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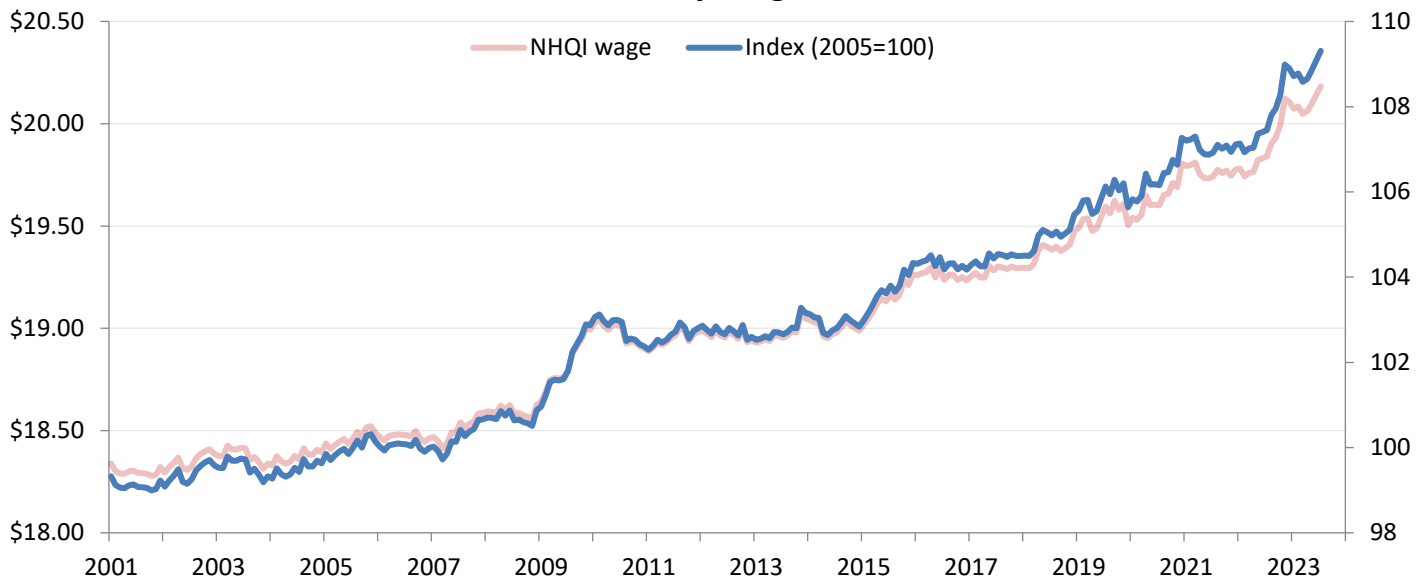
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Upjohn Institute New Hires Quality Index hits another new high for July 2023, plus special Labor Day look at actual real wage growth

KALAMAZOO, Mich.— The Upjohn Institute New Hires Quality Index shows inflation-adjusted hourly earnings power of individuals starting a new job increased 0.2 percent between June and July 2023, to \$20.18, besting last month's record by 4 cents. Over the past 12 months, the index is up 1.7 percent; since 2005, it is up 9.3 percent. After falling the previous three months, hiring volume was unchanged in July, but it remains 3.1 percent below its level 12 months ago and is just 0.4 percent above its prepandemic (February 2020) level. Adjusting for population growth, however, hiring rates are now 2.0 percent below the pre-COVID baseline. As the labor market continues to cool, the likelihood of taking a new job is easing, especially if that new job is in a lower-paying occupation.

The index and accompanying [interactive database](#) and [report](#), developed by Upjohn Institute economist Brad Hershbein, fill a key gap in the measurement of hiring activity. The NHQI provides monthly updates on the volume and occupation-based wages of newly hired workers, and is available for different groups based on sex, age, education, and other characteristics.

