

RESEARCH REPORT

# Employer Practices and Worker Outcomes

A Landscape Report

*Erin L. Kelly, Hazhir Rahmandad, Nathan Wilmers, and Aishwarya Yadama*

JUNE 2022





WorkRise is a research-to-action network on jobs, workers, and mobility based at the Urban Institute. WorkRise connects workers, employers, researchers, and advocates to build evidence to inform and shape policies and practices that bring economic security and upward mobility for all US workers—opening new opportunities for workers to thrive at work and in life.

# About This Series

---

WorkRise is a research-to-action network on jobs, workers, and mobility based at the Urban Institute. This publication is one in a series of reports WorkRise has commissioned from the nation's preeminent social scientists and economic mobility researchers. These reports map out the current frontiers of knowledge across six channels that influence workers' economic mobility and advancement in the US labor market: macroeconomic and labor market contexts and policies; employer practices; worker power, voice, and representation; job search and matching; skills, training, and human capital; and the social determinants of work.

The purpose of these reports is twofold: to identify areas where existing empirical evidence can inform current policy and practice and to characterize knowledge gaps in order to inform a set of priorities for advancing research, building the evidence base, and motivating action in policy and practice. As part of the research process, WorkRise convened a cross-sector group of advocates, practitioners, and experts to assess the relevance and value of knowledge-building priorities proposed by study authors.

Each report examines root causes and potential solutions for reversing the decades-long decline in mobility and enduring racial and gender disparities in the labor market. These reports take a broad view of the market, institutional, political, and social forces that shape worker outcomes. By delineating questions with the most important implications for worker well-being, these reports will inform WorkRise's research agenda and broader debates on creating new pathways for mobility in the labor market

# Contents

---

<b>Acknowledgments</b>	<b>vi</b>
<b>Introduction</b>	<b>vii</b>
Goals and Audience	viii
Framework and Scope of Review	ix
<b>Employer Practices and Their Effects</b>	<b>12</b>
Pay and Wages	12
Definition of Practices	12
Channels: How Would Compensation Be Expected to Affect Mobility?	12
Empirical Evidence	14
Key Takeaways	16
Scheduling	16
Definition of Practices	16
Channels: How Would Scheduling Be Expected to Affect Mobility?	17
Empirical Evidence	18
Key Takeaways	20
Leaves	20
Definition of Practices	20
Channels: How Would Leaves Be Expected to Affect Mobility?	21
Empirical Evidence	21
Key Takeaways	22
Recruitment and Hiring Practices	23
Definition of Practices	23
Channels: How Would Recruitment and Hiring Practices Be Expected to Affect Mobility?	23
Empirical Evidence	25
Key Takeaways	28
Promotion Practices	28
Definition of Practices	28
Channels: How Would Promotion Practices Be Expected to Affect Mobility?	28
Empirical Evidence	29
Key Takeaways	31
Work Systems	32
Definition of Practices	32
Channels: How Would Work Systems Be Expected to Affect Mobility?	33

Empirical Evidence	35
Key Takeaways	36
Diversity, Equity, and Inclusion Initiatives	37
Definition and Channels through Which Diversity, Equity, and Inclusion Practices Are Expected to Affect Mobility	37
Empirical Evidence	38
Key Takeaways	40
Summary of Employer Practices and Their Impact on Worker Mobility	41
<b>Adoption of Practices: Evidence, Drivers, and Challenges</b>	<b>47</b>
Considering Prevalence	47
Institutional, Policy, and Industry Context	49
Complementarities and Social Capital	50
Challenges in Implementation and Maintenance	52
<b>Promising Research Opportunities</b>	<b>55</b>
Shorter-Term and Practice-Specific Research Opportunities	55
Pay and Wages	55
Scheduling	55
Leaves	56
Recruitment and Hiring Practices	56
Promotion Practices	57
Work Systems	57
Diversity, Equity, and Inclusion Initiatives	57
Opportunities to Improve Design and Data Infrastructure	58
Field Experiments in Organizations	59
Linking Data on Employer Practices to High-Quality Worker Data	60
Studying Adoption and Implementation Directly	62
<b>Conclusions</b>	<b>63</b>
<b>Notes</b>	<b>65</b>
<b>References</b>	<b>66</b>
<b>About the Authors</b>	<b>84</b>
<b>Statement of Independence</b>	<b>86</b>

# Acknowledgments

---

This report was funded by the Bill & Melinda Gates Foundation, the Mastercard Center for Inclusive Growth, and other funders of WorkRise. For a complete list of WorkRise’s funders, please visit [www.workrisenetwork.org](http://www.workrisenetwork.org). WorkRise is grateful to all its funders, who make it possible for WorkRise to advance its mission.

The views expressed are those of the authors and should not be attributed to WorkRise, its leadership board, or its funders. Funders do not determine research findings or the insights and recommendations of WorkRise experts. Further information on WorkRise’s funding principles can be found on the website of the Urban Institute, WorkRise’s host organization, at [urban.org/fundingprinciples](http://urban.org/fundingprinciples).

The authors have benefited enormously from the insights and suggestions of many readers, and we are grateful for their guidance. Thank you to David Autor, Petri Böckermann, Corine Boon, William Congdon, Barbara Dyer, Roberto Fernandez, Elisabeth Jacobs, Kaifeng Jiang, Alexandra Kalev, Sarah Kalloch, J. R. Keller, Thomas Kochan, Susan Lambert, Lisa Lynch, Martha Mangelsdorf, Eunmi Mun, Paul Osterman, Laura Padin, Michael Piore, Maya Rossin-Slater, and Daniel Schneider, as well as participants in the MIT Institute for Work and Employment Research seminar in April 2021, students in our spring 2021 PhD seminar on employer practices, and participants in a feedback session organized by WorkRise in August 2021. We also appreciate the excellent research assistance of Victoria Zhang. Any remaining errors or omissions are our own.

# Introduction

---

This review asks a seemingly simple question: How can employers facilitate economic mobility for disadvantaged workers, particularly those who are workers of color or who lack a college degree? Our analysis attempts to evaluate whether organizational policies and practices can address rising inequality and reduce long-standing racial gaps in income, wealth, and opportunity in the United States and other wealthy countries. This is a critical moment in which to assess the potential for employers' practices to promote economic mobility and reduce inequality. The pay gap between college graduates and others has risen since 1980 (Autor, Goldin, and Katz 2020). Stagnant pay in entry-level jobs and slower early-career earnings growth have played important roles in reducing total lifetime earnings of workers who have entered the labor market since the 1980s, relative to those who entered in prior cohorts (Guvonen et al. 2017). The Black–white pay gap persists (Bayer and Charles 2018), and women still earn less than men, with the gender pay gap expanding over the life course (Goldin et al. 2017).

These inequalities are persistent, but current events have focused attention on the workplace and employers' potential responses. Many people lost their jobs during the COVID-19 pandemic; others felt pressure to work in sometimes unsafe conditions, risking exposure to provide for their families. Renewed calls for racial justice in the wake of George Floyd's 2020 murder have many workers pushing for change in their workplaces and on the streets. How can employers do better by workers at this moment and in the years ahead?

Although employment law and public policies set the context of what employers are expected to do in a society, organizational practices still vary substantially. Firms offer different levels of pay and provide different work environments even when hiring similar workers into seemingly similar jobs (Card et al. 2018; Groshen 1991; Kline et al. 2019). This variance indicates that employer practices can either reinforce the status quo or promote economic security and upward mobility. For instance, some employers organize work in ways that build human and social capital among their employees, helping those workers build skills and networks. Others provide leaves and stable schedules that support secure employment by recognizing workers' personal and family needs. Still others adopt practices that attempt to mitigate enduring biases and exclusions in hiring and promotion

while fostering a more inclusive culture. The impact of these varying practices is not necessarily clear, and even when they have not been seriously evaluated, some are touted in the business press and by consultants and advocates concerned with job quality and inequality.

Of course, firms would have little incentive to change course if their current practices always maximized profit. However, not all existing practices are optimal or match a firm's particular situation. The fact that we see heterogeneity in productivity and practices among firms in similar markets (Bloom et al. 2019; Syverson 2011), challenges in identifying and adopting profit-maximizing practices (Cyert and March 1963; Nelson and Winter 1982), and social and behavioral factors often driving adoption (Gavetti 2012; Jiang, Takeuchi, and Jia 2020), all suggest that firms can identify and adopt practices beneficial to both their bottom line and their employees.

## Goals and Audience

We review recent, rigorous social science research to ask whether a number of common and emerging employer practices promote greater mobility (particularly for workers at the lower end of the wage distribution) and reduce racial and gender inequalities. We believe this review of the research will be of interest to three primary audiences:

- We aim to support *employers* looking to identify promising practices to adopt in their own organizations. We do not provide a simple, prioritized list of what to do next; rather, we summarize the evidence on which changes and investments are supported by research, and which are not.
- We hope to inform *funding agencies, regulatory bodies, and other advocates for better working conditions* in their evaluation of what we need to know and do next. The research we summarize will be valuable for guiding investments both in research and in scaling and publicizing specific programs or practices.
- We believe *scholars and students* who want to dive into these topics will also find this review a helpful orientation, particularly because we reach across disciplines and focus on multiple practices.



Our findings reveal a complex picture: some practices are promising for enhancing worker mobility *and* benefiting firms, whereas others are overhyped compared to the real evidence of their efficacy. Furthermore, evaluating “what works” to improve workers’ outcomes and reduce inequality requires better data and a nuanced analysis of how different strategies hang together and where they are more likely to succeed. These are challenging questions to assess, and we offer ideas for improving research on these topics. Nonetheless, in the last section, we identify several promising practices and new research directions that would advance our understanding and serve as exemplars of actionable research. We are optimistic that there is room both to craft better jobs for historically marginalized workers and to broaden their access to economic opportunities.

## Framework and Scope of Review

We use the term *economic mobility* broadly to refer both to earnings that meet basic needs and increased pay and job quality over time. We review research to investigate how employers’ policies and practices affect workers’ economic mobility and security over the course of their working lives. Some high-paying and easily accessed jobs are temporary, whereas some initially low-paying jobs may offer substantial future earnings-growth potential. Understanding the *long-term effects of employer practices* requires considering how those practices affect the development of human and social capital and pave the way for enhanced economic opportunities.

We conceptualize three channels through which employer practices may affect economic mobility:

- First, and most simply, employers can raise the quality of jobs for current workers in low-wage sectors. This can involve increasing wages and compensation, clarifying pathways to increased earnings and opportunities within the same firm or industry, and organizing work so front-line workers can use and grow their skills, with the expectation that skill development will be rewarded with better pay. We call this the *job quality channel*.
- Second, a job may offer relatively good wages and opportunities but have characteristics (e.g., highly unstable schedules or hostile cultures for racial minorities or women) that routinely push particular workers out of those positions. We call this the *sustainability channel*; by *sustainability*, we mean decent working

conditions (looking beyond pay) that help workers remain in well-paying jobs rather than exit. We see the sustainability channel as broadening job quality to reflect work conditions that are especially important for traditionally marginalized workers, including racialized minorities and caregivers.

- Third, employers can make better jobs more accessible to applicants who are currently unemployed, out of the labor market, or in low-wage, low-quality jobs. We attend to this *accessibility channel* because hiring workers without a postsecondary degree (hereafter *noncollege workers*) is at the center of mobility. Accessibility also highlights racial discrimination and other forms of bias and exclusion more directly than has prior research on job quality.

In our review, we note whether a particular practice seems to affect economic security and mobility through one of these three channels (job quality, sustainability, access) more directly. We also discuss the impact of each practice on firms' outcomes. Firms would only voluntarily adopt practices they find beneficial (or at least not harmful) to their bottom line. Our discussion of firms' outcomes is more limited, focusing on assessing the attractiveness of each practice for voluntary adoption, and accounting for direct costs and expected benefits arising from productivity, turnover, and quality effects.

With this framework in mind, we review prior research on a variety of employer practices: pay and wages; scheduling; leaves; recruitment and hiring practices; promotion practices; work systems; and diversity, equity, and inclusion (DEI) initiatives. We exclude staffing and outsourcing decisions but address those insofar as they can undermine the benefits of effective hiring and promotion practices. For example, we acknowledge that firms that have externalized many functions (e.g., contracting for janitorial services, offshoring business-processing tasks) are attempting to shift responsibility for those workers' economic security and mobility to their contractors; the question of how those employment practices affect workers' mobility is beyond the scope of this review. We also exclude formal training programs, though we address training insofar as it connects to other practices. Last, we recognize other employer practices that are relevant to economic mobility, including how employers respond to workers' voice and union organizing, but this review sets those aside given limited space and coverage of those questions in other reviews (Rosenfeld 2019; Schultz 2019; Marinescu and Rosenfeld 2022). Although we began with a broad look at many studies of our selected practices, we concentrate our summary

here on recent empirical research, particularly experimental, quasi-experimental, and longitudinal research designs.

In our review of the research literature, we were most concerned with the impact of employer practices on (a) the economic security and mobility of workers in the lower end of the wage distribution and (b) those who face challenges in the labor market because they lack a college degree or are racialized minorities; however, we did not limit our review to studies of these specific populations. Some studies we reviewed drew on data representing the entire labor force, or from higher-wage occupations when those data are all that are available. In addition to our summary text, table 1 lists key studies that inform our conclusions (but not all studies reviewed). We also provide specific cases—either organizations that have invested in specific practices or exemplary studies—in text boxes to illustrate more fully a given practice and its connection to mobility. After reviewing each practice, we address the question of why some employers adopt these practices and describe the challenges in adopting or implementing practices well. We conclude with a brief discussion of new directions for research, addressing both methodological directions and promising practices that deserve further attention.

# Employer Practices and Their Effects

---

## Pay and Wages

### Definition of Practices

Pay for workers in similar jobs varies greatly across organizations (Barth et al. 2016; Song et al. 2018). Firm-wide *average pay level* is therefore a critical determinant of inequality and mobility. Firms can also do more or less to *compress pay* among their employees, as when voluntary minimum wages are increased or executive compensation is restrained.

Furthermore, firms determine the basis on which pay is set. Pay can be a strict function of job title and seniority, or it can vary, either directly with market pressures and external offers, or with individual, team, or organizational performance, as in merit-based pay raises or various bonus and incentive schemes. We summarize these in a contrast between *standardized pay* and *pay that varies with performance*.

### Channels: How Would Compensation Be Expected to Affect Mobility?

Paying high wages is perhaps the most important feature of job quality. The positive impact of higher pay for workers is straightforward (box 1). Likewise, more-compressed pay within a firm will have a positive direct effect on those earning lower wages, who will disproportionately be in the lower levels of the firm hierarchy.

The expected effects for firms of higher and compressed pay, however, are more ambiguous. The direct negative effect of higher costs with increased pay may be offset by benefits in productivity, lower turnover, and more positive worker selection. However, if these collateral benefits are small or difficult for employers to measure, the prospect of higher labor costs will deter employers from raising pay. Likewise, although pay comparisons and fairness concerns among coworkers can motivate pay compression, such compression could blunt incentives and drive turnover in higher-level positions.

---

**BOX 1****Long-Term Benefits of High-Paying Jobs**

**Overview:** Does getting a high-paying job have a long-term positive effect on young workers? Although it is intuitive that a high-paying job might increase economic security, studying longer-term effects is challenging. Does a good job provide benefits that are strictly temporary, or does it set workers on a long-term upward career trajectory? A recent study using data from Spain sheds light on this question by following male, Spanish-born labor market entrants from their first job until age 35.

**Methods:** Large firms consistently pay more than smaller firms, even for similar jobs and similar workers. This means that getting a job at a large firm tends to provide higher pay. However, the early-career workers who get those jobs might also be more compelling applicants than their peers who do not get hired. To address this, the study looked at the outcomes of early-career workers who graduated high school during periods when a large firm is expanding in their local labor market, in effect comparing those graduating high school in a place and time with more hiring by large firms, relative to similar workers who were not so lucky.

**Outcomes:** The author found that male workers who matched with a first-employing organization that was larger by one standard deviation (of employer size) earned around a quarter more in total income over the next 15 years. Supplementary analysis showed that this benefit exists partly because workers who start out at larger firms are able to get subsequent jobs at other large firms more easily than those starting at small firms. Young workers also seem to gain valuable experience from working at large, high-paying firms. Together these results suggest that high-paying jobs not only bring immediate benefits, they can also change the whole trajectory of workers' early careers.

**Source:** Arellano-Bover (2021).

---

Although these pay considerations are of first-order importance for mobility, pay practices can also matter through more indirect channels. Performance-based pay can increase worker engagement and human capital acquisition on the job, but it can also contribute to eroding collaboration; increasing stress at work; and introducing biased, subjective managerial assessment into the pay-setting process. Similarly, high within-firm pay inequality could violate fairness norms and drive employee turnover. On the firm side, performance pay can yield higher productivity, but high-powered incentives risk distorting work effort toward a narrowed set of incentivized tasks.

## Empirical Evidence

Strong evidence shows that higher pay boosts worker mobility, lowers poverty, and reduces racial inequality (Bailey et al. 2021; Derenoncourt and Montialoux 2020; Dube 2019). Emerging evidence also suggests that being hired at a higher-paying firm as a labor-market entrant boosts earnings long-term (Arellano-Bover 2021; von Wachter 2020). These primary benefits in job quality can sometimes be undermined by secondary costs in shifting worker selection, as when job postings following minimum wage increases were more likely to require a high school diploma (Clemens, Kahn, and Meer 2021).

Strong evidence also suggests that employers have some discretion over pay setting, because pay varies across firms even for similar workers (Abowd, Kramarz, and Margolis 1999; Barth et al. 2016). Specifically, high pay relative to coworker characteristics is found at large employers; employers using structured management practices or high-performance work systems; and employers that are relatively profitable, are research and development intensive, and employ more educated workers (Barth, Davis, and Freeman 2018; Bloom et al. 2021; Cobb and Lin 2017; Groshen 1991; Osterman 2006). Even after accounting for many of these characteristics, a substantial unexplained component in pay variation remains (Barth, Davis, and Freeman 2018), which could reflect different managerial beliefs about pay and limited changes in firms' outcomes with modest differences in pay levels.

Evidence is weaker that, for most employers, raising pay at the margin will yield higher productivity. Pure productivity or effort effects have been studied extensively in field experiments, but overall, the evidence of increased worker productivity with increased compensation is mixed (Fehr and Goette 2007; Kube, Maréchal, and Puppe 2012; Sandvik et al. 2021; Gneezy and List 2006). However, these experiments often rely on short-term or casual employment relations, in which compensation can be experimentally varied: noncausal studies in more standard work contexts find more encouraging positive effects (Emanuel and Harrington 2021; Hesford, Mangin, and Pizzini 2019). Higher pay would likely reduce turnover, but quantifying savings from turnover costs is challenging (Kuhn and Yu 2021).

Stronger evidence demonstrates that labor unions (Freeman and Medoff 1984; VanHeuvelen 2018), normative pressure from other employers (Derenoncourt, Noelke, and Weil 2021), and minimum wages can force employers to raise pay even if doing so raises

costs. These three bodies of evidence raise the possibility that employer practices (and public policies) that strengthen worker bargaining power may be more important for raising pay than the productivity benefits of gift exchange or efficiency wages.

Pay compression has similarly clear benefits for front-line workers and ambiguous effects for employers. Most pay inequality is within firms, among coworkers. Particularly at large firms, rising within-firm inequality is an important supplementary source of overall rising inequality (Song et al. 2018). There is also strong evidence that workers are sensitive to pay-fairness violations. For instance, when a large retailer raised coworkers' pay unevenly, those who received smaller raises were more likely to leave (Dube, Giuliano, and Leonard 2019). Yet for firms, pay compression involves difficult trade-offs involving the benefits of respecting important fairness norms, the costs of turnover among higher-level employees, and the impact of weakened performance incentives on lower-level employees (Cohn et al. 2014; Cullen and Perez-Truglia 2018; Mas 2017).

Performance-based pay, in contrast, has clearer benefits for firms and more ambiguous effects on workers. A substantial body of research (including field and lab experiments and observational studies) has found that financial incentives tied to performance increase worker productivity (Garbers and Konradt 2014; Levitt and Neckermann 2015). Careful design of incentives is critical, though, as strong incentives can distort work effort and lead to gaming (Benson 2015).

On the worker side, performance-based pay increases inequality among coworkers (Barth et al. 2012) and may increase stress (Gerhart, Rynes, and Fulmer 2009; Parker et al. 2019). It also opens the opportunity for discrimination in pay setting (Castilla 2008; Mun and Kodama 2021), although organizational practices to increase oversight of pay and performance evaluations can help mitigate this issue (Castilla 2015). The relative costs of relying on performance-based pay to increase mobility likely depend on the details of how compensation systems are designed (i.e., team-based versus individual-performance pay) and assessment processes are implemented (which we discuss further, in the Recruiting and Hiring Practices section).

Evidence of inequality in other types of compensation, like health insurance provision and retirement benefits, is also emerging (Kristal, Cohen, and Navot 2018). Although we do not detail this research on the mobility effects of these other facets of compensation here, these benefits are underprovided for low-wage workers (Monaco and Pierce 2015). The

general US system in which employers provide these benefits can also lead to job lock, a situation in which employees are unable to leave their jobs because of the potential loss of employer-provided benefits such as health care (Garthwaite, Gross, and Notowidigdo 2014).

## Key Takeaways

Pay does not exclusively track job titles or worker skills. Some employers are able to pay more than others and appear to have some discretion in setting pay levels or compressing pay. However, there is insufficient evidence that wage increases pay for themselves through indirect productivity or cost reduction channels. Future research on this is warranted—particularly research that identifies plausibly exogenous variation in pay, in the context of longer-term, standard employment relationships.

This research generally suggests that raising pay may require external pressures through tight labor markets, minimum-wage legislation, labor union pressure, or informal norms across an industry or sector. Alternatively, employers may be able to sustain higher pay through complementarities with employer practices that either bolster productivity or credibly increase worker bargaining power.

## Scheduling

### Definition of Practices

*Scheduling practices* refer to how work hours are set, including workers' control over or input into their schedules, variation or volatility in the number of hours worked week to week, and advance notice of schedules. Scheduling practices vary substantially by workers' education and occupational status (Kossek and Lautsch 2018; Mas and Pallais 2020). Driven by our concern with the economic mobility of less-advantaged workers, we focus on unstable schedules labeled *just-in-time scheduling* (Lambert 2008) or *precarious schedules* (Lambert, Fugiel, and Henly 2014; Schneider and Harknett 2019), rather than on employee-driven flexibility or schedule control among professional, managerial, and other white-collar workers (Kelly and Moen 2020).



## **Channels: How Would Scheduling Be Expected to Affect Mobility?**

Unstable scheduling may affect economic security and mobility through income inadequacy (when workers are given fewer hours than needed) and income volatility (when number of hours worked fluctuates between weeks). Workers with variable schedules and limited schedule control also find it difficult to work a second job, so unstable schedules in a primary job often reduce total earnings (Hashemian, Ton, and Rahmandad 2020).

Additionally, the sustainability channel is important because the stress and work-family conflict associated with unstable schedules (Henly and Lambert 2014; Schneider and Harknett 2019) may encourage job exits, particularly for parents and other caregivers who need to coordinate care work with their paid work. Whereas job mobility across organizations often increases the earnings of low-income workers (e.g., Andersson et al. 2005), periods of unemployment or jumping into another lower-wage job with unstable schedules may instead exacerbate insecurity or increase debt. Workers managing unstable schedules and juggling complex work-family challenges also face a significant cognitive load, which we believe leaves them with less energy and capacity for longer-term career planning or skill building.

