Why Are Some Places So Much More Unequal Than Others?

Jaison R. Abel and Richard Deitz

OVERVIEW

- This study explores regional wage inequality in the United States, with a particular focus on the New York-Northern New Jersey region.
- Wage inequality has increased in nearly every metropolitan area since the 1980s, though it has risen quite sharply in some parts of the country to particularly high levels.
- Large urban areas such as New York City are now among the most unequal places, owing largely to strong demand for skill pushing up wages for those toward the top of the wage distribution.
- Many of the least unequal places, including much of upstate New York, have struggled with weak economic conditions and sluggish demand for workers, resulting in lackluster wage growth across the board—particularly for middle- and lower-wage workers.

Economic inequality, which has been on the rise in the United States since the early 1980s, has become a critically important economic and social issue. One of the most significant contributors to economic inequality is the disparity in wages workers earn in the labor market. Today, a worker at the 95th percentile of the wage distribution earns more than three times what the median worker earns, and more than seven times the earnings of a worker at the 10th percentile, well above what these ratios were just a few decades ago. This widening difference in earnings has largely been driven by the high and rising premium earned by skilled workers, as wages have increased much more rapidly for highly skilled workers at the top of the wage distribution than they have for those in the middle or at the bottom.

However, wage inequality is not uniform across the nation. Indeed, it has risen quite sharply in some parts of the country to particularly high levels, while it has been much more subdued in other places. As a result, some places are much more unequal than others, with the magnitude of wage inequality varying considerably across space.

This article examines the magnitude and sources of regional wage inequality, paying particular attention to the

Jaison R. Abel and Richard Deitz are assistant vice presidents at the Federal Reserve Bank of New York. Email: jaison.abel@ny.frb.org; richard.deitz@ny.frb.org.

The views expressed in this article are those of the authors and do not necessarily reflect the position of the Federal Reserve Bank of New York or the Federal Reserve System. To view the authors' disclosure statements, visit https://www.newyorkfed.org/research/epr/2019/epr_2019_wage-inequality.

evolution of wage inequality in the New York-Northern New Jersey region. We begin by discussing trends in wage inequality for the nation as a whole and describe how changes in the demand for skill have led to disparate wage growth across the wage distribution. We then examine wage inequality across U.S. metropolitan areas. Our analysis reveals that, like the nation, nearly every metropolitan area in the country has seen an increase in wage inequality since the early 1980s, though there is significant variation in both the level of wage inequality and the pace at which it has risen. Focusing on the New York-Northern New Jersey region, we find that Fairfield, Connecticut, is the most unequal metropolitan area in the country, with the New York City metropolitan area also ranking among the top ten nationally. By contrast, wage inequality tends to be much lower throughout upstate New York, where it has risen only modestly in recent decades.

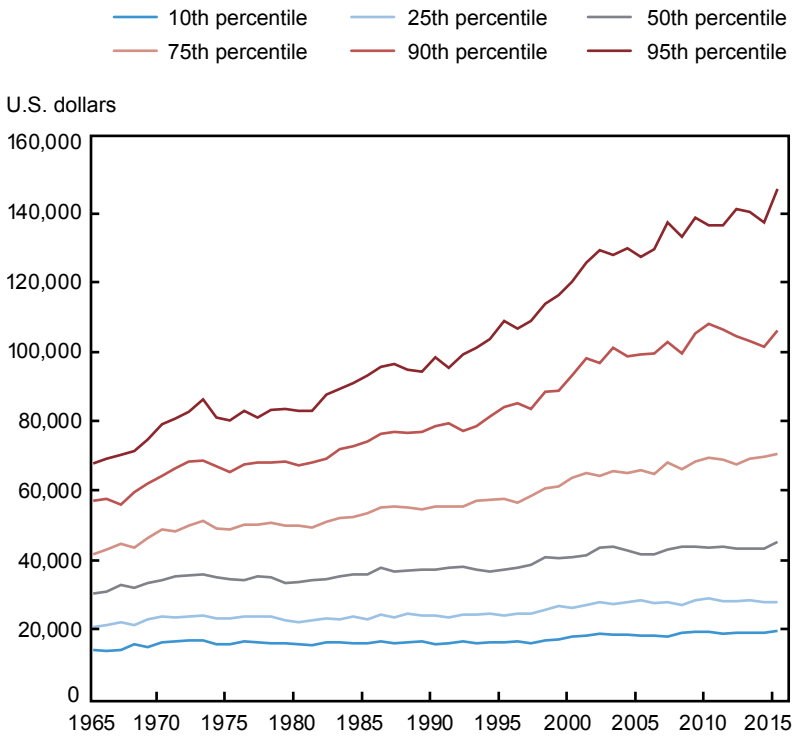
We then delve into the forces that drive regional wage inequality. We show that the most unequal places tend to be large urban areas that possess both strong demand for skill and strong agglomeration economies, two features that boost the wages of skilled workers. Further, these places have been especially attractive to high-wage workers. The least unequal places, many of which are geographically concentrated in the Midwest and the Great Lakes region, tend to have lackluster wage growth across the board largely because of weak demand for labor as automation and increased globalization have displaced many middle- and lower-skilled workers.

