

GOOD REASON HOUSTON

Every Child. Every Neighborhood.



BUILDING THE FUTURE WORKFORCE

UNDERSTANDING PREDICTORS OF
POSTSECONDARY SUCCESS IN TEXAS

goodreasonhouston.org

Building the Future Workforce

UNDERSTANDING PREDICTORS OF POSTSECONDARY SUCCESS IN TEXAS

INTRODUCTION AND EXECUTIVE SUMMARY

Experts estimate that 70% of Texas jobs will require some type of postsecondary credential by 2036.

More than ever before, leaders across the PK-12, higher education, and business sectors need to work together to ensure that today's students can get the support and educational experiences necessary to prepare them for the future. To coalesce across sectors, our community leaders need timely and accessible data that track postsecondary outcomes and connect indicators across the students educational trajectory so that gaps can be identified and closed.

In November 2023 Good Reason Houston was approved to conduct an original research project at the University of Houston Education Research Center (ERC) examining the predictors of postsecondary success for Texas high school graduates. By creating profiles of students' PK-12 educational experiences and connecting them with postsecondary outcomes such as college enrollment, credential attainment, employment, and earnings, Good Reason Houston's Research & Data Strategy team hoped to identify the elements of graduates' PK-12 experiences which were most closely associated with workforce readiness and postsecondary success. Better understanding these PK-12 predictors of postsecondary success will allow school districts, policymakers, and other key stakeholders to create

targeted initiatives aimed specifically at boosting student opportunities in those areas.

This original research project shares descriptive findings from our research. This first phase of the research updates and expands upon the state of Texas's [publicly available reports on postsecondary credential attainment](#). While the Texas Higher Education Coordinating Board has previously tracked credential attainment, the last reported cohort was for the classes of 2014-16 combined. Additionally, the reported data had limited subgroup analyses. Phase 1 is the first study to update credential attainment for more recent cohorts and use student level demographic data to understand outcome variation across student groups, such as those from economically disadvantaged backgrounds and different race/ethnicity groups. Phase 1 also examined the extent to which Houston-region graduates were earning enough to qualify as a living wage in Harris County by six years after high school graduation. The second phase, which will be conducted throughout 2024, will construct profiles of high school graduates and examine which elements of graduates' PK-12 experiences are most closely associated with postsecondary outcomes.





INTRODUCTION AND EXECUTIVE SUMMARY

This research brief shares findings from the first phase of this ongoing research project, focusing specifically on the Houston region. Key findings include:



Overall, neither college enrollment nor credential attainment within six years of high school saw significant change between the graduating cohorts of 2012 to 2017.



Credential attainment for non-economically disadvantaged students increased 10 points from 2012 to 2017, with those gains concentrated among students of color.



Recent graduating cohorts affected by the COVID-19 pandemic have significantly lower likelihood of college enrollment and attainment of certifications or associate's degrees.

- The high school class of 2020 was 15 percentage points less likely than the class of 2017 to enroll in college within two years of high school graduation.



Only 16% of the class of 2016 was earning enough to qualify as a Harris County living wage for a single-earner household with no dependents (\$42,158 annually) by 2022, six years after high school graduation.

- Graduates with bachelor's degrees or professional certifications were much more likely to earn a living wage than graduates overall, at 43% and 31% respectively.

These findings have significant implications for school leaders, policymakers, and other stakeholders. In order to prepare today's students to meet the future workforce needs of our region, more work must be done to provide students with the support and experience they need to be able to attain credentials of value and pursue high-wage, high-growth career opportunities.



METHODS AND DATA

This study incorporates data from a few key sources:

Texas Education Agency (TEA):

Student sociodemographic information and High school graduation.

National Student Clearinghouse (NSC):

College enrollment on IHEs outside the state of Texas.

Texas Higher Education Coordinating Board (THECB):

College enrollment and Credential completion from institutions of higher education (IHEs) in Texas.

Texas Workforce Commission (TWC):

Employment and wages for graduates employed within Texas.

Future phases of this project will incorporate additional data on students' PK-12 educational experiences from TEA, including standardized test scores, career technical education (CTE) participation, and advanced course-taking.

The portion of the study covered in this research brief connected data for high school graduates from TEA to data on college enrollment and completion from THECB. This brief summarizes postsecondary enrollment and completion outcomes for two sets of graduates:

- Outcomes six years after high school graduation for the graduating classes of 2012 to 2017, and
- Outcomes three years after high school graduation for the graduating classes of 2012 to 2020.

