

Racial Disparities in Registered Apprenticeship Programs: National and Chicagoland Data Document Gaps in Enrollment, Completion, and Earnings

Executive summary

Apprenticeships offer a proven pathway to household sustaining careers. Aspiring apprentices who gain entry to Registered Apprenticeship (RA) programs begin earning wages while learning. Unlike most colleges and universities, apprentices earn an income while gaining valuable credentials – all without paying tuition or incurring debt from education loans (Bruno & Manzo, 2016). Despite these advantages for jobseekers, apprenticeships represent a small proportion of the U.S. labor market and often have very competitive admission processes (Lerman, 2022). This is especially true for the skilled construction trades – the industry sector that is home to most apprenticeship programs in the United States (The Home Builders Institute, 2024). Government, community, and business leaders have all promoted the expansion of apprenticeships as a strategy to improve access to quality jobs, particularly for people from communities that have experienced disinvestment and the negative impacts of structural racism (Cheney, 2019).

To better understand the career pathway dynamics of apprenticeships, the Inclusive Economy Lab has analyzed enrollment and completion patterns of Registered Apprenticeship programs using the Registered Apprenticeship Partners Information Database System (RAPIDS) data provided by the United States Department of Labor. The accompanying analysis includes data from the American Community Survey (ACS) that facilitates comparison to national population and earnings statistics. Using this data, we observe trends in apprenticeship enrollment and completion both at a national level and in the Chicagoland area. We further disaggregate data by race and trade type. We find that an overwhelming majority of apprentices in the Chicagoland area are enrolled in skilled trades programs. We also see racial disparities in enrollment, completion, earnings, and trade. The key findings detailed in this brief include:

1. The proportion of Black and Latine¹ apprenticeship completers are lower than their corresponding share of the national population.
2. A significant proportion of RA programs did not enroll any Black and/or Latine apprentices during the sample period (1986 to 2022).
3. Black apprentices in skilled trades within the Chicagoland area complete RA programs at a rate 40 percent lower than their white and Latine peers.
4. Racial distribution within skilled trades apprenticeships varies by trade. Black workers are underrepresented in most trades and Latine workers are underrepresented in higher paying professions.
5. Black apprentices enroll in RA programs at older ages than their white and Latine peers, potentially impacting lifetime earnings
6. Most Chicagoland skilled trades RA programs are located outside of the city.

¹The authors of this brief use the term Latine when referring to people of Latin American heritage. The suffix “-e” is gender-neutral in Spanish, offering a more inclusive and capacious alternative to Latino/a. Unlike its gender-neutral counterpart Latinx, Latine is also easier to pronounce in Spanish, more commonly used among Spanish speakers, and can be made plural. For more information, see Mendez, L. (2023, June 05). *A Brief Explainer on Latine and Latinx*. Hispanic Executive. <https://hispanicexecutive.com/latinx-latine-explainer/>

7. Nationally, white workers are overrepresented in higher paying construction jobs and Latine workers are overrepresented in lower paying construction jobs. Black workers are underrepresented across the board, especially in the higher paying occupations.

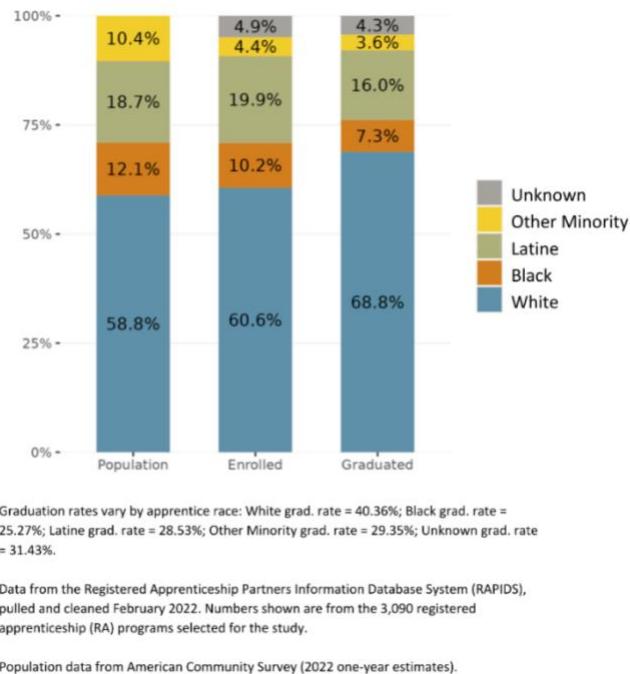
The visualizations representing the Chicagoland area in this paper are based on RAPIDS data for skilled trades programs located in Cook, DeKalb, DuPage, Grundy, Kane, Kankakee, Kendall, Lake, McHenry, and Will counties.