1. Wage Inequality in the United States

We begin by examining wage inequality for the nation as a whole using data from the Current Population Survey.[1] Chart 1 shows the annual wages earned by full-time workers at different points along the wage distribution over the past fifty years, expressed in constant 2015 dollars.[2] The distance between the percentiles generally increases over time, pointing to an increase in wage inequality. In particular, wages have grown much more strongly for workers toward the top of the distribution. For example, at the 95th percentile, wages more than doubled between 1965 and 2015, from about $70,000 to $145,000, and at the 90th percentile, wages increased from around $60,000 to more than $100,000. Wages increased much less for other workers. At the 50th percentile, wages increased from $30,000 to $45,000, and at the 10th percentile, wages increased from $15,000 to just $20,000. Most of the widening in the wage gaps between workers started around 1980, so we focus our attention on this period.

Chart 2 offers a more comprehensive picture of the increase in wage inequality that began in the early 1980s by plotting the growth in wages from 1980 to 2015 for each percentile along the wage distribution.[3] The upward sloping trend seen on the chart indicates that wage inequality over the past few decades has not been confined to just the top or bottom of the wage distribution, but exists throughout the entire wage distribution.[4] That is, the wages of a worker at the 95th percentile grew faster than those of a worker at the 90th percentile, the wages of a worker at the 80th percentile grew faster than the 70th percentile, the wages of the 50th percentile grew more than the 40th percentile, and so on down the distribution. All in all, there has been little growth in wages toward the bottom of the distribution, modest growth for those in the middle, and much more significant growth for those toward the top of the wage distribution, particularly for the top 25 percent of workers.

Chart 1
Annual Real Wages for Full-Time Workers in the United States, 1965-2015



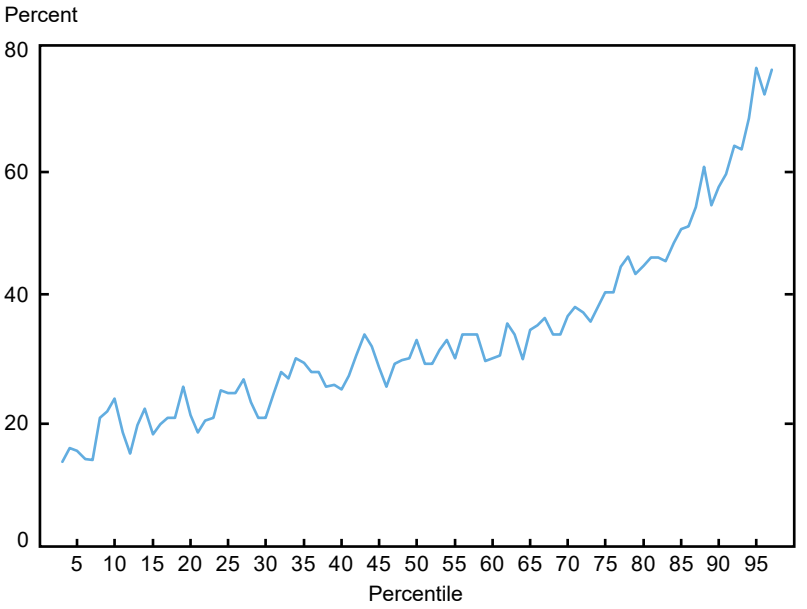
Sources: U.S. Census Bureau and Bureau of Labor Statistics, Current Population Survey (IPUMS); U.S. Bureau of Economic Analysis, PCE Price Index.

Notes: Figures are expressed in constant 2015 dollars. Full-time workers are those aged 16-64 working at least thirty-five hours per week and forty weeks per year.

While there are a number of reasons for this pattern of wage growth in the United States, the predominant reason is the rising return to skill.[5] The more skill a worker possesses, the more the worker tends to earn and the faster the worker's wages tend to rise. This relationship stems from an increase in demand for skilled workers in recent decades relative to the available supply of skilled workers. As the U.S. economy has become more dependent on innovation, on the production of ideas, and on the provision of complex services, the demand for skilled workers has increased, pushing up the wages of these workers more rapidly than those of workers with less skill.

The main drivers of this disparity in the demand for skill have been technological change and globalization.[6] Innovations in the U.S. economy—particularly, the computer revolution of the 1980s and 90s—and the opening of global markets simultaneously complemented the kinds of work performed by skilled workers while substituting for much of the more routine work typically done by middle- and lower-skilled workers. As a result, the demand for lesser-skilled workers declined at the same time that the demand for more-skilled workers

Chart 2
Real Wage Growth in the United States by Percentile, 1980-2015



Sources: U.S. Census Bureau and Bureau of Labor Statistics, Current Population Survey (IPUMS); U.S. Bureau of Economic Analysis, PCE Price Index.

Note: Wage growth statistics for the bottom and top few percentiles of the wage distribution are not shown because of reporting and top coding issues.

increased, exerting upward pressure on the wages of skilled workers while exerting downward pressure on the wages of lesser-skilled workers. Though this rising return to skill associated with technological change and globalization is the predominant contributor to rising wage inequality in the United States, other factors have also contributed, including the erosion of institutions such as labor unions and the declining real value of the minimum wage.[7]

2. Patterns of Regional Wage Inequality

Our analysis of regional wage inequality focuses on roughly 200 consistently defined metropolitan areas in 1980 and 2015 using data from the U.S. Census Bureau. We focus our attention on metropolitan areas because these geographies are a good approximation of local labor markets, where the economic forces that shape wage inequality are most pronounced.