New Hires Hourly Wage Index: All



SOURCE: Upjohn Institute New Hires Quality Index

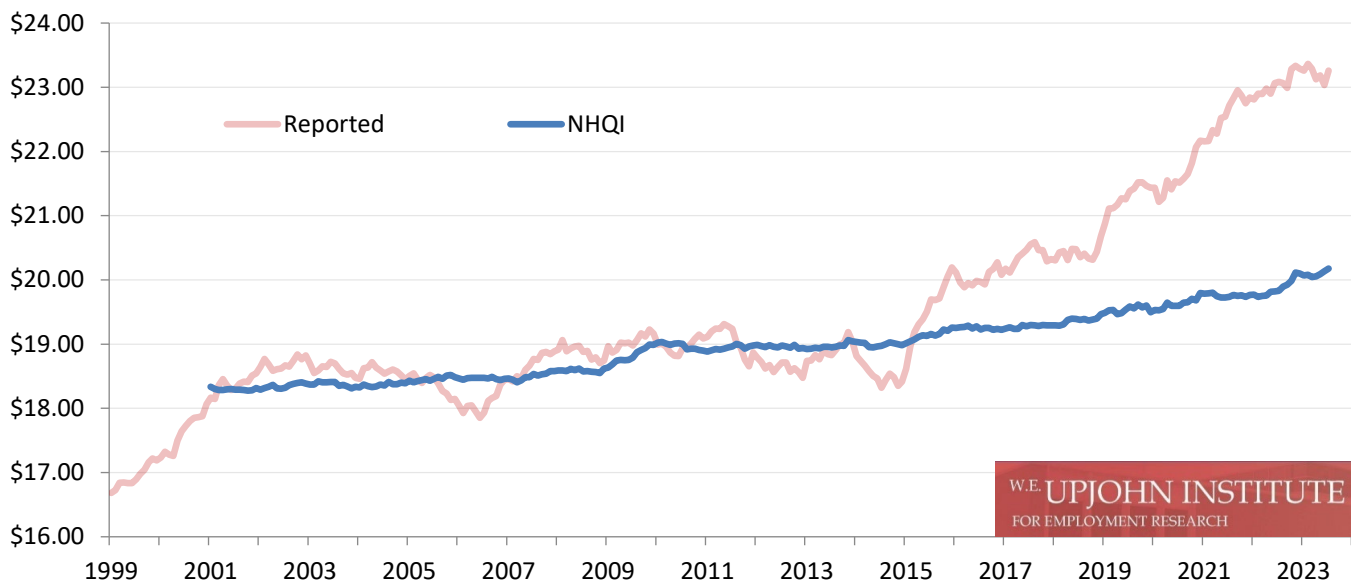
NOTE: The lighter line uses the left axis and shows the inflation-adjusted hourly wage of new hires. The darker line uses the right axis and shows the relative change since the base year of 2005.

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FOR EMPLOYMENT RESEARCH

For this month’s release around Labor Day, we again showcase trends in actual, reported wages of newly hired workers and compare these with the NHQI. As documented in the FAQ below, the NHQI does **not** measure actual wages of newly hired workers but rather their earnings power as proxied by their occupation and demographic characteristics. While there are pitfalls to using actual wages of new hires (also described in the FAQ), they can sometimes be illustrative, especially when compared to the NHQI. In particular, because existing [theory](#) and [evidence](#) suggest that wages of new hires should be more responsive to economic conditions than wages of incumbents, looking at growth in the former can shed important insight on the strength—or possible weakness—of the labor market. This may be especially relevant during the late stages of the COVID-19 jobs recovery, as inflation had until very recently [eroded](#) even [historically high nominal wage growth](#) for many incumbent workers.¹

The NHQI shows that newly hired workers have steadily become more skilled, with particularly sharp growth during the Great Recession, in 2015, during 2018–2020, and again in 2022, but it does not address whether these workers are being paid commensurate with these higher skills, or how a stronger economy has translated into actual wage growth. The figure below plots the NHQI wage index (in blue) and the average self-reported wage of newly hired workers (in salmon); both are adjusted for inflation to year 2022 dollars.²

NHQI and Self-Reported Hourly Wage



While NHQI trends tend to be gradual, given their construction, actual self-reported wages of new hires have tended to change in rapid spurts. As [profiled earlier](#), there have been periods of rapid wage growth in the late 1990s, in the mid-2000s right before the Great Recession, in 2015, in [early 2019](#), and most recently during the pandemic recovery of late 2020 through [late 2021](#). During other times wage growth

¹ Adjusting for inflation, average hourly wages of all employees in July 2023 were up 0.7 percent since February 2020, but they had been down about 1 percent in the summer of 2022. These averages, however, mask large decreases for some workers and sizable increases among others.