In addition, this brief utilized TWC data to include analyses of living wage attainment six years after high school graduation

for the classes of 2012 to 2016. These analyses focused primarily on the class of 2016 because six years after high school graduation for this cohort was 2022, when living expenses and wages sharply increased due to high inflation. This cohort's earnings reflected this changed reality, while other cohorts' earnings did not.

Data sources were joined and structured longitudinally at the student-level in order to create a data profile for each graduate starting with their year of high school graduation year and proceeding for six additional years afterward. Wage data was considered on an annual basis, and all wages reported for a given graduate in a given year were included. This structure allowed researchers to gauge the extent to which graduates had achieved particular outcomes within either three or six years of high school graduation, depending on the outcome.

Outcome variables of interest and the graduating cohorts they were examined for are as follows:

OUTCOME VARIABLE	YEARS SINCE HIGH SCHOOL GRADUATION	GRADUATING COHORTS INCLUDED
College enrollment	Two, three, and six years	2012 to 2021
2-year degree or professional certification completion	Three and six years	2012 to 2020
Bachelor's degree completion	Six years	2012 to 2017
Completion of any college degree or certification	Six years	2012 to 2017
Living Wage Attainment - Single-Earner Household With No Dependents	Six Years	2012 to 2016
Living Wage Attainment - Single-Earner Household With One Dependent	Six Years	2012 to 2016
Living Wage Attainment - Two-Earner Household With One Dependent	Six Years	2012 to 2016



METHODS AND DATA

Some key definitions to keep in mind for this report include:

- **Credential(s)** - Any postsecondary credential awarded by a Texas institution of higher education, including associate’s degrees, level I, II, or III professional certifications, and bachelor’s degrees.
- **Houston region** - A geography defined as the eleven public independent school districts with at least one campus within city of Houston boundaries and a majority-economically disadvantaged student population. Public charter school campuses within these eleven districts’ boundaries are also included.
- **Living wage** - An estimate of the earnings a household would need to cover basic expenses such as food, housing, internet, child care, and taxes. Living wages do not account for additional spending, such as eating out at restaurants, vacation, savings, or even retirement. This study utilized living wage estimates for Harris County calculated by MIT. More information on MIT’s methodology can be found here, while details on Harris County living wage estimates and their components can be found here.

The below annual income thresholds were used to assess living wage attainment in Harris County:

SINGLE-EARNER HOUSEHOLD With No Dependents	SINGLE-EARNER HOUSEHOLD With One Dependent	TWO-EARNER HOUSEHOLD With One Dependent
\$42,158	\$73,017	\$81,526

Notable study limitations include that, due to structural data concerns, NSC data on graduates who enrolled in and completed college outside of Texas could not be accurately assessed. To account for this, any graduates who enrolled in college outside of Texas at any point in the study period were excluded from all outcomes calculations. An additional data limitation is that linking TEA data to data from either THECB or NSC requires that students have a valid Social

Security number. Graduates without valid SSNs, including undocumented students, cannot be connected to other data sources and have therefore been excluded from all analyses. Finally, wage and employment data is based on tax data and therefore limited to employment that generates a W2, meaning that any earnings through the “gig economy” or other contract work cannot be accounted for.



