



# What's Happening With Philadelphia's Middle-Wage Jobs?

Pre-pandemic, their growth was weak—with a greater share going to college graduates

## Overview

In recent years, economists and policymakers have paid considerable attention to so-called middle-wage jobs—positions thought to produce a livable income and, in many cases, be available to people without bachelor's degrees. These jobs are particularly important in Philadelphia, where only about 30% of adults have such degrees, where roughly a quarter of the population lives in poverty, and where middle-wage positions are seen as a pathway to economic opportunity and financial stability. For those reasons, the preservation and expansion of middle-wage positions will be a key factor as policymakers consider the city's post-pandemic economic future.

The Pew Charitable Trusts took an in-depth look at the nature of these jobs in Philadelphia before the COVID-19 pandemic, examining what pay levels constituted middle wages, which sectors have middle-wage positions, whether such jobs have become more or less numerous in recent years, and who holds these types of positions. The research was based primarily on the most recent census data available, which covers the five years from 2015 to 2019.

The first task was to define middle-wage jobs. In the census data, the median wage among civilians who worked in Philadelphia (including residents and nonresidents) was \$23.26 per hour (in 2019 dollars).<sup>1</sup> Based on that finding, Pew defined middle-wage positions as those paying plus or minus 20% of that median (middle) wage, or from \$18.61 to \$27.92 per hour.<sup>2</sup> (The Massachusetts Institute of Technology has estimated that a living wage in Philadelphia for a household of two adults, one of whom is employed, and one child is \$24.02 per hour.)<sup>3</sup> By Pew's definition, about 145,000 people working in Philadelphia, or 23% of the workforce, held middle-wage jobs during this period before the pandemic.<sup>4</sup>

The research for this issue brief also found that:

- The largest number of these positions are in health care and social assistance, educational services, public administration, and transportation and warehousing.
- Although the number of people working in Philadelphia has grown in recent years, the number with middle-wage jobs remains essentially unchanged. And far more of these positions are held by college-educated workers than in the aftermath of the Great Recession.
- The demographics of middle-wage workers in Philadelphia vary substantially among sectors but are similar to those of the city's jobholders overall. However, more female and Black workers hold these jobs, compared with their share of Philadelphia's entire workforce.

## **Middle-wage workers in Philadelphia's economic sectors**

Middle-wage earners are more heavily concentrated in some sectors of Philadelphia's economy than in others. (See Figure 1.)

