Federal Reserve Bank of Boston®

Regional & Community Outreach

Issue Brief | 2019-2 | June 2019

Minimum-Wage Effects by Neighborhood: A Preliminary Analysis

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Contents

Abstract

In this brief, we examine the aggregate dollar amounts potentially flowing to low-wage workers in Massachusetts neighborhoods and communities as a result of mandated increases in the state minimum wage. We draw from census data to estimate income and develop various impact scenarios. Disagreements abound about the employment effect of increased minimum wages on the local workforce. Our analysis lays out several scenarios illustrating how communities may be affected, depending on employers' responses and the concentration of low-wage workers in each community.

Key data items

- If no jobs are lost, our estimates suggest that the recent $1 per hour increase in the minimum wage from $10 to $11 may bring up to $18 million in increased earnings for affected workers in communities such as Springfield and Worcester.
- Even if a minimum-wage increase results in significant decreases in employment, our analysis shows that workers in some communities will still experience a net gain in earnings. Some communities, however, will see the combined earnings of low-wage workers decline in this scenario.
- Communities that are poorer and have higher concentrations of low-wage workers will have a relatively greater benefit than communities with lower concentrations of low-wage workers.
- While the minimum-wage increase applies to all Massachusetts minimum-wage recipients, the local effects will depend, in part, on the numbers of low-wage workers in those communities.

Introduction

Over the past several years, the minimum wage in Massachusetts has increased from $8 to $12 per hour, and recent legislation has mandated further increases up to $15 per hour by 2023—changes that may come as particularly welcome news to communities with higher concentrations of minimum-wage workers. This report assumes that wages are carried home to neighborhoods and that a significant portion of those wages is spent in the local area.[1] Thus, the well-being of a place depends, in part, on the incomes of its residents. This analysis provides community-by-community estimates of the increase in the total amount of wages flowing into individual Massachusetts neighborhoods and communities because of increases in minimum wages.

From 2016 to 2017, the state minimum wage in Massachusetts increased from $10 to $11, the last of the three increases required by a 2014 state law. Nearly 500,000 workers—15 percent of all workers in Massachusetts—were estimated to have benefited from the wage hike.[2] Given the size of the increase and the number of people affected, it is not surprising that a lively debate surrounds the potential benefits and costs of the increase. Observers have noted many potential implications for workers, consumers, businesses, governments, and communities. For example, while some assume that the

majority of America's low-wage jobs are held by young, part-time workers who are primarily teenagers or college students, low-wage workers are just as often the primary wage earners in a family, and women, African Americans, and Latinos make up a disproportionate number of low-wage workers.[3]

Studies indicate that low-income households typically spend any additional money they receive, so raising the earnings of low-wage workers can be expected to generate more consumption than would transfers of a similar size to higher-income households.[4] Thus, minimum-wage increases possibly offer a greater economic boost to lower-income communities. Higher earnings, and the related consumption, will also generate additional payroll, income, and sales taxes, benefitting public finances for the state and federal governments.[5,6,7,8]

While wage hikes translate most immediately into higher take-home pay, increases in income affect individuals and households in other important ways. They have the overall effect of increasing well-being and demonstrably improving individual health.[9] Higher eligible wages also lead to higher contributions to social security, which can benefit workers during their retirement or should they become disabled. However, the effects depend on the demographics of the low-wage labor market; as noted above, workers who are younger, who are single mothers, who work in the service industry, or who are people of color are more likely be paid minimum wage[10] and therefore are disproportionately affected by minimum-wage policies.[11]

When residents receive wage hikes, their pay also can benefit their neighborhoods in a number of ways. Increases in pay can be applied to housing costs, which can reduce the incidence of evictions and foreclosures; neighborhoods benefit from greater residential stability, which is central to reducing neighborhood crime and disorder.[12] Minimum-wage increases are also associated with increased spending at restaurants and on groceries, much of which is done locally. Overall, raising wages at the bottom leads to a greater amount of economic activity in all neighborhoods where lower-wage earners work and live, which in turn benefits others in the neighborhood.[13]

