Search and Matching for Jobseekers

Priorities for Research

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Each month, millions of workers in the United States move into or out of jobs. For workers in low-wage employment, transitions to new, higher-paying positions are an important driver of upward economic mobility. For those who are out of work, regaining employment in a good job, quickly, is critical for both their near- and long-term economic security.

However, workers at the bottom of the earnings ladder face barriers that impede their ability to achieve economic security or realize upward mobility when trying to find work or move between jobs. These challenges are especially acute for Black and other workers of color for whom structural racism and persistent discrimination pose additional barriers to opportunities. These barriers are not only harmful to individual workers, but they can depress productivity and wages across the board. Improving the efficiency and equity of the search-and-matching process—that is, how workers search for and move into jobs and

how employers recruit and hire workers—is an important strategy for advancing economic mobility in the labor market.

Maximizing the potential of the search-and-matching process to foster upward labor market mobility requires rigorous and actionable evidence on both workers and employers. First, we need to better understand how workers search for jobs and the factors influencing the efficacy of that search process, with a focus on how these processes vary by race, gender, age, geography, and other key demographic factors. Second, we need to better understand how employers recruit talent and how hiring processes shape which workers are hired and into what jobs. Better research on both fronts could improve the design and implementation of evidence-backed policies that improve the economic security and upward mobility of workers at the bottom of the earnings ladder.

In this brief, we summarize the research framework that informs WorkRise's thinking about the importance of search and matching for low-wage workers' labor market mobility. We then offer specific priorities for future research.

Search and Matching Framework

Two key insights frame existing research into search and matching practices. The first is the simple but powerful insight, formalized in modern models of labor markets, that workers are not interchangeable, and a key function of the labor market is not merely employing workers, or filling jobs, but matching individual workers to specific jobs where they can be most productive (see, for example, Diamond 2011; Mortensen 2011; and Pissarides 2011). A high-quality match of a worker employed in a job that is a good fit for their skills can raise wages and productivity and facilitate skill and career development. Placement in a poorly matched job can limit earnings growth and future opportunities (e.g., Albagli et al. 2021; Arellano-Bover 2022).

The second key insight is that matching a worker to a job does not occur seamlessly. For a worker, identifying job opportunities, applying to them, and advancing through the selection process requires an investment of valuable time and access to complete and accurate information that they may not have. For employers, the process of advertising and recruiting for jobs can be prone to bias and imperfection. Search frictions can slow the process and reduce match quality to the detriment of workers, firms, and the labor market

as a whole (Bartik and Stuart 2022). Crucially, the extent and nature of these frictions also varies across groups of workers, such as by race, gender, or age, leading to not just inefficient but also inequitable outcomes (e.g., Pager, Western, and Bonikowski 2009).

These general insights give rise to a host of specific questions about how workers search for employment, how firms recruit and hire, how the nature and source of frictions can prevent good matches, and whether policy interventions can be designed to facilitate and improve match quality. Current research provides limited answers to these questions. With better evidence on issues such as how jobseekers make, or fail to make, transitions to higher-paying jobs, or on the sources of discrimination in recruitment and hiring, policymakers and practitioners would be better positioned to support workers in climbing career ladders. Better evidence could also help employers find talent and policymakers dismantle structural and systemic disparities in the labor market. In the next section, we identify and describe priorities for research that might fill these critical gaps in knowledge.

BOX 1

WorkRise Landscape Reviews, Working Groups, and Research Priorities

Developing new evidence on search and matching is a core pillar of WorkRise's broader research agenda. To assess the current state of knowledge, WorkRise commissioned a comprehensive landscape review from researchers Alexander Bartik of the University of Illinois at Urbana-Champaign and Bryan Stuart of the Federal Reserve Bank of Philadelphia (Bartik and Stuart 2022). The paper surveys research on labor market search and matching and its interactions with economic mobility and security for workers.