Analyses and findings within this policy brief come directly from Bartik, Bertrand, and Stuart (2025), or are slightly modified versions. For example, Bartik, Bertrand, and Stuart (2025) report results for the entire country whereas much of the analysis below focuses on the Chicagoland area. We would like to acknowledge Robert Bruno of the University of Illinois Urbana Champaign's Project for Middle Class Renewal and Frank Manzo of the Illinois Economic Policy Institute who have studied apprenticeships in Midwestern states for more than a decade and have contributed a wealth of knowledge to the field. Their research provides valuable contextual information for interpreting the descriptive findings of this brief. A key finding of theirs is that registered apprenticeships in the construction industry provide competitive earnings, completion rates, and diversity outcomes comparable to four-year university programs. They also found that joint union-employer led apprenticeship programs in construction lead to higher earnings and lower levels of racial disparity than employer only RA programs (Manzo & Bruno, 2020).

Key Finding # 1: The proportion of Black and Latine apprenticeship completers is lower than their corresponding share of the national population.

Using population data from the ACS and data from RAPIDS we observe differences in Registered Apprenticeship enrollment and completion rates by race. To measure these outcome disparities, we created an analytic sample of 3,090 Registered Apprenticeship Programs from across the country that span a diversity of industries and enroll approximately 54 percent of all apprentices documented in the RAPIDS data set. The enrollment timeframe was from 1986 to 2022. We find that Black Americans are underrepresented in apprenticeship programs relative to their share of the national population. Further, only 25 percent of Black apprentices successfully graduate from apprenticeship programs. Latine Americans are slightly overrepresented in apprenticeship programs relative to their share of the national population and about 29 percent of Latine apprentices successfully complete their programs. White Americans are also overrepresented in apprenticeship programs relative to their share of the national population and complete their programs at a rate of 40 percent. Figure 1 compares the relative shares of the United States population, enrolled apprentices, and program completers. We see that Black Americans graduate from apprenticeships at a rate 40 percent lower than their share of the national population, while white apprentices graduate at a rate 17 percent higher than their proportion of the population.

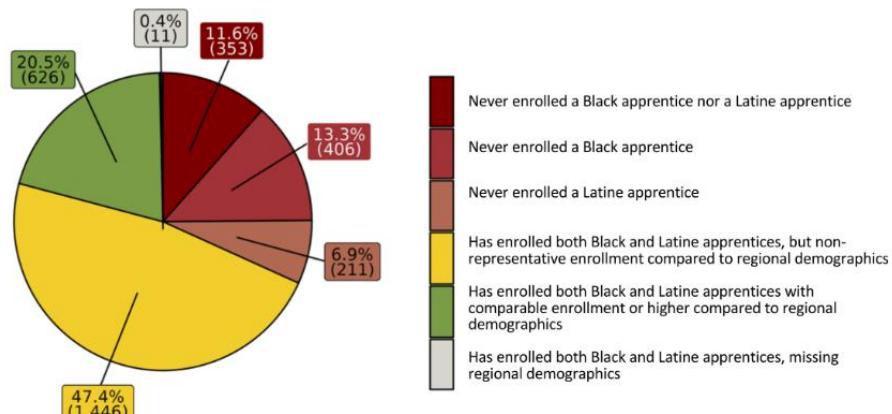
Figure 1: Apprenticeship enrollment and graduation rates disaggregated by race/ethnicity compared to the national population



Key Finding # 2: A significant proportion of RA Programs did not enroll a Black and/or Latine apprentice during the sample period (1986 to 2022).

At the program level, we identified enrollment by race for 3,053 Registered Apprenticeship Programs that have reported apprentice race for over half of their reporting years. Figure 2 shows the percentage of programs based on whether they have enrolled either a Black and/or Latine apprentice and if the enrolled Black or Latine population is comparable or higher than the regional demographics.