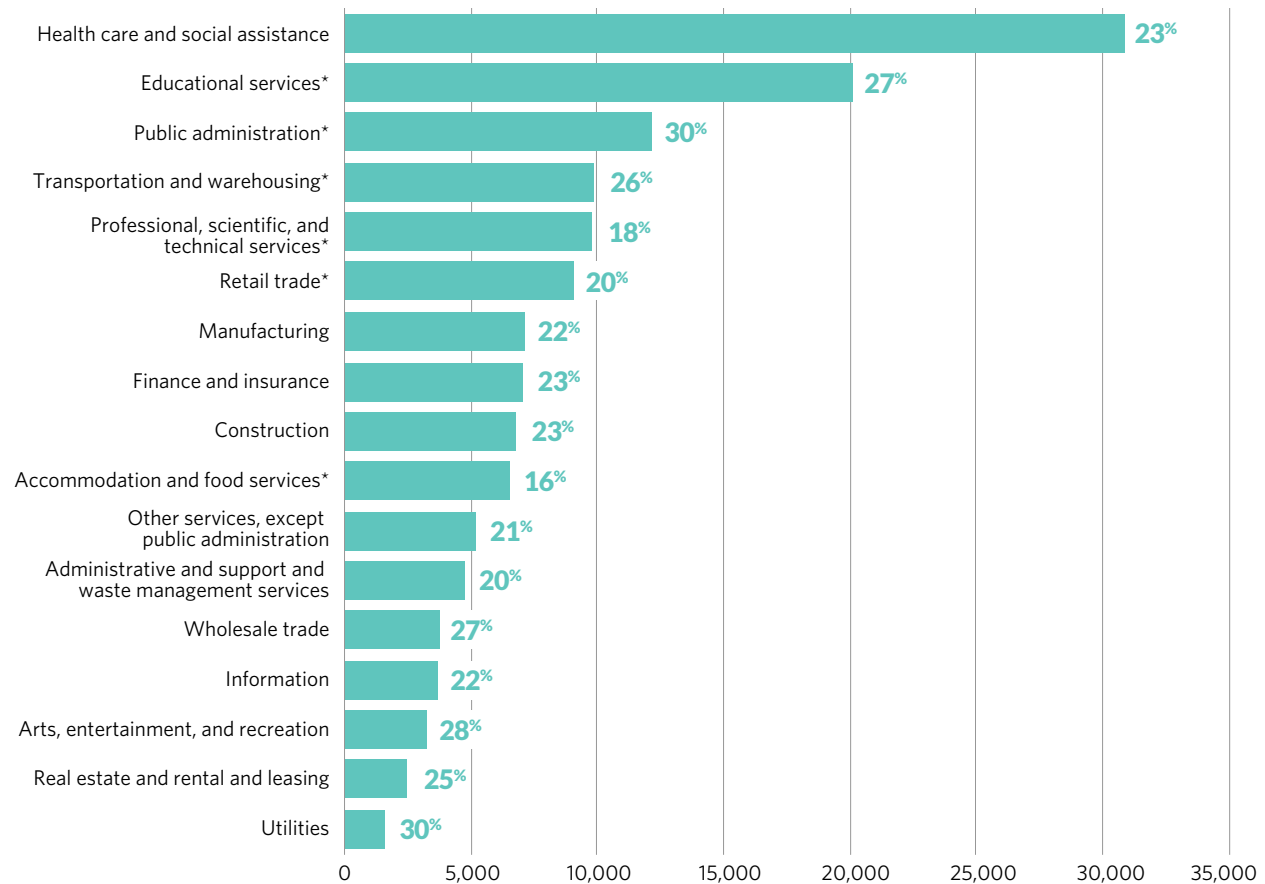
In several cases, this is simply the result of the sector's large size. For instance, health care and social assistance, the largest sector in Philadelphia's economy, also accounts for the largest share of middle-wage jobs. The percentage of jobs in the sector paying those wages, 23%, is the same as the share of middle-wage positions in the city economy as a whole.

By contrast, the three sectors providing the next-largest shares of middle-wage jobs—educational services, public administration, and transportation and warehousing—all have higher rates of middle-wage positions than does the city economy overall. And some sectors that employ relatively large numbers of middle-wage workers—professional, scientific, and technical services; retail trade; and accommodation and food services—do so at disproportionately lower rates than in the city economy as a whole.

Figure 1

## Number and Percentage of Middle-Wage Workers in Philadelphia in Each Sector

Sectors varied in the number and share of middle-wage workers whom they employed



Notes: Percentages represent the share of workers in each sector who earn middle wages. Sectors with asterisks denote those with statistically significant differences in percentages between middle-wage workers within each sector and the percentage of middle-wage workers overall (23%), at a 90% confidence level. This figure excludes sectors with fewer than 1,500 middle-wage workers in Philadelphia.

Source: U.S. Census Bureau, Public Use Microdata Sample, American Community Survey, five-year estimates, 2015-19

© 2021 The Pew Charitable Trusts

The demographics of workers earning middle wages differ dramatically by sector. (See Table 1.) For instance, although women account for 54% of middle-wage workers overall, they make up a much higher share of such workers in the sectors providing the largest numbers of middle-wage jobs: health care and social assistance, and educational services. Men make up a disproportionate share of middle-wage workers in several relatively large sectors, including transportation and warehousing, manufacturing, construction, and accommodation and food services.