To inform priorities for future research, WorkRise convened a working group on search and matching, bringing together key stakeholders including leading worker advocates, policymakers, practitioners, and labor market researchers united by a shared dedication to creating and sustaining meaningful pathways for upward mobility and opportunity in the labor market. Using the landscape paper as a foundation, the working group set out both to determine where existing evidence might inform action and to suggest priorities for knowledge building that could guide future decisionmaking.

Guided by these efforts, WorkRise has identified key focus areas for future research on search and matching in modern labor markets. Together, they form a roadmap for high-leverage research that can unlock opportunities for workers.

Sources: Bartik, Alexander, and Bryan Stuart. 2022. *Search and Matching in Modern Labor Markets: A Landscape Report*. WorkRise report. Washington, DC: Urban Institute; WorkRise working group.

Search and Matching Research Priorities

Because of the potential for new evidence on these issues to inform policy, practice, or other actions that can promote upward economic mobility for low-wage workers, improve racial equity in labor markets, or both, high-priority topics for future investment and investigation related to search and matching include the following:

- Understanding **job-to-job transitions** as a source of upward mobility

- Clarifying the social and behavioral dimensions of job search

- Assessing the **role of emerging technology** in search and hiring

- Identifying the most **effective actions for advancing racial equity** in job search and matching

- Quantifying the **relative impact of programs and policies** designed to improve the search-and-matching process for low-wage workers

Below, we expand on each of these priorities, detailing the general issues they present in search and matching, their importance for worker and labor market outcomes, the nature of some key knowledge gaps, their connection to the current research and literature, and how closing these gaps could inform action.

Job-to-Job Transitions

More evidence is needed on how workers in low-wage jobs move up wage ladders through job switching, including transitions across occupations, with particular attention to how these processes vary for workers in racial or other groups facing structural barriers and how programs, practices, or policy can create opportunities for upward transitions.

Issue and Importance for Economic Security, Upward Mobility, and Labor Market Equity

While improved economic security for low-wage workers can be realized in different ways, such as wage growth within a job or through promotion in a firm, research suggests that changing employers is a central and perhaps the dominant pathway for upward mobility

for low-wage workers (Topel and Ward 1992; Haltiwanger, Hyatt, and McEntarfer 2018). The growing disparity between high- and low-wage employers in recent decades has only heightened the importance of matching workers to good jobs with the right employer (Card et al. 2018; Song et al. 2019). At the same time, trends in employment relationships, such as the rise in outsourcing and contracting, have led to diminished opportunities for upward mobility in the absence of job switching (Abraham and Houseman 2021; Weil 2014).

Key Areas of Investigation on This Issue That Could Inform Policy and Practice

How do workers experience and navigate job-to-job transitions? Which occupations, industries, and types of employers offer low-wage workers the greatest opportunities to move to better paying jobs? What worker characteristics predict successful occupational switching? What is the role of broader labor market conditions? The current state of research provides emerging but still limited insight into these issues (e.g., Escobari, Seyal, and Contreras 2021; Haltiwanger et al. 2018). Current research on these questions is also limited by the availability and accessibility of data that link information on workers, their jobs, and their employers over time. Improvements in data infrastructure will therefore be critical to advancements in search and matching research.

What frictions impede upward job-to-job moves, and what interventions promote them? Do search frictions, like incomplete information about skills adjacencies, hold workers back from changing occupations (e.g., Belot, Kircher, and Muller 2019)? Do hiring practices, such as employer reliance on credentials, impede such moves even for workers who might possess necessary skills (e.g., Blair et al. 2020)? Are there policy or institutional barriers, such as occupational licensing, to switching jobs that impair mobility (e.g., Kleiner and Xu 2020)? With better knowledge of the underlying market failures, policies, and practices that support search and matching can be targeted to help workers move to higher-wage jobs.

Social and Behavioral Dimensions

More evidence is needed on how people actually search for, find, and take work, including the role of social networks and individual decisionmaking, the role of these forces in generating both search frictions and racial disparities, and the implications for policies and interventions.