Figure 2: Apprentice enrollment by race reported at the program level



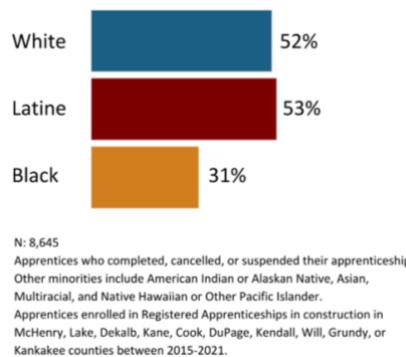
Data from the Registered Apprenticeship Partners Information Database System (RAPIDS), pulled and cleaned February 2022. Numbers shown are from the 2,053 Registered Apprenticeship (RA) programs selected for the study that have reported apprentice race for over 50 percent of their reporting years.

We found that about 31 percent of programs have not enrolled a Black apprentice, not enrolled a Latine apprentice, or have not enrolled a Black nor Latine apprentice. Only about 20 percent of programs enrolled both Black and Latine apprentices with comparable or higher enrollment compared to racial demographics of the county in which they are located. It is important to note that these patterns do not necessarily reflect differential treatment given that small programs in disproportionately white communities may be fairly likely to enroll few or no Black or Latine apprentices during any given time period. Further analysis is needed to assess how these patterns compare to the expected distribution of hires given the demographics of different apprenticeships' catchment areas.

Key Finding #3: Black skilled trades apprentices in the Chicagoland area complete RA programs at a rate 40 percent lower than their white and Latine peers.

We focus a portion of our analysis on skilled trades apprenticeships in the Chicagoland area. Between 2015-2021, 86 percent of apprentices were enrolled in a skilled trades apprenticeship or 17,848 people in total. During this period, 8,645 apprentices completed their program. Figure 3 shows us that Black apprentices completed their programs at a rate 20 percentage points lower than Latine and white apprentices.

Figure 3: Chicagoland apprenticeship completion rates by race

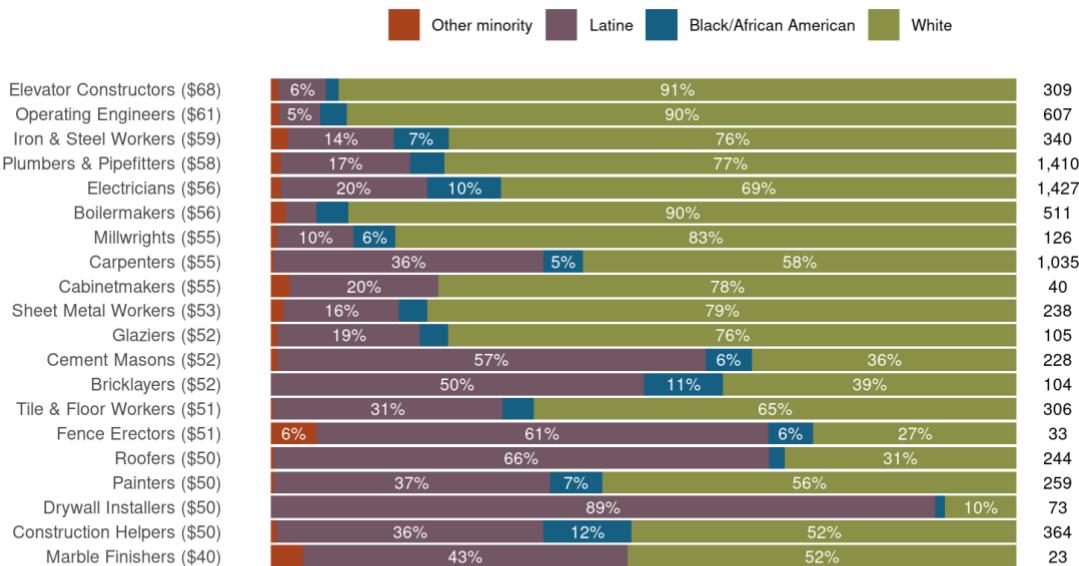


Key Finding # 4: Racial distribution within skilled trades apprenticeships varies by trade. Black workers are underrepresented in most trades and Latine workers are underrepresented in higher paying professions.

We disaggregated program enrollment to identify the percentage of apprentices by race in various skilled trades. While Black people made up 16.3 percent of the regional population, for most occupations the share of Black apprentices was less than the share of the regional Black population. Latine people made up 23.1 percent of the regional population and were overrepresented in the trades with lower wages and underrepresented in higher paying trades.² We see that white people made up 50.6 percent of the regional population and were overrepresented in 13 out of the 20 skilled trades programs we assessed. In addition to this, we found that white apprentices were overrepresented in the top 11 paying occupations and Black apprentices were underrepresented in all occupations. Figure 4 presents the relative proportion of apprenticeship graduates disaggregated by race in 20 skilled trades in the Chicagoland area. Trade occupation groupings are ordered highest to lowest by Cook County prevailing wage rates.

