

# W.E. UPJOHN INSTITUTE FOR EMPLOYMENT RESEARCH

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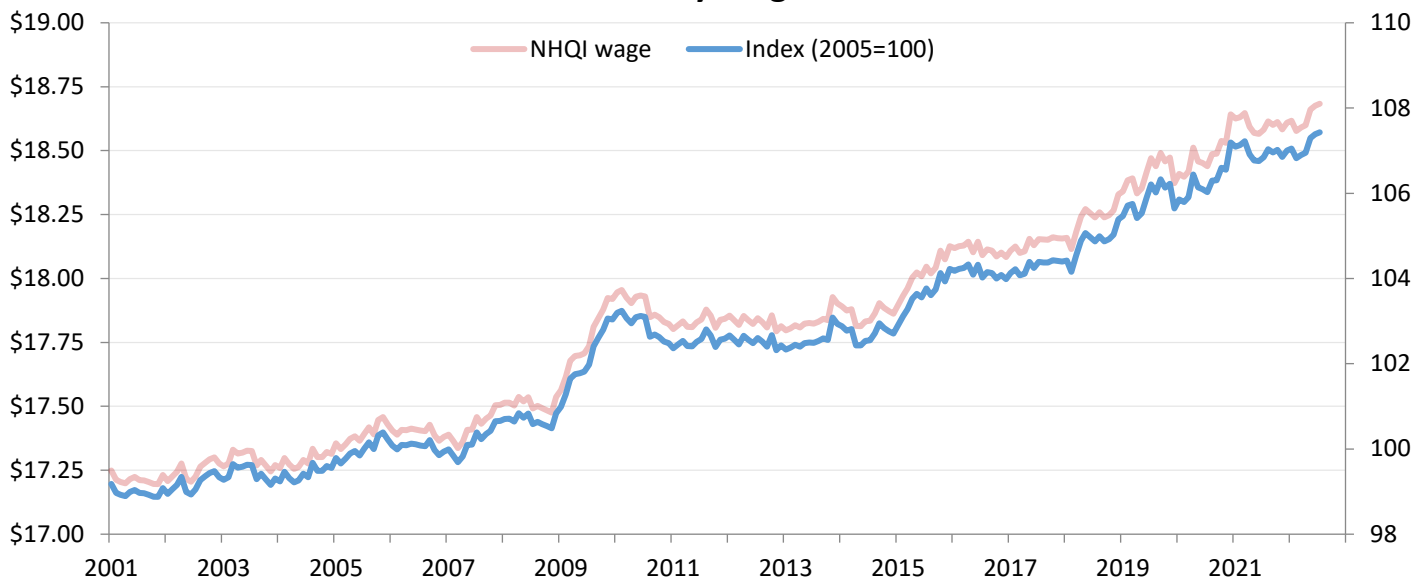
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## Upjohn Institute New Hires Quality Index for July 2022 edges to another new high, plus special Labor Day look at actual real wage growth

KALAMAZOO, Mich.— In July 2022, the Upjohn Institute New Hires Quality Index shows inflation-adjusted hourly earnings power of individuals starting a new job edged up a hair from June (to another new record) and is up 0.5 percent from a year prior, with a current reading of \$18.68. This level stands 7.4 percent above its reading in 2005 and 1.5 percent above its reading right before the pandemic. Hiring volume slowed 1.2 percent from June but remains 3.5 percent above its pre-pandemic (February 2020) level. It is too soon to say whether this slowdown is a blip or a sign that interest rate hikes, inflation, and ongoing supply chain disruptions are beginning to take a toll on the labor market. July also marks the first month that payroll employment has recovered to its pre-pandemic level, although if previous employment growth had continued unabated the job count would be several million higher.