Minimum-wage policies can also have negative effects: wage hikes push labor costs up, and employers often transfer these costs back onto consumers by raising prices. Some observers contend that wage increases raise employers' costs so that the very low-wage workers whom proponents seek to help may find their hours cut or jobs eliminated, while others suggest the pressure could be so extreme as to drive some employers out of business.[14] However, previous analysis from the Federal Reserve Bank of Boston concludes that the cumulative price-level increase in response to previous minimum-wage increases has been "fairly benign."[15] While there has not been a broad study of the cumulative effects of wage-hike schedules like the increase of $1 per hour per year that Massachusetts implemented, such gradual increase plans are designed to allow employers to adjust to the wage changes. By contrast, in Seattle, the minimum wage rose by $3.53, or more than 37 percent, over just nine months and may have contributed to the negative employment effects reported there.[16]

The main focus of this brief, however, is to estimate and report scenarios for potential community-by-community changes in total earnings for all workers affected by the minimum-wage increases. In Massachusetts, residents who earn minimum wages are present in all neighborhoods but are most concentrated in financially disadvantaged communities like the Boston neighborhoods of Roxbury and East Boston, and smaller post-industrial cities such as Worcester. Presenting impacts in the context of these communities could help community stakeholders consider how state- and federal-level policy changes around the minimum wage affect their specific locations.

Because the effects on workers are difficult to predict, this brief presents several scenarios that estimate income changes depending on a potential severe, modest, or nonexistent decline in employment. How much wage hikes translate into worker income is difficult to precisely determine, as employers may respond in ways that have negative effects (e.g., cutting jobs or hours) or positive ones (e.g., increasing wages for workers who earn slightly more than minimum wage). Additionally, there are a host of other forces that can affect the economic flows into and out of a neighborhood that are not accounted for in this estimate, such as firm creation and relocation. For this preliminary calculation, we develop three scenarios: one in which there are the same number of jobs and hours in the area in the year following a $1 per hour wage hike (stable employment scenario); a second one where jobs and hours only decline modestly (moderate loss of employment scenario); and a third involving a more significant decline in employment (severe loss of employment scenario). In all three scenarios, we assume perfect employer compliance to the minimum-wage increase. While we don't estimate the likeliest outcome of the changes to the Massachusetts minimum wage, the stable employment scenario is reflective of most analyses.

While our goal here is to explore a few minimum-wage scenarios from a community-level perspective, our approach lacks the sophistication of a more thorough, academic investigation. Other analysts add factors to test for higher aggregate benefits: because the wage distribution is compressed, minimum-wage hikes also raise wages for workers just above the minimum wage by bringing up the bottom wages; thus, those earning slightly above the new minimum wage might also see a wage boost. These near minimum-wage workers likely are also concentrated in the same residential areas as minimum-wage workers, so our "direct" estimate may underestimate the full impact. Additionally, some of the increases in wages will be offset by losses in income from public programs or in the possible decline in local employment.[17,18] In such analyses, however, the estimated effects are typically small, especially in the case of incremental wage hikes like those being enacted in Massachusetts.[19] Overall, this preliminary work is less nuanced, and it is less our aim to be precise than to point out that because low-wage workers are concentrated in particular communities, state- and national-level policies will have a greater impact on those particular communities.

Research questions and method

Given the potential for minimum-wage hikes to differentially affect neighborhoods, this brief addresses two questions: (1) Which communities are home to workers affected by increases in the minimum wage? (2) What is the total estimated income newly flowing into each community because of the 2017 increase in the minimum wage to $11, based on scenarios of no change, minimal decline, and serious decline in employment?

The geography used in this analysis is constrained by the way the government presents census data. Research often defines neighborhoods using census tracts, administrative units that roughly approximate neighborhoods of 4,000 people. Yet the data needed for this analysis is not reported within census tracts at the individual level. Researchers facing similar constraints turn to another census-defined statistical area, public use micro data areas (PUMAs), which are geographically contiguous areas with populations of at least 100,000 and up to 200,000. Though clearly much larger than census tracts, PUMAs do delineate all places in Massachusetts into smaller geographic areas and are proxies for local communities.[20]

We estimated the presence, hourly pay, and annual earnings of workers earning less than $11 per hour (and more than $7.99 per hour) in 2016 by the PUMA where the worker lives. We then determined the increase in annual wages associated with changing the minimum wage to $11 by calculating the percentage increase in hourly wage, and multiplied annual earnings by that percentage increase for individuals with wages between $8.00 and $10.99 per hour. Using person weights, we then added up all the individual annual increases within each PUMA. [21] We label this calculation the “stable employment scenario.”