²The Illinois Department of Labor posts county-level prevailing wages for all skilled trades occupations. Hourly rates can be found here: <https://labor.illinois.gov/laws-rules/commed/current-prevailing-rates.html>.

Figure 4: Chicagoland construction apprenticeship completers examined by trade and race/ethnicity

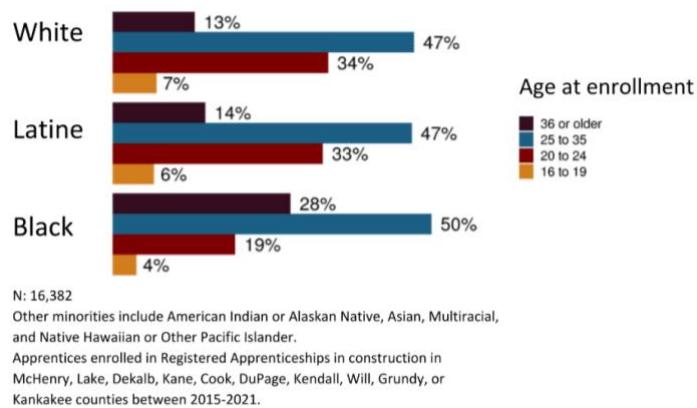


Source: 2024 RAPIDS data on registered apprenticeship programs in Chicago counties (Cook, DeKalb, DuPage, Grundy, Kane, Kankakee, Kendall, Lake, McHenry, and Will) for apprentices enrolled 2015-18 and have since completed, showing only those in the most common occupations for programs in Chicago counties and excluding apprentices where race was not provided (n=7,782 apprentices). Parentheses show prevailing wage for the given occupation group in Cook County - the county in the Chicago region with the largest share of work governed by Illinois prevailing wage law. In instances where there is more than one rate (e.g. Plumbers & Pipefitters) a simple average was created.

Key Finding #5: Black apprentices enroll in RA programs at older ages than their white and Latine peers, potentially impacting lifetime earnings.

In the Chicagoland area, Black apprentices enroll in registered apprenticeships later in life compared to their white and Latine peers. As displayed in Figure 5, 19 percent of Black apprentices enrolled in apprenticeships are between the ages of 20-24 compared to 33 percent of Latine and 34 percent of white apprentices of that age enrolled in apprenticeships. Twenty eight percent of Black apprentices are 36 or older, compared to 13 percent and 14 percent of white and Latine apprentices, respectively. This enrollment age discrepancy means that Black apprentices are disproportionately excluded from the financial gains of apprenticeships earlier in life.

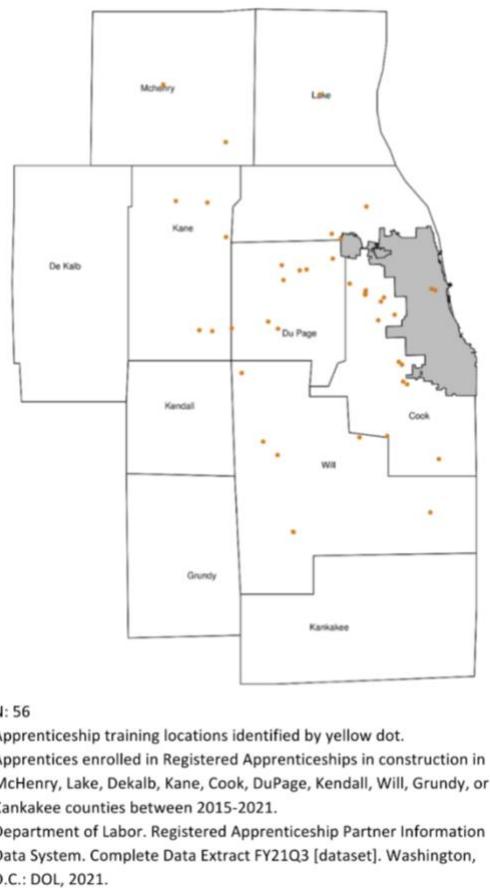
Figure 5: Chicagoland skilled trades apprenticeship age of enrollment by race/ethnicity



Key Finding #6: Most Chicagoland skilled trades Registered Apprenticeship Programs are located outside of the City.

