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Basic Needs and the American Paycheck: New Indicators of Pay Quality and Group Disparities, 1979-2019

David R. Howell*

A defining feature of the post-1979 American economy has been increasing pay inequality, but for many working families, far worse than falling further behind those at the top has been the growing threat to living standards made possible by a full-time job: falling *pay quality.* There are many good inequality metrics but no intuitively transparent indicators of the pay quality distribution. This paper constructs these by anchoring different points in the wage distribution to the living standards each wage makes possible with a single regular full-time job using evidence from basic-needs family budget calculators. This approach is illustrated with three anchored thresholds for the lowest-cost household type—a single-adult household without dependents: a *decent-pay* (living-wage) threshold that distinguishes low-pay from decent-pay jobs supplemented by *poverty-pay* and *good-pay* thresholds that define the bottom tier of low-pay jobs and the upper tier of decent-pay jobs. Pay quality (PQ) indicators measure the distribution of employment across these tiers of the PQ hierarchy for workers stratified by age, education, gender, race, and nativity between 1979 and 2019 using CPS-ORG data. Main findings include 1) substantial decoupling of decent-pay jobs (number and incidence) and GDP growth; 2) a striking narrowing of gender PQ gaps—whether measured by decent-, poverty-, or good-pay incidence—that reflect large absolute declines in PQ for men, particularly young (18-34) men without a college degree; 3) a modest rise in the overall racial poverty-pay gap between 1979 and 2019, driven by an *increasing* gap between white and nonwhite women that has dominated a *declining* gap between white and nonwhite men; and 4) the disappearance by 2019 of the large poverty-pay gap favoring native- over foreign-born young less-educated workers, both men and women. These findings document profound long-term shifts in paycheck-based living standards across American demographic groups with important political and social implications.

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Introduction

> "Forty years of going backwards for the working class … people understand that they've been left behind. Workers are now scraping to get by, while working multiple jobs, seven days a week, 12 hours a day and living paycheck to paycheck. That's not a life. When I was a kid, it didn't matter if you worked at a grocery store, or if you worked at an assembly plant, a one-person income could sustain a family. That's not the case anymore…".
>
> Shawn Fain, President of the United Auto Workers[1]

Conventional indicators have documented surging economic inequality over the last half century, but of much greater concern for many working families is the economic hardship and insecurity of declining *pay quality*—the material living standards made possible by a full-time job. There are a wide variety of inequality metrics but no simple statistical indicators adequate to the task of documenting the indictment of the post-1970s economy as going backwards in the material sense that working families have had increasing difficulty getting by paycheck to paycheck, often requiring high-interest debt. The consequences of severe material deprivation despite full-time employment for has been extensively documented[2] and there is overwhelming recent anecdotal evidence of the political salience of the "fear in people... about their ability to make it" (Glueck 2024).[3] One particularly acute source of grievance has been the inability of many young workers entering the labor market since the late 1970s to achieve anything close to the material living standards of their parents.[4] This paper is motivated by the need for quantitative indicators of one key source of these experiences and grievances, the inability of a full-time job to make possible decent living standards for working families, even for the very smallest (a single worker).[5]

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[1] Kitman (2024).

[2] Examples of this huge literature include Newman (1999) and Ehrenreich (2001) to Coile and Duggan (2019), Autor et al. (2019), Case and Deaton (2020), and Leonhardt (2023).

[3] See also Gross 2025 and Miller 2024). Goldstone (2025) concludes from six years of reporting on working families that "For millions of Americans, the greatest threat isn't that they'll lose their jobs. It's that the jobs will never pay enough, never provide enough hours, never offer enough stability to keep them housed."

[4] "One of the defining features of the 'American dream' is the aspiration that children have a higher standard of living than their parents. When children are asked to assess their economic progress, they frequently compare their own standard of living to that of their parents" (Chetty et al. 2017: 1). Referring to this as downward "absolute income mobility", the authors find that "the fraction of children earning more than their parents fell from 92% in the 1940 birth cohort to 50% in the 1984 cohort" and attribute this collapse mainly to "greater inequality in the distribution of growth" (2).

[5] This paper is a substantially reframed and updated version of a working paper published by the Washington Center for Equitable Growth (Howell 2019).

The attainment of minimally decent living standards through work has long been a widely accepted social goal and one that many economists have identified as the ultimate purpose of the discipline. For Smith (1937: 79), "they who feed, cloath, and lodge the whole body of the people should have such a share of the produce of their own labour as to be themselves tolerably well fed, cloathed and lodged". Alfred Marshall, arguably the world's most influential mainstream economist at the turn of the 20th century, identified the primary task of the new discipline of economics as the widespread attainment of "the material requisites of wellbeing."[6] More recently, the contemporary CORE-econ textbook has defined a "dynamic economy" as one that "brings sustained growth in living standards." But neither conventional inequality metrics nor measures of economic growth per person (or per hour of work) offer meaningful indicators of the material requisites of wellbeing required for minimally decent levels of "social functioning" (Sen 1988; 1995) at different points in the pay distribution—the objective of the living-wage movement that has its origins many centuries before Adam Smith in notions of the 'just wage' (Waltman 2004; Hirsch and Valadez-Martinez 2017; Pollin and Luce 1998).[7] The failure of the American labor market to produce living-wage jobs for a large share of full-time workers has motivated two major policy responses in developed capitalist countries: legal protections for collective bargaining by employees and the statutory minimum wage. For example, the opening words of the 1938 Fair Labor Standards Act calls for pay that ensures a "minimum standard of living necessary for health, efficiency, and general wellbeing of workers".[8] This paper describes the development of statistical indicators that measure the living-wage performance of the American economy since 1979.

Pay quality indicators measure employment shares in different tiers of the wage distribution, defined by wage thresholds anchored to the living standards made possible by a full-time job. As measures of labor market performance, these incidence indicators can offer new perspectives on the American pay crisis, including the proliferation of low-wage 'bad' jobs and

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[6] "Political economy or economics is a study of mankind in the ordinary business of life; it examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of wellbeing" (Marshall, quoted by Streeck 2016: fn. 3, p. 202).

[7] As President Roosevelt put it in 1938: "It seems to me to be equally plain that no business which depends for existence on paying less than living wages to its workers has any right to continue in this country…. By living wages, I mean more than a bare subsistence level — I mean the wages of a decent living" (Statement on the National Recovery Act. http://docs.fdrlibrary.marist.edu/odnirast.html).

[8] Fair Labor Standards Act of 1938, as amended (Revised May 2011). WH Publication 1318. URL: http://www.dol.gov/whd/regs/statutes/FairLaborStandAct.pdf

the shortage of high-wage 'good' jobs.[9] They are constructed by combining absolute and relative approaches to setting wage thresholds: *absolute*, by anchoring narrow ranges of the wage distribution to living standards for a particular family type made possible by a full-time job, much like the federal government's Supplemental Poverty Measure (SPM) identifies the poverty cutoff for household incomes;[10] and *relative*, by using inequality formulas to identify particular wage levels, like the conventional formula for the incidence of low-pay (two-thirds of the median wage), which facilitate consistent measurement over time.[11] Living-wage thresholds can be chosen—as they are here—with evidence from basic-needs family budget calculators, which estimate the "monthly resources a family needs to attain a modest yet adequate standard of living" (Gould et al. 2024: 3).[12]

Like the older labor market segmentation and recent skill polarization literatures, the identification of job tiers is central to the pay quality approach.[13] Pay quality *hierarchies* consist of tiers defined by wage thresholds that are anchored to family budget living standards; pay quality *indicators* then measure the share of workers employed in each tier. Like the cutoffs used to define many other conventional published statistical measures of well-being (e.g., the incidence of poverty and low-pay), the choice of these thresholds is inherently subjective and

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[9] The concern in this paper is with the development of pay quality metrics appropriate for judging the living standards for *working families*—those headed by production and nonsupervisory workers, or alternatively, by workers without elite four-year college degrees.

[10] "Like the official poverty measure... (the SPM) is a measure of economic deprivation. It defines poverty status for families and individuals by comparing *resources* against a measure of *need*" (Congressional Research Service 2022: 2). See also Fremstad (2020), Renwick and Short (2013) and the discussion below.

[11] This formula is used throughout the literature on low wages. It is regularly published by the Organization for Economic Cooperation and Development (OECD) and was used as the main statistical indicator by the Russell-Sage Low-Wage Project (Gautié and Schmitt 2010). See also Lucifora and Salverda (2009), Osterman and Shulman (2011), and Ross and Bateman (2019).

[12] These budgets are formal calculations of what the classical economists referred to as basic "necessaries" or "needs". For Adam Smith: "By necessaries I understand, not only the commodities which are indispensably necessary for the support of life, but whatever the custom of the country renders it indecent for creditable people, even of the lowest order, to be without (Smith, 1937: 821). For Marx: "The actual value of labour-power diverges from the physical minimum... it depends not only on the physical needs but also on historically-developed social needs" (quoted by Milanovic 2024: 135). Basic-needs budgets are also referred to as "self-sufficiency standards" (Pearce 2020) and in the European literature as "reference budgets" (Penne et al. 2020).

[13] Both literatures have relied on tripartite structures. The labor market segmentation literature of the 1970s distinguished secondary, subordinate primary, and independent primary job segments on the basis of job quality, job mobility, and mechanisms of management control (Doeringer and Piore 1971; Piore 1976; Gordon, Edwards and Reich 1982). Similarly, the recent skills/tasks literature (Autor et al. 2008; Autor 2010; Autor and Dorn 2013) has explored the effects of computer-driven shifts in the demand for skills/tasks on wage inequality with evidence for three groups of occupations, those featuring "non-routine cognitive tasks (high-skilled), non-routine manual tasks (low-skilled), and routine tasks (middle-skilled, some of which are cognitive and some of which are manual)" (Mishel et al. 2013:13).

should reflect prevailing social norms about Marshall's 'material requisites of wellbeing' which are required for (Smith's and Sen's) 'social functioning without shame'. As a measure of wage adequacy, pay quality is a key dimension of overall job quality, but is not measured here either by self-reported worker satisfaction[14] or by reference to other important dimensions of job quality, like the adequacy of work hours and the regularity of work schedules.[15]

Measures of pay quality supplement rather than replace conventional inequality metrics, which unquestionably provide essential perspectives on economic performance and individual wellbeing.[16] Relative standing can be extremely important for perceived personal well-being and identity independently of wage levels and the living standards they make possible (e.g., Card et al. 2012) as well as for relative political power, particularly in an age of exploding inequality (Hacker and Pierson 2010). Whether measured with data from individual tax filings (Piketty, Saez, and Zucman 2018), household surveys (Mishel 2021), or administrative records of establishments, firms, and industries (Haltiwanger, Hyatt, and Spletzer 2024), sharply rising pay inequality has unequivocally characterized the American labor market since the late 1970s, reaching ever-more extreme levels in the 21st century by developed world standards.[17]

But exploding inequality, however consequential, does not speak directly to what has happened to paycheck-based living standards across the distribution, even when paired with evidence of wage stagnation. For example, consider one of the most widely used and intuitively understandable indicators of rising inequality, the 90-10 wage ratio, which measures the gap between the top (90th percentile) and bottom (10th percentile) of the wage distribution.[18]

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[14] Pay quality is not measured by how satisfied workers are with their pay, self-reported or otherwise, which is, to an important degree, determined by perceptions of fairness in specific organizational contexts (Rosenfeld 2021: 37-39). "Multiple studies have confirmed that satisfaction with what we make is bound up with what we think our coworkers earn. This is true even after controlling statistically for our own pay" (39).

[15] But on hours adequacy, see below (Section 2.4). There are other ways to measure the inadequacy and precariousness of work schedules (Golden 2016; Bauer et al. 2024, Cai 2024). Clark et al. (2024) finds that wages and other dimensions of job quality ("nonmonetary rewards to work") are strongly positively correlated (see also Howell and Kalleberg 2019).

[16] Measures of poverty and inequality tend to show only limited correspondence because they address different problems. As Cowell (2009:12) has written, "In contrast to the former, which "is concerned primarily with that segment of the population falling below some specified 'poverty line', the latter is concerned with dispersion over large parts, if not the entire, distribution."

[17] Referring to the extreme inequality of the post-1980 U.S. and U.K., Tony Judt (2010: 21) writes that "Inequality is corrosive. It rots societies from within.... The impact of material differences takes a while to show up: but in due course competition for status and goods increases; people feel a growing sense of superiority (or inferiority) based on their possessions… and the pathologies of social disadvantage become ever more marked."

[18] Piketty (2022:19) has called for inequality indices that are more intuitively understandable than conventional metrics (e.g., Gini coefficients) like decile ratios (e.g., the 90-10 and 50-10 measures) or the shares of national income allocated to different parts of the population (e.g., the top 1% or bottom 50%).

Increasing in the U.S. from 3.42 in 1979—the highest level among rich countries—to 4.75 in 2019, this ratio offers a simple and transparent statistical indicator of the top pulling away from the bottom in the post-1979 decades. But these ratios are only indicators of relative position, unanchored to measures of material living standards. Nor is the inflation-adjusted wage an adequate measure of the change in paycheck-based living standards. The 10th percentile wage increased from $11.53 to $12.06, just 53 cents over four decades, clearly qualifying as wage stagnation.[19] But for this inflation-adjusted wage stagnation to offer a good measure of changes in real living standards would require accounting for the after-tax resources required for social functioning at a particular level for a particular family type, given access to various critical forms of social provision (e.g., in housing, healthcare, education, childcare, and transportation), which is exactly what basic-needs family budget calculators are designed to estimate.[20]

While the job quality literature has noted the importance of pay adequacy, it has typically been measured with conventional inequality metrics—the relative standing of variously defined groups of workers or jobs in the overall pay distribution.[21] For example, 'bad' jobs are commonly conflated with 'low-wage' jobs. There can be some justification for this if the wage is low by local standards in the sense that it is pays below the customary wage for a particular set of tasks, working conditions, and skill requirements.[22] But in the job quality literature, bad jobs are commonly identified as those paid a 'low' wage in the simple statistical sense that it is below the median wage (e.g., below two-thirds of the median wage), which means that many (or all) jobs in the bottom half *must* be bad jobs. This conflation fails to reflect the meaning of 'bad' in common parlance, and has no necessary implication for the adequacy of paycheck-based living standards

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[19] Economic Policy Institute, *State of Working America Data Library,* "Wages by percentile and wage ratios" 2024.
[20] The inflation-adjusted "real" wage is designed to measure *changes* in the purchasing power of the *pre-tax* wage, defined by a cost-of-living index for particular market baskets of commodities assumed to be purchased by consumers at every point in the distribution (e.g., at both 10th and 90th percentiles; e.g., see Ludwig). In contrast, pay quality indicators are designed to measure the *level* of particular living standards for different family types made possible by *after-tax* monthly income from a single full-time paycheck at different points in the wage distribution. As Gornick and Jantti (2013: 492) have argued, there is "much more work needs to be done in analyzing (relative and absolute) changes in real income in different parts of the income distribution…."
[21] The identification of job quality by relative standing in the pay distribution is illustrated by publications whose titles explicitly reference 'good' and 'bad' jobs' (e.g., Galbraith 1998; Acemoglu 2001, 2019; Bartik and Houseman 2008; Lucifora and Salverda 2009; Abraham and Speltzer 2010; Kalleberg 2011; Osterman and Shulman 2011; Schmitt and Jones 2012; Warhurst 2012; Dwyer and Wright 2019; Ross and Bateman 2019; and Blanchflower 2019.
[22] Low wage jobs are often identified as those that do not "pay decently by local standards," either relative to other similar jobs in other firms (e.g., Walmart versus Costco) or relative to the applicable statutory minimum wage (Rosenfeld, 2021: 188). However intuitively sensible, this definition is too casual to serve as the basis for a meaningful quantitative statistic.

(Hick and Marx 2022; Haapanala, Marx, and Parolin 2023). In many other rich countries, full-time workers paid well below the median wage can achieve higher material living standards than American workers paid well above the median (just $19.32 in 2019) because they have access to far more generous universal social benefits (e.g., healthcare, childcare, education, and housing).[23]

At the other end of the pay spectrum, 'decent' and 'good' jobs are often identified as those that pay a wage sufficient for achieving 'middle-class' living standards. But there is often no empirical definition and measurement of what makes these jobs middle-class, apart from their location in the middle of the household income distribution.[24] A recent report by the OECD (2019) on the state of the middle-class in rich countries offers a good example of the relative income approach to the measurement of the middle-class. While this report states that "A middle-class lifestyle is typically associated with certain goods, services and living conditions, such as decent housing, good education, and sound health and a wholesome environment" (103), it measures the size of the middle class by households with incomes between 75 and 200 percent of the (equivalized) median household income, with no reference to those "certain goods, services, and living conditions".[25] This relative-position approach to the measurement of the middle-class is then used to define low-income class (below 75%) and upper-income class (above 200%).[26]

This paper reframes the inequality of the pay distribution as measured by the spread of individual wages to the shape of the pay quality job hierarchy as measured by the shares of employment in pay quality tiers defined by wage thresholds anchored to the material living standards generated by a single full-time paycheck.[27] Section 1 describes the pay quality

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[23] See, for example, Esping-Andersen's (2015), Aerts et al. (2022), and Gornick et al. (2024).

[24] For example, according to Rodrik and Sabel (2019), "good pay" makes possible "at least a middle-class existence, by a region's standards, with *enough* income for housing, food, transportation, education and other family expenses, as well as some saving" (pp. 1-2, my emphasis), but the authors leave "enough" undefined and unmeasured. Similarly, for Acemoglu (2019: 2), good jobs must pay "a wage consistent with a comfortable (sometimes referred to as 'middle-class') living standard", but there is no operational definition or evidence for a good or middle-class living standard.

[25] While relying on unanchored statistical ranges is certainly much easier for cross-country comparisons, defining a household's position relative to the median of the income distribution may be no less difficult if the objective is meaningful international comparisons of middle-class living standards.

[26] For the use of relative income approaches to the 'middle-class', see also OECD (2014); Gornick and Jantti (2013); Atkinson and Brandolini (2013); and Kenworthy (2013).