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

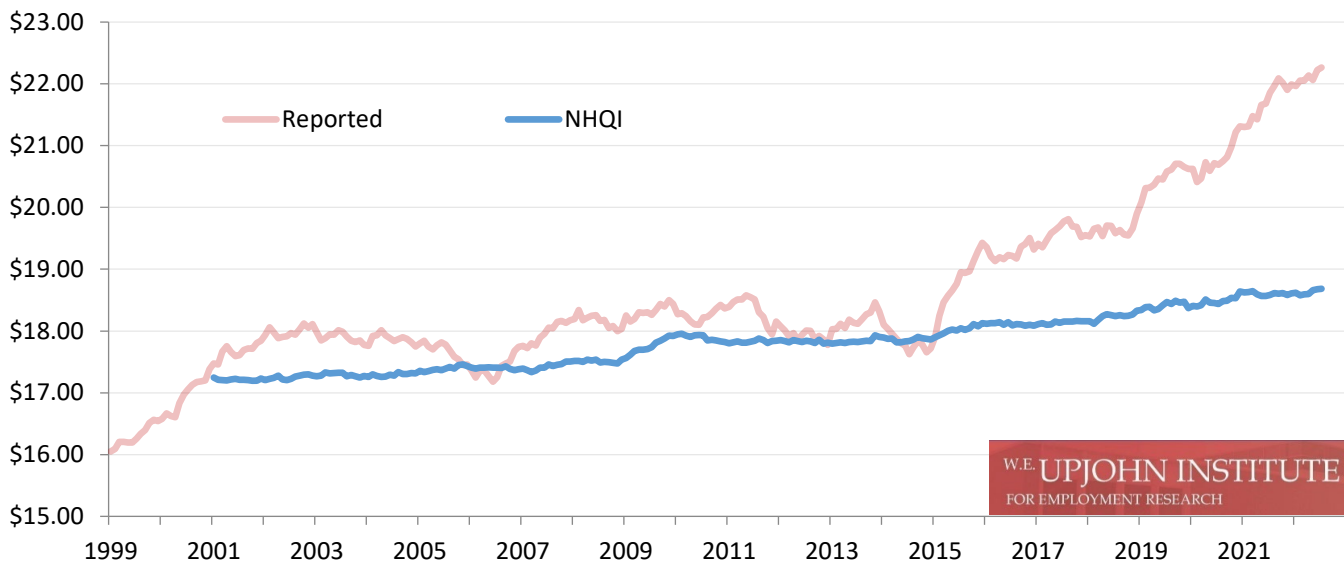
NOTE: The lighter line uses the left axis and shows the inflation-adjusted hourly wage of new hires. The darker line uses the right axis and shows the relative change since the base year of 2005.

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For 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 but rather the earnings power of newly hired workers 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 COVID-19 jobs recovery, as sustained inflation has [eroded](#) even [historically high nominal wage growth](#) for many incumbent workers.<sup>1</sup>

The NHQI shows that newly hired workers have steadily become more skilled, with particularly sharp growth during the Great Recession, in 2015, and during 2018–2020, 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 2021 dollars.<sup>2</sup>

### 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, and in late [2018](#). During other times wage growth has stalled or even turned negative. This was also the case over much of 2019 and into the summer of 2020, as both the NHQI and actual self-reported wages of new hires had leveled off, suggesting the labor market was cooling even several months before the pandemic began.

<sup>1</sup> Adjusting for inflation, average hourly wages of all employees are down about 1 percent since February 2020, but 3 percent since July 2021. These averages, however, mask larger decreases for some workers and actual increases among others.