We found that most apprenticeship training locations in the Chicagoland area are located in the western suburbs. A requirement for some programs is to travel to training sites. This condition makes it more difficult for Chicago residents without reliable transportation to access apprenticeship programs. Anecdotal evidence suggests that a lack of reliable access to transportation makes it more difficult for apprentices, especially apprentices of color, to access and complete their program. Figure 6 visualizes this potential geographic barrier.

Figure 6: Map of Chicagoland area RA Program training sites



Key Finding #7: Nationally, white workers are overrepresented in higher paying construction jobs and Latine workers are overrepresented in lower paying construction jobs. Black workers are underrepresented across the board, especially in the higher paying occupations.

Figures 7, 8, and 9 use national ACS data to visualize the concentration of Black, Latine, and white workers in construction occupations as wages increase. The size of the dots correlates to the proportion of workers in each field. Dots below the x-axis indicate underrepresentation in a given field and dots above the line represent overrepresentation. The figures document occupational segregation trends within the skilled trades that appear to be driven by race and wage. Black workers are underrepresented in construction occupations, and we see less Black workers in high wage occupations. Latine workers are overrepresented in construction occupations but are underrepresented in high wage occupations. The share of white workers in

construction occupations increases as wages increase. This gap in representation, especially in the higher wage occupations, indicates that Black and Latine workers face barriers to accessing the skilled trades careers that present the best opportunity for building family wealth.

Figure 7: Black workers in construction occupations

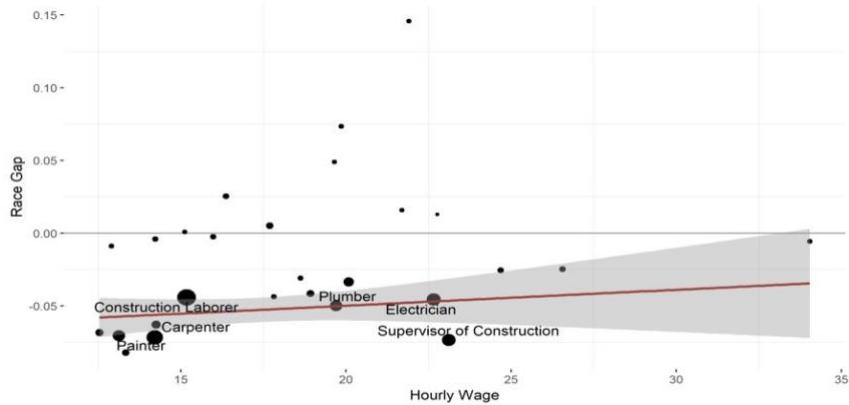


Figure 8: Latine workers in construction occupations

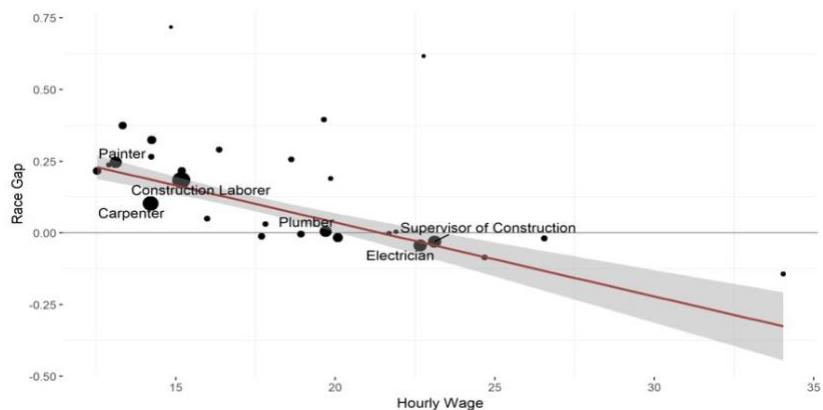
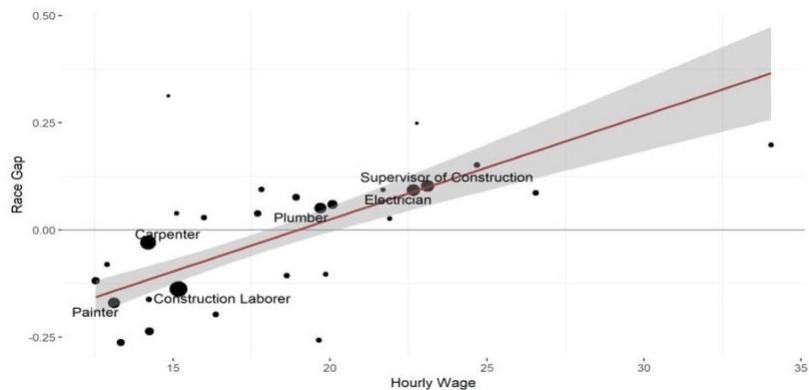