KEY FINDINGS

COLLEGE ENROLLMENT AND CREDENTIAL ATTAINMENT SIX YEARS AFTER HIGH SCHOOL GRADUATION

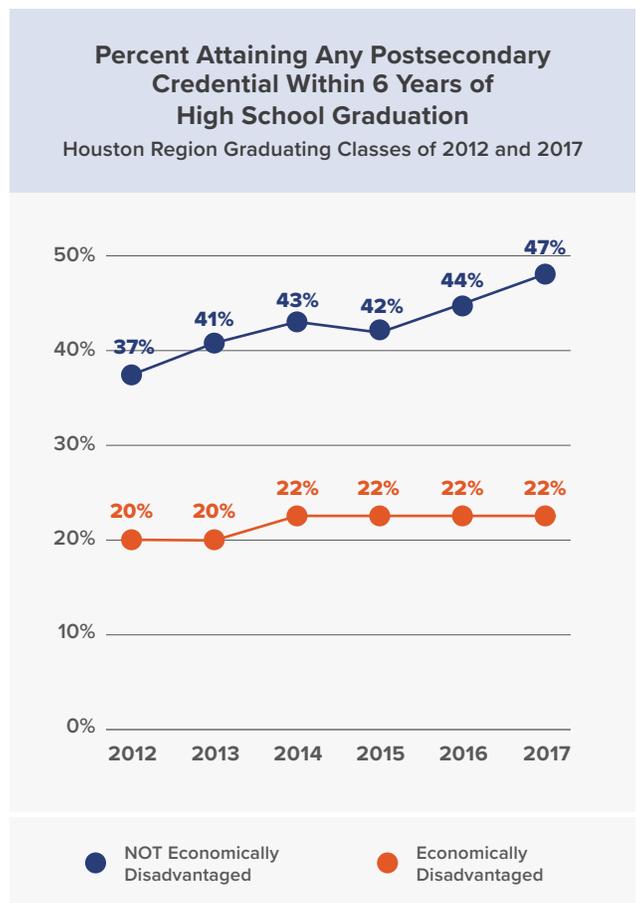
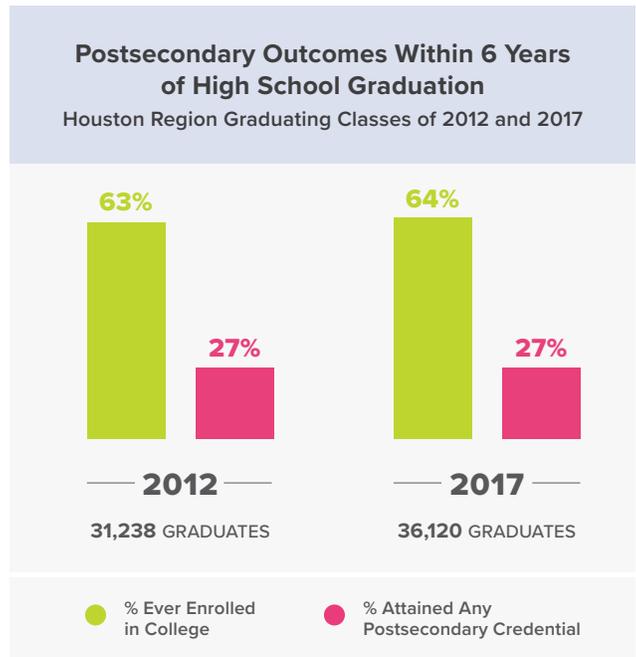
Overall, neither college enrollment nor credential attainment for Houston region high school graduates changed much from the classes of 2012 to 2017.

As seen in Figure 1, fewer than two-thirds of graduates from both 2012 and 2017 enrolled in college within six years of high school graduation, and barely one-in-four from either class attained some type of postsecondary credential.

This overall trend masked some variation when looking at various student groups, however. For instance, credential attainment within six years of graduation increased by 10 percentage points from 2012 to 2017 among non-economically disadvantaged students, as seen in Figure 2. Credential attainment among economically disadvantaged graduates was virtually unchanged.

Looking one level deeper, among non-economically disadvantaged graduates, growth was driven largely by graduates of color. Non-economically disadvantaged graduates of color saw substantial growth in credential attainment within six years of high school graduation, with Black graduates from those economic circumstances seeing a 12-point increase, Hispanic graduates a 13-point increase, and Asian graduates a 7-point increase. Non-economically disadvantaged white graduates, on the other hand, only experienced a 3-point increase in credential attainment, as seen in Figure 3.

