

Disability Risk and Alternative Work Arrangements

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Introduction

Workplace injuries represent major economic and health risks for households, and injuries that result in lost work days or permanent impairment have been shown to predict future Social Security Disability Insurance (SSDI) enrollment (O’Leary et al., 2012). Workers’ compensation, which provides cash benefits and medical care to injured workers, represents the front-line social insurance program for workers who are injured on the job, and benefit generosity in state workers’ compensation systems has been linked to SSDI application volumes (McInerney and Simon, 2012; Guo and Burton Jr., 2012). In recent years, *alternative work arrangements* such as independent contracting and employment through temporary help agencies have become more common, raising a number of questions about the suitability of existing social insurance programs for workers who are not direct-hire employees, or *nonstandard workers* (Katz and Krueger, 2016; Krueger, 2017).

As the prevalence of alternative work arrangements continues to grow at the expense of more traditional, direct-hire employer-employee relationships, it is imperative to understand how alternative work arrangements might alter the health and safety risks faced by workers, the magnitude of economic risks borne by nonstandard workers, and the extent to which greater employment risk or less adequate workers’ compensation benefits might affect SSDI application decisions following workplace injury. The most visible challenge for workers’ compensation and disability policy posed by the rise of alternative work arrangements is the growth of non-covered employment. Outside of Texas, where participation in the workers’ compensation system is optional for employers, workers’ compensation is essentially universal for wage and salary employees in all states. Because independent contractors are not legally classified as employees, they typically are not covered by workers’ compensation even if they are working for businesses whose direct-hire employees must be covered by workers’ compensation.

Temporary and contract employees are generally covered by workers’ compensation, but existing workers’ compensation policies might be problematic for these workers as well if they face systematically greater income and employment risk after injury than similarly situated direct-hire workers. Previous research has shown that temporary agency workers have higher workers’ compensation injury claim rates than direct-hires in the same industries (Smith et al., 2010). Interviews with injured temporary employees show that inadequate safety training and worse communication with managers and co-workers about workplace hazards contribute to elevated injury rates. These findings suggest that the tenuous nature of the employer-employee relationship directly affects the health and safety risk faced by temporary workers independently of confounding factors like age and job tenure (Foley, 2017).

We might expect that workers in alternative work arrangements would also face greater income and employment risk after workplace injury than similar direct-hire workers do, and that they might similarly face such elevated risks due to the nature of their work arrangements. Nonstandard workers may not be covered by labor laws or unjust dismissal doctrine, and even if they are covered, they may be unaware of their rights and thus less likely to pursue unjust dismissal cases. Employers may also be less likely to invest in accommodations for injured temporary workers since the workers have less employer-specific human capital and can be more

easily replaced. Moreover, temporary workers may simply be less attached to the labor force such that workplace injuries are more likely to drive them out of the labor force entirely. If nonstandard workers do, in fact, face more severe economic consequences after workplace injury, then workers' compensation benefits may be inadequate for these workers and they may ultimately be more likely to apply for SSDI as a result of their injuries. However, studies on workplace injury among nonstandard workers have focused on outcomes observable in workers' compensation data and have not directly measured labor market outcomes, making it difficult for policymakers to judge whether workers' compensation benefits are appropriately designed for the risks facing nonstandard workers.

This project provides the first empirical evidence about how income and employment risk after injury—specifically, the probability that a worker will be out of work two years after a workplace injury—differs between nonstandard and direct-hire workers. We compare labor market outcomes after workplace injury between direct-hire workers and temporary or contract employees in order to understand whether temporary workers are prone to worse employment outcomes after suffering an injury.

Data

In this project, we use a unique dataset from California to provide the first evidence comparing employment risk after workplace injury between workers in alternative work arrangements and direct-hire workers who are injured doing similar jobs. This dataset, which was developed for previous RAND studies, includes administrative claims from the universe of California workers' compensation claims for 2005 to 2012 (Dworsky et al., 2016). Workers were linked to administrative Unemployment Insurance earnings records to provide pre- and post-injury earnings and employment outcomes, permitting us to compare the trajectory of labor market outcomes across different types of workers. In our data, we can identify direct-hire workers as well as temporary and contract workers. Although temporary and contract workers do not encompass the entire nonstandard workforce, independent contractors are unlikely to be covered by workers' compensation or state Unemployment Insurance programs and are thus largely invisible in the administrative datasets available for this study. In contrast, temporary and contract workers are covered by both workers' compensation and Unemployment Insurance, so it is possible to observe injuries and labor market outcomes among temporary and contract workers. The outcomes of temporary workers can shed light on how benefit adequacy in the existing workers' compensation system compares between workers who are and who are not direct-hires.

Empirical Strategy

A major advantage of these data are that we have earnings information for both sets of workers before and after the injury, permitting us to study how similar the workers were in terms of trends before the injury while also studying the dynamic post-injury effects. Our empirical strategy is to compare changes in labor outcomes for temporary workers relative to direct-hires due to a workplace injury. However, one concern with this strategy is that temporary workers may have different employment trajectories than direct-hires regardless of injury status. Our

preferred specification, therefore, uses low-severity, medical-only workers' compensation claims as an additional comparison group to account for differential underlying trends. Medical-only claims are injury claims which do not result in payment of cash benefits; in California, this means that the worker missed fewer than three days of work after the injury. We use medical-only claims to account for the underlying differences in employment dynamics before and after between direct-hires and temporary workers. The treated group, then, is defined as temporary workers receiving indemnity benefits due to lost work time.