Unstable schedules reflect management efforts to tightly link labor expenditures to varying customer demands. Hours are added or cut depending, for instance, on the traffic in the store, the patients on the floor, or the orders a given warehouse must fill. These just-in-time scheduling practices are believed to tie labor costs to demand and so increase productivity (box 2). However, fine-tuned, rapid schedule adjustments may create vicious cycles of poor service, lost sales, and high turnover (Ton 2014; Williams et al. 2018), which raise the costs for employers. Public policy interventions may shift employers' scheduling practices by requiring more stable schedules, advance notice of schedules, or commitments to minimum hours—these hours regulations are common in many countries and emerging in the US (e.g., Harknett, Schneider, and Irwin 2021).

---

**BOX 2****Stable Scheduling at Gap, Inc.**

The retail sector has largely embraced just-in-time scheduling, but Gap Inc. collaborated with researchers to experiment with new scheduling practices. This field experiment, conducted in 28 stores in the Chicago and San Francisco metropolitan areas, provides strong causal evidence of the positive impact of improved scheduling practices for employees and firms, but it also points to the challenges of changing management practices across many stores.

**Components of Scheduling Changes:** Stores randomized to the treatment group were asked to roll out a bundle of related changes: a new app to support shift swapping among employees, guidance to managers to set stable start and end times and default to stable schedules from week to week, a management commitment to provide a core team of associates with at least 20 hours a week, and additional labor hours to provide managers with a small scheduling buffer.

**Outcomes:** The stable-scheduling practices reduced stress among workers who were parents but not among nonparent workers, and they modestly increased self-reported sleep quality (with larger effects for younger workers and those with two jobs). Importantly, hours increased for a core group of workers, and turnover was reduced among more experienced sales associates who tend to have greater sales per hour. Store productivity increased 5.1 percent, a result of sales increasing 3.3 percent and labor costs decreasing 1.8 percent.

**Challenges:** Schedule consistency, predictability, and input improved only modestly overall. There was notable variation in the actual changes in scheduling practices across the treatment stores, pointing to implementation challenges. Corporate headquarters often made last-minute decisions about promotions, shipments, and leadership visits that encouraged managers to change workers' schedules even in the treatment stores.

**Sources:** Kesavan et al. 2021; Williams, Lambert, and Saravanan 2018; Williams et al. 2019.

---

## **Empirical Evidence**

Among workers in the bottom income quintile, month-to-month income swings of at least 30 percent are common (Farrell and Greig 2016), driven in part by hours volatility (Lambert, Henly, and Kim 2019). Workers with more volatile work hours, more schedule changes and shift cancellations, and the status of being “on call” are more likely to face

economic hardships including hunger, housing insecurity, and difficulty paying bills (Schneider and Harknett 2020).

Service-sector workers facing unstable schedules are more likely to leave their jobs. Specifically, those working on-call shifts are 21 percent more likely to leave than their counterparts, and those who have had shifts cancelled are 38 percent more likely to leave; last-minute schedule changes and short notice of schedules also predict exits (Choper, Schneider, and Harknett 2021). Turnover is 50 percent higher for service-sector workers reporting at least three types of scheduling instability than for those reporting none. Although job changes may lead to upward mobility, Choper, Schneider, and Harknett (2021, 22) found “job turnover is associated with downward mobility in earnings in the short run.”

Reforming scheduling practices can reduce turnover, as found in a group-randomized field experiment in Gap Inc. retail stores (Kesavan et al. 2021). That intervention included tech-supported shift swapping, guidance to managers to default to stable schedules, a commitment from management to schedule a core team of workers for at least 20 hours a week, and additional labor hours to provide managers with a small buffer when scheduling (Williams, Lambert, and Saravanan 2018). A field experiment in a white-collar workforce where an initiative provided workers with greater control over their work hours and location also found lower voluntary turnover for employees in the departments that received the intervention (7.6 percent versus 11.3 percent in departments following usual company policies; Moen et al. 2017).

In addition to reduced recruiting and training costs tied to lower turnover, changes in scheduling practices may increase productivity. The Gap Inc. experiment found that treated stores increased productivity about 5 percent (Kesavan et al. 2021;). In another study, increasing retail workers’ weekly hours (without changing overall labor hours) increased productivity 10 to 29 percent in different estimations (Mahdi Hashemian, Ton, and Rahmandad 2020). The implication is that employing fewer people but ensuring they have adequate hours can improve productivity while supporting those workers’ economic security.

Both the Gap study and an evaluation of Seattle’s Secure Scheduling Ordinance found that greater schedule stability and predictability improve well-being and sleep (Harknett, Schneider, and Irwin 2021; Williams et al. 2019). The policy evaluation further found that

“eliminating schedule unpredictability would reduce the share of workers experiencing at least one material hardship by 45 percentage points (from 64 to 19%)” (Harknett, Schneider, and Irwin 2021, 7).

## **Key Takeaways**

In addition to work-family conflicts, stress, and sleep problems, unstable scheduling reduces economic security through increased income volatility and job exits. Researchers, policymakers, and employers have shown increased interest in scheduling, and exciting experimental studies have found that changes in scheduling practices can benefit employers through reduced turnover and increased productivity. We still need to learn more, though, about the longer-term impacts of unstable and precarious schedules on economic security and mobility, as well as how to implement stable scheduling prompted by both firm initiatives and fair workweek legislation more effectively.

## **Leaves**

### **Definition of Practices**

Leaves allow workers to take time away from work without job loss. This time away may be paid (often with partial wage replacement) or unpaid. Leaves may be provided by employers as a benefit or mandated by governments, with pay administered through social insurance schemes funded by employer and/or worker contributions. Although the US has fewer public policies mandating leaves, even firms' leave benefits that seem to have been voluntarily adopted reflect corporate responses to shifting public policies, including antidiscrimination law that preceded the federal Family and Medical Leave Act or states' paid-leave laws (Kelly and Dobbin 1999). Paid sick leaves and paid family leaves (including maternity, paternity, and other caregiving leaves) have been studied in US-based and comparative non-US research, with specific attention to how leaves affect women's economic attainment and gender inequality.

## **Channels: How Would Leaves Be Expected to Affect Mobility?**

Leaves are expected to operate primarily through the sustainability channel, providing formal opportunities to stay employed even though a worker needs to be away from the job for health or family-care reasons. Leaves would be expected to improve job continuity (and avoid income shocks from unemployment) and may increase economic mobility if workers invest more in firm-specific human capital when leaves are available or can leverage previous human capital investments to get promoted after a leave. However, negative effects on careers and income are plausible; long leaves may lead to depreciated human capital, and employers may avoid hiring women and others believed to be likely users of leaves, to avoid the costs of paid leaves (even though such decisions would violate antidiscrimination laws).

## **Empirical Evidence**

Research has found that paid family and sick leave positively affect the economy (Olivetti and Petrongolo 2017), children's outcomes (Carneiro, Løken, and Salvanes 2015; Pihl and Basso 2019; Stearns 2015; Van Niel et al. 2020), and maternal health (Bullinger 2019), but it has not clearly demonstrated the impact of leaves on individuals' earning and longer-term mobility outcomes.

Studies of family leave policies in other countries suggest that paid leaves improve job continuity, increase employment rates for women (Rossin-Slater 2017; Ruhm 1998), and help reduce gender inequality. Leave policies in Norway, for example, significantly reduced the motherhood wage penalty (referring to the pay gap between similarly situated women who are mothers and those who are not (Petersen, Penner, and Høgsnes 2014)). Additionally, cross-national research finds that workers with less education and those in "lower-skill" jobs benefit more from public leave laws, especially in high-inequality contexts (Hook and Paek 2020; Olivetti and Petrongolo 2017). Some of these studies find no long-term effects of leaves on earnings (Dahl-Jørgensen and Saksvik 2005; Lalive and Zweimüller 2009), whereas others find that longer leaves (e.g., 2–3 years) may have a lasting negative effect on labor-force attachment and earnings (Gangl and Ziefle 2009; Schönberg and Ludsteck 2014).

The situation in the US is quite different because the US does not currently have federally mandated paid family leaves or sick leaves of any length. Higher-wage workers in

the US are much more likely to have *employer*-provided paid family leaves (Gault et al. 2014) and paid sick leaves.<sup>i</sup> Additionally, workers of color are less likely to be covered by the Family and Medical Leave Act, which provides job-protected unpaid leaves, partly because the law does not cover smaller workplaces and workers with less tenure and limited hours (Armenia and Gerstel 2006). Legal mandates to expand family leave may address these inequalities, and research in US states with paid-leave policies has found that employers report no reductions in productivity (Bartel et al. 2021). California's leave law nearly doubled access to pay during leaves, increasing benefits for low-income and less-educated workers in particular, as well as for men who had not been covered by previous laws covering short-term maternity leave (Rossin-Slater, Ruhm, and Waldfogel 2013). However, in the current context of primarily employer-provided leave policies, research finds that both men and women workers who take more parental leave, particularly a paid leave, have slower wage growth, and that women's propensity to take longer leaves contributes to the gender pay gap (Kramer, Pak, and Park 2022). The implication is that public paid family-leave policies could support the economic security of workers in the US while reducing gender inequality.

## **Key Takeaways**

Paid family and sick leaves support workers' job continuity and increase women's labor force participation, although longer leaves can hinder women's employment and economic attainment. Because employer-provided paid-leave policies are much more likely to be available to workers with more education and higher wages, public policy interventions are needed to support economic mobility through paid leaves. More research is needed in the US as new state, local, and perhaps federal policies increase access to paid leaves, and as longer-term effects can be evaluated. Future research could fruitfully trace how paid leaves affect economic security over time, including for men and for caregiving, not just maternity leave, with a focus on noncollege workers. These questions are important to examine in the US because existing research is largely from countries with more stable employment relationships and more generous public safety nets that are activated during periods of leave. Additionally, intersectional analyses of the impact of leaves during and after the COVID-19 pandemic would be valuable, given different risks to families and communities by race, ethnicity, and class.

## Recruitment and Hiring Practices

### Definition of Practices

Employers' recruitment and hiring practices determine who has access to good jobs. We review (1) organizational practices that may minimize the impact of common biases and (2) practices that can broaden access to good jobs for people with fewer formal credentials or limited social networks but who still have the skills (or capacity to develop the skills) needed to perform well in those jobs.

### Channels: How Would Recruitment and Hiring Practices Be Expected to Affect Mobility?

Recruitment and hiring practices are expected to operate primarily through the accessibility channel. Recruitment strategies can attract more people from underrepresented groups, and unbiased hiring practices can broaden access to “good jobs.” Historically, racism and discrimination in hiring have contributed to racial income and wealth gaps. Recent experimental data found that distinctively Black names on résumés reduced probability of employer contact by 2.1 percent relative to distinctively white names (Kline, Rose, and Walters 2021). Moreover, meta-analyses of audit studies (which compare employers' response to, for example, equivalent applications from Black and white applicants) found no decrease in discrimination against Black applicants and only small decreases in discrimination against Hispanic applicants in the US since 1989 (Quillian et al. 2017).

Besides explicit and implicit biases, structural barriers can make it difficult for racialized minorities and women with caregiving responsibilities to accumulate the credentials and continuous work histories that employers associate with trustworthiness, commitment, and productivity. Importantly, Black Americans are disproportionately concentrated in communities with less educational funding and higher risks of arrest (Kim and Kiesel 2018), imprisonment (Enders, Pecorino, and Souto 2019), or unemployment (Ritter and Taylor 2011). Employers respond negatively to those life events, even when candidates' skills, experience, and credentials are similar to their white counterparts' (e.g., Pager, Bonikowski, and Western 2009; Pedulla 2016, 2020). Interrupted work histories also affect gender inequality, with hiring penalties for those who have taken time out for child rearing or other caregiving (e.g., Goldin 2014; Weisshaar 2018).

Some advocates question whether formal educational credentials are the best indicator of skill, noting that workers who are “skilled through alternative routes” make up a significant portion of the labor force but that middle- and higher-wage employers often require degrees (Opportunity@Work and Accenture 2020). If formal educational credentials are not always necessary for strong performance in a job but are still required by employers, shifting hiring practices to consider workers who lack credentials but have relevant skills—thus increasing access to good jobs—is one way employers can support worker mobility (box 3).

---

**BOX 3****Year Up: Training Initiatives that Broaden Access**

Employers can make positions more accessible to capable applicants without traditional credentials by partnering with organizations like Year Up. Year Up is a nonprofit group that provides professional and technical skill training to young adults facing economic insecurity. Participants are placed into internships with partnering employers, many of whom are aware that requiring a college degree for certain roles is unnecessarily prohibitive. Most funding for this program comes from employers that pay the organization for interns and donations. Researchers measured outcomes in earnings in a randomized controlled trial involving 2,544 young adults who were either part of a treatment group that was encouraged to participate in Year Up or part of a control group that was prohibited from enrolling.

**Outcomes:** Seventy-five percent of all people in the treatment group completed the program. Findings show increases in average quarterly earnings of \$1,857, 38 percent higher than the control group for low-income and predominantly minority young adults at early follow-ups. The share of participants earning at least \$15 an hour increased from 15 percent to 46 percent after just 18 months, and increased income effects persisted to the end of a five-year period. Treatment group members were more likely to work in high-paying sectors, with 52 percent either in information technology or in the business/financial sector in contrast to 19 percent in the control group. Employers who hired their Year Up interns after the internship have improved retention and greater savings tied to hiring fewer college graduates.

**Challenges:** Year Up requires intensive recruitment and screening. Screening for a high school diploma or GED still excludes a large share of people who might benefit from this program. Further, even after increasing access to higher-paying jobs, employers’ pursuit of lower wages for noncollege workers relative to college-educated workers in the same job is cause for caution.

**Sources:** Fuller and Raman 2017; Katz et al. 2020; Miller 2021.



## Empirical Evidence

Structured hiring processes that limit managerial discretion and increase transparency and accountability may mitigate identity-based bias and identify broader groups of high-quality workers (Dana, Dawes, and Peterson 2013; Rivera 2020, 3). Formalized processes would seem to limit discrimination but can backfire when not implemented alongside accountability measures (Dobbin and Kalev 2016; Dobbin, Schrage, and Kalev 2015; Kalev, Dobbin, and Kelly 2006). For example, some formalized hiring rules such as performance evaluations have null or negative effects on the racial and gender diversity of managers, except among federal contractors or when those rules are paired with the presence of a diversity manager (Dobbin, Schrage, and Kalev 2015). Formalized job postings and publicized job ladders (which create more transparency about opportunities within a firm) are also promising, predicting greater racial and gender diversity in management positions (Dobbin, Schrage, and Kalev 2015).

Research evaluating employers' responses to experimentally identical résumés of Black, Hispanic, and white applicants documents continued hiring discrimination by race (Quillian et al. 2017), prompting the question of what employer policies or practices might limit or avoid discriminatory hiring decisions. Linking an organizational survey to a hiring audit, Pedulla and colleagues found less discrimination against Black applicants in organizations that have more formalized policies and procedures, administrative infrastructure (i.e., separate human resources, legal, and equal opportunity departments), and networking and mentoring programs specifically for employees of color (Pedulla et al. n.d.).

Behavioral design changes also show promise for reducing bias in hiring. Research suggests that blinding will reduce gender disparities in hiring (Goldin and Rouse 2000) but may also reduce the opportunity to proactively select for underrepresented candidates or strategically increase diversity across teams; the overall impact of blinding on demographics requires further study (Bohnet 2016). One study found that evaluating candidates jointly rather than separately led decisions to be based on individual performance rather than group stereotype. Specifically, evaluators tended more frequently to choose men for mathematical tasks and women for verbal tasks—with equivalent performance information—when evaluating candidates one by one than when they compared across candidates (Bohnet, van Geen, and Bazerman 2015).

Employers are turning to algorithmic hiring, hoping that algorithms will be less biased and identify strong, diverse pools of candidates (e.g., Cowgill and Tucker 2019). There is a legitimate concern that algorithms built on data from past and incumbent role holders will replicate and obscure any biases, although such algorithms could be written proactively to encourage “exploration” of less traditional candidates (Li, Raymond, and Bergman 2020). Along with proactive monitoring of disparate impact on candidates, innovations in hiring technology have incorporated blinding as well as joint evaluation to guard against halo effects, but the effects of these innovations have not yet been documented empirically (Trindel, Polli, and Glazebrook 2020).

Not much evidence is available on which specific employer practices draw broader, more diverse talent pools, although targeted recruiting (e.g., going to Hispanic-serving and historically Black colleges for recruiting) has been found to increase the racial diversity of the managerial workforce over time (Dobbin, Schrage, and Kalev 2015). Some research suggests that subtle moves to create more inclusive environments (e.g., removing posters for male-typed movies in a computer science lab) encourage people from traditionally excluded groups to pursue training and jobs in these fields (e.g., Cheryan, Master, and Meltzoff 2015), but more research is needed to explore how employer practices and cultures affect “supply side” decisions to pursue a particular job or field.

Apprenticeships, internships, and other employment trials have been suggested as strategies for overcoming employers’ potentially biased beliefs about a given candidate’s abilities, because these experiences provide specific information about an individual’s performance and build social ties within the organization (Sterling and Fernandez 2018).

Workers are sometimes excluded from good jobs because of formal credential requirements that do not reflect the real requirements of a job or summarize a candidate’s true abilities. One study comparing current workers to those applying for jobs that require college degrees found that 63 percent of new job postings for production supervisor required a college degree in 2015, but only 16 percent of incumbent production supervisors in 2015 had that degree (Fuller and Raman 2017). Moreover, research tracking job requirements in positions posted during the Great Recession found that substantial numbers of employers expanded their requirements for educational experience as unemployment rates shifted (Modestino, Shoag, and Ballance 2016, 2020). The implication is that employers’ declared job requirements are flexible and could be broadened to include workers with less traditional credentials if employers were actively trying to improve

mobility for less-educated individuals and racialized minorities (Fuller and Raman 2017). Because a lack of traditional credentials often reflects structural barriers to training opportunities and good jobs, and because occupational skills of noncredentialed candidates may be reliable predictors of employee performance, more research is warranted on how employers can expand the applicant pool by considering nontraditional candidates (see box 3 for one example).

It is well known that criminal records make it more difficult for qualified applicants to be hired (e.g., Pager 2003; Pager, Bonikowski, and Western 2009). However, simply removing questions about a criminal record may not work to broaden access to good jobs. One study revealed that absent explicit questions on criminal histories, hiring managers seemed to rely on negative stereotypes about Black individuals. In this scenario, Black applicants were called back only 70 percent as often as white applicants (Raphael 2021). A similar pattern has been documented when employers were told not to disqualify applicants based on credit scores; doing so disproportionately harms Black workers (Ballance, Clifford, and Shoag 2020). These studies illustrate the importance of empirical, ideally experimental, evaluations of well-intentioned changes in hiring practices and other employer practices.

Several of these hiring practices come with benefits, or at least no evident harm, to employers. Implementing antibias hiring practices may help firms improve their performance, as indicated by one study reporting that hiring bias in firms was negatively associated with profitability (Kline, Rose, and Walters 2021). Evidence indicates that skills testing can improve firm performance without decreasing the number of hires of people of color (Autor and Scarborough 2008; Hoffman, Kahn, and Li 2017; Rivera 2020), although it may also reduce racial diversity in management (Dobbin, Schrage, and Kalev 2015). These findings suggest that skills tests help employers identify high-performing candidates from diverse backgrounds, but they are not always paired with opportunities for advancement for minority workers. Employers may be able to leverage the positive effects of these practices without harming minorities and women by implementing guardrails for accountability, such as oversight by diversity officers or other strategies for internal monitoring (e.g., Castilla 2015; Dobbin, Schrage, and Kalev 2015).

## Key Takeaways

Research on what employers can do differently and better in the hiring process is scattered, with formalized hiring procedures (in conjunction with oversight from those focused on diversity), internships, and certain design changes potentially broadening access to higher-paid roles. There is much more to learn, though, about the impact of different recruitment and hiring practices for different groups of workers, including how these practices affect mobility and reduce racial and gender gaps in leadership over time. Reevaluations of traditional educational credentials and related training investments may help employers reach broader, more diverse populations and move those workers into better-paying jobs and career tracks. More research is needed to document the impact of skills-based hiring on employee outcomes and firm performance. Studies that track mobility over time of employees who were hired through practices that “expand the pipeline” would illuminate the long-term effects of these efforts.

## Promotion Practices

### Definition of Practices

Employers can directly facilitate mobility for entry-level workers by providing opportunities for promotion into higher-paying positions. But what evidence supports this, and what specific features of internal mobility systems increase opportunity? In this section, we consider trade-offs associated with *more- or less-structured promotion systems*; the *basis on which promotion* decisions occur (performance evaluation, credentials, network sponsorship, or tenure); and the underlying structure of *within-firm job opportunities*. Our assessment of promotion structures also recognizes that *internal job changing* within a firm often has been less likely to support mobility, relative to workers switching organizations altogether (external job changes; Kalleberg and Mouw 2018). We further consider strategies to integrate career development processes across several employers.

### Channels: How Would Promotion Practices Be Expected to Affect Mobility?

Promotions have a direct effect on higher pay; they consistently bring a pay increase for promoted workers (Baker, Gibbs, and Holmstrom 1994). Promotions can also increase

organizational commitment and retention by rewarding employees for their effort and reinforcing motivation while reducing firms' turnover costs. We therefore see these practices as operating through the job quality and sustainability channels.

The details of promotion systems can matter too. Substantial supervisor discretion over promotion decisions could introduce bias into an important mobility channel. Likewise, the actual job opportunities available within a firm are an important constraint on whether promotion drives mobility.

On the firm side, promotion offers two advantages. First, internal hiring can help employers by allowing them to use private information about workers that is not accessible to labor market competitors (Benson and Rissing 2020; Bidwell and Mollick 2015). Second, the credible possibility of promotion can serve as a motivator for front-line workers. Both of these firm-side benefits can have offsetting costs for workers if they substitute for higher starting pay. Promotion can also cost employers if lower-level workers are moved out of jobs at which they excel and into managerial positions where their performance is worse (Benson, Li, and Shue 2019).

## **Empirical Evidence**

Much of the literature comparing internal hiring and promotion systems with external moves has relied on samples of white-collar and managerial workers. This literature indicates that internal hiring is more likely to yield upward occupational mobility relative to external moves (DeVaro, Kauhanen, and Valmari 2019). At the same time, even though external moves are more likely to be lateral with respect to occupation and job title, they provide higher pay relative to job level than do internal moves (Bidwell and Mollick 2015; DeVaro, Kauhanen, and Valmari 2019). This comparison implies one benefit of internal hiring for employers: internal hires can be paid less for a given role than external hires (Bidwell 2011). For the white-collar and managerial workers in these studies, it implies a trade-off between job switches that bring immediate wage gains and switches that bring occupational upgrades.