The data used for the analysis comes from The Integrated Public Use Microdata Series (IPUMS USA). IPUMS microdata is the underlying data used in the American Community Survey (ACS). For the purpose of this report, the 2016 IPUMS data established the estimated work and pay related data which was then used to draw the PUMA level effects.[22]

We then calculate two additional scenarios, one with a 5 percent reduction in employment, the “moderate loss of employment scenario,” and another with a 10 percent reduction in employment, the “severe loss of employment scenario.” We chose these scenarios in order to capture the range of the prevailing hypotheses about the effects of minimum wage on employment as well as the employment reduction that occurred during the Great Recession. “Employment” does not refer to strict employment levels since wage increases do not always result in absolute loss of jobs, but may result in reduction of hours. Using the recent recession as representative of a worst-case scenario, we estimate possible employment reductions of up to 10 percent. During the recession, average weekly hours worked declined 2.6 percent and aggregate hours worked (accounting for jobs lost) declined 9.1 percent.[23] We operate on the assumption that a rise in minimum wage will not be more detrimental to employment in the short run than a severe recession.

Findings

Minimum-wage workers are not equally distributed across all neighborhoods, and the data show stark differences in estimated dollar flows between PUMAs of equal sizes. PUMAs with larger numbers of lower-income residents saw larger increases. Because of the differences in the distributions across communities of workers earning between $8.00 and $10.99 per hour, PUMAs with the greatest concentration of the lowest-earning low-wage workers will see more benefit than PUMAs with high concentrations of the highest-earning low-wage workers. The estimated one-year changes in aggregate income in Massachusetts due to raises in the minimum wage can be viewed a number of ways. Below we discuss the three scenarios—stable employment with no job loss, moderate loss of employment, and severe loss of employment—and the associated estimated aggregate changes in income gains in different communities.

