The public health emergency created by the COVID–19 pandemic has led to an economic crisis. Midway through 2020, approximately 15 million fewer people were at work than at the start of the year, a decrease of about 10 percent in the share of the population employed. Millions more who remain on the job have lost hours and earnings, face ever–greater uncertainty about their employment and economic security, or have become subject to more difficult or less safe working conditions. And these effects have been unevenly distributed by race, income, gender, and other factors: workers who are already disadvantaged are suffering some of the greatest losses and facing some of the most significant threats to their livelihoods and their very lives. Employment losses have been relatively larger among Black and Hispanic workers than for white workers, and the majority of job losses in the early months of the pandemic were in low–wage occupations (Amburgey and Birinci 2020).
For policymakers and researchers, employers and worker advocates, and everyone concerned with workers’ general welfare and economic prospects, accurately understanding and effectively addressing the immediate crisis is rightly the most urgent priority.

But the challenge of providing security and relief to workers during the pandemic is magnified by and exposes the precarious position that many workers were in even before the crisis. Much as the coronavirus itself carries greater risks for those with underlying health conditions, the economic effects of the immediate crisis are amplified by decades of disappointing labor market outcomes for workers.

In this brief, we discuss the performance of the United States labor market for the typical worker over the longer term by focusing on wages, which are a key indicator of worker well-being and labor market health. We present now-familiar evidence that from 1979 to 2019, wages have grown slowly for many workers. We review how neither broader measures of compensation and income nor the challenges associated with measuring wages and prices overturn the conclusion that real wage growth has been sluggish. We conclude with a brief discussion of what we know and what we don’t know about the causes of these trends and of potential directions for research and policy.

Wage Growth in Recent Decades

Wages, or the portion of a worker’s total compensation from work that they see in their paycheck, per hour worked, work well to track and represent how workers are faring for at least two reasons. First, they are a good summary measure of workers’ welfare. Most working-age people get most of their total income from work, which they receive mostly in the form of wages and salaries (Piketty, Saez, and Zucman 2018). Higher real wages (i.e., wages adjusted for inflation) mean greater purchasing power and the possibility of a higher standard of living for workers and their families.

Second, wages, being the returns to work determined by the labor market, are a direct indicator of the overall health of the labor market—of how well labor markets are serving, or failing, workers. When competitive labor markets are functioning well and the productive capacity of workers and the economy are growing, wages should rise. Slow wage growth suggests imperfections or imbalances in the labor market or the economy as a whole, which potentially indicate the need for a policy response.
Cumulative growth in the real median wage and real GDP per capita since 1979

Sources: Bureau of Labor Statistics; Bureau of Economic Analysis; National Bureau of Economic Research (NBER); and authors' calculations.

Notes: Wage data are from the Current Population Survey, Merged Outgoing Rotation Groups; we use the Merged Outgoing Rotation Groups data files made available by the Center for Economic and Policy Research. Wages are for prime-age (25–64), nonagricultural workers, and are inflation adjusted using the CPI-U-RS. Real GDP per capita data are from Bureau of Economic Analysis; we retrieved this data series from Federal Reserve Economic Data at the Federal Reserve Bank of St. Louis. Gray bars indicate recessions as defined by NBER.

To characterize wage growth over time, we focus on trends in the median wage, using the midpoint of the overall wage distribution as an indicator for the wages of a typical worker. Figure 1 shows the cumulative growth in the real median wage for prime-age workers (those between 25 and 64) from 1979 to 2019, up to the onset of the COVID-19 pandemic and roughly the peak of the most recent business cycle. We can see that over this time, which would encompass the entire working life of a young worker entering the labor force at the beginning of this period, the median wage is all but flat, having grown only 7.5 percent. In other words, since 1979, workers earning wages at the middle of the wage distribution have seen the equivalent of an annual raise averaging far below 1 percent a year.
To put this rate of growth of wages in perspective, the figure also shows the growth of the overall US economy over the same period. Compared with essentially stagnant wage growth, the economy has nearly doubled in size in real, per capita terms since 1979. The US economy has grown, but this growth hasn’t shown up in wages.\(^4\)

