainment and depression and anxiety is further supported by Bjelland et al., "Does a Higher Education Level Protect against Anxiety and Depression?," 2008. Bauldry has found that these positive returns to education are greater for individuals from disadvantaged backgrounds than those with more resources; see Bauldry, "Variation in the Protective Effect of Higher Education against Depression," 2015.

79 Hartog and Oosterbeck, "Health, Wealth and Happiness," 1998.

80 Vila, "The Non-Monetary Benefits of Education," 2000; Lochner and Moretti, "The Effect of Education on Crime," 2004; Trostel, *It's Not Just the Money*, 2015.

81 Lochner and Moretti, "The Effect of Education on Crime," 2004.

82 Trostel, *It's Not Just the Money*, 2015.

83 Lochner and Moretti, "The Effect of Education on Crime," 2004; Trostel, *It's Not Just the Money*, 2015.

84 Lochner and Moretti, "The Effect of Education on Crime," 2004.

85 Lochner and Moretti, "The Effect of Education on Crime," 2004.

white-collar crimes, Schanzenbach and Yaeger find that education is associated with reduced incarceration, and racial disparities exist in sentencing trends.⁸⁶ On average, Black individuals receive sentences that are about a month longer, and Latinx individuals receive sentences that are just over a month longer than those received by White individuals for committing the same white-collar crimes, after controlling for education levels and other factors.⁸⁷

Lochner and Moretti also find that the relationship between education and incarceration rates is stronger for men than women and present evidence of a two-way correlation between incarceration and education, as criminal activity in youth can inhibit one's ability to complete an education.⁸⁸ Further, the negative correlation between being in school and delinquency is well established.⁸⁹



Family Structure

While decisions about family structure are intensely personal, it is worth noting that educational attainment is positively correlated with marriage rates,⁹⁰ and it is inversely correlated with divorce.⁹¹ The most conspicuous disparities in marriage and divorce rates occur between individuals who have completed some college and those who have obtained bachelor's degrees.⁹² According to the 2012 American Community Survey, 55 percent of working-age adults with high school diplomas are married, compared with 67 percent of individuals with bachelor's degrees and 71 percent of individuals with advanced degrees.⁹³ Since the 1980s, marriage rates have fallen across all education levels, but the drop is most significant for individuals without a college education. Case and Deaton find that the share of non-college-educated White individuals (ages 45 to 54) who are married has fallen from more than 80 percent in 1980 to slightly more than 60 percent in 2015, while that number for White college graduates has remained steady at around 75 percent.⁹⁴ In their seminal work on the relationship between education and marriage, Stevenson and Wolfers examine 150 years of marriage and divorce trends in the United States, finding, on average, a 10-percentage-point gap in divorce rates from first marriages between college graduates and those with less than a bachelor's degree. Further, they find that divorced individuals who did not graduate from college are less likely to remarry than individuals with bachelor's degrees, and if nongraduates do remarry, they are more likely to get divorced again.⁹⁵

Consistent with that research, Aughinbaugh and colleagues find that people with higher educational attainment marry at higher rates and divorce at lower rates than their less-educated counterparts. Using data from the 1979 National Longitudinal Survey of Youth, they find that 89 percent of individuals with at least a bachelor's degree are married by

86 Schanzenbach and Yaeger, "Prison Time, Fines, and Federal White-Collar Criminals," 2006.

87 Schanzenbach and Yaeger, "Prison Time, Fines, and Federal White-Collar Criminals," 2006.

88 Lochner and Moretti, "The Effect of Education on Crime," 2004.

89 Vila, "The Non-Monetary Benefits of Education," 2000; Anderson, "In School and Out of Trouble?," 2009.

90 Oreopoulos and Salvanes, "Priceless," 2011; Trostel, *It's Not Just the Money*, 2015.

91 Stevenson and Wolfers, "Marriage and Divorce," 2007; Aughinbaugh et al., "Marriage and Divorce," 2013.

92 Aughinbaugh et al., "Marriage and Divorce," 2013; Trostel, *It's Not Just the Money*, 2015.

93 Trostel, *It's Not Just the Money*, 2015.

94 Case and Deaton, *Deaths of Despair and the Future of Capitalism*, 2020.

95 Stevenson and Wolfers, "Marriage and Divorce," 2007.

age 46, compared with 81 percent of individuals with less than a high school diploma. In addition, the divorce rate for first marriage is almost 20 percentage points lower for college graduates than it is for those with a high school diploma or less. Notably, though both men and women tend to marry and remain in marriages at higher rates when they are more educated, the gap between highly educated and less-educated men is larger than the gap between highly educated and less-educated women.⁹⁶ Oreopoulos and Salvanes also find evidence that individuals tend to choose partners with similar education levels, which can contribute to the success of their marriages. Future research on this subject should consider the direction of causality and how schooling affects marriage and partner preferences.⁹⁷

A relationship between educational attainment and family size also exists, with more-educated women generally having fewer children than their less-educated counterparts. This may happen because more-educated women begin having children later in life.⁹⁸ Using US Census data, Jones and Tertilt estimate that more than half of the decline in fertility rates since the late 1800s can be attributed to education increases; they observe an inverse correlation between educational attainment and fertility rates and find that for both men and women, higher levels of education correspond with lower fertility.⁹⁹ This finding contradicts other studies asserting that only women's education has a significant relationship with fertility.¹⁰⁰

It is difficult to determine whether larger family size should be seen as a positive or a negative when considering nonmonetary benefits. Angrist and colleagues investigate the concept of a quality-quantity trade-off in which larger families are less able to invest in each child's development and find no evidence of such a trade-off.¹⁰¹ In contrast, Black and colleagues find that family size is negatively correlated with children's educational attainment.¹⁰²

There is a link between educational attainment and the development of critical thinking skills, the ability to synthesize information, and the ability to make informed decisions.

