



Neighborhood Unemployment: A Technical Note

The Boston Planning & Development Agency

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Requests

Please contact us at research@boston.gov with additional questions.

Research Division

Director

Alvaro Lima

Senior Researcher Economist

Matthew Resseger

Research Associate

Kevin Kang

Interns

Alissa Zimmer

Zhehui Zheng

Deputy Director

Jonathan Lee

Senior Researcher/ Demographer

Phillip Granberry

Research Assistant

Avanti Krovi

Jing Chen

Research Manager

Christina Kim



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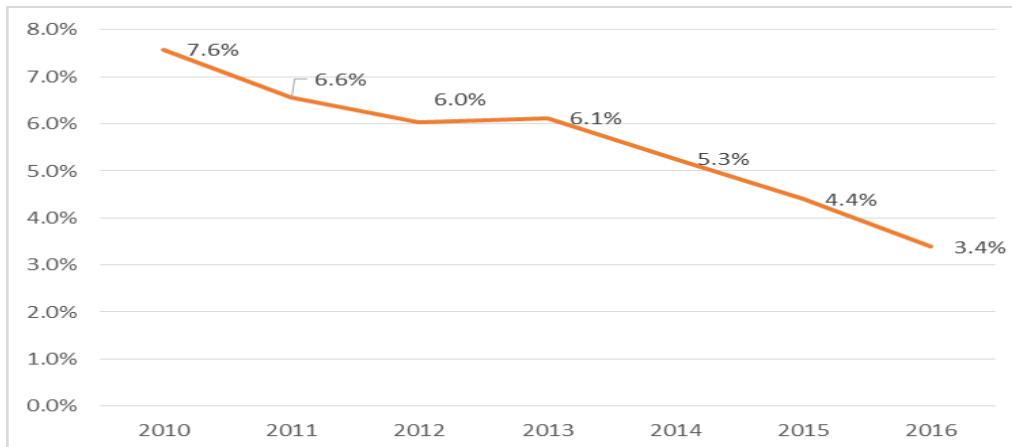
Unemployment Data Sources Available

Bureau of Labor Statistics Local Area Unemployment Statistics:

The Bureau of Labor Statistics (BLS) publishes the official national monthly unemployment rate, as well as official rates at the state, county, and city level through the Local Area Unemployment Statistics (LAUS) program. The BLS does not publish unemployment data at the neighborhood level or any other geography below the citywide level. The most recent monthly estimate for Boston's citywide unemployment rate is 4.2% for July 2017.

- *Advantage:* Most current and widely used.
- *Disadvantage:* Smallest geography reported is the city.

Figure 1: Boston Citywide Unemployment Rate – Bureau of Labor Statistics



Source: Bureau of Labor Statistics, Local Area Unemployment Statistics

U.S. Census Bureau's American Community Survey

The U.S. Census Bureau's American Community Survey (ACS) publishes five-year average estimates at the census tract level, which can be aggregated to neighborhoods. The latest ACS data available at the census tract level, is a five-year estimate for 2011-2015. One-year ACS estimates for 2015 are also available, but only for the city as a whole. The ACS data, while providing better geographic detail, is much older and published less frequently than the BLS data. The 2011-2015 five-year ACS unemployment estimate for Boston is 8.7%, while the 2015 one-year ACS estimate for Boston is 6.7%. Additionally, the unemployment rate spiked during the Great Recession and remained elevated for most of the 2011-2015 period included in the most recent ACS tract-level estimates. Any Neighborhood unemployment rates derived from the Census ACS data will likely be much higher than unemployment levels being experienced today.

In addition to the time lag, two differences in survey methodology also cause the ACS to overstate unemployment compared to official BLS numbers. Particularly important for Boston, the BLS surveys people living at their “usual residence” which for many college students means they are counted at their parents’ home address rather than their college address. Second, the survey questions used by the BLS are thought to get more precise answers to whether someone is actively looking for work, and thus counted as unemployed, or not actively looking, and thus out of the labor force.

These differences in methodology likely explain the variation in the unemployment estimates from the ACS and BLS. For example the 2015 estimates show: (1) the national unemployment rate calculated in the 2015 ACS is 6.3%, one point higher than the 5.3% national annual average unemployment rate from the BLS, and (2) Boston’s citywide 2015 unemployment estimate from the ACS, at 6.7%, was over two points higher than the 2015 Boston annual unemployment rate of 4.4% from the BLS.

