Workers’ Compensation Experience Rating and Return to Work

Seth A. Seabury, Christopher F. McLaren, Robert T. Reville, Frank Neuhauser and John Mendeloff
How do we help injured workers get back to work?

• Much research on the effects of financial incentives and workplace safety focuses on prevention

• We are also interested in minimizing the adverse consequences of injuries when they occur

• What is the role of financial incentives in promoting better outcomes for injured workers?
  – Do they lead to faster and sustained return to work?
Our approach

• Use linked data on workers’ compensation claims and employment

• Estimate the relationship between financial incentives and return to the at-injury employer

• Financial incentives measured through experience rating
  – Experience rating is not directly observed in our data
  – Compare self-insured and insured firms
Financial incentives, experience rating and self-insurance

• Workers’ compensation provides employers with incentives to minimize time out of work
  – Early return is associated with lower claim costs

• Insurance mutes these incentives
  – Restored by experience rating
  – Most insured firms are imperfectly experience rated

• Self-insured firms bear the full cost of their claims
  – Strongest financial incentives to bring people back to work
  – Assume that financial incentives the only difference
Data

• Merged 3 administrative databases in California
  – Earnings and workers’ compensation claims

• Outcome measures
  – Employment overall and for at-injury firm 1 to 5 years after the quarter of injury

• Other characteristics
  – Age, tenure, pre-injury earnings, occupation, dispute, type and severity of injury, industry and firm size for at-injury employer

• Exclude public employers
Measuring self-insurance

- Not directly observed in the data

- Workers’ compensation claims from 2 data sources
  - WCIRB – insured
  - DEU – insured + self-insured

- We denote a firm as self-insured if they fail to match
  - Introduces measurement error into the key independent variable
    - Attenuation bias towards no effect
Statistical analysis

• Estimate the effect of self-insurance on return to work using multivariate regression
  – Control for other confounders to isolate the effect of financial incentives

• Positive effect of self-insurance on return to work implies financial incentives improve outcomes for injured workers

• Use robustness checks to test for confounding effects
Results
Self-insurance measure tracks firm size

Percent of Injured Workers

Up to 1,000
1,001+
Size of At-Injury Employer

Insured
Self-Insured
Self-insured firms are much more likely to retain workers after an injury.
But overall employment is similar at self-insured and insured firms
Regression results confirm the relationship between self-insurance and return to work

<table>
<thead>
<tr>
<th>Number of Employees</th>
<th>1 Year After-Injury</th>
<th></th>
<th>5 Years After-Injury</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate (Standard Error)</td>
<td>Percent Difference</td>
<td>Estimate (Standard Error)</td>
<td>Percent Difference</td>
</tr>
<tr>
<td>101-500</td>
<td>0.007 (0.007)</td>
<td>1.6%</td>
<td>0.010+ (0.006)</td>
<td>1.0%</td>
</tr>
<tr>
<td>501-1,000</td>
<td>0.029* (0.012)</td>
<td>4.9%</td>
<td>0.032** (0.011)</td>
<td>3.2%</td>
</tr>
<tr>
<td>1,001-5,000</td>
<td>0.047** (0.012)</td>
<td>6.9%</td>
<td>0.035* (0.015)</td>
<td>3.5%</td>
</tr>
<tr>
<td>5,001+</td>
<td>0.024 (0.035)</td>
<td>3.8%</td>
<td>-0.003 (0.044)</td>
<td>-0.3%</td>
</tr>
</tbody>
</table>
Summary of findings

• Self-insured firms are “perfectly” experience rated
  – Expect them to have stronger incentives to bring injured workers back sooner

• We find that self-insured firms are up to 7% more likely to retain injured workers 1 year after injury
  – 3-4% more likely 5 years after injury
  – Robust to other covariates
  – No evidence of effects on overall labor market participation
Implications

• Self insurance is associated with better return to work
  – Suggests that financial incentives do matter
  – Though we can’t entirely rule out selection bias

• If causal, the use of mandatory experience rating
  Increases incentives to accommodate injured workers

• Future work should explore the mechanisms though
  which these incentives drive improved employment outcomes
  – Need better measures of experience rating
  – And better measures of employer behavior
Center for Health and Safety in the Workplace

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