[27] "Workers" and "jobs" are used interchangeably. It has been conventional to use "occupations" or "occupations within sectors" as an approximation (Gittleman and Howell 1995; Dwyer and Wright 2019). This is a good solution for some questions, but fails to account for the extensive range in wages (and nonmonetary job dimensions) within most industry-occupation cells, including those defined at the most detailed level (Hunt and Nunn 2022). There is an extensive literature that documents substantial pay variation across firms and establishments, and within

approach as a combination of conventional methods for the measurement of absolute and relative well-being. The first step is to set narrow wage ranges for particular *absolute material* living standards (e.g. decent-pay, poverty-pay, good-pay) with evidence from basic-needs monthly budgets for particular family types and locations (like the U.S. government's Supplemental Poverty Measure).[28] The second step is to define precise wage thresholds within these ranges with *relative-position* formulas (like the conventional low-pay formula: e.g., two-thirds of the median full-time wage). Pay quality is then measured by the share of workers in each pay quality tier.

Section 2 illustrates this general approach with wage thresholds set for a single worker without dependents, an extremely conservative baseline for American pay quality if the standard is a minimally decent 'family' wage.[29] Basic-needs family budget evidence for 30 cities and counties is used to set the range for the single worker 'decent-pay' threshold ($18-$21 for 2019) and a decent-pay threshold formula (two-thirds of the mean prime-age wage for full-time workers) then sets the exact decent-pay cutoff ($18.80). Additional 'poverty-pay' and 'good-pay' thresholds are defined with the same 2-step approach and their real (inflation-adjusted) values are extended back to 1979. This section shows how these three pay-quality thresholds (decent-pay, poverty-pay, and good-pay) create both dual and tripartite structures of the single worker pay quality hierarchy: the *decent-pay* (living-wage) cutoff creates a dual structure of low-pay and decent-pay tiers (two job 'segments'), while an overlapping tripartite structure (three job 'contours') is generated by the *poverty-pay* and *good-pay* thresholds. The former defines the lower tier of the low-pay segment while the latter identifies the upper tier of the decent-pay segment. In addition, the poverty- and good-pay thresholds define a 3rd contour of jobs located between them—the middle-pay contour. These three thresholds define the pay quality hierarchy used in this paper, but it is a simple matter to use family budget evidence to construct different

establishments by the conditions under which tasks are performed (e.g., workplace environment), employment status (part-time vs. full-time), and who performs them (e.g., the pay penalty for 'women's' jobs). "A job's holder brings particular expectations to a job, and the employer's view of the job is colored by the worker holding it" (Tilly and Tilly 1998: 163).

[28] Basic-needs family budget calculators have evolved over the last century in the U.K. and U.S. (Anker and Anker 2017) and were given government standing, first by the U.S. Bureau of Labor Statistics' family budgets between 1947 and 1979 and then by the development of the Supplemental Poverty Measure in the early 2000s (Fremstad 2020).

[29] The pay quality outcomes presented in the remainder of the paper would be far worse for job hierarchies defined with full-time wage thresholds anchored to the basic-needs of larger families, even one comprised of a single adult and one young child (as shown in this section's Table 1).

pay quality hierarchies by anchoring any number of different full-time wage thresholds for other family types and locations (regions, cities and counties) with the same methodology.

Sections 3-6 report pay quality outcomes—employment rates (incidence) and group disparities—as measured by the dual segment (decent-pay and low-pay) and tripartite contour (poverty-pay, middle-pay, and good-pay) pay quality indicators. Section 3 explores the correspondence between decent-pay jobs and economic growth with quarterly data, documenting a striking decoupling of both the share and number of decent-pay jobs from GDP growth between 1979 and 2019. For example, as the inflation-adjusted size of the American economy more than tripled between 1979 and 2019 (and doubled per capita), the decent-pay employment share collapsed for young workers without a four-year college degree and even declined slightly for prime-age workers (ages 35-59) with at least a college degree. The relationship of GDP growth with the *number* of decent-pay jobs is also explored with a counterfactual exercise that compares the change in numbers of decent-pay jobs between 1990 and 2019 with what would be predicted had the GDP-to-decent-pay relationship in the expansion quarters of the 1980s remained unchanged.[30] By this measure of 'falling behind', the 1980s relationship would have increased the number of decent-pay jobs from 60.1 in 1990 to 102.6 million in 2019 (+42.5 million); instead the actual number of decent-pay jobs in 2019 was just 74.5 million (+14.4 million). Like the results for decent-pay incidence, there has been a sharp decoupling of the number of young less-educated workers and GDP since the 1980s.

Section 4 describes the four-decade evolution of decent-pay incidence and group disparities. The central take-away is that while there has only been a modest decline in decent-pay rates for all workers between 1979 and 2019, this conclusion masks profound changes by gender, race, and educational attainment. For example, the decent-pay ratio of women to men rose from 55.3 percent in 1979 (41.4%//74.9%) to 80.3 percent in 2019 (48.6%//60.5%), a result due more to declining pay quality for men than improving decent-pay outcomes for women. Among workers with less than a four-year college degree, the decent-pay gender gap narrowed from 35.2 points in 1979 to just 18.1 points in 2019, again driven mainly by the collapse in decent-pay incidence for men (which declined drastically, from 71.5% to 47.4%). These results

[30] This exercise would have produced far larger decent pay gaps had it been possible to use a baseline from pre-1979 decades because substantial wage stagnation and pay-productivity decoupling characterizes the 1980s (Mishel and Bivens 2021; Stansbury and Summers 2018).

also show that the decent-pay *disadvantage* for workers without a college-degree worsened substantially for both men and women.

Section 5 shifts the focus from decent-pay jobs to the tripartite hierarchy of pay quality contours—poverty-pay, middle-pay, and good-pay jobs. Like the results for decent-pay, poverty- and good-pay rates for all workers (18-64) were broadly stable, reflecting substantial offsetting shifts by gender. For example, while the poverty-pay share *improved* for women workers over these four decades by about 20 percent (declining from 40.4% to 32.1%), it *worsened* by about 50 percent for men (increasing 14.9% to 21.5%).[31] By race, white women have shown greater improvement in poverty-pay than nonwhite women. Among men, the most striking result is the collapse in pay quality for both white and nonwhite young men without a college degree (from 32.5% to 12.1% and from 22.4% to 7.9%, respectively).

Section 6 presents the poverty-pay evidence from the previous section in the form of *disparities* by gender, race, and nativity. Three sets of findings are highlighted. *First*, consistent with conventional wage gap evidence, gender disparity in poverty-pay incidence narrowed dramatically, driven by a particularly large decline in poverty-pay incidence for women but also by massive increases for men. *Second,* there were small increases in overall race disparities by age/education group, driven by greater improvement in pay quality for white than nonwhite women (*rising* race disparity) and by greater deterioration for white than nonwhite men (*declining* race disparity). *Third,* the large gap favoring native-born over foreign-born workers in poverty-pay rates for young workers without a college degree in 1994 entirely disappears by 2019 for both men and women.

Section 7 briefly summarizes the paper and outlines the two main explanations for the poor post-1979 pay outcomes that are documented in the paper for most nonsupervisory workers, particularly young less-educated men. The paper concludes with some directions for future work on pay quality.

[31] These findings for poverty-pay are similar to results reported by the OECD's low-pay indicator, which is defined by the same formula but applied to a slightly different population.

1. Pay Quality

1.1 Anchoring Distributions to Living Standards: From household poverty to paycheck inadequacy

Conventional inequality metrics are designed as measures of dispersion and relative position, unanchored to indicators of material wellbeing. The same is true of conventional indicators of low pay (below 2/3 of the median wage) and national poverty rates (either 50 or 60 percent of the median equivalized household income). In contrast, the U.S. government's two poverty indicators—the Official Poverty Measure (OPM), which dates back to the 1960s, and the Supplemental Poverty Measure (SPM), first published in 2008—are explicitly anchored.[32] Like the OPM, the SPM can be used as the anchor for a *tripartite framing* of the quality of the American household income hierarchy: poor households, low-income households (some multiple of the poverty line by household type), and households above the low-income threshold.[33] The development of carefully constructed and well-documented basic-needs family budget calculators for a wide variety of family types and locations has made it possible to extend this anchored approach to the identification of a credible living wage for individual workers, defined as the full-time wage necessary to sustain families at a decent living standard (Johnson et al. 2000; Bernstein et al. 2000; Allegretto 2006). This 'decent-pay' wage can, in turn, serve as the anchor for translating the wage distribution into *pay quality hierarchies*, defined for particular family types and locations.

Following an earlier generation of 'family budgets' produced by the Bureau of Labor Statistics between 1947 and 1979,[34] a number of family budget calculators have regularly produced estimates of the full-time hourly wage required for a basic-needs family budget,

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[32] The OPM was "developed as three times the cost of the Economy Food Plan, with some adjustments for two-person families and single individuals to account for their higher fixed costs. In the current official measure of poverty, the thresholds developed in the 1960s have been adjusted only for price inflation.... The SPM was designed to address limitations of the official poverty measure.... The SPM poverty thresholds measure a standard of living based on expenditures for food, clothing, shelter, and utilities (FCSU), and 'a little more' for other expenses. The resources measured against those thresholds represent disposable income (after taxes and certain other expenses), including the value of certain noncash benefits, that are available to families to meet those needs" (Congressional Research Service 2022: 1-2).

[33] The OPM has often been used as the anchor in this sense. As Renwick and Short (2013: 3) write, "Over the last decade many analysts have been using 200 percent of the official poverty line as a measure of low income or income inadequacy. For example, a report released in January 2013 by the Working Poor Families Project (WPFP) defines low-income as those with incomes below 200 percent of the official poverty threshold."

[34] "For example, in 1966 BLS described its 'City Worker's Family Budget' as a 'moderate living standard' that 'provides for the maintenance of health and social well-being, the nurture of children, and participation in community activities.' According to BLS, this 'moderate' living standard was higher than 'subsistence' but lower than 'the standard of living enjoyed by a majority of American families'." (Fremstad 2022: 2).

including the Economic Policy Institute (EPI), the Living Wage Institute (MIT), the National Center for Children in Poverty, and the Center for Women's Welfare (University of Washington School of Social Work). As Allegretto (2006: 43) puts it, "While poverty thresholds are used to evaluate the extent of serious economic deprivation in our society, family budgets—that is, the income a family needs to secure safe and decent-yet-modest living standards in the community in which it resides—offer a broader measure of economic welfare " Similarly, The Living Wage Institute's Calculator defines the 'living wage' as "what one full-time worker must earn on an hourly basis to help cover the cost of their family's minimum basic needs where they live while still being self-sufficient."

Common to these calculators is the estimation of "bare-bones" social subsistence budgets for each family type (size and composition) and location, independent of government income assistance or in-kind benefits like food stamps (SNAP) or housing subsidies. The major cost categories for each family type are (with an example of a key data source in parentheses): 1) *Food* (U.S. Department of Agriculture's Low-Cost Plan); 2) *Childcare* (National Database for Childcare prices, U.S. Department of Labor); 3) *Healthcare*, including health insurance premiums and out-of-pocket medical expenses (Medical Expenditure Panel Survey; Consumer Expenditure Survey, U.S. Bureau of Labor Statistics,); 4) *Housing* (Fair Market Rents, U.S. Department of Housing and Urban Development), 5) *Transportation* - basic vehicle ownership and public transportation costs (Consumer Expenditure Survey); 6) *Other Necessities*, including clothing, personal care items, basic housekeeping supplies and basic internet and mobile phone costs (Consumer Expenditure Survey); and 7) *Income and Payroll Taxes* (National Bureau of Economic Research: TAXSIM).[35] These budget estimates generally exclude the cost of goods/services that many would consider necessary for a minimally decent living standard, much less a middle-class one, such as meals purchased outside the home, non-work-related transportation, vacation spending, and savings.[36]

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[35] These taxes are adjusted for credits, like the Earned Income Tax Credit. Property and sales taxes are reflected in categories 1-6. For methodologies and sources, see Living Wage Calculator, Nadeau (2023), and Gould and Mokhiber (2022).

[36] Families living on a basic-needs budget are, in most cases, asset-poor, putting them at high risk for a financial crisis if there is even a modest unexpected income shock. The Center for Women's Welfare's 'self-sufficiency standard' recognizes this in a limited way, allowing for "emergency savings", which is "the amount needed to cover living expenses when there is job loss net of the amount expected to be received in unemployment benefits" (Pearce 2020: 3).

1.2 Basic-Needs Family Budgets and Wage Threshold Formulas

The conventional approach used for the low-pay threshold—a formula that defines it as some fraction of the median wage—is extended in the pay quality approach by anchoring several points in the wage distribution to living standards levels made possible by a single full-time paycheck. This is done with evidence from family budget calculators, which translate basic-needs monthly family budgets into an hourly living wage, assuming full-time/full-month employment. Because this paper's empirical illustration is at the national level, the first step is to identify a narrow but reasonably representative range of living-wage estimates across American locations for which family budgets have been estimated (metropolitan areas, cities, and counties).[37] The next step is to use a "relative-position" formula to set the exact decent-pay cutoff for a particular year, which makes it a simple matter to compare changes over time, just as the OECD does with its (unanchored) low-pay formula. For example, if family budget evidence suggests that the living-wage range should be set between $18 and $21 in the reference year (e.g., 2019), a formula (e.g., 2/3 of the mean full-time wage for prime-age workers) would set the cutoff for that year (in this case, $18.80) and its value for earlier years would be set by the same formula.[38] The same range/formula (absolute/relative) approach can be used to set the poverty-pay and good-pay thresholds, taking into account not just Marshall's 'material requisites of wellbeing' at different wage points but also the distance from the decent-pay (living-wage) threshold (to construct a useful and plausible set of pay quality tiers).

The empirical illustration in this paper defines three anchored thresholds with relative-position formulas using both the median and mean as the reference wage. The convention for the measurement of low pay has been to rely on the median. Rarely explicitly justified, the preference for the median over the mean is that it avoids disproportionate influence of extremely high wages (Lucifora and Salverda 2009: 263). But for empirical work that uses survey-based individual and household data, like the Current Population Survey (as in this paper), this potential problem is substantially mitigated since top-end observations are censored via top-

[37] Like calculations of the national anchored poverty-lines, the measurement of pay quality at the national level requires what is effectively an averaging of basic-needs budgets across locations to identify the wage thresholds that together define a national pay quality hierarchy for a particular family type.

[38] Ideally, these calculations would be made at more frequent intervals, like the approach taken by the federal government's supplemental poverty measure which makes adjustments reflecting the composition of consumer spending every five years. But this is not possible with the available basic-needs calculators—they have only been available since the early 2000s and have been regularly revised since; the most reliable basic-needs budget estimates for the purposes of this paper are the most recent.

coding. The median is used here as the reference wage for the *poverty-pay* threshold for two reasons. The first is that the median-based formula for low-pay used by the OECD happens to generate a wage within the poverty-pay range identified by the basic-needs budget evidence and has the additional advantage that the most aggregate poverty-pay results calculated here can be directly compared to those for 'low pay' published annually for the U.S. by the OECD.[39] This serves to highlight that, despite its label as an indicator of *low-pay*, at least for the U.S., basic-needs evidence makes clear that it is far more appropriate as a cutoff for *poverty-pay* and that this difference should be recognized in the literature and policy discourse.

The second reason is that the severe deprivation that the term 'poverty' depicts—levels of income and resources inadequate "for generating minimally acceptable capabilities" (Sen 1995: 111)—must reflect the social context. For this purpose the median wage seems a reasonable point of comparison—it is within the bottom half of the pay distribution that Sen's (and Adam Smith's) linkage of relative and absolute deprivation seems most persuasive, where "*Relative* deprivation in the space of *incomes* can yield *absolute* deprivation in the space of *capabilities"* (p. 115; the italics are Sen's).[40] For a worker with a wage at two-thirds or one-half of the median wage, the pulling-away of the top incomes (e.g., top 10%) seems likely to be a much more remote consideration for self-perception of severe economic deprivation than the distance of that worker below the median.

But at higher levels of the pay distribution, the frame of reference for what qualifies as a 'decent' or 'good' wage should be developments in the top-half pay inequality. Because the social functioning required for taking part in the life of the community "impose(s) commodity requirements that vary with what *others* in the community standardly have" (Sen, 1995: 216), perceptions of earnings adequacy (a 'decent' living standard) can be expected to change as top-half pay inequality increases steadily and substantially, as it has since the late 1970s. For this reason, the formulas that define the 'decent-pay' and 'good-pay' cutoffs used for the post-1979

[39] Although the same formula produces modest differences between the incidence rates reported here and by the OECD, due to differences in the population of workers for which the median is calculated (most notable, the age range).

[40] Following Adam Smith, Sen (1995: 115) writes that "In a country that is generally rich, more income may be needed to buy enough commodities to achieve the *same social functioning*, such as 'appearing in public without shame'. The same applies to the capability of 'taking part in the life of the community' (Sen 1995: 115). But it is important to qualify this, because the translation of extremely low incomes into levels of absolute capability deprivation that qualify as a 'poverty' living standard is complicated by what Sen calls "personal characteristics" such as the need for expensive health services, the nature of household composition and relationships, and variations across demographic "categories" like gender, age, and class (111).

era of rising top-half wage inequality ought to adjust upward over time, which is what the use of the overall mean accomplishes.

2. Enough to Live On? The American pay quality hierarchy, 2019

2.1 The Decent-Pay Threshold

If a decent-pay job is one that makes possible "a modest yet adequate standard of living", what full-time wage should mark the cutoff between decent-pay and low-pay jobs? Table 1 shows the 2019 hourly wage required by a single full-time worker to cover a basic family budget for two family types, a single adult and an adult with one young child, according to the Economic Policy Institute (EPI) and Living Wage Institute (MIT) calculators. These living-wage estimates are presented for 30 jurisdictions (metropolitan areas, cities, and counties), ranked in each panel by the EPI-MIT average.[41] These estimates are the most recent available, calculated by the EPI and MIT calculators for 2024 and deflated to 2019 dollars.[42] Although the basic budget categories used by these two calculators are similar, the sources and relative weights for them (and their components) are different, so it is notable that the wage estimates are in most cases similar, although frequently the overall similarity reflects offsetting differences across categories. The first two columns show that the MIT living-wage estimates tend to be slightly higher for the ten least-cost locations (rows 1-10), but are substantially lower than the EPI's basic-needs wage for high-cost areas (differences of $1-$3), which tend to be large metropolitan areas (rows 21-30). The bottom row shows that the average EPI-MIT basic-needs wage for a *single* adult full-time worker across these thirty locations was $19.52 (in 2019 dollars), which reflects EPI-MIT averages ranging from Allen County Kansas ($15.83) and Logan County Ohio ($15.90) to Jersey City ($24.58) and Seattle ($25.72). This lower panel also reports overall averages for the bottom-10 ($16.64) and top-10 ($23.20) locations.