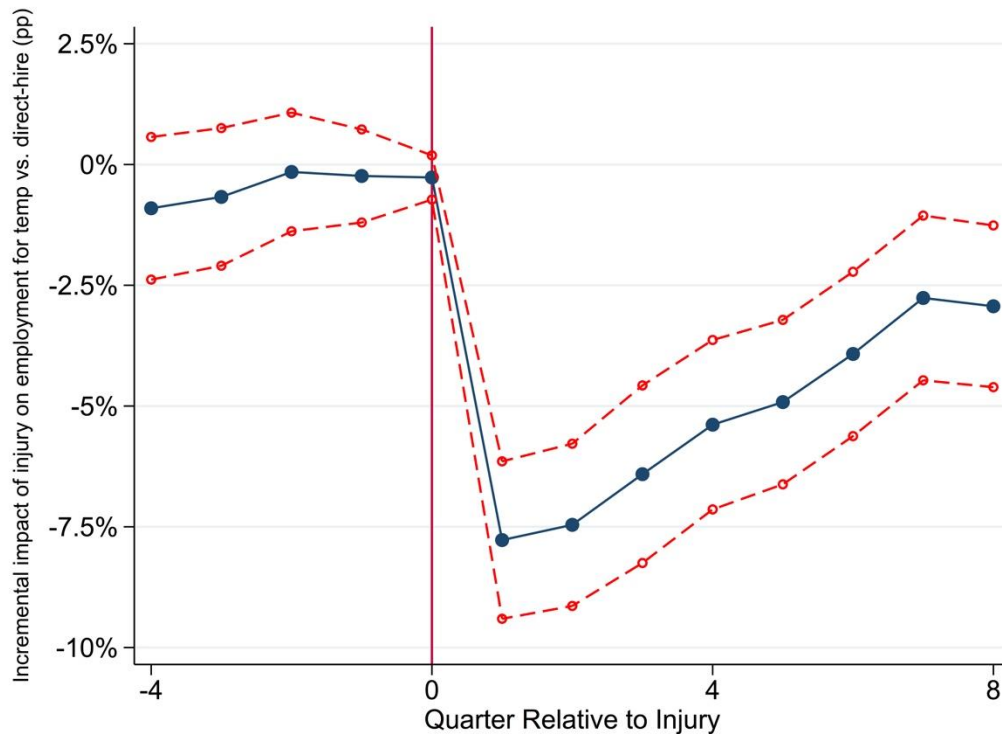
Our main variable of interest is the interaction of indicators for temporary workers, quarter relative to injury, and injured workers receiving indemnity benefits. Our specification controls for each of the two-way interactions between those three variables. When comparing direct-hire and temporary workers, it is also important to control for factors like job tenure at injury and the type of work being done at the establishment where the injury took place. We are able to estimate differences in employment risk associated with alternative work arrangements holding constant confounding factors like job tenure, demographics, and the type of work.

We also control for a full set of interactions between calendar time (based on time of the injury) and workers' compensation class code, which reflects the production process and level of injury risk at the establishment where the injury took place. Thus, the comparisons are between temporary and direct-hire workers injured at the same time doing the same kinds of work. We also control for job tenure, age-gender interactions, type of injury, geographic region within California, and full-time versus part-time status (before injury). The relationships between these variables and the outcomes are allowed to vary based on quarter relative to injury. This approach allows us to isolate the different employment trajectory for temporary workers relative to direct-hires, holding constant differences in job tenure and other observable characteristics.

Results

Our preferred triple-difference specification estimates imply that direct-hires and temporary workers have similar pre-injury labor outcomes, but temporary workers have lower post-injury employment propensities and earnings relative to direct-hires. We provide the estimates of employment differences in terms of quarter-relative-to-injury in Figure 1, along with 95% confidence intervals.

Figure 1: Employment Before and After Lost-Time Workplace Injury for Temporary vs. Direct-Hire Workers¹



The estimates are normalized to 0 in the quarter prior to the injury. We find little evidence of differential pre-existing trends. Upon injury, we see an immediate relative reduction in employment for the temporary workers. In the first quarter after injury, we find that temporary workers experience a 7 percentage point reduction in employment relative to similar direct-hires. However, we also find evidence that this differential converges rather steadily throughout the post-injury period. By the eighth quarter post-injury, the differential has declined to 3 percentage points, a meaningful difference on its own but less than half of the original differential.

¹ Source: Authors' calculations, WCIS-EDD data. See Dworsky et al. (2016) for background on the data. Figure plots regression coefficients on interactions between indicators for temporary employment, indemnity injury, and calendar quarters before or after the date of injury. Coefficients can be interpreted as incremental effect on employment of a lost-time (versus medical-only) injury associated with temporary worker status (versus direct-hire). pp = percentage points.

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