



# How Philadelphia's Minimum Wage Compares With Other U.S. Cities

And who's earning it in Philadelphia

## Overview

The notion of raising Pennsylvania's minimum wage—and thereby Philadelphia's—has been a topic of considerable debate over the past year, both in the state Legislature and elsewhere. As of Jan. 1, 2020, Philadelphia's minimum wage was \$7.25 an hour, where it has remained since 2009. The rate—which is also the federal minimum—is set by the state, and the city has no authority to change it.

Responding to a nonbinding ballot question in May 2019, Philadelphia voters voiced overwhelming support for a \$15-an-hour minimum. And the city government has raised the minimum for its own workers, as well as for city contractors and subcontractors, to \$13.25, with plans to gradually increase it to \$15 by mid-2022.

To help inform the conversation, The Pew Charitable Trusts set out to determine how Philadelphia's minimum wage compares with the rate in other major cities and to take a detailed look at how many Philadelphians have been getting paid that amount—and who they are.

The research found that a majority of major U.S. cities have higher minimums than Philadelphia's, some substantially higher, although 14 of the 31 cities studied for this brief also are at \$7.25. When the overall level of wages in each of the metropolitan areas that include those cities is taken into account, Philadelphia has what is effectively the lowest minimum of any of those cities. This is the result of Philadelphia's low minimum, the relatively high wages paid throughout the region, and a higher cost of living than in many of the other cities with the same \$7.25 hourly rate.

According to data from the U.S. Census Bureau's American Community Survey (ACS), an estimated 9% of all Philadelphians age 16 or older working in Pennsylvania and receiving wages or salaries from private employers or state or local government—about 44,000 individuals—were earning an hourly average of \$7.25 or less in the five-year period ending in 2018, the most recent years with detailed data available. Of that number, approximately 21,000, or 4% of Philadelphia workers, worked full time and year-round at that rate. These estimates likely include some workers who are not covered by the minimum wage or whose employers did not comply with the law.

Relative to the city's overall workforce, residents earning \$7.25 or less were disproportionately nonwhite or Hispanic, young, and lacking a college degree. Sixty-three percent of all Philadelphians earning the minimum wage or less worked in four sectors: accommodation and food services, retail trade, health care and social assistance, and educational services.

As the inflation-adjusted value of the minimum wage has declined over time, the share of those earning \$7.25 or less has fallen from roughly 11% of Philadelphians working in Pennsylvania in 2010 to about 8% in 2018. An additional 7% made \$7.26 to \$9.50 per hour.

With many low-wage workers and the sectors that employ them being hit hard by the COVID-19 pandemic and its economic fallout, it remains to be seen what shape the minimum wage conversation will take once it resumes in earnest.

## **Philadelphia's minimum wage compared with those of other cities**

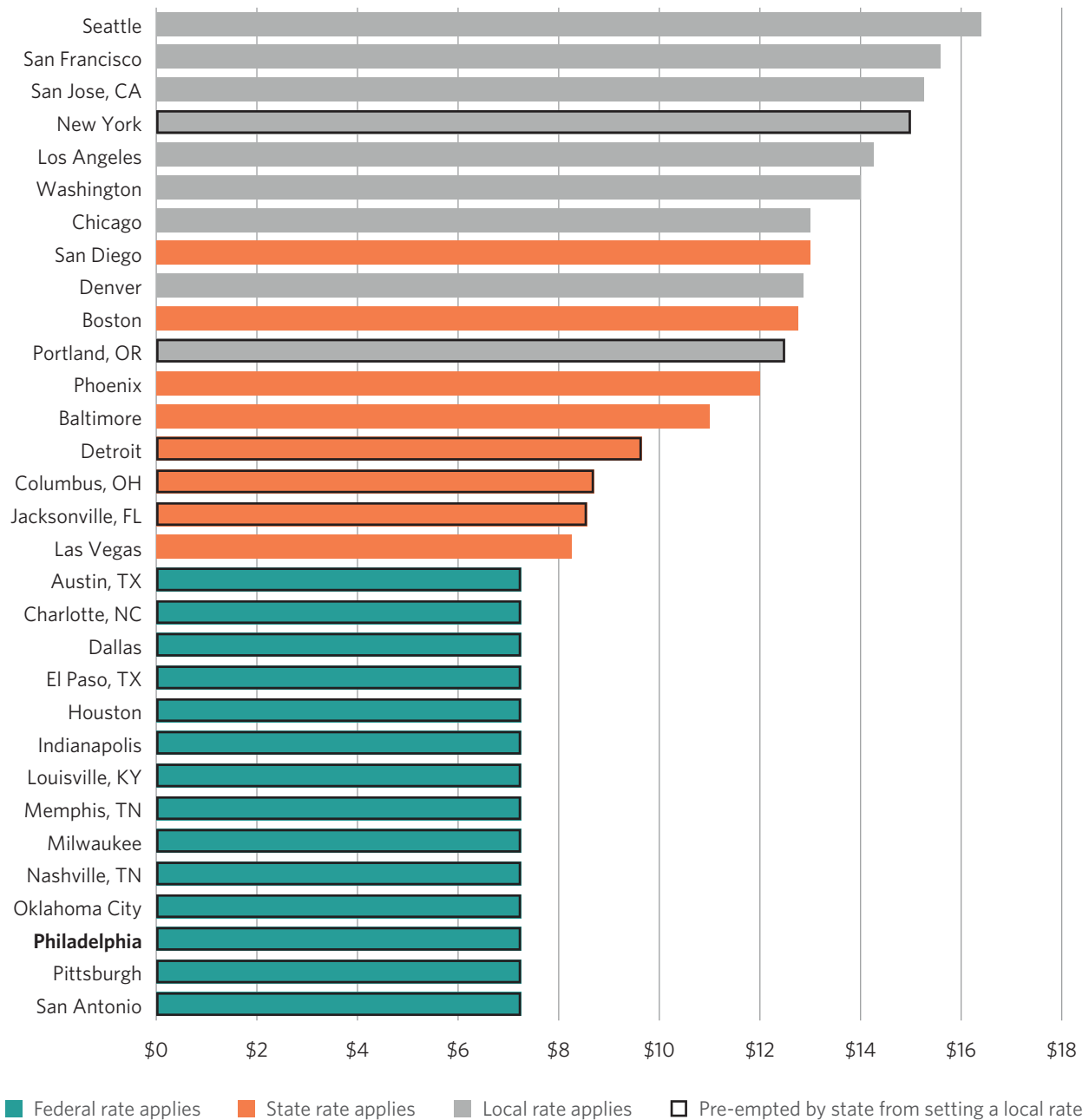
The minimum wage in Philadelphia remained at the federal figure of \$7.25 per hour as of Jan. 1, 2020.<sup>1</sup> States have the authority to raise their minimums above that level, and 29 of them, plus the District of Columbia, have done so.<sup>2</sup> Many cities, particularly those where overall wages are relatively high, have raised their minimums above their state baselines. But in 28 states, including Pennsylvania, state law prevents local jurisdictions from doing so, a policy known as pre-emption.<sup>3</sup>

Figure 1 shows the minimum wage in 31 cities, including nearly all of the nation's largest, regardless of whether they are subject to state pre-emption or whether the minimum applies locally or statewide.<sup>4</sup> The highest minimums are \$16.39 in Seattle; \$15.59 in San Francisco; \$15.25 in San Jose, California; and \$15 in New York. The rate is \$14 in Washington, D.C.; \$12.75 in Boston; and \$11 in Baltimore. Nearly all of the highest minimums are local rates; Washington state has the highest state minimum, at \$13.50.

Figure 1

## The Local Minimum Wage in Major American Cities

Philadelphia is tied with several other cities for the lowest rate



Notes: The minimum in Portland, Oregon, and New York is set by the state but applies locally. The comparison group includes 29 of the 30 most populous U.S. cities plus Milwaukee, which is the 31st, and Pittsburgh, which is the 66th. This does not include Fort Worth, Texas, the nation's 13th-largest city, because it is not the biggest city in its metropolitan area (Dallas-Fort Worth-Arlington).