Issue and Importance for Economic Security, Upward Mobility, and Labor Market Equity

Job search and matching processes and outcomes are mediated by social and behavioral forces. Both job searches and hiring, for example, are conducted not only or even mainly through formal search process and intermediaries but rely heavily on social factors, such as personal connections (e.g., Lester, Rivers, and Topa 2021) and social networks (e.g., Bayer, Ross, and Topa 2008). Job searches are also conducted by workers who are influenced by decisionmaking factors that can lead them to accept lower-paid jobs. Some workers tend to underestimate the pay improvement they could receive by moving to a new employer (e.g., Jäger et al. 2021). To better understand, and improve, matching outcomes requires an empirical approach that fully incorporates the role of social and behavioral factors in both job searching and hiring.

Key Areas of Investigation on This Issue That Could Inform Policy and Practice

What are the roles and implications of social networks in job search and matching? This includes how workers engage these networks in searches, how people within firms such as hiring managers use networks in recruiting and hiring; the consequences for workers, firms, and labor markets; and opportunities for policy or practice to either leverage or address these effects. A particular focus in this work should be continued research on how these factors contribute to or perpetuate socioeconomic variance, such as through segregated social networks (e.g., Calvó-Armengol and Jackson 2004).

How do both workers and employers make decisions about search and matching, how does this depend on context, and how does this matters for outcomes? This includes the nature of preference formation, use of time and available sources of information and support, and the role of tendencies such as optimism or impatience (e.g., DellaVigna and Paserman 200; Spinnewijn 2015). And additional research and experimentation is needed on what these findings imply for effective policy and programs.

Role of Emerging Technology

More evidence is needed on assessing the implications of technological advancements (e.g., online job search platforms and hiring technology such as algorithmic screening) for workers' economic security and mobility outcomes, with particular attention to how these

technologies might be contributing to, or could be used to ameliorate, racial differences in outcomes.

Issue and Importance for Economic Security, Upward Mobility, and Labor Market Equity

New technologies have greatly altered the ways jobseekers search for and find work, and how employers advertise and fill job openings. Perhaps most visibly, four in five job-hunters now use online resources to aid their searches (Smith 2015). Employers also make use of online job boards, digital advertising, and other applications of technology. Approximately two in three midsize employers and nearly all Fortune 500 companies now use applicant tracking systems and other automated recruiting and hiring tools (Hu 2019; Fuller et al. 2021). Improving search and matching outcomes requires learning about the effects of these tools and ensuring they are used to the benefit of workers.

Available evidence suggests these new technologies have improved the efficiency of searching and matching for some jobseekers, with modestly positive implications for economy-wide employment, productivity, pay, and vacancy-filling (e.g., Bhuller, Kostøl, and Vigtel 2021). Yet it has become clear that even as technology reduces some barriers to efficient and equitable matching, others persist. In some cases, technology can even create new frictions or exacerbate existing ones.

Key Areas of Investigation on This Issue That Could Inform Policy and Practice

How are new technologies used by workers, and how can they be used to improve job search outcomes? In particular, research and experimentation is needed to identify opportunities for leveraging new technology to improve job search outcomes, for example by generating recommendations to job seekers on openings and understanding how this can be leveraged in conjunction with traditional job-search assistance (e.g., Belot, Kircher, and Muller 2022).

How do firms use emerging recruiting and hiring technologies, and what are their effects for workers and labor markets? There is a particular risk that automated recruitment and applicant screening systems could replicate or exacerbate bias in hiring and matching. Additional empirical and theoretical research on both the magnitude and sources of such

effects, as well as solutions, is badly needed (e.g., Li, Raymond, and Bergman 2020; Kleinberg et al. 2018).

Beyond the direct role of technology in job search and hiring, what are the effects of emerging technologies related to how work is performed and organized for how workers search for and match to jobs? Issues such as whether the recent growth in remote work has led geography to play less of a role in mediating search and matching outcomes require research attention (e.g., Brueckner, Kahn, and Lin 2021).