² As detailed in the [technical report](#), the reported wage includes only non-imputed responses, and for consistency with the NHQI, is also shown as a 12-month lagged moving average. The figure is an updated version of the one in the technical report and previous July NHQI releases.

has stalled or even turned negative. On net, inflation-adjusted wages of newly hired workers were largely stagnant between 2002 and 2014, with slight dips in 2005 and 2014.

The past year or so has represented a slowdown in this wage growth after the frenzied pace of the early pandemic recovery. Whereas inflation-adjusted wage growth for new hires surged at an annualized rate of 3.6 percent between July 2020 and July 2022, the fastest clip this century, wage gains were a far more tepid 0.8 percent over the most recent 12 months. What's more, the current (July 2023) average real wage of new hires, \$23.26, is actually slightly less than it was at the beginning of the year. The deceleration reflects both the lagged effect of inflation and smaller nominal wage increases as the labor market gradually cools from its earlier white-hot level. The findings also corroborate [recent news accounts](#). Nonetheless, wages of new hires have seen powerful growth over the past eight years; even after accounting for inflation, wages are up 19.2 percent since 2015, equivalent to an average annual growth rate of 2.4 percent.

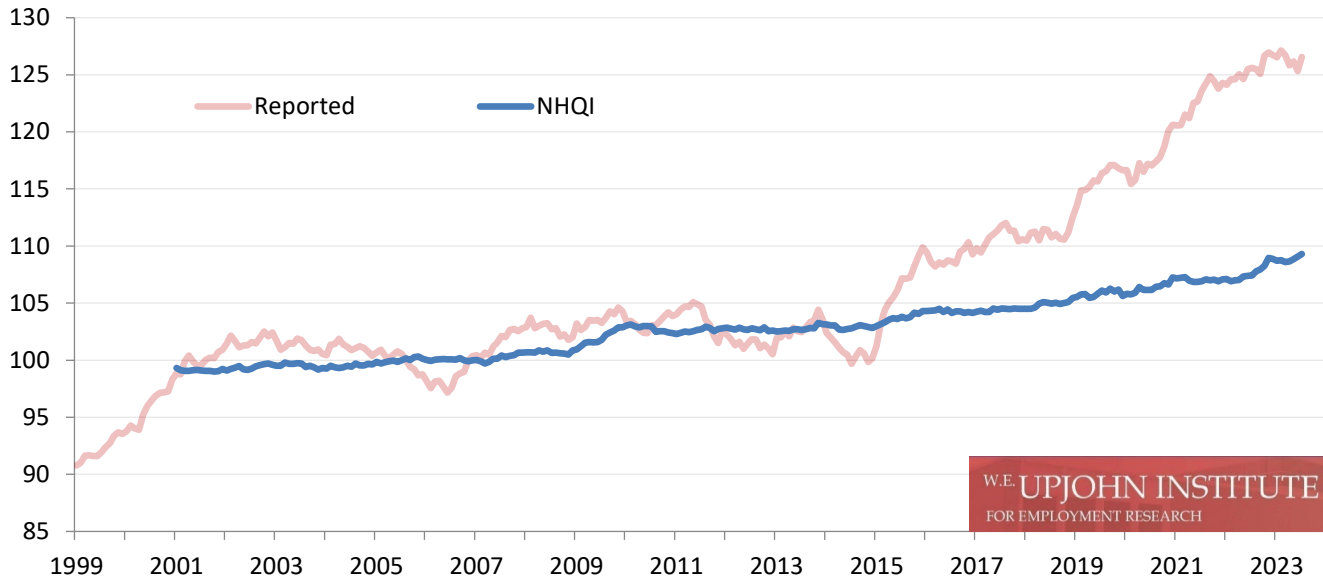
How does recent wage growth of new hires compare to that of incumbent workers? Rather than compare wage growth of [all payroll workers](#), which reflects rapid changes in the composition of jobs lost in the spring of 2020 and gained since, a better approach is to instead compare the wage growth of new hires with the wage growth of the same group of individual workers employed one year apart. The Atlanta Federal Reserve Bank's [Wage Growth Tracker](#) shows that the median worker employed in both July 2022 and July 2023 experienced nominal wage growth of 5.7 percent, but after adjusting for inflation, real wage growth was closer to 2.7 percent.³ This is not only more than triple the inflation-adjusted wage growth of new hires over the same interval, it is also a sharp reversal from the pattern of the preceding two years, July 2020 to July 2022, when inflation-adjusted wage growth of new hires far outpaced that of steadily employed workers. This is a consequence of the rapid deceleration of inflation over the past 12 months, in conjunction with nominal wage growth slowing faster for new hires than for incumbent workers. It is also an additional [indication](#) that the labor market is easing.