Sources: U.S. Department of Labor; UC Berkeley Center for Labor Research and Education; state and local labor offices; National Employment Law Project; Pew Research Center; Economic Policy Institute

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Notably, the poorest cities within this comparison group—those with poverty rates higher than 20%, which includes Philadelphia—are all in states with minimum wage pre-emption, and almost all have a \$7.25 minimum wage. The exception is Detroit; Michigan’s statewide minimum is \$9.65.

To compare minimum wages in places with different levels, economists commonly use the Kaitz index, a locally adjusted minimum wage metric calculated by dividing the minimum by the local median. In this case, each city’s legal minimum was divided by the metropolitan area’s median wage.<sup>5</sup> The lower the city’s minimum compared with regional wages, the lower the index.<sup>6</sup> At 0.35, Philadelphia’s Kaitz index is the lowest among all large cities because of both the city’s low minimum wage, \$7.25, and its relatively high regional hourly rate, \$20.47. (See Figure 2.)

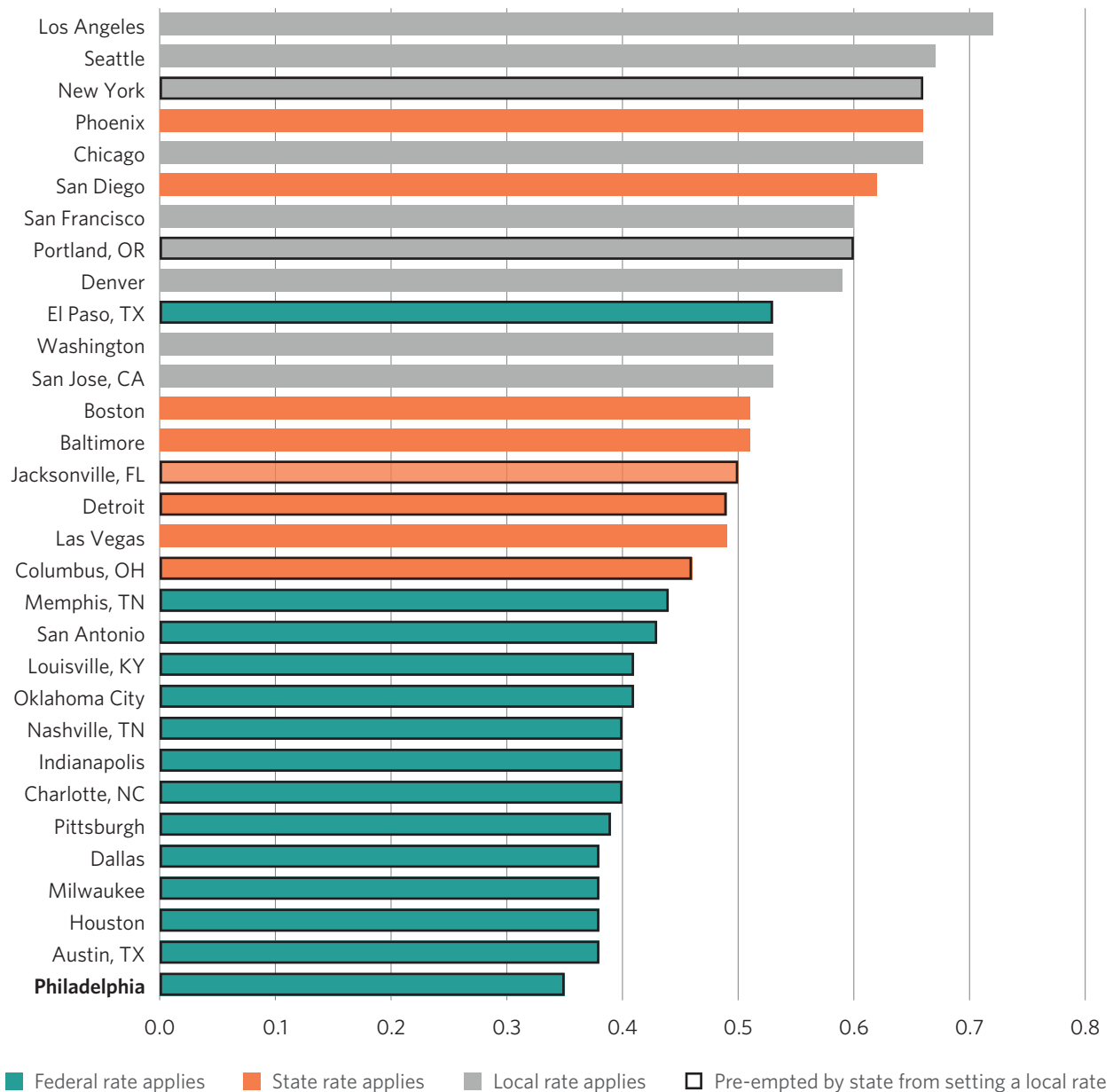
Of all large cities with a \$7.25 minimum, Philadelphia has the highest regional median hourly wage. Other cities with comparable regional rates have higher minimums; in San Diego, for instance, where the regional median is \$20.86, the city minimum is \$13.



Figure 2

## The Ratio of the Minimum to the Regional Median Hourly Wage in Major American Cities

Adjusting for local wages, Philadelphia has the lowest minimum



Notes: The minimum in Portland, Oregon, and New York is set by the state but applies locally. The comparison group includes 29 of the 30 most populous U.S. cities plus Milwaukee, which is the 31st, and Pittsburgh, which is the 66th. This does not include Fort Worth, Texas, the nation's 13th-largest city, because it is not the biggest city in its metropolitan area (Dallas-Fort Worth-Arlington).

Sources: U.S. Department of Labor; UC Berkeley Center for Labor Research and Education; state and local labor offices; National Employment Law Project; Pew Research Center; U.S. Bureau of Labor Statistics' Occupational Employment Statistics; Economic Policy Institute

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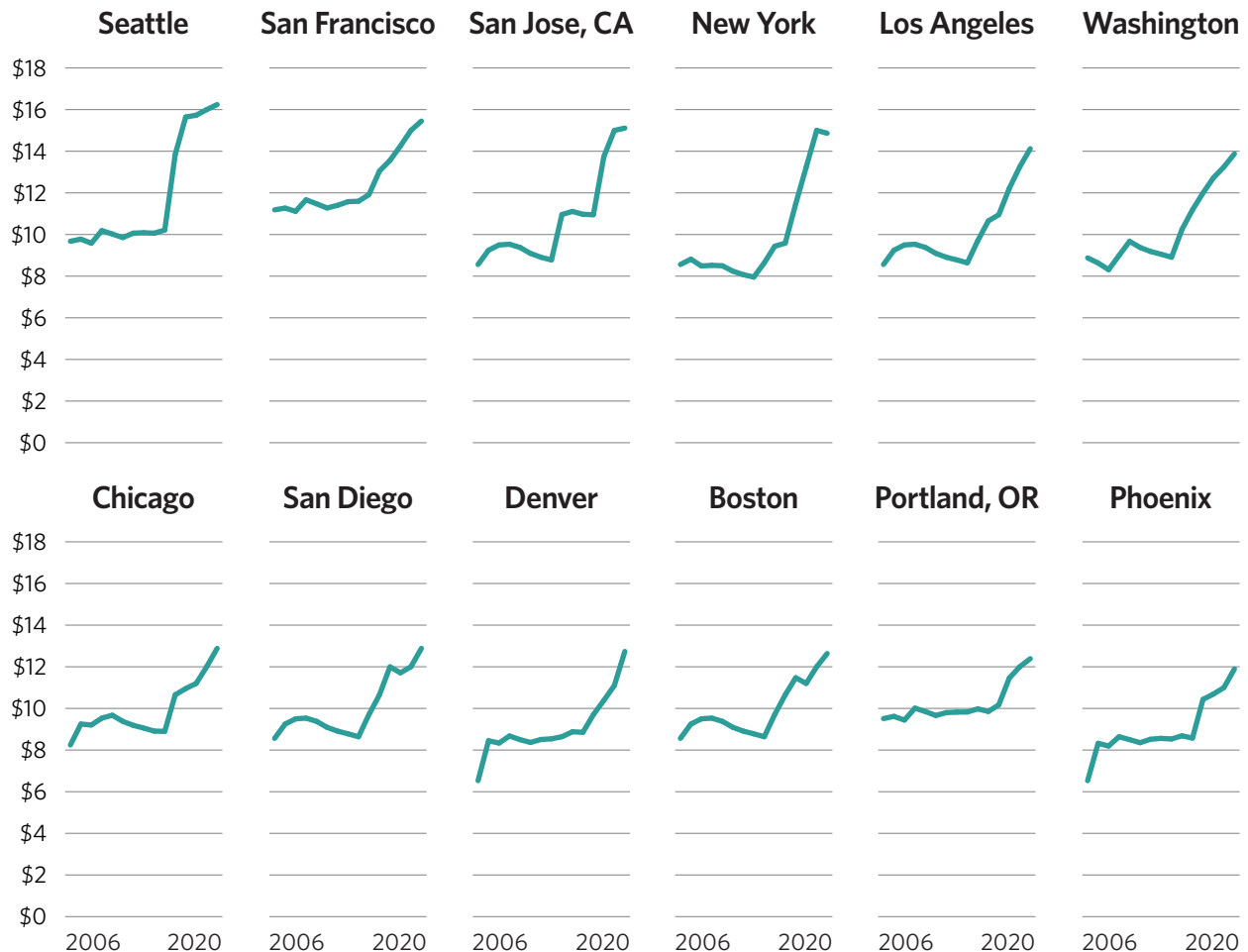
The minimum wage in Philadelphia also buys less than it does in other large cities around the country. Dividing the minimum by a measure of regional consumer prices, the U.S. Bureau of Economic Analysis' regional price parity index, Philadelphia has the lowest minimum wage among large cities when adjusted for the local cost of living.<sup>7</sup>