96 Aughinbaugh et al., "Marriage and Divorce," 2013.

97 Oreopoulos and Salvanes, "Priceless," 2011.

98 Black et al., "The More the Merrier?," 2005.

99 Jones and Tertilt, "An Economic History of Fertility in the U.S.," 2006.

100 Hotz and Miller, "An Empirical Analysis of Life Cycle Fertility," 1988; Heckman and Walker, "The Relationship between Wages and Income and the Timing and Spacing of Births," 1990.

101 Angrist et al., "New Evidence on the Causal Link between the Quantity and Quality of Children," 2005.

102 This study controls for mother's and father's educational level but does not control for family income. It uses data from the full population of Norway between 1986 and 2000. Black et al., "The More the Merrier?," 2005.



Critical Thinking Skills

Research indicates that there is a link between educational attainment and the development of critical thinking skills,¹⁰³ the ability to synthesize information,¹⁰⁴ and the ability to make informed decisions.¹⁰⁵ Green and Riddell use International Adult Literacy

Survey data from the 1990s to explore the relationships between earnings, education, and cognitive skills.¹⁰⁶ Unsurprisingly, they find that education appears to have a strong, positive association with literacy skills.¹⁰⁷ Similarly, Glaeser and colleagues posit that educational attainment empowers citizens to understand complex issues and provides them with the tools needed to interact effectively with their governments. Further, they find that education is a strong predictor of economic growth because it contributes significantly to the development of human capital.¹⁰⁸

Heckman proposes an alternative theory, asserting that cognitive ability, whether inherent or learned, could be a key determinant of educational attainment. However, he acknowledges that many socioeconomic and familial factors influence both cognitive development and educational outcomes.¹⁰⁹ Consistent with much of the earlier literature, Falch and Massih find a positive correlation between education and cognitive ability, as measured by IQ scores, using a Swedish longitudinal data set and controlling for many confounding factors, like family income and baseline cognitive ability in youth. Based on Ordinary Least Squares regressions, they estimate that an additional year of school is associated with an increase of 2.9 to 3.5 points in IQ.¹¹⁰



Civic Engagement

Multiple studies point to a positive relationship between educational attainment and civic engagement.¹¹¹ With his sociological work on the conditions needed for a well-functioning democracy, Lipset argued in 1959 that education plays a role in producing an informed citizenry

with the capacity to make electoral decisions and resist tyranny.¹¹² Friedman also argued that education allows individuals to better understand political issues and national values.¹¹³ In more recent literature, Verba and colleagues assert that education helps people develop the skills needed to distill political concepts,¹¹⁴ and Hanushek proposes

103 Trostel, *It's Not Just the Money*, 2015. Arum and colleagues are currently investigating the relationship between postsecondary education and outcomes like critical thinking in their Next Generation Undergraduate Success Measurement Project; see Arum et al., "Measuring Postsecondary Value," 2021.

104 Vila, "The Non-Monetary Benefits of Education," 2000.

105 Milligan et al., "Does Education Improve Citizenship?," 2004.

106 Green and Riddell, "Literacy and Earnings," 2003. Our own research establishes earnings premiums attached to the use of various competencies (such as problem-solving and complex thinking) in the workforce, although those monetary benefits are beyond the scope of this discussion. See Carnevale et al., *Workplace Basics*, 2020.

107 Green and Riddell, "Literacy and Earnings," 2003.

108 Glaeser et al., "Do Institutions Cause Growth?," 2004.

109 Heckman, "Lessons from the Technology of Skill Formation," 2006.

110 Falch and Massih, "The Effect of Education on Cognitive Ability," 2011.

111 Lipset, "Some Social Requisites of Democracy," 1959. Arum and colleagues are building on what is known about postsecondary education and civic engagement by investigating civic attitudes through their Next Generation Undergraduate Success Measurement Project; see Arum et al., "Measuring Postsecondary Value," 2021.

112 Lipset, "Some Social Requisites of Democracy," 1959.

113 Friedman, *Capitalism and Freedom*, 1962.

114 Verba et al., *Voice and Equality*, 1995.



Studies point to a positive relationship between educational attainment and civic engagement.

that education fosters an interest in politics.¹¹⁵ Consistent with these discussions, Lewis-Beck and colleagues suggest that education increases individuals' interest in and knowledge of political issues, thereby increasing political participation.¹¹⁶

Milligan and colleagues test whether schooling increases civic participation as measured by voting in the United States and the United Kingdom. Using National Election Studies data from 1948 to 2000, they find that 52 percent of US high school dropouts, 67 percent of high school graduates, 74 percent of individuals who complete some college, and 84 percent of college graduates report voting in national elections. They note, however, that because these reported voting rates are significantly higher than the actual turnout rates in recent elections, it is possible that respondents misreported their own voting participation. In both countries, they find that better-educated individuals are more inclined to follow elections, discuss politics, identify with a political group, and work on community issues.¹¹⁷

Using High School and Beyond survey data from the US Department of Education, Dee finds that starting college increases voter participation by between 17 and 22 percentage points. He also concludes that additional schooling is associated with increased newspaper readership, community involvement, and support for free speech.¹¹⁸

According to Trostel's analysis of government surveys on voting and civic engagement, 28 percent of high school graduates with no college education said they always vote in local elections, while 41 percent of college graduates without further education and 45 percent of advanced degree holders said they do so. In national elections, the positive association between education and voting persists, although the percentage of individuals who report having voted is even higher across all educational attainment levels. Approximately 85 percent of bachelor's degree holders report that they voted in the 2012 presidential election, compared with 62 percent of individuals with only high school diplomas and 42 percent of individuals with less than a high school diploma. In the 2012 presidential election, however, the overall voting rate did not surpass 60 percent, which indicates significant overreporting of voter participation; future research should examine this