While there are many metrics for measuring wage inequality, we focus on the "90/10 ratio." This ratio represents the wages earned by a worker at the 90th percentile of the wage distribution divided by the wages earned by a worker at the 10th percentile in each place. The 90/10 ratio is one of many measures of inequality that all tend to be highly correlated, but it has the

advantage of being a convenient summary metric that is easy to compute and straightforward to interpret. Given the high degree of correlation between various measures of wage inequality, our analysis and conclusions are not dependent on the metric used.

2.1 The Geography of Wage Inequality

We begin by looking at the metropolitan areas with the highest and lowest 90/10 ratios in 2015, shown in the first pair of columns in Table 1. The 90/10 ratios range from a high of 8.7 in Fairfield, Connecticut, to a low of 3.9 in Johnstown, Pennsylvania, with a median of 5.2 across all metropolitan areas. These ratios indicate that in Fairfield, a worker at the 90th percentile earned nearly nine times as much as a worker at the 10th percentile, but in Johnstown, a worker at the 90th percentile earned only about four times as much as one at the 10th percentile.

A more comprehensive picture of the geography of wage inequality is shown in the map on page 7, which plots the 90/10 ratios for our full set of metropolitan areas in 2015. The metropolitan areas in red—with 90/10 ratios above 6—are the most unequal places in the country, while the metropolitan areas in blue—with 90/10 ratios below 5—are some of the least unequal places. Some clustering of the most and least unequal places is apparent. A number of metropolitan areas in California and Texas are among the most unequal places, as well as some metropolitan areas along the Boston-Washington corridor. By contrast, wage inequality is lowest in metropolitan areas in the Midwest and the Great Lakes region, as well as some parts of Florida and the West Coast.

2.2 Geographic Patterns of Wage Inequality Are Persistent

How do these recent patterns of regional wage inequality compare to the past? Table 1 ranks the most and least unequal places in 1980 and in 2015. As it did in the nation as a whole, wage inequality increased at the regional level, with both the range of inequality among metropolitan areas and the median rising significantly. In 1980, 90/10 ratios ranged from 3.3 for Wausau, Wisconsin, to 5.6 for Fairfield, Connecticut, with a median ratio of 4.0—a figure similar to that of the least unequal place in 2015 (Johnstown, Pennsylvania).

We can see the increase in wage inequality among metropolitan areas more fully in Chart 3 (page 8), which presents a scatterplot of 90/10 ratios for metropolitan areas in 1980 relative to 2015. The chart also includes a 45-degree line to clarify where inequality has increased: points above the 45-degree line indicate that the 90/10 ratio increased in that metropolitan area between 1980 and 2015, while points below the line point to a decrease in inequality. With just a few exceptions, all metropolitan areas fall above the 45-degree line—indicating that almost every metropolitan area saw an increase in inequality between 1980 and 2015, some quite significant. In fact, many metropolitan areas appear well above the 45-degree line, pointing to large increases in inequality during this time.

Wage inequality has increased almost everywhere, and the geographic pattern of regional wage inequality tends to be persistent. Looking at the most and least unequal places in 1980 and 2015 presented in Table 1, we see that three of the top fifteen metropolitan areas and six of

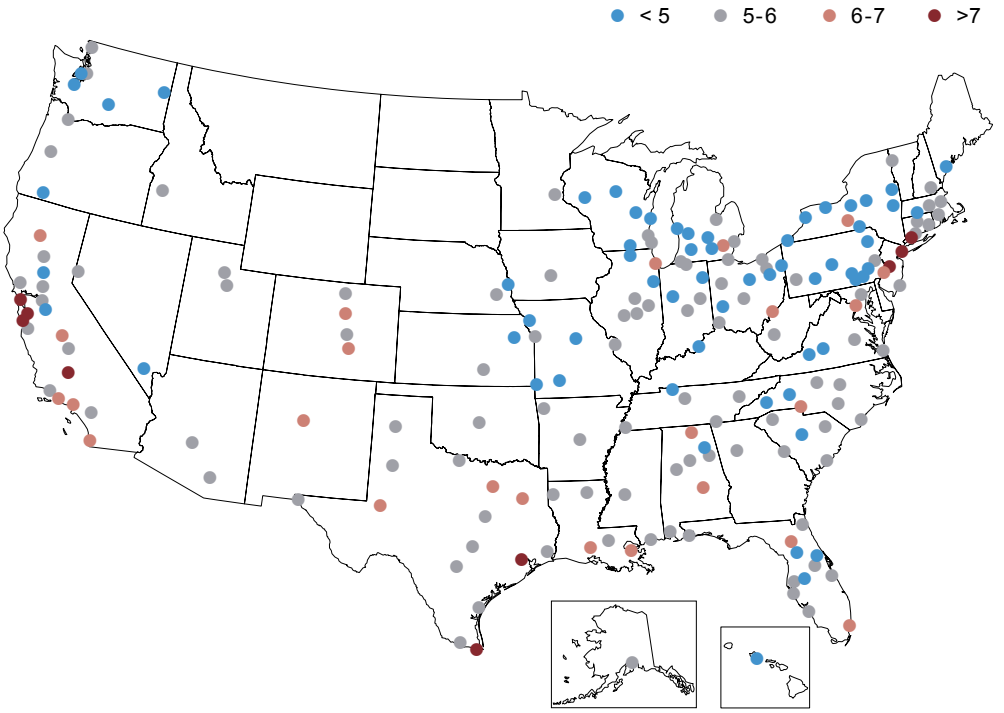
Table 1
The Most and Least Unequal U.S. Metropolitan Areas, 2015 and 1980