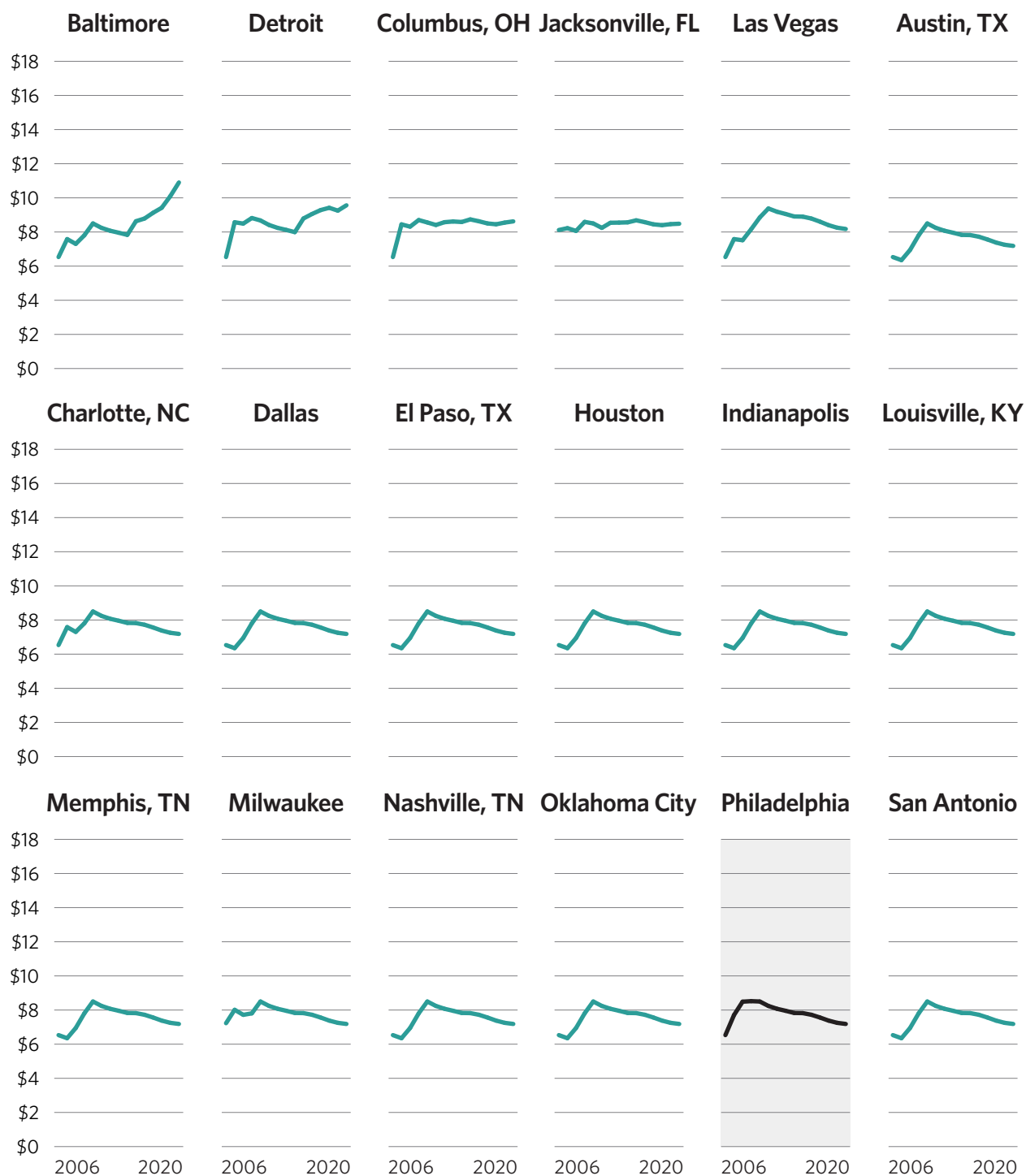
Inflation has caused the real value of Philadelphia's minimum wage to fall by 16% since it was last raised in 2009; then, it was worth \$8.64 in 2019 dollars. By contrast, many of the largest cities in the country have seen the real value of their minimum wages, some of which are indexed to inflation, grow during the same period, when many cities and states enacted legislation granting an increase. (See Figure 3.)

Figure 3

## Change in the Minimum Wage in Philadelphia and Major American Cities, 2006-20

The value of the minimum in 2019 dollars has declined in Philadelphia since 2009 but has risen in many other cities





Notes: The cities are plotted in order of their minimum wage in 2020, from left to right and from top to bottom, and alphabetically in the event of a tie. The comparison group includes 29 of the 30 most populous U.S. cities plus Milwaukee, which is the 31st. This does not include Fort Worth, Texas, the nation's 13th-largest city, because it is not the biggest city in its metropolitan area (Dallas-Fort Worth-Arlington). Pittsburgh, which is the 66th largest, shares the same values as Philadelphia and is not plotted.

Sources: U.S. Department of Labor; UC Berkeley Center for Labor Research and Education; state and local labor offices; U.S. Bureau of Labor Statistics; Economic Policy Institute

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## Who earns the minimum wage in Philadelphia?

Roughly 9% of Philadelphia residents, or approximately 44,000 people who worked within the city limits or anywhere else in Pennsylvania—where the minimum wage would be the same—earned an average hourly rate of \$7.25 or less during the five-year period ending in 2018, the most recent years with detailed data available.<sup>8</sup> (See Figure 4.) Methods for estimating earnings are described in Appendix A.

Less than half of those earning the minimum wage or less, about 4% of Philadelphia residents, worked year-round at full-time jobs.<sup>9</sup> Workers may have received less than \$7.25 an hour for a variety of reasons, including misreporting (as these values were self-reported), imperfect compliance with the law, exemption from the minimum wage, and imprecise estimates.<sup>10</sup> An additional 8% of workers made \$7.26 to \$9.50 per hour—a proposed minimum wage debated by the Pennsylvania Legislature in late 2019—for a total of 17% earning \$9.50 or less.

The cumulative percentage of residents earning various rates or less is shown in Figure 4. Looking instead at people working in Philadelphia, regardless of where they lived, roughly 8% made the minimum wage or less as of 2018.