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[41] The locations were informally chosen to illustrate the range of budget levels, from high-cost large metropolitan areas to small cities and rural counties across the country. Earlier versions of this table included estimates from the National Center for Children in Poverty, but there were severe limitations for the purposes of this paper. Thanks to Seth Hartig (formerly at the NCCP) for valuable advice and especially to Mackenzie Daly for help with the development of the table.

[42] Deflated 2024 values are used instead of those estimated directly for 2019 for two reasons: 1) there have been interruptions in the calculation and publication of results during and after the 2020 COVID pandemic; and 2) the quality of basic-needs family budgets has continued to improve in recent years. Thanks to Elise Gould for advice on the use of the most recent estimates.

Table 1: Living Wage Thresholds: The Full-time Hourly Wage Required for a Monthly Basic-Needs Budget for Two Household Types in 30 U.S. Locations, 2024
(in 2019 dollars, ranked by the EPI-MIT average)

Single Adult				Single Adult_1 Child			
	EPI	MIT	Avg.		EPI	MIT	Avg.
1. Allen County, KS	$15.97	$15.69	$15.83	1. Allen County, KS	$23.40	$25.30	$24.35
2. Logan County, OH	$15.71	$16.09	$15.90	2. Logan County, OH	$24.60	$28.48	$26.54
3. Lexington-Fayette, KY	$16.84	$16.19	$16.51	3. Lexington-Fayette, KY	$27.43	$27.79	$27.61
4. Pueblo, CO	$16.43	$16.70	$16.57	4. Tallahassee, FL	$27.20	$28.58	$27.89
5. Cincinnati, OH	$16.54	$16.93	$16.73	5. San Antonio, TX	$27.37	$28.98	$28.18
6. Cleveland, OH	$16.66	$16.85	$16.76	6. Birmingham, AL	$28.22	$29.22	$28.72
7. Albuquerque, NM	$16.25	$17.30	$16.78	7. Pueblo, CO	$27.26	$30.43	$28.84
8. Spokane, WA	$16.49	$17.20	$16.85	8. Albuquerque, NM	$26.98	$31.65	$29.32
9. Milwaukee, WI	$16.70	$17.17	$16.94	9. Pittsburgh, PA	$27.26	$31.82	$29.54
10. Pittsburgh, PA	$16.92	$18.10	$17.51	10. Bakersfield, CA	$27.47	$32.02	$29.74
11. San Antonio, TX	$17.84	$17.23	$17.53	11. Cincinnati, OH	$28.89	$31.24	$30.07
12. Tallahassee, FL	$18.45	$17.02	$17.74	12. Omaha, NE	$29.20	$30.94	$30.07
13. Syracuse, NY	$17.79	$18.41	$18.10	13. Cleveland, OH	$28.82	$31.63	$30.23
14. Omaha, NE	$18.29	$18.04	$18.16	14. Spokane, WA	$28.46	$32.34	$30.40
15. Bakersfield, CA	$18.10	$18.48	$18.29	15. Kansas City-Wy, KS	$29.05	$31.96	$30.51
16. Birmingham, AL	$18.93	$17.73	$18.33	16. Milwaukee, WI	$29.78	$31.43	$30.60
17. Kansas City-Wy, KS	$18.73	$18.54	$18.63	17. Dallas, TX	$31.17	$31.77	$31.47
18. Manchester, NH	$19.30	$20.62	$19.96	18. Orlando, FL	$32.48	$31.94	$32.21
19. Dallas, TX	$20.84	$19.45	$20.14	19. Syracuse, NY	$30.85	$34.20	$32.52
20. Camden, NJ	$20.35	$20.52	$20.44	20. Miami, FL	$35.31	$33.76	$34.53
21. Portland, ME	$21.97	$20.46	$21.22	21. Manchester, NH	$33.46	$37.76	$35.61
22. Orlando, FL	$22.72	$20.19	$21.45	22. Camden, NJ	$33.36	$38.00	$35.68
23. Miami, FL	$23.07	$20.32	$21.70	23. Portland, ME	$38.36	$36.93	$37.65
24. Denver, CO	$23.66	$22.01	$22.83	24. Sacramento, CA	$38.80	$39.65	$39.23
25. Sacramento, CA	$23.47	$22.38	$22.93	25. Washington DC	$39.58	$40.57	$40.07
26. Bridgeport, CT	$23.67	$22.79	$23.23	26. Los Angeles, CA	$39.70	$40.75	$40.23
27. Los Angeles, CA	$24.12	$23.54	$23.83	27. Denver, CO	$40.03	$40.63	$40.33
28. Washington DC	$25.09	$23.84	$24.46	28. Jersey City, NJ	$38.95	$41.80	$40.37
29. Jersey City, NJ	$25.63	$23.53	$24.58	29. Seattle, WA	$44.43	$43.33	$43.88
30. Seattle, WA	$27.44	$24.00	$25.72	30. Bridgeport, CT	$42.64	$47.02	$44.83
Top 10 Location Averages	$24.08	$16.82	$23.20	Top 10 Location Averages	$38.93	$40.64	$39.79
Bottom 10 Location Averages	$16.45	$16.82	$16.64	Bottom 10 Location Averages	$26.72	$29.43	$28.07
Total Location Averages	$19.80	$19.24	$19.52	Total Location Averages	$32.02	$34.06	$33.04

Source: EPI Family Budget Calculator, January 2025 [https://files.epi.org/uploads/fbc_data_2025.xlsx; Glasmeier, A. K. (2025). *Living Wage Calculator*. Massachusetts Institute of Technology, February 28, 2025 [https://livingwage.mit.edu]. Data originally in 2024 dollars was deflated to 2019 dollars using annual averages calculated from the *Consumer Price Index for All Urban Consumers (CPI-U).*

This evidence suggests that the 2019 cutoff between low-pay and decent-pay jobs for a single full-time worker should be set between $18 and $21, a range set by boundaries almost exactly the same distance from the overall EPI-MIT average ($19.52)—which happens to be just above the national median wage for 2019 ($19.32).[43]

[43] Economic Policy Institute, *State of Working America Data Library,* "Wages by percentile and wage ratios" 2024.

Following the widely accepted formula for the low-pay threshold (2/3 of the median wage), the decent-pay threshold formula can be defined by choices in three dimensions: 1) *work status*: for example, all employed workers or all full-time workers; 2) *the benchmark wage*: for example, some fraction of the median or mean; and 3) *age group*: for example, all those of working-age (e.g., 18-64) or just prime-age workers (e.g., 25-54). Within the $18-21 range, it might be set at the lower end (closer to $18) to be conservative (e.g., around the values in Table 1 for Syracuse and Omaha); or it could arguably be set higher, closer to $21 (e.g., around the living-wage values for Dallas and Camden, N.J.), on the grounds that the top-10 locations include many large metropolitan areas that together represent a far larger share of the national population than the bottom-10 (by a factor of more the 3).

Figure 1 shows the trendlines produced by five threshold formulas.[44] The bottom series is set by the formula used by the Russell-Sage Foundation's (RSF) Low Wage Project, *two-thirds of the median wage for all workers* ($12.99 in 2019). The next series reports the cutoffs for the formula used by the OECD, which is like the RSF formula but limits the population to *full-time workers* ($14.08 in 2019). The middle series is also defined by reference to the full-time median but narrows the population further to *prime-age workers* ($14.64 in 2019). The two series at the top of the figure replace the median with the mean as the benchmark wage, which increases the spread between them and the bottom three series after the 1980s as the mean (unlike the median) reflects the pulling-away of the top- from the bottom-half of the distribution. The formula for the 4th series is defined as *two-thirds of the mean full-time wage* ($18.26 in 2019), while the top series narrows this formula to *prime-age workers* ($18.80 in 2019).

This top cutoff series, defined by two-thirds of the mean full-time wage for prime-age workers, defines the decent-pay threshold—the cutoff between the low-pay and decent-pay segments. At $18.80, it is $.72 below the overall EPI-MIT average for the 30 Table 1 locations ($19.52) and slightly above the average single-worker living-wage for Kansas City ($18.63), ranked #17 in the table. Figure 2 shows that the wage set by this formula increased steadily from just above the 40th decile to slightly below the 50th (median) decile of the wage distribution.

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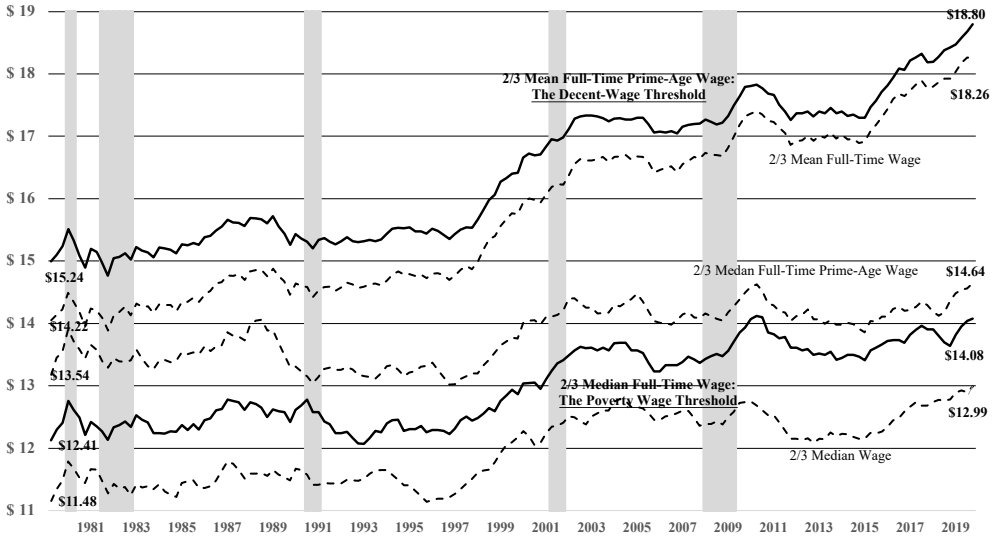
[44] These were calculated with the Merged Outgoing Rotation Group data from the U.S. Current Population Survey, accessed from the Center for Economic and Policy Research (CEPR). The sample is limited to wage and salary workers with reported gross (pre-tax) hourly wages between $.50 and $200 in 1989 dollars, using the CPI-U-RS as the wage deflator. For salaried workers, the hourly wage is calculated by dividing usual weekly gross pay by usual weekly hours.

Figure 1: Five Pay Quality Threshold Series, 1979-2019



Source: author's calculations from the CPS-ORG (CEPR). The wages shown at the beginning and end of each series are for the 2nd quarter of 1979 and the 4th quarter of 2019 (2019 dollars)

Figure 2: Pay Quality Thresholds and Wage Deciles, 1979-2019

Source: For the thresholds see Figure 1. The wage deciles are taken from the Economic Policy Institute for 2019 (downloaded 2021).

2.2 Poverty-Pay and Good-Pay Thresholds

If the decent-pay threshold marks the cutoff between low-pay and decent-pay jobs for a single full-time worker, 'poverty-pay' jobs can be defined as the bottom tier of low-pay jobs. The conventional low-pay definition shown by the 2nd series in Figure 1 generates a wage of $14.08

for 2019, well below the decent-pay cutoff of $18.80; it is $2.56 below the bottom-10 location average ($16.64) in Table 1 and $1.75 below the lowest-wage location (Allen County, Kansas: $15.83). This evidence suggests that from a living standards perspective, the conventional low-pay formula widely used for international comparisons (e.g., by the OECD and the Russell-Sage Foundation) is much better suited as a statistical marker for 'poverty-pay' than 'low-pay' in the United States. Figure 2 shows that this poverty-pay threshold (defined by the conventional low-pay formula) nearly perfectly tracks the 30th percentile of the wage distribution between 1979 and 2019.

Just as the poverty-pay threshold distinguishes poverty-pay jobs as the bottom-tier of the low-pay segment, 'good-pay' jobs can be defined as the upper tier of the decent-pay job segment.[45] A good-pay threshold should be substantially higher than the decent-pay cutoff ($18.80 in 2019) and should also be considerably higher than average basic-needs budget required in the top-10 areas in Table 1 for a single worker without dependents ($23.20). I follow the OECD's approach, which defines 'high pay' as 150 percent of their "low-pay" cutoff (2/3 of the full-time median wage). Applied to the decent-pay threshold ($18.80), this 150 percent rule sets the 2019 single-worker good-pay threshold at $28.20, about $3 above Seattle's basic-needs cutoff for a single worker. A useful perspective is provided by the right-side of Table 1: if a good wage is one that makes it possible for a full-time worker to barely 'get by' with a single young child, $28.20 would qualify in just five of the 30 locations; it is nearly identical to this two-person family basic living-wage cutoff for San Antonio ($28.18). In contrast, six of the highest-cost two-person family basic-needs budgets—all large metropolitan areas, ranging from Washington D.C. to Bridgeport Connecticut—would have needed a 2019 full-time/full-month wage of at least $40. As Figure 2 shows, this formula's good-pay cutoff (150% of the decent-pay threshold) has closely tracked the 70th percentile wage since 1979.

2.3 The Single-Worker Pay Quality Hierarchy, 2019

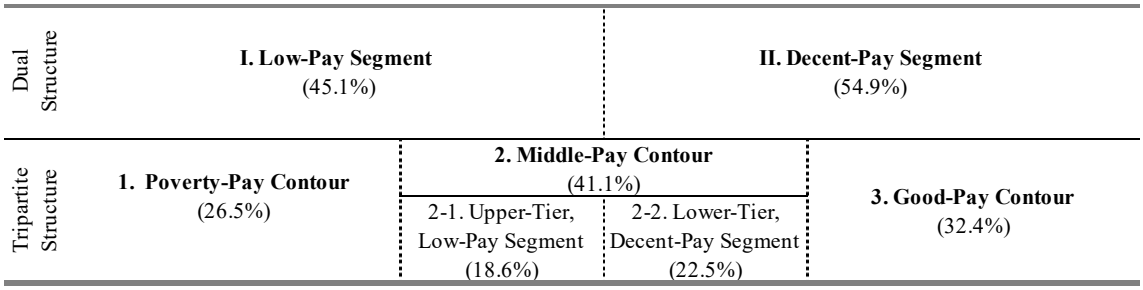
The poverty-, decent-, and good-wage thresholds described in the previous section (see Figure 2) create a pay quality hierarchy that consists of dual (decent- and low-pay) and tripartite (poverty-,

[45] As noted above, the reference population of workers in this paper is production and nonsupervisory workers (about 80 percent of the employed workforce); a 'good-pay' job is not intended to describe pay quality for higher level professional, technical, and managerial workers with elite four-year college and graduate degrees.

middle-, and good-pay) structures. This hierarchy is displayed in Figure 3. The decent-wage threshold ($18.80 in 2019) creates a dual structure of decent- and low-pay segment jobs. The decent-pay share was 54.9 percent of all wage and salary workers (18-64) in 2019, down from 60.4 percent in 1979 (not shown). The remainder, 45.1 percent, were employed in the low-pay segment, up from 39.6 percent in 1979.

Figure 3 also shows that, at the tripartite level, the poverty-pay cutoff distinguishes the poverty-pay contour from other low-pay jobs and the good-pay threshold sets apart good-pay from other decent-pay jobs. Middle-pay jobs are located between these top and bottom pay quality contours, comprised of upper-tier low-pay jobs and lower-tier decent-pay jobs. Poverty-pay jobs accounted for 26.5 percent of all employed workers in 2019 (up slightly from 25.8% in 1979); 32.4 percent of all workers were employed in the good-pay contour in 2019 (down from 34.1% in 1979); and 41.1 percent of workers held middle-pay jobs (up slightly from 40.0% in 1979). This last finding is particularly notable—unlike the findings of much of the occupation-based polarization literature, this tripartite pay quality structure shows no 'declining middle' since 1979.[46] At the same time, there has been substantial pay quality deterioration within the middle-pay contour as its composition has shifted away from the lower-tier of the decent-pay segment (from 26.8% to 22.5%) to the upper tier of the low-pay segment (from 13.25% to 18.6%), as discussed in some detail (Section 5.2). For convenience, the adjacent box summarizes the procedures that set the three wage thresholds.

Figure 3: The Single-Worker Pay Quality Hierarchy: Dual and Tripartite Structures, 2019*



*Employment shares are shown in parentheses for workers ages 18-64.

[46] See for example, Autor, Katz, and Kearney (2008), Autor (2010), and Autor and Dorn (2013).

The Construction of Pay Quality Tiers and Indicators

This box summarizes the setting of the three wage thresholds described in Section 1. The pay quality approach is illustrated in Figure 3 with three pay quality thresholds: the poverty-pay and decent-pay thresholds ($14.08 and $18.80) are set by reference to basic-needs budget evidence for single workers; the good-pay threshold is set at 150% of the decent-pay cutoff ($28.20). As shown in Figure 3, these thresholds define dual and tripartite structures.

The Dual Pay Quality Structure
Low-Pay and Decent-Pay Segments: The decent-pay threshold distinguishes low-pay from decent-pay jobs, reflecting evidence from the EPI-MIT calculators for a single worker in 30 locations in 2019 (Table 1). This evidence produced a target range of $18-$21 and the decent-pay formula (2/3 of the mean prime-age wage for full-time/full-month workers) sets the cutoff at $18.80.

