The Effect of Seattle's Paid Sick and Safe Time Ordinance on Workers' Employment Trajectories

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Background

Over 45 percent of workers nationwide have no access to paid sick leave (CEA, 2014). These workers –many of whom earn low-wages – are more susceptible to experience negative health outcomes, lower on-the-job productivity and suffer income loss if they become sick (Drago and Miller, 2011; Applebaum and Milkman, 2011). Research suggests that workers lacking paid sick time are more likely to work while sick and to report an inability concentrate on their job, thereby increasing the likelihood of physical contagion in the workplace (Smith and Kim 2010; Davis et al. 2005). Moreover, workers without paid time off are three times more likely to forgo medical care for themselves and 1.6 times more likely to forgo care for their families (DeRigne et al. 2016)

In efforts to reduce inequality in workplace compensation and to promote public health, the city of Seattle enacted a Paid Sick and Safe Time Ordinance (PSSTO) in 2012, which mandates employers to provide one hour of paid sick time for every 30-40 hours worked by their employees (Office of the City Clerk, 2011). Among other goals, the policy is intended to reduce exposure to infectious disease, "resulting in a healthier and more productive workforce, …and improv[ing] family economic security." If successful in its intent, the policy could reduce employee absenteeism, and promote productive employee time, lower rates job turnover, longer job tenure, and greater earnings stability for workers. However, there may be unintended consequences on employees' labor market outcomes if the cost of the required insurance is passed down to affected workers through employment, lost hours, or reduced wages. Some prior research indicates that workers with access to paid sick leave have lower risks of occupational injury and are less likely to experience sharp swings in earnings (Asfaw et al. 2012, Hill 2012). However, recent research on employer mandates at the local level – such as minimum wage ordinances – has also shown that the cost incurred by such mandates can lead to net decreases in worker take-home pay (Jardim et al. 2018a, 2018b).

This paper provides a comprehensive evaluation of Seattle's PSSTO on workers' employment and earnings trajectories. Specifically, I ask: What is the effect of Seattle's Paid Sick and Safe Time on a covered worker's likelihood of remaining employed, their job tenure and turnover, and their overall earnings and hours volatility, relative to uncovered workers? The data I draw on for my study is a restricted-access administrative dataset from Washington State's Unemployment Insurance program, which provides quarterly hours and earnings data for all workers and their employers. These data allow me to precisely identify workers employed in firms in Seattle with four or more full-time equivalents relative to workers in firms with four or fewer full-time and compare the labor market outcomes of these two groups. Unlike previous research that has compared outcomes for workers in Seattle's King County to other counties (Pichler and Ziebarth, 2018), I am able to compare workers within the same labor market by leveraging variation in the size of firms that workers are employed in. As firms had little ability to manipulate their FTE size in the periods leading up to and directly after the PSSTO, my identification strategy uses a difference-in-difference framework to compare labor market

characteristics of workers' in firms with FTE sizes directly below the mandated coverage threshold (Firms with 2 - ≤ 4 FTEs) with workers in firms with FTE sizes directly above the mandated overage threshold (Firms with 2 - ≤ 6 FTEs). I define a cohort of workers as those employed in the quarter prior to the ordinance going into effect and compare their labor market outcomes in the eight quarters following the ordinance relative to their labor market characteristics eight quarters prior to getting enacted. To the extent that I can observe these workers over time, this approach generates plausibly-causal estimates of the impact of PSSTO on worker outcomes.

I further assess the effect of the PSSTO on workers who were least likely to have access to paid leave prior to the policy. Previous research has shown that 60 percent of Seattle workers already had some form of leave prior to the policy going into effect. Workers with the lowest coverage rates prior to the policy were workers in the hospitality industries, low-income workers, and workers employed in part-time work (Romich et al., 2014). To assess this potential treatment heterogeneity, I conduct subgroup analysis based on workers' industry, earnings quintile and labor market attachment, contributing some of the first ever estimates of the effect of paid sick leave on workers least likely to have access to leave prior to the policy.

This paper will contribute to existing scholarship and current policy discourse immediately: at present, a multitude of localities and states are enacting paid sick leave laws with limited evidence of how these policies affect workers and their broader impacts on patterns of inequality. In addition, this paper contributes evidence on workers' economic security by assessing the impact of the policy on workers' earnings and hours volatility in the years after the enactment of the PSSTO. To the extent that local employment regulations may lead to changes in job tenure, it may also have implications for earnings volatility and can improve welfare for workers through earnings stabilization in the same way that safety net and welfare programs increase recipient welfare through household income stabilization effects (Hardy, 2017; Deshpande, 2016).

Data and Methods

I examine the impact of the Seattle PSSTO using administrative employee-employer matched data from Washington State between during the eight quarters preceding and following implementation of the ordinance, spanning the third quarter of 2010 through the second quarter of 2014[1]. Washington's Employment Security Department collects quarterly payroll records for all workers who receive wages in Washington State and are covered by the Unemployment Insurance Program. Critically, Washington is one of four states in the nation to collect employee data on both hours worked earnings for their UI program rolls, which allows me to estimate the effect of PSSTO on workers' hours volatility and labor market attachment[2]. These data give me the unique ability to measure workers' employment status, employment duration, and job turnover in their main job, as well as their overall hours and earnings volatility.

Converting employer-employee matched data to panel data

Because the data provide information on all jobs a worker held during a quarter, it is impossible to know if a worker with earnings from more than one job in a quarter is holding both jobs simultaneously or is switching between jobs. I restrict my analysis to a workers' main job

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[1] I do not use additional quarters of data because Seattle's Minimum Wage Ordinance was passed in April of 2014, which may have independent effects on the outcomes explored in this analysis.