115 Hanushek, "Publicly Provided Education," 2002.

116 Lewis-Beck et al., *The American Voter Revisited*, 2008.

117 Milligan et al., "Does Education Improve Citizenship?," 2004.

118 The individuals included in this study were high school sophomores in 1980 and would have been in their early twenties during the 1988 presidential election. This is worth noting because young adults (ages 18 to 24) in the United States have consistently voted at lower rates than other age groups since at least 1964 (see File, "Young-Adult Voting," 2014). Future analysis should examine whether these effects deepen or diminish with age. Dee, "Are There Civic Returns to Education?," 2004.

discrepancy.¹¹⁹ Some evidence suggests that individuals with higher levels of educational attainment are more inclined to report having voted even when they have not.¹²⁰

Educational attainment is also positively correlated with an array of behaviors indicating political engagement aside from voting, including boycotting or purchasing products based on a company's political or social platform, contacting a public official, and discussing politics. In general, community involvement rises with educational attainment. Participation in a community organization of any kind, including school or community associations, service or civic organizations, and religious institutions, jumps from just under 20 percent for high school graduates to 36 percent for individuals who completed some college, 48 percent for bachelor's degree holders, and 59 percent for advanced degree holders. There is also a positive association between educational attainment and working on a community project or attending a community meeting.¹²¹

Some researchers find that individuals with at least a bachelor's degree are more likely to volunteer, to pursue nonprofit employment, and to make charitable contributions than their less-educated counterparts. Trostel uses data from the 2012 Volunteer Supplement of the Current Population Survey to estimate that 17 percent of high school graduates, 28 percent of individuals with some college, 40 percent of bachelor's degree holders, and 49 percent of advanced degree holders regularly volunteer.¹²² Ma and colleagues also conclude that volunteering trends upward with education, but that across all education levels, women volunteer more than men.¹²³ On the other hand, Dee does not find evidence of a significant relationship between educational attainment and the likelihood of volunteering.¹²⁴



Authoritarianism

One critical way in which higher education affects civic life in a democracy is by mitigating people's tendencies to hold authoritarian viewpoints. Our own research shows an inverse relationship between higher levels of education and preferences for authoritarianism. At each successively higher level of educational attainment, people are less inclined to support authoritarian regimes or to express a lack of support for democracy. People with higher educational attainment are also less inclined to express authoritarian attitudes about childrearing practices. This disinclination toward authoritarianism is particularly strong among college graduates.¹²⁵

Our research affirms not only that higher education plays a role in mitigating authoritarian tendencies, but also that certain types of postsecondary education play a stronger role than others. Liberal arts majors are particularly disinclined to express authoritarian preferences and attitudes when compared with majors in science,

119 Trostel, *It's Not Just the Money*, 2015.

120 Silver et al., "Who Overreports Voting?," 1986; Hansen and Tyner, "Educational Attainment and Social Norms of Voting," 2019.

121 Trostel, *It's Not Just the Money*, 2015.

122 Trostel, *It's Not Just the Money*, 2015.

123 Ma et al., *Education Pays 2019*, 2019.

124 Dee, "Are There Civic Returns to Education?," 2004.

125 This research measures authoritarian mindsets using survey data on political preferences as well as preferences related to childrearing practices; see Carnevale et al., *The Role of Education in Taming Authoritarian Attitudes*, 2020.

technology, engineering, and mathematics (STEM) or business-related majors.¹²⁶ This speaks to the important role of liberal arts education in sustaining American democracy.



Pluralistic Orientation

Among the learning outcomes that postsecondary institutions frequently aim to impart are those that prepare students for engagement with diversity and complexity, such as “intercultural knowledge and competence” and “ethical reasoning and action.”¹²⁷ These skills and dispositions are at once important to navigating the 21st-century workforce and crucial to justice-oriented leadership in society. Because some college-educated individuals go on to hold influential positions in various sectors, higher education should play a role in combating inequality by helping students develop the skills and dispositions they will need to seek justice in their future careers and communities.¹²⁸

One subset of these skills and dispositions—political and social tolerance—is generally associated with postsecondary educational attainment, particularly at the baccalaureate level.¹²⁹ Postsecondary education has also been shown to promote “egalitarian racial attitudes,” although this effect is not uniform across racial/ethnic groups and does not always translate into support for racially egalitarian policies.¹³⁰ On the whole, the debate persists over whether education leads to deep and lasting appreciation for difference or simply teaches individuals to more adeptly promote their own and their group’s self-interest, including by voicing an egalitarian mindset in order to conform with social norms.¹³¹

That said, there is evidence that learning environments that promote meaningful engagement with diversity can succeed in instilling “a pluralistic orientation.”¹³² Engberg and Hurtado have found that the development of such an orientation is associated with “positive interactions across race” as well as engagement in courses and cocurricular programs with a focus on diversity. In contrast, cross-racial interactions that were negative in nature were associated with increased “intergroup anxiety.”¹³³ The presence of racial diversity on campus has been shown to increase interactions across race, particularly for White students.¹³⁴ These interracial interactions have been associated with outcomes such as “openness to diversity, cognitive development, and

126 Carnevale et al., *The Role of Education in Taming Authoritarian Attitudes*, 2020.

127 Association of American Colleges and Universities, “The LEAP Challenge,” 2015.

128 Elliott and Jones, “How Well Are Colleges Educating Students to Be Change Agents?,” 2021.

129 Dražanová, *Education and Tolerance*, 2017.

130 For example, White Americans with higher educational attainment are not necessarily more likely to support affirmative action in hiring than those with lower levels of formal education. Wodtke, “The Impact of Education on Inter-Group Attitudes,” 2012.