An additional reversal from the previous two years is that the 0.8 percent year-over-year real wage growth of newly hired workers is slower than the 1.7 percent increase in the NHQI wage index over the same period. Roughly speaking, the difference between the two series implies that average real wage growth, controlling for changes in the occupations and demographics of new hires, is *down* about 1.0 percent between July 2022 and July 2023, after having increased in each of the previous two years.⁴

³ The Wage Growth Tracker shows *nominal* wage growth, unadjusted for inflation; the numbers shown here are adjusted for inflation [in the same manner](#) as the self-reported wage growth of new hires.

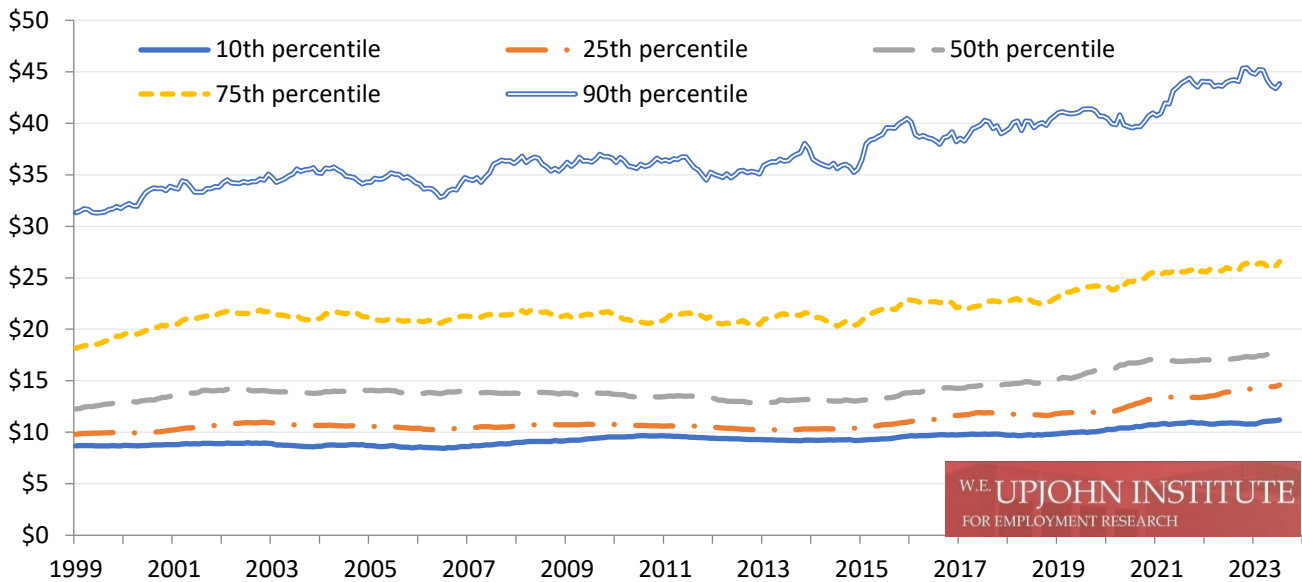
⁴ The increase was 4.8 percent between July 2020 and July 2021, and 1.1 percent between July 2021 and July 2022. Since 2005, the total increase in the real wages of new hires, controlling for changes in occupations and demographics, has been 15.8 percent, or about 0.84 percent per year.

NHQI and Self-Reported Hourly Wage (2005=100)



To understand longer-term changes, we normalize each wage series to its respective value in 2005, shown in the figure above. Inflation-adjusted, self-reported hourly wages of new hires have grown 26.6 percent since 2005, with essentially all this growth occurring since 2015. Netting out the 9.3 percent growth in the NHQI since 2005, composition-adjusted real wages of new hires have grown 17.3 percent, or about 0.9 percent per year. (Since 2015, they have grown 2.1 percent annually.)

