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Trends in Postsecondary Education

In recent decades, the nature of work has changed in ways that previous generations would likely not have imagined. With few exceptions, well-paying jobs increasingly require higher-level analytical or social skills, or both, while jobs that demand largely physical or manual skills are fading in importance.¹ It is no surprise, then, that education has become an increasingly important pathway to the middle class in the past 50 years. Indeed, many recent studies show that adults with high school diplomas and college degrees are more likely to be employed and have higher incomes than their peers with less education.²

However, educational attainment has become an arms race for those seeking upward mobility.³ Today's young adults face significant challenges in trying to “get ahead” through education. A high school diploma is no longer sufficient to support a middle-class lifestyle for the majority of Americans.⁴ Postsecondary education has become increasingly expensive while public support has declined.⁵ New credentials—with unknown returns—are emerging. We discuss these and other trends related to postsecondary education and highlight important dimensions to consider if the United States is to fortify education as an effective pathway to the middle class.

Educational Attainment is Rising, Along with the College Wage Premium

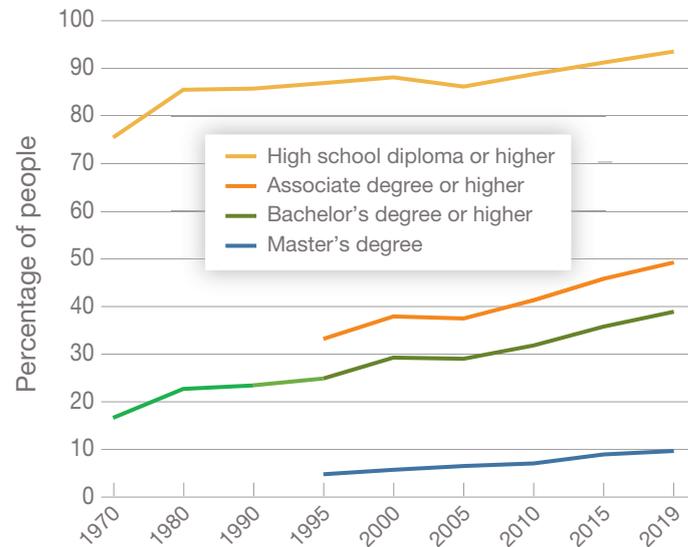
Education levels across America have been increasing since the 1970s, including growth in high school and post-secondary education attainment.⁶ The fraction of 25- to 29-year-olds who completed high school increased from 75 percent in 1970 to 94 percent in 2019.⁷ High school dropout rates are also declining, with especially large improvements for Black and Hispanic students.⁸

In addition, college enrollment and degree completion rates are increasing. In 2018, 69 percent of recent high school completers enrolled in a college, with 44 percent attending a four-year college and 26 percent attending a two-year college.⁹ Comparatively, college enrollment rates were 60 percent in 1990 and 52 percent in 1970.¹⁰ College enrollment rates increased the most among women and Black and Hispanic people.¹¹ Increases stemmed from rising enrollment in both the two-year and four-year sector.¹²

Increasing enrollment has translated into increasing degree attainment. Figure 1 shows the general growth trends for four levels of degree attainment, from high school graduation to master's degree completion, for 25- to 29-year-olds. In 2019, 49 percent of 25- to 29-year-olds held an associate degree or higher compared with 38 percent in 2000. Bachelor's degree attainment rates increased from 29 percent to 39 percent over the same period.¹³

Degree attainment is also increasing because completion rates and time to degree have been improving.¹⁴ Sixty-two percent of students who began pursuing a bachelor's degree at a four-year institution in fall 2012 obtained

FIGURE 1
Education Level of 25- to 29-Year-Old People in the United States, 1970–2019



SOURCE: NCES, 2019a.

their degree within six years. At two-year colleges, 33 percent of full-time students in the fall 2015 cohort completed their degrees within three years.¹⁵ Although these completion rates may seem low, they represent improvements over rates in the 1990s and early 2000s.¹⁶

While more Americans have gone to college over the past 50 years, the college wage premium has also grown since the 1980s.¹⁷ People with a bachelor's degree earn more than their peers with less education, and those with an associate degree earn more than their peers with a high school diploma or less.¹⁸ Several studies now document a causal link between college attendance and higher

earnings,¹⁹ but more work is needed to understand the effects of attending subbaccalaureate programs and following nondegree college pathways.