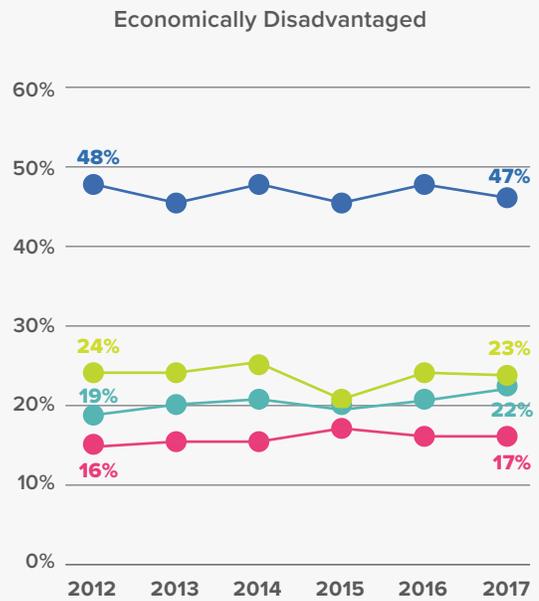
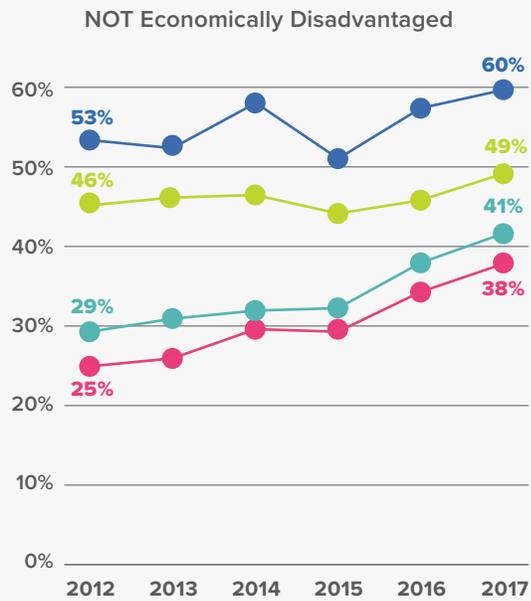
The reason these gains do not show up in the overall regional trend over this time period is that the proportion of high school graduates considered non-economically disadvantaged decreased sharply from 2012 to 2017 in the Houston region. Although the total number of high school graduates in the Houston region increased by 5,000 from 2012 to 2017, the total number of non-economically disadvantaged graduates dropped by about 4,500. Those graduates made up 37% of all graduates in 2012, but only 22% of graduates in 2017. In fact, even though the proportion of non-economically disadvantaged graduates attaining credentials increased, the actual number of such graduates fell. So, while these trends are encouraging—particularly those for non-economically disadvantaged graduates of color—they may be as reflective of shifting regional demographics as they are of real gains in credential attainment over time.





KEY FINDINGS

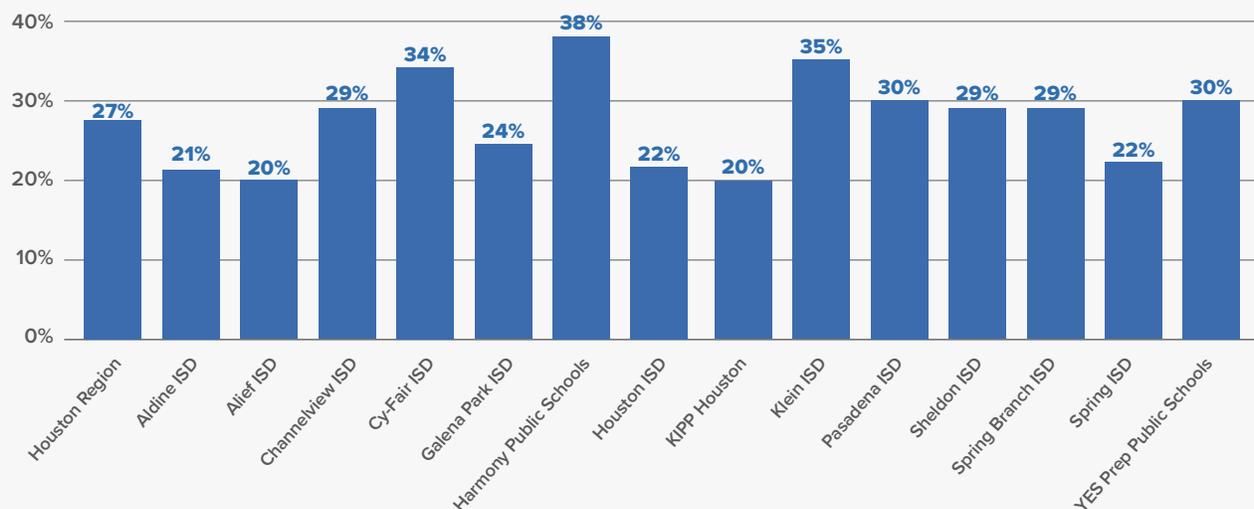
Percent Attaining Any Postsecondary Credential Within 6 Years of High School Graduation Houston Region Graduating Classes of 2012 and 2017



● Asian ● Black ● Hispanic ● White

School districts across the Houston region displayed significant variation in the proportion of their 2017 graduates who attained a postsecondary credential within six years of high school graduation. Harmony Public Schools, a Houston-based charter school network, had the region's highest credential attainment at 38%, while several traditional ISDs saw less than one-quarter of 2017 graduates attain credentials, including Aldine, Alief, Houston, and Spring ISDs. Despite college enrollment rates much higher than the region average (80% of graduates enrolled), Houston-area campuses from the KIPP charter network actually had the region's lowest credential attainment at only 20%.