The focus of the internal hiring research on white-collar workers reflects the limited role that promotions play in careers of less-educated workers. Evidence looking specifically at low-wage workers indicates that switching away from a current employer is the dominant pathway out of low-wage work, representing about two-thirds of “escapes”

over a six-year period (Andersson, Holzer, and Lane 2005). Even when researchers focus on workers' upward occupational mobility, they find that workers starting in low-paid occupations are more likely to move into a higher-paying occupation by switching employers than by staying with the same employers (Wilmers and Kimball 2021). Moreover, external mobility disproportionately benefits low-wage and young workers (Haltiwanger, Hyatt, and McEntarfer 2018). Despite the potential benefits of internal mobility for low-wage workers, promotion is not currently a dominant pathway of upward mobility. Most low-wage workers currently need to switch employers to achieve upward mobility.

Another downside of promotion is that if it is based on subjective performance evaluations, it opens the possibility for bias in who gets to move up. Performance evaluations often exhibit bias against women (Joshi, Son, and Roh 2015), and surveys find that promotion systems provide less benefit for Black workers than for white workers (Baldi and McBrier 1997; Smith 2005). On the other hand, external hiring can also suffer from racial or gender disparity, as we discuss in the Recruitment and Hiring Practices section.

How can promotion systems be done well? Similar to hiring, structured decisionmaking could reduce bias in the promotion process. However, highly structured job ladders can also separate workers starting in a lower-wage job category into a lower-ranked track (DiPrete and Soule 1988). A study of white-collar workers suggested that allowing open bidding on jobs benefits employers and workers (Keller 2018) and that firms publicizing job ladders (i.e., one indicator of structured promotion systems) see greater increases in the racial diversity of their managerial workforces (Dobbin, Schrage, and Kalev 2015). We found little research on how the substantive criteria for promotion, like tenure, performance reviews, or network-based sponsorship, affect mobility outcomes.

In the current period of flattened firms, delayering, outsourcing, and skill segregation, it is unclear how many employers of low-wage workers have enough high-wage jobs to make promotion viable (Lane et al. 2003). Perhaps because of this, recent discussion of career paths for low-wage workers has gone beyond employer practices to consider collaborative training projects spanning multiple employers within a sector (box 4). Such sectoral programs are typically aimed at training disadvantaged applicants for employment in specific industries that have both good starting wages and better promotion opportunities than those found in the service sector or other “dead-end jobs”

(Autor, Li, and Notowidigdo 2019; Katz et al. 2020). For example, a health care or life-sciences sector initiative would provide training on specific skills needed for these growing, better-paying fields and supplement that with soft-skills training, job-placement support, and services for workers who are placed in new jobs and their employers. These programs also work with employers to encourage internal mobility structures for career development (Lowe et al. 2018). Another alternative is to create additional job tiers within a single employer: quasi-experimental evidence among certified nursing assistants found that job tiers supported by formal training improved retention and wages as well as quality of care (Fitzgerald 2006).

## Key Takeaways

Relative to switching employers, promotion practices within firms are not currently a dominant pathway out of low-wage work. These practices also face constraints as a general strategy for mobility, given the flat and job-segregated nature of many organizations: there may not be enough higher-level jobs within firms that employ low-wage workers for promotion to be a broad mobility strategy. However, because promotion systems can benefit firms and workers, further research on effective promotion systems is worthwhile. Structured career ladders that avoid segregating marginalized groups at the bottom are needed; likewise, some low-wage workers may benefit from clear pathways for skill building and job switching.

---

### BOX 4

#### **Sector-Focused Training Programs: Employers and Partners Working Together to Broaden Access**

**Overview:** Sector-focused training programs are a promising approach to building career mobility for disadvantaged workers. These programs move beyond the single-employer strategies on which this report focuses and could offer a way around the limitations of the single-employer promotion systems that we identify. However, because of worker self-selection into these programs, it is generally difficult to assess the effects of training. A recent study addressed this problem by analyzing data from randomized controlled trial evaluations of eight different programs.

**Intervention:** Sector-focused training programs focus on providing skills for specific industries and jobs that pay relatively high wages. They go beyond conventional training programs by supplementing occupation-specific education with soft-skills training, job-



placement support, and follow-up services to both workers and employers. These programs run from a few weeks to six months and recruit from populations of disadvantaged workers.

A key component of these programs is significant engagement with employers. Employers are critical both for helping define relevant skills for the programs to target, and for providing supportive employment following program completion and worker placement.

**Outcomes:** The programs evaluated consistently increased employment in high-wage jobs for participants. For instance, WorkAdvance increased employment rates generally and increased the share of workers earning at least \$15 an hour by 5.5 percent. Follow-up surveys suggested these earnings gains are mainly caused by expanding the share of participants placed into higher-wage jobs, industries, and occupations. Supplementary evidence showed that these programs had lasting effects for workers for nearly a decade after their participation. These results suggest that continued and expanded employer engagement with these programs could be a promising pathway through which they can enhance mobility for disadvantaged workers.

Source: Katz et al. 2020.

---

## Work Systems

### Definition of Practices

How work is organized — the content of the tasks, and the relationships in which employees are embedded — significantly affects employees' day-to-day experiences as well as their skills, motivation, and contribution opportunities. Practices we review in this category include organizing work around teams; providing feedback and training to employees; decentralization and participation enhancement (e.g., process improvement); and enhancing job design through autonomy, task significance, and skill variety at work (Boon, Den Hartog, and Lepak 2019; Hackman and Oldham 1976; Jiang et al. 2012; Subramony 2009). Some of these practices (e.g., process improvement, feedback, and incentive pay) overlap with those studied under “structured management practices” (Bloom and Van Reenen 2007), though such research primarily focuses on firm outcomes and thus is not reviewed here in detail (but see work by Bloom, Kretschmer, and Van Reenen [2009] for the impact of structured management practices on employee outcomes).



## **Channels: How Would Work Systems Be Expected to Affect Mobility?**

Several work-system practices promise to align employee and employer outcomes by offering pathways to motivate, empower, and upskill the employees (Jiang et al. 2012). Specifically, teams, autonomy, and other decentralized participation systems empower workers to contribute more; rich social networks and several job design features may enhance motivation (along with compensation, as covered earlier in the Pay and Wages section); and training, rigorous selection, and feedback improve employee skills.

The promise is that when all components of skill, contribution opportunity, and motivation are present, employees will be more productive, generating surplus that can be shared between workers and employers. Workers also will be more satisfied with their jobs and have lower turnover. Therefore, both the job quality and sustainability channels are relevant. The three components (skills, opportunities to contribute, and motivation) are complementary: absent any of them, employee productivity will not improve, and the potential surplus that would motivate the firm to implement and maintain these practices will be lost. For example, increasing worker responsibility complements practices such as training or interpersonal skill building (Ichniowski and Shaw 2003). Complementarities also extend to the match between work systems and external contexts (e.g., business cycles; Kim and Ployhart 2014) and industry dynamism (Datta, Guthrie, and Wright 2005) as well as core production technologies. Flexible manufacturing, for instance, would benefit more from empowered, motivated, and skilled employees than mass production (MacDuffie 1995). Therefore, work system practices are often combined with performance-based compensation and selective hiring and internal promotion to form coherent “bundles” of practices (which we call High-Involvement Work Systems, or HIWS) that promise better outcomes for workers and the firm in combination versus in isolation (box 5).

---

**BOX 5****High Involvement Work Systems Practices at QuikTrip**

QuikTrip is a private US convenience store and gas station chain with 24,000 employees and \$11 billion in annual revenue as of 2010. In a competitive, cost-focused sector, the company has adopted several practices associated with high involvement work systems:

- **Compensation and benefits:** Base pay is almost double the industry average. Compensation includes stock ownership, profit-based bonuses, and 401(k) contributions of up to 6 percent of salary; generous health coverage; and paid vacation of 2–5 weeks, based on tenure.
- **Hiring and promotion:** Hiring is selective (~2 percent of applicants are hired); 100 percent of front-line managers are promoted from within; company has a no-layoff policy.
- **Work systems:** Workers receive two weeks of training at entry and extensive additional training for every promotion; company cross-trains and empowers workers to do multiple tasks. Respect for front-line workers is reinforced by management; a relief employee pool ensures adequate staffing in event of leaves/vacations; front-line employees are empowered to order merchandise and solve customer problems. Company uses continuous process improvement to enhance systems and processes and conducts regular anonymous 360-degree reviews as well as feedback meetings with supervisors.

**Outcomes:** Employee satisfaction is high, with annual turnover rates at 13 percent and 36 percent for full- and part-time employees, compared with industry averages of 109 percent and 157 percent. The company has regularly made it to *Fortune Magazine's* “100 Best Companies to Work For” list, with employees highlighting good pay, bonuses, benefits, a friendly environment, and flexible schedules (though some find it too fast paced with long hours). QuikTrip has regularly outperformed all competitors in per-store profits, customer satisfaction and loyalty, sales per labor hour and square foot, and shrinkage. The chain has been growing steadily for the past three decades.

**Challenges:** The company builds in a two-year investment period before new-store profitability is expected; providing growth opportunities for employees requires continuous expansion into new markets; the very selective hiring process may not be generalizable to whole sectors of the economy; a case study does not establish causality between adopted practices at QuikTrip and firm and employee outcomes.

**Sources:** Glassdoor, “QuikTrip Reviews,” accessed February 3, 2022, <https://www.glassdoor.com/Reviews/QuikTrip-Reviews-E2947.htm>; Ton (2014).

---

## Empirical Evidence

A large body of evidence supports the benefits of these practices for *firm* outcomes (Bloom et al. 2013; Knight and Parker 2021; Rabl et al. 2014; Subramony 2009). There is also evidence that bundles of complementary practices are more important than individual practices (Combs et al. 2006; Ichniowski and Shaw 2003; MacDuffie 1995; Subramony 2009). However, empirical issues in measuring complementarity are complex; thus the role of complementarity is not unambiguously settled. Moreover, the overall benefits of HIWS for both employees and the firm are closely tied to whether employees perceive management practices as signals of mutual commitment (Boxall and Macky 2009; Nishii, Lepak, and Schneider 2008), increasing the heterogeneity in the outcomes of these practices (Bloom, Sadun, and Van Reenen 2012). When we consider single practices that fall under the work-system heading, benefits to the firm are found for practices that enhance employee involvement (e.g., Total Quality Management programs) and training (Rabl et al. 2014; Subramony 2009).

The strongest effects for employees come from practices that change job characteristics by enhancing autonomy, flexibility, skill variety, task identity and significance, job feedback, and social support (Humphrey, Nahrgang, and Morgeson 2007). Moreover, research finds participatory intervention programs and HIWS often contribute to workers' well-being (Böckerman, Bryson, and Ilmakunnas 2012; Fox et al. 2021). There is also some evidence on diversity benefits of HIWS. For instance, organizations with self-managed teams and cross-training see greater diversification of their managerial workforces (Kalev 2009), suggesting that these work design strategies allow workers of color and white women to develop the skills and networks needed to move up. On the other hand, a few studies have identified negative effects of HIWS from increased stress and overload (e.g., Gupta et al. 2018; Jensen, Patel, and Messersmith 2013; Pohler and Luchak 2014). In sum, employees' gains from HIWS are evident for satisfaction and social relationships but less clear for health and stress outcomes (Van De Voorde, Paauwe, and Van Veldhoven 2012).

The causal effects on employee earnings and mobility are mixed (Handel and Gittleman 2004). Some evidence demonstrates that these practices reduce turnover (Chênevert, Jourdain, and Vandenberghe 2016; Glisson, Dukes, and Green 2006) and enhance promotion opportunities (Bonet 2014). To the extent that HIWS increase workers' productivity, their earnings would increase if firms shared those gains with employees. Yet that sharing should not be taken for granted, especially absent strong worker

representation. Empirical evidence is limited, and one study suggests that enriched jobs attract employees with higher skills, acting as a selection process rather than improving the mobility of incumbent workers (Böckerman, Bryson, and Ilmakunnas 2013). These practices may benefit external workers' access to better jobs, but by keeping employees in one organization, they may slow down the upward mobility some may attain through switching jobs. Overall, thoughtfully curated bundles of HIWS practices have the potential to offer win-win opportunities to employers and their existing employees, but more research is needed on the mobility implications of these practices.

## **Key Takeaways**

Several practices can contribute to work systems that enhance employee productivity and experience while improving organizational performance. To realize these benefits, practices need to be designed carefully to build on complementary combinations that simultaneously increase employee motivation, skills and capabilities, and opportunities for contribution. Although work design can enhance current employees' job quality, its impact on broadening access and growth opportunities for diverse workers is unknown. Several research directions on work design and worker mobility are promising. First, the benefits of HIWS for low-wage workers, especially in the service sector, are critical but less studied; also beneficial are new studies focused on small firms, including their unique adoption challenges. Second, existing studies focus on benefits for existing workers in the current firm, but their impact on focal workers' outcomes beyond the current firm, and opportunities for the workforce outside of the focal firm, are poorly understood. Last, existing case studies on how HIWS can be designed to realize win-win opportunities could be augmented by

- experimental or quasi-experimental studies that establish the viability of these alternative strategies;
- in-depth and empirically grounded structural models that tease out how different practices complement each other, and how more effective HIWS could be designed; and
- studies of the implementation process—how employees, managers, and the market perceive this process, and what the common challenges and facilitating factors are.

Such research can provide blueprints for more effective adoption.

## Diversity, Equity, and Inclusion Initiatives

### Definition and Channels through Which Diversity, Equity, and Inclusion Practices Are Expected to Affect Mobility

Our review thus far notes that race- and gender-neutral practices can lead to positive mobility outcomes that benefit people of color and women working in traditionally male fields. Additionally, practices specifically aimed at improving mobility for traditionally excluded groups (particularly racial minorities and women in male-dominated fields) can operate through all three channels of mobility (improving job quality, broadening access, and sustaining workers settled in good jobs) to improve worker outcomes.

Diversity, equity, and inclusion (DEI) practices take many different forms, each addressing specific mobility channels. Targets or numerical goals for diversifying the workforce broaden access to jobs that pay more or offer more advancement opportunities by encouraging the hiring manager or the firm to prioritize qualified applicants from traditionally underrepresented groups (Miller 2017; see also box 6 and the Hiring and Recruitment Practices section in this report). Employee resource groups can make jobs more attractive to candidates from diverse backgrounds, facilitate supportive organizational culture through mentorship, and expand opportunities for upward mobility through increased learning and visibility with senior leaders (Welbourne, Rolf, and Schlachter 2015), which improves job quality apart from wages. Diversity training may reduce managers' and coworkers' biases (although the evidence that it does so is weak; see, e.g., Onyeador, Hudson, and Lewis 2021) and therefore make it more likely that candidates from underrepresented groups will be hired, supported in their work, and promoted. Harassment intervention and prevention initiatives are meant to operate through the sustainability channel, because workers who are harassed or feel mistreated are more likely to leave and forgo firm-specific skills and human capital.

---

**BOX 6****Diversifying the Applicant Pool**

Recent experimental evidence on affirmative action commitments, targets, and quotas indicates that these policies are among the most promising of the DEI practices for broadening access to higher-paying jobs. *Affirmative action* here refers to a direct commitment from the employer to hire candidates from diverse backgrounds, whereas *targets* and *quotas* are numerical or proportional goals for hiring either women or people of color.

**Outcomes:** A field experiment in Colombia found that an announcement that at least half the hires for a posted job position would be women increased female job seekers' interest in a job. Women in the control group (who didn't receive that announcement) exhibited significantly less interest in the position than male candidates. The public announcement of a commitment to hire women increased both women's interest and the amount of time and effort they spent on the application but did not change the amount of effort male candidates exerted (Banerjee et al. 2021). Relatedly, in a study of coding programs in Lima and Mexico City, an experimental condition that provided information about female role models, career prospects, and peer networks also significantly increased women's application rates (Del Carpio and Guadalupe 2018). Yet another study found that when Fortune 500 firms directly signaled interest in increasing racial diversity through a statement on the application, Black and Hispanic candidates were about twice as likely to be interested in the position and were significantly more likely to apply and be hired than when the firm made a vaguer statement (such as about valuing diversity in fields of study; Flory et al. 2018). Importantly, these statements did not change the interest and application rates for individuals in the ethnic majority.

**Challenges:** Hiring quotas may lead to distorted peer reviews later on, in which those in the targeted or prioritized group receive significantly less-favorable reviews from peers, even when they have similar actual performance (Petters and Schroeder 2020). This experimental evidence points to the possibility that quotas or targets may lead to more diverse representation in new hires but may not necessarily set those workers up for future success in the firm.

**Sources:** Banerjee et al. 2021; Del Carpio and Guadalupe 2018; Flory et al. 2018; Petters and Schroeder 2020.

---

**Empirical Evidence**

Older research on affirmative action programs shows they have the potential to increase employment of women and Black individuals (Leonard 1990), suggesting that numerical

targets may increase mobility and reduce inequality even if framed as goals rather than policy-driven quotas. More recent work finds the primary beneficiaries of affirmative action in federal contracting from 1973 to 2003 were Black and Native American women and men (Kurtulus 2016). The effect of federal affirmative action regulation on the racial composition of establishments has been steady increases in the share of Black employees, even after the establishment is released from government oversight (Miller 2017). Given the increased interest in achieving specific representation goals, and the trend on the part of large companies such as Coca-Cola and Microsoft to publicize racial-diversity targets, further research on the various ways that employers are approaching these goals, and their impact on both representation and careers or mobility over time, is warranted (Rivera 2020).

The evidence tying diversity training to individual workers' economic mobility is very limited. At the establishment level, mandatory diversity training focused on legal compliance has been associated with *decreases* in representation of workers of color in management positions (Dobbin and Kalev 2019; Kalev, Dobbin, and Kelly 2006). Furthermore, organizations with diversity training are no less likely than those without to discriminate against Black workers in hiring but are also no more likely to do so (Pedulla et al. n.d.). Recent experiments do point to some plausible benefits from voluntary diversity training programs, though. One study found white-collar employees randomized to a diversity training were more likely to informally mentor and publicly recognize the strong performance of women and racial minorities (Chang et al. 2019), potentially setting these groups up for future mobility. These effects were greater for women and racial minorities in company diversity training, suggesting that the program inspired them to take action for other coworkers from underrepresented groups (Chang et al. 2019). A randomized controlled trial of 92 departments at the University of Wisconsin–Madison found that faculty in departments randomized to receive a (voluntary) diversity training workshop felt more prepared to address diversity concerns and reported a better departmental climate (Carnes et al. 2015). More research is needed to identify (1) what types of diversity training succeed in creating more inclusive, supportive cultures and (2) whether exposure to diversity training affects the economic mobility of and pay gaps for racial-minority, women, and noncollege workers over time.

Although diversity training is perhaps oversold, diversity task forces and committees are surprisingly effective in diversifying the management ranks (Kalev, Dobbin, and Kelly



2006). A diversity task force can gather data; identify useful policy changes in hiring, evaluation, or rewards systems; and solidify organizational commitments to DEI by pulling managers and employees together across units and roles, at relatively low cost to the firm (Dobbin and Kalev 2016).

Evidence from higher-wage, professional occupations points to positive impacts of employee resource groups and structured mentorship programs, suggesting workplace efforts to build relationships are fruitful for employees from marginalized and historically disadvantaged groups. For example, randomized assignment to a mentoring program increased women economists' retention in academia and their odds of getting tenure (Ginther et al. 2020). Additionally, a hiring audit paired with an organizational survey found that workplaces with race-specific networking and mentoring initiatives are less likely to discriminate against Black applicants (Pedulla et al. n.d.).

There is significant evidence documenting the physical, mental, and financial costs of harassment in the workplace; in fact, evidence points toward significant productivity gains for women when the threat of harassment is reduced (Cici et al. 2021). Studies have shown that harassment training can actually exacerbate hostility toward people reporting harassment and women generally (Icekson, Tziner, and Bareket-Bojmel 2020), although training tends to be more effective in organizations that already have a higher proportion of women in management (Dobbin and Kalev 2019). Bystander interventions are growing in popularity as a method for empowering individuals to intervene in harassment situations (Coker et al. 2016), but the implications of these strategies for targets' or bystanders' careers and mobility has not been evaluated.

## **Key Takeaways**

Overall, goals and numerical targets for underrepresented workers may broaden access to higher-paying jobs without negative effects on the hiring pool or productivity. Employee resource groups and mentorship seem to be effective, though research is from high-wage settings. Diversity and harassment training have the potential to worsen conditions for people of color and white women, while task forces and committees show promise.

There are several important directions for research in this space. First, future work should investigate how DEI and harassment initiatives affect the retention of diverse candidates more directly. Although a supportive and inclusive climate would seem critical



for workers' recruitment, retention, and interest in advancing within a given firm (or field), the organizational policies and specific employer practices that foster a supportive and inclusive climate are not clear. Second, we note that much of the best research on DEI practices has taken place in professional and managerial occupations and other high-wage settings. More research is needed on what DEI practices look like in low-wage settings and how they affect the security and mobility of low-wage workers over the longer-term.

## Summary of Employer Practices and Their Impact on Worker Mobility

Table 1 summarizes the findings discussed in the previous sections. For each employee practice we discuss the effect on employees and on the firm, distinguishing between different channels of impact (job quality, access, and sustainability for employees; performance, cost, and retention for firms). We also provide a qualitative assessment of the type of effect as well as the level of confidence in that effect. We label effect types as positive, neutral, and negative, and we apply the label *heterogeneous* when there is evidence that a practice's effects vary by context (i.e., are conditional). We also summarize our confidence in the evidence using the labels *consistent* and *uncertain*; we use *uncertain* if there is only one study on that effect, even if the research was well designed. We provide only a few example studies per practice and emphasize those with longitudinal or (quasi-) experimental designs.