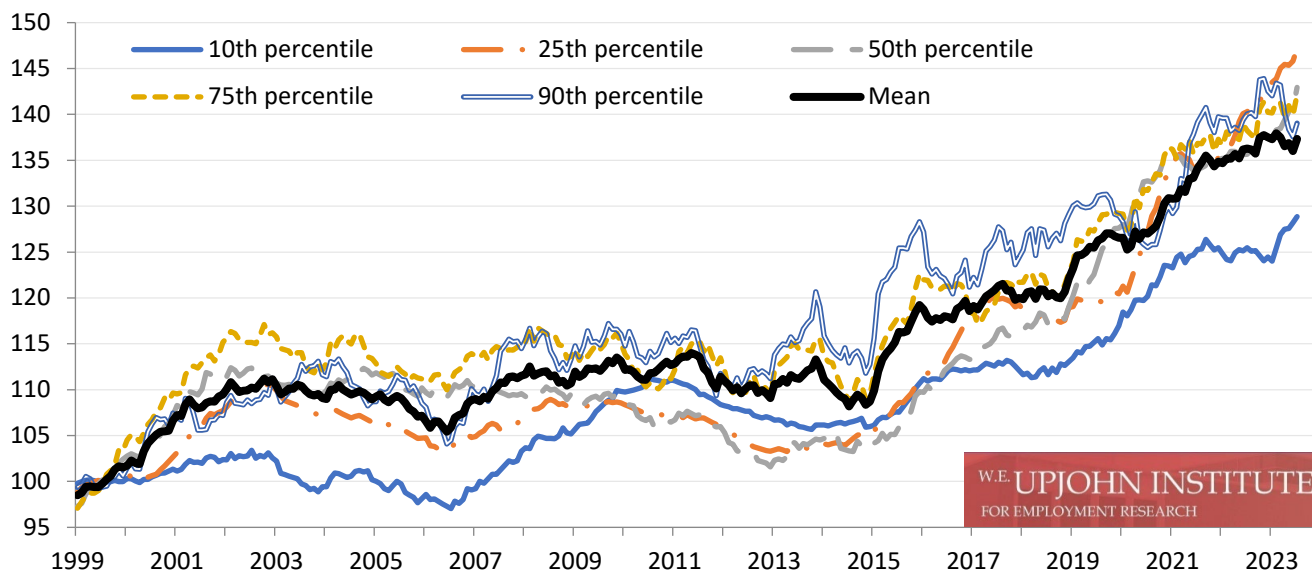
Self-Reported (Real) Hourly Wage, Selected Quantiles



Growth in the average wage, however, does not necessarily mean that all parts of the wage distribution are growing similarly. The speedup of 2020 and 2021, and the recent slowdown since 2022, could be widespread or it could be driven by higher (or lower) earners. The figure above provides context by showing the real hourly reported wage (in 2022 dollars) of new hires for different percentiles. For example, at the 10th percentile—the point at which 10 percent of new hires makes less and 90 percent make more—hourly wages in July 2023 were about \$11.20, \$3.95 above the federal minimum wage (but still below 19 states' minimum wages). In contrast, at the 90th percentile, wages were \$43.85 per hour,

nearly four times as much. The 50th percentile, or median, where half of newly hired workers earn more and half earn less, was \$18.01, much less than the mean value of \$23.26 found above. The divergence in earnings between the typical new hire (represented by the median) and the average (skewed by higher earners) speaks to the importance of looking at the entire wage distribution.

