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More Autonomy for Frontline Workers Supports Higher-Paying Jobs

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EMPLOYMENT RESEARCH

More Autonomy for Frontline Workers Supports Higher-Paying Jobs

Dylan Nelson, Nathan Wilmers, and Letian Zhang

ARTICLE HIGHLIGHTS

- *Case studies suggest that allowing frontline workers to carry out more complex tasks can increase productivity, decrease supervisory costs, and increase workers' pay.*
- *Quantitative evidence about the effect of this job design on pay is limited, partly because the data required to address this question are so challenging to assemble.*
- *We link wage records from the Unemployment Insurance system to job posts and multiple surveys. Our unique dataset allows us to measure changes in tasks for the same employer and occupation.*
- *We find that when employers raise task complexity and autonomy in a given job, new hires' wages jump and grow faster in subsequent years.*

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Hilary Wething and
Meredith Slopen
page 5

How can U.S. businesses support higher-paying jobs? High-paying factory jobs were an engine of egalitarian economic growth in the mid-20th century, fueled by industrial protectionism, internal labor markets, and unionization. During the late 20th century and early 21st century, however, middle- and low-income U.S. workers' wages stagnated. Much economic research attributes this stagnant wage growth to declining demand for routine work tasks in the labor market. For example, competition with China for low-wage manufacturing work likely suppressed wages for U.S. workers in those occupations (Acemoglu and Autor 2011).

Explanations that focus on market-wide shifts in demand may miss another important lever for change at the organizational level: employers' and managers' choices about job design and workflow. Managers at Walmart, for example, have some leeway in choosing the tasks performed by entry-level associates (Wartzman 2022). Case studies have found that some "high road" employers maintain profitability while paying workers more than what they would get elsewhere based on their credentials, experience, and other characteristics (Ton 2014). For employers, providing frontline workers with greater autonomy and giving them the opportunity to carry out more complex tasks has the potential to increase productivity and decrease supervisory costs, which in turn gives employers more latitude to increase frontline workers' pay. However, quantitative evidence of the effect of this type of job design on wages is limited, partly because the data required to address this question are so challenging to assemble.

Our perspective takes account of the actual work tasks done in a job. [In a related paper](#), we study two ways to support higher pay for

entry-level jobs: allocating more *complex* tasks and allocating more *autonomous* tasks. Greater complexity may stem from tasks based on tacit knowledge that can be learned on the job (Beane 2019) or on technical knowledge rooted in formal

Explanations for rising inequality and stagnating wages usually stop at the factory gates and at the superstore's sliding doors. But wages are also affected by the choices that employers and managers make about the tasks workers actually do.

training. Greater autonomy—reductions in tasks subject to managerial or broader oversight—can foster higher pay as an incentive to maintain productivity if workers realize this "bonus wage" would be hard to find at other employers (Krueger and Summers 1988).

To assess the impact of task complexity and autonomy on worker pay, we simultaneously measure the tasks allocated to jobs across occupations, industries, and regions; assign measures of complexity and autonomy to the required tasks; and measure worker pay over time. To do this, we link wage records from the Unemployment Insurance system to job posts and multiple surveys. We compare pay over time for workers hired into the same occupation and firm, but assign higher- or lower-complexity and autonomy tasks to that occupation and firm at

More Autonomy for Frontline Workers Supports Higher-Paying Jobs

different times based on information in the job posts, and we control for other worker and labor market characteristics that explain pay.

We find that when employers raise the task complexity and autonomy of jobs, new hires' starting earnings increase and subsequently grow faster.

We find that when employers raise task complexity and autonomy in a given job, new hires' pay gets a boost.

About half of the earnings boost from complex, technical tasks is due to more highly educated workers entering those jobs, but this change in worker composition explains little of the wage boost when tacit knowledge tasks or high-autonomy tasks increase. Our task-driven organizational theory of wage setting provides reasons that managers may increase wages other than collective bargaining or supply and demand dynamics. Policies to foster the creation of high-paying jobs should consider task allocation alongside formal training.

Complexity, Discretion, and Pay

Managers, and employers more broadly, have some leeway in assigning tasks to workers. When banks give tellers some responsibility for loan assessments, for instance, this adds a new, relatively technical task to the clerical work tellers otherwise perform. Managers can also add tasks that are complex but nontechnical and typically learned on the job, such as adding care coordination to medical administrative assistants' work or giving maintenance and process improvement responsibilities to production line workers. These sorts of tasks could boost pay both through the acquisition and the signaling of a worker's ability.

In other cases, firms can shift frontline jobs toward increasing autonomy and discretion, as in

reducing the use of scripts in call centers or allowing the use of the [Andon cord](#) in the Toyota Production System. These tasks involve problems that are relatively difficult to analyze, both for workers and for managers overseeing them. The resulting autonomy allotted to frontline workers, when used to increase productivity, gives employers a reason to pay higher wages. For example, Walmart recently [conducted](#) a program of cross-training and devolution of decision-making to retail associates. At the same time, the company substantially increased hourly pay, even relative to other retailers also facing tight labor markets.