**TABLE 1****Summary of Employer Practices and How They Affect Employee and Firm Outcomes**

Category	Name	Worker mobility: Channel and assessment of evidence (positive, negative, heterogeneous; consistent or uncertain)	Firms: Mechanism or evidence	Discordant citations
Pay and wages	Pay level	Job quality: Positive, Consistent (Arellano-Bover 2021; Bailey, DiNardo, and Stuart 2021; Derenoncourt and Montialoux 2020; Dube 2019; Godøy and Jacobs 2021; von Wachter 2020)	Compensation costs: Negative, Consistent Gift exchange benefits: Positive/Heterogeneous, Uncertain (Bellemare and Shearer 2009; Gilchrist, Luca, and Malhotra 2016; Gneezy and List 2006; Kube, Maréchal, and Puppe 2012; Sandvik et al. 2021)	
Pay and wages	Pay compression	Job quality; Positive, Consistent (Bailey, DiNardo, and Stuart 2021; Freeman and Medoff 1984; VanHeuvelen 2018)	Negative selection, weakened incentives: Negative, Uncertain (Cullen and Perez-Truglia 2018; Dube, Giuliano, and Leonard 2019; Mas 2017) Higher effort, by respecting fairness norms: Positive, Uncertain (Breza, Kaur, and Shamdasani 2017; Card et al. 2012)	
Pay and wages	Performance-based pay	Sustainability; Negative, Uncertain (Gerhart, Rynes, and Fulmer 2009; Parker et al. 2019)	Productivity: Positive, Consistent (Garbers and Konradt 2014; Levitt and Neckermann 2015)	
Scheduling	Stable schedules	Job quality— income stability and material hardship: Positive, Consistent (Harknett, Schneider, and Irwin 2021; Lambert, Henly, and Kim 2019) Job quality— subjective well-being: Positive, Consistent (Ananant and Gassman-Pines 2021; Harknett, Schneider, and Irwin 2021; Schneider and Harknett 2019) Sustainability: Positive, Uncertain (Choper, Schneider, and Harknett 2021)	Performance: Positive, Consistent but limited (Hashemian 2020; Kesavan et al. 2021; Ton 2014)	Workers are willing to pay for stable schedules, so earn less (Mas and Pallais 2017)

		<b>Worker mobility: Channel and assessment of evidence (positive, negative, heterogeneous; consistent or uncertain)</b>		<b>Firms: Mechanism or evidence</b>	<b>Discordant citations</b>
<b>Category</b>	<b>Name</b>				
Scheduling	Adequate hours	Job quality—higher pay: Positive, Consistent (by definition for hourly workers) Sustainability: Positive, Uncertain (Choper, Schneider, and Harknett 2021; Williams, Lambert, and Saravanan 2018)		Retention: Positive, Uncertain (Choper, Schneider, and Harknett 2021; Williams, Lambert, and Saravanan 2018) Productivity: Positive, Consistent (Mahdi Hashemian, Ton, and Rahmandad 2020; Williams, Lambert, and Saravanan 2018)	
Scheduling	Employee control or input re: schedule, work location	Job quality—subjective well-being: Positive, Consistent (Bloom et al. 2015; Kelly et al. 2014; Moen et al. 2016) Sustainability: Positive, Consistent (Choper, Schneider, and Harknett 2021; Moen et al. 2017)		Retention: Positive, Consistent (Bloom et al. 2015; Moen, Kelly, and Hill 2011; Moen et al. 2017) Productivity: Positive, Consistent (Beckmann, Cornelissen, and Kraekel 2017; Bloom et al. 2015) Quality, innovation: Positive, Uncertain (Godart, Görg, and Hanley 2017; Kelly and Moen 2020; Ton 2014)	Increased work hours may offset subjective well-being benefits (Lott and Chung 2016; Schieman, Milkie, and Glavin 2009)
Leaves	Paid family leaves	Sustainability: Positive, Uncertain (by length of leave) for employment (Rossin-Slater 2017; Rossin-Slater, Ruhm, and Waldfogel 2013) Job quality—increased wages: Neutral, Uncertain (Rossin-Slater 2017; Schönberg and Ludsteck 2014)			
Leaves	Sick Leaves	Sustainability: Positive, Uncertain (Kristal, Cohen, and Navot 2018; Schneider 2020)			
Hiring	Structured decision-making processes (e.g., skills testing)	Access: Heterogeneous, Uncertain (Autor and Scarborough 2008; Dana, Dawes, and Peterson 2013; Dobbin, Schrage, and Kalev 2015; Rivera 2020)		Performance: Positive, Uncertain (Hoffman, Kahn, and Li 2018)	

Category	Name	Worker mobility: Channel and assessment of evidence (positive, negative, heterogeneous; consistent or uncertain)	Firms: Mechanism or evidence	Discordant citations
Hiring	Blinding	Access: Positive, Uncertain (Goldin and Rouse 2000)		
Hiring	Algorithmic/other uses of AI	Access: Positive, Uncertain (Li, Raymond, and Bergman 2020)	Performance: Positive, Uncertain (Li, Raymond, and Bergman 2020)	
Hiring	Internships	Job quality: Positive, Uncertain (Sterling and Fernandez 2018)		
Promotion	Internal vs. external mobility	Access: Heterogeneous, Uncertain (Andersson, Holzer, and Lane 2005; Baldi and McBrier 1997; Haltiwanger, Hyatt, and McEntarfer 2018; Smith 2005) Sustainability: Positive, Uncertain (Lyness and Judiesch 2001)	Cost per employee: Positive, Consistent (Bidwell 2011; Bidwell and Mollick 2015; DeVaro, Kauhanen, and Valmari 2019) Misallocation costs: Negative, Uncertain (Benson, Li, and Shue 2019)	
Promotion	Open bidding	Access: Positive, Uncertain (Keller 2018)		
Promotion	Career ladders	Sustainability: Positive, Uncertain (Fitzgerald 2006; Maier 2002)		
Promotion	Sector programs	Access: Positive, Consistent (Katz et al. 2020)		
Work systems	Team-based work	Job quality: Positive, Uncertain (Mohr and Zoghi 2008)	Productivity: Positive, Consistent (Birdi et al. 2008; Ichniowski, Shaw, and Prenzushi 1997)	Absenteeism (Frick, Goetzen, and Simmons 2013) Labor cost (Cappelli and Neumark 2001)

		<b>Worker mobility: Channel and assessment of evidence (positive, negative, heterogeneous; consistent or uncertain)</b>		
<b>Category</b>	<b>Name</b>	<b>Firms:</b>	<b>Mechanism or evidence</b>	<b>Discordant citations</b>
Work systems	Participatory problem-solving groups	Job quality: Positive, Consistent (Bourbonnais, Brisson, and Vezina 2011; Dahl-Jørgensen and Saksvik 2005; DeJoy et al. 2010; Linzer et al. 2015; Tsutsumi et al. 2009; Uchiyama et al. 2013; von Thiele Schwarz et al. 2017)	Productivity and quality: Positive, Consistent (Birdi et al. 2008; Bourbonnais, Brisson, and Vezina 2011; Colombo, Delmastro, and Rabbiosi 2007; DeJoy et al. 2010; Jones, Kalmi, and Kauhanen 2010)	(Cappelli and Neumark 2001; Gupta et al. 2018)
Work systems	Job enrichment initiatives	Job quality: Positive, Consistent (Graen, Novak, and Sommerkamp 1982; Grant 2008; Griffin 1983; Holman and Axtell 2016; Holman et al. 2010; Tims, Bakker, and Derks 2013)	Productivity: Positive, Consistent (Birdi et al. 2008; Grant 2008; Griffin 1983; Holman and Axtell 2016)	Manual worker satisfaction (Yan, Peng, and Francesco 2011)
Work systems	Job rotation systems and cross-training	Job quality: Positive, Uncertain (Brown et al. 2008; Workman and Bommer 2004) Sustainability: Positive, Uncertain (Mohr and Zoghi 2008)	Productivity: Positive, Consistent (Birdi et al. 2008; Chowhan 2016; Chowhan, Zeytinoglu, and Cooke 2016; McKenzie 2021)	
Work systems	Feedback and communication systems	Job quality: Positive, Consistent (Graen, Novak, and Sommerkamp 1982; Griffin 1983; Linzer et al. 2015; Mohr and Zoghi 2008)	Positive, Uncertain	
Work systems	Bundles	Job quality: Positive, Consistent (Batt 2002; Böckerman, Bryson, and Ilmakunnas 2012, 2013; Chowhan, Zeytinoglu, and Cooke 2016; Lee, Hong, and Avgar 2015; Macky and Boxall 2007; Piening, Baluch, and Salge 2013) Sustainability: Positive, Consistent (Bonet 2014; Chênevert, Jourdain, and Vandenberghe 2016; Chênevert and Tremblay 2009; Glisson, Dukes, and Green 2006; Way 2002)	Productivity: Positive, Consistent (Bloom et al. 2013; Chuang and Liao 2010; Colombo, Delmastro, and Rabbiosi 2007; Ichniowski, Shaw, and Prenzushi 1997; Jones, Kalmi, and Kauhanen 2010; Piening, Baluch, and Salge 2013; Shin and Konrad 2017; Thompson and Heron 2005) Retention: Positive, Consistent (Batt 2002)	Productivity (Cappelli and Neumark 2001) Limited pay impact (Handel and Gittleman 2004)

Category	Name	Worker mobility: Channel and assessment of evidence (positive, negative, heterogeneous; consistent or uncertain)	Firms: Mechanism or evidence	Discordant citations
DEI	Quotas and affirmative action	Access: Positive, Consistent (Beaurain and Masclet 2016; Ibanez and Riener 2018; Leonard 1990)  Sustainability: Negative, Uncertain (Heilman 1996; Petters and Schroeder 2020)	Performance: Neutral, Consistent (Beaurain and Masclet 2016; Holzer and Neumark 2000; Ibanez and Riener 2018; Koelle 2017)	(Baron, Mittman, and Newman 1991)
DEI	Diversity training	Sustainability: Heterogeneous, Consistent (Chang et al. 2019; Devine et al. 2012; Moss-Racusin et al. 2016)	Performance: Neutral, Uncertain (Ely 2004)	
DEI	ERGs/mentorship	Sustainability: Positive, Uncertain (Friedman and Holtom 2002; Ginther et al. 2020)	Retention: Positive, Uncertain (Buckley et al. 2002)	
DEI	Harassment training	Sustainability: Heterogeneous, Uncertain (Coker et al. 2016; Dobbin and Kalev 2019)	Performance: Positive, Uncertain (Cici et al. 2021)	

Source: Authors' analysis.

Note: DEI = diversity, equity, and inclusion initiatives.

# Adoption of Practices: Evidence, Drivers, and Challenges

---

Our review suggests several practices to enhance worker mobility that will not hurt firms and may even benefit them in the long run. How common are these practices? And what affects their adoption?

If firms were fully efficient, they already would have adopted any profitable practice voluntarily. However, adopting long-term profit-maximizing practices cannot be assumed (Cyert and March 1963; Gavetti 2012; Nelson and Winter 1982). Inertia, external pressures, complexity, measurement issues, cognitive limits, and peers' choices all influence adoption above and beyond the true costs and benefits of a given practice. As a result, even firms in similar markets vary greatly in their practices and outcomes (Bloom et al. 2019; Syverson 2011). Here we briefly discuss what is known about how prevalent our focal practices are and then summarize research on the drivers of or barriers to adoption beyond efficiency.

## Considering Prevalence

The opportunities for promoting economic mobility by spreading these practices depend on their current prevalence. Yet specifying how many employers have adopted a given practice is not straightforward: answers vary by industry, country, and time; studies with large representative samples are few; adoption levels for many practices are not studied; and standard definitions, labels, and measurement instruments are not common. Thus, estimates for current prevalence of most practices, let alone trends, are lacking. A few relevant data points, however, suggest several of these practices are fairly common with room for further spread.

Surveys suggest various components of HIWS have been adopted at moderate rates in the US and UK. For instance, 30–60 percent of firms employ team-based work (Bloom and Van Reenen 2010; Wood and Bryson 2009; Lawler and Mohrman 2003; Lynch 2007), 70 percent have regular feedback systems (Lynch 2007), and 30 to 40 percent have adopted process improvement (Bloom and Van Reenen 2010; Wood and Bryson 2009; Cappelli and

Neumark 2001). Job rotation is not uncommon in manufacturing (e.g., 40 percent adoption in the mid-1990s; Lynch 2007), but formal provisions for job security are less common (less than 10 percent; Bloom and Van Reenen 2010; Wood and Bryson 2009).

Various forms of pay for performance have been growing in acceptance, with about half of firms adopting these schemes and about 10 to 30 percent of the workforce covered by them (Bloom and Van Reenen 2007; Kruse, Blasi, and Park 2008; Lawler and Mohrman 2003). Share-ownership schemes have also expanded to more than 25 percent of establishments (Bloom and Van Reenen 2010; Wood and Bryson 2009). However, both are much less common in public-sector organizations. Job ladders, an indicator of formal promotion systems, had been adopted by only 20 percent of firms as of 2002, but their use may have expanded since then (Dobbin, Schrage, and Kalev 2015).

On scheduling, the American Time Use Survey found that in 2017, 29 percent of workers in the US could work from home, 57 percent had flexibility in their work start and end times, and 55 percent knew their work schedule at least four weeks in advance, whereas 19 percent did not learn their schedules until a week ahead.<sup>2</sup> In contrast to this 2017 data, the Current Population Survey reported in 1985 that only 12.3 percent of workers had flexible start or end times (Mellor 1986, 21). Surveys by the US Bureau of Labor Statistics found about 90 percent of private-industry workers had access to unpaid family leave in recent years, whereas paid family leave coverage has steadily increased from 7 percent of private-sector workers in 2005 to 23 percent in 2021.<sup>3</sup> These increases reflect both several states' new paid family leave laws and shifting employer benefits, particularly for professional and managerial workers and in the tech sector.

Information on the prevalence of particular recruitment/hiring and DEI practices is even more limited than for other practices discussed herein, but two surveys of US employers provide some suggestive findings. First, data from an older survey of about 700 private-sector US employers found increased prevalence of several DEI initiatives over the 1970–2002 period (Kalev, Dobbin, and Kelly 2006). Affirmative action policies (which often involve goals or targets for racial and gender representation) were adopted by 63 percent of firms, whereas diversity training grew to about 39 percent of these workplaces by 2002. The prevalence of other DEI practices such as diversity staff and committees, mentorship programs, and evaluating managers on their diversity performance was in the 11 to 20 percent range of workplaces as of the early 2000s. Second, a survey of employers with open job postings (conducted in 2018 and 2019 as part of an audit study to assess



racial discrimination in hiring) found that diversity training was provided in only 28 percent of these organizations (Pedulla et al. n.d.). Although 85 percent of these employers mentioned equal opportunity and affirmative action commitments in their job postings, only 18 percent reported targeted recruiting of people of color (Pedulla et al. n.d.). Networking and mentoring initiatives that targeted people of color were provided by only 12 percent and 6 percent of workplaces, respectively (Pedulla et al. n.d.).

In sum, many of the practices we discussed were adopted by a modest fraction of organizations. The evidence suggests these practices are feasible—and not limited to only a few, very select organizations—but that they currently only reach a minority of workers. Therefore, many firms might consider adopting a subset of these practices. Doing so requires a better understanding of how firms approach the adoption decision and how they can implement these practices effectively and sustainably.

## **Institutional, Policy, and Industry Context**

Not every practice is similarly applicable in every context. Industry moderates the perceived costs, benefits, and feasibility of different practices. Where building industry-specific skills is key to employee productivity, firms and employers have more incentives to maintain longer-term relationships and invest in building those skills. In contrast, some sectors (e.g., retail, hospitality, and food services) have shifted toward deskilling tasks, expecting to manage high churn instead of investing in employees. The precarious nature of these jobs may then make it harder for employees to build additional skills and find alternative opportunities, keeping them trapped in these low-wage sectors. Nevertheless, even in such settings, a few firms have been able to profitably use more employee-focused practices (Rahmandad and Ton 2020).

Employers' practices are partly shaped through explicit regulation by the state and by a tripartite (employer, union, government) bargaining system in some countries. Where regulations are limited and unions are weaker, one could expect more variation in practices across workplaces, because the “business case” for a given practice may be the primary driver for adoption. Some examples of employer practices that vary in nature and magnitude of adoption because of institutional and policy pressures include minimum wages and sectoral or industry wage boards, promotion paths and job ladders, scheduling practices (Berg et al. 2014), merit-based rewards, voluntary and involuntary turnover, and

formalization of management practices (e.g., human resources; Bloom, Kretschmer, and Van Reenen 2009). Workforce regulations also vary by industry. For example, health care is highly regulated and scope-of-practice rules may set up barriers to upskilling within a given job. Institutional environment also moderates the public policies under consideration: sharp competition with low-wage countries for labor may have affected trade and immigration policies and conditioned firm's choices. Public policies significantly affect what practices employers adopt, how they are implemented, and what value they deliver (Carré and Tilly 2017).

Institutional environment also matters beyond government regulations. The policy context of a given country or state affects economic security and mobility more generally, changing the potential value to employees of various firm practices. For instance, in states with more generous unemployment and income benefits, vulnerable residents will be less reliant on their employers' progressive practices. Moreover, the adoption of practices is affected by large actors, peers, and norms. The public sector, for instance, can promote mobility by investing in workforce development that supports certain HIWS and increases labor productivity. Peers strongly influence the adoption of organizational practices (Jiang, Takeuchi, and Jia 2020), creating reinforcing cycles that promote adoption in specific countries or industries while hampering diffusion in others. In fact, the "right" level of adoption for a practice in an institutional context may be largely socially constructed by the firms and other stakeholders (Greenwood et al. 2017). As such, local and national governments can have influence as major employers (and contractors) who adopt (and expect) given practices that support greater mobility, and their experiences can provide a "proof of concept" that new practices are feasible and mutually beneficial to workers and organizations.

## **Complementarities and Social Capital**

Although many of the practices we discuss do not hurt firms and may be beneficial in the long run, the benefits to the firm of adopting each single practice are modest. That expectation limits the incentives for change, especially when other organizations seem to be doing just fine without adopting these practices. However, the benefits to the firm become larger when different practices complement each other, each enhancing the value

of the others. Understanding how those complementarities emerge and are sustained enables broader voluntary adoption.

Complementarities may be rooted in the match between the nature of work and the requisite skills. Supermarkets that offer a smaller assortment of products can gain operational efficiencies, allowing workers more time to get to know the inventory and better serve customers. This strategy can also create a complementarity between work design (assortment size) and human resources practices (for recruiting, training, and retaining skilled workers). Organizing work and technology to complement employees' skills and motivation can strengthen the benefits of several practices we have discussed (Ton 2014).

Cognitive and social mechanisms also create complementarities. First, dominant logics regulating how employment, benefits, schedules, and tasks are defined have emerged over time, and management and employees then often treat those historically negotiated arrangements as clear blueprints for designing organizations today. Not only it is cognitively simpler to stick to those proven sets (e.g., to follow the “job control” logic; Kochan, Katz, and McKersie 1986), but piecemeal change also may prove counterproductive. Designing, identifying, assessing, and promoting industry-specific templates that integrate employee value with firm performance can streamline adoption (Ton 2014).

Second, different practices are connected through social capital and organizational commitment (Appelbaum et al. 2000). By regulating the employee-employer relationship, social capital and trust influence commitment, productivity, and opportunities for mutual gain (Akerlof 1984; Baker, Gibbons, and Murphy 2002; Blau 1983; Boxall and Macky 2009; Fulmer and Gelfand 2012; Klein, Molloy, and Brinsfield 2012; Lin 2001; Rousseau 1989). Employer practices signal how much employers care about employees, and those perceptions moderate the impact of organizational practices on employee and firm outcomes (Alfes et al. 2013; Kehoe and Wright 2013; Messersmith et al. 2011; Nishii, Lepak, and Schneider 2008). When an employer practice is interpreted to strengthen (or erode) organizational social capital, that interpretation not only changes the outcomes of the focal practice but also modifies the impact of other practices. Thus complementarities may extend to practices that are otherwise not mechanistically connected—for example, harassment training becomes more effective when social capital is high (Ickson, Tziner, and Bareket-Bojmel 2020).

Social capital changes as a result of interactions within the workplace (Bhandari and Yasunobu 2009; van den Bos, Wilke, and Lind 1998). Whereas building social capital is slow, requiring long-term investment, the breach by any party of social capital's psychological contract leads to its rapid erosion, which harms commitment, effort, and health outcomes (Conway and Briner 2009). Thus, randomly choosing practices, some of which promote social capital and others erode it, is likely inefficient. Announcing promotion pathways, for instance, may offer little benefit when also employing just-in-time scheduling practices that demotivate employees. Employers seeking to benefit from employee commitment, citizenship behavior, and discretionary effort need to create bundles of practices that reinforce one another, often by building and maintaining social capital. Effective practices may share features, such as signaling employers' commitment to employees, eliciting employees' voices in setting organizational practices, establishing procedural fairness, accommodating employees' personal and family constraints, strengthening social bonds, recognizing citizenship behavior, or investing in employees (e.g., through training).

## **Challenges in Implementation and Maintenance**

Even if a practice is promising, its implementation and maintenance may be challenging. First, complementarities require specific combinations of practices to be implemented concurrently. For example, if practices that increase employee motivation, tenure, or engagement are not complemented by better opportunities for employees' input or contributions, their productivity benefits for the firm will be limited. Because single-practice adoptions may prove disappointing to firms and employees, synergistic bundles are most beneficial for introducing new practices (Pil and MacDuffie 1996). However, synchronized adoption of multiple new practices is a major undertaking with significant costs. Even if the promise is appealing and the management team is committed, when many alternative bundles could be conceived and the evidence base for picking the right combination is thin, such transformations can be fraught. Moreover, few other firms may be following this risky path, so champions of change may find little tolerance for error among shareholders. Adoption decisions are further complicated by the lags in realizing the value of the initiatives. These lags, inherent in building resources and capabilities (e.g., hiring the right people, enhancing employee skills, establishing new routines, and building social capital), create a gap between when change is undertaken and when outcomes are

observed. The lag not only entails an investment period before breakeven can be expected, but it also may initially send the wrong signal about the viability of the practice and lead promising initiatives to be abandoned prematurely (Rahmandad and Gary 2020; Rahmandad and Ton 2020).

Second, because social capital and trust are fragile, workers may interpret changes in management, poor communication, or environmental adversity as signaling changes in management's (or other stakeholders') commitment to improving the workplace, and lead to a reinforcing breakdown of trust, reduced investment in social capital, and loss of commitment and productivity. For instance, maintaining mutual trust requires productivity gains from complementary practices to be split fairly, yet workers, or their unions, may define *fairly* differently from management, precipitating a breakdown in an otherwise mutually beneficial set of practices. So even when mutually beneficial practices are established, their persistence is not specially guaranteed when champions leave, top management changes, or incentives are defined over short horizons (Rahmandad and Repenning 2016; Rubinstein and Kochan 2018).

A third set of challenging dynamics relates to allocating organizational resources and attention under pressure (Repenning and Sterman 2002). Diverting scarce resources to enhancing organizational routines, including devoting energy to establishing new practices, may seem infeasible for many busy managers. However, absent those investments, the efficiency of the organization will gradually erode, further pressuring management to focus on the bottom line. This reinforcing process can lock organizations into a state of constant scarcity (sometimes called *firefighting*) and close the door to investing in new practice bundles that could benefit both the firm and its employees. On the flip side, firms that do manage to invest in better practices may leverage a virtuous cycle of enhanced performance, resource availability, and capability investments to outperform competition over longer periods (Ton 2014).

One may generally expect these practical challenges to weigh heavily on managers' and executives' decisions to adopt unfamiliar practices, convincing many to stay on the sidelines. At an organizational level, overcoming these challenges entails careful design of change initiatives to account for complementarities, strong support from senior management, recognition of the delays in realizing the full benefits and explicitly planning for these, and getting clear buy-in from various stakeholders before starting the change. Although these challenges may limit adoption, they also point to the strategic value of

adopting and maintaining promising practices: firms that succeed could outperform competition by a feat that takes time and is hard to replicate. Nevertheless, considering the implementation challenges, the promised benefits to firms may not always be enough to trigger large-scale voluntary adoption. In many cases, broader institutional and normative pressures (such as new employment laws or pressure from social movements) may be required to convince large numbers of organizations to adopt practices that offer only modest benefits for the firm, even if they are significantly valuable to employees.

# Promising Research Opportunities

---

Our review finds there is already strong evidence that certain employer practices can influence worker outcomes. However, there are also significant areas where more research could answer fundamental and outstanding questions. On the critical question of how employer practices affect economic security and mobility, we see promising research opportunities specific to the practices we have reviewed, and exciting possibilities for improving the data infrastructure and research design. We outline both next.

## Shorter-Term and Practice-Specific Research Opportunities

In this section, we describe several research directions that are worthwhile at any point but that may be especially opportune to pursue now. During this period of labor history, dubbed the Great Resignation or Great Reshuffling, many employers are finding the market for low-wage workers tight, and thus they may be particularly receptive to partnering with scholars on research about improving job quality and mobility for low-wage workers.