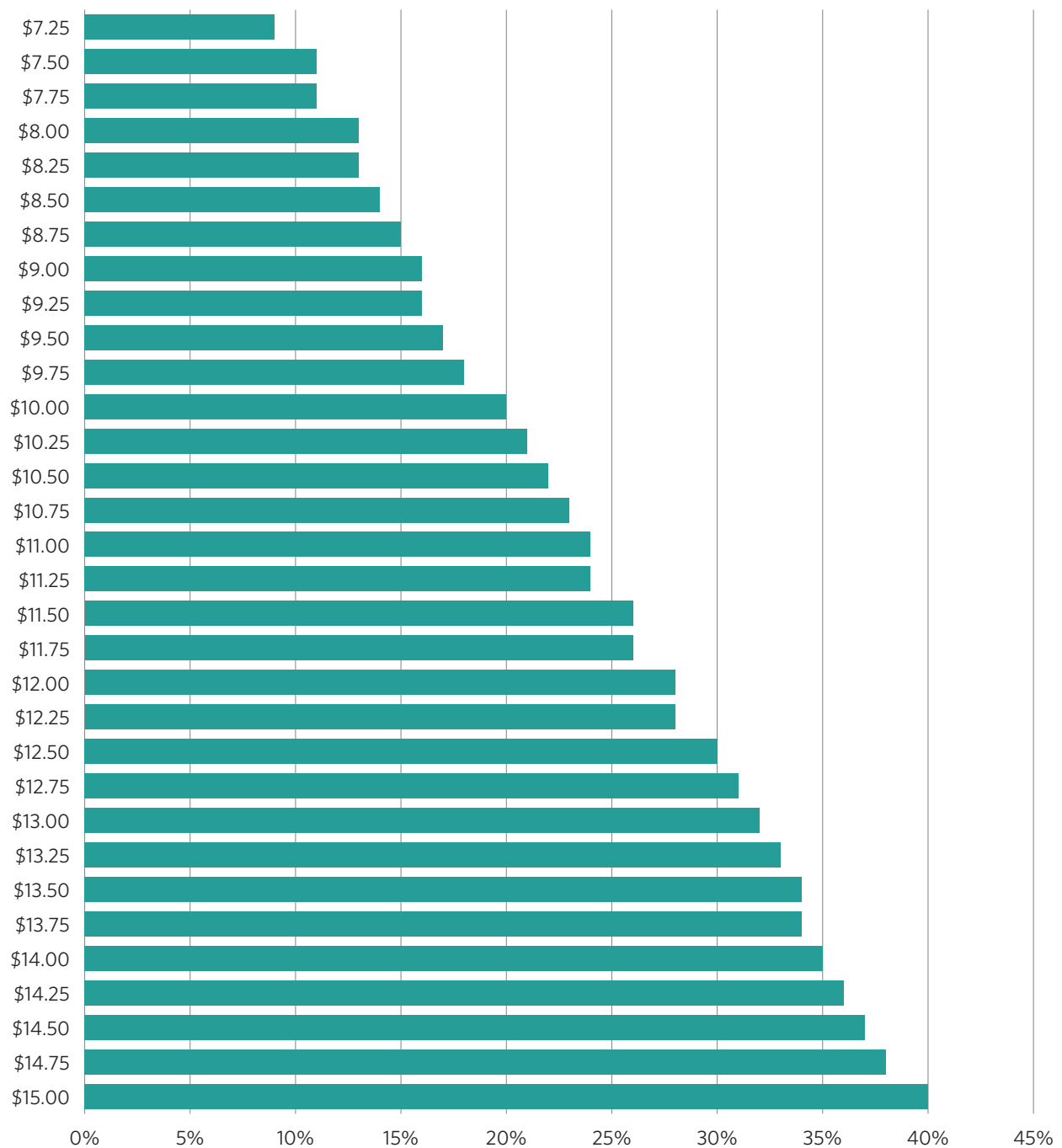
Lexey Swall for The Pew Charitable Trusts



Figure 4

## The Share of Employed Philadelphia Residents Earning Each Hourly Rate or Less

Roughly 9% of residents earned the \$7.25 minimum or less



Source: U.S. Census Bureau, Public Use Microdata Sample, American Community Survey, five-year estimates, 2014-18, accessed using IPUMS-USA, University of Minnesota, <http://www.ipums.org>

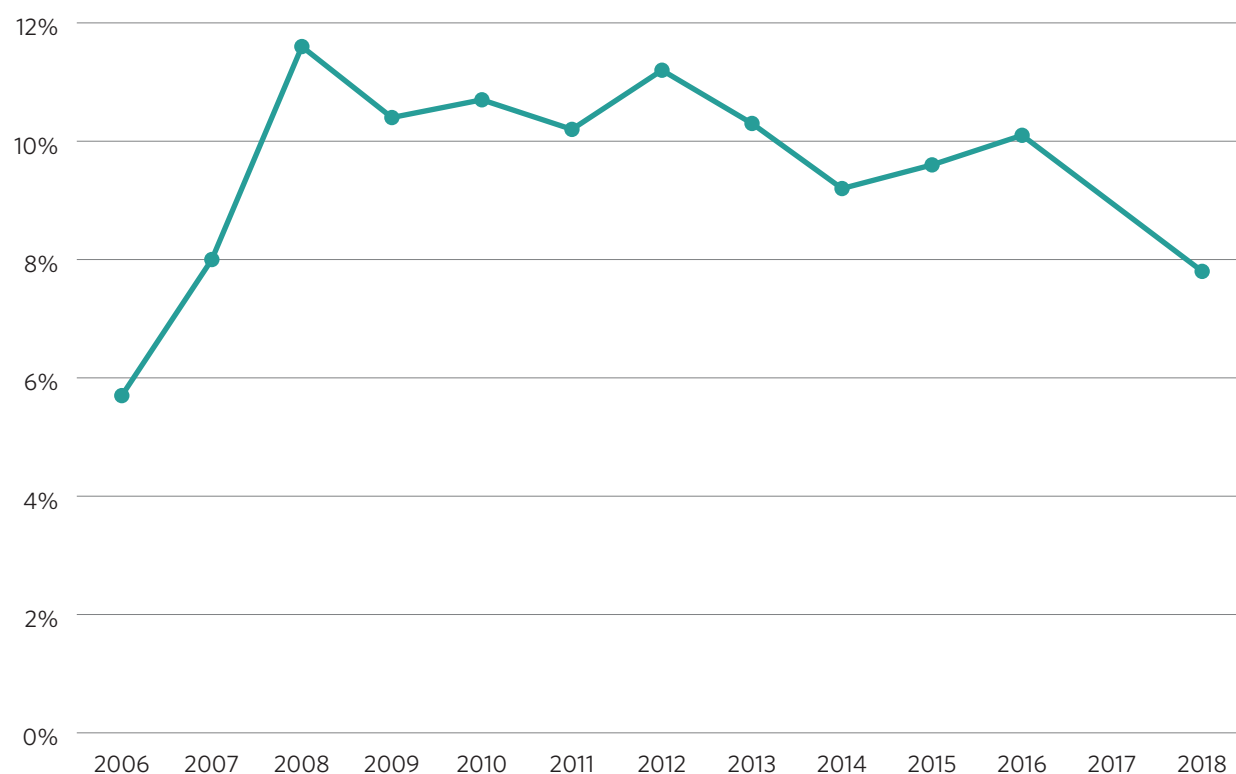
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The percentage of employed Philadelphians earning the minimum wage or less has declined slightly in recent years, falling from roughly 11% in 2010 to about 8% in 2018. (See Figure 5.)

Figure 5

## The Percentage of Employed Philadelphia Residents Earning the Minimum Wage or Less, 2006-18

The share has declined gradually since the minimum was last raised in 2009



Notes: 2017 is not plotted because of an error in U.S. Census Bureau data for Philadelphia for that year. Percentages are calculated based on the minimum wage in effect on Jan. 1 of the corresponding year.