Table 1

## Demographics of Middle-Wage Jobs in Philadelphia by Sector

The positions were unevenly distributed across sectors and demographic groups

Sector	Middle-wage earners	% Female	% Male	% Some college or less	% Bachelor's or higher	% Black	% White	% Asian	% Hispanic	% Other
Health care and social assistance	30,881	75%*	25%*	54%	46%	45%*	40%*	6%	7%	2%
Educational services	20,140	67%*	33%*	25%*	75%*	26%*	57%*	9%*	7%	2%
Public administration	12,139	58%	42%	59%	41%	55%*	35%*	3%*	7%	1%*
Transportation and warehousing	9,890	33%*	67%*	83%*	17%*	43%*	45%	3%*	8%	2%
Professional, scientific, and technical services	9,807	57%	43%	29%*	71%*	15%*	69%*	8%	6%*	2%
Retail trade	9,040	49%	51%	74%*	26%*	24%*	53%	6%	14%	2%
Manufacturing	7,162	39%*	61%*	74%*	26%*	23%*	54%	10%*	11%	3%
Finance and insurance	7,024	57%	43%	53%	47%	38%	48%	4%	8%	1%
Construction	6,832	8%*	92%*	88%*	12%*	7%*	74%*	1%*	15%*	3%
Accommodation and food services	6,549	38%*	62%*	66%	34%*	33%	50%	6%	9%	2%
Other services, except public administration	5,216	55%	45%	43%*	57%*	23%*	66%*	5%	6%	0%*

Continued on next page

Sector	Middle-wage earners	% Female	% Male	% Some college or less	% Bachelor's or higher	% Black	% White	% Asian	% Hispanic	% Other
Administrative and support and waste management services	4,744	43%	57%	68%	32%*	34%	43%	1%*	12%	10%*
Wholesale trade	3,750	21%*	79%*	81%*	19%*	13%*	60%	3%*	22%*	3%
Information	3,743	41%*	59%	42%*	58%*	30%	59%	6%	6%	0%*
Arts, entertainment, and recreation	3,255	44%	56%	43%	57%	21%*	60%	5%	11%	3%
Real estate and rental and leasing	2,455	59%	41%	62%	38%	37%	52%	2%*	8%	1%
Utilities	1,582	26%*	74%	83%	17%*	45%	48%	6%	1%*	0%*
<b>Total</b>	<b>144,704</b>	<b>54%</b>	<b>46%</b>	<b>56%</b>	<b>44%</b>	<b>33%</b>	<b>51%</b>	<b>5%</b>	<b>9%</b>	<b>2%</b>

Notes: Values with asterisks denote statistically significant differences between the percentages of middle-wage workers within each sector and demographic group and that demographic group's share of middle-wage jobs overall, at a 90% confidence level. The table excludes three small sectors that had a total of 495 such workers in Philadelphia but includes them in the total number.

Source: U.S. Census Bureau, Public Use Microdata Sample, American Community Survey, five-year estimates, 2015-19

© 2021 The Pew Charitable Trusts

As Table 1 shows, compared with their percentage of all middle-wage workers (56%), those without a college degree make up a disproportionate share in several sectors that provide large numbers of middle-wage jobs, including transportation and warehousing, retail trade, manufacturing, and construction. College-educated workers are overrepresented among middle-wage earners in educational services and in professional, scientific, and technical services.

By race and ethnicity, Black workers hold the greatest share of middle-wage jobs in health care and social assistance and in public administration. White workers are more prevalent in educational services; professional, scientific, and technical services; and construction. Compared with their share of middle-wage workers, Asian American workers are disproportionately concentrated in educational services and in manufacturing, while Hispanic workers are overrepresented in construction and, although it provides relatively few middle-wage jobs, wholesale trade.

## **The lack of growth of middle-wage jobs in Philadelphia**

The number of middle-wage workers in Philadelphia did not keep pace with pre-pandemic employment growth in the city. From 2009-13 to 2015-19, according to census data, the number of workers overall grew by nearly 25,000 (4%) in Philadelphia, while the number earning middle wages was essentially flat, increasing by only 400 (less than 1%).<sup>5</sup>