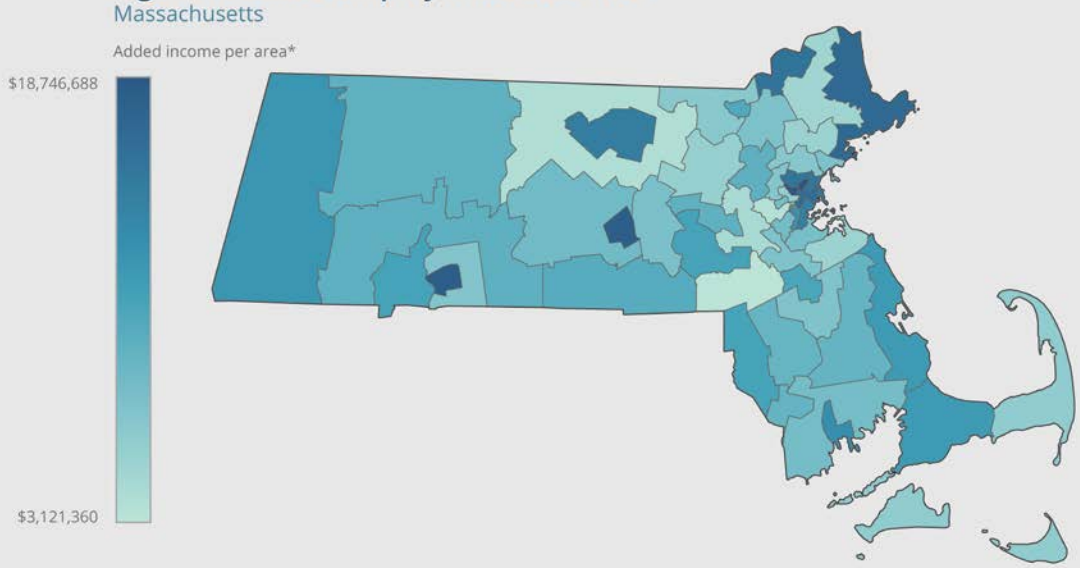
Stable employment scenario

In an employment scenario with no job loss due to a higher minimum wage, raising the minimum wage increases aggregate annual earnings by half a billion dollars in the commonwealth. This translates into an average additional $2,000 per minimum-wage earner per year.[24] Because of the differences in numbers and concentrations of low-wage workers, we see a wide geographic variation in earnings gains. For example, west-central Middlesex County added just $5.5 million, compared with east Middlesex County (which contains Somerville and Everett) where estimated gains amounted to almost $19 million. While communities with concentrations of low-wage workers have the greatest income gain in this scenario, workers in affluent areas do see an increase in aggregate earnings; towns such as Newton and Brookline increased more than $3 million.

Of the five PUMAs within Boston, the one including Back Bay, Beacon Hill, Charlestown, and East Boston had the highest estimated earnings gain ($16 million), while Allston, Brighton, and Fenway had the lowest (less than $8 million). Pittsfield would gain an estimated aggregate of $12.3 million annually from a minimum-wage increase of $1 per hour per year. By way of comparison, the Community Development Block Grant (CDBG) program awarded to Pittsfield amounted to $1.1 million in 2016.

Figure 1: Stable Employment Scenario

Massachusetts



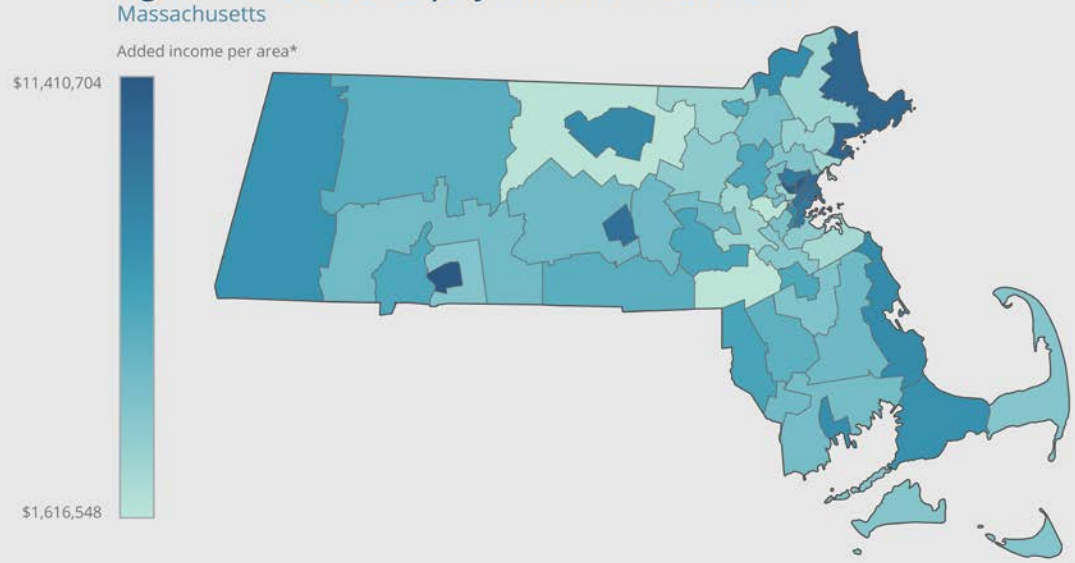
Source: U.S. Census. Bureau 2012–2016 American Community Survey (ACS) 5-year Public Use Microdata Samples (PUMS). Authors' own calculation.
**Area boundaries represent Public Use Micro Areas (PUMAs) and are outlined in light gray.*

Moderate loss of employment scenario

We also model a "moderate" scenario where employment declines by 5 percent among all minimum-wage workers.[25] This scenario assumes, first, a 5 percent decline in employment for workers in each neighborhood and, further, that all affected workers have their hours reduced by 5 percent. Thus, all communities are equally affected by the decline, and job losses are not concentrated within communities among the most affected workers. Even in the presence of this moderate decline in employment, all PUMAs in Massachusetts see positive net gains to earnings following a $1 per hour per year minimum-wage increase.