Figure 9: White workers in construction occupations



Discussion

The data on registered apprenticeships and construction employment highlight racial disparities in apprenticeship enrollment, completion, and earnings. The key takeaways of our analysis illustrate the extent to which enrollment, completion, and earning patterns disproportionately favor white apprentice candidates in accessing the opportunities presented by RA programs. While Latine workers are overrepresented in construction, they are not proportionately represented in higher wage occupations. Black workers are starting apprenticeships later in life, which means lower lifetime earning potential. Further, Black apprentices are underrepresented in most construction occupations, and less likely to complete apprenticeships.

Additional research needs to be conducted to further understand the racial disparities that we see in the data. Qualitative research, such as interviews or focus groups, could help explain how some apprenticeship programs are recruiting diverse candidates and successfully graduating apprentices. This work would illuminate the experiences of Black and Latine apprentices, uncover barriers they might face in enrolling in and completing an apprenticeship, and shed light on the unseen incentives that promote their success in RA programs. Research and analyses that intentionally focus on the experiences and interests of prospective Black and Latine apprentices could be leveraged to improve broad access to the benefits of apprenticeship programs and establish more equitable recruitment and training practices. Additionally, more precise assessment of who is working in the skilled trades and the career pathway dynamics that facilitated their success could inform public policy designed to increase access to household sustaining careers. Moreover, this study did not disaggregate enrollment and completion data by gender. Additional research is necessary to discern what trends exist for women and gender nonconforming apprentices. To realize these aims, the authors recommend that precise gender identity measurements be integrated, analyzed, and disseminated in future apprenticeship studies.

Many national and Chicago-based initiatives aim to create more equitable pathways to apprenticeship-based employment. This is especially true for the skilled trades where government, communities, unions, industry and service organizations collaborate to prepare people for entry into apprenticeships and incentivize racial and gender diversity within the construction workforce. These efforts also merit further study to better understand their impact and identify the most promising practices to achieving more equitable outcomes for apprenticeship workers and communities.

Acknowledgements

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References

<https://www.census.gov/quickfacts/fact/table/US/PST045222>, University of Chicago Inclusive Economy Lab analysis of US DOL RAPIDS data.

Bruno, R. & Manzo, F. (2016). *The Impact of Apprenticeship Programs in Illinois: An Analysis of Economic and Social Effects*. Illinois Economic Policy Institute. https://illinoisupdate.com/wp-content/uploads/2016/08/pcmr-ilepi-impactofapprenticeshipprograms_newcover.pdf

Cheney, G. (2019). *Growing Equity and Diversity Through Apprenticeship*. Center for Apprenticeship & Work-based Learning. <https://www.aacc.nche.edu/wp-content/uploads/2021/05/GrowingEquityandDiversitythroughApprenticeship-BizPerspectives-07182019-2.pdf>

Department of Labor. Registered Apprenticeship Partner Information Data System Complete Data Extract FY21Q3 [dataset]. Washington, DC: DOL, 2021., University of Chicago Inclusive Economy Lab

Lerman, R. I. (2022). *The State of Apprenticeship in the US: A Plan for Scale*. Apprenticeships for America. <https://dls.maryland.gov/pubs/prod/NoPblTabMtq/AppCmsn2023/State-of-Apprenticeships-in-the-United-States.pdf>

Manzo IV, F., & Bruno, R. (2020). *The Apprenticeship Alternative: Enrollment, Completion Rates, and Earnings in Registered Apprenticeship Programs in Illinois*. Illinois Economic Policy Institute; University of Illinois at Urbana-Champaign.

The Home Builders Institute. (2024). *The Home Builders Institute (HBI) Construction Labor Market Report*. <https://hbi.org/wp-content/uploads/2024/09/Fall-2024-Construction-Labor-Market-Report.pdf>

Bartik, A., Bertrand, M., and Stuart, B. (expected 2025). Minority Under-Representation in Apprenticeships: Demand and Supply-Side Explanations. University of Chicago Inclusive Economy Lab. (Yet to be released)

University of Chicago Inclusive Economy Lab analysis of USDOL RAPIDS data.

U.S. Census Bureau. American Community Survey [dataset].