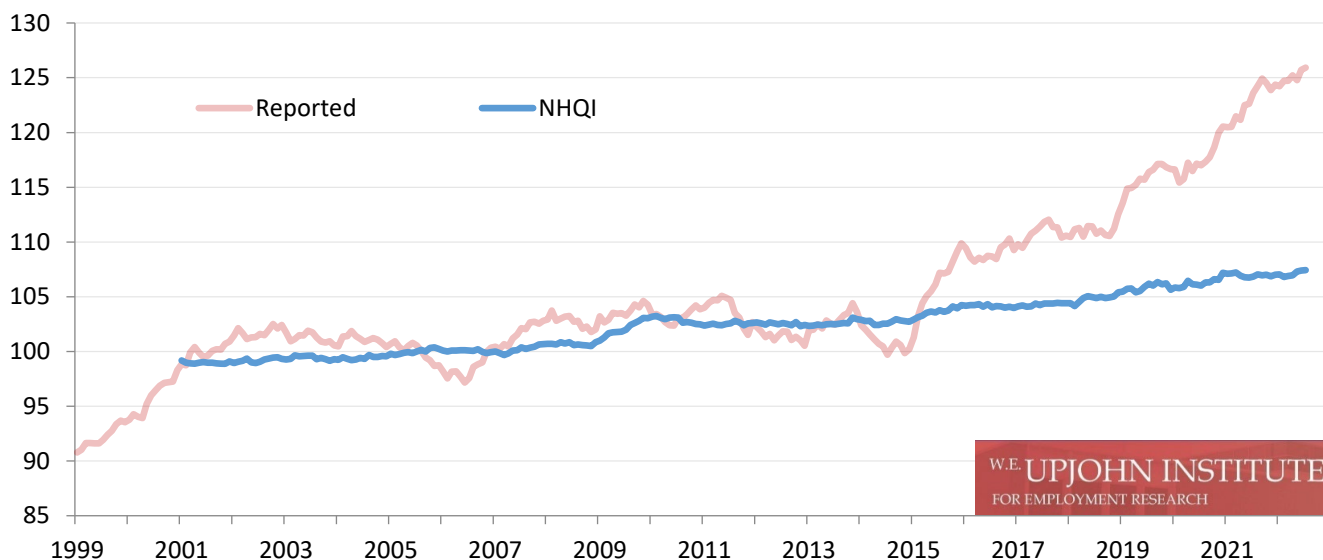
<sup>2</sup> As detailed in the [technical report](#), the reported wage includes only non-imputed responses, and for consistency with the NHQI, is also shown as a 12-month lagged moving average. The figure is an updated version of the one in the technical report and previous July NHQI releases.

Since then, however, inflation-adjusted wage growth for new hires has shot up over the past two years, growing at its most rapid pace since the turn of the century. From July 2020 to July 2022, the real wages of new hires have increased by 7.6 percent, to \$22.26 per hour and an all-time high. Although much of this growth spurt occurred between the summers of 2020 and 2021, before sustained inflation took its toll, real wages of new hires have still continued to edge up, with year-over-year growth of 1.9 percent as of July 2022. Over the 7.5 years since the beginning of 2015, actual inflation-adjusted wages of new hires have shot up 24.3 percent, equivalent to an average annual growth rate of 2.9 percent. In contrast, the total growth over the *previous 15 years*, between 2000 and 2015, was just 7.1 percent, less than one-third as much. The recent period thus likely marks among the fastest real wage growth in modern history. That this wage growth took place even as the historically low-paying leisure and hospitality sector accounted for over 30 percent of net job growth (and [over 20 percent of gross job growth](#)) is truly remarkable.

Although it may be tempting to compare this positive real wage growth among new hires to the [negative wage growth of all payroll workers](#), the sharp changes in the composition of jobs lost in the spring of 2020 and gained since makes such comparisons risky. 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 2021 and July 2022 experienced nominal wage growth of 6.7 percent, but after adjusting for inflation, real wage growth was a relatively anemic 0.4 percent.<sup>3</sup> Combining the last two years of data to get a sense of inflation-adjusted wage growth between July 2020 and July 2022, the number is flat, implying real wages of these workers held steady. Inflation-adjusted wages of new hires have thus grown much faster than those of the steadily employed over the past two years, 7.6 percent to 0 percent, a large reversal from before the pandemic.