Self-Reported (Real) Hourly Wage, Selected Quantiles (1999=100)



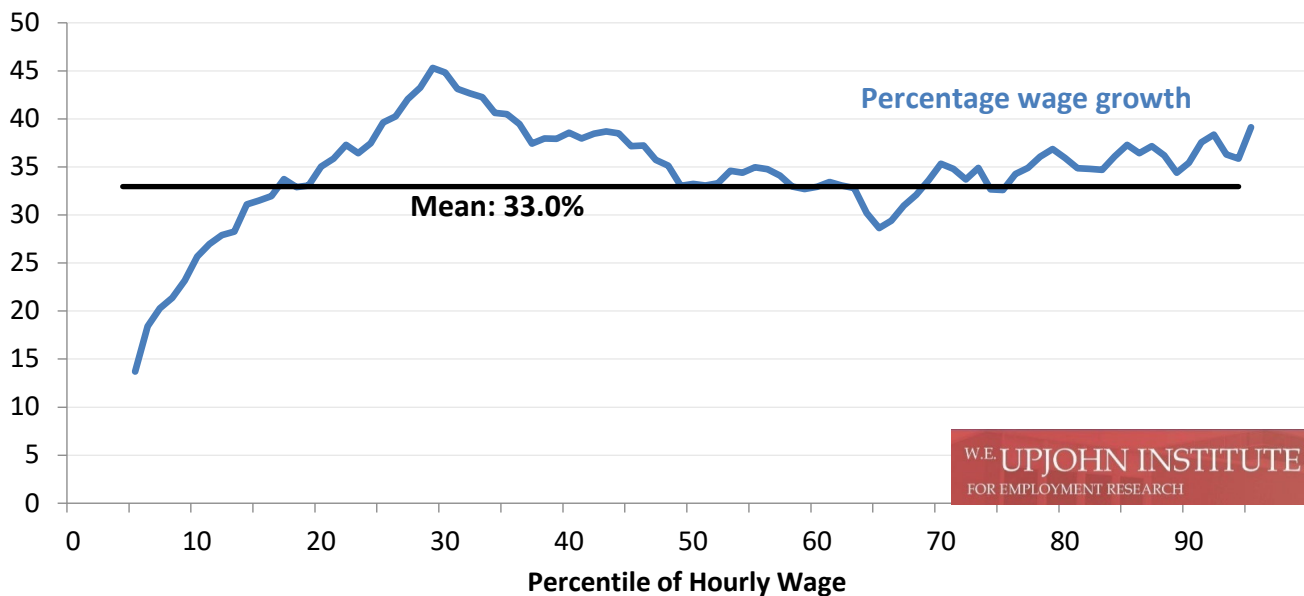
To see growth in the distribution more clearly, however, it is helpful to normalize the series. In the figure above, each selected wage percentile is normalized to its value in 1999, and the mean is included for reference. Since 1999, the average inflation-adjusted, self-reported hourly wage of new hires has increased by 37.3 percent (thick black line). This works out to an annualized rate of growth of 1.33 percent since 1999, but almost all this growth was concentrated in the late 1990s or since 2015, with a noticeable slowdown since the beginning of 2022. (Over the past 12 months, for instance, the inflation-adjusted mean wage has risen only 0.8 percent). As mentioned earlier, the average real wage of new hires was essentially unchanged between 2002 and 2014.

The graph also shows sizable deviations over the long term for the different percentiles. Since 1999, for example, the 10th percentile real wage of new hires has risen by 28.9 percent, while that for the median is up 42.9 percent, and that for the 90th percentile is up 39.0 percent. Since the COVID recovery began in the summer of 2020, cumulative growth has been uneven, with increases of 15.7 percent at the 25th percentile and 10.8 percent at the 90th percentile, and much smaller gains of 7–8 percent at the 10th, 50th, and 75th percentiles. Over the *past 12 months*, however, growth has stalled at the 90th percentile, with inflation-adjusted wages of new hires at this point of the distribution actually slipping 0.7 percent. In contrast, the other quantiles have continued to see sizable gains, at 2.7 and 2.9 percent for the 10th and 75th percentiles, respectively, and even more rapid annual gains of 4.9 and 5.4 percent at the 25th and 50th percentiles. This means that the recent slowdown in *mean* wage growth, described in the previous paragraph, is driven by the slippage at the top, even as the rest of the distribution of new hires has continued to see rapid wage growth.