The Tripartite Pay Quality Structure
The Poverty-Pay Contour: the poverty-pay threshold distinguishes poverty-pay from other low-pay jobs. The target threshold range is defined as a basic-needs full-time wage that falls below the lowest of the 30 EPI-MIT average living-wage budgets for a single worker shown in Table 1 (Cleveland: $14.23). The cutoff ($14.08) is set by the conventional 'low-pay' formula (2/3 of the median full-time wage).
The Good-Pay Contour: the good-pay threshold distinguishes good-pay from other decent-pay jobs. Following the OECD's approach to setting the 'high-pay' threshold (150% of their low-pay threshold), it is defined as 150% of this paper's decent-pay cutoff, $28.20.
The Middle-Pay Contour: this tier is defined by the boundaries set by the poverty-pay and good-pay thresholds and consists of the upper-tier of the low-pay segment and the lower-tier of the decent-pay segment.

2.4 Not Enough to Live On: Low-pay incidence and the inadequacy of work hours

The empirical evidence presented in this paper is concerned with the incidence of pay quality in different tiers of the wage distribution as measured by the living standards made possible by a regular full-time job, not about the actual earnings distribution, which will reflect work hours. It should be underscored that not all workers who want full-time work can get it, often because of the volatility in work schedules set by employers (Bauer et al. 2025; Cai 2025), or because they simply cannot find a full-time job and are working involuntarily part-time (Golden 2016).[47]

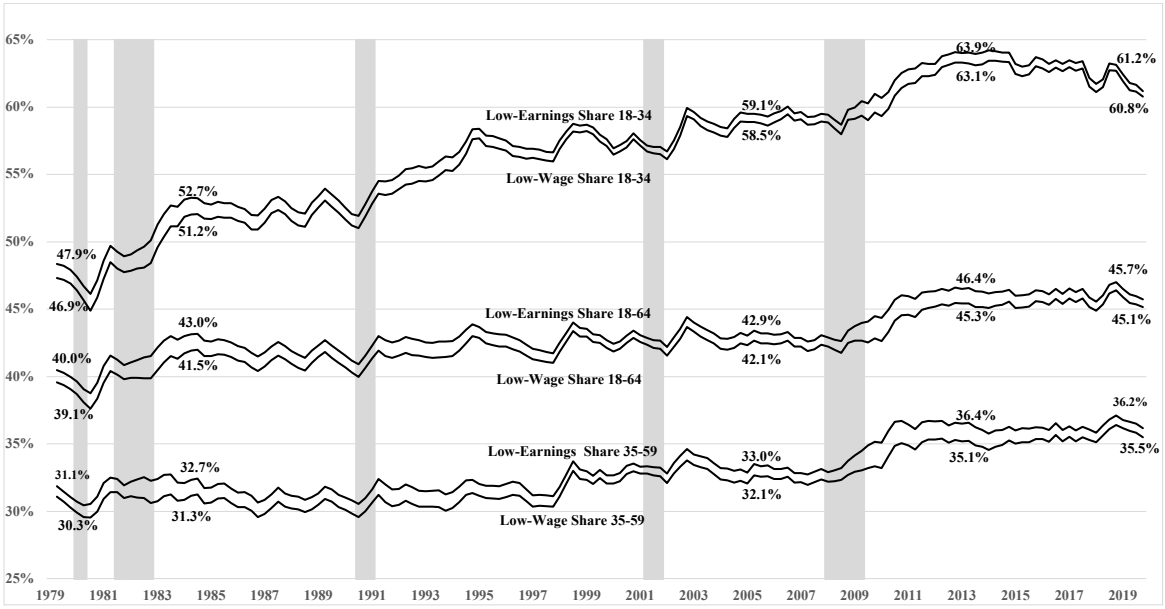
Figure 4 offers a perspective on the magnitude of involuntary part-time employment for the incidence of low-pay in the American economy by showing two series for each of three age groups (18-64, 35-59, and 18-34). *Low-wage* incidence is the share of workers paid a wage below the decent-pay threshold ($18.80 in 2019), while *low-earnings* incidence measures those paid below this wage or paid above it, but working involuntarily part-time. The figure reports clear upward (worsening) trends in low-wage incidence between 1979 and 2019 for all three

[47] The Bureau of Labor Statistics refers to involuntary part-time work as "part-time for economic reasons."

age groups and nearly identical trends for low-earnings shares at slightly higher levels, differences that range from just under 1 percentage point to just over 2 points.

For example, for all (18-64) workers, low-wage incidence rose from 39.1 to 45.1 percent while the low-earnings share (accounting for involuntary part-time jobs) increased from 40.0 to 45.7 percent. For prime-age workers, the low-wage and low-earnings shares rose from share rose from 30.3 to 35.5 percent and from 31.1 to 36.2 percent, respectively. Nearly all these increases took place during and just after the two major recessionary periods, 1980-83 and 2008-2013. In sharp contrast, the increases for young workers exploded, increasing by 13.9 points for the low-wage share (from 46.9% to 60.3%) and by 13.3 points for the low-earnings share (47.9% to 61.2%). Low-pay outcomes for young workers were also distinctive in that they improved between 2013 and 2019, falling by 2.3 points for the low-wage share and by 2.7 points for the low-earnings share.[48]

Figure 4. Low-Pay Incidence: The significance of accounting for involuntary part-time work, 1979-2019



Source: author's calculations from the CPS-ORG (CEPR). Employment shares are labeled for 1979q4, 1983q3, 2004q3, 2013q3, and 2019q4.

[48] See Autor et al. (2023) for a detailed examination of the compression in low-wage labor markets in this period.

3. Economic Growth and Decent-Pay Jobs: Four decades of falling behind

Under the managerial Keynesianism policy mix that prevailed from WWII to the late 1970s, economic growth was rapid and moderately egalitarian.[49] Following the economic turbulence of the 1970s and the growing influence of conservative academic economists and affiliated research and advocacy organizations, the ideas framing national economic policy swung sharply to a neoliberal supply-side 'trickle-down' economics, in which a low-tax, small-government, market-centered policy-mix became the recipe for spurring economic growth and "lifting all boats." A half century later, the evidence for this period now shows that only the very largest 'boats' have been lifted: the explosion of the gap between top incomes and those in the bottom half has been mirrored by an equally striking decoupling of national productivity growth from median worker compensation (Mishel and Bivens, 2021; Stansbury and Summers, 2018).[50]

This section illustrates how the number and incidence of decent-pay jobs tells an equally stark tale of falling behind. Decent-pay performance is measured relative to GDP growth in two ways, by changes in the decent-pay share of employment (Section 3.1) and by changes in the absolute number of decent-pay jobs (Section 3.2). The evidence is presented for groups defined by age, gender and education for calendar quarters between 1979 and 2019 to help examine and assess the relationship of decent pay performance over the business cycle.

3.1 GDP and the Incidence of Decent-Pay Jobs

Figure 5 presents decent-pay incidence trends for four demographic groups defined by age and education over business cycle expansions as the American economy tripled in size

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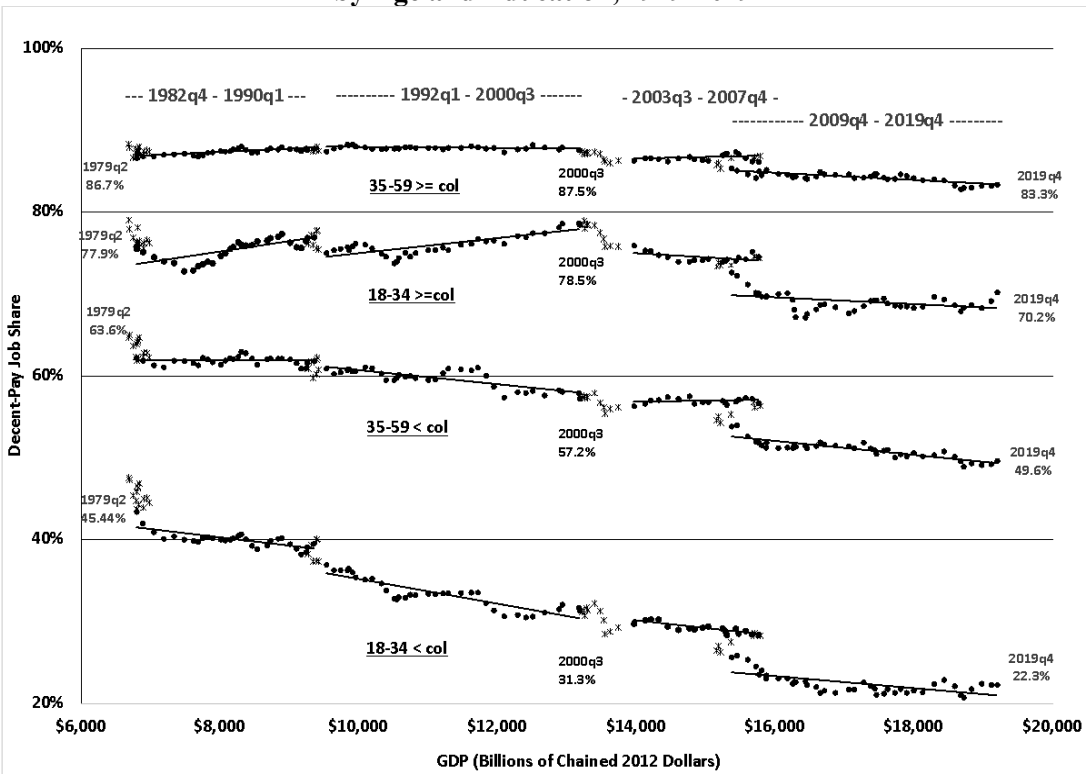
[49] As three leading economists put it, during this period "… the priority given to economic growth was not controversial and … was even on a par with motherhood and apple pie. Faster growth in the output of goods and services in an economy meant higher incomes for everyone (even though some people would, inevitably, earn more than others)" (Baumol, Litan and Schramm 2007: 15).

[50] For example, Piketty et al. (2018, Table II: 578) show that adult (ages 20+) incomes grew more than twice as fast as top 1 percent incomes over the 34 years between 1946 and 1980, whether measured pre-tax (102% vs 47%) or post-tax (130% vs 58%). The same table reports that over the next 34 years—between 1980 and 2014—average pre-tax income rose 21 percent for the bottom 50 percent and 194 percent for the top 1 percent, while post-tax incomes rose by just 1 percent for the bottom half and 205 percent at the very top. According to Mishel (2021 Figure A), productivity and typical worker compensation grew in tandem between 1948 and 1979 (118.4 percent and 107.5 percent) but diverged sharply between 1979 and 2019, when productivity increased at a far faster rate (59.7%) than worker compensation (13.7%). Median compensation is measured for production and nonsupervisory workers, about 80 percent of the workforce (Mishel 2021).

(GDP).[51] The two series at the top of the figure report the results for prime-age (35-59) and young (18-34) workers with at least a four-year college degree. Over the first two decades—between 1979 and 2000—GDP almost doubled (from $6.8 to $13.2 trillion) but the decent-pay share rose only slightly for both prime-age college graduates (from 86.7% to 87.5%) and young college graduates (from 76.9% to 78.8%). But even as GDP increased by another 45 percent between 2000 and 2019, the decent-pay share *declined* substantially for both: down 4.2 percentage points for prime-age workers (to 83.3%) and down 8.6 points (to 70.2%) for young workers. The figure shows that these declines took place during and shortly after the 2001 and 2008-9 recessions as well as during the 2010-2019 expansion.

Figure 5: GDP and the Decent-Pay Share of Employment by Age and Education, 1979-2019



Source: author's calculations from the CPS-ORG (CEPR).

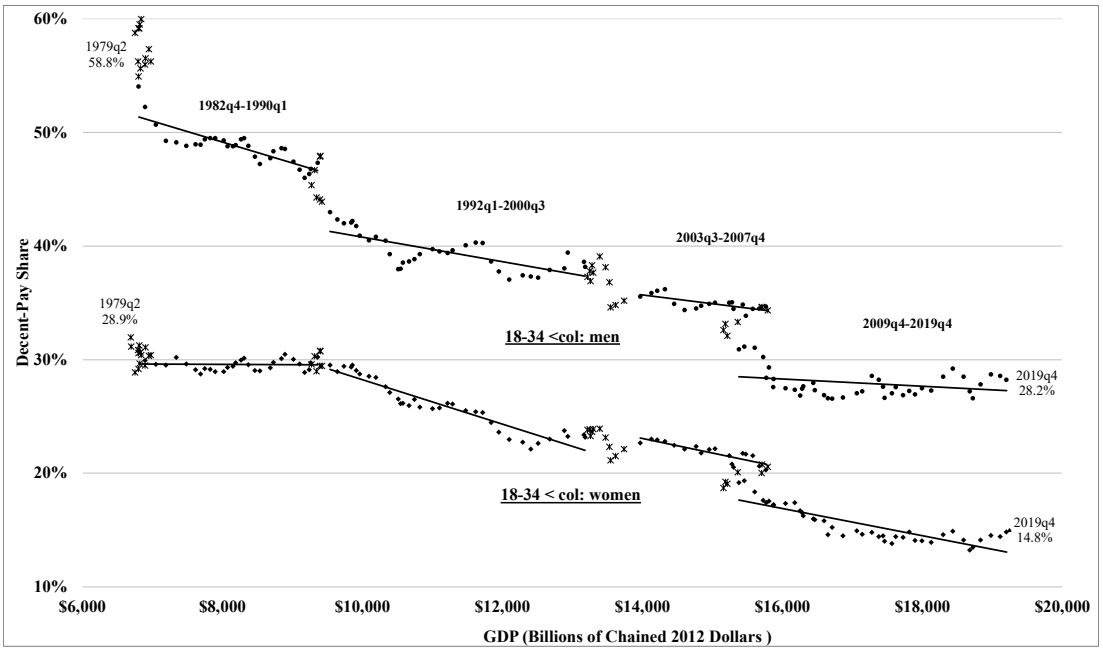
The two series at the bottom of Figure 5 show that outcomes were far worse for workers without a college degree. The decent-pay share for less-educated prime-age workers fell from

[51] Measured per capita, American real GDP almost exactly doubled between 1979 and 2019 (from $32,244 to $63,360 in 2017 dollars) (fred.stlouisfed.org).

63.6 to 49.6 percent between 1979 and 2019; for young workers without a college degree, the decent-job rate collapsed, from 45.4 to 22.3 percent, reflecting sharp declines in both recession and expansion quarters over the entire four decades.

Figure 6 breaks out the bottom demographic group in Figure 5—young workers with less than a college degree—by gender. Figure 6 shows that both young men and young women without a four-year degree experienced enormous declines in decent-pay shares: from 58.8 to 28.2 percent for men and from 28.9 to 14.8 percent for women. But while the trajectories were similar, the patterns over the business cycle were quite different. For young men without a college degree, nearly the entire decline took place in two periods: between 1979q2 and 1995q1 (20.8 percentage points, from 58.8% to 38.0%); and during and shortly after the 2008 financial crisis, from 2008q3 to 2012q1 (7.2 points: 34.6% to 27.4%).

Figure 6: GDP and the Decent-Pay Share of Employment for Young (18-34) Workers without a 4-year College Degree by Gender, 1979-2019



Source: author's calculations from the CPS-ORG (CEPR).

For young less-educated women, most of the decline also took place in two short periods: the first was in the mid-1990s (down 6 points, from 29% in 1993q2 to 23% in 1998q3) while the second was between 2009 and 2016 (down 6.3 points, from 20.1% to 13.8%). This figure also shows that the collapse for men was overwhelmingly concentrated in business cycle downturns,

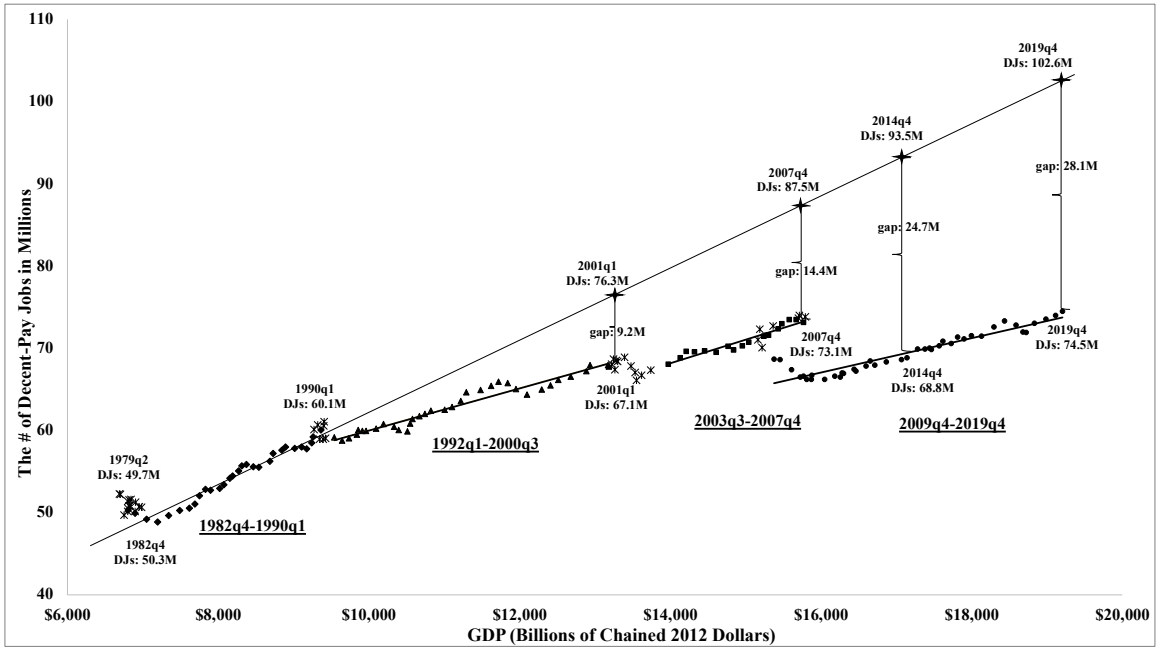
especially 1980-82, 1990-91, and 2007-09. The decline for young less-educated women begins in the mid-1990s and was also massive, taking place across both expansion and recession quarters until 2015.