Moreover, the 7.6 percent real wage growth of newly hired workers was also much faster than the 1.3 percent increase in the NHQI wage index. Roughly speaking, the difference between the two series implies that real wage growth, controlling for changes in the occupations and demographics of new hires, is up 6.2 percent on average over the past two years, a rapid clip, although not as fast as during the 2020–2021 period alone.<sup>4</sup>

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

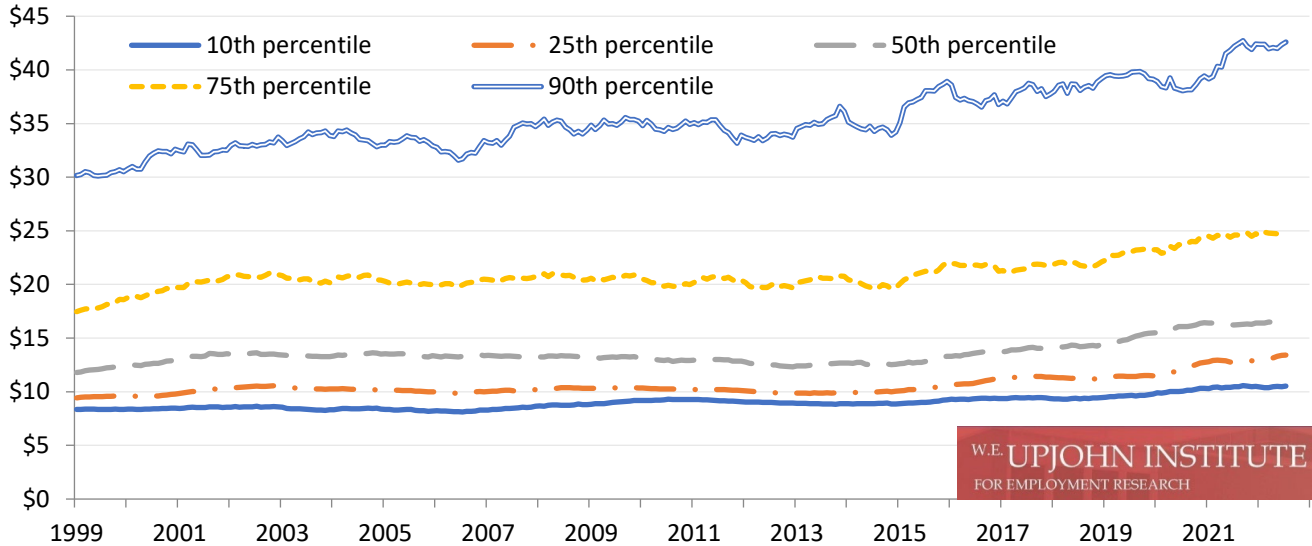


<sup>3</sup> The Wage Growth Tracker shows *nominal* wage growth, unadjusted for inflation; the numbers shown here are adjusted for inflation [in the same manner](#) as the self-reported wage growth of new hires.

<sup>4</sup> Over the most recent 12 months, actual real wage growth of new hires was 1.9 percent and the NHQI growth was 0.6 percent, so composition-adjusted real wage growth of new hires was 1.3 percent.

