Advancing Workforce Equity in Boston
THE REGION’S WORKFORCE IS GROWING MORE DIVERSE, INCREASING THE URGENCY OF RACIAL ECONOMIC INCLUSION
The Boston region's workforce is steadily growing more diverse.

Current and Emerging Workforce Demographics by Race/Ethnicity, Boston Metro Region, 2018

- **Current workforce**
- **Emerging workforce**

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Current Workforce</th>
<th>Emerging Workforce</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>8%</td>
<td>63%</td>
</tr>
<tr>
<td>Black</td>
<td>10%</td>
<td>16%</td>
</tr>
<tr>
<td>Latinx</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>9%</td>
<td>8%</td>
</tr>
<tr>
<td>Native American</td>
<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>Mixed/other</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: Authors’ analysis of the 2018 5-year American Community Survey microdata from IPUMS USA. Note: Universe of emerging workforce includes all people under the age of 25 years, while the current workforce includes the employed population between the ages of 25 and 64 years.

National Equity Atlas
The region’s GDP could be nearly 10 percent larger if racial gaps in income were eliminated.

Actual GDP and Estimated GDP with Racial Equity in the Workforce ($ Billions), Boston Metro Region, 2018

- GDP in 2018
- GDP if racial gaps in income were eliminated

$463.6
$508.1
Equity dividend: $44.5 billion

Source: Authors’ analysis of the 2018 5-year American Community Survey microdata from IPUMS USA. Note: Universe includes the population ages 25–64 years. Data reflect a 2014–2018 average. Values are in 2018 dollars. See the methodology for details on the analysis.
With racial equity in employment and wages, average incomes for people of color would increase by 57 percent.

**Income Gains with Racial Equity in the Workforce, Boston Metro Region, 2018**

<table>
<thead>
<tr>
<th>Race</th>
<th>Average income</th>
<th>Average income with racial equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>$41,129</td>
<td>$74,572</td>
</tr>
<tr>
<td>Latinx</td>
<td>$38,270</td>
<td>$74,653</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>$65,164</td>
<td>$76,879</td>
</tr>
<tr>
<td>Native American</td>
<td>$38,211</td>
<td>$73,360</td>
</tr>
<tr>
<td>Mixed/other</td>
<td>$50,655</td>
<td>$74,586</td>
</tr>
<tr>
<td>People of color</td>
<td>$47,960</td>
<td>$75,285</td>
</tr>
</tbody>
</table>

**Source:** Authors' analysis of the 2018 5-year American Community Survey microdata from IPUMS USA. **Note:** Universe includes the population ages 25–64 years. Data reflect a 2014–2018 average. Values are in 2018 dollars. See the methodology for details on the analysis.
RACIAL INEQUITIES ARE ENTRENCHED IN THE REGIONAL ECONOMY
Earnings growth over the past 30 years has been disproportionately captured by high-wage workers.

Growth in Jobs and Earnings by Wage Level, Boston Metro Region, 1990–2018

- Low-wage
- Middle-wage
- High-wage

Black and Latinx workers are overrepresented in a number of low-wage occupations.

Source: Authors’ analysis of the 2018 5-year American Community Survey microdata from IPUMS USA. Note: Universe includes the employed population ages 25–64 years. Data reflect a 2014–2018 average.
Nine out of 10 White workers earn at least $15/hour, compared to just six in 10 Latinx immigrants.

Share of Workers Earning at Least $15/Hour by Race/Ethnicity and Nativity, Boston Metro Region, 2018

Source: Authors’ analysis of the 2018 5-year American Community Survey microdata from IPUMS USA. Note: Universe includes civilian noninstitutionalized full-time wage and salary workers ages 25–64 years. Data reflect a 2014–2018 average. The $15/hour wage threshold is based on 2018 dollars. Data for Native American workers could not be analyzed because of small sample size.
Just one in five immigrant Latinx adults and fewer than 30 percent of Black and US-born Latinx adults in the Boston region have a bachelor's degree.

Educational Attainment by Race/Ethnicity, Boston Metro Region, 2018

- High school diploma or less
- Some college or associate's degree
- Bachelor's degree or higher

Source: Authors' analysis of the 2018 5-year American Community Survey microdata from IPUMS USA. Note: Universe includes the population ages 25–64 years. Data reflect a 2014–2018 average.
Higher educational attainment narrows racial gaps in employment, but actually widens racial wage gaps.