3.2 GDP and the Number of Decent-Pay Jobs

Figures 7-9 report the results of a counterfactual exercise that compares the actual number of decent-pay jobs between 1990 and 2019 to what the number would have been had the simple linear relationship between GDP growth and decent-pay jobs during the *expansion* quarters of the 1980s continued after 1990. It should be noted that this procedure would have produced far larger decent pay gaps had it been possible to use a baseline from pre-1979 decades, because substantial wage stagnation and pay-productivity decoupling characterizes the 1980s (Mishel and Bivens 2021; Stansbury and Summers 2018). But even so, this exercise shows large decent-pay/GDP decoupling over the subsequent three decades, illustrated here for three demographic groups: all workers ages 18-64 (Figure 7), young workers with less than a college degree (Figure 8), and young workers with at least a college degree (Figure 9).

Had the relationship of decent-pay jobs to GDP during the 1980s expansion continued, Figure 7 shows that there would have been 102.6 million decent-pay jobs by the end of 2019 instead of the actual number, 74.5 million. The figure shows a progressive decoupling, with the decent-pay gap increasing from 9.2 million in 2000 to 14.4 million in 2007, to 24.7 million by the end of 2014, and to 28.1 million by the end of 2019. This striking failure of decent-pay jobs to keep pace with GDP after the early 1990s was driven by slower increases in each of the subsequent expansion periods (flatter trendlines) and by absolute declines during each of the three contractions: a small decline in the 1990-91 recession, a moderate decline in the 2001-02 recession, and a massive decent-job loss in the 2008 crisis and its aftermath (from 73.1 million in 2007q4 to 68.8 million in 2014q4). This figure shows an almost 10 million decent-pay job gain in the 8 years of the 1980s expansion as GDP grew by $2.6 trillion, but an increase of only 1.4 million decent-pay jobs over the 12 years between 2007q4 and 2019q4, despite the much larger $3.4 trillion increase in GDP.

Figure 7: GDP and Decent-Pay Jobs for All Workers (18-64), 1979-2019



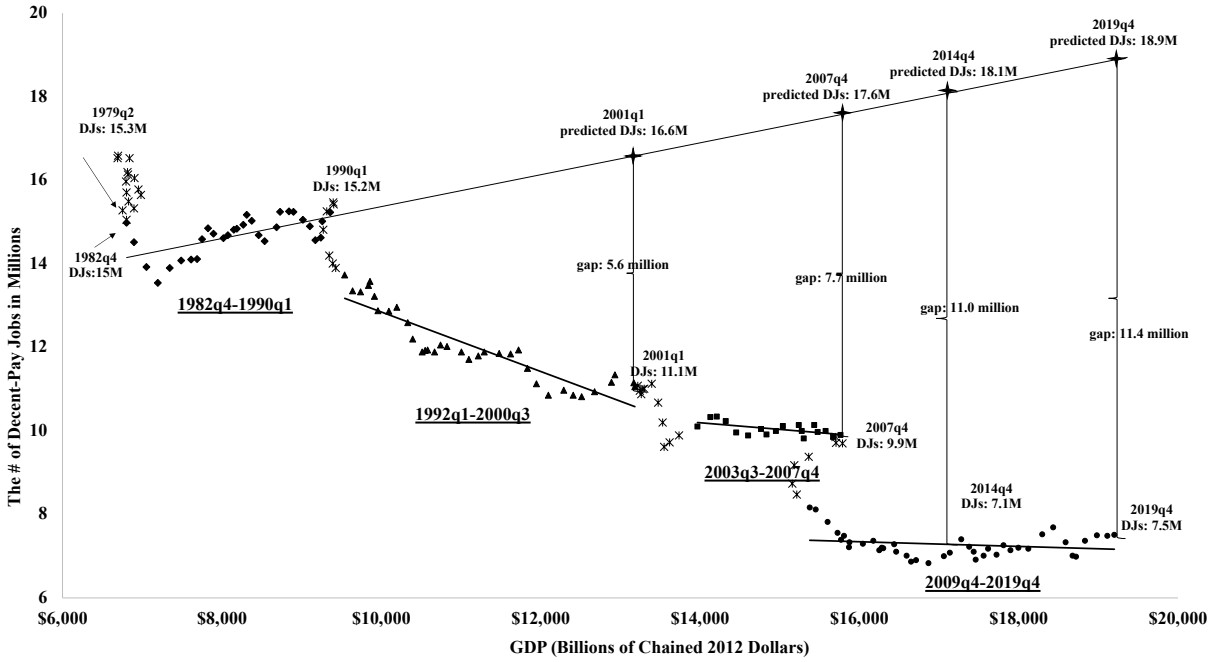
Source: author's calculations from the CPS-ORG (CEPR).

Figure 8 reports outcomes of the same exercise for young workers without a 4-year college degree. Although the total number of these workers saw almost no change over these four decades—33.6 million in 1979 and 33.7 million in 2019—the number with decent-pay jobs fell by half, from 15.3 million (45.4% of total employment for these workers) to 7.5 million (22.3% of the total). This figure shows that the collapse was particularly severe in two periods: the 1990s, during which the decent job total dropped by 4.2 million (from 15.2 in 1990q1 to 11 million in 2000q3), and another 3.1 million during and after the 2008 financial crisis (from 9.9 million in 2007q4 to 6.8 million in 2014q2). These two periods (16 years) accounted 7.3 of the 7.7 million decent-pay job decline from 1982 to 2019.[52] Had the 1980s relationship between GDP and decent jobs continued to 2019, there would have been 18.9 million decent-pay jobs for these young workers instead of the actual 7.5 million. In short, vastly fewer young less-educated

[52] Jaimovich and Siu (2012) point to job polarization as the driving force behind jobless recoveries. "... essentially all of the contraction in aggregate employment during NBER dated recessions can be attributed to recessions in these middle-skill, routine occupations…. jobless recoveries are observed only in these disappearing, middle-skill jobs" (pp. 2-3). My results suggest a more pervasive decline in pay quality during recessions, at least as measured by the incidence and number of decent-pay jobs, especially for men and all young workers without a college degree.

workers had a decent-pay job in 2019 than in 1979, a collapse not just in relative standing, but in opportunities for decent living standards from full-time work.

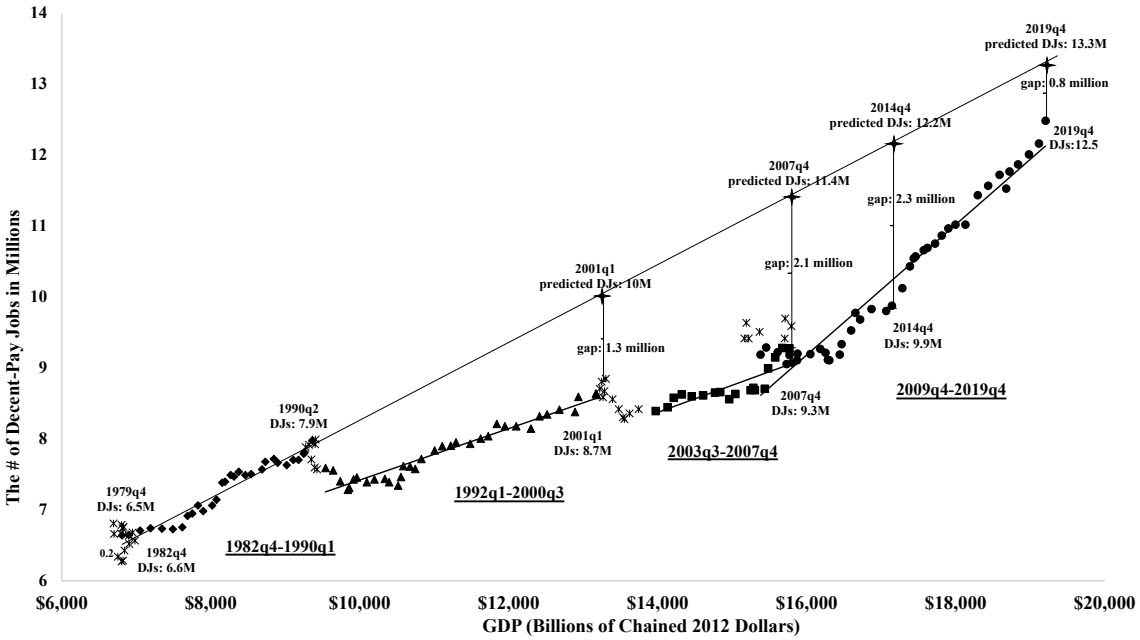
Figure 8: GDP and Decent-Pay Jobs for Young Workers (18-34) without a 4-Year College Degree, 1979-2019



Source: author's calculations from the CPS-ORG (CEPR).

Although the labor market performed much better for their college-degree counterparts, as a group these workers also experienced a substantial pay quality decoupling from GDP. Figure 9 shows a close upward fit between GDP and the number of young college-degree workers with decent-pay jobs in the 1980s, but this relationship shifted sharply downwards in the 1990-91 recession and again in the 2001-02 contraction quarters. This figure shows an increase in 1.4 million decent-pay jobs for young college-degree workers over the 17 years between 1990 and 2007 (7.9 to 9.3 million), hardly larger than the increase of 1.3 million decent-pay job increase in the 8 years between 1982 and 1990 (from 6.6 to 7.9 million). But since the 2008 financial crisis, this decline reversed, as the decent-pay number of jobs held by young college-degree workers actually increased faster than in the1980s, narrowing the decent jobs gap from 2.3 million in 2014 to just .8 million by the end of 2019.

Figure 9: GDP and Decent-Pay Jobs for Young Workers (18-34) with at least a 4-Year College Degree, 1979-2019



Source: author's calculations from the CPS-ORG (CEPR).

4. Decent-Pay Incidence and Disparities: The significance of gender, age, and education

Pay quality outcomes at the dual level of the pay quality hierarchy were introduced in Section 2.4 (Figure 4) for all workers (18-64) as well as for the subsets of prime-age workers (35-59) and young workers (18-34). This section presents a more detailed look at the evolution of the flip-side of the dual pay quality structure: decent-pay incidence and disparities. The central take-away is that the modest overall decline in the incidence of decent-pay jobs masks profound changes by gender, age, and educational attainment between 1979 and 2019.

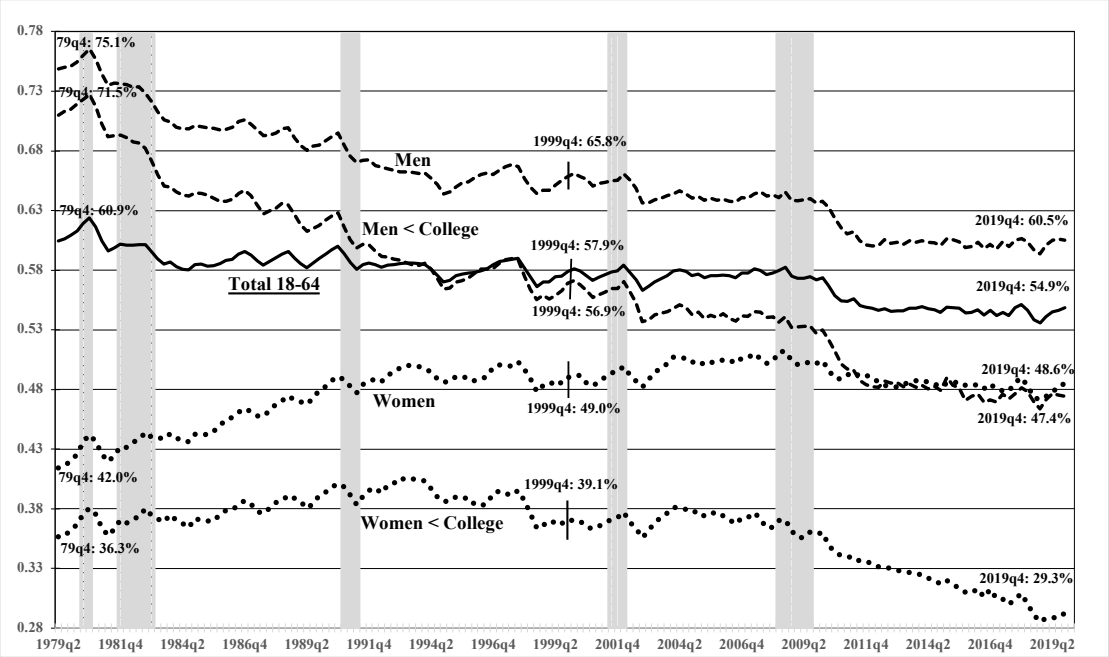
Figure 10 documents trends in decent-pay rates with five quarterly series: all workers (18-64), all men and all women (separately), and all men and all women (separately) without a

four-year college degree. The change in decent-pay incidence for all workers (the solid line in the center of the figure) was broadly stable for most of these four decades; the decline from 60.4 to 54.9 percent took place entirely during and immediately after the two major recessions, 1980-83 and 2008-11. But Figure 10 also shows that this stability reflects two strongly offsetting trends by gender. The first was the sharply declining rate for men, from 74.9 to 60.5 percent, which was driven most dramatically by the colossal decline for men without a four-year college degree (from 71% to 47.4%). The second contributing development was the modest increase in the decent-pay rate for women (41.4% to 48.6%), which took place entirely prior to the 2008-09 Great Recession. Unlike the results for young less-educated men, the decent-pay rate for women without a college degree increased in the first decade and a half, from 36.3 to 40.1 percent between 1979 and 1994, but then followed the pattern for men by declining sharply to 20.3 percent.

These incidence patterns can be translated into trends in group disparities. Consistent with the well-known narrowing of the gender wage gap, the gender gap in decent-pay rates is clearly visible in Figure 10. The decent-pay ratio of women to men rose from 55.3 percent in 1979 (41.4%//74.9%) to 80.3 percent in 2019 (48.6%//60.5%), a result due—once again—more to declining pay quality for men (from a 74.9% decent-pay share to 60.5%) than to improving decent-pay outcomes for women (41.4% to 48.6%).[53] While this 25 percentage point improvement in the gender pay quality gap (from 55.3% to 80.3%) is impressive, the figure also shows that by this indicator, gender pay quality inequality has remained substantial. The decent-pay rate for all women (18-64) was barely above the decent-pay rate for men with less than a college degree in 2019 and was no better off (at 48.6%) in 2019 than in 1991, 28 years earlier. Figure 10 shows that the decent-pay *disadvantage* for workers without a college-degree relative to overall rate for all workers worsened substantially for both men and women. The decent-pay education gap for less-educated men increased from a negligible 3.8-point gap in 1979 (71.3% vs. 75.1%) to a gigantic 17.1-point gap in 2019 (47.4% vs. 60.5%); for women, the rise in the education disadvantage was similar, increasing from a gap of 5.7 points in 1979 (36.3% vs. 42.0%) to 19.3 points in 2019 (29.3% vs. 48.6%).

[53] According to Blau and Kahn (2017: 793, Table 1), the unadjusted gender gap at the median wage narrowed from 61.9 to 82.2 percent between 1980 and 2010.

Figure 10. Decent-Pay Employment Shares (18-64) by Gender and Education, 1979-2019



Source: author's calculations from the CPS-ORG (CEPR).

Table 2 shifts the focus to decent-pay rates by race (white and nonwhite) as well as by gender and compares outcomes for these gender-by-race groups for workers with and without a 4-year college degree. The top panel shows that the 6-point decline in decent-pay incidence for all workers (60.9% to 54.9%) was evenly divided between the first two and last two decades (3 points each). Behind this modest decline was a huge drop in decent-pay incidence for those without a college degree (-16.6 points: from 55.9% to 39.3%), which was compounded by a small decline for those with a college degree (-2.9 points).

The next two panels report that the improvement for white women was substantially greater than for nonwhite women (11.0 points compared to 3.9 points), due to racial differences by education level. The table shows that the decline in decent-pay rates was smaller for less-educated white than nonwhite women (-3.1 points vs. -7.7 points) but the gains were far larger for white than nonwhite women with a college degree (5.0 points compared to 1.4 points). As a result, the decent-pay disadvantage for nonwhite women worsened from 82.7 percent in 1979 (35.9%//43.4%) to 73.2 percent in 2019 (39.8%//54.4%).[54]

[54] This rising racial pay quality gap among women was driven by 1) poorer outcomes for less-educated nonwhite women prior to 2000, and 2) worse performance for college-degree nonwhite women since 2000. It would be interesting to explore the reasons for these patterns.

Table 2: Decent-Pay Employment Shares (18-64) by Race, Gender, and Education, 1979-2019

	Decent-Pay Shares (%)			Change in Percentage Points		
	1979q4	1999q4	2019q4	1979-99	1999-2019	1979-2019
All Workers	**60.9%**	**57.9%**	**54.9%**	**-3.0**	**-3.0**	**-6.0**
< College	55.9%	47.5%	39.3%	-8.4	-8.2	-16.6
>= College	82.3%	84.9%	79.4%	2.6	-5.5	-2.9
White Women	**43.4%**	**52.6%**	**54.4%**	**9.2**	**1.8**	**11.0**
< College	37.5%	40.6%	34.4%	3.1	-6.2	-3.1
>= College	71.8%	80.9%	76.8%	9.1	-4.1	5.0
Non-White Women	**35.9%**	**39.3%**	**39.8%**	**3.4**	**0.5**	**3.9**
< College	30.6%	28.8%	22.9%	-1.8	-5.9	-7.7
>= College	70.4%	79.4%	71.8%	9.0	-7.6	1.4
White Men	**78.0%**	**71.5%**	**67.6%**	**-6.5**	**-3.9**	**-10.4**
< College	74.7%	63.2%	55.0%	-11.5	-8.2	-19.7
>= College	89.1%	89.6%	85.9%	0.5	-3.7	-3.2
Non--White Men	**60.4%**	**49.8%**	**49.2%**	**-10.6**	**-0.6**	**-11.2**
< College	57.1%	42.0%	37.5%	-15.1	-4.5	-19.6
>= College	83.3%	84.3%	78.9%	1.0	-5.4	-4.4

Source: author's calculations from the CPS-ORG (CEPR).