Importantly, this lack of wage growth has not been true for all workers: as shown in figure 2, workers at the top of the wage distribution have been faring better than those at the middle. At the 90th percentile, for example, wages grew 39 percent from 1979 to 2019. If workers at the median had experienced similar wage growth, the median wage in 2019 would be $27.50 rather than its actual value of $21.25. For a full-time, full-year worker, this would be a difference of about $12,500 a year.

**FIGURE 2**

*Wages Across the Distribution, 1979–2019*

*Cumulative growth in real wages at the 10th, 50th, and 90th percentile since 1979*

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**Sources:** Bureau of Labor Statistics; National Bureau of Economic Research (NBER); authors’ calculations.

**Notes:** Wage data are from the Current Population Survey, Merged Outgoing Rotation Groups; we use the Merged Outgoing Rotation Groups data files made available by the Center for Economic and Policy Research. Wages are for prime-age (25–64), nonagricultural workers, and are inflation adjusted using the CPI–U–RS. Gray bars indicate recessions as defined by NBER.
Slow wage growth means that from the perspective of the overall labor market, middle- and low-wage workers today are doing little better in real terms than similarly situated workers 40 years ago. These conditions also reflect constrained prospects for rising living standards and upward mobility for many individual workers. When labor markets are working well—when wages are growing over time across the wage distribution—workers could be thought of as riding an escalator: their living standards are rising as they share in the benefits of economic growth.

But when wage growth stalls, the escalator stops. Earning more over the course of a lifetime or a career is less automatic and requires more active climbing. For workers to raise their earned income requires working longer hours or obtaining a better-paying job, which can often require additional training or education. Findings of limited or declining upward mobility among US workers in absolute terms, both within and across generations, are consistent with slow wage growth (Acs and Zimmerman 2008; Chetty et al. 2017).

Differences in wage growth at different points in the wage distribution also affect workers’ ability to improve their economic standing in relative terms. To borrow a metaphor, as the steps that workers need to climb move farther apart, they become harder to ascend, impairing relative mobility or movement up the wage distribution (Chetty et al. 2014). As figure 2 illustrates, the escalator never stopped working for workers at the 90th percentile even as it broke down for workers at the median, leaving those workers further behind.

**Gender, Race, and Ethnicity**

Trends in wage growth and their consequences for workers also exhibit important differences across demographic groups. One central difference is in the experiences of men versus women, as shown in figure 3. Although wages stagnated or fell slightly for men (about 5 percent), they did rise substantially for women (about 30 percent). This divergence reflects, in part, the broader changes in the social, economic, educational, and labor market status of women during this period (see, for example, Goldin 2006). When interpreting the differences in wage growth, note that the higher rate of growth in women’s wages was from a lower starting point, such that even after four decades of faster
growth, the median wage for women in 2019 remained below that for men. The persistence of the gender wage gap is attributed to several factors, including occupational differences, wage penalties and the effects of workforce interruptions related in part to motherhood and traditional gender roles, and discrimination (Blau and Kahn 2017).

**FIGURE 3**

**Wage Growth by Gender, 1979–2019**

*Median wage for men and women since 1979*

Sources: Bureau of Labor Statistics; National Bureau of Economic Research (NBER); authors’ calculations.

Notes: Wage data are from the Current Population Survey, Merged Outgoing Rotation Groups; we use the Merged Outgoing Rotation Groups data files made available by the Center for Economic and Policy Research. Wages are for prime-age (25–64), non-agricultural workers, and are inflation adjusted using the CPI–U–RS. Gray bars indicate recessions as defined by NBER.