Joblessness by Educational Attainment, Race/Ethnicity, and Nativity, Boston Metro Region, 2018

Source: Authors' analysis of the 2018 5-year American Community Survey microdata from IPUMS USA. Note: Universe includes the civilian noninstitutionalized population ages 25–64 years. Joblessness is defined as those unemployed or not in the labor force as a share of the total population. Data reflect a 2014–2018 average. Data for Native American workers, and for US-born Asian or Pacific Islander workers at certain educational levels, could not be analyzed because of small sample size.
Median Wages by Educational Attainment and Race/Ethnicity, Boston Metro Region, 2018

<table>
<thead>
<tr>
<th>Education Level</th>
<th>White</th>
<th>Black</th>
<th>Latinx</th>
<th>Asian or Pacific Islander</th>
<th>Mixed/other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than a HS diploma</td>
<td>$20</td>
<td>$17</td>
<td>$15</td>
<td>$14</td>
<td>$17</td>
</tr>
<tr>
<td>HS diploma, no college</td>
<td>$23</td>
<td>$18</td>
<td>$17</td>
<td>$16</td>
<td>$17</td>
</tr>
<tr>
<td>Some college, no degree</td>
<td>$25</td>
<td>$19</td>
<td>$18</td>
<td>$20</td>
<td>$19</td>
</tr>
<tr>
<td>AA degree, no BA</td>
<td>$29</td>
<td>$21</td>
<td>$21</td>
<td>$20</td>
<td>$20</td>
</tr>
<tr>
<td>BA degree or higher</td>
<td>$39</td>
<td>$29</td>
<td>$29</td>
<td>$43</td>
<td>$32</td>
</tr>
</tbody>
</table>

Source: Authors' analysis of the 2018 5-year American Community Survey microdata from IPUMS USA. Note: Universe includes civilian noninstitutionalized full-time wage and salary workers ages 25–64 years. Data reflect a 2014–2018 average. Values are in 2018 dollars. Data for Native American workers, and for mixed/other race workers at certain educational levels, could not be analyzed because of small sample size.
WORKERS FACE A SHORTAGE OF GOOD JOBS
Characteristics and Examples of Good Jobs by Typical Education Requirements, Boston metro region, 2019

Characteristics of good jobs:
- Living-wage compensation: Average wage for the occupation is sufficient to sustain a working family of two working adults and two children—$42,453 in Boston
- Stable or growing base of employment: The number of jobs is projected to grow or to remain relatively stable for the next decade—employment in the occupation is not declining by more than 10 percent over 10 years, or more than 2 percent over 10 years for small occupations
- Automation resilient: The occupation has a probability of computerization lower than 50 percent, given the full array of tasks that comprise the role

<table>
<thead>
<tr>
<th>Example occupations accessible to workers with a high school diploma or less:</th>
<th>Example occupations accessible to workers with a postsecondary certificate or license or vocational training through an apprenticeship</th>
<th>Example occupations accessible to workers with an associate's degree</th>
<th>Example occupations accessible to workers with a bachelor's degree or higher:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Sales representatives of services, except advertising, insurance, financial services, and travel</td>
<td>• First-line supervisors of construction trades and extraction workers</td>
<td>• Registered nurses</td>
<td>• Financial managers</td>
</tr>
<tr>
<td>• Food service managers</td>
<td>• Electricians</td>
<td>• Air traffic controllers and airfield operations specialists</td>
<td>• Software developers</td>
</tr>
<tr>
<td>• Financial clerks</td>
<td>• Emergency medical technicians</td>
<td>• Veterinary technologists and technicians</td>
<td>• Management analysts</td>
</tr>
</tbody>
</table>
Just under half of Boston workers are in good jobs.

Share of Workers in Good Jobs, Overall and by Educational Requirements, Boston Metropolitan Region, 2019

<table>
<thead>
<tr>
<th>Educational Requirements</th>
<th>Share of Workers in Good Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>47%</td>
</tr>
<tr>
<td>High school diploma or less</td>
<td>12%</td>
</tr>
<tr>
<td>Postsecondary certificate, license,</td>
<td>29%</td>
</tr>
<tr>
<td>or apprenticeship</td>
<td></td>
</tr>
<tr>
<td>Associate's degree</td>
<td>60%</td>
</tr>
<tr>
<td>Bachelor's degree or more</td>
<td>82%</td>
</tr>
</tbody>
</table>

Sources: Employment from 2018 5-year American Community Survey microdata from IPUMS USA, and occupational characteristics from Burning Glass job posting data and 2018 5-year American Community Survey microdata from IPUMS USA.
More than one million Boston jobs require no more than a high school diploma, but only 12 percent of them are good jobs.