The bottom two panels show that white and nonwhite men experienced similar declines in decent-pay incidence between 1979 and 2019 (-10.4 and -11.2 points, respectively), driven by large declines between 1979 and 1999, especially for nonwhite men (-10.6 points, from 60.4% to 49.8%). The drop in decent-pay incidence was similar by race for both non-college degree workers (-19.7 and -19.6 points) and for college-plus workers (-3.2 and -4.4 points). This table shows that while both white and nonwhite men experienced large declines in pay quality as measured by decent-pay rates, race disparity among men worsened slightly between 1979 and 2019, from a nonwhite/white ratio of 77.4 percent (60.4%//78%) to 72.8 percent (49.2%//67.6%).

5. A Tripartite Pay Quality Perspective: Poverty-, middle-, and good-pay jobs

This section shifts attention to the pay quality indicators defined by the tripartite structure (Figure 3). Section 5.1 presents poverty-, middle-, and good-pay rates by demographic group for five dates—roughly decades—between 1979 and 2019. As measured by both poverty-pay and good-pay incidence, there have been large shifts in pay quality by gender. Both white and nonwhite women have experienced either large pay quality increases (all women 18-64) or at least stability (young women 18-34 and those with less than a college degree), while both white and nonwhite men in each age and education group have been hit by large pay quality declines. Section 5.2 shows that middle-pay jobs, while broadly stable in employment shares across demographic groups, declined notably in pay quality, as the composition of middle-pay jobs shifted away from the lower tier of the decent-pay segment to the upper-tier of the low-pay segment.

5.1 Poverty-, Middle-, and Good-Pay Employment Rates

A tripartite perspective on changes in pay quality for all workers (18-64) is presented in Figure 11. Despite the sharp increases in conventional indicators of pay inequality over these four decades, the top panel shows that pay quality—measured by the incidence of poverty-pay and good-pay—was almost perfectly stable. The increase in poverty-pay incidence from 25.8 to 26.5 percent between 1979 and 2019 is slightly smaller than the increase shown by the OECD's low pay indicator (defined by the same formula), which rose 21.9 to 23.4 percent (0.7 vs 1.5 percentage points).[55] The increase in poverty-pay incidence in the 1980s shown in the figure (from 25.8% to 28.7%) reflects the large increase in bottom-half inequality (as measured by the conventional 50-10 ratio) between 1980 and 1987.[56] In addition, in light of the widely accepted view that the American pay structure has been characterized by a "declining middle", it is also notable that the share of middle-pay jobs was almost perfectly stable over these four decades and, as mentioned in the previous section, was only slightly higher in 2019 (41.1%) than 1979 (40.0%).

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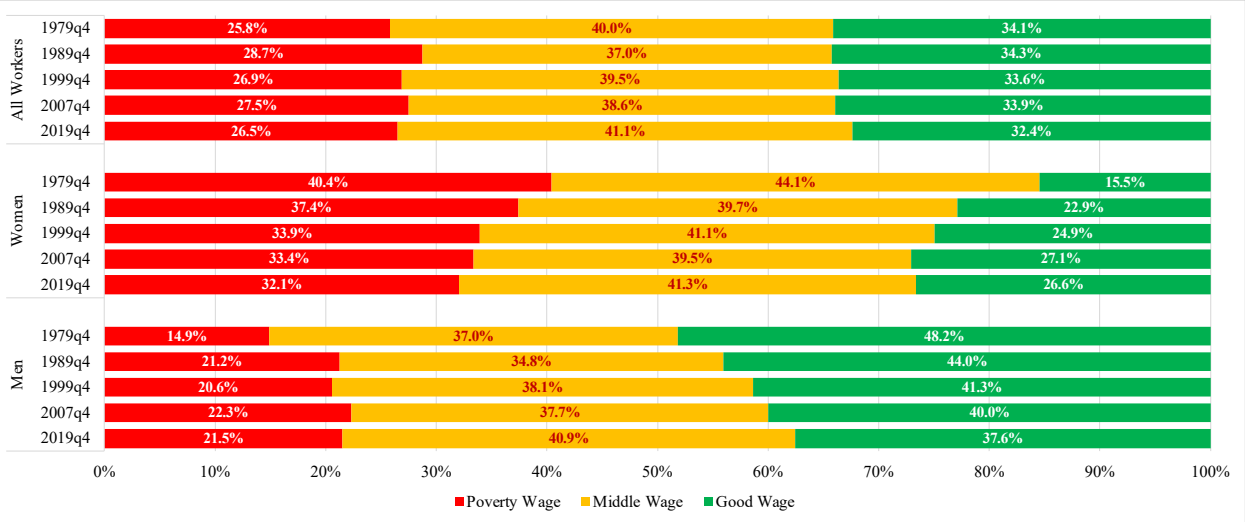
[55] The differences in levels and change between this paper's poverty-pay rates and the OECD's low-pay indicator largely reflect differences in how the population of workers is defined (e.g., age and wage cutoffs).

[56] According to the Economic Policy Institute, the 50-10 ratio rose from 1.72 to 2.13 between 1979 and 1987, fell back to 1.89 in 2003, and was the same in 2019 (1.9) (EPI: https://www.epi.org/data/#?subject=wage-percentiles, accessed October 18, 2024).

Figure 11: Pay Quality Contours by Gender for All Workers (18-64), 1979-2019



Source: author's calculations from the CPS-ORG (CEPR).

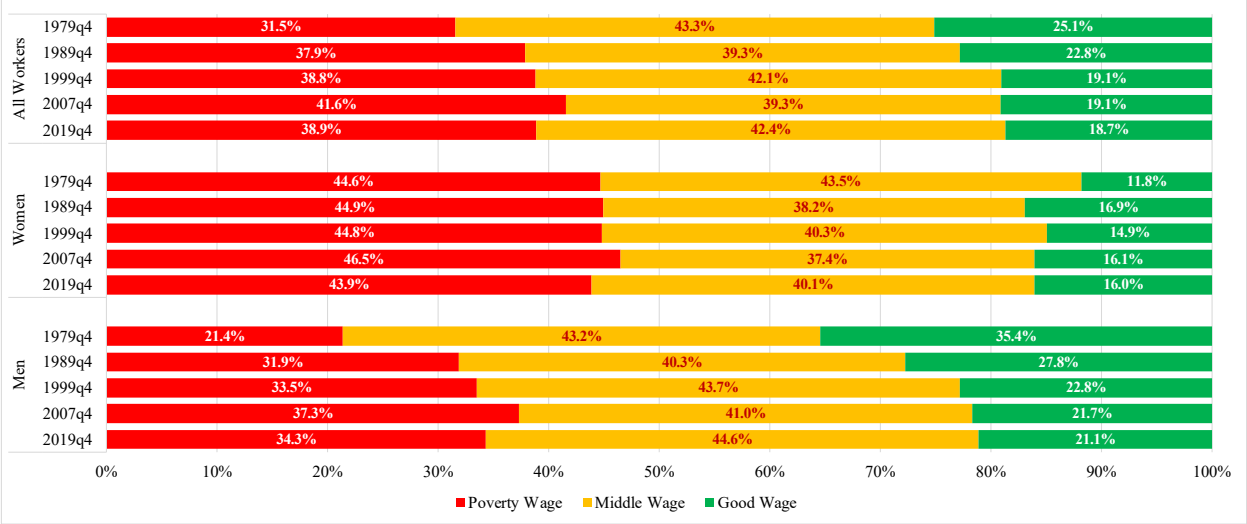
Like the results presented in the previous section for decent-pay jobs, the second and third panels in Figure 11 show that the overall stability masks substantial *offsetting* shifts by gender. While the poverty-pay share declined sharply for women workers (8.3 percentage points, from 40.4% to 32.1%), it increased dramatically for men (6.6 points, from 14.9% to 21.5%), driven by substantial worsening in the 1980s (consistent with deindustrialization, rising trade competition, and the assault on unions in that decade).[57] These two bottom panels also show that the good-pay share for women rose by over 11 percentage points (15.5% to 26.6%), about the same in absolute terms as the 10.6 percentage point decline for men (48.2% to 37.6%). The share of middle-pay jobs for women fell from 44.1 percent to 39.7 percent in the 1980s but then remained stable between the early 1990s and 2019 at just above 40 percent. The middle-pay share also declined for men in the 1980s, from 37.0 to 34.8 percent, but then rose to 40.9 percent in 2019.

Figure 12 presents tripartite results by gender for young workers (18-34). For all young workers (the top panel), the incidence of poverty-pay rose from 31.5 percent in 1979 to 38.9 percent in 2019, while the good-pay rate fell equally substantially (from 25.1% to 18.7%) and

[57]The OECD's low-pay shares by gender show similar offsetting trends: substantial worsening for men, from an OECD low-pay share of 12.3 percent in 1979 to 19.4 percent in 2019 (19.1% in 2023), and a similarly large low-pay improvement for women, declining from 37.4 percent to 28 percent (28.6% in 2023) (OECD Data Explorer: https://stats.oecd.org/Index.aspx?QueryId=64193# accessed on October 9, 2024).

the middle-pay share remained about the same (43.3% to 42.4%). The 2nd and 3rd panels show that this worsening in pay quality for young workers was driven by large increases in the poverty-pay rate for young men (from 21.4% to 34.3%) and declines in the good-pay rate (35.4% to 21.1%); for both indicators, the worsening in pay quality took place before 2007 and especially during the 1980s. The overall decline in pay quality for young workers also reflects the lack of improvement in poverty-pay incidence for young women, which remained at 44-45 percent— strikingly different from the big gains for all women (18-64) shown in Figure 11. At the same time, due mainly to the decline in middle-pay shares, the good-pay rate for young women rose from 11.8 to 16.0 percent, entirely due to gains in the 1980s.

Figure 12: Pay Quality Contours by Gender for Young Workers (18-34), 1979-2019

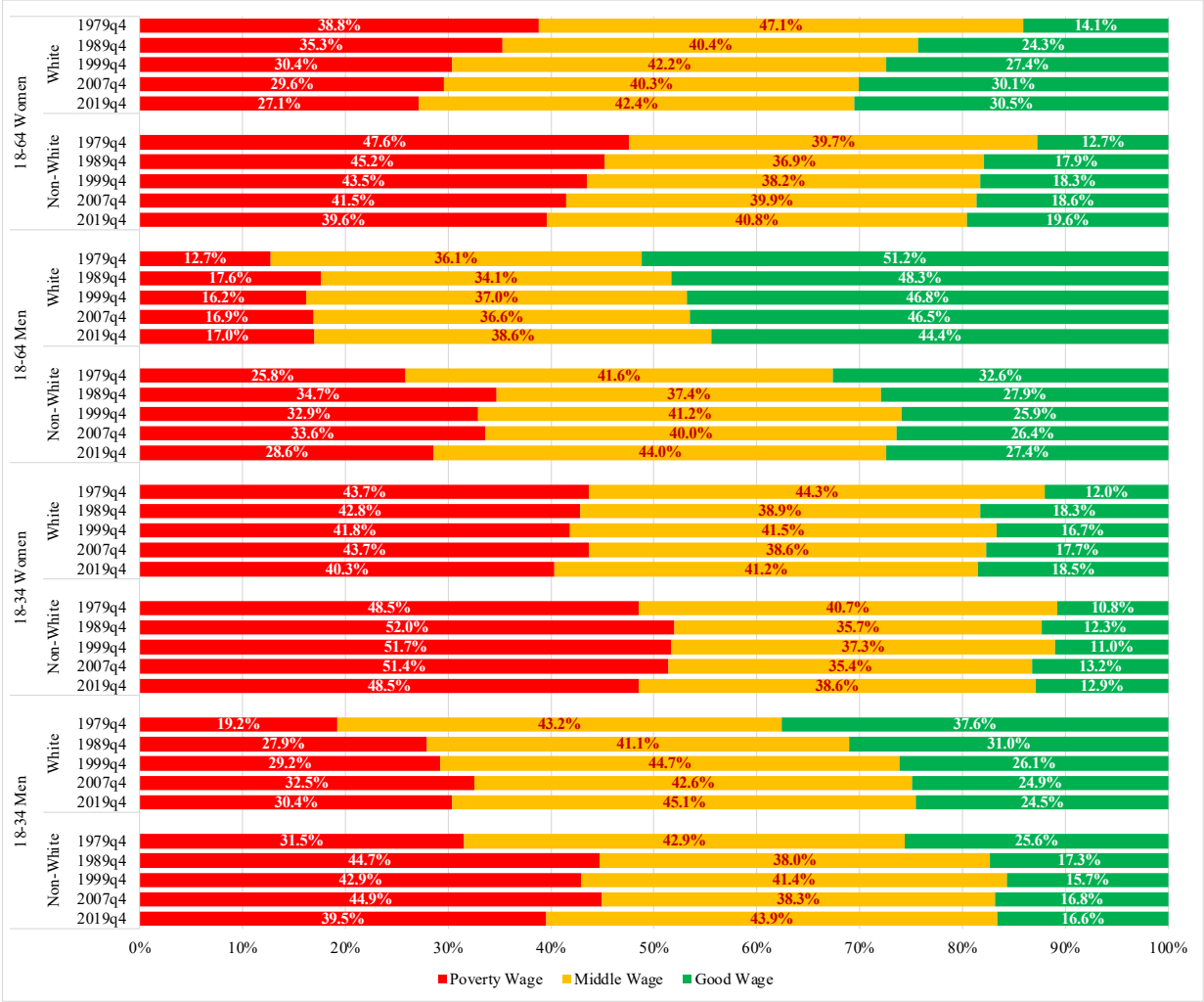


Source: author's calculations from the CPS-ORG (CEPR).

Figure 13 stratifies workers further by intersecting race with gender and age. This figure shows that changes in pay quality have moved mainly with gender, but with notable differences by race within each gender. Above all, poverty- and good-pay indicators show that white and non-white women have experienced substantial gains while white and non-white men have seen large declines. But overall, the story is that white women have experienced the largest relative gains and white men the largest declines. For example, the top panel ('18-64 Women') reports that among women, the decline in poverty-pay incidence was large for both racial groups, but much larger for white women (down 11.7 points: from 38.8% to 27.1%) than non-white women (down 8 points: 47.6% to 39.6%). Similarly, the incidence of good-pay jobs rose impressively

for women in both race groups, but the improvement was, again, greater for white women (up 15.4 points: 14.1% to 30.5%) than non-white women (up 6.9 points: 12.7% to 19.6%). Among men, the next panel ('18-64 Men') shows that the increase in poverty-pay was greater for white men (4.3 points:12.7% to 17%) than nonwhite men (2.8 points: 25.8% to 28.6%). Good-pay incidence fell for men, both white (6.8 points) and nonwhite (5.2 points).

Figure 13: Pay Quality Contours by Age, Gender, and Race, 1979-2019



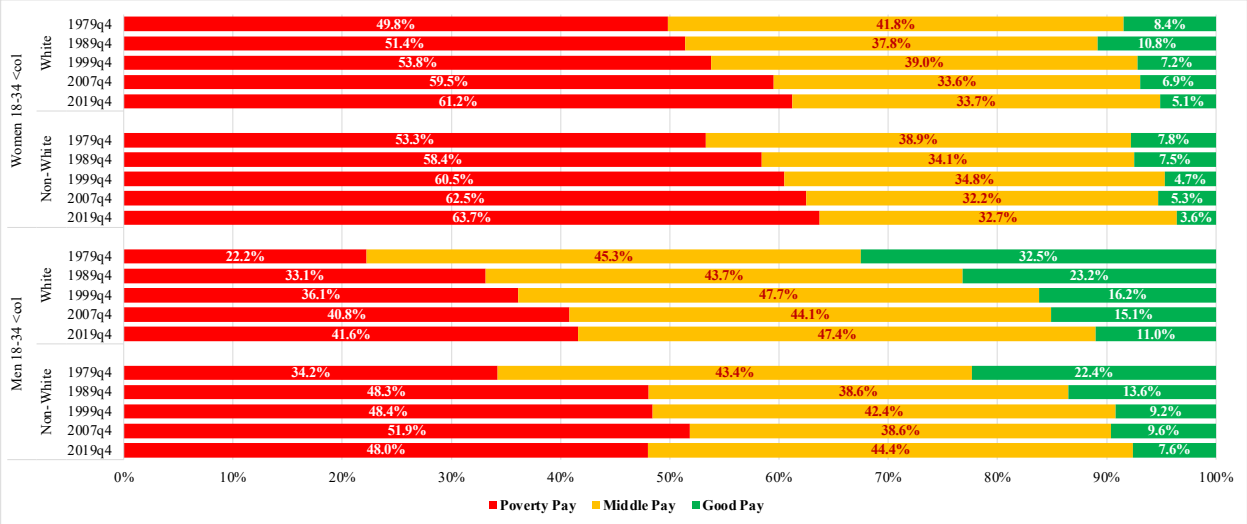
Source: author's calculations from the CPS-ORG (CEPR).

For young workers, the 3rd panel of Figure 13 ('18-34 Women') shows that among young women, the poverty-pay share fell between 1979 and 2019 (43.7% to 40.3%), while the share for non-white women remained unchanged at 48.5%. The relative performance of young white and nonwhite women was even greater for good-pay jobs: up 6.5 points (12% to 18.5%) for these white women compared to just 2.1 points for nonwhite women (10.8% to 12.9%). Finally,

Panel 4 ('18-34 Men') reports that the increase in poverty-pay incidence for men was extremely large for both groups, but again, larger for young white men (11.2 points: 19.2% to 30.4.2%) than non-white men (8 points: 31.5% to 39.5%). Both groups experienced huge declines in good-pay jobs: for young white men, from 37.6 to 24.5 percent (13.1 points); for young nonwhite workers, from 25.6 to 16.6 percent (9 points).

Finally, Figure 14 shows outcomes for young workers by gender and race for those without a four-year college degree. A comparison of these results with the bottom panels of Figure 13 shows that pay-quality performance was not only lower for each gender-by-race group in each decade, but worsened substantially between 1979 and 2019, even for white women. The top panel reports that in second half of this period, since 1999, the poverty-pay rate increased sharply for young less-educated white women between 1999 and 2019 (48.9% to 57.1%) but only slightly for nonwhite women (58.8% to 61.5%)—a downward convergence in the racial wage gap as both young white and nonwhite women's pay quality at the bottom of the labor market worsened. Similarly, good-pay rates show large declines (from very low levels) for both white and nonwhite women.

