Segregation in the Low-Wage Workforce

Technical Appendix

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WorkRise

Methodology

Data Sources

This feature uses data from the Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC) from 1971 to 2023, accessed through the Integrated Public Use Microdata Series (IPUMS) database.[1]

Low-Wage Definition

We define low-wage workers as those earning less than two-thirds of the median wage, following a commonly used, relative threshold used for characterizing low-wage work relative to the full wage distribution. For calculating this threshold, we first compute the median wage of the full sample of prime-age workers in each year using the CPS, and then multiply the resulting figure by two-thirds. This threshold is computed for each year of the data (1971–2023) and applied to the observations based on their year to determine a worker's low-wage status.

Note that while other ways of defining low-wage work have been considered in practice and the research literature, for this data feature we use two-thirds of the median wage of all prime-age workers as our preferred definition and threshold for clarity, simplicity, and comparability with other applications.[2, 3, 4]

Low-Wage Sample

Our sample of low-wage workers is made up of individuals ages 25–54, what economists refer to as prime-age workers, in the labor force (LABFORCE) who were employed at some point during the prior year. The sample includes both full- and part-time workers.

Variable Construction and Analysis

We create a wage variable for each worker in our low-wage sample. For individuals who do not report their earnings as an hourly wage (HOURWAGE), we calculate an hourly wage

equivalent by dividing their annual wage and salary income (INCWAGE) by the number of recorded hours they work during the prior calendar year. We calculate the normal weeks worked during the year by multiplying the usual number of hours worked in a week (UHRSWORKLY) by the recorded number of weeks worked over the year (WKSWORK1). If either variable was unavailable (as is the case for observations earlier than 1976), we substitute the number of hours worked during the prior week (AHRSWORKT) and/or the midpoint of the interval the respondent selected for the total number of weeks worked during the prior calendar year (WKSWORK2). Of these six variables, the only variable top-coded was hours worked in a week (UHRSWORKLY), top-coded at 99 hours. The results were adjusted for inflation and standardized to 2023 US dollars.[5] Given that the ASEC provides annual estimates, we did not do any wage or income smoothing. Nor did we impute any data in advance of making this wage calculation. We then assign to each worker an indicator for "low wage" depending on whether their wage is below or above the threshold described above.

Our estimates of the racial makeup of the low-wage workforce are constructed with CPS IPUMS variables RACE and HISPAN. Occupations (OCC2010) are grouped according to the categories listed in the CPS codebook. All these calculations use the appropriate weight.[6]

Notes

[1] Sarah Flood, Miriam King, Renae Rodgers, Steven Ruggles, J. Robert Warren, and Michael Westberry, "Integrated Public Use Microdata Series, Current Population Survey: Version 10.0 [dataset]," Version 10.0, 2022, IPUMS, accessed September 19, 2024, https://doi.org/10.18128/D030.V10.0.

[2] "Incidence of Low and High Pay," Organisation for Economic Co-operation and Development (OECD), accessed September 19, 2024, https://data.oecd.org/earnwage/wage-levels.htm.

[3] Claus Schnabel, "Low-Wage Employment: Are Low-Paid Jobs Stepping Stones to Higher-Paid Jobs, Do They Become Persistent, or Do They Lead to Recurring Unemployment?" 2021, accessed September 19, 2024, https://wol.iza.org/articles/low-wage-employment/long.

[4] "Incidence of Low and High Pay," Organisation for Economic Co-operation and Development.

[5] "Consumer Price Index Data from 1913 to 2024," US Inflation Calculator, CoinNews Media Group, accessed September 19, 2024, https://www.usinflationcalculator.com/inflation/consumer-price-index-and-annual-percent-changes-from-1913-to-2008/.

[6] We default to using EARNWT where possible, excluding COVID-era observations (2020–2021), for which we use ASECWTCVD. For earlier observations where neither is available (prior to 1982), we use ASECWT.

Acknowledgments

WorkRise

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