131 Dražanová, *Education and Tolerance*, 2017; Wodtke, “The Impact of Education on Inter-Group Attitudes,” 2012.

132 Engberg and Hurtado, “Developing Pluralistic Skills and Dispositions in College,” 2011. Engberg and Hurtado measure pluralistic orientation according to “students’ self-ratings regarding their ability to see the world from someone else’s perspective, tolerance of others with different beliefs, openness to having one’s views challenged, ability to work cooperatively with diverse people, and ability to discuss and negotiate controversial issues.”

133 Engberg and Hurtado, “Developing Pluralistic Skills and Dispositions in College,” 2011. The authors found that these effects were not uniform across racial/ethnic groups, and that pluralistic orientation upon college entry seemed to play a role in pluralistic orientation after two years in college.

134 Chang et al., “Cross-Racial Interaction among Undergraduates,” 2004.

self-confidence,”¹³⁵ along with other benefits, such as “intellectual ability, civic interest, and social skills.”¹³⁶

This body of research suggests that while postsecondary education may not intrinsically produce a pluralist orientation or appreciation for diversity among students, it nonetheless has a significant opportunity to create learning opportunities that promote these outcomes. Importantly, both the presence of compositional diversity and opportunities for positive engagement across racial and ethnic groups are essential to this work.¹³⁷



Agency and Empowerment

In general, people with higher levels of education tend to have a greater sense of empowerment and control over their lives.

Researchers have theorized that this greater sense of control leaves them less prone to feel threatened by difference, more tolerant of those unlike themselves, and less susceptible to authoritarianism.¹³⁸

Markus and Kitayama define “agency” as frameworks of ideas and values that guide individuals’ actions.¹³⁹ Snibbe and Markus build upon existing research that studies the linkage between individuals’ socioeconomic statuses and their decision-making independence to explore the relationship between educational attainment and agency. Using music genre preferences (rock vs. country) as representations of White Americans’ cultural preferences, they find that college-educated respondents value expressions of uniqueness, control over their environments, and their ability to influence others. In contrast, high school-educated respondents are more inclined to prefer upholding integrity, personal improvement, and resisting influence. Further, Snibbe and Markus’s findings suggest that individuals with bachelor’s degrees value choice more than their high school-educated peers.¹⁴⁰



Political and social tolerance is generally associated with postsecondary educational attainment.

135 Chang et al., “The Educational Benefits of Sustaining Cross-Racial Interaction among Undergraduates,” 2006.

136 Chang et al., “Cross-Racial Interaction among Undergraduates,” 2004.

137 In fact, college environments characterized by “White habitus” can increase “colorblind ideological orientations” among White students, potentially undermining the role of college in promoting racial justice. See Jayakumar, “The Shaping of Postcollege Colorblind Orientation among Whites,” 2015.

138 Carnevale et al., *The Role of Education in Taming Authoritarian Attitudes*, 2020; Dražanová, *Education and Tolerance*, 2017; Stenner, *The Authoritarian Dynamic*, 2005.

139 Markus and Kitayama, “Models of Agency,” 2003.

140 Snibbe and Markus, “You Can’t Always Get What You Want,” 2005.

It is also possible that agency and empowerment lead to, rather than stem from, educational attainment. For example, Martin and colleagues examine the non-cultural-capital factors that contribute to community college students' persistence, finding a positive relationship between empowerment and college graduation rates based on a qualitative study of a public community college in the southeastern United States.¹⁴¹ Specifically, they observe that students who graduate from community colleges, which traditionally have lower graduation rates than four-year colleges, share certain characteristics, including having clear goals, strong senses of motivation and self-empowerment, a self-driven desire for success, and an ability to manage external demands.



Happiness

Evidence on the relationship between educational attainment and happiness is somewhat mixed and can be difficult to interpret definitively due to its subjective nature.¹⁴² Blanchflower and Oswald note a positive correlation, independent of income, between educational attainment and happiness levels in the United States and Great Britain, but find that the relationship is stronger for men than for women. Interestingly, they also note that Americans with both high and low levels of education have experienced downward trends in self-reported happiness levels since the 1970s, and that the decline has been approximately equivalent regardless of education level.¹⁴³

Postsecondary education has many positive outcomes that cannot be adequately measured in monetary terms.

In their research on the White working class, Case and Deaton find that White adults without a college education are more likely to report regular feelings of unhappiness than college graduates in the same demographic group, and this happiness gap has widened since the late 20th century.¹⁴⁴

Oreopoulos and Salvanes find that the positive relationship between education and self-reported levels of happiness persists even after controlling for factors associated with both, such as income. Controlling for income, they find that high school graduates are 4 percentage points more likely than high school dropouts to report that they are happy, and college graduates are 2 percentage points more likely than high school graduates to

141 Martin et al., "Community College Student Success," 2014.

142 It is possible, for example, that groups reporting higher levels of happiness are not happier per se, but are simply more likely to say that they are happy due to socialization or other factors.

143 Blanchflower and Oswald, "Well-Being over Time in Britain and the USA," 2004.

144 The data set includes White adults ages 45 to 54, and the study does not discuss other racial/ethnic groups. Case and Deaton, *Deaths of Despair and the Future of Capitalism*, 2020.

report that they are happy.¹⁴⁵ This evidence of an independent, albeit minor, happiness effect of educational attainment challenges literature claiming that the increased happiness of more-educated individuals occurs because of the related gains in income and socioeconomic status.