Graduates Attaining Any Postsecondary Credential Within 6 Years, High School Class of 2017





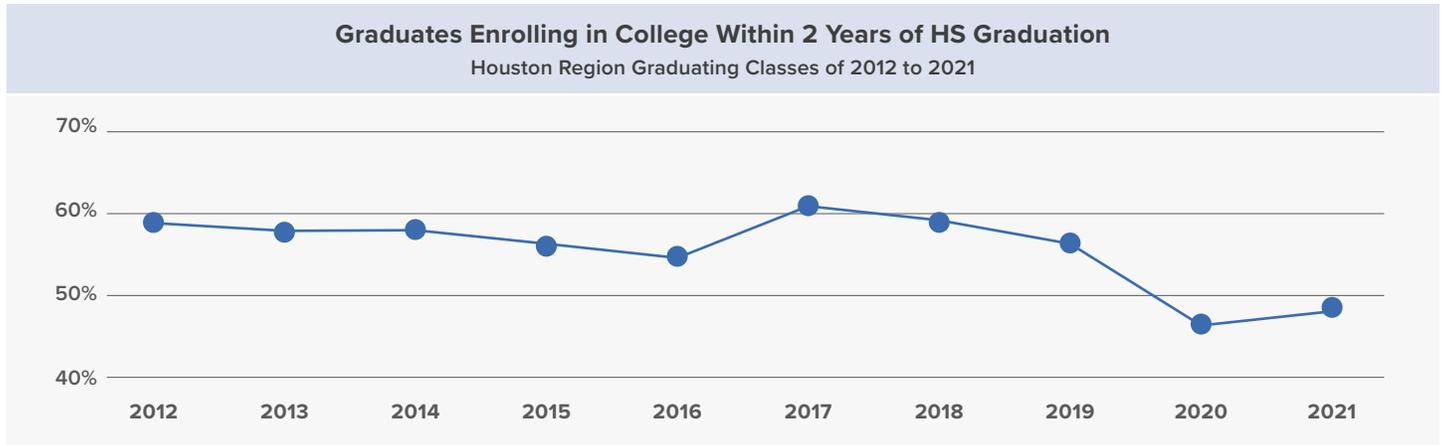
KEY FINDINGS

COLLEGE ENROLLMENT AND CREDENTIAL ATTAINMENT

THREE YEARS AFTER HIGH SCHOOL GRADUATION

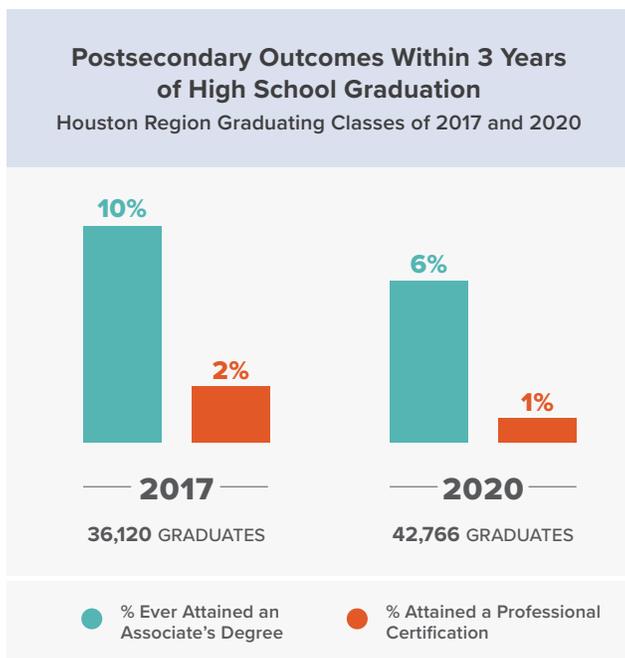
For more recent high school graduates, college enrollment has dropped precipitously since its high for 2017 graduates.