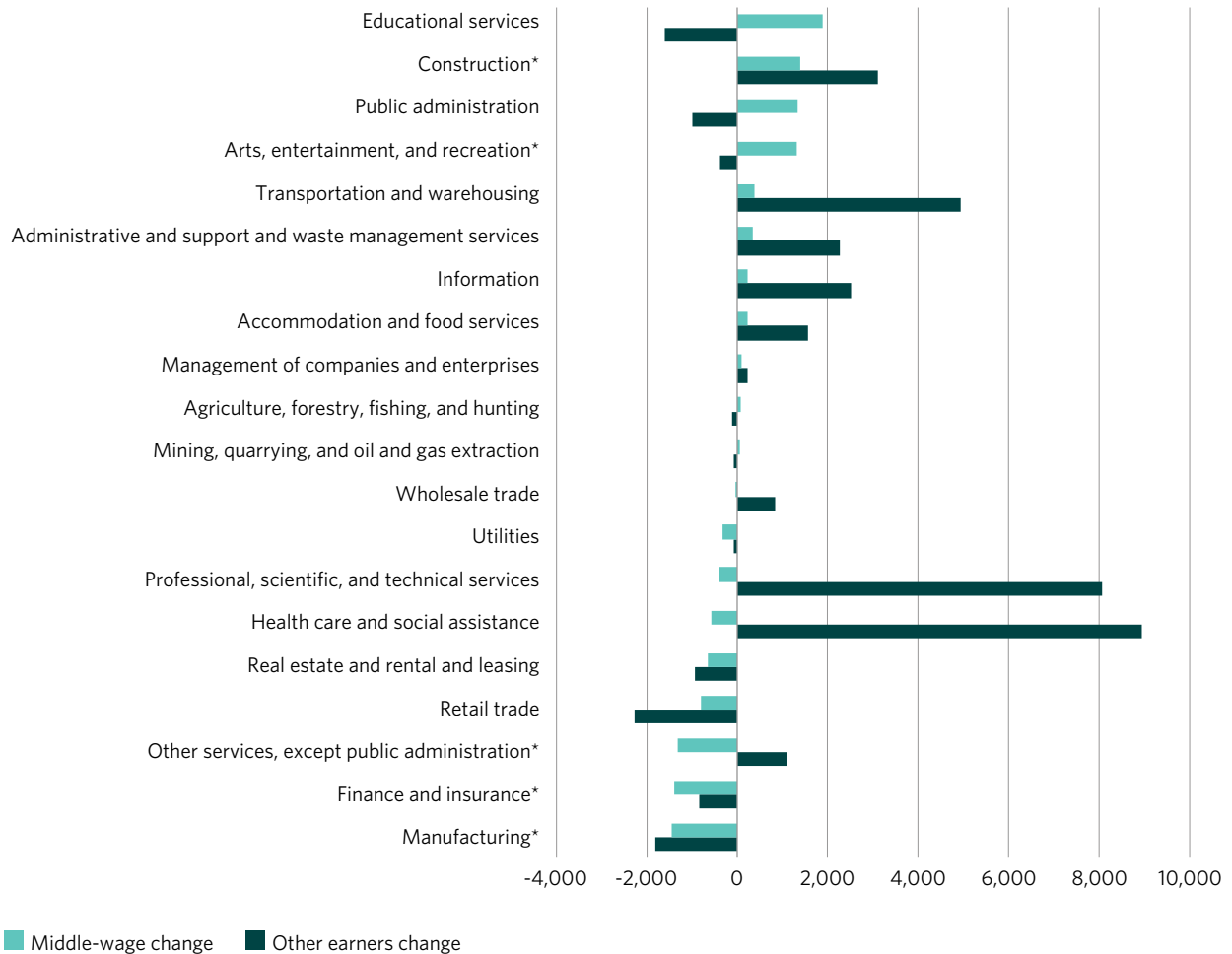
There was, however, considerable change in the number of middle-wage positions in some sectors. Substantial numbers of middle-wage jobs were added in educational services; construction; public administration; and arts, entertainment, and recreation. (See Figure 2.) Other sectors—including manufacturing as well as finance and insurance—shed these jobs.

In some cases, changes in the number of middle-wage workers aligned with sectorwide trends. For instance, the loss of middle-wage workers in manufacturing was accompanied by losses in the sector across all wage levels. On the other hand, middle-wage growth in public administration occurred against the backdrop of job losses in that sector. And in other cases, sectors such as health care and social assistance added workers—but not in middle-wage positions.