College Costs Are Increasing, but Aid Is Not Keeping Pace for All

The costs of college attendance have been increasing across most types of institutions. Between 1990 and 2020, average tuition and fees, when adjusted for inflation, more than doubled. This happened not only at private nonprofit four-year colleges, but also at public two-year and four-year colleges.²⁰ Between 2009 and 2019, average institutional grant aid for two- and four-year students increased by 33 percent (\$2,430), offsetting some of the increase in tuition and fees.²¹ However, other forms of financial aid fell over this period, including federal loans and the value of Pell grants.

Furthermore, these patterns mask some differences between the two-year and four-year sectors. Financial aid has largely kept pace for students attending two-year colleges, where the average first-time full-time student finds that their aid package covers tuition and fees.²² Net price, which is the average cost of attendance (including tuition, fees, and living expenses) minus average grant aid, averaged \$7,200 at public two-year colleges in 2017.²³

At four-year institutions, aid has not kept pace with costs. In 2019, the average net price was \$13,700 at public four-year institutions and \$27,000 at private nonprofit four-year colleges.²⁴ Many students have turned to work to close the gap between rising college costs and reduced available financial aid, but there are concerns that this may harm completion rates.²⁵

Loans present an alternative to grant aid and working while in school, but their use has also declined over the past decade. Between 2009 and 2019, federal loans to undergraduates fell by 38 percent, as fewer students took out loans and the average loan size declined.²⁶ Nonfederal borrowing declined after the Great Recession and has slightly increased since, although constituting a smaller share of total aid.²⁷ In addition, default rates have been declining from their 2009 peak at 14 percent to 9 percent for the 2017 cohort.²⁸

Recent reductions in average borrowing and default rates, however, mask significant disparities by race/ethnicity and type of institution. Black students are more likely to borrow and default than White, Hispanic, or Asian students.²⁹ Even conditional on receiving a bachelor's degree, Black graduates default five times more than White bachelor's degree holders and are more likely to default than White dropouts.³⁰ Default rates are also

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alarmingly high among those who attended for-profit colleges: They are more than four times as likely to default as their peers who attended public two-year colleges.

Public Financial Support for Higher Education Is Declining and May Be Affecting College Outcomes

Low state appropriations for postsecondary education may be an important contributor to rising costs and low completion rates. State appropriations per student fell across public four-year and two-year colleges between 2000 and 2012, with a particularly sharp decline during the Great Recession.³¹ While they have been increasing since then, they have not returned to their levels in the late 1990s and early 2000s, and the financial consequences of the coronavirus disease 2019 (COVID-19) pandemic may reverse recent improvements.³² There is also significant variation in state and local funding across states, from just over \$3,000 per student in New Hampshire and Vermont to approximately \$19,000 per student in Hawaii and Alaska.³³ In addition, federal spending on public higher education fell by 13 percent (per full-time equivalent student) between 2011 and 2018.³⁴

Changes in state appropriations and institutional spending can have important consequences for postsecondary degree completion. Chakrabarti, Gorton, and Lovenheim (2020) show that increases in state appropriations increase educational attainment in the two-year sector and lower student debt originations in the four-year sector. Deming and Walters (2017) also find that increases in institutional spending (driven by state budget shocks)

increase degree attainment. Thus, bolstering state appropriations or institutional resources may be promising ways to improve educational attainment.

Nondegree Credentials Remain an Opaque Pathway

We know far less about how enrollment in nondegree credential programs has changed over time. Attainment of occupational licenses and work certifications have only very recently been systematically measured in surveys, making it challenging to look at trends over time.³⁵ Additionally, these surveys typically measure credential-holding among the general population rather than credential completion, reducing the ability to identify rapid changes.