Source: U.S. Census Bureau, Public Use Microdata Sample, American Community Survey, one-year estimates, 2006-18, accessed using IPUMS-USA, University of Minnesota, <http://www.ipums.org>

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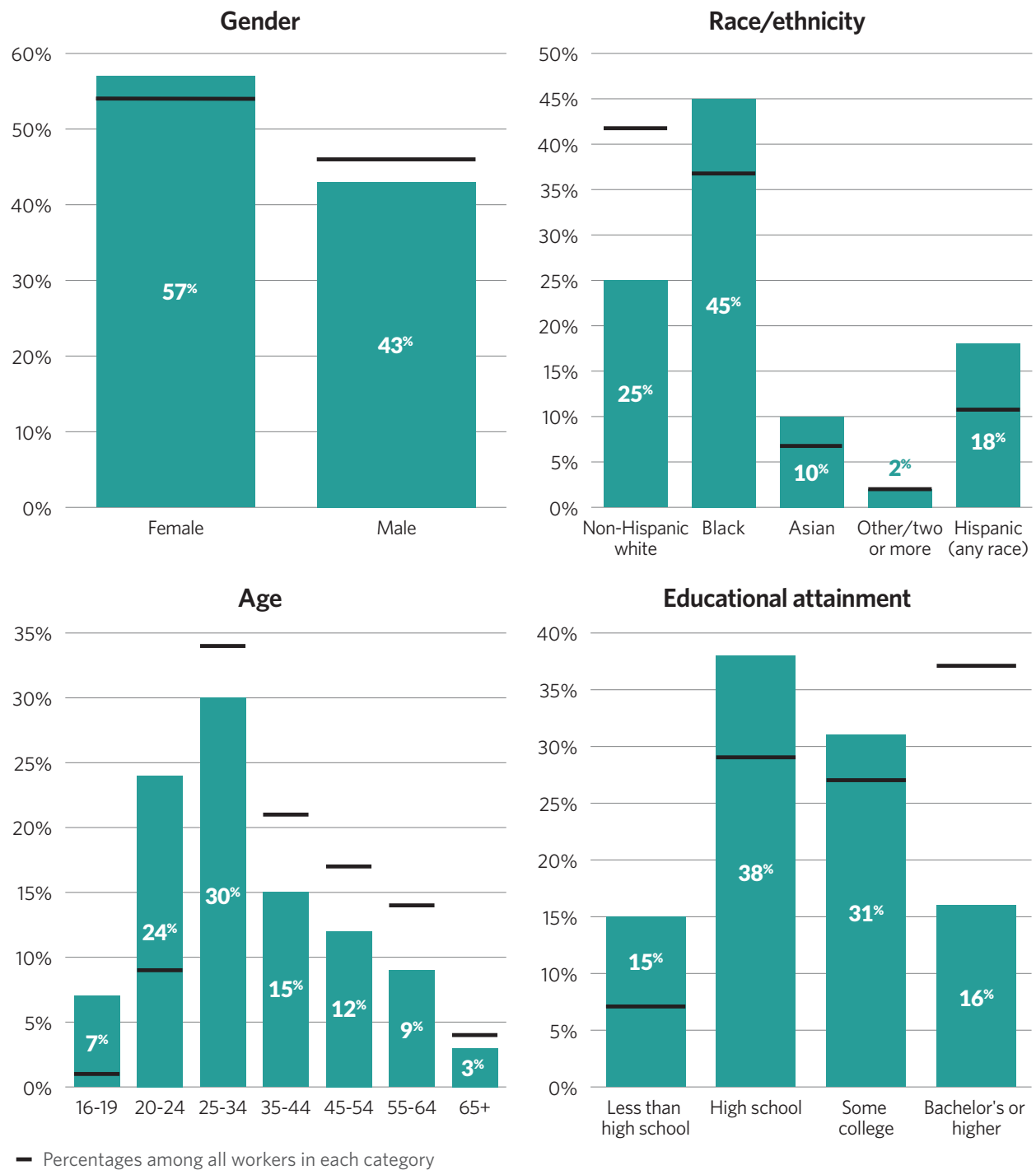
Relative to all Philadelphians working anywhere in the state, workers earning the minimum wage or less were disproportionately likely to be nonwhite or Hispanic, young, and lacking a college degree. Fifty-seven percent of them were female; women represent 54% of the overall wage-earning population. (See Figure 6.)

Forty-five percent were black, 10% were Asian, and 18% were Hispanic (of any race)—all higher than their proportions among all earners. Workers making \$7.25 or less skewed young but were distributed across the age spectrum. Only 7% were teenagers, but 24% were 20 to 24 years old, and an additional 30% were ages 25-34. Nearly 58% were 25 to 54 years old, a range often thought of as prime working age.

The majority of workers earning the minimum wage had no college education, though 31% had attended college but had not graduated, and 16% had a bachelor's degree or higher. Of those ages 16-24, some 54% were currently in school.

Figure 6

## The Demographics of Philadelphia Residents Earning the Minimum Wage or Less Compared With the City's Total Working Population



Source: U.S. Census Bureau, Public Use Microdata Sample, American Community Survey, five-year estimates, 2014-18, accessed using IPUMS-USA, University of Minnesota, <http://www.ipums.org>

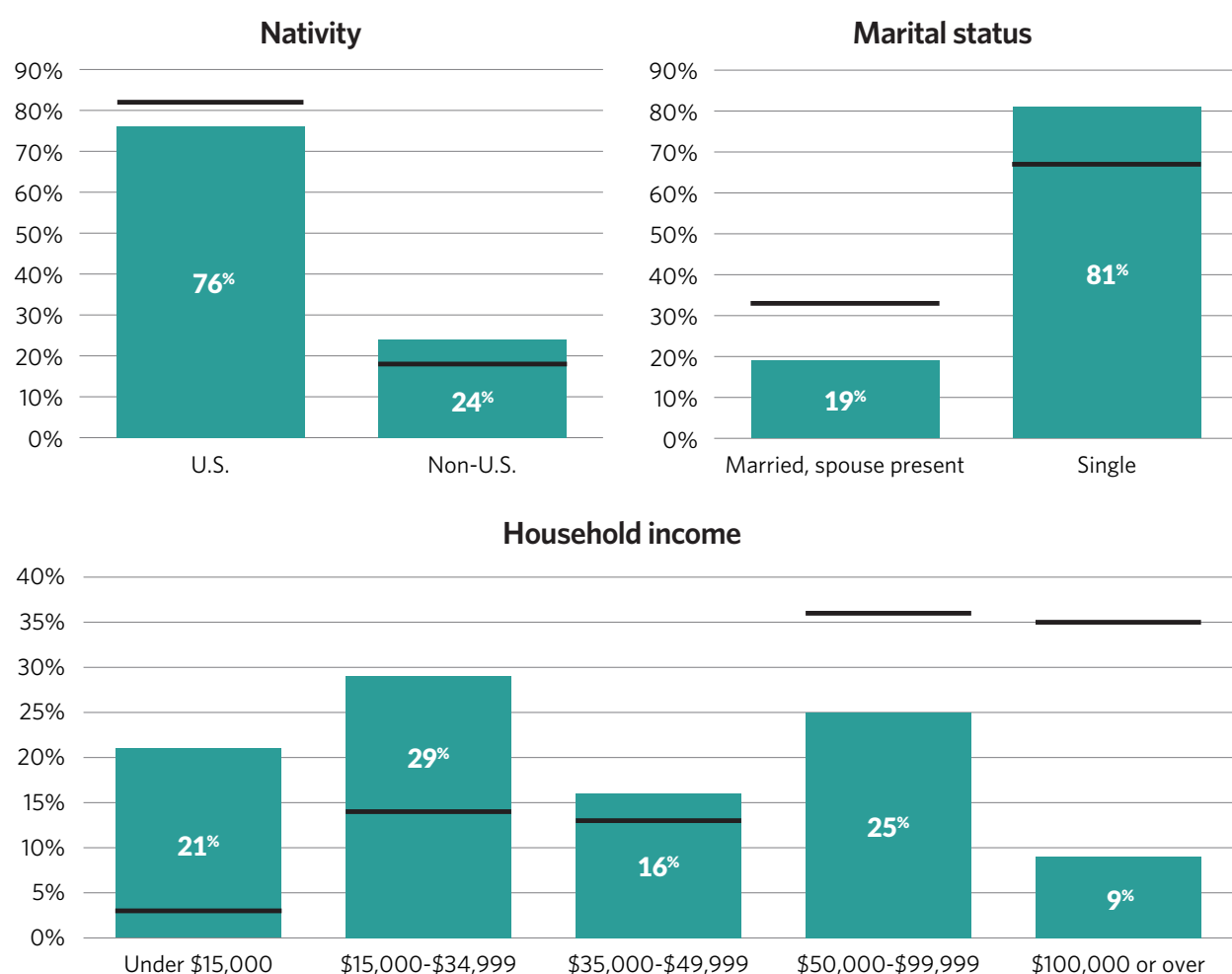
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Most Philadelphia residents earning the minimum wage or less were born in the U.S. But relative to the city’s overall working population, a disproportionate number of them were immigrants (24%) and were either single or married but not living with their spouses (81%). (See Figure 7.)