While the proportion of Houston-region graduates enrolling in college within two years of high school graduation had been falling steadily for years (with a notable spike from the class of 2016 to the class of 2017), the single-year decline was sharpest between the classes of 2019 and 2020, likely due in no small part to the COVID-19 pandemic.



Attainment of postsecondary credentials which can be completed in less than three years has also fallen since the graduating class of 2017. For most graduating classes, including 2017, about 10% of graduates attain an associate’s degree and about 2% of graduates attain a professional certification, which are earned at two-year colleges and typically take 1-2 full semesters to complete. 2020 graduates, however, were about half as likely as these historical benchmarks to attain an associate’s degree or a professional certification, at 6% and 1%, respectively.

These declines in college enrollment and two-year degree completion were similar across graduates from different race/ethnicity and economic disadvantage backgrounds, demonstrating that the COVID-19 pandemic’s negative impacts on college enrollment and completion appear to have affected most student groups.



Growing gaps in college enrollment and credential completion between male and female graduates have gained national attention in recent years, with males across the country being much less likely to attend and complete college today than a decade ago compared to females. Looking specifically at college enrollment, while the difference nationally in the likelihood of enrolling in college between females and males nearly doubled from 2011 to 2022, female graduates in the Houston region were about 10 percentage points more likely to enroll in college as far back as 2012 and that gap remained relatively stable over time, indicating that a significant college enrollment gap between males and females in Houston was in place long before it became a topic of national conversation. This gap was remarkably consistent across sociodemographic groups, including between female and male graduates from different racial or ethnic backgrounds and those with different economic disadvantaged statuses. The one exception was among Asian students, who exhibited much smaller gaps in college enrollment between males and females than other student groups.



KEY FINDINGS

LIVING WAGE ATTAINMENT

SIX YEARS AFTER HIGH SCHOOL GRADUATION

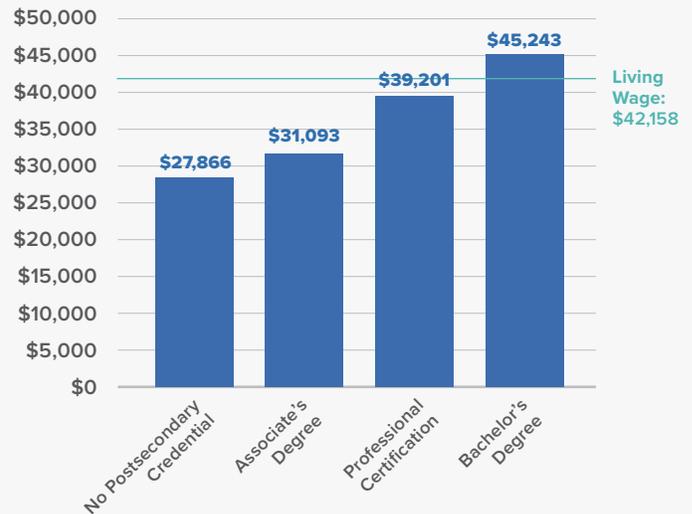
In Harris County in 2023, MIT's estimated living wage for a single-earner household with no dependents was \$42,158 annually (See pages 3 and 4 for how we determined living wage for our analysis). Whether or not graduates are earning enough to be considered a living wage is an important indicator of how successfully our PK-12 system is preparing their graduates to lead successful, choice-filled lives.

Earnings for 2016 Houston-region graduates six years after high school graduation varied greatly by whether or not those graduates had attained postsecondary credentials. As seen below, graduates with bachelor's degrees earned the highest annual wages on average at \$45,243 annually, followed by those with professional certifications at \$39,201. Only those with bachelor's degrees earned enough, on average, to qualify as a living wage for a single-earner household with no dependents. Graduates with no postsecondary credential—who represent about 80% of wage-earners—earned nearly \$15,000 short of a living wage on average, at just \$27,866. These figures exclude graduates who were currently enrolled in college in 2022.