Figure 2

## Change in Number of Workers, Middle-Wage and Not, in Philadelphia by Sector, 2009-13 to 2015-19

Sectors varied widely in worker gains or losses



Notes: Sectors with asterisks denote those with statistically significant differences between the numbers of middle-wage workers in each sector from 2009-13 to 2015-19 at a 90% confidence level. Educational services and public administration were both nearly statistically significant.

Source: U.S. Census Bureau, Public Use Microdata Sample, American Community Survey, five-year estimates, 2009-13 and 2015-19

© 2021 The Pew Charitable Trusts

Disparities in whether a sector expanded or contracted, as well as demographic variations in employment among sectors, yielded sharp differences in middle-wage employment trends across groups.

Among those trends was a dramatic increase in college-educated workers earning middle wages, offset by a reduction among workers without a bachelor’s degree earning middle wages. (See Figure 3.) That drop was particularly severe for those with a high school education or less. For those without a bachelor’s degree, drops occurred in a wide range of sectors, including other services, except public administration; manufacturing; and professional, scientific, and technical services. One sector that recorded gains was construction, but those gains were overwhelmingly concentrated among White and male workers, and construction was the largest source of middle-wage job growth for both groups. Another clear change since the last recession involved growth in the number of Hispanic workers earning middle wages.

Figure 3

## Change in Middle-Wage Jobs in Philadelphia by Demographics From 2009-13 to 2015-19

Middle-wage gains or losses were unevenly distributed across demographic groups



Note: Bars with asterisks denote statistically significant differences between the numbers of middle-wage workers within each demographic group from 2009-13 to 2015-19 at a 90% confidence level.

Source: U.S. Census Bureau, Public Use Microdata Sample, American Community Survey, five-year estimates, 2009-13 and 2015-19

© 2021 The Pew Charitable Trusts



Philadelphia’s sector-by-sector pattern of growth and decline among middle-wage jobs was unique to the city in some respects but mirrored national trends in others. For instance, Philadelphia registered gains in middle-wage jobs in public administration, a category that saw losses nationally. But the city did not experience substantial growth in three of the five sectors that generated the most middle-wage jobs nationally: transportation and warehousing; accommodation and food services; and professional, scientific, and technical services. Philadelphia was in line with national trends in seeing large gains in middle-wage jobs in both construction and educational services, and substantial losses in retail trade, finance and insurance, and manufacturing.

## The demographics of Philadelphia’s middle-wage workers

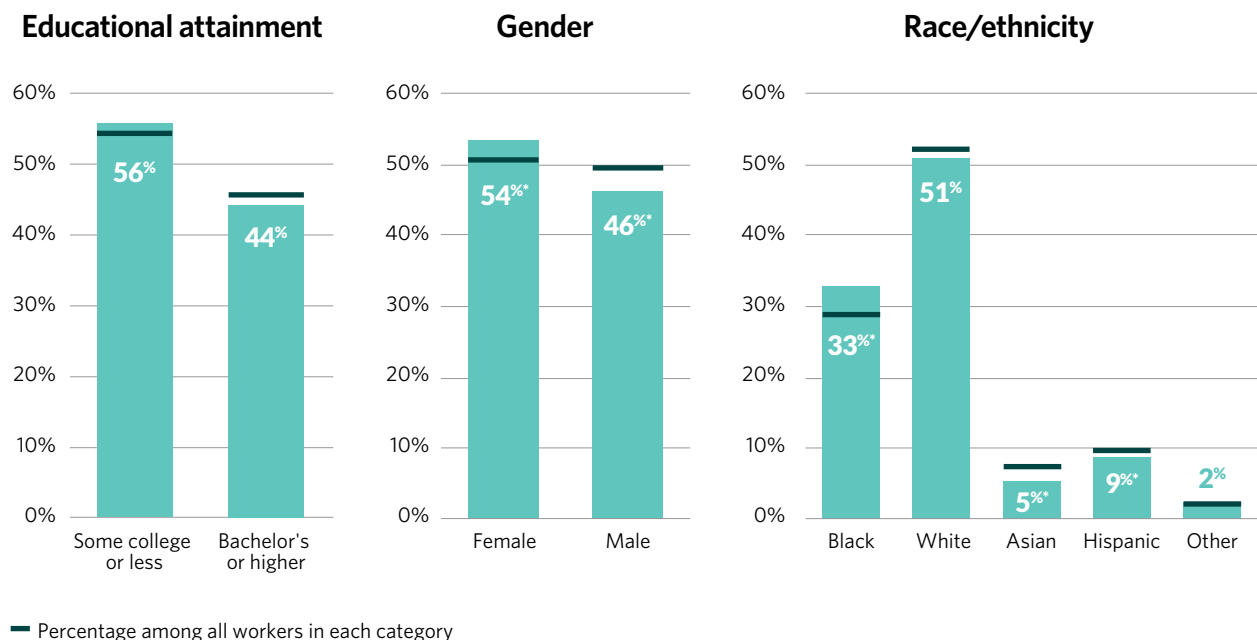
For the most part, middle-wage workers’ demographics resemble those of people working in the city as a whole. (See Figure 4.)