### Pay and Wages

More research is needed on the implications of raising wages for both workers' economic mobility over time and productivity, especially in regular employment relationships (versus some experimental work about contracted jobs or piece-rate arrangements). Such research could be experimental, where a firm raises wages in some establishments and not others. Another option is to use some relatively clean observational data on the effect of a company's wage changes—for example, the effects on turnover and productivity when a firm raises its base pay for entry-level workers (see, for example, Emanuel and Harrington 2021).

### Scheduling

The findings of the previously described study at Gap Inc., revealing that employees and the business both benefited from more stable scheduling practices (Kesavan et al. 2021; Williams et al. 2019), suggest that further research on that topic could meaningfully

influence employer practices and the welfare of low-wage employees. Companies have an incentive to explore practices that can improve business outcomes. Such research could involve more experimental studies of new scheduling strategies by firms, including initiatives to increase hourly workers' input into their schedules, promises of minimum hours, and protection from mandatory overtime. In addition, as new scheduling regulations emerge in the United States, continued research into their effects will be needed to inform both public policy and management decisions.

## **Leaves**

In states where paid family leave or sick leave laws have been passed, more evaluation studies are needed on the effects of these laws, including how workers and managers understand and implement those new legal standards, and how traditionally disadvantaged and marginalized workers can effectively make use of their legal rights. The goal of such research would be to assess how these laws affect turnover and workers' earnings over time and whether they help close racial and gender gaps in earnings and advancement.

## **Recruitment and Hiring Practices**

Findings on the efficacy of sector-based job training initiatives and other strategies to broaden the pool of candidates for decent-paying jobs (e.g., Year Up) are encouraging. However, more research is needed on how to scale those initiatives so more employers get involved, support trainees or applicants who may struggle in such programs, and assess how workers entering firms through these channels fare over time compared with other hires.

There is also high interest in algorithmic strategies to try to avoid hiring biases, but it will be important to track exactly how those strategies are used within particular organizations and whether the goals of reducing racial disparities in evaluation and hiring are being achieved. Another question is whether these matches are as good for such employees—and lead to similar or better tenure, satisfaction, and earnings trajectories—compared with the matches made through more traditional hiring processes.



## **Promotion Practices**

Experimental studies of employers' efforts to create new job ladders and attract people to them from underrepresented groups would be valuable. A key requirement here is opportunities for skill development: many contemporary lower-wage jobs have been deskilled and middle-wage jobs eliminated (Autor and Dorn 2013). How can employers create better pathways while using technology fruitfully? This is an opportune moment to pursue this research question because tight labor markets can motivate employers to explore new strategies for attracting and retaining workers. For example, in 2020 Walmart announced higher wages for team leads at their supercenter stores, in an effort to create more of a career ladder for those employees. Additional research can help evaluate the many new ways that firms are approaching career ladders, especially for low-wage workers.

## **Work Systems**

Existing case studies on HIWS could be augmented in three ways. First, experimental evaluations of promising strategies would be valuable. Second, there is demand for in-depth, empirically grounded structural models that tease out how different management practices complement each other and how more effective HIWS could be designed and implemented. Such models would guide scholars and practitioners toward specific sets of practices more efficiently than scattered experimental, quasi-experimental, or case study research could. Third, HIWS should also be studied more fully in low-wage service work and smaller firms, to assess the applicability and impact of these promising practices in those contexts.

## **Diversity, Equity, and Inclusion Initiatives**

Although research shows that numerical targets help candidates from diverse backgrounds get jobs, we know less about the experiences of these candidates once they have been hired. Studies that track the advancement or lack thereof of racially minoritized and underrepresented candidates would also be useful. Another encouraging finding from our review is that several relatively low-cost DEI practices—diversity task forces, employee resource groups, and structured mentorship programs—can be fruitful. However, most of the research on these topics has examined professional and managerial occupations or

higher-wage settings. More research is needed on which DEI practices are effective in lower-wage contexts and the long-term impact of such practices on the retention and earnings trajectories of workers in a broader array of occupations.

## **Opportunities to Improve Design and Data Infrastructure**

The question of how employers' practices affect workers' economic mobility is not one that has been captured in a well-established and bounded research field. As such, we have ranged across a variety of fields in this review. Here we recognize and assess some common pitfalls in this prior research and then identify new possibilities for improving research into employer practices and workers' economic security and mobility.

First, studies of employer practices that assess worker-side outcomes are nearly always short term. However, mobility outcomes are inherently long-term constructs: if a job offers a high wage temporarily, but no job security or a flat earnings trajectory, it may not contribute to upward economic mobility. Likewise, the study of employer practices almost always measures effects on incumbent employees, rather than following workers across organizations. However, at present, the most common way low-wage workers move into higher-paying jobs is by switching employers altogether. Upward mobility is a long-term, cumulative, and typically multijob process, and we need to measure it as such.

Second, in some of the research we reviewed, there was a gap between objective economic outcomes and workers' subjective responses to practices. When workers' subjective outcomes are studied, as in research on job design and scheduling practices, it is often unclear whether self-reported or subjective outcomes translate into objective economic mobility. In some cases, worker satisfaction can drive a virtuous cycle of increased productivity, on-the-job learning, greater commitment, and higher pay over time. However, improved job satisfaction could actually keep people in lower-paying but pleasant jobs, limiting their economic mobility. This ambiguity means that the positive findings about job design and work systems and subjective outcomes do not necessarily imply those practices promote economic mobility.

Third, studies related to economic mobility typically either emphasize improving job quality or broadening access to good jobs to historically marginalized workers, but not both. Researchers who focus on the potential positive outcomes (for firms) of offering high

pay, or good benefits and amenities, often suggest that one way those choices will pay off for the firm is by helping those employers attract better workers. However, if this positive selection skews toward more credentialed or more experienced workers, it could exclude the most disadvantaged workers. In other words, making jobs better regarding pay or other amenities may just draw in workers who are already more advantaged in the labor market. On the other hand, researchers studying race and gender disparities in access to higher-paying jobs typically take the underlying set of jobs as fixed, and simply ask how to reduce segregation by ascriptive characteristics. This focus neglects potential opportunities to improve work for everyone, rather than just reallocating opportunities by reducing bias. In our view, understanding how employers affect economic mobility requires studying both the feasibility of improving job quality and the sorting and selection dynamics that match better jobs to disadvantaged applicants.

Last, addressing these challenges requires novel research designs and data. We specifically propose combining the tools used to study macroeconomic mobility outcomes with the attention to specific employer practices found in studies of organizational practices conducted by sociologists and management scholars. No single design promises to solve the challenges discussed, but triangulation across different methods can enhance the cumulative evidence.

## **Field Experiments in Organizations**

Experimental designs that randomize the implementation of a practice across organizations (or within different groups inside a single organization) and pursue extended follow-up of employee outcomes can best identify the causal effects of different practices. For example, research on work redesign has randomized treatments across work groups and measured mobility-relevant outcomes such as turnover and job satisfaction as well as health and well-being (Kelly and Moen 2020). Likewise, research on performance pay and financial incentives has relied on effective field experiments to study changes in both wages and the dynamics of productivity and worker selection (Levitt and Neckermann 2015).

These designs, however, are difficult to scale, partly because they are expensive and because work organizations (usually firms) have questions about the time scale and operational challenges of randomized field experiments. Experiments thus raise questions

of generalizability (i.e., which organizations are willing to partner with researchers; whether workers in those organizations represent the broader workforce) and present the challenge that different practices interact in important ways that make it important to evaluate them in complementary bundles. Employer experiments also rarely track workers *after* they exit the firm, which is critical for understanding the total mobility effects of any employer practice.

### **Linking Data on Employer Practices to High-Quality Worker Data**

Many of these challenges can be addressed by improving data quality. Short-term and single-employer experiments can be extended by greater use of linked employer-employee administrative data or by survey panels that follow workers over time and across employer switches. Both of these approaches offer strong evidence on workers' objective economic outcomes. And indeed, for employer practices that are influenced by large-scale policy changes, like minimum wage and scheduling predictability laws, we already have compelling evidence that relies on worker-side data (Dube, Giuliano, and Leonard 2019; Harknett, Schneider, and Irwin 2021).

Unfortunately, both administrative data and panel surveys in the US tend to include very little information about specific employer practices. Other countries, however, have a research infrastructure with more employer-employee data, including surveys on management practices and workers' outcomes. For instance, Germany collects linked employer-employee data from administrative or social security records and uses a linked personnel panel to survey workers directly,<sup>4</sup> in addition to offering other linked data focused on larger firms. Regarding US administrative data, the recent Census Management and Organizational Practices Survey is an exciting step in this direction.<sup>5</sup> However, this survey focuses on practices that affect productivity rather than the broader set of practices that affect worker mobility reviewed here. It is also, for now, limited to manufacturing establishments.

Absent large-scale government-sponsored surveys of employers, another strategy is to match smaller samples of employer-side data to longitudinal data that track workers' mobility. This approach requires effective surveying of employers. There is a history of employer-side surveys, including the Structured Management Practice surveys, the National Organizations Study, and several surveys in the high-performance work-

organizations area (Bloom and Van Reenen 2011; Kalleberg et al. 1994; Osterman 2006). Unfortunately, these surveys tend to be cross-sectional, which makes it difficult to distinguish employer practice effects from time-invariant differences between employers. One possibility would be to ask retrospective questions about the timing in which particular practices, policies, or initiatives were adopted; this approach was used in research on diversity practices and establishment-level inequality (e.g., Dobbin, Schrage, and Kalev 2015; Kalev, Dobbin, and Kelly 2006). Recall biases are a concern with retrospective surveys, but these may work well for formalized practices where firms keep records of policy changes (e.g., a human resources manual with dates of updates). Another solution is to run a prospective panel survey of employers with repeated follow-up (as in Osterman's [2006] High Performance Work Organization surveys or the Kauffman Firm Survey<sup>6</sup>). Dealing with respondent (organizational) retention is a critical issue for this design.

Another approach, which does not require matching in employer data, is to ask worker panel respondents richer questions about their employers and jobs. Such detailed questions about the content of a workers' job could better capture elements of job design (beyond the broad occupation designations that panel surveys typically include). Likewise, questions about training availability, interaction with management, or available DEI initiatives could be asked fruitfully of workers themselves. Several studies of performance pay and promotions have effectively used this strategy (Lemieux, MacLeod, and Parent 2009; Wilmers and Kimball 2021). Additional questions could be incorporated into existing panel surveys or new panels that recruit new cohorts of young workers. This design could sample comparable large worker segments (e.g., retail, food preparation, or warehouse workers), which would allow for tracking career trajectories of workers who entered these low-wage positions to investigate how their mobility may be influenced by specific employer practices. However, many employer practices are not reliably visible to worker respondents, and it is unclear how reliable employee assessments of employer practices are. Research that compares data from employer surveys of practices against employee recall of those practices and tests different recall horizons has yet to be done and might open up new designs for the subset of practices where employee recall of employer practices proves reliable.

Employee panels require long waiting times before results on longer-term mobility can be identified, potentially making the findings less relevant for guiding management

practice or informing policy choices. A different solution may be to use retrospective and in-depth surveys of matched individual worker histories that cover both mobility outcomes and employer practices. Although this solution would face the same recall challenges just described, such a method may offer a more systemic view of promising practices without waiting years for panel results to emerge (Agarwal et al. 2021). For example, more questions on economic security, mobility, and specific employer practices could be embedded in health-oriented occupational cohort studies where workers were initially recruited from one employer or occupation and are then followed over time (and into new jobs).<sup>7</sup>

### **Studying Adoption and Implementation Directly**

There will always be real heterogeneity across firms in how practices affect employee and firm outcomes, in part because the same ostensible practice or policy will be implemented differently across settings. Qualitative and mixed-methods research is needed to investigate what happens inside organizations that consider or pursue new practices—with important questions from the perspective of employers, workers, and unions or other work advocates (Rivera 2020). These studies might include investigations of adoption decisions, including the influence of investors and other financial actors (Appelbaum and Batt 2014), as well as grounded research on variation in the implementation of the same practices across different sites. In addition to helping scholars understand mixed findings on the efficacy of employer practices, these studies can (1) identify organizational structures and ways to increase participation and input of workers that may amplify the effects of new practices, and (2) ask how company practices can be effectively integrated with sectoral programs, community college training, and similar offerings. Research of this type may point firms to more promising strategies, identify guidance for effective implementation, and reveal how institutional contexts and public policy changes could support employers' adoption of practices that support both worker mobility and strong organizational performance.

# Conclusions

---

Employer practices matter for the mobility outcomes of low-wage workers, and they vary notably, even across employers operating in the same industries and labor markets. Current evidence suggests that there are indeed employer practices in several categories (compensation, hiring, promotion, scheduling, work systems, and DEI) that could benefit employees' mobility while not hurting the firms' performance, and even offering some win-win opportunities. However, much prior research on the effects of employer practices has neglected the worker-sorting and access issues that we emphasize here: if high-productivity employer practices increase pay but only for a more advantaged set of workers, then effects on mobility for lacking these advantages will be muted.

Our review surfaced multiple feasible practices that seem promising for enhancing mobility. Stabilizing worker schedules can improve worker well-being and support mobility by reducing income volatility and related material hardships. Paid and sick leaves shorter than one year support economic security mobility through job continuity and facilitation of women's labor force participation. Structured hiring practices and employers' partnership with sectoral organizations have the potential to make good jobs more accessible to noncollege and racial-minority candidates while preserving a high-quality applicant pool on the firm side. Although promotion is not the dominant pathway out of low-wage work, there is evidence that creating and better defining internal job ladders, often adopted through employer partnership with intermediaries and sectoral programs, can support worker mobility. Work systems research has largely focused on benefits to firms; however, there is evidence that complementary practices enhancing motivation, empowerment, and skill building can improve worker satisfaction and afford opportunities for upward mobility. DEI practices like affirmative action have the potential to improve access to high-paying jobs without detriment to firms. While increasing pay has obvious benefits for workers, pay for performance brings benefits for the firm but more heterogeneous impacts on workers, depending on context and implementation.

There is promising evidence that these practices, taken together, could improve worker mobility, but heterogeneity in content and implementation may dramatically impact their effects. The most promising evidence supports changes that align job quality, productivity, and bargaining power for existing employees. This often happens when firms assemble

bundles of complementary practices that also build social capital between the employer and the employee.

Yet absent policy and institutional changes, including those that engage workers more effectively in determining employer practices, the wide voluntary adoption of even promising practices faces substantial headwinds. Moreover, evidence on the long-term mobility benefits for large groups of workers is thin. A focused program of mobility research, drawing on longitudinal and experimental methods and attending to implementation and contextual analysis, can not only strengthen our understanding of worker mobility drivers but also help organizations identify and adopt the most relevant practices for their workers.



# Notes

---

- <sup>1</sup> “Higher paid workers more likely than lower paid workers to have paid leave benefits in 2020,” US Department of Labor, Bureau of Labor Statistics, *Economics Daily*, April 1, 2021, <https://www.bls.gov/opub/ted/2021/higher-paid-workers-more-likely-than-lower-paid-workers-to-have-paid-leave-benefits-in-2020.htm>.
- <sup>2</sup> “Job Flexibilities and Work Schedules—2017-2018 Data from the American Time Use Survey,” Bureau of Labor Statistics, News release USDL-19-1691, September 24, 2019, <https://www.bls.gov/news.release/pdf/flex2.pdf>.
- <sup>3</sup> “What Data Does the BLS Publish on Family Leave?,” Bureau of Labor Statistics, last modified September 23, 2021, <https://www.bls.gov/ncs/ebs/factsheet/family-leave-benefits-fact-sheet.htm>.
- <sup>4</sup> “Integrated Establishment and Individual Data,” German Federal Employment Agency, Research Data Center, Institute for Employment Research, accessed March 14, 2021, [https://fdz.iab.de/en/Integrated\\_Establishment\\_and\\_Individual\\_Data.aspx](https://fdz.iab.de/en/Integrated_Establishment_and_Individual_Data.aspx).
- <sup>5</sup> “Management and Organizational Practices Survey (MOPS),” United States Census Bureau, accessed March 14, 2022, <https://www.census.gov/programs-surveys/mops.html>.
- <sup>6</sup> “Kauffman Firm Survey,” Ewing Marion Kauffman Foundation, accessed February 3, 2022. <https://www.kauffman.org/entrepreneurship/research/kauffman-firm-survey/>.
- <sup>7</sup> For example, see “The Gazel Cohort,” Gazel, accessed February 3, 2022, <https://www.gazel.inserm.fr/en/gazel-cohort>; The Nurses’ Health Study, at <https://nurseshealthstudy.org/>; and Erin Wigger, “The Whitehall Study,” *Unhealthy Work* (blog), June 22, 2011, <https://unhealthywork.org/classic-studies/the-whitehall-study/>.

# References

---

- Abowd, John M., Francis Kramarz, and David N. Margolis. 1999. "High Wage Workers and High Wage Firms." *Econometrica* 67 (2): 251–333. <https://doi.org/10.1111/1468-0262.00020>.
- Agarwal, Ruchir, Ina Ganguli, Patrick Gaule, and Geoff Smith. 2021. "Why U.S. Immigration Barriers Matter for the Global Advancement of Science." SSRN scholarly paper 3762886. Rochester, NY: Social Science Research Network. <https://doi.org/10.2139/ssrn.3762886>.
- Alfes, K., A. D. Shantz, C. Truss, and E. C. Soane. 2013. "The Link between Perceived Human Resource Management Practices, Engagement and Employee Behaviour: A Moderated Mediation Model." *International Journal of Human Resource Management* 24 (2): 330–51. <https://doi.org/10.1080/09585192.2012.679950>.
- Ananant, Elizabeth O., and Anna Gassman-Pines. 2021. "Work Schedule Unpredictability: Daily Occurrence and Effects on Working Parents' Well-Being." *Journal of Marriage and Family* 83: 10–26. <https://doi.org/10.1111/jomf.12696>.
- Andersson, Fredrik, Harry J. Holzer, and Julia I. Lane. 2005. *Moving Up or Moving On: Who Gets Ahead in the Low-Wage Labor Market?* New York: Russell Sage Foundation. <http://www.jstor.org/stable/10.7758/9781610440103>.
- Appelbaum, Eileen, Thomas Bailey, Peter Berg, Arne L. Kalleberg, and Thomas Andrew Bailey. 2000. *Manufacturing Advantage: Why High-Performance Work Systems Pay Off*. Ithaca, NY: Cornell University Press.
- Appelbaum, Eileen, and Rosemary Batt. 2014. *Private Equity at Work: When Wall Street Manages Main Street*. New York: Russell Sage Foundation.
- Arellano-Bover, Jaime. 2021. "Career Consequences of Firm Heterogeneity for Young Workers: First Job and Firm Size." *IZA Discussion Paper Series*. Bonn, Germany: IZA Institute of Labor Economics.
- Armenia, Amy, and Naomi Gerstel. 2006. "Family Leaves, the FMLA and Gender Neutrality: The Intersection of Race and Gender." *Social Science Research* 35 (4): 871–91. <https://doi.org/10.1016/j.ssresearch.2004.12.002>.
- Autor, David, Claudia Goldin, and Lawrence F. Katz. 2020. "Extending the Race between Education and Technology." *Working Paper* 26705. Cambridge, MA: National Bureau of Economic Research. <https://doi.org/10.3386/w26705>.
- Autor, David H., and David Dorn. 2013. "The Growth of Low-Skill Service Jobs and the Polarization of the US Labor Market." *American Economic Review* 103 (5): 1553–97. <https://doi.org/10.1257/aer.103.5.1553>.
- Autor, David H., and David Scarborough. 2008. "Does Job Testing Harm Minority Workers? Evidence from Retail Establishments." *Quarterly Journal of Economics* 123 (1): 219–77. <https://doi.org/10.1162/qjec.2008.123.1.219>.
- Autor, David, Anran Li, and Matthew Notowidigdo. 2019. "Preparing for the Work of the Future." Cambridge, MA: Abdul-Latif Jameel Poverty Action Lab.
- Bailey, Martha J., John DiNardo, and Bryan A. Stuart. 2021. "The Economic Impact of a High National Minimum Wage: Evidence from the 1966 Fair Labor Standards Act." *Journal of Labor Economics* 39 (S2): S329–67. <https://doi.org/10.1086/712554>.
- Baker, George, Michael Gibbs, and Bengt Holmstrom. 1994. "The Wage Policy of a Firm." *Quarterly Journal of Economics* 109 (4): 921–55. <https://doi.org/10.2307/2118352>.

- Baldi, Stephane, and Debra Branch McBrier. 1997. "Do the Determinants of Promotion Differ for Blacks and Whites?: Evidence from the U.S. Labor Market." *Work and Occupations* 24 (4): 478–97. <https://doi.org/10.1177/0730888497024004005>.
- Ballance, Joshua, Robert Clifford, and Daniel Shoag. 2020. "'No More Credit Score': Employer Credit Check Bans and Signal Substitution." *Labour Economics* 63 (April): 101769. <https://doi.org/10.1016/j.labeco.2019.101769>.
- Baron, James N., Brian S. Mittman, and Andrew E. Newman. 1991. "Targets of Opportunity: Organizational and Environmental Determinants of Gender Integration within the California Civil Service, 1979–1985." *American Journal of Sociology* 96 (6): 1362–1401.
- Bartel, Ann P., Maya Rossin-Slater, Christopher J. Ruhm, Meredith Slopen, and Jane Waldfogel. 2021. "The Impact of Paid Family Leave on Employers: Evidence from New York." Working paper w28672. Cambridge, MA: National Bureau of Economic Research. <https://doi.org/10.3386/w28672>.
- Barth, Erling, Bernt Bratsberg, Torbjørn Hægeland, and Oddbjørn Raaum. 2012. "Performance Pay, Union Bargaining and Within-Firm Wage Inequality." *Oxford Bulletin of Economics and Statistics* 74 (3): 327–62. <https://doi.org/10.1111/j.1468-0084.2011.00656.x>.
- Barth, Erling, Alex Bryson, James C. Davis, and Richard Freeman. 2016. "It's Where You Work: Increases in the Dispersion of Earnings across Establishments and Individuals in the United States." *Journal of Labor Economics* 34 (S2): S67–97. <https://doi.org/10.1086/684045>.
- Barth, Erling, James Davis, and Richard B. Freeman. 2018. "Augmenting the Human Capital Earnings Equation with Measures of Where People Work." *Journal of Labor Economics* 36 (S1): S71–97. <https://doi.org/10.1086/694187>.
- Batt, R. 2002. "Managing Customer Services: Human Resource Practices, Quit Rates, and Sales Growth." *Academy of Management Journal* 45 (3): 587–97. <https://doi.org/10.2307/3069383>.
- Bayer, Patrick, and Kerwin Kofi Charles. 2018. "Divergent Paths: A New Perspective on Earnings Differences Between Black and White Men Since 1940." *Quarterly Journal of Economics* 133 (3): 1459–1501. <https://doi.org/10.1093/qje/qjy003>.
- Beaurain, Guillaume, and David Masclet. 2016. "Does Affirmative Action Reduce Gender Discrimination and Enhance Efficiency? New Experimental Evidence." *European Economic Review, Social Identity and Discrimination* 90 (November): 350–62. <https://doi.org/10.1016/j.euroecorev.2016.04.009>.
- Beckmann, Michael, Thomas Cornelissen, and Matthias Kraekel. 2017. "Self-Managed Working Time and Employee Effort: Theory and Evidence." *Journal of Economic Behavior & Organization* 133 (January): 285–302. <https://doi.org/10.1016/j.jebo.2016.11.013>.
- Bellemare, Charles, and Bruce Shearer. 2009. "Gift Giving and Worker Productivity: Evidence from a Firm-Level Experiment." *Games and Economic Behavior* 67 (1): 233–44.
- Benson, Alan. 2015. "Do Agents Game Their Agents' Behavior? Evidence from Sales Managers." *Journal of Labor Economics* 33 (4): 863–90. <https://doi.org/10.1086/681107>.
- Benson, Alan, Danielle Li, and Kelly Shue. 2019. "Promotions and the Peter Principle." *Quarterly Journal of Economics* 134 (4): 2085–2134. <https://doi.org/10.1093/qje/qjz022>.
- Benson, Alan, and Ben A. Rissing. 2020. "Strength from within: Internal Mobility and the Retention of High Performers." *Organization Science* 31 (6): 1475–96.
- Berg, Peter, Ellen Kossek, Kaumudi Misra, and Dale Belman. 2014. "Work-Life Flexibility Policies: Do Unions Affect Employee Access and Use?" *Industrial and Labor Relations Review* 67 (January): 111–37. <https://doi.org/10.1177/001979391406700105>.