In their survey of recent happiness literature, Blanchflower and Oswald estimate that an extra year of education in the United States is associated with a 0.017-percentage-point increase in self-reported happiness. However, in this analysis, they contradict their earlier finding that the relationship is independent of income, noting that recent empirical studies demonstrate that the link runs primarily through the higher income associated with educational attainment.¹⁴⁶

In sum, postsecondary education has many positive outcomes that cannot be adequately measured in monetary terms. The degree to which these outcomes constitute private versus public benefits is an open question. The same can be said of the effect that economic and racial justice in postsecondary education would have on society. Future research should establish a framework for distinguishing between private and public benefits and a means of measuring the impact that closing postsecondary attainment gaps would have on both.

¹⁴⁵ Oreopoulos and Salvanes, "Priceless," 2011.

¹⁴⁶ Blanchflower and Oswald, "International Happiness," 2011.

Conclusion:

The Strong Case for Educational Equity



Despite its limitations as a lever for equality in society, equitable educational attainment would have great societal value, both monetary and nonmonetary. If we consider the potential societal gains alongside the investments required to raise educational attainment among underserved groups, the case for economic and racial justice in postsecondary education is clear.

With the necessary investments, higher education could be an effective lever for advancing economic and racial justice in society—partly because there is simply so much inequality to be eradicated in the current postsecondary system. Our thought experiment suggests that addressing the disparities in postsecondary education would be an investment with high monetary returns for society, in addition to the nonmonetary gains associated with educational attainment.

References

- Addo, Fenaba R., Jason N. Houle, and Daniel Simon. "Young, Black, and (Still) in the Red: Parental Wealth, Race, and Student Loan Debt." *Race and Social Problems* 8, no. 1 (March 2016): 64–76.
- Aizer, Anna, and Laura Stroud. "Education, Knowledge and the Evolution of Disparities in Health." NBER Working Paper 15840, National Bureau of Economic Research, Cambridge, MA, 2010.
- Aliprantis, Dionissi, Daniel R. Carroll, and Eric R. Young. "The Dynamics of the Racial Wealth Gap." Federal Reserve Bank of Cleveland Working Paper 19-18, October 2019.
- Anderson, D. Mark. "In School and Out of Trouble? The Minimum Dropout Age and Juvenile Crime." *Review of Economics and Statistics* 96, no. 2 (2009): 318–31.
- Angrist, Joshua D., Victor Lavy, and Analia Schlosser. "New Evidence on the Causal Link between the Quantity and Quality of Children." NBER Working Paper 11835, National Bureau of Economic Research, Cambridge, MA, 2005.
- Arum, Richard, Jacquelynne S. Eccles, Jutta Heckhausen, Gabe A. Orona, Luise von Keyserlingk, Christopher Wegemer, Charles E. Wright, and Katsumi Yamaguchi-Pedroza. "Measuring Postsecondary Value: Identifying Student Learning and Growth." Paper prepared for the Postsecondary Value Commission, 2021.
- Ashman, Hero, and Seth Neumuller. "Can Income Differences Explain the Racial Wealth Gap? A Quantitative Analysis." *Review of Economic Dynamics* 35 (2020): 220–39.
- Association of American Colleges and Universities. "The LEAP Challenge: Education for a World of Unscripted Problems." *Liberal Education* 101, no. 1/2 (Winter/Spring 2015).
- Aughinbaugh, Alison, Omar Robles, and Hugette Sun. "Marriage and Divorce: Patterns by Gender, Race, and Educational Attainment." *Monthly Labor Review*. US Bureau of Labor Statistics, 2013.
- Autor, David H. "Skills, Education, and the Rise of Earnings Inequality among the 'Other 99 Percent.'" *Science* 344, no. 6186 (May 2014): 843–51.
- Balko, Radley. "21 More Studies Showing Racial Disparities in the Criminal Justice System." *Washington Post*, April 9, 2019.
- Bauldry, Shawn. "Variation in the Protective Effect of Higher Education against Depression." *PubMed* 5, no. 2 (January 2015): 145–61.
- Baum, Sandy, Jennifer Ma, Matea Pender, and CJ Libassi. *Trends in Student Aid 2019*. New York: College Board, 2019.
- Bjelland, Ingvar, Steinar Krokstad, Arnstein Mykletun, Alv A. Dahl, Grethe S. Tell, and K. Tambs. "Does a Higher Education Level Protect against Anxiety and Depression? The HUNT Study." *Social Science & Medicine* 66, no. 6 (March 2008): 1334–45.
- Black, Sandra E., Paul J. Devereux, and Kjell Salvanes. "The More the Merrier? The Effect of Family Composition on Children's Education." *Quarterly Journal of Economics* 120, no. 2 (2005): 669–700.
- Blanchflower, David G., and Andrew J. Oswald. "International Happiness: A New View on the Measure of Performance." *Academy of Management Perspectives* 25, no. 1 (2011): 6–22.
- Blanchflower, David G., and Andrew J. Oswald. "Well-Being over Time in Britain and the USA." *Journal of Public Economics* 88, no. 7–8 (2004): 1359–86.
- Carnevale, Anthony P., Kathryn Peltier Campbell, Ban Cheah, Megan L. Fasules, Artem Gulish, Michael C. Quinn, Jenna R. Sablan, Nicole Smith, Jeff Strohl, and Sarah Barrese. *The Monetary Value of Economic and Racial Justice in Postsecondary Education: Quantifying the Potential for Public Good*. Washington, DC: Postsecondary Value Commission, 2021.