Across Massachusetts, the total net increase in low-wage workers' earnings would be about $300 million, and the average affected worker would receive $1,200 in additional income. Hampden County sees the largest income gain—a little over $11 million. Given a moderate decrease in employment, cities like Newton, Brookline, and Franklin, because of their relatively low shares of low-income earners, see the smallest gains, with each community project to gain about $1.6 million.

Figure 2: Moderate Employment Decline Scenario
Massachusetts



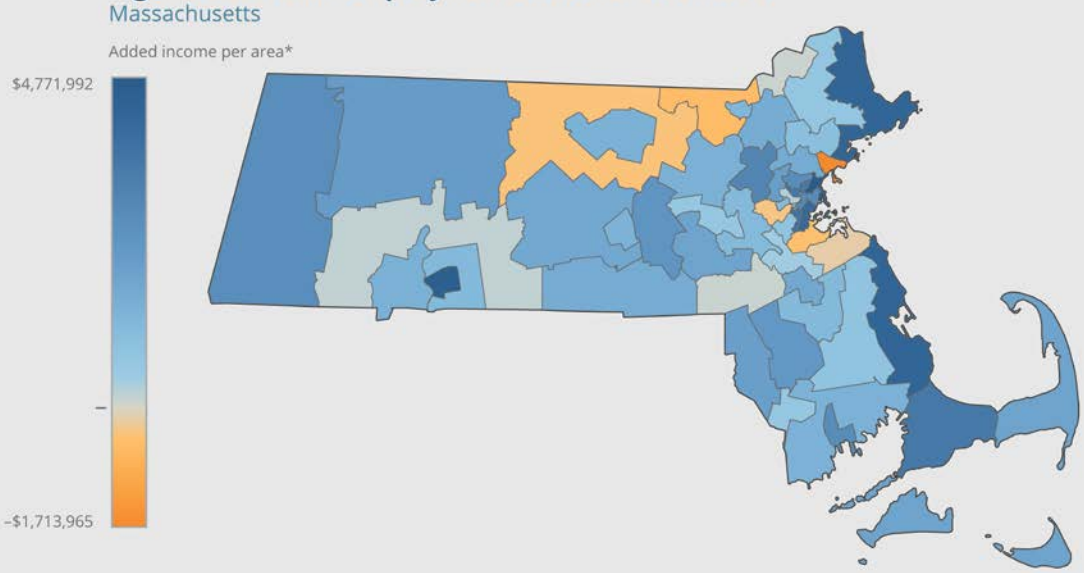
Source: U.S. Census. Bureau 2012–2016 American Community Survey (ACS) 5-year Public Use Microdata Samples (PUMS). Authors' own calculation.
**Area boundaries represent Public Use Micro Areas (PUMAs) and are outlined in light gray.*

Severe loss of employment scenario

The third scenario assumes that a minimum-wage increase would result in a recession-level employment adjustment.[26] Even with this 10 percent decline in employment, our estimates indicate that statewide total wages would still increase by $85 million. North Suffolk County would have the largest increase, $4.7 million, and once again, Hampden County (which includes Springfield) would be one of the top gainers.

Some PUMAs, however, do experience declines in aggregate earnings, and the average annual per-capita gain is only $340. The estimated declines are not only a measure of the share of low-wage workers but also the distribution of low-wage workers earning $8.00 to $10.99 per hour. If a large portion of the low-wage workers earn at or near the wage range limit before the minimum-wage increase, a greater amount is potentially lost if their employment declines. Possibly owing to this distribution, PUMAs that were not near the bottom in the other two scenarios are at the bottom when employment sees a 10 percent decline. At this level, PUMAs that include Lynn, Quincy, and Swampscott would be affected most negatively. While Newton and Brookline still see a decline in aggregate income, these would be relatively modest decreases, compared with the potential gains shown in the alternate aforementioned employment scenarios.