	90/10 Ratio in 2015		90/10 Ratio in 1980
Top 15			
Fairfield, CT	**8.7**	**Fairfield, CT**	**5.6**
San Jose, CA	7.9	Anchorage, AK	5.4
Trenton, NJ	7.4	Gadsden, AL	5.0
Bakersfield, CA	**7.1**	Pueblo, Co	5.0
Houston, TX	7.1	Lafayette, LA	4.9
Santa Cruz, CA	**7.1**	Huntsville, AL	4.8
New York, NY	7.0	Palm Bay, FL	4.8
San Francisco, CA	7.0	Santa Maria-Santa Barbara, CA	4.8
Oxnard-Thousand Oaks-Ventura, CA	6.9	New Orleans, LA	4.7
Tyler, TX	6.9	**Santa Cruz, CA**	**4.7**
Odessa, TX	6.9	Orlando, FL	4.6
Los Angeles, CA	6.9	**Bakersfield, CA**	**4.6**
Washington, DC	6.6	Baton Rouge, LA	4.6
Ann Arbor, MI	6.6	Jackson, MS	4.5
San Diego, CA	6.5	Champaign-Urbana, IL	4.5
Bottom 15			
Muskegon, MI	**4.3**	State College, PA	3.6
Clarksville, TN	4.2	**Erie, PA**	**3.5**
Erie, PA	**4.2**	Eau Claire, WI	3.5
Roanoke, VA	4.2	Harrisburg, PA	3.5
Deltona-Daytona Beach, FL	4.2	Asheville, NC	3.5
Yakima, WA	4.2	**Utica-Rome, NY**	**3.4**
Columbia, MO	4.2	**Oshkosh-Neenah, WI**	**3.4**
Utica-Rome, NY	**4.2**	Springfield, MA	3.4
Ocala, FL	4.1	**Sheboygan, WI**	**3.4**
Hickory-Lenoir-Morganton, NC	4.1	**Muskegon, MI**	**3.4**
Oshkosh-Neenah, WI	**4.1**	Kalamazoo-Portage, MI	3.4
Fort Wayne, IN	4.0	Elkhart-Goshen, IN	3.3
Wausau, WI	**4.0**	Anniston-Oxford-Jacksonville, AL	3.3
Sheboygan, WI	**4.0**	Portland, ME	3.3
Johnstown, PA	3.9	**Wausau, WI**	**3.3**
Median	**5.2**	**Median**	**4.0**

Sources: U.S. Census Bureau, 1980 Decennial Census and 2015 American Community Survey (IPUMS).

Note: Bold indicates that the metropolitan area appears on the list in both 1980 and 2015.

The Geography of Wage Inequality
2015 90/10 Ratios by Metropolitan Area



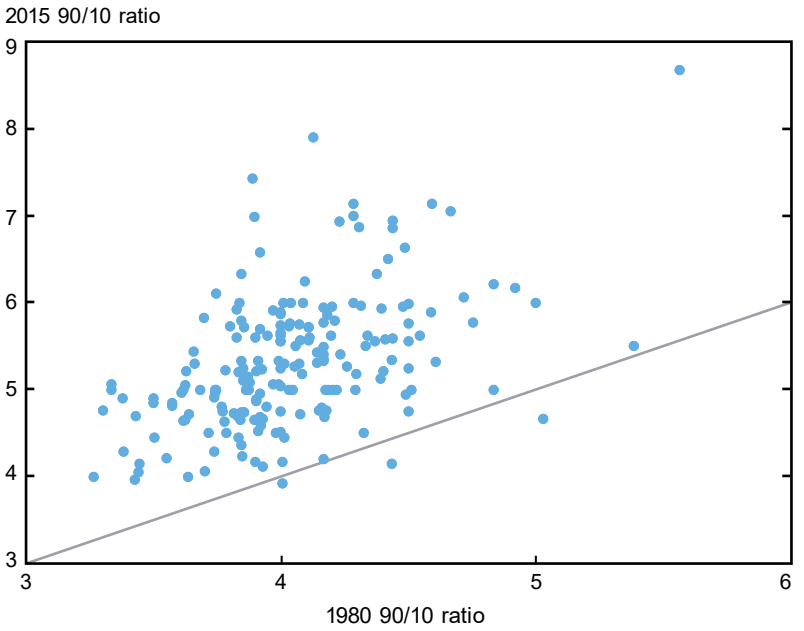
Source: U.S. Census Bureau, 2015 American Community Survey (IPUMS).

the bottom fifteen metropolitan areas appear on both lists. More generally, the correlation coefficient between the 90/10 ratio in 1980 and the ratio in 2015 is 0.5. This relatively strong positive relationship suggests that places with the highest levels of inequality in 1980 generally tended to also have the highest levels of inequality in 2015. However, there are some notable and significant exceptions, particularly among the most unequal metropolitan areas. In particular, more large urban areas are now at the top of the rankings than in 1980, including Houston, New York City, San Francisco, Los Angeles, and Washington, D.C. In the next section, we will explain in more detail the tendency of large urban areas to now be among the most unequal places.