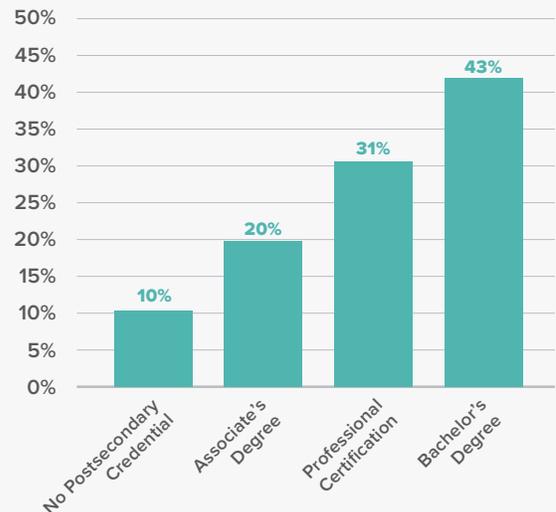
Overall, only 16% of 2016 graduates earned enough in 2022 to qualify as a living wage for a single-earner household with no dependents, but this varied greatly by whether or not graduates had attained postsecondary credentials. While graduates with bachelor's degrees were 4.3x more likely and those with professional certifications were 3.1x more likely to earn a living wage six years after high school than those with no postsecondary credential, still less than half of bachelor's degree holders earned a living wage for a single-earner household with no dependents by six years after high school graduation. Only 12% of bachelor's degree holders and 6% of those with professional certifications met the living wage threshold for single-earner households with one dependent.

Average Wage by Degree or Credential

Houston Region Class of 2016



Percent of 2016 Graduates Earning Living Wage for A Single Earner Household with No Dependents





SUMMARY AND DISCUSSION

This study updates publicly available datasets on postsecondary outcomes in the Houston region by adding additional graduating cohorts and examining college enrollment and completion across various sociodemographic student characteristics.

In doing so, it found notable variation in college enrollment and credential attainment across student groups. In particular, this study highlights that, though overall credential attainment has remained relatively unchanged in the Houston region since the graduating class of 2012, non-economically disadvantaged graduates were more likely to attain credentials in 2017 than in 2012. This was especially true for non-economically disadvantaged graduates of color, notably Black and Hispanic graduates. Complicating this picture is the fact that non-economically disadvantaged graduates made up a significantly smaller proportion of Houston-region graduates in 2017 than in 2012, so this change did not show in the overall regional trend.

Along with stagnant credential attainment, this study also found a steady decline in college enrollment within two years of high school graduation from the graduating class of 2012 to that of 2021. The COVID-19 pandemic appears to have had a significant impact on the likelihood of college enrollment, with the change in enrollment between the graduating classes of 2019 and 2020 representing the largest single year drop over the study period. Accordingly, the graduating class of 2020 was about half as likely to attain near-term credentials such as associate's degrees or professional certifications within three years of high school graduation than the class of 2017.

This apparent lack of overall progress in credential attainment came over a period in which many initiatives aimed at boosting college enrollment and completion were implemented and expanded. While these programs fill an important need in supporting students on an individual basis, this study's findings suggest that broader systemic challenges persist and the reach and scope of their programming does not address these challenges for the vast majority of Houston-region graduates.

Finally, living wage attainment for graduates six years after high school—even among those with postsecondary credentials—is alarmingly low. Less than half of bachelor's degree holders earned a living wage six years after high school graduation. Although the bachelor's degree holders included in this study would have been early in their careers, in theory graduates who attained professional certifications could have had several years of professional experience by six years after high school. These certifications typically take one or two semesters to complete. A graduate who earned one soon after high school would have been four or five years into their careers and had time to increase their earnings. Wage outcomes for bachelors degree and certificate holders suggest that we have significant work to do to ensure that credential pathways are intentionally connected to high-wage, high-growth career opportunities.

Because 70% of jobs in Texas will require some type of credential beyond a high school diploma by 2036, the Houston region has much work to do to provide its high school graduates with the tools, resources, and knowledge they need to successfully navigate the postsecondary space. If we are to meet demands of the future workforce, we need to dramatically improve the opportunities afforded to students, especially those from economically disadvantaged backgrounds, so that they attain some type of credential. We also have much work to do across sectors to ensure that postsecondary credential attainment leads to employment opportunities that allow graduates to earn a living wage to support themselves and their families. Only through intentional collective action and collaboration across the K-12, higher education, and business communities can we provide our graduates with the skills and supports necessary to attain credentials of value, and ensure the continued economic vitality of our region.