Figure 3: Severe Employment Decline Scenario
Massachusetts



Source: U.S. Census. Bureau 2012–2016 American Community Survey (ACS) 5-year Public Use Microdata Samples (PUMS). Authors' own calculation.
**Area boundaries represent Public Use Micro Areas (PUMAs) and are outlined in light gray.*

Conclusion

Lack of income is a stressor that has short- and long-term effects on household well-being. When people facing income stress are concentrated in neighborhoods, entire communities suffer. Communities in the Boston metro area and Western Massachusetts have long seen the deleterious effects of low wages on their residents. To the extent that raising wages can reduce this stress, increases in the minimum wage should be seen as a form of community development, potentially reducing both individual- and community-level negative outcomes. This may be even truer for places with large numbers of low-wage workers who, compared with higher-wage workers, are more likely to apply this income toward necessities such as rent, food, healthcare, transportation, and other basic needs.[27,28]

It is also possible that raising the minimum wage will work to the detriment of low-paid workers; if employment losses are substantial, some communities will see net declines in wages. It is not the goal of this paper to referee disputes in the minimum-wage literature, but it is worth noting that the moderate employment-loss scenario we explore implies a level of job loss that is at the high end of the estimates coming from the research. Yet even in our moderate job-loss scenario, we still found that with a $1 per hour minimum-wage hike, all communities within Massachusetts experience an increase in net wages for their low-wage workers.

Moreover, in that scenario, the aggregated wage increases for communities with larger concentrations of low-wage workers were considerable. In places like Mattapan and Roxbury, workers may bring an estimated additional $12.5 million into their community each year, or as much as $120 million over the course of a decade. While individuals may use their higher wages to move to new communities, the minimum wage sets the floor on what any worker can expect to earn and what communities can expect to realize. In these places, a minimum-wage increase may yield almost 10 times as much money annually as the amount designated by the federal government through the CDBG program. Public grants like CDBG and private wages are not interchangeable, of course, but both are important economically for low-wage workers in these communities. Overall, these scenarios demonstrate how increases in the minimum wage hold more promise than peril for both communities and the low-wage workers living and working within them.