These trends suggest that wage inequality among new hires has narrowed over the past year. Taken together with the slowdown in the occupation-based NHQI wage index, real wage growth among new hires since the summer of 2022 has been concentrated in lower-paying occupations. Nonetheless, the strongest labor market we've seen in over 20 years has done little to close the long-term wage gap at the

bottom among new hires. The figure below shows cumulative (inflation-adjusted) hourly wage growth of new hires, for nearly the entire wage distribution, between the late 1990s and the most recent 36 months.⁵ Over this near quarter of a century, wage growth has averaged 33.0 percent, and the upper four-fifths of new hires have either exceeded this growth number or stayed within a few percentage points below it. Wage growth in the lower-middle part of the distribution—around the 25th to 45th percentiles—has been especially brisk, allowing for some catchup with the top half. However, the wage growth of the bottom fifth—and especially the bottom tenth—has lagged behind considerably. Although the strong labor market of the past few years has helped reduce wage inequality among new hires—and lift living standards—it has still not been enough to make up for the preceding decades of slow growth at the bottom. As hiring continues to cool due to higher interest rates and the exhaustion of accumulated pandemic savings, the least-paid newly hired workers risk falling further behind.

Self-Reported Distributional Wage Growth: 1999–2022



These statistics and many more, as well as interactive charts and data downloads, can be found at the website for the Upjohn Institute New Hires Quality Index: www.upjohn.org/nhqi.

The full report, including methodology, can be found here: https://www.upjohn.org/sites/default/files/2021-05/NHqi_report_0.pdf.

All data will be regularly updated during approximately the first week of the second month following the reference of the data release month. For example, data for August 2023 will be released during the first week of October 2023. To sign up to regularly receive monthly press releases for the Upjohn Institute New Hires Quality Index, visit: www.upjohn.org/nhqi/signup.

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⁵ The endpoints are the averages of 1998–2000 and August 2020–July 2023; 36-month averages are used to allow sufficient sample sizes to make comparisons over the whole wage distribution.

FAQ

1. What is the New Hires Quality Index?

The New Hires Quality Index (NHQI) is a consistent way of measuring the earnings power of people taking new jobs each month, allowing comparisons over time.

2. How is the Index constructed?

The Index is based on the occupations of newly hired workers as documented in the [Current Population Survey](#), the same source used to produce the national unemployment rate each month. Separate data on the hourly wages for each occupation from another government survey, [Occupational Employment Statistics](#), are connected to the newly hired workers in the Current Population Survey. These hourly wages are then statistically adjusted to account for differences in the demographic composition of new hires (sex, race and ethnicity, education, and age) before being averaged.

3. Does the Index measure actual, reported wages of newly hired workers?

No. Although the data used to create the Index do have some information on self-reported wages (or those reported by another household member), many economists consider these self-reported wages [increasingly unreliable](#), as a growing fraction of workers refuse to answer the wage questions, and the government's attempts to impute (make an "educated guess") for these workers are [problematic](#). Moreover, because relatively few workers are even asked the wage questions, and only a small subset of these are newly hired, use of the self-reported wage data would lead to very small samples.

The Index captures change in the wages of new hires due to both changes in the mix of occupations hired and the demographic characteristics of individuals taking new jobs. It will not capture change in the wages of new hires due to other factors, such as individual aptitude, geography, or employer characteristics.

A comparison of the Index with a series derived from the actual self-reported wages in the Current Population Survey can be found in the [technical report](#). An analysis of self-reported wages can also be found in the [July 2018](#), [July 2019](#), [July 2020](#), [July 2021](#), and [July 2022](#) press releases, as well as this press release.

4. Does the NHQI count self-employed workers?

No, the NHQI excludes self-employment or people who work for themselves.

5. How often is the NHQI updated?

Every month, with the release by the Census Bureau of the Current Population Survey microdata. Updates will be posted on the [NHQI website](#) during the first week of the month, covering data from two months ago. Data are currently available from January 2001 through July 2023. To receive updates through email or social media, [visit the signup page](#).

6. What data are available on the NHQI website?

The [NHQI website](#) contains monthly data for all components of the NHQI. The four main components are: the hourly wage index, the hiring volume index, the wage bill index (the product of hourly wages and hiring volume), and the hires per capita index. Each component is available in its actual level or normalized to the base year 2005. In addition to providing data for all new workers, the NHQI exists for men, women, different age groups, different education groups, different races/ethnicities, different industry sectors, different regions, native and foreign-born, full- and part-time workers, and different types of new hires (the newly employed and employer changers). All data can be charted interactively or downloaded for separate analysis.