2.3 Differing Patterns of Regional Wage Growth

While the 90/10 ratios provide a useful summary measure of wage inequality across places, a more complete picture of the drivers of wage inequality in a given metropolitan area can be gleaned by examining wage growth patterns along the entire local wage distribution. Because it would be cumbersome to show these distributions for all of the metropolitan areas in our study, in Chart 4 we plot wage growth distributions for select metropolitan areas

Chart 3
Rising Wage Inequality among U.S. Metropolitan Areas, 1980-2015



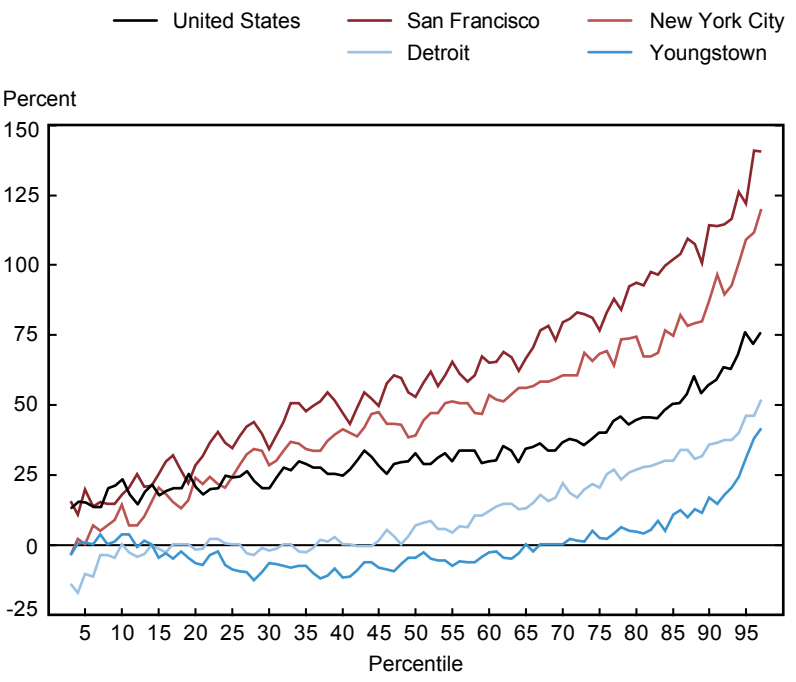
Sources: U.S. Census Bureau, 1980 Decennial Census and 2015 American Community Survey (IPUMS).

Note: Points above the gray line indicate an increase in the 90/10 ratio for that metropolitan area between 1980 and 2015, while points below the line indicate a decrease.

relative to the national distribution to illustrate some of the significant differences in wage growth patterns across the country.

Like the national pattern, these metropolitan area wage growth distributions tend to be upward sloping, indicating that wage growth is generally stronger as we move up the wage distribution. However, the shape and slope of regional wage growth profiles differ quite considerably across geographic space. In some places, the wage growth distributions tend to be quite steep, pointing to an increase in inequality to relatively high levels, while in other places, the distributions are flatter, pointing to more equal wage growth and less inequality. For example, New York City and San Francisco, both among the top 10 most unequal metropolitan areas in the country, possess rather steep wage growth distributions. In San Francisco, wages increased by about 20 percent between 1980 and 2015 for the 10th percentile, by 50 percent for the median, and by 120 percent for the 95th percentile. Likewise, in New York City, wages grew by 15 percent for the 10th percentile, by 40 percent for the median, and by 110 percent for the 95th percentile. Many of the metropolitan areas that have seen the largest increases in inequality to particularly high levels fit this pattern of modest increases in wages for the middle and lower portions of the wage distribution coupled with rapid growth in wages for those at the top of the distribution.

Chart 4
Real Wage Growth for Selected U.S. Metropolitan Areas by Percentile, 1980-2015



Sources: U.S. Census Bureau and Bureau of Labor Statistics, Current Population Survey (IPUMS); U.S. Census Bureau, 1980 Decennial Census (IPUMS) and 2015 American Community Survey (IPUMS); U.S. Bureau of Economic Analysis, PCE Price Index.

Wage growth distributions are much flatter in places such as Detroit and Youngstown, Ohio, which have experienced decades of deindustrialization and relatively weak demand for skilled workers at the top of the wage distribution. In these places, wages did not grow for the bottom 50 to 75 percent of all workers, and in some cases wages even declined. This stagnant wage growth for the vast majority of workers in these places has been coupled with only modest wage growth for the upper portion of the distribution. Unlike in San Francisco or New York City, rising wage inequality in these places has been driven largely by stagnant wages in the middle and lower parts of the distribution coupled with sluggish wage growth toward the top of the distribution.

3. Why Are Some Places More Unequal Than Others?

Three key factors drive differences in wage inequality across metropolitan areas: differences in the local demand for skilled and unskilled workers; urban agglomeration economies, which tend to favor higher-skilled workers; and the migration of skilled workers between locations. These three regional economic factors work in tandem and reinforce one another.