- Bhandari, Humnath, and Kumi Yasunobu. 2009. "What Is Social Capital? A Comprehensive Review of the Concept." *Asian Journal of Social Science* 37 (3): 480–510. <https://doi.org/10.1163/156853109X436847>.
- Bidwell, Matthew. 2011. "Paying More to Get Less: The Effects of External Hiring versus Internal Mobility." *Administrative Science Quarterly* 56 (3): 369–407. <https://doi.org/10.1177/0001839211433562>.
- Bidwell, Matthew, and Ethan Mollick. 2015. "Shifts and Ladders: Comparing the Role of Internal and External Mobility in Managerial Careers." *Organization Science* 26 (9): 1629–45.
- Birdi, Kamal, Chris Clegg, Malcolm Patterson, Andrew Robinson, Chris B. Stride, Toby D. Wall, and Stephen J. Wood. 2008. "The Impact of Human Resource and Operational Management Practices on Company Productivity: A Longitudinal Study." *Personnel Psychology* 61 (3): 467–501. <https://doi.org/10.1111/j.1744-6570.2008.00136.x>.
- Bloom, Nicholas, Erik Brynjolfsson, Lucia Foster, Ron Jarmin, Megha Patnaik, Itay Saporta-Eksten, and John Van Reenen. 2019. "What Drives Differences in Management Practices?" *American Economic Review* 109 (5): 1648–83.
- Bloom, Nicholas, Benn Eifert, Aprajit Mahajan, David McKenzie, and John Roberts. 2013. "Does Management Matter? Evidence from India." *Quarterly Journal of Economics* 128 (1): 1–51.
- Bloom, Nicholas, Tobias Kretschmer, and John Van Reenen. 2009. "Work–Life Balance, Management Practices, and Productivity." In *Differences in the Business Practices and Productivity of Firms*. Chicago: University of Chicago Press. <https://doi.org/10.7208/chicago/9780226261959.001.0001>.
- Bloom, Nicholas, James Liang, John Roberts, and Zhichun Jenny Ying. 2015. "Does Working from Home Work? Evidence from a Chinese Experiment." *Quarterly Journal of Economics* 130 (1): 165–218. <https://doi.org/10.1093/qje/qju032>.
- Bloom, Nicholas, Scott W Ohlmacher, Cristina J Tello-Trillo, and Melanie Wallskog. 2021. "Pay, Productivity and Management." Working Paper 29377. Cambridge, MA: National Bureau of Economic Research. <https://doi.org/10.3386/w29377>.
- Bloom, Nicholas, and John Van Reenen. 2007. "Measuring and Explaining Management Practices across Firms and Countries." *Quarterly Journal of Economics* 122 (4): 1351–1408.
- — —. 2010. "Human Resource Management and Productivity." Working paper 16019. Cambridge, MA: National Bureau of Economic Research.
- — —. 2011. "Human Resource Management and Productivity." In *Handbook of Labor Economics* 4: 1697–1767.
- Bloom, Nicholas, Raffaella Sadun, and John Van Reenen. 2012. "The Organization of Firms Across Countries." *Quarterly Journal of Economics* 127 (4): 1663–1705. <https://doi.org/10.1093/qje/qje029>.
- Böckerman, Petri, Alex Bryson, and Pekka Ilmakunnas. 2012. "Does High Involvement Management Improve Worker Wellbeing?" *Journal of Economic Behavior & Organization* 84 (2): 660–80.
- — —. 2013. "Does High Involvement Management Lead to Higher Pay?" *Journal of the Royal Statistical Society: Series A (Statistics in Society)* 176 (4): 861–85.
- Bohnet, Iris. 2016. *What Works: Gender Equality by Design*. Cambridge, MA: Harvard University Press.
- Bohnet, Iris, Alexandra van Geen, and Max Bazerman. 2015. "When Performance Trumps Gender Bias: Joint vs. Separate Evaluation." *Management Science* 62 (5): 1225–34. <https://doi.org/10.1287/mnsc.2015.2186>.
- Bonet, Rocio. 2014a. "High- Involvement Work Practices and the Opportunities for Promotion in the Organization." *Industrial Relations* 53 (2): 295–324. <https://doi.org/10.1111/irel.12057>.

- — —. 2014b. “High-Involvement Work Practices and the Opportunities for Promotion in the Organization.” *Industrial Relations: A Journal of Economy and Society* 53 (2): 295–324. <https://doi.org/10.1111/irel.12057>.
- Boon, Corine, Deanne N. Den Hartog, and David P. Lepak. 2019. “A Systematic Review of Human Resource Management Systems and Their Measurement.” *Journal of Management* 45 (6): 2498–2537. <https://doi.org/10.1177/0149206318818718>.
- Bos, Kees van den, Henk Wilke, and E. Lind. 1998. “When Do We Need Procedural Fairness? The Role of Trust in Authority.” *Journal of Personality and Social Psychology* 75 (December). <https://doi.org/10.1037//0022-3514.75.6.1449>.
- Bourbonnais, R., C. Brisson, and M. Vezeina. 2011. “Long-Term Effects of an Intervention on Psychosocial Work Factors among Healthcare Professionals in a Hospital Setting.” *Occupational and Environmental Medicine* 68 (7): 479–86. <https://doi.org/10.1136/oem.2010.055202>.
- Boxall, Peter, and Keith Macky. 2009. “Research and Theory on High-Performance Work Systems: Progressing the High-Involvement Stream.” *Human Resource Management Journal* 19 (1): 3–23. <https://doi.org/10.1111/j.1748-8583.2008.00082.x>.
- Breza, Emily, Supreet Kaur, and Yogita Shamdasani. 2017. “The Morale Effects of Pay Inequality.” *Quarterly Journal of Economics* 133 (2): 611–63. <https://doi.org/10.1093/qje/qjx041>.
- Brown, Andrew, Chris Forde, David Spencer, and Andy Charlwood. 2008. “Changes in HRM and Job Satisfaction, 1998–2004: Evidence from the Workplace Employment Relations Survey.” *Human Resource Management Journal* 18 (3): 237–56.
- Buckley, M., Tommie Mobbs, Jorge Mendoza, Milorad Novicevic, Shawn Carraher, and Danielle Beu Ammeter. 2002. “Implementing Realistic Job Previews and Expectation-Lowering Procedures: A Field Experiment.” *Journal of Vocational Behavior* 61 (October): 263–78. <https://doi.org/10.1006/jvbe.2001.1856>.
- Bullinger, Lindsey Rose. 2019. “The Effect of Paid Family Leave on Infant and Parental Health in the United States.” *Journal of Health Economics* 66 (July): 101–16. <https://doi.org/10.1016/j.jhealeco.2019.05.006>.
- Cappelli, Peter, and David Neumark. 2001. “Do ‘High-Performance’ Work Practices Improve Establishment-Level Outcomes?” *ILR Review* 54 (4): 737–75.
- Card, David, Ana Rute Cardoso, Joerg Heining, and Patrick Kline. 2018. “Firms and Labor Market Inequality: Evidence and Some Theory.” *Journal of Labor Economics* 36 (S1): S13–70. <https://doi.org/10.1086/694153>.
- Card, David, Alexandre Mas, Enrico Moretti, and Emmanuel Saez. 2012. “Inequality at Work: The Effect of Peer Salaries on Job Satisfaction.” *American Economic Review* 102 (6): 2981–3003. <https://doi.org/10.1257/aer.102.6.2981>.
- Carneiro, Pedro, Katrine V. Løken, and Kjell G. Salvanes. 2015. “A Flying Start? Maternity Leave Benefits and Long-Run Outcomes of Children.” *Journal of Political Economy* 123 (2): 365–412. <https://doi.org/10.1086/679627>.
- Carnes, Molly, Patricia G. Devine, Linda Baier Manwell, Angela Byars-Winston, Eve Fine, Cecilia E. Ford, Patrick Forscher, et al. 2015. “The Effect of an Intervention to Break the Gender Bias Habit for Faculty at One Institution: A Cluster Randomized, Controlled Trial.” *Academic Medicine* 90 (2): 221–30. <https://doi.org/10.1097/ACM.0000000000000552>.
- Carré, Françoise, and Chris Tilly. 2017. *Where Bad Jobs Are Better: Retail Jobs across Countries and Companies*. New York: Russell Sage Foundation.
- Castilla, Emilio J. 2008. “Gender, Race, and Meritocracy in Organizational Careers.” *American Journal of Sociology* 113 (6): 1479–1526.



- — —. 2015. “Accounting for the Gap: A Firm Study Manipulating Organizational Accountability and Transparency in Pay Decisions.” *Organization Science* 26 (2): 311–33. <https://doi.org/10.1287/orsc.2014.0950>.
- Chang, Edward H., Katherine L. Milkman, Dena M. Gromet, Robert W. Rebele, Cade Massey, Angela L. Duckworth, and Adam M. Grant. 2019. “The Mixed Effects of Online Diversity Training.” *Proceedings of the National Academy of Sciences* 116 (16): 7778. <https://doi.org/10.1073/pnas.1816076116>.
- Chênevert, Denis, Geneviève Jourdain, and Christian Vandenberghe. 2016. “The Role of High-Involvement Work Practices and Professional Self-Image in Nursing Recruits’ Turnover: A Three-Year Prospective Study.” *International Journal of Nursing Studies* 53 (January): 73–84. <https://doi.org/10.1016/j.ijnurstu.2015.09.005>.
- Chenevert, Denis, and Michel Tremblay. 2009. “Fits in Strategic Human Resource Management and Methodological Challenge: Empirical Evidence of Influence of Empowerment and Compensation Practices on Human Resource Performance in Canadian Firms.” *International Journal of Human Resource Management* 20 (4): 738–70.
- Cheryan, Sapna, Allison Master, and Andrew N. Meltzoff. 2015. “Cultural Stereotypes as Gatekeepers: Increasing Girls’ Interest in Computer Science and Engineering by Diversifying Stereotypes.” *Frontiers in Psychology* 6.
- Choper, Joshua, Daniel Schneider, and Kristen Harknett. 2021. “Uncertain Time: Precarious Schedules and Job Turnover in the US Service Sector.” *ILR Review*. <https://doi.org/10.1177/00197939211048484>.
- Chowhan, James. 2016. “Unpacking the Black Box: Understanding the Relationship between Strategy, HRM Practices, Innovation and Organizational Performance: HRM, Innovation, Performance and Strategy.” *Human Resource Management Journal* 26 (2): 112–33. <https://doi.org/10.1111/1748-8583.12097>.
- Chowhan, James, Isik U Zeytinoglu, and Gordon B Cooke. 2016. “Immigrants and Job Satisfaction: Do High Performance Work Systems Play a Role?” *Economic and Industrial Democracy* 37 (4): 690–715. <https://doi.org/10.1177/0143831X14550696>.
- Chuang, Chih-Hsun, and H. U. I. Liao. 2010. “Strategic Human Resource Management in Service Context: Taking Care of Business by Taking Care of Employees and Customers.” *Personnel Psychology* 63 (1): 153–96.
- Cici, Gjergji, Mario Hendriock, Stefan Jaspersen, and Alexander Kempf. 2021. “#MeToo Meets the Mutual Fund Industry: Productivity Effects of Sexual Harassment.” *Finance Research Letters* 40 (May): 101687. <https://doi.org/10.1016/j.frl.2020.101687>.
- Clemens, Jeffrey, Lisa B. Kahn, and Jonathan Meer. 2021. “Dropouts Need Not Apply? The Minimum Wage and Skill Upgrading.” *Journal of Labor Economics* 39 (S1): S107–49. <https://doi.org/10.1086/711490>.
- Cobb, J. Adam, and Ken-Hou Lin. 2017. “Growing Apart: The Changing Firm-Size Wage Premium and Its Inequality Consequences.” *Organization Science* 28 (3): 429–46.
- Cohn, Alain, Ernst Fehr, Benedikt Herrmann, and Frédéric Schneider. 2014. “Social Comparison and Effort Provision: Evidence from a Field Experiment.” *Journal of the European Economic Association* 12 (4): 877–98. <https://doi.org/10.1111/jeea.12079>.
- Coker, Ann L., Heather M. Bush, Bonnie S. Fisher, Suzanne C. Swan, Corrine M. Williams, Emily R. Clear, and Sarah DeGue. 2016. “Multi-College Bystander Intervention Evaluation for Violence Prevention.” *American Journal of Preventive Medicine* 50 (3): 295–302. <https://doi.org/10.1016/j.amepre.2015.08.034>.
- Colombo, M. G., M. Delmastro, and L. Rabbiosi. 2007. “‘High Performance’ Work Practices, Decentralization, and Profitability: Evidence from Panel Data.” *Industrial and Corporate Change* 16 (6): 1037–67. <https://doi.org/10.1093/icc/dtm031>.

- Combs, James, Yongmei Liu, Angela Hall, and David Ketchen. 2006. "How Much Do High-Performance Work Practices Matter? A Meta-Analysis of Their Effects on Organizational Performance." *Personnel Psychology* 59 (3): 501–28. <https://doi.org/10.1111/j.1744-6570.2006.00045.x>.
- Conway, Neil, and Rob Briner. 2009. "Fifty Years of Psychological Contract Research: What Do We Know and What Are the Main Challenges." In *International Review of Industrial and Organizational Psychology, Volume 24*, edited by Gerard P. Hodgkinson and J. Kevin Ford, 71–130. Hoboken, NJ: John Wiley & Sons.
- Cowgill, Bo, and Catherine Tucker. 2019. "Economics, Fairness and Algorithmic Bias." Amsterdam: Elsevier SSRN.
- Cullen, Zoë, and Ricardo Perez-Truglia. 2018. "How Much Does Your Boss Make? The Effects of Salary Comparisons." Working paper 24841. Cambridge, MA: National Bureau of Economic Research. <https://doi.org/10.3386/w24841>.
- Cyert, Richard M., and James G. March. 1963. *A Behavioral Theory of the Firm*. Second edition. Englewood Cliffs, NJ: Prentice Hall.
- Dahl-Jørgensen, Carla, and Per Øystein Saksvik. 2005. "The Impact of Two Organizational Interventions on the Health of Service Sector Workers." *International Journal of Health Services* 35 (3): 529–49. <https://doi.org/10.2190/P67F-3U5Y-3DDW-MGT1>.
- Dana, Jason, Robyn Dawes, and Nathaniel Peterson. 2013. "Belief in the Unstructured Interview: The Persistence of an Illusion." *Judgment and Decision Making* 8 (5): 512–20.
- Datta, DK, JP Guthrie, and PM Wright. 2005. "Human Resource Management and Labor Productivity: Does Industry Matter?" *Academy of Management Journal* 48 (1): 135–45. <https://doi.org/10.5465/AMJ.2005.15993158>.
- DeJoy, David M., Mark G. Wilson, Robert J. Vandenberg, Allison L. McGrath-Higgins, and C. Shannon Griffin-Blake. 2010. "Assessing the Impact of Healthy Work Organization Intervention." *Journal of Occupational and Organizational Psychology* 83 (1): 139–65. <https://doi.org/10.1348/096317908X398773>.
- Derenoncourt, Ellora, and Claire Montialoux. 2020. "Minimum Wages and Racial Inequality." *Quarterly Journal of Economics* 136 (1): 169–228. <https://doi.org/10.1093/qje/qjaa031>.
- Derenoncourt, Ellora, Clemens Noelke, and David Weil. 2021. "Spillover Effects from Voluntary Employer Minimum Wages." Amsterdam: Elsevier SSRN.
- DeVaro, Jed, Antti Kauhanen, and Nelli Valmari. 2019. "Internal and External Hiring." *ILR Review* 72 (4): 981–1008. <https://doi.org/10.1177/0019793919842810>.
- Devine, Patricia G., Patrick S. Forscher, Anthony J. Austin, and William T. L. Cox. 2012. "Long-Term Reduction in Implicit Race Bias: A Prejudice Habit-Breaking Intervention." *Journal of Experimental Social Psychology* 48 (6): 1267–78. <https://doi.org/10.1016/j.jesp.2012.06.003>.
- DiPrete, Thomas A., and Whitman T. Soule. 1988. "Gender and Promotion in Segmented Job Ladder Systems." *American Sociological Review* 53 (1): 26–40.
- Dobbin, Frank, and Alexandra Kalev. 2016. "Diversity Why Diversity Programs Fail and What Works Better." *Harvard Business Review* 94 (7–8): 52–60.
- — —. 2019. "The Promise and Peril of Sexual Harassment Programs." *Proceedings of the National Academy of Sciences* 116 (25): 12255–60. <https://doi.org/10.1073/pnas.1818477116>.
- Dobbin, Frank, Daniel Schrage, and Alexandra Kalev. 2015. "Rage against the Iron Cage: The Varied Effects of Bureaucratic Personnel Reforms on Diversity." *American Sociological Review* 80 (5): 1014–44. <https://doi.org/10.1177/0003122415596416>.

- Dube, Arindrajit. 2019. "Minimum Wages and the Distribution of Family Incomes." *American Economic Journal: Applied Economics* 11 (4): 268–304. <https://doi.org/10.1257/app.20170085>.
- Dube, Arindrajit, Laura Giuliano, and Jonathan Leonard. 2019a. "Fairness and Frictions: The Impact of Unequal Raises on Quit Behavior." *American Economic Review* 109 (2): 620–63. <https://doi.org/10.1257/aer.20160232>.
- — —. 2019b. "Fairness and Frictions: The Impact of Unequal Raises on Quit Behavior." *American Economic Review* 109 (2): 620–63. <https://doi.org/10.1257/aer.20160232>.
- Ely, R. J. 2004. "A Field Study of Group Diversity, Participation in Diversity Education Programs, and Performance." *Journal of Organizational Behavior* 25 (6): 755–80. <https://doi.org/10.1002/job.268>.
- Emanuel, Natalia, and Emma Harrington. 2021. "The Payoffs of Higher Pay: Elasticities of Productivity and Labor Supply with Respect to Wages." Working paper. Cambridge, MA: Harvard University. <https://scholar.harvard.edu/eharrington/publications/payoffs-higher-pay-elasticities-productivity-and-labor-supply-respect-wages>.
- Enders, Walter, Paul Pecorino, and Anne-Charlotte Souto. 2019. "Racial Disparity in U.S. Imprisonment Across States and Over Time." *Journal of Quantitative Criminology* 35 (2): 365–92. <https://doi.org/10.1007/s10940-018-9389-6>.
- Farrell, Diana, and Fiona Greig. 2016. "Paychecks, Paydays, and the Online Platform Economy: Big Data on Income Volatility." New York: JPMorgan Chase & Co. Institute.
- Fehr, Ernst, and Lorenz Goette. 2007. "Do Workers Work More If Wages Are High? Evidence from a Randomized Field Experiment." *American Economic Review* 97 (1): 298–317. <https://doi.org/10.1257/aer.97.1.298>.
- Fitzgerald, Joan. 2006. *Moving Up in the New Economy: Career Ladders for U.S. Workers*. Ithaca, NY: Cornell University Press. <http://www.jstor.org/stable/10.7591/j.ctv2n7hpd>.
- Fox, Kimberly E., Sydney T. Johnson, Lisa F. Berkman, Marjaana Sianoja, Yenee Soh, Laura D. Kubzansky, and Erin L. Kelly. 2021. "Organisational- and Group-Level Workplace Interventions and Their Effect on Multiple Domains of Worker Well-Being: A Systematic Review." *Work & Stress: An International Journal of Work, Health & Organisations* 36 (1): 30–59. <https://doi.org/10.1080/02678373.2021.1969476>
- Freeman, Richard B., and James L. Medoff. 1984. *What Do Unions Do*. New York: Basic Books.
- Frick, Bernd J., Ute Goetzen, and Robert Simmons. 2013. "The Hidden Costs of High-Performance Work Practices: Evidence from a Large German Steel Company." *ILR Review* 66 (1): 198–224.
- Friedman, Raymond A., and Brooks Holtom. 2002. "The Effects of Network Groups on Minority Employee Turnover Intentions." *Human Resource Management* 41 (4): 405–21. <https://doi.org/10.1002/hrm.10051>.
- Fuller, Joseph, and Manjari Raman. 2017. "Dismissed by Degrees: How Degree Inflation Is Undermining US Competitiveness and Hurting America's Middle Class." Dublin and Cambridge, MA: Accenture, Grads of Life, and Harvard Business School.
- Gangl, Markus, and Andrea Ziefle. 2009. "Motherhood, Labor Force Behavior, and Women's Careers: An Empirical Assessment of the Wage Penalty for Motherhood in Britain, Germany, and the United States." *Demography* 46 (2): 341–69. <https://doi.org/10.1353/dem.0.0056>.
- Garbers, Yvonne, and Udo Konradt. 2014. "The Effect of Financial Incentives on Performance: A Quantitative Review of Individual and Team-Based Financial Incentives." *Journal of Occupational and Organizational Psychology* 87 (1): 102–37. <https://doi.org/10.1111/joop.12039>.
- Garthwaite, Craig, Tal Gross, and Matthew J. Notowidigdo. 2014. "Public Health Insurance, Labor Supply, and Employment Lock." *Quarterly Journal of Economics* 129 (2): 653–96. <https://doi.org/10.1093/qje/qju005>.