The U.S. Department of Education does, however, track the attainment of subbaccalaureate certificates, and it recently conducted a survey on nondegree credentials more broadly. (These terms are defined in the definitions box on page 5.) Between 2006 and 2017, the number of subbaccalaureate certificates awarded grew by one-third.³⁶ For-profit institutions constitute more than half of the institutions offering such subbaccalaureate credentials.³⁷ In the 2016 Adult Training and Education Survey,³⁸ more than one-quarter of adults report having a nondegree credential—which includes a postsecondary certificate, certification, or license. Black and White respondents had similar rates of credentialing. Many of these credentials, particularly medical licenses, are held by those with significant postsecondary education. However, 17 percent of those with only a high school diploma also reported holding a nondegree credential. Unfortunately, this was a one-

Definitions

Institutional grant aid—Grants provided by institutions, rather than state or federal governments, to students. These can be based on need, merit, or other criteria.

Pell grants—Federal grants awarded to students from low-income households.

Public financial support—Refers to money from the federal government and states (typically called *state appropriations*) provided to colleges and universities.

State appropriations—The amount of money allocated by a state’s budget to public higher institutions in the state. These are often reported in “per full-time equivalent student” terms to make numbers comparable over time and across states.

Net price—The cost of attending college (including tuition, fees, and room and board) after subtracting grant aid.

Default rate—The fraction of borrowers with a certain type of loan who have defaulted by not paying their loan for a defined period of time. Here we focus on default rates for federal loans, which typically default if not paid for 270 days.

Educational bootcamps—Typically, condensed courses focused on teaching a particular skill.

Nondegree credential—A postsecondary certificate, certification, or license. Certifications and licenses are often industry-driven, but they can be provided by an educational institution.

Subbaccalaureate certificate—A formal short-term program of study with a credential granted by an educational institution (sometimes four-year institutions, but generally two-year and technical colleges). The terms certificate, postsecondary certificate, and subbaccalaureate certificate are interchangeable.

time survey, so we cannot measure how nondegree credentialing is changing (beyond certificates).

Educational bootcamps, which are typically condensed courses focused on teaching a particular skill, are not tracked by the Department of Education. A scrape of LinkedIn suggests that approximately 34,000 students graduated from coding bootcamps in 2019,³⁹ a more-than-tenfold expansion since 2013. Data on graduation and employment rates among individual programs’ enrollees are available from the Council on Integrity in Results Reporting.⁴⁰ However, these outcomes are not tracked at

an aggregated level, obscuring the overall performance of students at coding bootcamps and limiting the ability to compare outcomes with other subbaccalaureate programs. Taken together, this information suggests that the subbaccalaureate nondegree and noncredential space is an important and growing market, but one into which we have little insight. Systematic data collection on enrollment, awards, and outcomes of graduates would facilitate better understanding of the economic mobility opportunities that these programs may provide.

Implications for Further Research

This review of recent trends in postsecondary education highlights important gaps in the evidence base and areas for future research and policy. The following are some promising areas for future work.

1. Additional research is needed on those who pursue and obtain nondegree credentials. While many shorter postsecondary pathways exist for young and older adults who are not poised for an associ-

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2. Additional work is needed to address the high borrowing and default rates among Black students and those attending for-profit institutions. Research and policy can help to illuminate why some students borrow and default at such high rates, regulate institutions where this is especially problematic, and evaluate promising models for addressing these challenges.
3. Public financial support for institutional resources and financial aid needs to be bolstered to increase student success rates and lower the costs of college attendance. Research on how best to target public dollars will be important as many policymakers grapple with how to most effectively support higher education.
4. More work is needed to understand how to build on recent progress in college completion rates. Learning why completion is increasing and how to improve college success rates will help bolster postsecondary education as a pathway to the middle class.
5. Many of the troubling trends, in terms of institutional support, college costs, and debt burdens, stemmed from the Great Recession. Research and policy work are needed to prevent the financial consequences of the COVID-19 pandemic from exacerbating the challenges remaining from the Great Recession. Work is also needed to prevent the rise of similar challenges and compounding of existing barriers.