- Carnevale, Anthony P., and Megan L. Fasules. "Who's Working from Home: The Education Divide." *Medium* (blog), April 29, 2020.
- Carnevale, Anthony P., Megan L. Fasules, and Kathryn Peltier Campbell. *Workplace Basics: The Competencies Employers Want*. Washington, DC: Georgetown University Center on Education and the Workforce, 2020.
- Carnevale, Anthony P., Artem Gulish, and Jeff Strohl. *Educational Adequacy in the Twenty-First Century*. Washington, DC: Georgetown University Center on Education and the Workforce and The Century Foundation, 2018.
- Carnevale, Anthony P., Peter Schmidt, and Jeff Strohl. *The Merit Myth: How Our Colleges Favor the Rich and Divide America*. New York: The New Press, 2020.
- Carnevale, Anthony P., Nicole Smith, Lenka Dražanová, Artem Gulish, and Kathryn Peltier Campbell. *The Role of Education in Taming Authoritarian Attitudes*. Washington, DC: Georgetown University Center on Education and the Workforce, 2020.
- Carnevale, Anthony P., Nicole Smith, and Artem Gulish. *Women Can't Win: Despite Making Educational Gains and Pursuing High-Wage Majors, Women Still Earn Less Than Men*. Washington, DC: Georgetown University Center on Education and the Workforce, 2018.
- Carnevale, Anthony P., Jeff Strohl, Artem Gulish, Martin Van Der Werf, and Kathryn Peltier Campbell. *The Unequal Race for Good Jobs: How Whites Made Outsized Gains in Education and Good Jobs Compared to Blacks and Latinos*. Washington, DC: Georgetown University Center on Education and the Workforce, 2019.
- Case, Anne, and Angus Deaton. *Deaths of Despair and the Future of Capitalism*. Princeton, NJ: Princeton University Press, 2020.
- Chang, Mitchell J., Alexander W. Astin, and Dongbin Kim. "Cross-Racial Interaction among Undergraduates: Some Consequences, Causes, and Patterns." *Research in Higher Education* 45, no. 5 (August 2004): 529–52.
- Chang, Mitchell J., Nida Denson, Victor Saenz, and Kimberly Misa. "The Educational Benefits of Sustaining Cross-Racial Interaction among Undergraduates." *Journal of Higher Education* 77, no. 3 (May/June 2006): 430–55.
- Christenson, Bruce A., and Nan E. Johnson. "Educational Inequality in Adult Mortality: An Assessment with Death Certificate Data from Michigan." *Demography* 32, no. 2 (1995): 215–29.
- Cutler, David M., and Adriana Lleras-Muney. "Education and Health: Evaluating Theories and Evidence." NBER Working Paper 12352, National Bureau of Economic Research, Cambridge, MA, 2006.
- Darity, William A., and A. Kirsten Mullen. *From Here to Equality: Reparations for Black Americans in the Twenty-First Century*. Chapel Hill: University of North Carolina Press, 2020.
- Dee, Thomas S. "Are There Civic Returns to Education?" *Journal of Public Economics* 88, no. 9–10 (2004): 1697–1720.
- Domestic Policy Council and the Council of Economic Advisers. *Taking Action: Higher Education and Student Debt*. The White House, June 2014.
- Dražanová, Lenka. *Education and Tolerance: A Comparative Quantitative Analysis of the Educational Effect on Tolerance*. Frankfurt: Peter Lang, 2017.
- Elliott, Kayla C., and Tiffany Jones. "How Well Are Colleges Educating Students to Be Change Agents?" Paper prepared for the Postsecondary Value Commission, 2021.
- Engberg, Mark E., and Sylvia Hurtado. "Developing Pluralistic Skills and Dispositions in College: Examining Racial/Ethnic Group Differences." *Journal of Higher Education* 82, no. 4 (July/August 2011): 416–43.
- Everett, Bethany G., David H. Rehkopf, and Richard G. Rogers. "The Nonlinear Relationship between Education and Mortality: An Examination of Cohort, Race/Ethnic, and Gender Differences." *Population Research and Policy Review* 32, no. 6 (December 2013): 893–917.
- Falch, Torberg, and Sofia Sandgren Massih. "The Effect of Education on Cognitive Ability." *Economic Inquiry* 49, no. 3 (2011): 838–56.
- File, Thom. "Young-Adult Voting: An Analysis of Presidential Elections, 1964–2012." Current Population Survey (CPS) Report P20-573, US Census Bureau, 2014.
- Friedman, Milton. *Capitalism and Freedom*. Chicago: University of Chicago Press, 1962.
- Furnée, Carina A., Wim Groot, and Henriëtte Maassen van den Brink. "The Health Effects of Education: A Meta-Analysis." *European Journal of Public Health* 18, no. 4 (2008): 417–21.
- Glaeser, Edward L., Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. "Do Institutions Cause Growth?" *Journal of Economic Growth* 9, no. 3 (2004): 271–303.
- Goldin, Claudia, and Lawrence F. Katz. "Long-Run Changes in the Wage Structure: Narrowing, Widening, Polarizing." *Brookings Papers on Economic Activity* vol. 38, no. 2 (2007): 135–67.
- Green, David A., and W. Craig Riddell. "Literacy and Earnings: An Investigation of the Interaction of Cognitive and Unobserved Skills in Earnings Generation." *Labour Economics* 10, no. 2 (2003): 165–84.