- Gault, Barbara, Heidi Hartmann, Ariane Hegewisch, Jessica Milli, and Lindsey Reichlin. 2014. "Paid Parental Leave in the United States: What the Data Tell Us about Access, Usage, and Economic and Health Benefits." Washington, DC: Institute for Women's Policy Research.
- Gavetti, Giovanni. 2012. "Toward a Behavioral Theory of Strategy." *Organization Science* 23 (1): 267–85.
- Gerhart, Barry, Sara L. Rynes, and Ingrid Smithey Fulmer. 2009. "Pay and Performance: Individuals, Groups, and Executives." *Academy of Management Annals* 3 (1): 251–315. <https://doi.org/10.5465/19416520903047269>.
- Gilchrist, Duncan S., Michael Luca, and Deepak Malhotra. 2016. "When 3 + 1 > 4: Gift Structure and Reciprocity in the Field." *Management Science* 62 (9): 2639–50. <https://doi.org/10.1287/mnsc.2015.2275>.
- Ginther, Donna, Janet Currie, Francine Blau, and Rachel Croson. 2020. "Can Mentoring Help Female Assistant Professors in Economics? An Evaluation by Randomized Trial." *AEA Papers and Proceedings* 110 (May): 205–9. <https://doi.org/10.1257/pandp.20201121>.
- Glisson, Charles, Denzel Dukes, and Philip Green. 2006. "The Effects of the ARC Organizational Intervention on Caseworker Turnover, Climate, and Culture in Children's Service Systems." *Child Abuse & Neglect* 30 (8): 855–80. <https://doi.org/10.1016/j.chiabu.2005.12.010>.
- Gneezy, Uri, and John A List. 2006. "Putting Behavioral Economics to Work: Testing for Gift Exchange in Labor Markets Using Field Experiments." *Econometrica* 74 (5): 1365–84. <https://doi.org/10.1111/j.1468-0262.2006.00707.x>.
- Godart, Olivier N, Holger Görg, and Aoife Hanley. 2017. "Trust-Based Work Time and Innovation: Evidence from Firm-Level Data." *ILR Review* 70 (4): 894–918.
- Godøy, Anna, and Ken Jacobs. 2021. "The Downstream Benefits of Higher Incomes and Wages." Boston: Federal Reserve Bank of Boston.
- Goldin, Claudia. 2014. "A Grand Gender Convergence: Its Last Chapter." *American Economic Review* 104 (4): 29.
- Goldin, Claudia, Sari Pekkala Kerr, Claudia Olivetti, and Erling Barth. 2017. "The Expanding Gender Earnings Gap: Evidence from the LEHD–2000 Census." *American Economic Review* 107 (5): 110–14. <https://doi.org/10.1257/aer.p20171065>.
- Goldin, Claudia, and Cecilia Rouse. 2000. "Orchestrating Impartiality: The Impact of 'Blind' Auditions on Female Musicians." *American Economic Review* 90 (4): 715–41. <https://doi.org/10.1257/aer.90.4.715>.
- Graen, George, Michael A. Novak, and Patricia Sommerkamp. 1982. "The Effects of Leader—Member Exchange and Job Design on Productivity and Satisfaction: Testing a Dual Attachment Model." *Organizational Behavior and Human Performance* 30 (1): 109–31. [https://doi.org/10.1016/0030-5073\(82\)90236-7](https://doi.org/10.1016/0030-5073(82)90236-7).
- Grant, Adam M. 2008. "The Significance of Task Significance: Job Performance Effects, Relational Mechanisms, and Boundary Conditions." *Journal of Applied Psychology* 93 (1): 108–24. <https://doi.org/10.1037/0021-9010.93.1.108>.
- Greenwood, Royston, Christine Oliver, Thomas B. Lawrence, and Renate E. Meyer. 2017. *The Sage Handbook of Organizational Institutionalism*. London: Sage Publications.
- Griffin, Ricky W. 1983. "Objective and Social Sources of Information in Task Redesign: A Field Experiment." *Administrative Science Quarterly* 28 (2): 184. <https://doi.org/10.2307/2392617>.
- Groshen, Erica L. 1991. "Sources of Intra-Industry Wage Dispersion: How Much Do Employers Matter?" *Quarterly Journal of Economics* 106 (3): 869–84. <https://doi.org/10.2307/2937931>.

- Gupta, Nidhi, Christian Dyrland Wåhlin-Jacobsen, Johan Simonsen Abildgaard, Louise Nøhr Henriksen, Karina Nielsen, and Andreas Holtermann. 2018. "Effectiveness of a Participatory Physical and Psychosocial Intervention to Balance the Demands and Resources of Industrial Workers: A Cluster-Randomized Controlled Trial." *Scandinavian Journal of Work, Environment & Health* 44 (1): 58–68. <https://doi.org/10.5271/sjweh.3689>.
- Guvenen, Fatih, Greg Kaplan, Jae Song, and Justin Weidner. 2017. "Lifetime Incomes in the United States over Six Decades." Working paper 23371. Cambridge, MA: National Bureau of Economic Research. <https://doi.org/10.3386/w23371>.
- Hackman, J. Richard, and Greg R. Oldham. 1976. "Motivation through the Design of Work: Test of a Theory." *Organizational Behavior and Human Performance* 16 (2): 250–79. [https://doi.org/10.1016/0030-5073\(76\)90016-7](https://doi.org/10.1016/0030-5073(76)90016-7).
- Haltiwanger, John, Henry Hyatt, and Erika McEntarfer. 2018. "Who Moves Up the Job Ladder?" *Journal of Labor Economics* 36 (S1): S301–36. <https://doi.org/10.1086/694417>.
- Handel, Michael J., and Maury Gittleman. 2004. "Is There a Wage Payoff to Innovative Work Practices?" *Industrial Relations: A Journal of Economy and Society* 43 (1): 67–97.
- Harknett, Kristen, Daniel Schneider, and Veronique Irwin. 2021. "Improving Health and Economic Security by Reducing Work Schedule Uncertainty." *PNAS* 118 (42): 1–8. <https://doi.org/10.1073/pnas.2107828118>.
- Hashemian, Mahdi, Zeynep Ton, and Hazhir Rahmandad. 2020. "The Effect of Unstable Schedules on Unit and Employee Productivity." Amsterdam: Elsevier SSRN. <https://doi.org/10.2139/ssrn.3839673>.
- Hashemian, MohammadMahdi. 2020. "Essays on the Counterintuitive Consequences of Labor Policies in Service Industries." PhD Diss., Massachusetts Institute of Technology.
- Heilman, ME. 1996. "Affirmative Action's Contradictory Consequences." *Journal of Social Issues* 52 (4): 105–9. <https://doi.org/10.1111/j.1540-4560.1996.tb01852.x>.
- Henly, Julia R., and Susan J. Lambert. 2014. "Unpredictable Work Timing in Retail Jobs: Implications for Employee Work-Life Conflict." *Industrial & Labor Relations Review* 67 (3): 986–1016. <https://doi.org/10.1177/0019793914537458>.
- Hesford, James W., Nicolas Mangin, and Mina Pizzini. 2019. "Using Fixed Wages for Management Control: An Intra-Firm Test of the Effect of Relative Compensation on Performance." *Journal of Management Accounting Research* 32 (3): 137–54. <https://doi.org/10.2308/jmar-18-070>.
- Hoffman, Mitchell, Lisa B Kahn, and Danielle Li. 2017. "Discretion in Hiring." *Quarterly Journal of Economics* 133 (2): 765–800. <https://doi.org/10.1093/qje/qjx042>.
- Holman, David, and Carolyn Axtell. 2016. "Can Job Redesign Interventions Influence a Broad Range of Employee Outcomes by Changing Multiple Job Characteristics? A Quasi-Experimental Study." *Journal of Occupational Health Psychology* 21 (3): 284–95. <https://doi.org/10.1037/a0039962>.
- Holman, David J., Carolyn M. Axtell, Christine A. Sprigg, Peter Totterdell, and Toby D. Wall. 2010. "The Mediating Role of Job Characteristics in Job Redesign Interventions: A Serendipitous Quasi-Experiment: The Mediating Role of Job Characteristics." *Journal of Organizational Behavior* 31 (1): 84–105. <https://doi.org/10.1002/job.631>.
- Holzer, Harry J., and David Neumark. 2000. "What Does Affirmative Action Do?" *Industrial & Labor Relations Review* 53 (2): 240–71. <https://doi.org/10.2307/2696075>.
- Hook, Jennifer L., and Eunjeong Paek. 2020. "National Family Policies and Mothers' Employment: How Earnings Inequality Shapes Policy Effects across and within Countries." *American Sociological Review* 85 (3): 381–416.

- Humphrey, Stephen E., Jennifer D. Nahrgang, and Frederick P. Morgeson. 2007. "Integrating Motivational, Social, and Contextual Work Design Features: A Meta-Analytic Summary and Theoretical Extension of the Work Design Literature." *Journal of Applied Psychology* 92 (5): 1332–56. <https://doi.org/10.1037/0021-9010.92.5.1332>.
- Ibanez, Marcela, and Gerhard Riener. 2018. "Sorting through Affirmative Action: Three Field Experiments in Colombia." *Journal of Labor Economics* 36 (2): 437–78. <https://doi.org/10.1086/694469>.
- Icekson, Tamar, Aharon Tziner, and Liad Bareket-Bojmel. 2020. "One Size Does Not Fit All: Taking Trainees' Personal Characteristics into Consideration in Sexual Harassment and Racial Discrimination Training." *Industrial and Organizational Psychology* 13 (2): 191–95. <http://dx.doi.org.libproxy.mit.edu/10.1017/iop.2020.34>.
- Ichniowski, Casey, and Kathryn Shaw. 2003. "Beyond Incentive Pay: Insiders' Estimates of the Value of Complementary Human Resource Management Practices." *Journal of Economic Perspectives* 17 (1): 155–80. <https://doi.org/10.1257/089533003321164994>.
- Ichniowski, Casey, Kathryn Shaw, and Giovanna Prennushi. 1997. "The Effects of Human Resource Management Practices on Productivity: A Study of Steel Finishing Lines." *American Economic Review* 87 (3): 291–313.
- Jensen, Jaclyn M., Pankaj C. Patel, and Jake G. Messersmith. 2013. "High-Performance Work Systems and Job Control: Consequences for Anxiety, Role Overload, and Turnover Intentions." *Journal of Management* 39 (6): 1699–1724. <https://doi.org/10.1177/0149206311419663>.
- Jiang, Kaifeng, David P. Lepak, Jia Hu, and Judith C. Baer. 2012. "How Does Human Resource Management Influence Organizational Outcomes? A Meta-Analytic Investigation of Mediating Mechanisms." *Academy of Management Journal* 55 (6): 1264–94. <https://doi.org/10.5465/amj.2011.0088>.
- Jiang, Kaifeng, Riki Takeuchi, and Yingya Jia. 2020. "Taking Peers into Account: Adoption and Effects of High-Investment Human Resource Systems." *Journal of Applied Psychology*.
- Jones, Derek C., Panu Kalmi, and Antti Kauhanen. 2010. "How Does Employee Involvement Stack up? The Effects of Human Resource Management Policies on Performance in a Retail Firm." *Industrial Relations: A Journal of Economy and Society* 49 (1): 1–21.
- Joshi, Aparna, Jooyeon Son, and Hyuntak Roh. 2015. "When Can Women Close the Gap? A Meta-Analytic Test of Sex Differences in Performance and Rewards." *Academy of Management Journal* 58 (5): 1516–45. <https://doi.org/10.5465/amj.2013.0721>.
- Kalev, Alexandra. 2009. "Cracking the Glass Cages? Restructuring and Ascriptive Inequality at Work." *American Journal of Sociology* 114 (6): 1591–1643. <https://doi.org/10.1086/597175>.
- Kalev, Alexandra, Frank Dobbin, and Erin Kelly. 2006. "Best Practices or Best Guesses? Assessing the Efficacy of Corporate Affirmative Action and Diversity Policies." *American Sociological Review* 71 (4): 589–617. <https://doi.org/10.1177/000312240607100404>.
- Kalleberg, Arne L., David Knoke, Peter V Marsden, and Joe L Spaeth. 1994. "The National Organizations Study: An Introduction and Overview." *American Behavioral Scientist* 37 (7): 860–71. <https://doi.org/10.1177/0002764294037007002>.
- Kalleberg, Arne L., and Ted Mouw. 2018. "Occupations, Organizations, and Intragenerational Career Mobility." *Annual Review of Sociology* 44: 283–303.
- Katz, Lawrence F, Jonathan Roth, Richard Hendra, and Kelsey Schaberg. 2020. "Why Do Sectoral Employment Programs Work? Lessons from WorkAdvance." Working paper 28248. Cambridge, MA: National Bureau of Economic Research. <https://doi.org/10.3386/w28248>.

- Kehoe, Rebecca R., and Patrick M. Wright. 2013. "The Impact of High-Performance Human Resource Practices on Employees' Attitudes and Behaviors." *Journal of Management* 39 (2): 366–91. <https://doi.org/10.1177/0149206310365901>.
- Keller, J. R. 2018. "Posting and Slotting: How Hiring Processes Shape the Quality of Hire and Compensation in Internal Labor Markets." *Administrative Science Quarterly* 63 (4): 848–78. <https://doi.org/10.1177/0001839217736045>.
- Kelly, Erin, and Frank Dobbin. 1999. "Civil Rights Law at Work: Sex Discrimination and the Rise of Maternity Leave Policies." *American Journal of Sociology* 105 (2): 455–92. <https://doi.org/10.1086/210317>.
- Kelly, Erin L., and Phyllis Moen. 2020a. *Overload: How Good Jobs Went Bad and What We Can Do about It*. Princeton, NJ: Princeton University Press.
- Kelly, Erin L., Phyllis Moen, J. Michael Oakes, Wen Fan, Cassandra Okechukwu, Kelly D. Davis, Leslie B. Hammer, Ellen Ernst Kossek, Rosalind Berkowitz King, and Ginger C. Hanson. 2014. "Changing Work and Work-Family Conflict: Evidence from the Work, Family, and Health Network." *American Sociological Review* 79 (3): 485–516.
- Kesavan, Saravanan, Susan Lambert, Joan Williams, and Pradeep Pendem. 2021. "Doing Well by Doing Good: Improving Store Performance with Responsible Scheduling Practices at the Gap, Inc." SSRN Scholarly paper 3731670. Amsterdam: Elsevier Social Science Research Network. <https://doi.org/10.2139/ssrn.3731670>.
- Kim, Jaek, and André Kiesel. 2018. "The Long Shadow of Police Racial Treatment: Racial Disparity in Criminal Justice Processing." *Public Administration Review* 78 (3): 422–31. <https://doi.org/10.1111/puar.12842>.
- Kim, Youngsang, and Robert E. Ployhart. 2014. "The Effects of Staffing and Training on Firm Productivity and Profit Growth before, during, and after the Great Recession." *Journal of Applied Psychology* 99 (3): 361–89. <https://doi.org/10.1037/a0035408>.
- Kline, Patrick M., Evan K. Rose, and Christopher R. Walters. 2021. "Systemic Discrimination Among Large U.S. Employers." Working paper 29053. Cambridge, MA: National Bureau of Economic Research. <https://doi.org/10.3386/w29053>.
- Kline, Patrick, Neviana Petkova, Heidi Williams, and Owen Zidar. 2019. "Who Profits from Patents? Rent-Sharing at Innovative Firms." *Quarterly Journal of Economics* 134 (3): 1343–1404. <https://doi.org/10.1093/qje/qjz011>.
- Knight, Caroline, and Sharon K Parker. 2021. "How Work Redesign Interventions Affect Performance: An Evidence-Based Model from a Systematic Review." *Human Relations* 74 (1): 69–104. <https://doi.org/10.1177/0018726719865604>.
- Kochan, Thomas A., Harry C. Katz, and Robert B. McKersie. 1986. *The Transformation of American Industrial Relations*. New York: ILR Press.
- Koelle, Felix. 2017. "Affirmative Action, Cooperation, and the Willingness to Work in Teams." *Journal of Economic Psychology* 62 (October): 50–62. <https://doi.org/10.1016/j.joep.2017.06.004>.
- Kossek, Ellen Ernst, and Brenda A. Lautsch. 2018. "Work-Life Flexibility for Whom? Occupational Status and Work-Life Inequality in Upper, Middle, and Lower Level Jobs." *Academy of Management Annals* 12 (1): 5–36. <https://doi.org/10.5465/annals.2016.0059>.
- Kramer, Karen Z., Sunjin Pak, and So Young Park. 2022. "The Effect of Parental Leave Duration on Early-Career Wage Growth." *Human Resource Management Journal*. <https://doi.org/10.1111/1748-8583.12428>.
- Kristal, Tali, Yinon Cohen, and Edo Navot. 2018. "Benefit Inequality among American Workers by Gender, Race, and Ethnicity, 1982–2015." *Sociological Science* 5 (20): 461–88. <https://doi.org/10.15195/v5.a20>.

- Kruse, Douglas, Joseph Blasi, and Rhokeun Park. 2008. "Shared Capitalism in the U.S. Economy? Prevalence, Characteristics, and Employee Views of Financial Participation in Enterprises." Working paper w14225. Cambridge, MA: National Bureau of Economic Research. <https://doi.org/10.3386/w14225>.
- Kube, Sebastian, Michel André Maréchal, and Clemens Puppe. 2012. "The Currency of Reciprocity: Gift Exchange in the Workplace." *American Economic Review* 102 (4): 1644–62. <https://doi.org/10.1257/aer.102.4.1644>.
- Kuhn, Peter, and Lizi Yu. 2021. "How Costly Is Turnover? Evidence from Retail." *Journal of Labor Economics* 39 (2): 461–96. <https://doi.org/10.1086/710359>.
- Kurtulus, Fidan Ana. 2016. "The Impact of Affirmative Action on the Employment of Minorities and Women: A Longitudinal Analysis Using Three Decades of EEO-1 Filings." *Journal of Policy Analysis and Management* 35 (1): 34–66. <https://doi.org/10.1002/pam.21881>.
- Lalive, Rafael, and Josef Zweimüller. 2009. "How Does Parental Leave Affect Fertility and Return to Work? Evidence from Two Natural Experiments." *Quarterly Journal of Economics* 124 (3): 1363–1402.
- Lambert, Susan, Peter Fugiel, and Julia Henly. 2014. "Precarious Work Schedules among Early-Career Employees in the US: A National Snapshot." Chicago: University of Chicago. [https://crownschool.uchicago.edu/sites/default/files/uploads/lambert.fugiel.henly\\_.precarious\\_work\\_schedules.august2014\\_o.pdf](https://crownschool.uchicago.edu/sites/default/files/uploads/lambert.fugiel.henly_.precarious_work_schedules.august2014_o.pdf).
- Lambert, Susan J. 2008. "Passing the Buck: Labor Flexibility Practices That Transfer Risk onto Hourly Workers." *Human Relations* 61 (9): 1203–27. <https://doi.org/10.1177/0018726708094910>.
- Lambert, Susan J., Julia R. Henly, and Jaeseung Kim. 2019. "Precarious Work Schedules as a Source of Economic Insecurity and Institutional Distrust." *RSF: The Russell Sage Foundation Journal of the Social Sciences* 5 (4): 218. <https://doi.org/10.7758/RSF.2019.5.4.08>.
- Lane, Julia, Philip Moss, Hal Salzman, and Chris Tilly. 2003. "Too Many Cooks? Tracking Internal Labor Market Dynamics in Food Service with Case Studies and Quantitative Data." In *Low-Wage America: How Employers Are Reshaping Opportunity in the Workplace*, 229–69. New York: Russell Sage Foundation.
- Lawler, Edward E., and Susan A. Mohrman. 2003. "Pay Practices in Fortune 1000 Corporations." Working paper. Los Angeles: University of Southern California, Marshall School of Business, Center for Effective Organizations. <https://ceo.usc.edu/2003/05/04/pay-practices-in-fortune-1000-corporations/>.
- Lee, Eun Kyung, Woonki Hong, and Ariel C. Avcig. 2015. "Containing Conflict: A Relational Approach to the Study of High-Involvement Work Practices in the Health-Care Setting." *International Journal of Human Resource Management* 26 (1): 100–122. <https://doi.org/10.1080/09585192.2014.938680>.
- Lemieux, Thomas, W. Bentley MacLeod, and Daniel Parent. 2009. "Performance Pay and Wage Inequality." *Quarterly Journal of Economics* 124 (1): 1–49. <https://doi.org/10.1162/qjec.2009.124.1.1>.
- Leonard, Jonathan S. 1990. "The Impact of Affirmative-Action Regulation and Equal-Employment Law on Black-Employment." *Journal of Economic Perspectives* 4 (4): 47–63. <https://doi.org/10.1257/jep.4.4.47>.
- Levitt, Steven D., and Susanne Neckermann. 2015. "What Field Experiments Have and Have Not Taught Us about Managing Workers." *Oxford Review of Economic Policy* 30 (4): 639–57. <https://doi.org/10.1093/oxrep/grv003>.
- Li, Danielle, Lindsey R. Raymond, and Peter Bergman. 2020. "Hiring as Exploration." Cambridge, MA: National Bureau of Economic Research.
- Linzer, Mark, Sara Poplau, Ellie Grossman, Anita Varkey, Steven Yale, Eric Williams, Lanis Hicks, et al. 2015. "A Cluster Randomized Trial of Interventions to Improve Work Conditions and Clinician Burnout in Primary Care: Results from the Healthy Work Place (HWP) Study." *Journal of General Internal Medicine* 30 (8): 1105–11. <https://doi.org/10.1007/s11606-015-3235-4>.