Table 1

PUMA Name	Estimated PUMA population	Minimum-wage population	Median income prior to wage increase	Added per capita income with no employment decline	Stable employment scenario: total income added with no employment decline	Moderate loss of employment scenario: total income change with 5% employment decline	Severe loss of employment scenario: total income change with 10% employment decline
Middlesex County (East)—Somerville & Everett Cities	127,399	7,362	$69,026	$2,546	$18,746,688	$11,112,109	$3,477,530
Hampden County (Central)—Springfield City	154,404	7,457	$35,742	$2,446	$18,239,062	$11,410,704	$4,582,346
Worcester County (Central)—Worcester City	184,146	9,550	$45,599	$1,901	$18,159,060	$9,778,683	$1,398,305
Essex County (East)—Salem, Beverly, Gloucester & Newburyport Cities	202,868	7,666	$73,405	$2,191	$16,797,640	$10,543,381	$4,289,122
Boston City—Back Bay, Beacon Hill, Charlestown, East Boston, Central & South End	156,596	6,276	$74,465	$2,639	$16,560,984	$9,692,095	$2,823,206
Essex County (Northwest)—Lawrence, Haverhill & Methuen Town Cities	193,006	8,832	$53,222	$1,795	$15,853,003	$7,977,337	$101,670
Middlesex County (East)—Malden & Medford Cities	117,954	6,118	$66,682	$2,558	$15,648,276	$9,197,177	$2,746,078
Suffolk County (North)—Revere, Chelsea & Winthrop Town Cities	112,398	5,328	$52,715	$2,887	$15,383,502	$10,077,747	$4,771,992
Worcester County (Northeast)—Leominster, Fitchburg & Gardner Cities	119,432	7,171	$57,206	$2,057	$14,753,416	$8,102,321	$1,451,225
Boston City—Dorchester & South Boston	129,319	5,552	$66,735	$2,594	$14,403,540	$9,240,888	$4,078,236
Bristol County (South)—New Bedford City & Fairhaven Town	112,299	5,350	$40,328	$2,415	$12,922,849	$7,841,697	$2,760,544
Boston City—Mattapan & Roxbury	136,141	5,639	$31,601	$2,196	$12,380,960	$8,022,917	$3,664,874
Berkshire County—Pittsfield City	127,003	5,746	$52,253	$2,135	$12,267,795	$7,498,776	$2,729,755
Barnstable County (West)—Inner Cape Cod Towns & Barnstable Town City	129,384	5,772	$69,288	$2,036	$11,752,656	$7,639,239	$3,525,821
Plymouth County (East)—Plymouth, Marshfield, Scituate, Duxbury & Kingston Towns	135,932	4,959	$89,826	$2,365	$11,730,016	$8,001,535	$4,273,055
Hampden County (West of Springfield City)—Westfield & Holyoke Cities	145,981	5,433	$54,071	$2,001	$10,873,484	$6,171,070	$1,468,656
Middlesex (Far Southwest), Norfolk (Northwest) & Worcester (Far East) Counties	123,167	3,962	$105,034	$2,734	$10,833,312	$6,357,992	$1,882,671
Attleboro City, North Attleborough, Swansea, Seekonk, Rehoboth & Plainville Towns	130,282	5,512	$79,514	$1,962	$10,816,298	$6,431,029	$2,045,758
Plymouth & Norfolk Counties—Brockton City, Stoughton & Avon Towns	128,889	5,522	$55,766	$1,909	$10,539,774	$6,151,415	$1,763,056
Middlesex County (Far Northeast)—Lowell City	110,269	4,769	$46,972	$2,131	$10,161,768	$5,731,580	$1,301,391
Worcester County (South)	156,551	5,153	$73,230	$1,899	$9,787,585	$5,703,321	$1,619,057
Hampden (West & East) & Hampshire (South) Counties—Northampton City	150,015	5,748	$64,839	$1,637	$9,407,545	$4,791,233	$174,920
Middlesex County—Waltham City, Lexington, Burlington, Bedford & Lincoln Towns	146,547	3,906	$98,644	$2,390	$9,333,714	$6,184,758	$3,035,803
Franklin & Hampshire (North) Counties	121,970	5,734	$56,279	$1,622	$9,298,400	$5,726,412	$2,154,422
Middlesex County (South)—Framingham Town, Marlborough City & Natick Town	147,521	5,195	$77,531	$1,780	$9,245,876	$4,954,132	$662,388
Bristol County (Central)—Fall River City & Somerset Town	106,118	4,715	$40,474	$1,897	$8,946,303	$4,799,406	$652,509
Plymouth County (Central)	117,341	4,770	$87,700	$1,874	$8,940,666	$4,866,428	$792,189
Bristol County—Taunton City, Mansfield, Norton, Raynam, Dighton & Berkley Towns	122,531	4,143	$74,951	$2,137	$8,852,334	$5,576,043	$2,299,750
Worcester County (West Central)	121,266	4,087	$74,823	$1,985	$8,111,602	$4,929,147	$1,746,692
Boston City—Hyde Park, Jamaica Plain, Roslindale & West Roxbury	138,863	4,189	$75,376	$1,892	$7,923,915	$4,361,444	$798,973
Bristol (Outside New Bedford City) & Plymouth (South) Counties	107,598	4,089	$73,973	$1,917	$7,837,752	$4,631,840	$1,425,927
Boston City—Allston, Brighton & Fenway	110,151	4,564	$47,487	$1,695	$7,734,364	$4,385,951	$1,037,538
Norfolk County (Northeast)—Quincy City & Milton Town	120,605	4,384	$72,236	$1,731	$7,589,943	$3,573,231	($443,481)
Worcester County (East Central)	124,187	2,617	$95,268	$2,838	$7,425,747	$4,939,100	$2,452,452
Billerica, Andover, Tewksbury & Wilmington Towns	131,745	3,865	$103,974	$1,875	7245297	4426423	1607547
Essex County (South)—Lynn City, Swampscott & Nahant Towns	111,422	4,726	$56,800	$1,522	7190917	2738476	-1713965
Norfolk County (Central)—Randolph, Norwood, Dedham, Canton & Holbrook Towns	120,684	3,950	$78,937	$1,809	$7,147,444	$3,776,186	$404,929
Plymouth & Bristol Counties (Outside Brockton City)	121,029	3,964	$81,787	$1,785	$7,077,282	$4,135,100	$1,192,918
Hampden County (East of Springfield City)—Chicopee City	128,841	3,607	$65,062	$1,921	$6,929,217	$4,053,816	$1,178,415
Middlesex County—Watertown Town City, Arlington, Belmont & Winchester Towns	129,617	2,705	$103,803	$2,476	$6,698,472	$4,375,574	$2,052,675
Woburn, Melrose Cities, Saugus, Wakefield & Stoneham Towns	143,209	3,323	$85,012	$1,980	$6,579,033	$4,107,606	$1,636,180
Middlesex County (Outside Lowell City)	116,311	4,020	$100,328	$1,598	$6,423,449	$2,934,217	($555,016)
Barnstable (East), Dukes & Nantucket Counties—Outer Cape Cod Towns	113,112	2,671	$62,284	$2,233	$5,963,091	$3,929,831	$1,896,571
Middlesex County (East)—Cambridge City	110,781	3,911	$83,122	$1,440	$5,633,460	$2,956,302	$279,144
Middlesex (West Central) & Worcester (East) Counties	127,000	3,209	$120,874	$1,728	$5,545,772	$3,502,133	$1,458,494
Peabody City, Danvers, Reading, North Reading & Lynnfield Towns	135,097	3,452	$83,597	$1,526	$5,269,399	$3,119,117	$968,835
Weymouth Town, Braintree Town Cities, Hingham, Hull & Cohasset Towns	135,127	3,481	$81,894	$1,477	$5,142,128	$2,493,802	($154,524)
Essex County (Central)—Amesbury Town City	114,475	2,869	$100,033	$1,712	$4,912,048	$2,810,351	$708,653
Norfolk (Northeast) & Middlesex (Southeast) Counties (West of Boston City)	112,858	2,463	$156,421	$1,765	$4,346,886	$2,760,947	$1,175,007
Worcester & Middlesex Counties (Outside Leominster, Fitchburg & Gardner Cities)	112,143	2,755	$80,414	$1,394	$3,839,886	$1,729,247	($381,393)
Middlesex (Southeast) & Norfolk (Northeast) Counties—Newton City & Brookline Town	147,989	2,617	$114,039	$1,360	$3,558,004	$1,616,548	($324,907)
Norfolk County (Southwest)—Greater Franklin Town City	132,312	2,396	$103,809	$1,303	$3,121,360	$1,621,062	$120,764