- Griffin, Kimberly A. *Achieving Diversity at the Intersection of STEM Culture and Campus Culture*. Washington, DC: American Council on Education, 2019.
- Groot, Wim, and Henriëtte Maassen van den Brink. "The Health Effects of Education." *Economics of Education Review* 26, no. 2 (2007): 186–200.
- Hansen, Eric R., and Andrew Tyner. "Educational Attainment and Social Norms of Voting." *Political Behavior*, 2019.
- Hanushek, Eric A. "Publicly Provided Education." *Handbook of Public Economics* 4 (2002): 2045–141.
- Hartog, Joop, and Hessel Oosterbeek. "Health, Wealth and Happiness: Why Pursue a Higher Education?" *Economics of Education Review* 17, no. 3 (1998): 245–56.
- Heckman, James J. "Lessons from the Technology of Skill Formation." *Annals of the New York Academy of Sciences* 1038, no. 1 (2006): 179–200.
- Heckman, James J., and James R. Walker. "The Relationship between Wages and Income and the Timing and Spacing of Births: Evidence from Swedish Longitudinal Data." *Econometrica* 58, no. 6 (1990): 1411–41.
- Hershbein, Brad, Melissa Schettini Kearney, and Luke W. Pardue. "College Attainment, Income Inequality, and Economic Security: A Simulation Exercise." NBER Working Paper 26747, National Bureau of Economic Research, Cambridge, MA, 2020.
- Hotz, V. Joseph, and Robert A. Miller. "An Empirical Analysis of Life Cycle Fertility." *Econometrica* 56, no. 1 (1988): 91–118.
- Huelsman, Mark. "The Debt Divide: The Racial and Class Bias behind the 'New Normal' of Student Borrowing." Demos, May 2015.
- Hummer, Robert A., and Elaine M. Hernandez. "The Effect of Educational Attainment on Adult Mortality in the United States." *Population Bulletin* 68, no. 1 (2013).
- Jayakumar, Uma M. "The Shaping of Postcollege Colorblind Orientation among Whites: Residential Segregation and Campus Diversity Experiences." *Harvard Educational Review* 85, no. 4 (Winter 2015): 609–45.
- Jones, Larry E., and Michele Tertilt. "An Economic History of Fertility in the U.S.: 1826–1960." NBER Working Paper 12796, National Bureau of Economic Research, Cambridge, MA, 2006.
- Kahn, Suzanne, Mark Huelsman, and Jen Mishory. *Bridging Progressive Policy Debates: How Student Debt and the Racial Wealth Gap Reinforce Each Other*. Roosevelt Institute, The Century Foundation, and Demos, September 2019.
- Kenkel, Donald S. "Health Behavior, Health Knowledge, and Schooling." *Journal of Political Economy* 99, no. 2 (1991): 287–305.
- Kopczuk, Wojciech, and Joseph P. Lupton. "To Leave or Not to Leave: The Distribution of Bequest Motives." NBER Working Paper 11767, National Bureau of Economic Research, Cambridge, MA, 2005.
- Leiserson, Greg, Will McGrew, and Raksha Koppam. "The Distribution of Wealth in the United States and Implications for a Net Worth Tax." Washington Center for Equitable Growth, March 21, 2019.
- Levanon, Asaf, Paula England, and Paul Allison. "Occupational Feminization and Pay: Assessing Causal Dynamics Using 1950–2000 U.S. Census Data." *Social Forces* 88, no. 2 (December 2009): 865–91.
- Lewis-Beck, Michael S., William G. Jacoby, Helmut Norpoth, and Herbert F. Weisberg. *The American Voter Revisited*. Ann Arbor, MI: University of Michigan Press, 2008.
- Lipset, Seymour Martin. "Some Social Requisites of Democracy: Economic Development and Political Legitimacy." *American Political Science Review* 53, no. 1 (1959): 69–105.
- Lleras-Muney, Adriana. "The Relationship between Education and Adult Mortality in the United States." *Review of Economic Studies* 72, no. 1 (January 2005): 189–221.
- Lochner, Lance. "Nonproduction Benefits of Education: Crime, Health, and Good Citizenship." In *Handbook of the Economics of Education Volume 4*, edited by Eric A. Hanushek, Stephen J. Machin, and Ludger Woessmann, 183–282. Amsterdam: Elsevier Science, 2011.
- Lochner, Lance, and Enrico Moretti. "The Effect of Education on Crime: Evidence from Prison Inmates, Arrests, and Self-Reports." *American Economic Review* 94, no. 1 (March 2004): 155–89.
- Looney, Adam, and Vivien Lee. "Parents Are Borrowing More and More to Send Their Kids to College—and Many Are Struggling to Repay." Brookings Institution, November 2018.
- Ma, Jennifer, Matea Pender, and Meredith Welch. *Education Pays 2019: The Benefits of Higher Education for Individuals and Society*. Trends in Higher Education Series. College Board, 2019.
- Markus, Hazel Rose, and Shinobu Kitayama. "Models of Agency: Sociocultural Diversity in the Construction of Action." In *Vol. 49 of the Nebraska Symposium on Motivation: Cross-Cultural Differences in Perspectives of the Self*, edited by V. Murphy-Berman and J. J. Berman, 18–74. Lincoln: University of Nebraska Press, 2003.
- Martin, Kimberly, Richard Galentino, and Lori Townsend. "Community College Student Success: The Role of Motivation and Self-Empowerment." *Community College Review* 42, no. 3 (2014): 221–41.