[2] Employers are required to report actual hours worked for employees paid by the hour, and either actual hours worked or (40 × the number of weeks worked) for salaried employees.

in each quarter, which I define as the job for which a worker works the most hours in in each quarter.[3] This restriction allows me avoid making assumptions about workers' employment transitions or multiple job holding behavior in the creation of a worker-quarter panel dataset for analysis.

Workers are observed in the UI program dataset if they are employed in a job for which they receive a W-2 in Washington State in any quarter. Thus, my analysis excludes workers in contract employment who file 1099 forms, and workers who are employed in informal arrangements paid with cash. While the PSSTO does not cover self-employed workers or workers in the informal economy, the absence of data on informal work and independent contract work means that I unable to observe potential movements between informal and formal work as a result of the policy[4]. My estimates may therefore overstate actual reductions in employment, hours and earnings if employers respond to the policy by shifting jobs under the table or outsourcing workers on payroll to contract positions, or if workers respond by shifting their employment out of formal work.

Furthermore, I only observe workers who are employed in any given quarter. Workers who are observed for a quarter in the data, and then not observed in a subsequent quarter may be unobserved for several reasons. First, the worker may be employed but not live in Washington State in the subsequent quarter. Second, the worker may be employed in the informal market or as an independent contractor in the subsequent quarter. Third, the worker may be unemployed and looking for worker. Fourth, the worker may have left the labor force or died. Missing quarters before a quarter of observable employment for workers may due to reasons (1)-(4) discussed above. Conversely, missing quarters after a quarter of observable employment for workers may due to all five reasons discussed above. I assume that quarters surrounding a workers' observable employment are quarters of nonemployment for that worker in Washington State, and impute zero for their hours and earnings. Imputing a zero for missing observations will underestimate workers' quarterly earnings and hours worked.

I identify whether or not workers are in "covered" firms by a firms' location and full-time equivalent status. To determine firms' location, I geocode mailing addresses to exact latitude and longitude coordinates[5] and then assign firms to Seattle's location based off these coordinates. Firms are unable to be geocoded for two reasons. First, firms with multiple locations have the option of establishing a separate UI account for each location, or a common account. Geographic identification in the data is at the account level. As such, I can identify business locations only for single site firms and multi-site firms that decide to have separate accounts by location and am unable to use 33 percent of the available worker level data. Second, I am unable to geocode businesses with invalid addresses or those whose address is listed only as "state-wide" or "unknown", which accounts for 5 percent of workers in the available data. Table 2 shows the average quarterly number of firms and workers included in my analysis after making these restrictions.

Firms are covered by the law if they have four full time equivalent employees (FTEs) in the calendar year prior to the ordinance (new firms assess their FTE status using a lookback

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[3] If a tie occurs between the number of hours worked by a worker, I chose the job for which a worker earns the most in a quarter.

[4] I will assess potential movements between formal and informal work using ACS data to incorporate a sense of these underlying patterns into future analysis.

[5] I geocode the data using the Business Analytics 2016 Street Map database from ARC GIS. Data is kept if geocoded to street address or zipcode level. I am successfully able to geocode 92 percent of the data.

period of 90 days). A full-time equivalent [worker] is based off the number of hours worked by workers in a given year (2080 hours= 1 full-time equivalent). As large firms behave differently than small firms (and are more likely to be unobserved in my data), I restrict my analysis to firm's right above and below the cut-off point of four FTEs. I assign treatment to firms who were categorized as having at least four but fewer than six FTEs in Seattle in the quarter prior to the ordinance going into effect. Firms are in the comparison group if they were categorized as having at least two but fewer than four FTEs in Seattle in the quarter prior to the ordinance going into effect.

Difference-in-difference identification strategy

As the paid sick leave policy went into effect in the third quarter of 2012, I compare worker labor market outcomes in the eight quarters following the policy, 2012q3-2014q2, to their labor market outcomes in the two years prior to policy, 2010q3-2012q2[6]. The internal validity of this difference-in-difference framework necessitates that the outcomes of interest in pre-policy period are equivalent for the treated and untreated groups. To estimate the effects of Seattle's PSSTO on worker labor market outcomes, I express the difference-in-difference as a two-way fixed effects model that follows the basic form:

$$y_{irt} = \beta_0 + \beta_1(Post_t \times Seattle_r) + \gamma_i + \varphi_r + \tau_t + \epsilon_{irt}$$

Where y_{irt} is the outcome variable of interest, $Post_t$, is a dummy for the period after the policy went into effect, 2012q3-2014q2, $Seattle_r$ is a dummy for the treatment group, β_1 is the causal effect of Seattle's PSSTO in the post policy period, γ are individual fixed effects, φ are regional fixed effects, τ are quarter fixed effects. I follow Bertrand, Mullainathan and Duflo (2004) and cluster my standard errors at the firm level.

Beyond estimating treatment effects for all workers covered by the PSSTO, I conduct subgroup analysis based on workers' industry, earnings quintile and labor market attachment, to assess whether or not workers who were least likely to have access to paid sick leave respond differently relative to workers who are more likely to have paid sick leave. I use two measures of labor market attachment: workers average employment spell duration prior to the ordinance going into effect and workers' average quarterly number of hours worked at their main job.

Preliminary Results

Due to disclosure restrictions enforced by the Washington State Employment Security Department, I am unable to share preliminary findings with the PAA review committee at this time. Disclosure review will occur in later 2018 and results will be ready by the PAA 2019 Annual Conference.

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[6] Given that firms "covered" status is determined by the number of FTEs' they had in the year prior, firms who were eligible in the first two quarters of the post period may not be eligible in the post period quarters of 2013 and 2014. I conduct sensitivity analysis on workers in firms that maintain their covered status throughout the post period.

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