Advancing Racial Equity

More evidence is needed on what the necessary steps will be to advance racial equity in hiring and promotion—including a richer understanding of how employer practices in recruiting and hiring lead to disparities and which policies, programs, and enforcement mechanisms most effectively address them.

Issue and Importance for Economic Security, Upward Mobility, and Labor Market Equity

Demographic disparities and inequities are present across the labor market. Evidence suggests that inequities are reinforced by the search and matching process (e.g., Bertrand and Mullainathan 2004; Pager, Bonikowski, and Western 2009; Pager 2017). Workers facing these disparities face diminished opportunities and worse outcomes (all the while needing to exert greater effort in searching for jobs) (e.g., Pager and Pedulla 2015). Achieving more equitable outcomes from job search and matching is a crucial and central element of dismantling labor market inequities more broadly.

Key Areas of Investigation on This Issue That Could Inform Policy and Practice

What specific employer practices in hiring and matching with jobseekers generate racial disparities? While discrimination in hiring is well established, in general, more detailed evidence on where and how this operates within firms—and at which stages of recruiting, evaluating applicants, and making hiring decisions this occurs—is needed to identify where and how to intervene and interrupt these outcomes. Current research on both the specific sources of bias and discrimination in hiring that should attract policy or

enforcement attention, as well as the specific employer practices to encourage, remains incomplete (e.g., Kline, Rose, and Walters 2022; Kelly et al. 2022).

What are the effects of public policies, programs, and enforcement mechanisms intended to reduce inequities and disparities? Empirical research on equal employment, civil rights, affirmative action, and other relevant regulatory and legal frameworks is relatively limited (e.g., Miller 2017). Research on better enforcement approaches is particularly lacking. It is also important to continue to build evidence on potentially disparate effects of policies regulating what information about workers should or should not be disclosed to employers during hiring, such as criminal and salary histories (e.g., Doleac and Hansen 2020). It should also include looking at broader labor market policies and regulations that mediate search and matching processes and outcomes, such as licensing (e.g., Blair and Chung 2021).

Quantifying the Relative Impacts of Programs and Policies

Additional evidence is needed into which programs and policies intended to improve search and matching outcomes are more or less effective, with attention to not just what policies work but for whom and why. Such research should consider both direct effects for targeted workers as well as any indirect or spillover effects on other workers or labor markets more broadly.

Issue and Importance for Economic Security, Upward Mobility, and Labor Market Equity

In addition to the jobseeker and employer sides of the job matching equation, a range of programs, policies, and intermediaries exist in the middle. These include programs like job search assistance, intermediaries such as third parties that connect jobseekers with employers or provide employment service programs, and policies that support workers with housing, transportation, and educational needs. By connecting the two sides of the labor market, these programs and institutions have important implications for not just match quality but even the duration of unemployment spells or overall labor market outcomes.

Key Areas of Investigation on This Issue That Could Inform Policy and Practice

What programs best for which workers, and under what conditions? We have good evidence, for example, that job search assistance is effective in general but less on if or how those effects vary across workers or circumstances (e.g., Card, Kluve, and Weber 2018; Manoli and Patel 2019). Understanding and rigorously quantifying which programs are accessible, trusted, and utilized in different communities at different times can inform efforts to strengthen labor market opportunity for all workers.

What are the matching and labor market implications of policies in other domains that potentially play key roles in supporting or constraining job search? Available theory and evidence suggest the importance of policies that invest in both social and physical infrastructure, such as internet access, housing, and transportation (e.g., Holzer, Quigley, and Raphael 2003). But richer and updated evidence is needed.

Beyond the direct effects of these programs and policies for affected or participating workers, what are the general equilibrium effects for the equity and efficiency of labor markets? When a program helps one person match with a job, does this improve outcomes overall, or is it simply at the expense of other jobseekers (e.g., Crepon et al. 2013)? Does the overall balance of these different effects change over the business cycle? Policymakers currently lack needed evidence on these questions.

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