Our Approach to Studying Work Organization and Pay

We examine how the complexity and autonomy of tasks within “jobs”—where a job is defined by the intersection of employer, occupation, industry, and U.S. region—relate to new hires' initial pay and changes in pay during the subsequent years. This approach requires us to link data from several sources:

- Unemployment Insurance system data allows us to follow individual workers and their pay as they change employers.
- A large-scale government survey allows us to measure worker characteristics, including occupation.
- Hundreds of millions of digitized job posts from 2010 through 2021 give us a measure of tasks required for a given job.
- An original survey we fielded gives us information from hundreds of individuals about the complexity and autonomy of tasks that are popular in their occupational field.

The resulting dataset allows us to measure changes in tasks for the same employer and occupation.

Measuring Task Complexity and Autonomy

Drawing on worker responses to our original survey, Figure 1 plots the relative complexity and autonomy of a subset of the 2,000 tasks we asked about. (Each survey asked the respondent to rate several tasks related to their occupation.) The top panel shows the average complexity rating of each task. We asked respondents to choose whether a given task was “complex, learned on the job,” “complex, learned off the job” through formal training, or “simple.” For example, machine operation and client base retention, like other tasks shown in the top left corner, is complex and can be learned on the job, whereas geometric dimensioning, like other tasks shown in the bottom right corner, requires formal training. By contrast, tasks in the bottom left corner, such as babysitting and general office duties, were often rated “simple.”

The bottom panel shows the average autonomy rating of each task. We asked respondents to choose whether a given task required “high discretion” and was difficult to monitor, required “significant relationships with coworkers and clients,” or was “rule-bound or closely supervised.” For example, X-rays and business software (in the bottom left corner) were typically rated as “rule-bound or closely supervised,” whereas client base retention is highly relational, and creative problem solving requires maximum discretion.

Does Raising Autonomy and Complexity Increase Pay, or Simply Change the Kinds of Workers Entering the Job?

When we compare different job postings for the same occupation at the same employer, and adjust for local labor market dynamics, we find that shifts toward more complex and higher-autonomy tasks increase starting earnings. Figure 2 shows

that earnings increase between 6 and 10 percent when jobs shift from no complex or no high-autonomy tasks to fully complex or high-autonomy tasks. Even when we also control for a worker's education and work experience, changes in task allocation increase earnings between 3 and 7 percent.

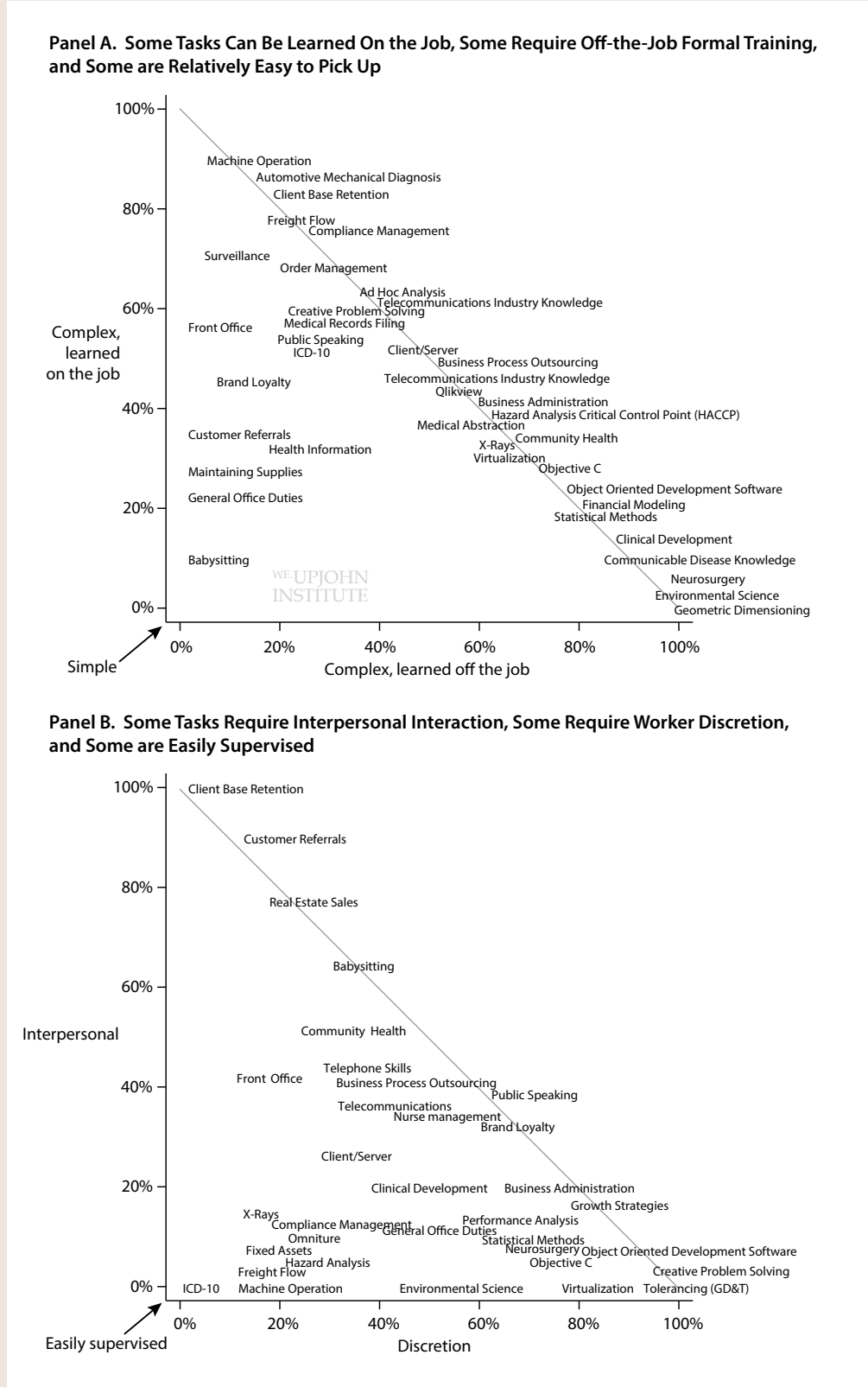
For complex tasks typically learned off the job through formal education, half of the boost to initial earnings is attributable to changing the mix of workers: more educated and more experienced workers are hired into more complex jobs. But for tasks learned on the job, typically involving work experience and tacit knowledge, and for high-discretion or high-autonomy tasks, very little of the task-based earnings benefit is due to a changing mix of workers. This is important because if job design only resulted in previously accessible jobs being filled by more-credentialed workers, it could raise pay in a given job but exacerbate inequality by reducing opportunities for lower-wage workers.