- *Advantage:* Census tract level estimates available allowing neighborhood level analysis.
- *Disadvantage:* Estimates are a five year average, and include the slow growth recovery period following the Great Recession. Estimates are not directly comparable to official BLS rates.

Estimating Neighborhood Unemployment Rates

Given that the BLS data do not allow for neighborhood level unemployment analysis, and the ACS data are an older five year average that does allow for neighborhood level analysis, one possibility is to take the neighborhood to city ratio from the ACS and report the relative magnitude (see table 1 for ACS neighborhood unemployment estimates and neighborhood to city ratio). For example, Roxbury’s unemployment rate in the 2011-2015 ACS is 1.65 times that of the citywide average.

Another alternative is to take the neighborhood to city ratio derived from ACS data and apply it to the BLS citywide estimate. This will allow for neighborhood level estimates using the more current BLS data as the base (see table two).

It is unclear how accurate these estimates are because different data and sampling methods were used to compile the Census ACS and BLS unemployment data. Because the ratio of neighborhood to citywide unemployment is fixed by the 2011-2015 ACS, this methodology cannot determine whether the unemployment rate in particular neighborhoods is changing faster or slower than the citywide rate.

- *Advantage:* uses a more recent base from the BLS data and generates neighborhood level estimates.
- *Disadvantage:* applies a ratio from the 2011-2015 ACS to the 2016 BLS rate, meaning it cannot detect whether there have been recent changes in neighborhood unemployment relative to the citywide average.

Table 1: Neighborhood Unemployment Rates - American Community Survey

	Unemployment Rate	Neighborhood to City Ratio
Boston	8.7%	
Allston	8.3%	0.95
Back Bay	3.6%	0.42
Beacon Hill	3.7%	0.42
Brighton	5.6%	0.64
Charlestown	6.0%	0.69
Dorchester	12.6%	1.45
Downtown	7.1%	0.82
East Boston	9.0%	1.04
Fenway	9.8%	1.13
Hyde Park	9.2%	1.06
Jamaica Plain	6.2%	0.71
Longwood	10.6%	1.22
Mattapan	15.1%	1.73
Mission Hill	8.1%	0.93
North End	1.9%	0.22
Roslindale	9.2%	1.06
Roxbury	14.3%	1.65
South Boston	5.8%	0.67
South Boston Waterfront	3.9%	0.45
South End	6.5%	0.75
West End	7.1%	0.82
West Roxbury	5.0%	0.57

Source: U.S. Census Bureau, 2011-2015 5-year American Community Survey, BPDA Research Division Analysis

Table 2: Estimated Unemployment Rates Using Ratio Method

	2014	2015	2016
Boston	5.3%	4.4%	3.4%
Allston	5.1%	4.2%	3.2%
Back Bay	2.1%	1.8%	1.4%
Beacon Hill	1.8%	1.9%	1.4%
Brighton	3.0%	2.8%	2.2%
Charlestown	3.3%	3.1%	2.3%
Dorchester	7.8%	6.4%	4.9%
Downtown	4.4%	3.6%	2.8%
East Boston	5.6%	4.6%	3.5%
Fenway	5.9%	5.0%	3.8%
Hyde Park	5.6%	4.7%	3.6%
Jamaica Plain	3.3%	3.1%	2.4%
Longwood	6.3%	5.4%	4.1%
Mattapan	9.2%	7.6%	5.9%
Mission Hill	5.2%	4.1%	3.2%
North End	1.1%	1.0%	0.7%
Roslindale	5.7%	4.7%	3.6%
Roxbury	8.8%	7.3%	5.6%
South Boston	3.3%	2.9%	2.3%
South Boston Waterfront	2.2%	2.0%	1.5%
South End	4.0%	3.3%	2.5%
West End	4.6%	3.6%	2.8%
West Roxbury	3.4%	2.5%	1.9%

Source: Bureau of Labor Statistics, Local Area Unemployment Statistics & U.S. Census Bureau, 2011-2015 5-year American Community Survey, BPDA Research Division Analysis