Figure 14: Pay Quality Contours by Gender and Race for Young Workers (18-34) without a Four-Year College Degree, 1979-2019



Source: author's calculations from the CPS-ORG (CEPR).

The bottom panel of Figure 14 reports that pay quality for young white and non-white men without a college degree totally imploded over these four decades. Good-pay incidence for young less-educated men fell by 21.5 points for white men (32.5% to 11%) and 14.8 points for

nonwhite men (22.4% to 7.6%). Measured by poverty-pay, pay quality decline was larger for white than nonwhite men: from 22.2 to 41.6 percent for young less-educated white men (19.4 points); and from 34.2 to 48.6 percent for their nonwhite counterparts (11.8 points)—a decline of nonwhite men due entirely to their pay quality collapse in the 1980s.

5.2 The Changing Quality of Middle-Pay Jobs

Poverty-pay and good-pay rates measure pay quality at the bottom and top of the pay hierarchy, one designed to target nonsupervisory workers (or, from another perspective, those not employed in professional, technical, or managerial jobs requiring elite 4-year college degrees). Clearly, increasing shares of poverty-pay and decreasing shares of good-pay jobs indicate declining pay quality, and figures 6-9 show no ambiguity about directions in pay quality using these two indicators for any of the demographic groups. But while no attempt is made to account for changes in pay quality *within* the poverty- and good-pay contours, it is straightforward to do so for the middle-pay contour because it is comprised of two distinct tiers, the Upper Tier of the Low-Pay segment (UTLP) and the Lower Tier of the Decent-Pay segment (LTDP). Changes in middle-pay contour pay can be measured simply by the change in this composition, for example, by the change in the decent-pay (LTDP) share of these jobs.[58]

Table 3 shows middle-pay employment shares in 1979 and 2019 for two age groups (18-64 and 18-34) for each of nine demographic groups defined by gender and race. Three patterns are apparent. *First,* as the bar charts (figures 6-9) reported, the middle-pay contours are similar in size across the 18 demographic groups, ranging from 36.1% for 18-64 white men in 1979 to 45.1% for 18-64 white women in 1979. *Second*, the change in the size of the middle-pay contour has been small—from +3.9 percentage points for all men 18-64 to -3.4 points for all women 18-34. *Third*, this general stability in size reflects offsetting changes in the two tiers with clear implications for changes in pay quality. In each of the nine panels and for both age groups, the change in the two tiers of the middle-pay contour between 1979 and 2019 runs in different directions: *declining* employment shares in the lower tier of the decent-pay segment (LTDP) and *increasing* shares in the upper-tier of the low-pay segment (UTLP).

[58] I thank Jan Gnaedinger for suggesting this measure.

Table 3: Changes in the Employment Composition of Middle-Pay Jobs, 1979-2019

	----------18-64 ----------					----------18-34 ----------			
	Employment Shares			Pay Quality		Employment Shares			Pay Quality
	1979q4	2019q4	Change*	Change**		1979q4	2019q4	Change*	Change**
1. All Workers									
Middle-Pay Contour	40.0%	41.1%	1.1	-12.3		43.3%	42.4%	-0.9	-16.3
Low-Tier Decent-Pay	26.8%	22.5%	-4.3			28.0%	20.5%	-7.5	
Upper-Tier Low-Pay	13.2%	18.6%	5.4			15.4%	21.9%	6.5	
2. All Women									
Middle-Pay Contour	44.1%	41.3%	-2.8	-7.0		43.5%	40.1%	-3.4	-9.8
Low-Tier Decent-Pay	26.6%	22.0%	-4.6			25.3%	19.4%	-5.9	
Upper-Tier Low-Pay	17.5%	19.3%	1.8			18.2%	20.7%	2.5	
3. All Men									
Middle-Pay Contour	37.0%	40.9%	3.9	-17.0		43.2%	44.6%	1.4	-21.0
Low-Tier Decent-Pay	27.0%	22.9%	-4.1			30.0%	21.6%	-8.4	
Upper-Tier Low-Pay	10.0%	18.0%	8.0			13.1%	23.0%	9.9	
4. All White									
Middle-Pay Contour	39.9%	40.6%	0.7	-9.0		43.7%	43.3%	-0.4	-13.5
Low-Tier Decent-Pay	27.0%	23.8%	-3.2			28.6%	22.5%	-6.1	
Upper-Tier Low-Pay	12.9%	16.8%	3.9			15.1%	20.8%	5.7	
5. All Non-White									
Middle-Pay Contour	40.8%	41.9%	1.1	-14.3		41.8%	41.4%	-0.4	-17.0
Low-Tier Decent-Pay	25.8%	20.5%	-5.3			25.3%	18.0%	-7.3	
Upper-Tier Low-Pay	15.0%	21.4%	6.4			16.5%	23.4%	6.9	
6. White Women									
Middle-Pay Contour	45.1%	42.4%	-2.7	-4.2		0.443	0.412	-3.1	-6.3
Low-Tier Decent-Pay	27.3%	23.9%	-3.4			0.259	0.215	-4.4	
Upper-Tier Low-Pay	17.8%	18.5%	0.7			0.184	0.197	1.3	
7. Non-White Women									
Middle-Pay Contour	39.7%	40.8%	1.1	-8.9		0.407	0.386	-2.1	-13.3
Low-Tier Decent-Pay	23.2%	20.2%	-3.0			0.229	0.166	-6.3	
Upper-Tier Low-Pay	16.5%	20.6%	4.1			0.178	0.22	4.2	
8. White Men									
Middle-Pay Contour	36.1%	38.6%	2.5	-14.1		0.432	0.451	1.9	-18.9
Low-Tier Decent-Pay	26.8%	23.2%	-3.6			0.306	0.234	-7.2	
Upper-Tier Low-Pay	9.3%	15.4%	6.1			0.126	0.217	9.1	
9. Non-White Men									
Middle-Pay Contour	41.6%	44.0%	2.4	-17.3		0.429	0.439	1.0	-20.1
Low-Tier Decent-Pay	27.8%	21.8%	-6.0			0.274	0.192	-8.2	
Upper-Tier Low-Pay	13.8%	22.2%	8.4			0.155	0.247	9.2	

*Percentage points. **This index of middle-wage pay quality is defined as the percentage point change in the Lower-Tier Decent-Wage (LTDW) share of Middle-Wage Contour jobs/workers. For example, the LTDW share for all middle-wage workers (18-64) is 67.0% in 1979 (26.8/40) and 54.7% in 2019 (22.5/41.1), which produces a middle-wage pay quality change of -12.3 points (67.0-54.7).
Source: author's calculations from the CPS-ORG (CEPR).

This pattern reflects the joint use of the median and the mean as reference wages for the pay quality thresholds in a period of sharply rising top-half wage inequality and little or no

increase in bottom-half inequality or in the median wage (see Section 2 and Section 3.2).[59] But like the other parts of the low-pay and decent-pay segments (the poverty-pay and good-pay contours), the magnitudes of the employment shifts within the middle-pay contour show large differences across demographic groups and similar patterns: far greater declines in pay quality for men than women. Measured by the percentage point change in the lower-tier decent-wage (LTDW) share of middle-pay jobs, the pay quality index fell by 17 points for men (-14.1 points for white men and -17.3 points for nonwhite men) but just 7 points for women (-4.2 point for white women and -8.9 points for nonwhite women). Also, like changes in poverty- and good-pay indicators, the right-side panel shows that the 1979-2019 change in the decent-pay share of middle-pay jobs was substantially worse for young workers: down 21 points for men (-18.9 for white men and -20.1 points for nonwhite men) and 9.8 points for women (-6.3 for white women and -13.3 points for nonwhite women).

6. Poverty-Pay Disparities by Gender, Race, and Nativity

Section 5 documented large post-1979 shifts in pay quality, measured by the incidence of decent-, poverty-, and good-pay jobs, for groups stratified by gender, race, age, and education. This section reports the consequences of the changes in outcomes for one of these pay quality indicators—the incidence of poverty-pay—for the evolution of gender, race, and nativity disparities in (bottom-end) pay quality over these four decades.[60] Section 3.1 reports gender disparities in poverty-pay incidence by race (white and non-white) for three age/education groups; Section 3.2 does the same for race disparities in poverty-pay by gender; and Section 3.3 presents the evolution of poverty-pay disparities for native-born and foreign-born workers with less than a college degree, separately for women and men.

[59] Throughout most of the 1979-2019 period, the increase in top-half wage inequality (captured by the mean) was greater than the increase in the median, causing the low-pay threshold to rise relative to the poverty-pay threshold, resulting in a rising share of workers located between these two thresholds. At the same time, the good-pay threshold is defined as 150 percent of the decent-pay (low-pay) threshold; as top-half inequality rose between 1979 and 2019, higher shares of decent-pay workers were located above this good-pay threshold, leading to a lower-share in below it, and thus a declining share in the lower tier of the decent-pay segment.

[60] Gender and race disparities in good-pay incidence are broadly similar and are available from the author.

5.1 Gender Disparities by Race

The gender gap literature has focused on measuring and explaining changes in the ratio of women's to men's pay, as measured by the hourly wage, weekly earnings, and annual incomes, usually for full time workers. As Blau and Kahn's (2017, p.790) comprehensive review of the literature concludes, "After many years with a stable female/male earnings ratio of roughly 60 percent, women's relative wages began to rise sharply in the 1980s, with a continued, but slower and more uneven rate of increase thereafter." The Blau/Kahn review also reports changes at different points in the distribution, which shows that convergence has been similar at the 10th, 50th, and 90th percentiles: the (unadjusted) hourly wage ratio has converged at similar rates between 1980 and 2010 at the 10th and 50th percentiles—to slightly closer parity at the 10th (87.6%) than the 50th (82.2%) and still less parity at the 90th percentile (76.6%). One important conclusion is that this convergence reflects the fact that women now "look" more like men than in recent decades (Goldin, 2014), especially in human capital characteristics and facing less overt discrimination, although occupation segregation (e.g., in 'caring' jobs) remains substantial (Blau and Kahn, 2017, p. 800). But this literature has not put much emphasis on determining the extent to which, in the aggregate, the gender gap has narrowed because of *declining* labor market outcomes for men, especially in the bottom half of the distribution. In the terminology of Sean Fain, the question is: how much of the gender convergence is due not just to the important gains that have been reported for women, but to "40 years of going backwards" in *absolute* terms for men? Pay quality incidence is an effective metric for highlighting this dimension of the evolution of disparity trends in different parts of the pay distribution (tiers of the pay quality hierarchy).

Table 4 reports poverty-pay employment shares and the corresponding gender disparity ratios (the 'D-Ratio'), which measure group disadvantage—here, the ratio of women's to men's poverty-pay incidence. The larger the difference, the greater the disadvantage, and gender convergence is shown by a D-Ratio that approaches unity. The results shown in the left-side panel report the results for the total workforce (18-64) in three sets of rows—total, white, and non-white—for 1979 and 2019. Rows 1-2 show that women's poverty-pay disadvantage, measured by the D-Ratio, fell almost in half, from 2.71 to 1.49. This decline reflects changes in incidence rates shown in the first two columns: the combination of the 8.3 percentage point poverty-pay rate *decline* for women (from 40.4% to 32.1%) and the 6.6-point *increase* for men (from 14.9% to 21.5%). Rows 3-4 and 5-6 show that the decline in the gender disparity ratio was

far greater among white workers (3.05 to 1.62) than nonwhite workers (1.85 to 1.40). These rows also show that this difference by race was due to a much bigger improvement for white than nonwhite women (38.8% to 25.2% and 47.6% to 38.3%, respectively) and a greater deterioration (in both percentage points and percent change) for white than nonwhite men (12.7% to 15.6% versus 25.8% to 27.4%).

Table 4: Gender Disparities in Poverty-Pay by Race, 1979 and 2019

		18-64			18-34			18-34 < college		
		Women	*Men*	*D-Ratio**	*Women*	*Men*	*D-Ratio**	*Women*	*Men*	*D-Ratio**
Total	*1979*	40.4%	14.9%	2.71	44.6%	21.4%	2.09	50.5%	24.6%	2.05
	2019	32.1%	21.5%	1.49	43.9%	34.3%	1.28	62.4%	44.6%	1.40
White	*1979*	38.8%	12.7%	3.05	43.7%	19.2%	2.28	49.8%	22.2%	2.24
	2019	25.2%	15.6%	1.62	35.8%	27.2%	1.32	57.1%	37.9%	1.51
Non-White	*1979*	47.6%	25.8%	1.85	48.5%	31.5%	1.54	53.3%	34.2%	1.56
	2019	38.3%	27.4%	1.40	45.8%	37.3%	1.23	61.5%	45.7%	1.35

*The D-Ratio is a measure of disparity disadvantage. In this case, it is the ratio of women's to men's poverty-pay employment share. Source: author's calculations from the CPS-ORG (CEPR).

In contrast, the middle columns report that for young workers (18-34), the large decline in gender poverty-pay disparity (from 2.09 to 1.28) was entirely due to the massive increase in poverty-pay rates for men (21.4% to 34.3%); the rates for young women were nearly the same in 1979 and 2019 (44.6% and 43.9%). Like the results for all workers (18-64), for young workers the decline in gender pay disparity was much larger for white workers (2.28 to 1.32) than non-white workers (1.54 to 1.23).

The top rows of the right-side panel (young less-educated workers) show that, unlike the stability for all young female workers, for young women without a college degree, poverty-pay rates *rose* significantly (from 50.5% to 62.4%), driven by a sizable worsening for *both* white and non-white women (rows 3-6: 49.8% to 57.1% for white women; 53.3% to 61.5% for nonwhite women). But the increase in poverty-pay rates were in even larger for young less-educated male workers, nearly doubling (from 24.6% to 44.6%), which led to a large decline in poverty-pay gender disparity among young non-college degree workers (from 2.05 to 1.4).

Rows 3-4 and 5-6 show that the decline in these young men's pay quality was substantial for both white men (22.2% to 37.9%) and nonwhite men (34.2% to 45.7%). The bottom right corner shows that these incidence patterns for young less-educated workers led to much greater gender convergence among white workers (2.24 to 1.51) than non-white workers (1.56 to 1.32).

5.2. Race Disparities by Gender

Mandel and Semyonov (2016) present important findings on gender differences in trends and sources of the racial pay gap for 1970-2010. They confirm that the size of the racial gap has been far larger among men than women (p. 1040), due in part to structural changes (growing private and public service sectors and declining manufacturing sectors), but argue that this difference by gender is also due to greater "negative stereotypes" of black men than black women, and that "women from different races have much more in common than men do, due to the universal tension between paid and unpaid work" (p. 1040).

These intersectional dynamics are explored in Table 5, but with different metrics: poverty-pay incidence instead of average wage levels. The top left side of the table shows that for all workers (18-64), poverty-pay incidence was lower in 2019 than four decades earlier for both nonwhite workers (35.6% to 32.6%) and white workers (23.8% to 20.1%). Because the relative decline was somewhat greater for whites, the racial disparity ratio increased, from 1.5 to 1.62. But this increase in overall race disparity is the result of offsetting disparity trends among women and men: the poverty-pay disadvantage for non-white relative to white women more than doubled, from 23 to 52 percent (the D-Ratio increased from 1.23 to 1.52), while the disadvantage of non-white men relative to white men fell (from 2.03 to 1.76).

The middle panel of Table 5 reports a similar but less pronounced pattern for young workers by gender: the disadvantage ratio increases modestly from a very low level for women (1.11 to 1.28) but declines for men from a higher level (1.64 to 1.37). For young workers without a college degree, the right-side panel shows that the modest narrowing in poverty-pay race disparity (1.24 to 1.15) was driven entirely by convergence among men, as the non-white disadvantage fell substantially, from 54 percent in 1979 (1.54) to 21 percent in 2019 (1.21), reflecting the much larger relative and absolute increase in the poverty-pay share for white than nonwhite young men.

Table 5: Race Disparities in Poverty-Pay by Gender, 1979-2019

		18-64			18-34			18-34 < college		
		Non-White	***White***	***D-Ratio***	***Non-White***	***White***	***D-Ratio***	***Non-White***	***White***	***D-Ratio***
Total	*1979*	35.6%	23.8%	1.50	39.2%	29.8%	1.32	42.7%	34.4%	1.24
	2019	32.6%	20.1%	1.62	41.3%	31.2%	1.32	52.7%	45.9%	1.15
Women	*1979*	47.6%	38.8%	1.23	48.5%	43.7%	1.11	53.3%	49.8%	1.07
	2019	38.3%	25.2%	1.52	45.8%	35.8%	1.28	61.5%	57.1%	1.08
Men	*1979*	25.8%	12.7%	2.03	31.5%	19.2%	1.64	34.2%	22.2%	1.54
	2019	27.4%	15.6%	1.76	37.3%	27.2%	1.37	45.7%	37.9%	1.21

*The D-Ratio is a measure of disparity disadvantage. For example, the top row shows that nonwhite workers (18-64) were 1.5 times more likely to hold poverty-pay jobs than men in 1979 and that difference increased to a factor of 1.62 in 2019.

In sum, the Mandel/Semyonov (2016) expectations and findings of "striking similarity in the over-time trend of the racial pay gap across the two gender groups" (p. 1040) is not confirmed with poverty-pay rates reported here. The Table 5 results for all three age-education groups show rising racial disparity among women, driven by the greater improvement of white than nonwhite women, but declining racial disparity among men, due to the relatively worse performance over the post-1979 decades for white men.

