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RESEARCH BRIEF

Profiling the U.S. Sick Leave Landscape: Presenteeism among Females

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Objective. To profile the sick leave landscape in the United States.

Data Sources. The 2011 Leave Supplement of the American Time Use Survey.

Study Design. Bivariate and multivariate analyses to identify (i) employees without sick pay coverage and (ii) employees who attend work sick.

Principal Findings. Sixty-five percent of full-time employees have sick pay coverage. Coverage rates are below 20 percent for employees with hourly wages below \$10, part-time employees, and employees in the hospitality and leisure industry.

Conclusion. Each week, up to 3 million U.S. employees go to work sick. Females, low-income earners, and those aged 25 to 34 years have a significantly elevated risk of presenteeism behavior.

Key Words. Paid sick leave, sick pay, presenteeism, low-income worker, U.S. sick leave landscape, medical leave

Send me a bill that gives every worker in America the opportunity to earn 7 days of paid sick leave. (Barack Obama in his State of the Union Address on January 20, 2015)

I think the Republicans would be smart to get behind it. (Bill O'Reilly in The O'Reilly Factor [Fox News] on January 21, 2015)

The United States is the only industrialized country without universal access to paid sick leave (Heymann et al. 2010; Schliwen et al. 2011). However, underscored by the epigraph, support for paid sick leave has grown substantially in the last decade. Sick leave mandates have been implemented in San Francisco, Seattle, Washington D.C., New York City and Portland, among others. Connecticut was the first state to implement an employer mandate in 2012 (Ahn and Yelowitz 2015); California, Massachusetts, and Oregon have followed. The *Healthy Families Act* even proposes the introduction of a federal paid sick leave program.

A strong rationale for sick pay coverage is public health promotion. Without sick pay, contagious employees come to work sick, which triggers

“negative externalities” and spreads diseases. Given vaccination rates of around 40 percent in the United States, workplace presenteeism is one important channel through which flu epidemics spread (Blank, Schwenkglenks, and Szucs 2009; CDC 2014a). It has also been found that the costs of reduced work productivity due to presenteeism can exceed the medical costs for some conditions (Goetzel et al. 2004). Over-the-counter (OTC) drugs that suppress flu symptoms, but fail to curb contagiousness, reinforce the spread of diseases under presenteeism (Earn, Andrews, and Bolker 2014). The annual death toll associated with the flu ranges from 3,000 to 49,000 individuals in the United States (CDC 2014b, WHO 2014). Using 1987 MEPS data and structural modeling techniques, Gilleskie (1998) estimates that a quarter of all employed males work during an illness episode. Pichler and Ziebarth (2015) show that the spread of influenza-like diseases decreased by about 5 percent after U.S. cities mandated employee access to (paid) sick leave.

This paper empirically investigates the sick leave landscape in the United States, exploiting the 2011 Leave Supplement of the American Time Use Survey (ATUS). Our conceptual framework consists of two main categories of predictors. The first category includes workplace factors that predict access to paid sick leave, such as part-time and full-time work, salary, and industry. The second category includes factors that predict the individual need for sick leave such as age and whether one has children.

Our findings show that 55 percent of American employees have sick pay coverage. Large differences by type of work and sociodemographics exist. Coverage rates are significantly lower for part-time workers, low-income workers, very young employees, and very old employees. The service sector—where presenteeism is a particular public health concern—reveals very low coverage rates.

When analyzing the need for paid sick leave, one finds: In a given week of the year, 4.8 percent of employees actually take sick leave due to own sickness, and 1.6 percent take sick leave due to a relative’s sickness. Two percent of employees—or about 3 million Americans—self-report that they would have needed sick leave but did not take it. Half of those who went to work sick indicated that a lack of coverage was the reason for their presenteeism. When analyzing the characteristics of these employees, a clear picture emerges:

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Low-income female employees with children have a significantly elevated risk of working sick.

DATABASE AND EMPIRICAL ANALYSIS

ATUS Leave Supplement 2011

This research uses the Bureau of Labor Statistics (BLS) provided ATUS, a nationally representative cross-sectional survey with approximately 14,000 participating households every year, which are equally distributed over all months of the year (BLS 2014; United States Department of Labor 2015).

In 2011, a special “Leave Module” was included in the ATUS. Because only employed respondents were eligible for the Leave Module, our final sample consists of 6,354 respondents.¹ We use the sample weights provided by the ATUS throughout the empirical analysis.