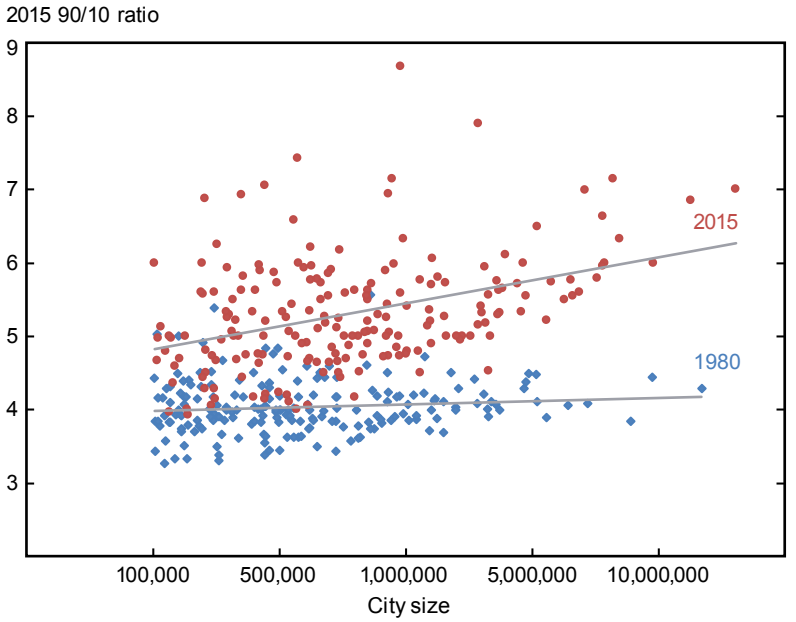
First, the demand for skilled workers has been geographically concentrated in some places over the past few decades, while the decline in demand for lesser-skilled workers has been concentrated in other places. Wages for skilled workers toward the top of the wage distribution have increased significantly in places that have seen strong demand for skill. San Francisco and New York City are good examples of this dynamic. San Francisco has seen a burgeoning tech sector in recent decades, resulting in strong demand and robust wage growth for highly skilled workers, especially those at the very top of the wage distribution (as shown in Chart 4). Likewise, skilled workers in the finance industry have been in strong demand in New York City. Many of the most unequal places in the country fit this dynamic. In fact, more broadly speaking, research indicates that wage inequality tends to be more pronounced in those places where the demand for skill is the highest.[8]

At the other end of the spectrum, technological change and globalization have reduced the demand for middle- and lower-skilled workers, with this decline quite severe in some parts of the country.[9] This weak demand has led to sluggish wage growth for such workers in these areas, and in some cases has led to an outright decline in the wages of people in the middle and lower portions of the local wage distribution. Detroit is an example of this pattern, as the demand for middle- and lower-skilled workers declined as the auto industry cut thousands of jobs in the area—job cuts brought about both by automation and by auto plant closures, some of which have been tied to increased global competition in the auto market. In addition to stagnant wages in the middle and lower portions of the wage distribution, many of these places have also tended to have weak demand for the most skilled workers, resulting in lackluster wage growth for high-wage earners.

Second, the benefits that arise when people and firms locate in large numbers near one another in cities—what economists refer to as urban agglomeration economies—have enhanced the productivity and wages of skilled workers in large and dense metropolitan areas. These productivity benefits arise in part because of increased sharing of knowledge and ideas among workers, enhanced learning opportunities, and better job matching, since people who search for jobs in thick urban labor markets are more likely to find employment that matches their skills, which helps boost their productivity and wages.[10] While urban agglomeration economies have been shown to raise the productivity of all workers, recent research has found that these benefits tend to favor higher-skilled workers more than lesser-skilled workers.[11] This dynamic did not exist decades ago.[12] As a result, highly skilled workers in places where skill is concentrated tend to command even higher wages than they would earn elsewhere, amplifying wage inequality in those places.

Third, migration within the United States has changed the mix of workers across places. In particular, strong demand for skilled workers in large urban areas has led many high-wage earners to move to such locations to take advantage of comparatively higher wages than they could earn elsewhere. In addition, these areas often provide urban amenities that are particularly attractive to high-wage workers. Indeed, since the early 1980s skilled workers have become much more geographically concentrated, as those with college and graduate degrees have flocked to large cities while lesser-skilled workers have increasingly been priced out of such places, in large part because of high and rising housing costs.[13] The geographic concentration of skill has changed the composition of workers across space and reinforced the productivity benefits of urban agglomeration economies.

Chart 5
City Size and Wage Inequality, 1980 and 2015



Sources: U.S. Census Bureau, 1980 Decennial Census and 2015 American Community Survey (IPUMS).

Notes: The figures shown on the x-axis correspond to the log of metropolitan area population. Gray lines are fitted linear trendlines for 1980 and 2015.

3.1 Large Metro Areas Now Tend to Be the Most Unequal

Together, these three forces have transformed many of the largest metropolitan areas in the country—such as San Francisco and New York City—into some of the most unequal. Such places have seen strong demand for skill, tend to offer significant productivity benefits owing to agglomeration economies, and are particularly attractive to high-wage workers. Indeed, these three factors work in synergy to push up wage inequality to especially high levels in large metropolitan areas because higher-skilled workers tend to be in greater demand in large metropolitan areas, and the benefits of agglomeration tend to be strongest in larger and denser metropolitan areas. Furthermore, large metropolitan areas tend to offer amenities that draw skilled workers, resulting in more highly paid and skilled workers in these places.

We illustrate how metropolitan area size has become associated with higher wage inequality in Chart 5, which shows the correlation between city size and wage inequality in 1980 and 2015. In 1980, there was virtually no relationship between city size and the level of wage inequality; however, by 2015, the correlation increased to 0.4, indicating that larger places now tend to be more unequal. Indeed, in 1980, none of the ten largest metropolitan areas ranked among the nation's most unequal places, two of the largest areas ranked below the median, and only half of the largest metropolitan areas ranked in the top fifty most unequal places. By 2015, five of the ten

Table 2
Wage Inequality in the New York-Northern New Jersey Region, 2015 and 1980