There have also been important differences in wage growth by race and ethnicity over this period, as discussed in greater depth in a separate WorkRise brief (Brown 2020) concerning racial inequality in the labor market. Figure 4 shows the trends for median wages for white, Black, and Latinx workers from 1979 to 2019.¹ Wage growth over this period...
period was markedly slower for Black and Latinx workers than for white workers. These different rates of wage growth across these groups both reflect and compound the disadvantages that workers of color face from structural inequalities and discrimination (Brown 2020).

**FIGURE 4**
Wages Growth by Race and Ethnicity, 1979–2019
Cumulative growth in the median wage for White, Black, and Latinx workers since 1979

Sources: Bureau of Labor Statistics; National Bureau of Economic Research (NBER); authors’ calculations.
Notes: Wage data are from the Current Population Survey, Merged Outgoing Rotation Groups; we use the Merged Outgoing Rotation Groups data files made available by the Center for Economic and Policy Research. Wages are for prime-age (25–64), nonagricultural workers, and are inflation adjusted using the CPI–U–RS. Gray bars indicate recessions as defined by NBER.
Wages, Income, and Measurement

Although the wage growth trends shown here paint a relatively dire picture for low- and middle-wage workers, several factors lead to debates in interpreting these results.

Other Elements of Compensation and Definitions of Income

First, wages alone are of course not the only element of workers’ incomes. Even at work, wages are just one component of total compensation, which often includes nonwage benefits such as health insurance or retirement plans. And broader measures of compensation have risen faster over this period than wages for many workers. But as with wages, overall trends can obscure how relatively modest this growth has been for the typical worker. Over the past decade, for example, real, total compensation has grown only 1.8 percent at the median (while rising 9 percent at the 90th percentile).  

Just as crucially, even if nonwage compensation has gone up in recent decades for the typical worker, that growth has not necessarily translated into more money in workers’ pockets. In particular, the increase in the costs of the employer-paid portion of health insurance premiums has far outpaced wage growth over the last two decades (Kaiser Family Foundation 2019), which may depress wages (Baicker and Chandra 2006). Put another way, although rising real wages increase workers’ purchasing power, economic security, and financial well-being, rising costs of compensation do not translate as neatly into clear improvements in living standards.

Some workers, especially low- and middle-wage workers, also receive other sources of income outside of work through safety net and social insurance programs. And some important components of the safety net, such as the earned income tax credit, have grown substantially over this same period, offsetting slow wage growth to some degree. So that growth in total income for low- and middle-income families including these sources over this period is estimated to be higher than without (Congressional Budget Office 2019). But although these programs effectively raise net income—to the immense benefit of workers and their families—the key fact of low wages and poor labor market conditions remains.

More generally, research has identified debates around defining the right concepts of income for understanding trends in families’ general economic well-being over time (see, for example, Rose 2018 for a discussion of some of these issues). These issues, such as
identifying the best measures of income or making appropriate adjustments for household size, are important for understanding how well individuals, families, and households are doing overall, but they are fundamentally distinct from the issue of how workers have been doing in labor markets. Although some of these factors may offset the effects of slow wage growth, they do not overturn the central result for wages themselves.

**Measuring Wages and Prices**

Another area of debate for interpreting real wage growth in recent decades centers around some of the technical challenges associated with measuring inflation and wages. An issue that has received considerable attention from researchers is how to properly account for inflation when comparing wages across time. Different inflation indices generate different estimates of real wage growth, and there is no consensus on the most appropriate measure.\(^9\) Although we show median wage growth of 7.5 percent between 1979 and 2019 using the CPI–U–RS (above), if we instead use the Personal Consumption Expenditures (PCE) price index we find cumulative median wage growth over this period of 20 percent. Figure 5 shows wages adjusted both ways for comparison. These are important differences, to be sure. But for understanding the experience of a typical worker and the overall health of the labor market, the qualitative differences are not so stark: wage growth is relatively slow by either measure. Even using the PCE price index shows wage growth of less than 1 percent a year, and this is substantially slower than either productivity growth or economic growth over this period, as also shown in figure 5.\(^{10}\)