Philadelphia residents earning the minimum wage or less were also concentrated in households with low incomes; 50% of workers earning \$7.25 or less were in households with incomes under \$35,000, compared with 17% of all workers.

Figure 7

## Additional Characteristics of Philadelphia Residents Earning the Minimum Wage or Less Compared With the City’s Total Working Population



— Percentages among all workers in each category

Note: A marital status of “single” includes workers who were married but not living with their spouses. Household incomes are in 2019 dollars.

Source: U.S. Census Bureau, Public Use Microdata Sample, American Community Survey, five-year estimates, 2014-18, accessed using IPUMS-USA, University of Minnesota, <http://www.ipums.org>

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Four sectors of Philadelphia's economy accounted for nearly 63% of city residents earning the minimum wage or less: accommodation and food services, health care and social assistance, retail trade, and educational services. In two of those sectors, the percentage of workers making the minimum was disproportionate to the sector's overall share of local employment: Accommodation and food services employed 20% of all residents making \$7.25 or less but only 8% of earners overall, while retail trade employed 16% of workers making the minimum or less and 10% of workers overall. (See Figure 8.)

Figure 8

## The Percentage of Philadelphians Earning the Minimum Wage or Less and of Workers Overall in the Sectors of the Local Economy

Workers earning \$7.25 or less were concentrated in four sectors



— Percentages among all workers in each category

Source: U.S. Census Bureau, Public Use Microdata Sample, American Community Survey, five-year estimates, 2014-18, accessed using IPUMS-USA, University of Minnesota, <http://www.ipums.org>

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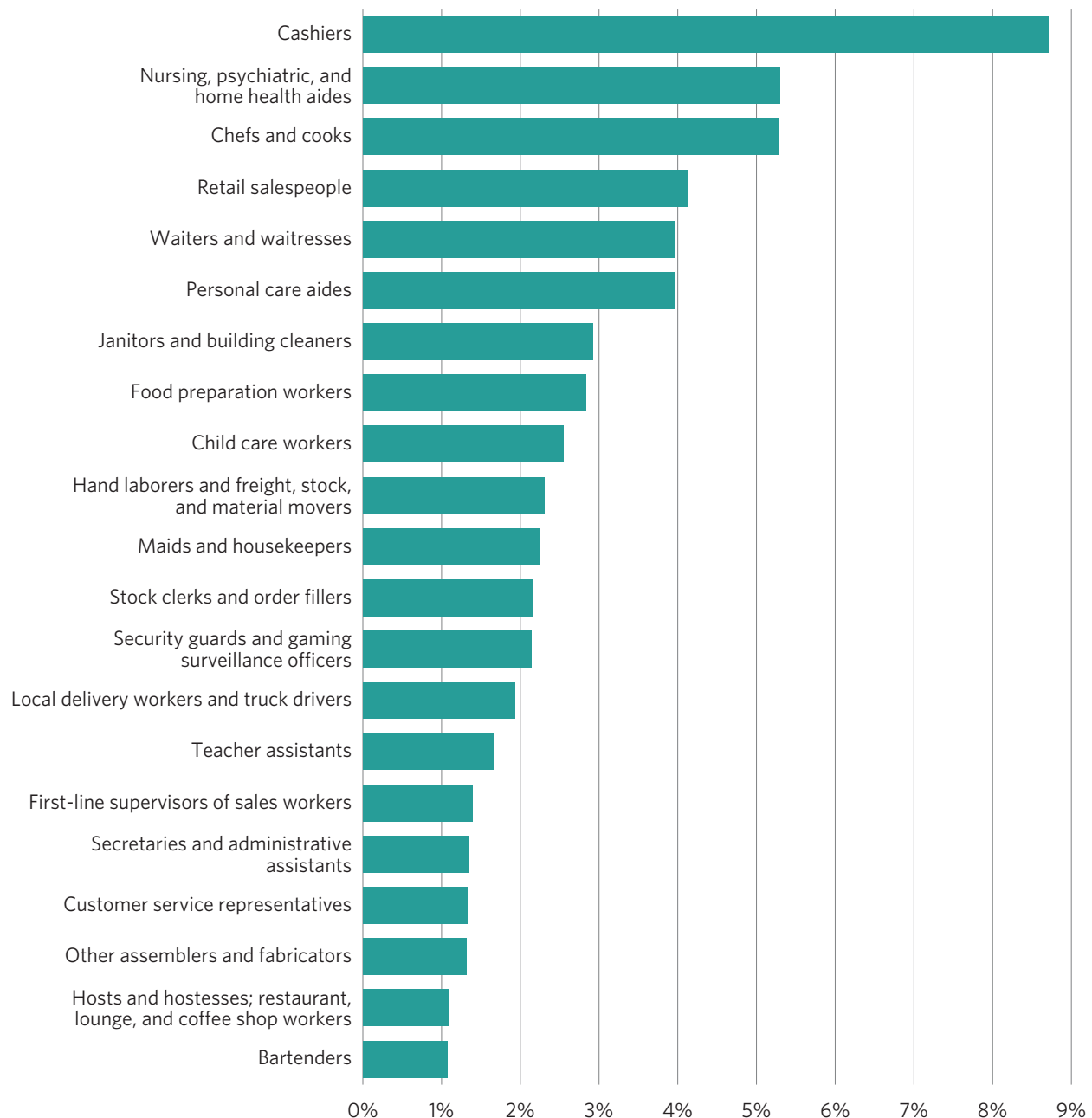
The most common occupations among workers making the minimum wage or less were cashiers (nearly 9%); nursing, psychiatric, and home health aides (more than 5%); chefs and cooks (more than 5%); retail salespeople (more than 4%); waiters and waitresses (nearly 4%); and personal care aides (nearly 4%). (See Figure 9.)

The demographics of the population earning \$7.25 or less shifted slowly from 2006 to 2018, reflecting changes in the makeup of Philadelphia's overall population during that period. Hispanics, individuals ages 25-34, and those with a bachelor's degree or more education all increased as a share of those earning the minimum wage or less and as a percentage of all workers.

Figure 9

## Occupations of Philadelphia Residents Earning the Minimum Wage or Less

Residents were concentrated in a small number of low-paying occupations



Note: Occupations are based on the U.S. census for 2012-16 because of a lack of data availability for 2017 and 2018.

Occupations shown are those with 1% or more of those earning \$7.25 or less.