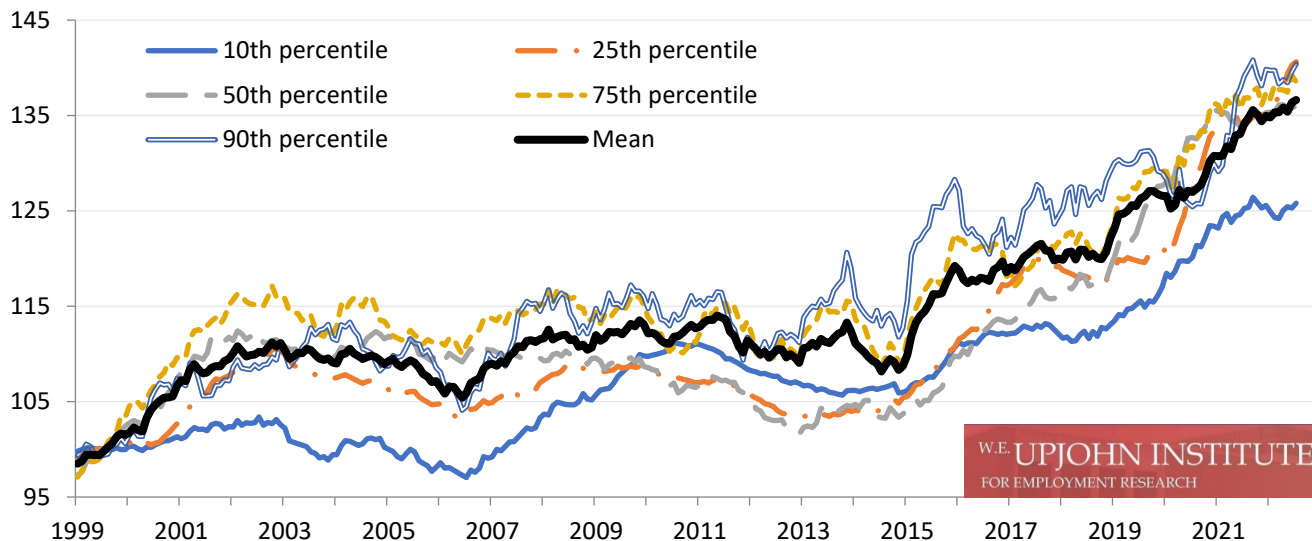
To understand longer-term changes, we normalize each wage series to its respective value in 2005, shown in the figure above. Inflation-adjusted, self-reported hourly wages of new hires have grown 25.9 percent since 2005, with essentially all this growth occurring since 2015. Netting out the 7.4 percent growth in the NHQI since 2005, composition-adjusted real wages of new hires have grown 17.2 percent, or about 0.94 percent per year. (Since 2015, they have grown 2.9 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. Was the recent speedup over the past two years widespread or concentrated among higher earners? The figure above provides context by showing the real hourly reported wage (in 2021 dollars) of new hires for different percentiles. For example, at the 10<sup>th</sup> percentile—the point at which 10 percent of new hires makes less and 90 percent make more—hourly wages in July 2022 were about \$10.52, \$3.27 above the federal minimum wage (but still below about 20 states’ minimum wages). In contrast, at the 90<sup>th</sup> percentile, wages were \$42.60 per hour, more than four times as much. The 50<sup>th</sup> percentile, or median, where half of newly hired workers earn more and half earn less, was \$16.48, much less than the mean value of \$22.26 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.