	2015		1980	
	90/10 Ratio	National Rank	90/10 Ratio	National Rank
Fairfield, CT	8.7	1	5.6	1
New York, NY	7.0	7	4.3	44
Ithaca, NY	6.5	16	n/a	--
Rochester, NY	4.8	145	3.9	111
Binghamton, NY	4.8	151	4.5	20
Syracuse, NY	4.8	152	3.8	158
Albany, NY	4.7	156	3.8	153
Glens Falls, NY	4.7	161	3.9	119
Buffalo, NY	4.5	173	3.7	166
Utica, NY	4.2	188	3.4	186

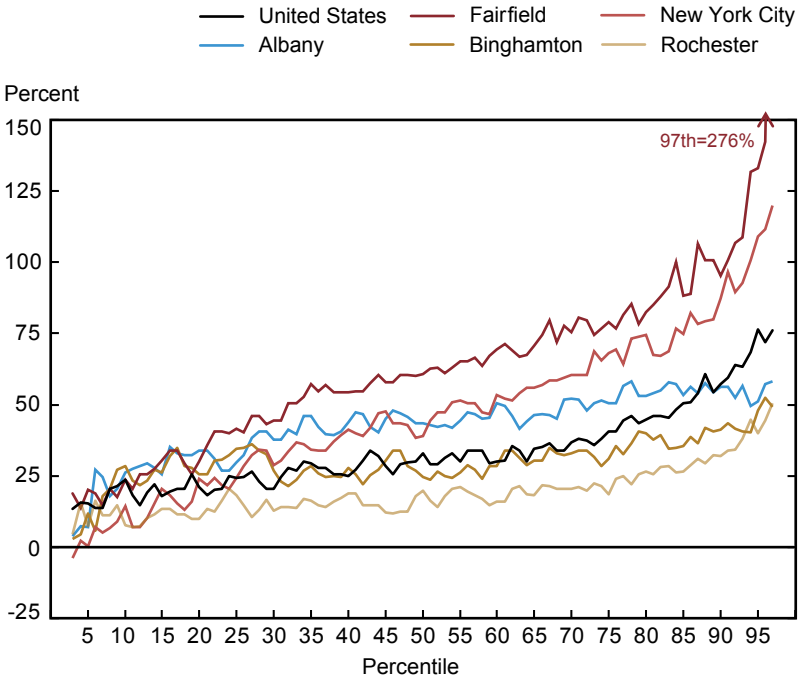
Sources: U.S. Census Bureau, 1980 Decennial Census and 2015 American Community Survey (IPUMS).
Note: Data for Ithaca for 1980 are not available.

largest areas ranked among the most unequal metropolitan areas in the country, and all of the ten most populated ranked among the top fifty. In fact, rising inequality in the United States has largely been an urban phenomenon, with recent research estimating that about a quarter of the nationwide increase in wage inequality is explained by the more pronounced divergence in wages that has occurred in larger places compared with smaller places.[14]

4. Wage Inequality in the New York-Northern New Jersey Region

The New York-Northern New Jersey region is home to some of the most and least unequal places in the country. Table 2 presents 90/10 ratios for the metropolitan areas in the region, and shows that Fairfield, Connecticut, ranked as the most unequal metropolitan area in the nation in both 1980 and 2015. The New York City metropolitan area is also among the most unequal metropolitan areas in the country, though this has not always been the case—in 1980, it ranked forty-fourth nationally, but it rose to become the seventh most unequal metropolitan area by 2015. By contrast, wage inequality generally held at much lower levels throughout upstate New York during this period. With the exception of Ithaca, each of the upstate metropolitan areas ranked among the least unequal metropolitan areas in the country in 2015. With a 90/10 ratio of 6.5, Ithaca ranked sixteenth in the nation in terms of wage inequality. This high

Chart 6
Real Wage Growth for New York-Northern New Jersey Metropolitan Areas by Percentile,1980-2015



Sources: U.S. Census Bureau and Bureau of Labor Statistics, Current Population Survey (IPUMS); U.S.Census Bureau, 1980 Decennial Census and 2015 American Community Survey (IPUMS); U.S. Bureau of Economic Analysis, PCE Price Index.

level of wage inequality is common in college towns, where universities with relatively well-paid professors and other professionals stand out in an otherwise small local economy.[15]

To better understand the sources of rising inequality among the New York-Northern New Jersey region's metropolitan areas, in Chart 6 we plot local wage growth distributions for the 1980 to 2015 period for a number of metropolitan areas in the region. The wage growth profiles for the Fairfield and New York City metropolitan areas are relatively steep with stronger wage growth across the board compared with the nation and other metropolitan areas in the region—particularly at the upper end of the wage distribution. Rising wage inequality in these metropolitan areas was largely a result of workers toward the top seeing especially strong wage gains, coupled with modest growth for those toward the middle and lower portions of the distribution.

Though local wage growth distributions are upward sloping for the metropolitan areas in upstate New York, they are relatively flat in shape and generally lay below the national wage growth profile.[16] This pattern suggests that wage growth was sluggish across the board in upstate New York, though those toward the top of the distribution did see more significant

wage growth than those toward the middle and bottom. This pattern is driven primarily by steep job losses in manufacturing stemming from technological change and globalization, as has been experienced in many metropolitan areas in the Great Lakes region more generally. These forces have reduced the number of middle-skilled workers and stifled wage growth more broadly. Furthermore, upstate New York has in general seen relatively modest demand for higher-skilled workers, and it does not possess particularly strong agglomeration economies, keeping wage growth relatively muted for upper-wage earners. All in all, while metropolitan areas in upstate New York tend to be among the least unequal in the country, the relatively low level of inequality has been driven by weak demand for workers, especially skilled workers.