There is also the issue of accurately measuring wages themselves. In this brief, we have estimated wage growth using the Current Population Survey. Although this is perhaps the most commonly used survey for tracking wages in the United States, like any survey–based measure of wages, it reflects potential sources of bias and error. Other researchers have investigated earnings trends in the United States using administrative data, such as tax records, alone or in combination with survey data, to provide a more comprehensive portrait of both wages and other sources of income.\(^{11}\) These estimates tend to largely tell the same story as survey estimates for the typical worker. Piketty, Saez, and Zucman (2018), for example, using tax data combined with Current Population Survey and other survey data, show a 10.6 percent increase in median pretax labor earnings from 1979 to 2014; this is higher than the corresponding estimate from the Current Population Survey alone for the same period (2 percent) but still slow in absolute terms (and relative to higher earners).\(^{12}\)
Cumulative growth in the real median wage using alternative price indices, compared with real GDP per capita and productivity growth since 1979

Sources: Bureau of Labor Statistics; Bureau of Economic Analysis; National Bureau of Economic Research (NBER); authors’ calculations.

Notes: Wage data are from the Current Population Survey, Merged Outgoing Rotation Groups; we use the Merged Outgoing Rotation Groups data files made available by the Center for Economic and Policy Research. Wages are for prime-age (25–64), non-agricultural workers, and are inflation adjusted using the CPI-U-RS or PCE, as indicated. Real GDP per capita data are from BEA; we retrieved this data series from Federal Reserve Economic Data (FRED) at the Federal Reserve Bank of St. Louis. Productivity is real net domestic product per hour worked. Real net domestic product data are from the Bureau of Economic Analysis and retrieved from FRED. Data for total hours worked are downloaded from the Bureau of Labor Statistics. Gray bars indicate recessions as defined by NBER.

Finally, estimates of wage growth exhibit some sensitivity to choices of how to characterize trends over time, such as the period over which changes are estimated or the point in the wage distribution used to assess the condition of low- and middle-income workers. We have focused on the period of 1979 to 2019 to show the full series (the data we use became available in 1979), but there were relative bright spots (such as the 1990s). Similarly, we have focused on median wages to give a sense of a typical worker’s experience, but the same series (figure 2) shows that the experience of workers at the 10th percentile may have been slightly less bad. But it is important to put this relative sensitivity...
in broader context: under any view of these data, wage growth for low- and middle-wage workers in recent decades has been disappointing.

Where Do We Go from Here?

What has gone wrong for workers? And how can it be fixed? Researchers have ventured various explanations and built some bodies of evidence to understand what has happened and why. Some evidence identifies declining worker power (exemplified by declines in unionization) as playing a key role (Farber et al. 2018; Stansbury and Summers 2020). Recent research has pointed to the market power of firms as a potential factor in depressing wages (CEA 2016; Azar, Marinescu, and Steinbaum 2017). Other work suggests a role for the changing nature of employment relationships (Dorn, Schmieder, and Spletzer 2018; Weil 2014). A well-established line of evidence finds that technological changes may have lowered relative wages for less-skilled workers (Autor, Katz, and Kearney 2008). A related strand of research argues that the educational attainment of workers over this period did not keep pace with these technological changes (Autor, Goldin, and Katz 2020; Goldin and Katz 2008). Patterns in international trade may have held down wages for workers exposed to import competition (Autor, Dorn, and Hanson 2013).