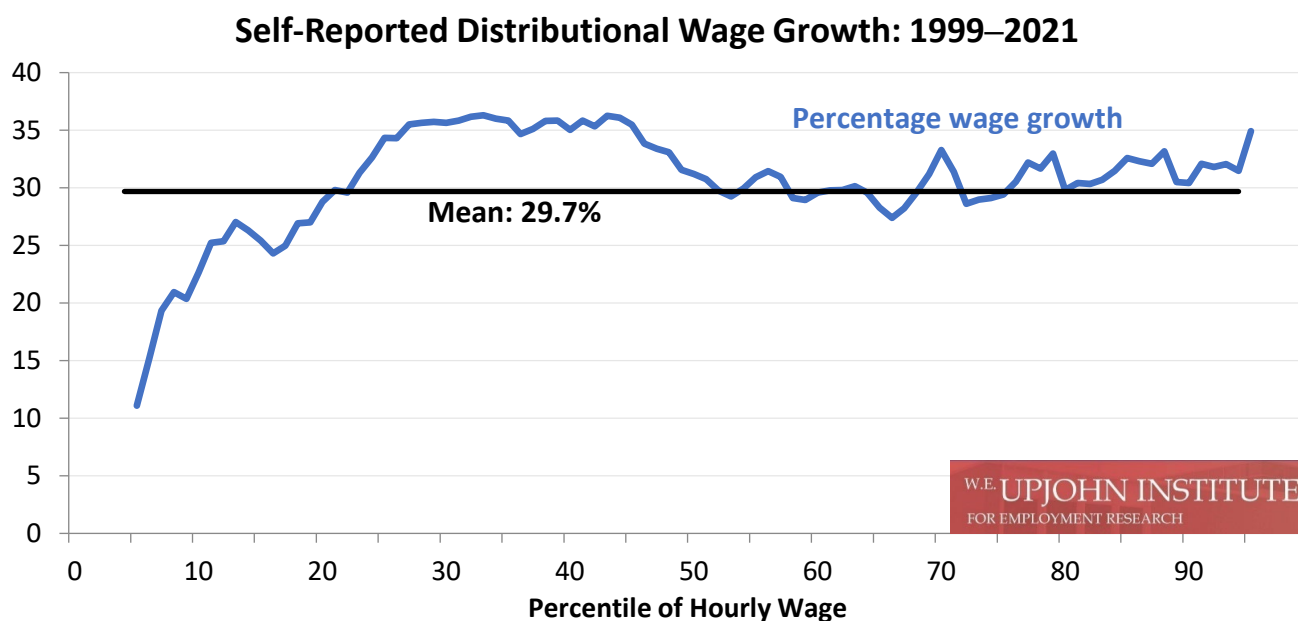
### Self-Reported (Real) Hourly Wage, Selected Quantiles (1999=100)



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 36.6 percent (thick black line). This works out to an annualized rate of growth of 1.37 percent since 1999, but almost all this growth was concentrated in the late 1990s or since 2015. The average real wage of new hires was essentially unchanged between 2002 and 2015.

The graph also shows sizable deviations over the long term for the different percentiles. Since 1999, for example, the 10<sup>th</sup> percentile real wage of new hires has risen by 25.8 percent, while that for the median is up 35.9 percent, and that for the 90<sup>th</sup> percentile is up 40.4 percent. Over the *past two years*, growth has been lopsided, with increases of 11.9 percent at the 90<sup>th</sup> percentile and 10.6 percent at the 25<sup>th</sup> percentile, with gains at the 10<sup>th</sup>, 50<sup>th</sup>, and 75<sup>th</sup> percentiles at 5 percent at less. Over the *past 12 months*, however, growth has slowed to about 1 percent—still outpacing inflation—for each of the quantiles except at the 25<sup>th</sup>, which experienced continued rapid growth of 4.6 percent. This means that the lower-middle has gained on the top over the past year, but the very bottom has continued to lag further behind.

Indeed, these trends confirm that inflation-adjusted wage growth of new hires has not been at the bottom but slightly higher up in the lower-middle part of the distribution. As such, even the strongest labor market we’ve seen in decades has done almost nothing 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.<sup>5</sup> Over this more than 20-year period, wage growth has averaged 29.7 percent, and the upper four-fifths of new hires have stayed within a percentage point or two of this growth number. The wage growth of the bottom fifth, however, has lagged behind considerably. Thus, the slower cumulative growth at the 10<sup>th</sup> percentile seen in the preceding graph extends to the bottom fifth of new hires, although the bottom tenth have fared especially poorly. With the economy likely to slow as the Federal Reserve stands poised to further increase interest rates to tame inflation, the least-paid newly hired workers run a real risk of falling further behind.



<sup>5</sup> The endpoints are the averages of 1998–2000 and August 2019–July 2022; 36-month averages are used to allow sufficient sample sizes to make comparisons over the whole wage distribution.

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](http://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](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 2021 will be released during the first week of October 2021. To sign up to regularly receive monthly press releases for the Upjohn Institute New Hires Quality Index, visit: [www.upjohn.org/nhqi/signup](http://www.upjohn.org/nhqi/signup).

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## 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](#), and [July 2021](#) 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 2022. 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.