Sick Pay Coverage. The first ATUS Leave Supplement question asks employees whether they receive paid leave (in general) on their main job. Those 61 percent who answer “yes” are then asked specifically whether they could take paid leave for different reasons, among them “own sickness.” Our first outcome variable *Sick Pay Coverage* is one for those 55 percent who self-report that they are able to take paid leave for their own illness or those of a sick family member.² Other surveys indicate similar shares (Lovell 2003; Boots, Martinson, and Danziger 2009; CEA 2014; Gault et al. 2014). For example, the National Compensation Survey, which surveys employers, reports that 61 percent of U.S. employees would be covered by paid sick leave in 2012 (up from 50 percent in 1992/1993) (Van Giezen, 2013).

In the United States, it is increasingly common that employers offer a single “convertible” form of paid leave that can either be used as paid vacation, paid maternity leave, or paid sick leave. Such plans are sometimes called “consolidated leave plans” or “PTO banks” (Lindemann and Miller 2012). Because “consolidated leave plans” do not represent sick pay schemes in the narrow sense,³ *Sick Pay Coverage* overestimates the true rate of (separate) sick leave coverage if employees with such plans claim that they can take paid sick leave. The Leave Supplement explicitly asks respondents whether their employer would offer (1) a PTO plan and/or (2) paid sick leave separately. Respondents who answer positive on the former question, negative on the latter, and still claim that they can take paid leave when sick, represent 15 percent

of all employees. Thus, only around 40 percent have *Sick Pay Coverage* and also claim that their employer offers a separate sick leave plan.⁴

Unmet Need for Paid Sick Leave (“Presenteeism”). The second outcome variable indicates an unmet need for sick leave. The binary variable is one for respondents who indicate that, in their main job in the last week, they would have needed to take sick leave because of own or a relative’s sickness but, in fact, did not take it. In other words, we measure presenteeism behavior.

Bivariate Comparisons by Type of Job and Sociodemographics

Sick Pay Coverage. The first column in Table 1 shows sick leave coverage rates by sociodemographics. Males (56 percent) and females (54 percent) have very

Table 1: Sick Pay Coverage and Unmet Need for Sick Leave by Sociodemographics

| | <i>Sick Pay Coverage</i> | <i>Unmet Need for Sick Leave (“Presenteeism”)</i> |
|-----------------------|--------------------------|--|
| Gender | | |
| Males | 0.561 | 0.013 |
| Female | 0.542 | 0.029 |
| Children in household | | |
| No | 0.565 | 0.018 |
| 1–3 | 0.542 | 0.022 |
| More than 3 | 0.398 | 0.052 |
| Type of work | | |
| Part-time | 0.185 | 0.019 |
| Full-time | 0.648 | 0.025 |
| Age (years) | | |
| Under 25 | 0.210 | 0.022 |
| 25–34 | 0.594 | 0.027 |
| 35–65 | 0.634 | 0.018 |
| Above 65 | 0.371 | 0.022 |
| Hourly wage | | |
| Below \$10 | 0.198 | 0.030 |
| \$10–\$20 | 0.560 | 0.025 |
| \$20–\$30 | 0.733 | 0.012 |
| Above \$30 | 0.724 | 0.008 |

Source. ATUS 2011, Leave Module, own illustration. The ATUS-provided leave module weights are applied.

similar rates. Coverage rates remain near the average of 55 percent until three children, and sharply drop to 40 percent when the household counts more than three children.

While only 18.5 percent of part-time workers have sick pay coverage, 65 percent of full-time workers have access. Put differently, 35 percent of all full-time employees in the United States claim that they cannot take paid leave when sick.

The next four rows in Table 1 illustrate that coverage rates are around 60 percent for age groups 25–65 but sharply decrease to 21 percent for employees under the age of 25, and to 37 percent for employees above the age of 65.

Jobs that pay less than \$10 per hour have coverage rates below 20 percent. Access to sick pay sharply increases to 56 percent for hourly wages between \$10 and \$20. Employees who earn \$20 per hour or more report in more than 70 percent of all cases that they can take paid sick leave.