Source: U.S. Census Bureau, Public Use Microdata Sample, American Community Survey, five-year estimates, 2012-16, accessed using IPUMS-USA, University of Minnesota, <http://www.ipums.org>

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Workers earning the minimum wage or less were not a homogenous group, so a statistical technique known as cluster analysis was used to identify distinct groupings of Philadelphia workers making the minimum or less based on their demographics and household incomes.<sup>11</sup>

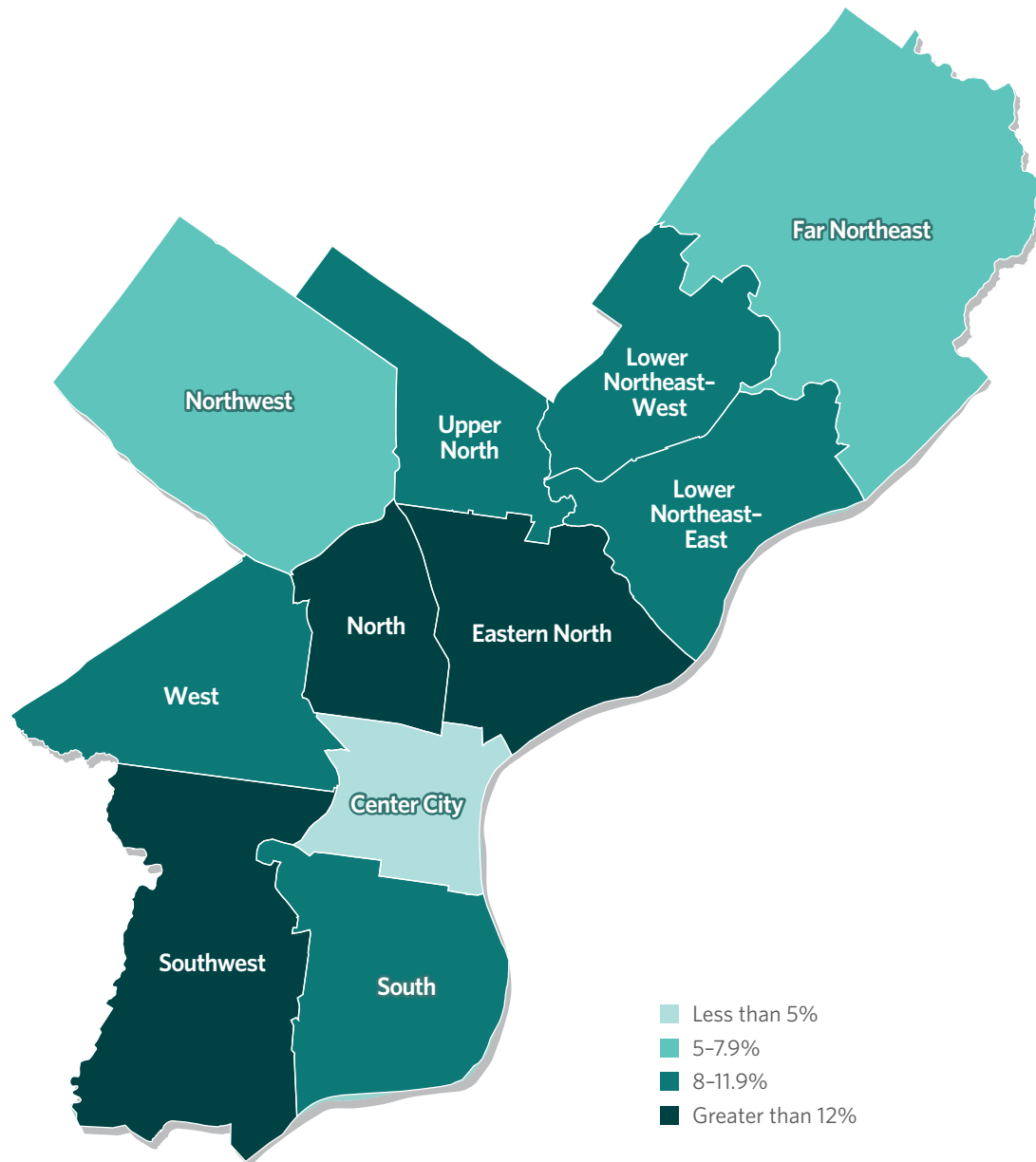
The analysis found that workers could be divided into six major clusters. (Detailed cluster characteristics can be found in Appendix B.) The largest cluster included primarily male, African American workers with limited education and an average age of 29, but others were quite different. For instance, two clusters were made up primarily of immigrants, one Asian and one Hispanic, with a high school education or less schooling. Another cluster captured African American women with an average age of 55 and a high school education, who may face limited opportunities for transitioning into higher-paying jobs. And the final two clusters collectively included young workers—mostly African American or white—with some college education, who may be working low-paying jobs temporarily before continuing to advance their educations.

Geographically, Philadelphia residents earning \$7.25 or less were most concentrated in North, Eastern North, and Southwest Philadelphia, areas in which 12% or more of workers were earning the minimum wage or less. (See Figure 10.) These were also areas with relatively higher densities of residents living in poverty.<sup>12</sup>

Figure 10

## The Percentage of Philadelphia Residents Who Earn the Minimum Wage or Less by Census Public Use Microdata Area

Earners were most concentrated in northern and southwestern Philadelphia



Notes: The percentages are calculated and mapped based on U.S. Census Bureau Public Use Microdata Areas (PUMA), which are the smallest geographic units for which this data is available. Some PUMA labels are modified slightly from Census Bureau designations for clarity. (PUMA descriptions can be found in Appendix C.)

Source: U.S. Census Bureau, Public Use Microdata Sample, American Community Survey, five-year estimates, 2014-18, accessed using IPUMS-USA, University of Minnesota, <http://www.ipums.org>

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## Conclusion

Over time, inflation has eroded the real value of the federal minimum wage, which is also Pennsylvania's minimum, and that has effectively lowered the buying power of the minimum in Philadelphia.

In a region with relatively high wages overall and a comparatively high cost of living, this trend has left Philadelphia with what is in effect the lowest wage floor of any large American city. By 2018, the percentage of Philadelphians earning the minimum or less had dropped to its lowest level since 2006.

Economic conditions and policy decisions regarding the minimum wage will determine the trajectory of those trends in the post-COVID-19 era.

## About this brief

This brief was researched and written by Seth Budick, an officer with Pew's Philadelphia research and policy initiative. It was edited by Larry Eichel, a senior adviser to the initiative, along with Erika Compart and Bernard Ohanian, and designed by Cara Bahniuk. Garrett Hincken, an officer with the initiative, also contributed to the research.

The brief benefited from the comments of three independent reviewers: Michael Reich, professor emeritus, University of California, Berkeley; Martha Ross, fellow, Brookings Institution; and Ernie Tedeschi, macro research analyst, Evercore ISI. This report does not necessarily reflect the opinions of any of these individuals or their institutions.

## Appendix A

### Methodology for earnings estimation

Hourly earnings were estimated as follows. The population of civilian residents of Philadelphia age 16 or older who worked in Pennsylvania and had income was filtered to include those who reported working for more than 13 weeks (including the previous one) and more than 10 hours per week during the previous year. The intention of this filtering step was to capture workers who were actively attached to the labor market (roughly 85% of workers). Workers who reported working 99 or more hours per week (roughly 0.1%) were excluded, as their average earnings could not be calculated. To exclude those not covered by minimum wage laws, workers were further restricted to those paid a wage or salary by a private or nonprofit employer, or by state or local government (94% of filtered workers). The self-employed (3%) and federal workers (3%) were excluded, as were unpaid family workers (less than 1%).

Hourly earnings were calculated by dividing self-reported values for annual wage and salary income, which had been adjusted to the amount that it would have been if it had been earned entirely during the calendar year, by the product of the usual hours worked per week and the number of weeks worked during the previous year, where the number of weeks worked was estimated as the midpoint of the interval reported in the U.S. Census Bureau's American Community Survey (ACS). Outliers (less than 0.1%) earning less than \$0.50 an hour in 1989 dollars were dropped from the analysis.

These methods are based on those described in I. Perry, S. Thomason, and A. Bernhardt, "Data and Methods for Estimating the Impact of Proposed Local Minimum Wage Laws" (2016), <https://irle.berkeley.edu/files/2016/Data-and-Methods-for-Estimating-the-Impact-of-Proposed-Local-Minimum-Wage-Laws.pdf>, and used elsewhere, though the use of self-reported survey data along with the indirect method of estimating earnings creates the possibility for misreporting and necessarily results in some imprecision in these estimates.