Fifty-four percent of them are female; among all Philadelphia workers, the figure is 51%. Similarly, 56% of those earning middle wages lack college degrees, compared with 54% of all workers. Middle-wage workers’ race and ethnicity are also generally comparable to their proportions among all workers. A slight majority of middle-wage workers are White (51%), but Black workers are disproportionately middle wage: They make up 33% of the middle-wage population and 29% of all people working in the city.

Figure 4

### The Demographics of Philadelphia’s Middle-Wage Workers Compared With Its Working Population

With just a few exceptions, middle-wage workers resembled the city’s entire workforce



Note: Values with asterisks denote statistically significant differences in percentages between middle-wage workers and workers overall at a 90% confidence level.

Source: U.S. Census Bureau, Public Use Microdata Sample, American Community Survey, five-year estimates, 2015-19

© 2021 The Pew Charitable Trusts

Breaking those numbers down in greater detail, Black women, both with and without a bachelor's degree, account for 20% of Philadelphia's middle-wage workers and are largely responsible for the higher rates of middle-wage employment among the city's Black and female workers compared with their share among workers overall. (See Table 2.) At the same time, the lower rate of White people among Philadelphia's middle-wage workers (when compared with their share of the city's workforce) is attributable to a substantially smaller fraction of White college-educated males; they account for 15% of the workforce overall but only 11% of middle-wage workers.

Table 2

## Share of Total Middle-Wage Employment in Philadelphia by Demographic Group and Educational Attainment

Overall trends were driven by disproportionate shares of middle-wage workers in some demographic subgroups

### Black 33% (4%\*)

	Total	Some college or less	Bachelor's or higher
Female	20%	13% (1%*)	7% (2%*)
Male	13%	10% (1%)	3% (0%)

### White 51% (-1%)

	Total	Some college or less	Bachelor's or higher
Female	26%	10% (1%)	16% (1%)
Male	25%	14% (2%*)	11% (-4%*)

### Asian 5% (-2%\*)

	Total	Some college or less	Bachelor's or higher
Female	3%	1% (-1%*)	2% (0%)
Male	3%	1% (-1%*)	2% (-1%*)

### Hispanic 9% (-1%\*)

	Total	Some college or less	Bachelor's or higher
Female	4%	3% (-1%*)	2% (0%)
Male	4%	3% (-1%)	1% (0%)

### Other 2% (0%)

	Total	Some college or less	Bachelor's or higher
Female	1%	0% (0%)	1% (0%)
Male	1%	1% (0%)	0% (0%)

Note: Values in parentheses indicate the difference in percentages between middle-wage workers and workers overall, with asterisks denoting statistical significance at a 90% confidence level.

Source: U.S. Census Bureau, Public Use Microdata Sample, American Community Survey, five-year estimates, 2015-19

© 2021 The Pew Charitable Trusts

## **Conclusion**

The number of middle-wage workers in Philadelphia has failed to keep pace with overall job growth since the last recession. Furthermore, the increases that have occurred have been overwhelmingly concentrated among college-educated workers rather than those without a bachelor's degree. Understanding these trends and how the COVID-19 pandemic has affected them is essential for policymakers seeking to help increase the number of middle-wage jobs in the city.