Distribution of Employment by Educational Requirements and Job Quality, Boston Metropolitan Region, 2018

- Red: Workers not in good jobs
- Green: Workers in good jobs

Sources: Employment from 2018 5-year American Community Survey microdata from IPUMS USA, and occupational characteristics from Burning Glass job posting data and 2018 5-year American Community Survey microdata from IPUMS USA.
White workers are overrepresented in good jobs overall and particularly overrepresented in good jobs that do not require any postsecondary education.

**Distribution of Workers by Race/Ethnicity, Job Quality, and Educational Requirements, Boston Metropolitan Region, 2018**

- **Overall workforce**
  - Workers not in good jobs: 67%
  - Workers in good jobs: 33%

- **High school diploma**
  - Workers not in good jobs: 64%
  - Workers in good jobs: 36%

- **Postsecondary certificate, license, or apprenticeship**
  - Workers not in good jobs: 68%
  - Workers in good jobs: 32%

- **Associate's degree**
  - Workers not in good jobs: 70%
  - Workers in good jobs: 30%

- **Bachelor's degree or higher**
  - Workers not in good jobs: 81%
  - Workers in good jobs: 19%

**Sources:** Employment from 2018 5-year American Community Survey microdata from IPUMS USA, and occupational characteristics from Burning Glass job posting data and 2018 5-year American Community Survey microdata from IPUMS USA.
Available Jobs in 2019 Could Have Closed Most Racial Gaps in Access to Good Jobs

In 2019, there were enough openings for good jobs over the year to close the racial equity gaps in good jobs at each level of educational attainment. For example, to close the racial gap in good jobs for jobs that require no more than a high school diploma, 17,000 workers of color would need a job upgrade (a 67 percent increase); in 2019, there were 33,000 openings for good jobs at this educational level.

Still, 82 percent of the 450,000 good jobs available in 2019 required a bachelor’s degree or more, underscoring the need for workforce intermediaries and employers to reexamine credentialing requirements and design pathways into these jobs for workers without a four-year degree, wherever possible.
Projected job growth for Latinx and Black workers is heavily concentrated in low-quality jobs.

**Occupations Projected to Add the Most Workers of Color, by Race/Ethnicity, Boston Metropolitan Region, 2020-2030**

- **Software developers**
- **Personal care aides**
- **Cooks**
- **Managers, all other**
- **Registered nurses**
- **Janitors and building cleaners**
- **Home health aides**
- **Shuttle drivers and chauffeurs**
- **Maids and housekeeping cleaners**
- **Laborers and freight, stock, and material movers, hand**
- **Nursing assistants**
- **Life scientists, all other**
- **Financial managers**
- **Construction laborers**
- **Management analysts**
- **Manicurists and pedicurists**
- **Waiters and waitresses**
- **Chefs and head cooks**
- **Computer occupations, all other**
- **Other teachers and instructors**
- **Food preparation workers**
- **Medical assistants**
- **Social workers, all other**
- **Elementary and middle school teachers**
- **Fast food and counter workers**
- **Market research analysts and marketing specialists**
- **Other mathematical science occupations**
- **Landscape and groundskeeping workers**
- **Medical and health services managers**
- **Childcare workers**

**Sources:** Burning Glass modeling for occupational growth, and 2018 5-Year ACS microdata from IPUMS for demographic characteristics of occupations. **Note:** Occupations marked in bold are classified as good jobs.
THE WAVERING COVID-19 RECOVERY IS LEAVING WORKERS OF COLOR BEHIND
People of color have experienced greater unemployment volatility compared to White workers.

Unemployment Rates by Race/Ethnicity, Boston Metro Region, January–September 2020

Source: Unemployment estimates from the Current Population Survey (CPS) microdata from IPUMS USA. Note: Dotted lines denote a two-month rolling average of unemployment rates due to small sample size.
Online job postings for positions held by Black and Latinx workers before the crisis are recovering more quickly than for those held by White workers.