Source: U.S. Census. Bureau 2012–2016 American Community Survey (ACS) 5-year Public Use Microdata Samples (PUMS). Authors' own calculation

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Acknowledgements

The authors would like to thank Kathy Bradbury, Prabal Chakrabarti, Alexander Cronin, Keri-Nicole Dillman, Amy Higgins, Mary Beth Mattingly, Anna Steiger, Jeffrey Thompson David West and Bo Zhao, as well the participants of the Regional and Community Development Workshop presentation.

Endnotes

[1] For a recent discussion, see Rothwell, J. (2015). What colleges do for local economies: A direct measure based on consumption. Brookings Institute Metropolitan Policy Program, 17. For a more formative discussion see Cowell, D. K., & Green, G. P. (1994). Community attachment and spending location: The importance of place in household consumption. *Social Science Quarterly*, *75*(3), 637-655.

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[24] This estimate is not adjusted for inflation, given the opacity of future inflation values. Assuming positive inflation and given the fixed ($1/yr) wage increase, the amount would be slightly less each year in the future.

[25] Due to the adjustment's application prior to weighting, the reduction is not a simple 5% reduction in aggregate income. Workers with higher weights in the data set have a disproportionate effect on aggregate income, and if those workers are concentrated in the higher range of low-wage workers (e.g., $10.50/hour in year one), then the overall effect of a 5% employment decline may be greater than just a simple 5% decline in the post-weighted aggregate income data (which assumes even distribution of income reduction across the entire range of low-wage earners in the sample).

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