- Meara, Ellen R., Seth Richards, and David M. Cutler. "The Gap Gets Bigger: Changes in Mortality and Life Expectancy, by Education, 1981–2000." *Health Affairs* 27, no. 2 (2008): 350–60.
- Medical Expenditure Panel Survey (MEPS) 2017 Full Year Consolidated Data File.
- Miller, Ben. "The Continued Student Loan Crisis for Black Borrowers." Center for American Progress, December 2, 2019.
- Miller, Ben, Colleen Campbell, Brent J. Cohen, and Charlotte Hancock. "Addressing the \$1.5 Trillion in Federal Student Loan Debt." Center for American Progress, June 12, 2019.
- Milligan, Kevin, Enrico Moretti, and Philip Oreopoulos. "Does Education Improve Citizenship? Evidence from the United States and the United Kingdom." *Journal of Public Economics* 88, no. 9–10 (2004): 1667–95.
- Mokdad, Ali H., James S. Marks, Donna F. Stroup, and Julie L. Gerberding. "Actual Causes of Death in the United States, 2000." *JAMA* 291, no. 10 (2004): 1238–45.
- Münich, Daniel, and George Psacharopoulos. "Education Externalities: What They Are and What We Know." European Expert Network on Economics of Education (EENEE) Analytical Report 34, European Union, Luxembourg, February 2018.
- North, Anna. "Every Aspect of the Coronavirus Pandemic Exposes America's Devastating Inequalities." *Vox*, April 10, 2020.
- Oreopoulos, Philip, and Kjell G. Salvanes. "Priceless: The Nonpecuniary Benefits of Schooling." *Journal of Economic Perspectives* 25, no. 1 (2011): 159–84.
- Phelan, Jo C., Bruce G. Link, Ana Diez-Roux, Ichiro Kawachi, and Bruce Levin. "'Fundamental Causes' of Social Inequalities in Mortality: A Test of the Theory." *Journal of Health and Social Behavior* 45, no. 3 (2004): 265–85.
- Program for the International Assessment of Adult Competencies. US Prison Study, 2014.
- Rhode, David, Kristina Cooke, and Himanshu-Ojha. "The Decline of the 'Great Equalizer.'" *The Atlantic*, December 19, 2012.
- Sander, William. "Cognitive Ability, Schooling and the Demand for Alcohol by Young Adults." *Education Economics* 7, no. 1 (1999): 53–66.
- Sander, William. "The Effects of Schooling and Cognitive Ability on Smoking and Marijuana Use by Young Adults." *Economics of Education Review* 13, no. 3 (1998): 317–24.
- Schanzenbach, Max, and Michael L. Yaeger. "Prison Time, Fines, and Federal White-Collar Criminals: The Anatomy of a Racial Disparity." *Journal of Criminal Law and Criminology* 96, no. 2 (2006): 757–93.
- Scott-Clayton, Judith, and Jing Li. "Black-White Disparity in Student Loan Debt More Than Triples after Graduation." Brookings Institution, October 2016.
- Silver, Brian D., Barbara A. Anderson, and Paul R. Abramson. "Who Overreports Voting?" *American Political Science Review* 80, no. 2 (1986): 613–24.
- Snibbe, Alana Conner, and Hazel Rose Markus. "You Can't Always Get What You Want: Educational Attainment, Agency, and Choice." *Journal of Personality and Social Psychology* 88, no. 4 (April 2005): 703–20.
- Stenner, Karen. *The Authoritarian Dynamic*. Cambridge: Cambridge University Press, 2005.
- Stevenson, Betsey, and Justin Wolfers. "Marriage and Divorce: Changes and Their Driving Forces." *Journal of Economic Perspectives* 21, no. 2 (2007): 27–52.
- Sullivan, Laura, Tatjana Meschede, Lars Dietrich, Thomas Shapiro, Amy Traub, Catherine Ruetschlin, and Tamara Draut. *The Racial Wealth Gap: Why Policy Matters*. New York: Demos, 2016.
- Summers, Lawrence H. "Investing in All the People." World Bank Policy Research Working Paper on Developmental Economics 905, May 1992.
- Thompson, Jeffrey P., and Gustavo A. Suarez. *Exploring the Racial Wealth Gap Using the Survey of Consumer Finances*. Board of Governors of the Federal Reserve, 2015.
- Trostel, Philip. *It's Not Just the Money: The Benefits of College Education to Individuals and to Society*. Lumina Foundation, October 2015.
- US Census Bureau, American Community Survey (ACS): 2013–17 (pooled): one-year person level microdata files. <http://www2.census.gov>.
- US Census Bureau, Survey of Income and Program Participation (SIPP). 2014.
- US Census Bureau and Bureau of Labor Statistics, Current Population Survey (CPS) March Supplement (Annual Economic and Social Supplement) microdata files. Washington, DC: US Census Bureau and Bureau of Labor Statistics, 2017. <https://www.census.gov/programs-surveys/cps/data.html>.
- US Department of Education, Institute of Education Sciences, National Center for Education Statistics. Integrated Postsecondary Education Data System (IPEDS). Washington, DC: 2013–14 through 2017–18.
- US Department of Education, Institute of Education Sciences, National Center for Education Statistics. National Postsecondary Student Aid Study (NPSAS). Washington, DC: Institute of Education Sciences, 2016.

US Department of Education, National Center for Education Statistics, Digest of Education Statistics tables 321.20, 322.20, 323.30, 324.20, 324.50, 2007–2017.

US Department of Education, National Center for Education Statistics, Digest of Education Statistics table 331.95, 2019.

Verba, Sidney, Kay L. Schlozman, and Henry Brady. *Voice and Equality: Civic Voluntarism in American Politics*. Cambridge, MA: Harvard University Press, 1995.

Vila, Luis E. "The Non-Monetary Benefits of Education." *European Journal of Education* 35, no. 1 (2000): 21–32.

Wodtke, Geoffrey T. "The Impact of Education on Inter-Group Attitudes: A Multiracial Analysis." *Social Psychology Quarterly* 75, no. 1 (March 2012): 80–106. <https://doi.org/10.1177/0190272511430234>.

Yellen, Janet L. "Perspectives on Inequality and Opportunity from the Survey of Consumer Finances." Speech given at the Conference on Economic Opportunity and Inequality, Federal Reserve Bank of Boston. Boston, MA, October 17, 2014.

To view the full report, visit:
cew.georgetown.edu/PublicBenefit

 facebook.com/GeorgetownCEW

 [@GeorgetownCEW](https://twitter.com/GeorgetownCEW)

 linkedin.com/company/GeorgetownCEW

Georgetown University
Center on Education and the Workforce

3300 Whitehaven St. NW, Suite 3200
Washington, DC 20007

cew.georgetown.edu



GEORGETOWN UNIVERSITY
McCourt School of Public Policy
Center on Education and the Workforce