Policymakers, for their part, have a range of tools at their disposal that potentially shape outcomes for workers. These include labor market policies and regulations, such as minimum wages (Dube 2019), or the legal regimes governing workers’ ability to engage in collective bargaining. But they also, importantly, include many other dimensions of social and economic policy. For example, to the extent that the market power of firms holds wages down, there may be a role for competition policy (Naidu, Posner, and Weyl 2018). Tax policy might also affect bargaining incentives and labor market earnings (Piketty, Saez, and Stantcheva 2014). Trade policy is potentially a factor, as are education and active labor market policies related to human capital development. Effective social insurance, such as unemployment insurance, can improve labor market outcomes (Farooq, Kugler, and Muratori 2020; Rothstein 2011), as can work–family policy, such as child care and leave policies (Blau and Kahn 2013; Morrissey 2017). Even fiscal and monetary policy potentially play an important role in determining wage growth for low-wage workers, as adequate aggregate demand creates the conditions for tight labor markets that can lead to market wage growth (Katz and Krueger 1999; Okun 1973).
There is a lot that researchers and policymakers still need to learn about not only the causes and mechanisms leading to slow wage growth but also the nature of effective and equitable solutions. Further research and evidence building are clearly needed. But the challenges facing workers are well established and pressing. And the current state of knowledge provides important insights that policymakers and others can act on, and that economic and labor market policy can adapt to reflect, even now. The costs of allowing wages to continue to grow sluggishly for another decade or another generation—to workers, their families, the economy, and society—would be enormous. A recovery from the COVID-19 pandemic and the current recession that fails to also tackle the larger project of rebuilding a labor market that provides sustained, real wage growth will be insufficient to restore prosperity and upward mobility for too many workers.

Notes

1 Here and throughout, we use the term “wages” to refer generally to cash earnings per hour worked whether received as an hourly wage or as a salary. For salaried workers, effective wage rates are earnings per hour worked.

2 The median wage also has the advantage of being less sensitive to the changes in the shape of the wage distribution over time due to increases in wage inequality, discussed briefly later in this brief.

3 It is important to note that these data show median wages over time in repeated cross sections of workers, not the trajectory of wages over time for individual workers. Individual workers can and do move up (and down) the wage distribution over the course of their working years, and tracing workers’ earnings trajectories over time as well as their movement across the earnings distribution is the subject of research using different sources of data (see, for example, Acs and Zimmerman 2008; Chetty et al. 2017). The relationship of wage growth in aggregate to the earnings growth of individual workers is discussed briefly later in this brief.

4 A comparison of wage growth with the growth of productivity, or output per hour worked, over this period, shown and discussed more later in this brief, yields a qualitatively similar result.

5 Note that women are also more likely to work part time than men, which in addition to the wage gap is another contributing factor to differences in total earnings between men and women.


7 In addition, expensive employer-sponsored health insurance may also lead to job lock among low-wage workers (e.g., Bansak and Raphael 2008; Hamersma and Kim 2009), potentially creating an additional brake on economic mobility.
Note that this is for (adjusted) household income, which is a different concept from wages. Additional detail on the measures and methods used by the Congressional Budget Office is provided in its publication (Congressional Budget Office 2014).

Janson, Verbrugge, and Binder (2020) provide a discussion of the differences between the CPI and PCE as inflation measures and the sources of their divergence over this period.

And note that the inflation adjustment has an identical effect of scaling wage growth at different points in the distribution, so the relative growth rates in figure 2 still hold qualitatively.

Administrative and survey data each have strengths and weaknesses for measuring earnings. Administrative data are a source of accurate records for the elements of income they capture, and they provide more accurate information on higher earners in particular. Survey data can capture sources of income that do not appear in administrative records, such as untaxed benefits, and cover individuals who do not appear in administrative records.


References


**About the Author**

**William J. Congdon**, a principal research associate in the Center on Labor, Human Services, and Population at the Urban Institute, is a labor economist with more than a decade of experience conducting and applying research to inform economic and social policy. His work focuses on labor market policy, social insurance, and the safety net. His research emphasizes the perspective of behavioral economics and the role of experimental methods for understanding economic outcomes and developing policy.

Congdon was previously a senior economist at the Council of Economic Advisers. He also was a fellow and founding member of the White House Social and Behavioral Sciences Team, an Obama administration initiative that translated insights from behavioral economics research to a wide range of policy issues. He holds a PhD in economics from Princeton University.

**Errata**

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