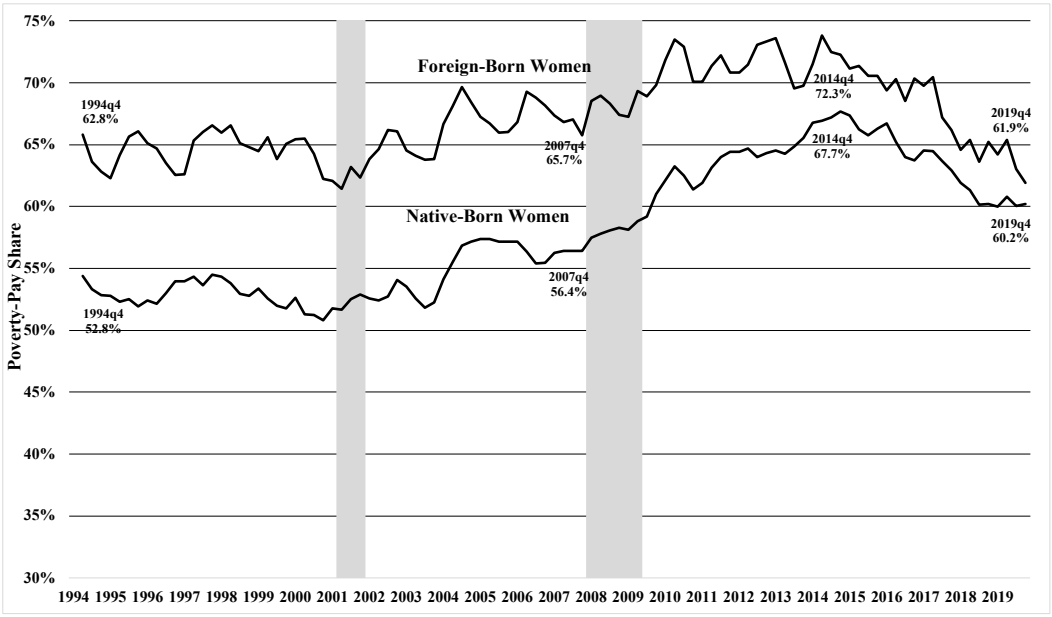
5.3 Nativity Disparities by Gender

Like the U.K. (Brexit) and many European countries, there has been a rise in anti-immigrant sentiment in the U.S., in part driven by the perception of unfair competition in the labor market. Has the native-born advantage in pay quality in the bottom-half of the wage distribution declined in recent decades? Figure 10 shows trends in the incidence of poverty-pay for young native- and foreign-born workers without a college degree since 1994 (the earliest available data from the CPS), presented separately for women (Panel A) and men (Panel B). Panel A shows that both groups of young less-educated women experienced similar trajectories, but increases in poverty-pay rates were greater for native-born women, resulting in a foreign-born disadvantage that dropped from 10 percentage points in 1994 (62.8% versus 52.8%) to just 1.7 points in 2019 (61.9% versus 60.2%). Most of this convergence took place after the 2008-09 recession. Panel B shows that among young less-educated men, the huge 21.4-point poverty-

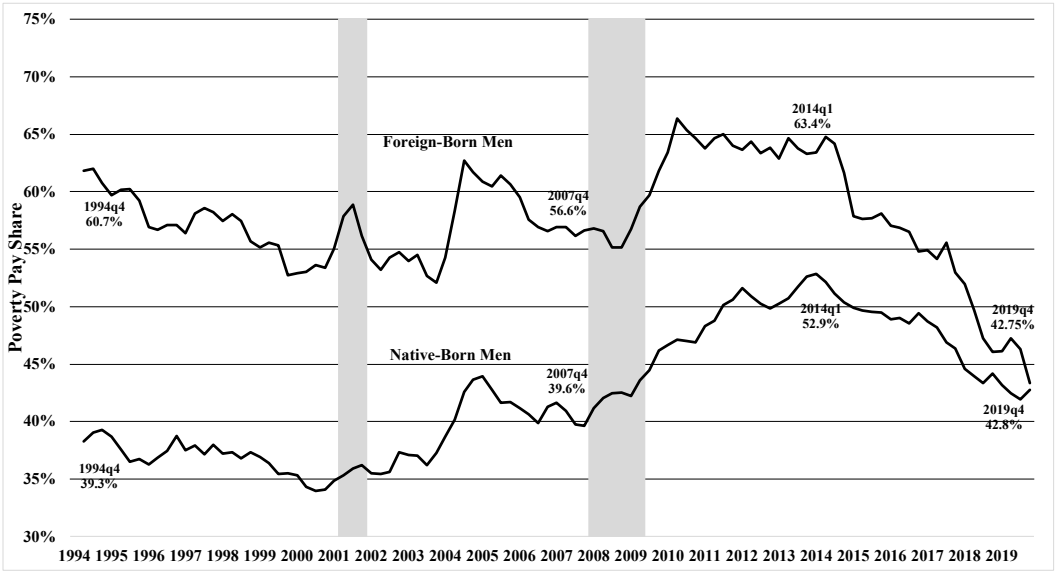
pay advantage for native-born men in 1994 (39.3% versus 60.7%) narrowed to less than one percentage point (43.3% vs. 42.75%) by the last quarter of 2019.[61]

Figure 15: Poverty-Pay Incidence by Nativity and Gender for Young (18-34) Workers with Less than a 4-Year College Degree, 1994-2019

Panel A: Women



Panel B: Men



Source: author's calculations of CPS-ORG data (CEPR).

[61] For workers with a college degree (not shown), poverty-pay employment shares for native- and foreign-born young workers have been much closer, but there has been convergence here as well. Since 2014 there has been little or no nativity poverty-pay gap among college graduates for either women or men.

These 25-year patterns of convergence in native- and foreign-born poverty-pay shares for young, less educated workers were particularly pronounced in the second half of the period, between 2007 and 2019. This convergence, for both women and men, reflects both larger increases in poverty-pay incidence for native- than foreign-born workers during the economic downturn and its aftermath (2008-14) *and* smaller poverty-pay declines for native- than for foreign-born workers during the subsequent strong economic upturn (2015-19).[62] This is consistent with recent evidence that shows far greater spatial mobility of foreign-born workers in response to changes in local economic conditions (Autor et al. 2025; Cadena and Kovak 2016).[63]

7. Concluding Remarks: Pay quality and policy choices

Conventional measures of inequality describe the spread of distributions and these metrics have unambiguously documented increases since the late 1970s to extreme levels by rich world standards. For the vast majority of working families, this has meant falling further and further behind those at the top of the pay distribution, with important social and political consequences. But this march towards a vastly more inegalitarian economy does not necessarily mean that the 'American Dream' economy has gone into reverse for this vast majority, as living standards made possible by a full-time paycheck have persistently declined since the neoliberal turn. But it did. The pay quality results presented in this paper show that for large numbers of workers, particularly those in the first decades of their working lives and without good four-year college degrees, the hyper-inequality of the last four-plus decades has featured not just a spectacular relative 'falling-behind', but one that left most working families experiencing absolute declines in

[62] Among young less-educated women, during the 2008-14 economic collapse and sluggish recovery, the poverty-pay share rose (worsened) twice as fast for native-born workers (a 20% versus 10% increase: 56.4% to 67.7% versus 65.7% to 72.3%), and the decline (improvement) over the strong 2014-19 recovery was only about two-thirds as large for the native-born (12.5% versus 17%). Among men, the difference in response to changes in economic conditions was even greater: the increase in the native-born poverty-pay share was almost three times that of the foreign-born share between 2007 and 2014 (33.6% compared to 12.4%), while the improvement during the strong 2014-19 recovery was only half as large (23.6% compared to 48.3%).

[63] "As adults, the native-born tend to settle close to where they lived as children, which may contribute to why supplies of less-educated native-born labor are largely unresponsive to adverse changes in local labor demand. For the foreign-born, mobility is often built into their working lives" (Autor et al. 2025: 10-11, citations omitted). Among many other studies, Cadena and Kovak (2016) offer strong supporting evidence for this pattern.

material living standards, increasingly forced to live 'paycheck to paycheck'. It is this double jeopardy—exploding pay inequality and collapsing pay quality—that has characterized the American labor market since the late l970s.

This paper addresses the need for intuitively transparent quantitative statistics that measure pay quality and its change over long periods of time and easily generated for workers stratified by standard demographic characteristics: age, education, gender, race, and nativity. To do so, it combines absolute and relative approaches to the measurement of well-being, illustrated respectively by the U.S. Supplemental Poverty Measure (SPM) and by the OECD's Low Pay indicator. A decent-pay threshold is set that identifies the full-time wage required for a minimally decent living standard for particular family types and locations with evidence from basic-needs family budget calculators. Additional living-standard thresholds located below and above this living-wage cutoff are then be similarly defined. The number and level of these thresholds depends on the purposes of the pay quality indicators and should reflect relevant social norms and ethical values—just as conventional quasi-absolute poverty metrics are constructed for the adequacy of household incomes. It is a simple matter to produce alternative anchored wage cutoffs that define different pay quality hierarchies.

The pay quality approach is illustrated in this paper with decent-, poverty-, and good-pay wage thresholds defined for a single worker (without dependents) living independently. Together, they generate a hierarchy with two overlapping pay quality structures: a dual structure of decent-pay and low-pay segments defined by the decent-pay threshold; and a tripartite structure comprised of poverty-, middle-, and good-pay contours, defined by poverty-pay and good-pay thresholds. These are overlapping structures: the poverty-pay cutoff defines the bottom tier (contour) of the low-pay segment; the good-pay cutoff does the same for the top tier of the decent-pay segment; and together, they define the middle-pay contour jobs—jobs located between the poverty- and good-pay thresholds (Figure 3). These anchored thresholds define tiers of pay quality hierarchies and the employment shares of each tier (segments and contours) serve as indicators of pay quality.[64]

[64] It needs to be underscored that these pay quality indicators do not measure the adequacy of actual earnings in each of the pay quality tiers, which would require measuring the adequacy or work hours. Many workers, even those employed in nominally 'full-time' regular jobs, are unable to depend on a full-time, full-month paycheck, due to scheduling practices of employers. This is especially likely to be the case in low-wage service, maintenance and construction jobs (Bauer et al. 2024; Cai 2024).

The results presented here reflect the choice of a living-wage defined for the smallest, lowest-cost family type: a single worker without dependents. Table 1 presented living-wage estimates from the EPI and MIT family calculators for both single workers and single adult/one child families for 30 American metropolitan areas, cities, and counties. These basic-needs wages show that adding a single young child would dramatically increase the necessary living-wage. For example, the 30-location EPI-MIT average living wage increases from $19.52 for a single worker to $33.04 for a single worker with one young child. Replacing the single worker wage with that for a single worker with one child would result in a far higher share of workers employed in poverty-pay jobs and a much lower share in good-pay jobs than reported here. This huge gap between single-worker and single-worker/one child living-wage levels highlights the failure of the American labor market to generate *family-sustaining* wages for most of the workforce. Short of mandating or subsidizing vastly higher wages, the solution can only be the provision of much greater public support for the basic-needs of working families—particularly in housing, healthcare, education, and childcare—following the lead of many other rich countries.[65]

The evidence presented in Section 3 documented a striking decoupling of decent-pay jobs from economic growth (GDP) since 1979, whether measured by decent-pay employment shares or numbers of jobs, even for prime-age workers with a college degree. As sections 3-6 documented in different ways, the pay quality for young workers without a four-year college degree dropped precipitously, particularly for men. But the results also report major improvements in the gender pay quality gap, most dramatically for prime-age white women with a college degree. At the same time, the evidence presented here shows that improvements in the gender pay quality gap have been due in large part to *absolute declines* in pay quality for men. Of particular political salience, there has also been a striking disappearance, for both men and women, of the large early 1990s poverty-pay gap favoring young native-born over and foreign-born workers without a college degree. These findings illustrate some important differences in perspective on post-1979 labor market developments made possible by pay quality incidence indicators.

Since the 1980s, the leading explanation for poor labor market outcomes—sharply rising wage inequality as wage levels stagnated—was that too many workers have failed to improve

[65] See, for example, Esping-Andersen (2016), Aerts et al. (2022), and Gornick et al. (2024).

workplace-relevant skills through greater educational attainment as employers demanded higher cognitive skills (e.g., Autor 2010; Autor et al. 2020). But the last decade has brought about a sea-change in perspective, one that has put much greater weight on policy-driven declines in worker bargaining power (Bivens et al. 2018; Krueger 2018; Card 2022; 2025). It may well be that the quality of American K-12 education has declined and that this has had harmful consequences for the dispersion and levels of pay, but the evidence for supply-side skill effects in the social science literature has focused mainly on changes in average years of schooling and the attainment of four-year college degrees. In this regard, it should be more widely recognized that there has been a substantial increase in years of schooling by young workers *without* a college degree.

Table 6: Workers with Some College as a Share of All Workers with Less than a Four-Year College degree, 1979-2017

	Ages 18-64			Ages 18-34		
Panel A: All Jobs	Total	Women	Men	Total	Women	Men
1979q2	28.1	28.3	27.8	35.5	35.7	35.3
1990q2	34.8	36.5	33.3	38.4	42.4	35.0
2000q2	41.5	44.6	38.6	43.2	48.6	43.2
2017q2	46.9	52.4	42.3	49.7	56.7	44.2
Panel B: Poverty- Pay Jobs						
1979q2	25.1	23.9	27.4	33.0	32.2	34.4
1990q2	28.7	29.2	27.8	34.3	36.9	31.3
2000q2	33.2	35.6	29.8	37.7	41.7	33.0
2017q2	35.4	45.3	40.8	46.4	52.3	40.2

Source: author's calculations of the CEPR CPS-MORG data.

Table 6 reports the educational upgrading that has taken place among workers with less than a four-year college degree by gender and age between 1979 and 2017, for both all workers and for those in poverty-pay jobs. Panel A shows large increases in the 'some-college' share for workers across the entire job distribution over these four decades: from 28.1 to 46.9 percent for all (18-64) workers, and from 35.5 to 49.7 percent for young (18-34) workers. Panel B shows that there has also been strong educational upgrading among workers holding poverty-pay jobs, though far more impressive for women than men. For example, the share of young non-college degree women workers with some college in poverty-pay jobs rose from 32.2 to 52.3 percent, while for men the increase was from 34.4 to 40.2 percent. This evidence shows that the

explosion of poverty-pay jobs over the last four decades for young workers with less than a college degree has occurred despite substantial investments in schooling beyond the high school degree (see also Gould, 2019).

It is beyond the scope of this paper to provide persuasive explanations for the specific patterns of pay quality change reported here, but the evidence from the literature clearly point to broad explanations that have become increasingly important in the professional literatures (reviewed by Howell and Kalleberg 2019; 2024). It is increasingly clear that political choices have produced institutional and policy changes that have had profoundly negative effects on the bargaining power of American workers. These have been manifested in managerial choices regarding workplace automation (Acemoglu 2021; Acemoglu et al. 2022) and, of much greater consequence, the decline of protective labor market institutions, policies, and social norms that reduced worker bargaining power and exposed large shares of the nonsupervisory workforce to systematic wage suppression (Bivens et al. 2018; Krueger 2018; Stansbury and Summers 2020; Card 2022).

For example, as workers were increasing their educational attainment, they were also far less likely to be union member. The share of young (18-34) male workers with less than a college degree who were union members fell from 24% in 1983 to 11.1% in 2001, and to just 8.8% in 2014; for similar female workers, the union share fell from 12.9% to 6.7% to 5.2%.[66] The erosion of the value of the federal minimum wage has also contributed to the increasing incidence of poverty-pay jobs: had the inflation-adjusted value of the federal minimum wage been maintained at its value in the late 1960s, it would have been $12.50 in 2023.[67] While recent minimum wage legislation at the state and local levels has had important positive wage effects for workers holding poverty-pay jobs, the federal minimum wage remains at $7.25—barely more than *half* of this paper's 2019 poverty-pay threshold ($14.08). Recent evidence overwhelmingly supports the existence of large effects on wages with little or no harmful consequences for employment (Card and Krueger 1995; Schmitt 2013; Cengiz et al. 2018; Dube and Lindner 2024).

Beyond the erosion of protections provided by collective bargaining and the statutory minimum wage, the norms governing employer wage policies have also been consequential for

[66] Author's calculations of the CEPR CPS-MORG data.
[67] Payne-Patterson and Adewale A. Maye, 2023, Table 1).

pay quality since 1979. As firms have become more concentrated (Barkai 2020; Benmelech et al. 2022) with pervasive monopsony power (Bassier et al. 2021; Naidu and Carr 2022), combined with the concurrent evisceration of protective labor institutions (Bivens et al. 2018), employers reconfigured the employment relationship and the organization of the workplace. According to David Weil there "has been an evolution of business organization that has fundamentally altered the employment relationship and, in turn, the way that wages are set for workers in a growing range of industries" (2017: 210). The business model is to have the same workers doing exactly the same tasks in the same jobs at a much lower cost by hiring them through specialized outside contractors; examples include janitors, security guards, cleaning service and food service workers (2017: 224). Eileen Appelbaum (2017: 14) describes this process as the "new labor market segmentation between lead firms and contractor firms…. The position of the worker's employer in the production network directly affects the worker's pay and working conditions. Thus, worker's wages depend not only on their own productivity characteristics, but on the relative power of their employer vis-à-vis other organizations in the network."

Angus Deaton (2019) aptly explains this transformation of the labor market as the result of political choices: "In the face of globalization and innovation, many of us would argue that American policy, instead of cushioning working people, has instead contributed to making their lives worse, by allowing more rent-seeking, reducing the share of labor, undermining pay and working conditions, and changing the legal framework in ways that favor business over workers." In his words, these are "mechanisms of enrichment" that generate inequality "through upward transfers from workers."

Future work on the effects of ideological and institutional settings for pay quality can be explored through cross-country comparisons with indices of institutional bargaining power. In the absence of comparable estimates of the living standards made possible by a full-time wage, these comparisons would require the same formulas for pay quality thresholds used for the United States. With this approach, comparisons with Canada, the U.K., Australia, and France show that pay quality outcomes (e.g., the incidence of poverty- and decent-pay) are not only the worst in the U.S., but the gap with these other countries has grown since the 1980s (Howell, 2021a). There is also evidence that these cross-country patterns are successfully accounted for by indices of protective labor market institutions, with no apparent negative consequences for

employment performance (Howell 2021b; Howell and Kalleberg 2024).

In contrast to the difficulties of cross-country comparisons, the availability of comparable basic-needs family budget evidence across hundreds of metropolitan areas, cities, and counties, makes the pay quality approach far more easily and effectively used to compare and account for outcomes by demographic group within the United States. Current projects include comparisons of pay quality outcomes for large American cities and metropolitan areas located in 'blue' and 'red' (right-to-work) states, together with a case study of the New York City metropolitan area.

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