Job Postings Relative to April Baseline by Pre-crisis Occupational Demographics (Race/Ethnicity), Boston Metro Region, March–September 2020

Source: Authors' analysis of Burning Glass job posting data (January–September 2020), with job postings allocated according to occupational race and ethnicity characteristics from 2018 5-year American Community Survey (ACS) microdata from IPUMS USA.
The early labor market recovery has been concentrated in jobs that require the least preparation and training. Postings for higher skills jobs remain down significantly from the February 2020 baseline.

Monthly Job Postings by Degree of Preparation Required, Boston Metro Region, February–October, 2020

Source: Authors’ analysis of Burning Glass Technologies data on monthly job postings, using O*NET occupational classifications. Note: For more information on job zone definitions, see https://www.onetonline.org/help/online/zones.
ACCELERATING AUTOMATION PUTS WORKERS OF COLOR AT RISK
Latinx workers are overrepresented in automation-vulnerable jobs by more than one-third, compared to their representation in the overall workforce.

Automation Risk by Race/Ethnicity, Boston Metro Region, 2018

Sources: Authors' analysis of the 2018 5-year American Community Survey microdata from IPUMS USA and automation scores from "The Future of Employment: How Susceptible Are Jobs to Computerisation?" (Carl Benedikt Frey and Michael A. Osborne, 2013). Note: Universe includes the employed civilian noninstitutionalized population age 16 or older.
Workers of color, those with less than a high school diploma, younger workers, and non-English speakers are the most vulnerable to automation-driven job disruption.

Automation Vulnerability by Worker Characteristics, Boston Metro Area, 2018

Sources: Occupation-level automation scores from "The Future of Employment: How Susceptible Are Jobs to Computerisation?" (Carl Benedikt Frey and Michael A. Osborne, 2013), and worker characteristics from 2018 5-year American Community Survey (ACS) microdata from IPUMS USA.
Automation Vulnerability by Industry, Boston Metropolitan Region, 2018

- Real Estate and Rental and Leasing: 71%
- Transportation and Warehousing: 70%
- Accommodation and Food Services: 70%
- Retail Trade: 65%
- Administrative and Support and Waste Management Services: 62%
- Construction: 57%
- Mining, Quarrying, and Oil and Gas Extraction: 54%
- Wholesale Trade: 53%
- Agriculture, Forestry, Fishing, and Hunting: 52%
- Manufacturing: 50%
- Other Services, Except Public Administration: 45%
- Utilities: 45%
- Finance and Insurance: 44%
- Management of Companies and Enterprises: 42%
- Public Administration: 38%
- Arts, Entertainment, and Recreation: 36%
- Information: 35%
- Professional, Scientific, and Technical Services: 31%
- Active Duty Military: 30%
- Health Care and Social Assistance: 30%
- Educational Services: 23%

Sources: Occupation-level automation scores from “The Future of Employment: How Susceptible Are Jobs to Computerisation?” (Carl Benedikt Frey and Michael A. Osborne, 2013), and industry characteristics from 2018 5-year American Community Survey (ACS) microdata from IPUMS USA.
About the National Equity Atlas: America’s most detailed report card on racial and economic equity.

A partnership between PolicyLink and the USC Equity Research Institute, the National Equity Atlas:

- produces innovative research to inform the field and influence policy debates;
- partners with community organizations to create tailored analyses that advance local campaigns; and
- democratizes access to equity data.
About Burning Glass Technologies

Burning Glass Technologies is an analytics software company that has cracked the genetic code of an ever-changing labor market.

Powered by the world’s largest and most sophisticated database of labor market data and talent, we deliver real-time data and breakthrough planning tools that inform careers, define academic programs, and shape workforces.

Burning Glass data have been built over 15 years with robust taxonomies and the industry’s largest in-house data science team.

- **3.4 million**
  Active unique jobs collected daily

- **50,000**
  Sources across the web - job boards and corporate sites

- **>1 million**
  Firms represented, from large corporations to SME’s

**Dynamic Labor Market Taxonomy**
- 23 Career Areas
- 1700 Occupations
- 18,000 Skills
- 60,000 Skill Variants

- **80%**
  Deduplication ensuring integrity and consistency

- **300 million**
  Resumes processed per annum

- **>1 billion**
  Historical job market records