An interesting juxtaposition exists between New York City's rise into the top ten most unequal places in the country and the decline in Binghamton's relative position in the rankings. Binghamton was one of the most unequal places in the country in 1980, ranking twentieth in the nation, but was among the least unequal by 2015, ranking 151st. The New York City metropolitan area, on the other hand, moved in the opposite direction, ranking forty-fourth in 1980 but increasing its position to seventh by 2015. The changes in the relative position of these metropolitan areas are largely the result of changes in the demand for skilled and well-paid workers. In Binghamton, IBM was a dominant presence in 1980, with its regional headquarters in the area employing a large number of skilled workers and well-paid executives. By 2015, IBM and many of its highly paid workers were all but gone, reducing wage inequality among the remaining population of workers. In contrast, the New York City economy was not faring particularly well in 1980, but during the 1980s and 1990s, jobs and incomes surged as the finance sector grew. As Wall Street employed increasing numbers of highly paid workers during this time, the gap in pay between finance industry workers and other workers in the area increased, pushing wage inequality significantly higher. These movements highlight the fact that a relatively low level of regional wage inequality can be the result of a weakening local economy, while relatively high regional wage inequality can be an outcome of strong but uneven economic growth.

Finally, although Albany is also among the least unequal places in the country, the area's local wage growth profile (shown in blue on Chart 6) differs from that of the rest of upstate New York. Albany-area workers up to the 90th percentile experienced above-average wage growth from 1980 to 2015, but those beyond the 90th percentile saw more subdued wage growth. What makes Albany so different from the rest of upstate New York? As the state capital, Albany has a significant number of government jobs, which tend to be relatively stable and provide steady wage increases. In addition, while Albany's manufacturing base has experienced long-term decline, the region's burgeoning nanotechnology cluster has helped the region add skilled manufacturing jobs. These two factors have provided support to the middle of Albany's local wage growth distribution.

5. Conclusion

Wage inequality has increased significantly in the United States since the early 1980s. This trend has been driven primarily by technological change and globalization, which have resulted in strong demand and wage growth for those at the top of the wage distribution and more muted

wage growth for workers toward the middle and bottom. Importantly, the economic effects of technological change and globalization have been geographically concentrated. In some places, the demand for skill has been robust, leading to strong wage growth for top earners. In other, often distinct places, technological change and globalization have displaced workers and depressed wage growth for many middle- and lower-skilled workers. As a result, some places are much more unequal than others.

Increases in the demand for high-skilled workers have been most pronounced in large and dense urban areas, such as San Francisco and New York City, while decreases in demand for lesser-skilled workers have been concentrated in other places, such as Detroit and much of upstate New York. The places where demand for skill has been strongest tend to be large urban areas with agglomeration economies and appeal for skilled workers. At the other end of the spectrum, many of the least unequal places in the country have struggled with weak economic conditions, resulting in sluggish demand for workers, particularly in regions where manufacturing jobs have plummeted over the past three decades. This weak demand has led to more subdued wage growth for workers toward the upper portions of the wage distribution, coupled with either a modest increase or a decrease in wages for those toward the middle and bottom of the wage distribution.

Indeed, as our analysis shows, a relatively low level of regional wage inequality is often the result of a weakening local economy, while relatively high regional wage inequality is often a consequence of strong but uneven economic growth. Thus, to the extent that regions wish to address inequality in their local area, these findings are an important first step to understanding the magnitude and sources of regional wage inequality.

Notes

[1] We make use of Integrated Public Use Microdata Series (IPUMS) data in this study (Ruggles et al. 2015).

[2] These figures do not measure wages for the same workers over time, but rather identify wages for workers at each percentile in the wage distribution at different points in time. We use the Personal Consumption Expenditures (PCE) deflator to adjust for inflation in our analysis because the Consumer Price Index (CPI) tends to overstate the cost of living. As a result, our analysis points to slightly higher wage growth across the wage distribution than analyses performed using the CPI. See Sacerdote (2017) for a detailed analysis of the magnitude of this CPI bias.

[3] Because of reporting and top coding issues, we do not present wage growth statistics for the bottom and top few percentiles of the wage distribution.

[4] Murphy and Topel (2016) show that these patterns hold separately for men and women.

[5] See, for example, Goldin and Katz (2008) and Autor (2014).

[6] See, for example, Autor, Katz, and Kearney (2006, 2008), Acemoglu and Autor (2011), and Autor, Dorn, and Hanson (2015).

[7] See Autor, Manning, and Smith (2016).

[8] See Glaeser, Resseger, and Tobio (2009) and Lindley and Machin (2014).

[9] See Autor, Dorn, and Hanson (2013) and Acemoglu and Restrepo (2017).

[10] See Duranton and Puga (2004) and Abel and Deitz (2015).

[11] See Glaeser and Resseger (2010) and Abel, Dey, and Gabe (2012).

[12] See Baum-Snow, Freedman, and Pavan (2018), Giannone (2018), and Autor (2019).

[13] See Berry and Glaeser (2005), Diamond (2016), and Ganong and Shoag (2017).

[14] See Baum-Snow and Pavan (2013).

[15] We are not able to provide Ithaca's 1980 90/10 ratio because of data limitations.

[16] The wage growth profiles for Buffalo, Syracuse, and Utica look quite similar to those shown in Chart 6 for Binghamton and Rochester. Ithaca's wage growth profile could not be calculated because data for 1980 are not available.

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