- Lott, Yvonne, and Heejung Chung. 2016. "Gender Discrepancies in the Outcomes of Schedule Control on Overtime Hours and Income in Germany." *European Sociological Review* 32 (6): 752–65. <https://doi.org/10.1093/esr/jcw032>.
- Lowe, Nichola, Julianne Stern, John R. Bryson, and Rachel Mulhall. 2018. "Youth Job Creation and Employer Engagement in U.S. Manufacturing." In *Investing in America's Workforce, Improving Outcomes for Workers and Employees Volume 2: Investing in Work*, edited by Stuart Andreason, Todd Greene, Heath Prince, and Carl E. Van Horn, 24. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Lynch, Lisa. 2007. "The Adoption and Diffusion of Organizational Innovation: Evidence for the U.S. Economy." Working paper w13156. Cambridge, MA: National Bureau of Economic Research. <https://doi.org/10.3386/w13156>.
- Lyness, Karen, and Michael Judiesch. 2001. "Are Female Managers Quitters? The Relationships of Gender, Promotions, and Family Leaves of Absence to Voluntary Turnover." *Journal of Applied Psychology* 86: 1167–78. <https://doi.org/10.1037/0021-9010.86.6.1167>.
- MacDuffie, John Paul. 1995. "Human Resource Bundles and Manufacturing Performance: Organizational Logic and Flexible Production Systems in the World Auto Industry." *ILR Review* 48 (2): 197–221.
- Macky, Keith, and Peter Boxall. 2007. "The Relationship between 'High-Performance Work Practices' and Employee Attitudes: An Investigation of Additive and Interaction Effects." *International Journal of Human Resource Management* 18 (4): 537–67. <https://doi.org/10.1080/09585190601178745>.
- Maier, G. 2002. "Career Ladders: An Important Element in CNA Retention." *Geriatric Nursing* 23 (4): 217–19. <https://doi.org/10.1067/mgn.2002.126971>.
- Marinescu, Ioana, and Jake Rosenfeld. 2022. "Worker Power and Mobility: An Overview."
- Mas, Alexandre. 2017. "Does Transparency Lead to Pay Compression?" *Journal of Political Economy* 125 (5): 1683–1721. <https://doi.org/10.1086/693137>.
- Mas, Alexandre, and Amanda Pallais. 2017. "Valuing Alternative Work Arrangements." *American Economic Review* 107 (12): 3722–59. <https://doi.org/10.1257/aer.20161500>.
- — —. 2020. "Alternative Work Arrangements." *Annual Review of Economics* 12 (1): 631–58. <https://doi.org/10.1146/annurev-economics-022020-032512>.
- McKenzie, David. 2021. "Small Business Training to Improve Management Practices in Developing Countries: Re-Assessing the Evidence for 'Training Doesn't Work.'" *Oxford Review of Economic Policy* 37 (2): 276–301.
- Mellor, Earl F. 1986. "Shift Work and Flexitime: How Prevalent Are They?" *Monthly Labor Review* (November): 8.
- Messersmith, Jake G., Pankaj C. Patel, David P. Lepak, and Julian S. Gould-Williams. 2011. "Unlocking the Black Box: Exploring the Link between High-Performance Work Systems and Performance." *Journal of Applied Psychology* 96 (6): 1105–18. <https://doi.org/10.1037/a0024710>.
- Miller, Conrad. 2017. "The Persistent Effect of Temporary Affirmative Action." *American Economic Journal: Applied Economics* 9 (3): 152–90. <https://doi.org/10.1257/app.20160121>.
- Modestino, Alicia Sasser, Daniel Shoag, and Joshua Ballance. 2016. "Downskilling: Changes in Employer Skill Requirements over the Business Cycle." *Labour Economics*.
- — —. 2020. "Upskilling: Do Employers Demand Greater Skill When Workers Are Plentiful?" *Review of Economics and Statistics* 102 (4): 793–805.
- Moen, Phyllis, Erin L. Kelly, Wen Fan, Shi-Rong Lee, David Almeida, Ellen Ernst Kossek, and Orfeu M. Buxton. 2016. "Does a Flexibility/Support Organizational Initiative Improve High-Tech Employees' "

- Well-Being? Evidence from the Work, Family, and Health Network.” *American Sociological Review* 81 (1): 134–64. <https://doi.org/10.1177/0003122415622391>.
- Moen, Phyllis, Erin L. Kelly, and Rachel Hill. 2011. “Does Enhancing Work–Time Control and Flexibility Reduce Turnover? A Naturally Occurring Experiment.” *Social Problems* 58 (1). <https://doi.org/10.1525/sp.2011.58.1.69>.
- Moen, Phyllis, Erin L. Kelly, Shi-Rong Lee, J. Michael Oakes, Wen Fan, Jeremy Bray, David Almeida, Leslie Hammer, David Hurtado, and Orfeu Buxton. 2017. “Can a Flexibility/Support Initiative Reduce Turnover Intentions and Exits? Results from the Work, Family, and Health Network.” *Social Problems* 64 (1): 53–85. <https://doi.org/10.1093/socpro/spw033>.
- Mohr, Robert D., and Cindy Zoghi. 2008. “High-Involvement Work Design and Job Satisfaction.” *ILR Review* 61 (3): 275–96.
- Monaco, Kristen, and Brooks Pierce. 2015. “Compensation Inequality: Evidence from the National Compensation Survey.” *Monthly Labor Review* (July).
- Moss-Racusin, Corinne A., Jojanneke van der Toorn, John F. Dovidio, Victoria L. Brescoll, Mark J. Graham, and Jo Handelsman. 2016. “A ‘Scientific Diversity’ Intervention to Reduce Gender Bias in a Sample of Life Scientists.” *CBE—Life Sciences Education* 15 (3): ar29. <https://doi.org/10.1187/cbe.15-09-0187>.
- Mun, Eunmi, and Naomi Kodama. 2021. “Meritocracy at Work? Merit-Based Reward Systems and Gender Wage Inequality.” *Social Forces* 100 (4): 1561–91. <https://doi.org/10.1093/sf/soab083>.
- Nelson, Richard R., and Sidney G. Winter. 1982. *An Evolutionary Theory of Economic Change*. Cambridge, MA: Belknap Press of Harvard University Press.
- Nishii, Lisa H., David P. Lepak, and Benjamin Schneider. 2008. “Employee Attributions of the ‘Why’ Of HR Practices: Their Effects on Employee Attitudes and Behaviors, and Customer Satisfaction.” *Personnel Psychology* 61 (3): 503–45. <https://doi.org/10.1111/j.1744-6570.2008.00121.x>.
- Olivetti, Claudia, and Barbara Petrongolo. 2017. “The Economic Consequences of Family Policies: Lessons from a Century of Legislation in High-Income Countries.” *Journal of Economic Perspectives* 31 (1): 205–30. <https://doi.org/10.1257/jep.31.1.205>.
- Onyeador, Ivuoma N., Sa-kiera T. J. Hudson, and Neil A. Lewis. 2021. “Moving Beyond Implicit Bias Training: Policy Insights for Increasing Organizational Diversity.” *Policy Insights from the Behavioral and Brain Sciences* 8 (1): 19–26. <https://doi.org/10.1177/2372732220983840>.
- Osterman, P. 2006. “The Wage Effects of High Performance Work Organization in Manufacturing.” *Industrial & Labor Relations Review* 59 (2): 187–204. <https://doi.org/10.1177/001979390605900201>.
- Pager, Devah. 2003. “The Mark of a Criminal Record.” *American Journal of Sociology* 108 (5): 937–75.
- Pager, Devah, Bart Bonikowski, and Bruce Western. 2009. “Discrimination in a Low-Wage Labor Market: A Field Experiment.” *American Sociological Review* 74 (5): 777–99. <https://doi.org/10.1177/000312240907400505>.
- Parker, Stacey L., Katrina Bell, Marylene Gagné, Kristine Carey, and Thomas Hilpert. 2019. “Collateral Damage Associated with Performance-Based Pay: The Role of Stress Appraisals.” *European Journal of Work and Organizational Psychology* 28 (5): 691–707. <https://doi.org/10.1080/1359432X.2019.1634549>.
- Pedulla, David. 2020. *Making the Cut: Hiring Decisions, Bias, and the Consequences of Nonstandard, Mismatched, and Precarious Employment*. Princeton, NJ: Princeton University Press.
- Pedulla, David S. 2016. “Penalized or Protected? Gender and the Consequences of Nonstandard and Mismatched Employment Histories.” *American Sociological Review* 81 (2): 262–89. <https://doi.org/10.1177/0003122416630982>.

- Pedulla, David S., Felipe Dias, Katherin E. Wullert, and John Muñoz. n.d. "Racial Discrimination in Context: The Role of Organizational Policies and Practices in Hiring Discrimination." Working paper.
- Petersen, Trond, Penner Andrew M., and Geir Høgsnes. 2014. "From Motherhood Penalties to Husband Premia: The New Challenge for Gender Equality and Family Policy, Lessons from Norway." *American Journal of Sociology* 119 (5): 1434–72. <https://doi.org/10.1086/674571>.
- Petters, Lea M., and Marina Schroeder. 2020. "Negative Side Effects of Affirmative Action: How Quotas Lead to Distortions in Performance Evaluation." *European Economic Review* 130 (November). <https://doi.org/10.1016/j.euroecorev.2020.103500>.
- Piening, Erk P., Alina M. Baluch, and Torsten Oliver Salge. 2013. "The Relationship between Employees' Perceptions of Human Resource Systems and Organizational Performance: Examining Mediating Mechanisms and Temporal Dynamics." *Journal of Applied Psychology* 98 (6): 926–47. <https://doi.org/10.1037/a0033925>.
- Pihl, Ariel Marek, and Gaetano Basso. 2019. "Did California Paid Family Leave Impact Infant Health?" *Journal of Policy Analysis and Management* 38 (1): 155–80. <https://doi.org/10.1002/pam.22101>.
- Pil, Frits K., and John Paul MacDuffie. 1996. "The Adoption of High-Involvement Work Practices." *Industrial Relations: A Journal of Economy and Society* 35 (3): 423–55.
- Pohler, Dionne M., and Andrew A. Luchak. 2014. "Balancing Efficiency, Equity, and Voice: The Impact of Unions and High-Involvement Work Practices on Work Outcomes." *ILR Review* 67 (4): 1063–94.
- Quillian, Lincoln, Devah Pager, Ole Hexel, and Arnfinn H. Midtbøen. 2017. "Meta-Analysis of Field Experiments Shows No Change in Racial Discrimination in Hiring over Time." *Proceedings of the National Academy of Sciences* 114 (41): 10870–75. <https://doi.org/10.1073/pnas.1706255114>.
- Rabl, Tanja, Mevan Jayasinghe, Barry Gerhart, and Torsten M. Kühlmann. 2014. "A Meta-Analysis of Country Differences in the High-Performance Work System–Business Performance Relationship: The Roles of National Culture and Managerial Discretion." *Journal of Applied Psychology* 99 (6): 1011–41. <https://doi.org/10.1037/a0037712>.
- Rahmandad, Hazhir, and Michael Shayne Gary. 2020. "Delays Impair Learning and Can Drive Convergence to Inefficient Strategies." *Organization Science* (December): 1–28. <https://doi.org/10.1287/orsc.2020.1405>.
- Rahmandad, Hazhir, and Nelson Repenning. 2016. "Capability Erosion Dynamics: Capability Erosion Dynamics." *Strategic Management Journal* 37 (4): 649–72. <https://doi.org/10.1002/smj.2354>.
- Rahmandad, Hazhir, and Zeynep Ton. 2020. "If Higher Pay Is Profitable, Why Is It So Rare? Modeling Competing Strategies in Mass Market Services." *Organization Science* 31 (5): 1053–71.
- Raphael, Steven. 2021. "The Intended and Unintended Consequences of Ban the Box." *Annual Review of Criminology* 4: 191–207.
- Opportunity@Work and Accenture. 2020. "Reach for the STARS: The Potential of America's Hidden Talent Pool." Washington, DC: Opportunity@Work.
- Repenning, N., and J. Sterman. 2002. "Nobody Ever Gets Credit for Fixing Problems That Never Happened: Creating and Sustaining Process Improvement." *California Management Review* 43: 64–88.
- Ritter, Joseph A, and Lowell J Taylor. 2011. "Racial Disparity in Unemployment." *Review of Economics and Statistics* 93 (1): 30–42. [https://doi.org/10.1162/REST\\_a\\_00063](https://doi.org/10.1162/REST_a_00063).
- Rivera, Lauren A. 2020. "Employer Decision Making." *Annual Review of Sociology* 46: 215–32.
- Rosenfeld, Jake. 2019. "US Labor Studies in the Twenty-First Century: Understanding Laborism without Labor." *Annual Review of Sociology* 45: 449–65.



- Rossin-Slater, Maya. 2017. "Maternity and Family Leave Policy." Working Paper 23069. Cambridge, MA: National Bureau of Economic Research. <https://doi.org/10.3386/w23069>.
- Rossin-Slater, Maya, Christopher J. Ruhm, and Jane Waldfogel. 2013. "The Effects of California's Paid Family Leave Program on Mothers' Leave-Taking and Subsequent Labor Market Outcomes." *Journal of Policy Analysis and Management* 32 (2): 224–45.
- Rubinstein, Saul A., and Thomas A. Kochan. 2018. *Learning from Saturn*. Ithaca, NY: Cornell University Press.
- Ruhm, Christopher J. 1998. "The Economic Consequences of Parental Leave Mandates: Lessons from Europe." *Quarterly Journal of Economics* 113 (1): 285–317. <https://doi.org/10.2307/2586992>.
- Sandvik, Jason, Richard Saouma, Nathan Seegert, and Christopher Stanton. 2021. "Employee Responses to Compensation Changes: Evidence from a Sales Firm." *Management Science* 67 (12): 7291–7950. <https://doi.org/10.1287/mnsc.2020.3895>.
- Schieman, Scott, Melissa A. Milkie, and Paul Glavin. 2009. "When Work Interferes with Life: Work-Nonwork Interference and the Influence of Work-Related Demands and Resources." *American Sociological Review* 74 (6): 966–88. <https://doi.org/10.1177/000312240907400606>.
- Schneider, Daniel. 2020. "Paid Sick Leave in Washington State: Evidence on Employee Outcomes, 2016–2018." *American Journal of Public Health* 110 (4): 499–504. <https://doi.org/10.2105/AJPH.2019.305481>.
- Schneider, Daniel, and Kristen Harknett. 2019. "Consequences of Routine Work-Schedule Instability for Worker Health and Well-Being." *American Sociological Review* 84 (February): 000312241882318. <https://doi.org/10.1177/0003122418823184>.
- — —. 2020. "Hard Times: Routine Schedule Unpredictability and Material Hardship among Service Sector Workers." *Social Forces* 99 (4): 1682–1709. <https://doi.org/10.1093/sf/soaa079>.
- Schönberg, Uta, and Johannes Ludsteck. 2014. "Expansions in Maternity Leave Coverage and Mothers' Labor Market Outcomes after Childbirth." *Journal of Labor Economics* 32 (3): 469–505.
- Schultz, Michael A. 2019. "The Wage Mobility of Low-Wage Workers in a Changing Economy, 1968 to 2014." *RSF: The Russell Sage Foundation Journal of the Social Sciences* 5 (4): 159–89.
- Shin, Duckjung, and Alison M. Konrad. 2017. "Causality Between High-Performance Work Systems and Organizational Performance." *Journal of Management* 43 (4): 973–97. <https://doi.org/10.1177/0149206314544746>.
- Smith, Ryan A. 2005. "Do the Determinants of Promotion Differ for White Men versus Women and Minorities? An Exploration of Intersectionalism through Sponsored and Contest Mobility Processes." *American Behavioral Scientist* 48 (9): 1157–81.
- Song, Jae, David J Price, Fatih Guvenen, Nicholas Bloom, and Till von Wachter. 2018. "Firming Up Inequality." *Quarterly Journal of Economics* 134 (1): 1–50. <https://doi.org/10.1093/qje/qjy025>.
- Stearns, Jenna. 2015. "The Effects of Paid Maternity Leave: Evidence from Temporary Disability Insurance." *Journal of Health Economics* 43 (September): 85–102. <https://doi.org/10.1016/j.jhealeco.2015.04.005>.
- Sterling, Adina D., and Roberto M. Fernandez. 2018. "Once in the Door: Gender, Tryouts, and the Initial Salaries of Managers." *Management Science* 64 (11): 5444–60. <https://doi.org/10.1287/mnsc.2017.2880>.
- Subramony, Mahesh. 2009. "A Meta-Analytic Investigation of the Relationship between HRM Bundles and Firm Performance." *Human Resource Management* 48 (5): 745–68. <https://doi.org/10.1002/hrm.20315>.
- Syverson, Chad. 2011. "What Determines Productivity?" *Journal of Economic Literature* 49 (2): 326–65.

- Thiele Schwarz, Ulrica von, Karina M Nielsen, Terese Stenfors-Hayes, and Henna Hasson. 2017. "Using Kaizen to Improve Employee Well-Being: Results from Two Organizational Intervention Studies." *Human Relations* 70 (8): 966–93. <https://doi.org/10.1177/0018726716677071>.
- Thompson, Marc, and Paul Heron. 2005. "Management Capability and High Performance Work Organization." *The International Journal of Human Resource Management* 16 (6): 1029–48.
- Tims, Maria, Arnold B. Bakker, and Daantje Derks. 2013. "The Impact of Job Crafting on Job Demands, Job Resources, and Well-Being." *Journal of Occupational Health Psychology* 18 (2): 230–40. <https://doi.org/10.1037/a0032141>.
- Ton, Zeynep. 2014. *The Good Jobs Strategy: How the Smartest Companies Invest in Employees to Lower Costs and Boost Profits*. Boston: Houghton Mifflin Harcourt.
- Trindel, Kelly, Frida Polli, and Kate Glazebrook. n.d. "Using Technology to Increase Fairness in Hiring." In *What Works? Evidence-Based Ideas to Increase Diversity, Equity, and Inclusion in the Workplace*. Amherst: University of Massachusetts.
- Tsutsumi, Akizumi, Makiko Nagami, Toru Yoshikawa, Kazutaka Kogi, and Norito Kawakami. 2009. "Participatory Intervention for Workplace Improvements on Mental Health and Job Performance Among Blue-Collar Workers: A Cluster Randomized Controlled Trial." *Journal of Occupational & Environmental Medicine* 51 (5): 554–63. <https://doi.org/10.1097/JOM.0b013e3181a24d28>.
- Uchiyama, Ayako, Yuko Odagiri, Yumiko Ohya, Tomoko Takamiya, Shigeru Inoue, and Teruichi Shimomitsu. 2013. "Effect on Mental Health of a Participatory Intervention to Improve Psychosocial Work Environment: A Cluster Randomized Controlled Trial among Nurses." *Journal of Occupational Health* 12–0228.
- Van De Voorde, Karina, Jaap Paauwe, and Marc Van Veldhoven. 2012. "Employee Well-Being and the HRM-Organizational Performance Relationship: A Review of Quantitative Studies: HRM, Employee Well-Being and Organizational Performance." *International Journal of Management Reviews* 14 (4): 391–407. <https://doi.org/10.1111/j.1468-2370.2011.00322.x>.
- Van Niel, Maureen Sayres, Richa Bhatia, Nicholas S. Riano, Ludmila de Faria, Lisa Catapano-Friedman, Simha Ravven, Barbara Weissman, et al. 2020. "The Impact of Paid Maternity Leave on the Mental and Physical Health of Mothers and Children: A Review of the Literature and Policy Implications." *Harvard Review of Psychiatry* 28 (2). [https://journals.lww.com/hrpjournal/Fulltext/2020/03000/The\\_Impact\\_of\\_Paid\\_Maternity\\_Leave\\_on\\_the\\_Mental.5.aspx](https://journals.lww.com/hrpjournal/Fulltext/2020/03000/The_Impact_of_Paid_Maternity_Leave_on_the_Mental.5.aspx).
- VanHeuvelen, Tom. 2018. "Moral Economies or Hidden Talents? A Longitudinal Analysis of Union Decline and Wage Inequality, 1973–2015." *Social Forces* 97 (2): 495–530. <https://doi.org/10.1093/sf/soy045>.
- Wachter, Till von. 2020. "The Persistent Effects of Initial Labor Market Conditions for Young Adults and Their Sources." *Journal of Economic Perspectives* 34 (4): 168–94. <https://doi.org/10.1257/jep.34.4.168>.
- Way, Sean A. 2002. "High Performance Work Systems and Intermediate Indicators of Firm Performance Within the US Small Business Sector." *Journal of Management* 28 (6): 765–85. <https://doi.org/10.1177/014920630202800604>.
- Weisshaar, Katherine. 2018. "From Opt Out to Blocked Out: The Challenges for Labor Market Re-Entry after Family-Related Employment Lapses." *American Sociological Review* 83 (1): 34–60. <https://doi.org/10.1177/0003122417752355>.
- Welbourne, Theresa M, Skylar Rolf, and Steven Schlachter. 2015. "Employee Resource Groups: An Introduction, Review and Research Agenda." In *Academy of Management Proceedings* 1: 1561–1594. Briarcliff Manor, NY: Academy of Management.

- Western, Bruce, and Jake Rosenfeld. 2011. "Unions, Norms, and the Rise in U.S. Wage Inequality." *American Sociological Review* 76 (4): 513–37. <https://doi.org/10.1177/0003122411414817>.
- Williams, Joan C., Susan J Lambert, Saravanan Kesavan, Rachel M. Korn, Peter J. Fugiel, Erin Devorah Carreon, Dylan Bellisle, et al. 2019. "Stable Scheduling Study: Health Outcomes Report." San Francisco: UC Hastings College of the Law, Center for WorkLife Law. <https://worklifelaw.org/projects/stable-scheduling-study/stable-scheduling-health-outcomes/>.
- Williams, Joan, Susan Lambert, Kesavan Saravanan, Peter J. Fugiel, Lori Ann Ospina, Erin Devorah Rapoport, Meghan Jarpe, Dylan Bellisle, et al. 2018. "Stable Scheduling Increases Productivity and Sales: The Stable Scheduling Study." San Francisco: UC Hastings College of the Law, Center for WorkLife Law.
- Wilmers, Nathan, and William Kimball. 2021. "How Internal Hiring Affects Occupational Stratification." *Social Forces* (November). <https://doi.org/10.1093/sf/soab131>.
- Wood, Stephen, and Alex Bryson. 2009. "High Involvement Management." In *The Evolution of the Modern Workplace*, edited by William Brown, Alex Bryson, John Forth, and Keith Whitfield, 151–175. Cambridge, UK: Cambridge University Press.
- Workman, Michael, and William Bommer. 2004. "Redesigning Computer Call Center Work: A Longitudinal Field Experiment." *Journal of Organizational Behavior* 25 (3): 317–37. <https://doi.org/10.1002/job.247>.
- Yan, Ming, Kelly Z. Peng, and Anne Marie Francesco. 2011. "The Differential Effects of Job Design on Knowledge Workers and Manual Workers: A Quasi-Experimental Field Study in China." *Human Resource Management* 50 (3): 407–24. <https://doi.org/10.1002/hrm.20428>.

# About the Authors

---

**Erin L. Kelly** is the Sloan Distinguished Professor of Work and Organization Studies at the MIT Sloan School of Management and codirector of the MIT Institute for Work and Employment Research. She is the coauthor of *Overload: How Good Jobs Went Bad and What We Can Do About It*. Kelly investigates the implications of workplace policies and management practices for firms, workers, and families with a joint focus on equity, well-being, and organizational performance. Previous research has examined scheduling and work-family supports, family leaves, harassment policies, and diversity initiatives in a variety of organizations and industries. Her research has been published in top sociology, management, and interdisciplinary journals and has been twice recognized by the Rosabeth Moss Kanter Award.

**Hazhir Rahmandad** is the Schussel Family Professor of Management Science and an associate professor of system dynamics at the MIT Sloan School of Management. Rahmandad's research shows how complex organizational dynamics can lead to heterogeneity in organizational practices and outcomes. He has analyzed how organizations learn in the presence of delays between taking action and observing the results and has shown through empirical data and simulations the resulting learning challenges. Rahmandad has published in top scientific journals on management and organizational science. He has been a reviewer for over 30 National Institutes of Health and National Science Foundation panels and over two dozen different journals, and his research has been funded by the National Science Foundation, the National Institutes of Health, the US Department of Housing and Urban Development, and private-sector firms.

**Nathan Wilmers** is the Sarofim Family Career Development Professor and an assistant professor of work and organization studies at the MIT Sloan School of Management. He is in the core faculty of the Institute for Work and Employment Research and affiliated with the economic sociology program. Wilmers researches wage and earnings inequality, economic sociology, and the sociology of labor. In his empirical research, he studies how wage stagnation and rising earnings inequality result from weakening labor market institutions, changing market power, and job restructuring. More broadly, he is interested in bringing insights from economic sociology to the study of labor markets and the wage

structure. His research has been published in the American Sociological Review, the American Journal of Sociology, and Social Forces.

**Aishwarya Yadama** is a doctoral candidate in systems dynamics at the MIT Sloan School of Management. She has been awarded the MIT Presidential Fellowship and has a BS in systems engineering and science from Washington University in St. Louis.

## **STATEMENT OF INDEPENDENCE**

The Urban Institute strives to meet the highest standards of integrity and quality in its research and analyses and in the evidence-based policy recommendations offered by its researchers and experts. We believe that operating consistent with the values of independence, rigor, and transparency is essential to maintaining those standards. As an organization, the Urban Institute does not take positions on issues, but it does empower and support its experts in sharing their own evidence-based views and policy recommendations that have been shaped by scholarship. Funders do not determine our research findings or the insights and recommendations of our experts. Urban scholars and experts are expected to be objective and follow the evidence wherever it may lead.



**WorkRise**

[www.workrisenetwork.org](http://www.workrisenetwork.org)