Notes

¹ Deming, 2017.

² Autor, Goldin, and Katz, 2020; Goldin and Katz, 2008; Goodman, Hurwitz, and Smith, 2017; Zimmerman, 2014.

³ “Expanding Higher Education—Time to End the Academic Arms Race,” 2018.

⁴ Carnevale et al., 2018.

⁵ Chakrabarti, Gorton, and Lovenheim, 2020.

⁶ Statistics on educational attainment are from Hussar et al., 2020, and Snyder, de Brey, and Dillow, 2019.

⁷ National Center for Education Statistics (NCES), 2019a.

⁸ Hussar et al., 2020.

⁹ NCES, 2020a.

¹⁰ NCES, 2020a.

¹¹ NCES, 2020a; NCES, 2020b.

¹² NCES, 2020a; NCES, 2020b.

¹³ NCES, 2019a.

¹⁴ Denning et al., 2020b; Denning et al., 2020a.

¹⁵ Hussar et al., 2020.

¹⁶ Bound, Lovenheim, and Turner, 2010; Denning et al, 2020b.

¹⁷ Autor, Goldin, and Katz, 2020.

¹⁸ NCES, 2019b.

¹⁹ Goodman, Hurwitz, and Smith, 2017; Stevens, Kurlaender, and Grosz, 2019; Zimmerman, 2014.

²⁰ Ma, Pender, and Libassi, 2020.

²¹ All changes and dollars are reported in terms of inflation-adjusted real changes.

²² Ma, Pender, and Libassi, 2020.

²³ Hussar et al., 2020.

²⁴ Hussar et al., 2020.

²⁵ Page and Scott-Clayton, 2016.

²⁶ Ma, Pender, and Libassi, 2020.

²⁷ Baum et al., 2019.

²⁸ Ma, Pender, and Libassi, 2020.

²⁹ Scott-Clayton, 2018.

³⁰ Scott-Clayton, 2018.

³¹ Chakrabarti, Gorton, and Lovenheim, 2020.

³² Laderman and Weeden, 2020.

³³ Ma, Pender, and Libassi, 2020.

³⁴ Hussar et al., 2020.

³⁵ For example, the Current Population survey recently added questions on certifications and licenses developed by the Interagency Working Group on Expanded Measures of Enrollment and Attainment (GEMEnA).

³⁶ NCES, undated-b.

³⁷ NCES, undated-a.

³⁸ Cronen, McQuiggan, and Isenberg, 2017.

³⁹ Gallagher, 2020.

⁴⁰ Council on Integrity in Results Reporting, 2019.

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NCES—See National Center for Education Statistics.

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About This Perspective

This Perspective summarizes recent trends in young peoples' entrance into and completion of postsecondary educational programs. Education is an important pathway into well-paying jobs and the American middle class. Education levels have been rising for the past 50 years, including large gains for many demographic groups. But declining public support for higher education, increasing costs of college attendance, and low college completion rates threaten young adults' pathway to a college degree. Additional research is needed on how to bolster college success and improve our understanding of alternative college credentials.

This Perspective is one in a multipart series that identifies problems related to the middle class, defines key terms, and determines research needs to support effective pathways to the middle class. It will be of interest to policymakers, practitioners, and the general public who wish to be able to benchmark growth and decline in the U.S. middle class.

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RAND Lowy Family Middle-Class Pathways Center

This research was conducted within the RAND Lowy Family Middle-Class Pathways Center. The center aims to identify ways to create and sustain middle-class employment in the face of rapidly changing labor-market conditions. The center is part of RAND Education and Labor, a division of the RAND Corporation that conducts research on early childhood through postsecondary education programs, workforce development, and programs and policies affecting workers, entrepreneurship, and financial literacy and decisionmaking.

For more information about the RAND Lowy Family Middle-Class Pathways Center, visit www.rand.org/mcpc. For more information on RAND Education and Labor, visit www.rand.org/education-and-labor.

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