Moreover, these patterns of task-based pay boosts extend to nonmanagerial and nonprofessional workers, and they persist—even increase—over the four years following a job start. Improved work organization, and especially increased worker discretion, can thus persistently increase worker earnings, even without changes to local labor market dynamics or workers getting more schooling or experience.

Managerial and Policy Implications

Our findings are relevant both for managers seeking to create higher-paying jobs for frontline workers and policymakers focused on incentivizing that creation. We show that organizational workflow changes alone, voluntarily implemented by employers, have the scope to increase workers' pay. Policymakers interested in providing tax credits to support on-the-job

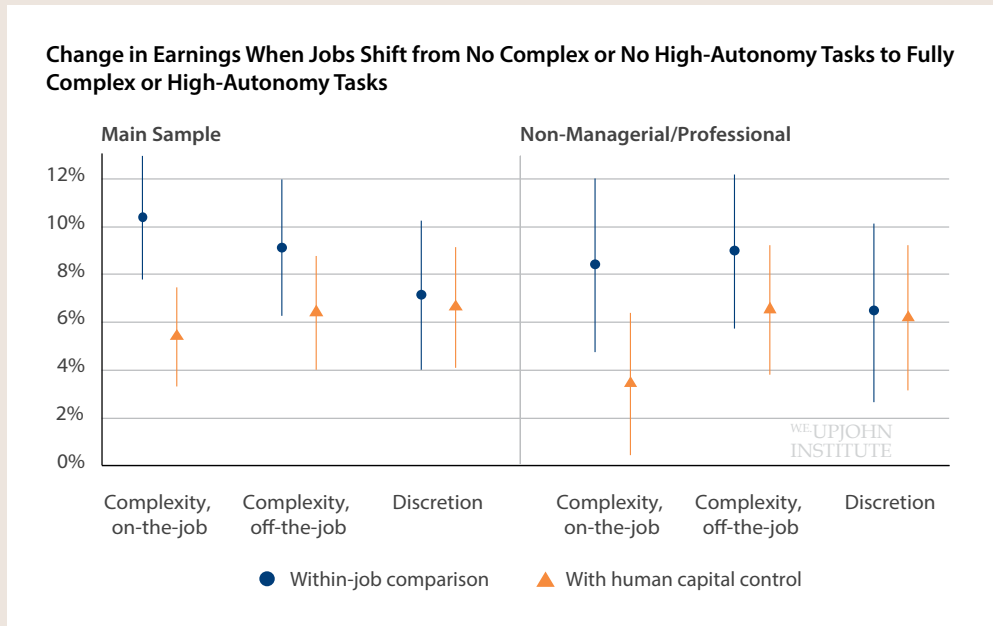
Figure 1 Characteristics of Job Tasks



NOTE: The graph shows the average scores survey respondents gave to each task. SOURCE: Nelson, Wilmers, and Zhang (2024).

More Autonomy for Frontline Workers Supports Higher-Paying Jobs

Figure 2 How Work Organization Affects Pay



SOURCE: [Nelson, Wilmers, and Zhang \(2024\)](#).

training—and ultimately greater pay and job advancement—should explore how promoting managerial plans to increase workers’ task complexity and autonomy can complement or supplement job training programs.

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