An alternative data source for estimating the distribution of Philadelphia residents' earnings is the Current Population Survey (CPS), sponsored jointly by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics. The CPS contains a much smaller sample size, making the ACS more suitable for characterizing the population earning the minimum wage or less. The CPS also lacks data on residents' place of work, making it impossible to determine what fraction of earners work in Pennsylvania rather than in adjacent states where the minimum wage is higher than \$7.25. The CPS does, however, allow respondents to directly report their hourly rate, potentially making those values more accurate. Based on CPS data for 2014-18, roughly 4% of Philadelphia resident civilian workers age 15 or older and paid a wage or salary by a private or nonprofit employer, or by state or local government, earned \$7.25 or less, and 16% made \$9.50 or less, according to IPUMS-CPS, University of Minnesota, <http://www.ipums.org>. Due to data limitations, this population was not filtered to exclude workers based on the number of hours or weeks worked.

## Appendix B

### Characteristics of the clusters of Philadelphia residents earning \$7.25 or less

Cluster	Percentage of earners	Age	Household income	Sex	Race	Educational attainment	Marital status	Nativity
1	24%	29	\$31,766	Male	Black	High school	Single	U.S.
2	19%	25	\$50,311	Female	Black	Some college	Single	U.S.
3	15%	55	\$33,685	Female	Black	High school	Single	U.S.
4	15%	28	\$50,001	Female	White	Some college	Single	U.S.
5	12%	32	\$37,245	Female	Hispanic	High school	Single	Non-U.S.
6	11%	46	\$46,099	Male	Asian	Less than high school	Married	Non-U.S.

Note: Clusters are listed in order of size along with the characteristics of each—the average value for numeric attributes and the most common value for qualitative ones. A marital status of single includes workers who were married but not living with their spouses.

Source: U.S. Census Bureau, Public Use Microdata Sample, American Community Survey, five-year estimates, 2012-16, accessed using IPUMS-USA, University of Minnesota, <http://www.ipums.org>

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## Appendix C

### U.S. Census Bureau Public Use Microdata Areas in Philadelphia (2010 Census)

Pew name	Census Bureau ID	Census Bureau name
North	4203207	Central
West	4203208	West
Far Northeast	4203201	Far Northeast
Lower Northeast—East	4203203	Near Northeast—East
Eastern North	4203205	East
Center City	4203209	Center City
South	4203211	Southeast
Southwest	4203210	Southwest
Lower Northeast—West	4203202	Near Northeast—West
Upper North	4203204	North
Northwest	4203206	Northwest

Source: U.S. Census Bureau, Pennsylvania Public Use Microdata Area (PUMA) Maps, <https://www.census.gov/geographies/reference-maps/2010/geo/2010-pumas/pennsylvania.html>

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## Endnotes

- 1 The minimum wage for tipped workers in Philadelphia is \$2.83. If tipped employees earn less than \$7.25 after tips, the employer is required to make up the difference.
- 2 U.S. Department of Labor, “Consolidated Minimum Wage Table,” accessed Jan. 2, 2020, <https://www.dol.gov/agencies/whd/mw-consolidated>.
- 3 State law specifically pre-empts local minimum wage laws in 25 states. In two others, New Hampshire and Virginia, local governments require specific permission to enact local minimum wages. In New York, there is no explicit pre-emption, but court rulings have interpreted the state minimum wage law as pre-empting local minimums. See L. Huizar and Y. Lathrop, “Fighting Wage Preemption: How Workers Have Lost Billions in Wages and How We Can Restore Local Democracy” (National Employment Law Program, 2019), <https://s27147.pcdn.co/wp-content/uploads/Fighting-Wage-Preemption-Report-7-19.pdf> and D. Desilver, “When It Comes to Raising the Minimum Wage, Most of the Action Is in Cities and States, Not Congress,” *Fact Tank*, Feb. 24, 2020, <https://www.pewresearch.org/fact-tank/2020/02/24/when-it-comes-to-raising-the-minimum-wage-most-of-the-action-is-in-cities-and-states-not-congress>.
- 4 U.S. Department of Labor, “Consolidated Minimum Wage Table”; UC Berkeley Center for Labor Research and Education, “Inventory of U.S. City and County Minimum Wage Ordinances,” accessed Jan. 15, 2020, <http://laborcenter.berkeley.edu/minimum-wage-living-wage-resources/inventory-of-us-city-and-county-minimum-wage-ordinances>; state and local labor offices; Economic Policy Institute, “Minimum Wage Tracker,” accessed Jan. 15, 2020, <https://www.epi.org/minimum-wage-tracker>. Some cities and states have minimum wages that differ depending on employer size, whether health benefits are offered, worker age, or other factors. In all cases, the highest local minimum wage is included in this analysis.
- 5 U.S. Bureau of Labor Statistics, Occupational Employment Statistics, “OES Data, May 2018,” accessed Jan. 15, 2020, <https://www.bls.gov/oes/tables.htm>. It was not possible to calculate a median wage at the city level for this group of cities because of data availability and the American Community Survey’s geographic limitations.

- 6 For a useful discussion of the Kaitz index's use in understanding variation in the minimum wage, see A. Dube, "Designing Thoughtful Minimum Wage Policy at the State and Local Levels" (Brookings, 2014), [https://www.brookings.edu/wp-content/uploads/2016/06/state\\_local\\_minimum\\_wage\\_policy\\_dube.pdf](https://www.brookings.edu/wp-content/uploads/2016/06/state_local_minimum_wage_policy_dube.pdf) and A. Dube, "Impacts of Minimum Wages: Review of the International Evidence" (HM Treasury, 2019), <https://www.gov.uk/government/publications/impacts-of-minimum-wages-review-of-the-international-evidence>.
- 7 U.S. Bureau of Economic Analysis, "Regional Price Parities by State and Metro Area," accessed Jan. 15, 2020, <https://www.bea.gov/data/prices-inflation/regional-price-parities-state-and-metro-area>. The results are similar if comparing the local minimum wage with a regional "living wage" such as that estimated by MIT's living wage calculator (<https://livingwage.mit.edu>).
- 8 U.S. Census Bureau, Public Use Microdata Sample, American Community Survey, five-year estimates, 2014-18, accessed using IPUMS-USA, University of Minnesota, <http://www.ipums.org>. Except where noted, this and the following analysis is of wages earned from 2014 to 2018, in nominal dollars, as these were the most recent data available for detailed analysis. Data from 2018 (one-year estimates) indicates that about 8% of residents earned \$7.25 per hour or less as of that year.
- 9 Following the Bureau of Labor Statistics, "full time" was defined as 35 hours or more per week, and "year-round" was defined as 50 or more weeks per year. See Bureau of Labor Statistics, "Work Experience of the Population—2018," news release, Dec. 3, 2019, <https://www.bls.gov/news.release/pdf/work.pdf>.
- 10 An example would be tipped workers who did not receive at least \$7.25 per hour after tips and whose employers did not supplement their pay to make up the difference. Waiters and waitresses, for example, were among the most common occupations of those earning \$7.25 or less. Exemptions from the \$7.25 minimum wage include domestic workers, some seasonal workers, some students, and trainees. See Minimum Wage Act of 1968—Federal Changes in Wage Rates and Preemption, P.L. 1077 (2006), <http://www.legis.state.pa.us/WU01/LI/LI/US/PDF/2006/0/0112.PDF>. This conforms with the observation that maids and housekeepers were also among the more common occupations earning \$7.25 or less.
- 11 The analysis utilized a k-prototypes algorithm, a method capable of handling mixed numeric and categorical data, as implemented in the clustMixType package for R. (See G. Szepannek, "ClustMixType: User-Friendly Clustering of Mixed-Type Data in R," *The R Journal* 10, no. 2 (2018): 200-08, <https://journal.r-project.org/archive/2018/RJ-2018-048/index.html>.) Clusters were generated based on worker age, sex, race/ethnicity, household income, marital status, and nativity. Scree plots were used to determine the appropriate number of clusters. Because the algorithm can yield slightly different results depending on the order in which individuals are added to the analysis, it was run 1,000 times, and the result with the greatest degree of cluster uniformity was selected.
- 12 The Pew Charitable Trusts, "Philadelphia's Poor: Who They Are, Where They Live, and How That Has Changed" (2017), [https://www.pewtrusts.org/-/media/assets/2017/11/pri\\_philadelphias\\_poor.pdf](https://www.pewtrusts.org/-/media/assets/2017/11/pri_philadelphias_poor.pdf).

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