## **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, senior adviser to the initiative, along with Erika Compart.

The brief benefited from the comments of two independent reviewers: Sheila Ireland, deputy secretary, workforce development, Department of Labor and Industry, Commonwealth of Pennsylvania; and another reviewer who wished to remain anonymous. This brief does not necessarily reflect the opinions of these individuals or their institutions.

## Endnotes

- 1 The estimates are based on place of work and therefore capture people who work in Philadelphia, regardless of where they reside. Hourly earnings were calculated by dividing self-reported values for annual wage and salary income 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). Earnings were calculated for the population of civilian workers in Philadelphia age 16 or older who had income and reported working for more than 13 weeks (including the previous one) during the previous year and more than 10 hours per week. The intention of this filtering step was to capture workers who were actively attached to the labor market. 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" (University of California, Berkeley, 2016), <https://irle.berkeley.edu/files/2016/Data-and-Methods-for-Estimating-the-Impact-of-Proposed-Local-Minimum-Wage-Laws.pdf>, and used elsewhere. 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.
- 2 Note that the data analyzed here captures income from wages, salaries, commissions, bonuses, and tips, not total compensation, which may vary among sectors. No standard definition for "middle wages" exists, although several have been used in the literature. See J. Bernstein and H. Hartmann, "The Low-Wage Labor Market: Challenges and Opportunities for Economic Self-Sufficiency—Defining and Characterizing the Low-Wage Labor Market" (U.S. Department of Health and Human Services, 2000), <https://aspe.hhs.gov/report/low-wage-labor-market-challenges-and-opportunities-economic-self-sufficiency-defining-and-characterizing-low-wage-labor-market>, for a useful taxonomy of approaches to defining labor market segments. In this case, a classification based on an interval around the local median was chosen because it is defined in terms of the literal middle wage and permits meaningful comparisons over time of the number and proportion of middle-wage workers. An alternative, percentile-based approach was also considered, where middle-wage workers were defined as those with hourly wages within the middle third of the local distribution. That analysis produced results that were qualitatively similar to the approach used here. The decision to constrain the middle-wage interval to within plus or minus 20% of the median was a compromise between the desire for a sample size large enough for meaningful analysis and a reasonably narrow window around the median. The choice of a lower threshold of 80% of the median also has support in the literature. See D. Osborne and P. Sommers, "Middle-Wage Jobs in Metropolitan America" (The Brookings Institution, 2009), <https://www.brookings.edu/research/middle-wage-jobs-in-metropolitan-america>.
- 3 Massachusetts Institute of Technology, Living Wage Calculator: Living Wage Calculation for Philadelphia County, Pennsylvania, 2020, <https://livingwage.mit.edu/counties/42101>.
- 4 The median hourly wage in the U.S. was lower, at \$20.22, but the percentage of middle-wage workers nationwide, 22%, was similar to that of Philadelphia.
- 5 This is consistent with a previous Pew study that looked at an eight-year period that included the 2007-09 recession and found that job gains for city residents came mostly from low-paying positions and, to a lesser extent, high-paying ones, with losses in the middle. See L. Eichel and S. Budick, "Philadelphia Job Growth Not Closing Wage Gap Between Residents and Suburban Commuters," The Pew Charitable Trusts, Aug. 13, 2019, <https://www.pewtrusts.org/en/research-and-analysis/articles/2019/08/13/philadelphia-job-growth-not-closing-wage-gap-between-residents-and-suburban-commuters>. The median hourly wage in Philadelphia from 2009 to 2013 was \$22.03 in 2019 dollars. Middle-wage earners during that period included those earning from \$17.62 to \$26.43 per hour and accounted for 24% of all workers.

---

**For further information, please visit:**  
**[pewtrusts.org/philaresearch](https://pewtrusts.org/philaresearch)**

---

**Contact:** Elizabeth Lowe, communications officer  
**Email:** [elowe@pewtrusts.org](mailto:elowe@pewtrusts.org)  
**Project website:** [pewtrusts.org/philaresearch](https://pewtrusts.org/philaresearch)

---

**The Pew Charitable Trusts** is driven by the power of knowledge to solve today's most challenging problems. Pew applies a rigorous, analytical approach to improve public policy, inform the public, and invigorate civic life.