Presenteeism. The average presenteeism rate is 2.1 percent. Relative to an estimated 130–140 million employees between 2011 and today (BLS 2015), this representative rate translates to between 2.7 and 3 million U.S. employees going to work sick (or not being able to take care of their sick child) in a given week of the year. Moreover, 4.8 percent of respondents took sick leave because of own sickness, and 1.6 percent took leave for a sick family member (numbers not reported in table).⁵ In addition, 1.3 percent rescheduled their work hours or work location due to own or a relative's sickness.⁶ This yields an estimated weekly demand for sick leave of 9.8 percent of the workforce.

Column (2) of Table 1 shows that, first, presenteeism is more than twice as high for female than male employees (2.9 percent vs. 1.3 percent). Second, the rate more than doubles from 2.2 to 5.2 percent when more than three children are in the household. Third, the rate is higher for full-time than part-time employees (2.5 percent vs. 1.9 percent). Fourth, the rate is highest for age groups 25–34. Lastly, presenteeism and the hourly wage are negatively associated.

Reasons for Presenteeism. Table 2 lists the reported reasons for not taking sick leave despite needing it. Almost one third—or about 1 million Americans every week—could not afford the loss in income. Almost 7 percent wanted to save leave and almost 5 percent got denied leave. Another 2 percent reported

Table 2: Among Employees Who Needed but Did Not Take Sick Leave, Reasons for Not Taking

| | <i>Percent</i> |
|--|----------------|
| Lack of comprehensive coverage | |
| Could not afford loss in income | 27.20 |
| Wanted to save leave | 6.78 |
| Leave was denied | 4.59 |
| Did not have enough leave | 1.7 |
| Total | 40.27 |
| Job consequences and other | |
| Fear of job loss or other negative outcome | 11.01 |
| Too much work | 20.36 |
| Other | 28.37 |
| Total | 100 |

Source. ATUS 2011, Leave Module, own illustration. The ATUS-provided leave module weights are applied.

that they did not have enough leave. When adding up these categories, 40 percent of all employees with presenteeism behavior indicate a lack of (comprehensive) coverage as reasons for not taking sick leave.

The other main reasons for not taking sick leave when needed are a high workload (20 percent) or being afraid of negative job consequences (11 percent).

Multivariate Regression Results

Table 3 estimates the determinants of sick pay coverage and presenteeism behavior using a multivariate parametric regression framework. Each column is one regression model, where the models only differ by the sets of covariates included.

Predictors of Sick Pay Coverage. First, one does not observe significant coverage differences by gender.

Second, the number of children is linked to paid sick leave access. Having less than three children in the household is significantly associated with a higher likelihood of access to paid sick leave. When controlling for the type of job, the strength of the relationship is cut in half; yet it is still a highly significant 8–9 percentage points (ppt) or around 15 percent of the mean (column 2 of Table 3).

Table 3: Significant Predictors of Sick Pay Coverage and Presenteeism

| | <i>Sick Pay Coverage</i> | | <i>Presenteeism</i> | |
|------------------------------|--------------------------|---------------------|---------------------|---------------------|
| | (1) | (2) | (3) | (4) |
| Female | -0.0139 (0.0119) | 0.0054 (0.0119) | 0.0162*** (0.0036) | 0.0150*** (0.0057) |
| No children in HH | 0.1592*** (0.0399) | 0.0842** (0.0362) | -0.0349*** (0.0119) | -0.0647*** (0.0175) |
| 1-3 children in HH | 0.1405*** (0.0402) | 0.0908** (0.0364) | -0.0309** (0.0120) | -0.0564*** (0.0176) |
| Age <25 | -0.4207*** (0.0171) | -0.1217*** (0.0190) | 0.0033 (0.0051) | -0.0152* (0.0092) |
| Age 25-34 | -0.0383*** (0.0147) | -0.0057 (0.0136) | 0.0090** (0.0044) | 0.0218*** (0.0065) |
| Age 65+ | -0.2736*** (0.0340) | -0.1082*** (0.0313) | 0.0053 (0.0102) | -0.0119 (0.0151) |
| Hourly wage <\$10 | | -0.2947*** (0.0199) | | 0.0345*** (0.0096) |
| Hourly wage \$10-\$20 | | -0.1143*** (0.0152) | | 0.0291*** (0.0073) |
| Hourly wage \$20-\$30 | | 0.0164 (0.0172) | | 0.0040 (0.0083) |
| Full-time employee | | 0.2878*** (0.0155) | | 0.0020 (0.0075) |
| College education | | -0.0007 (0.0204) | | 0.0104 (0.0098) |
| Mining | | 0.0243 (0.0851) | | 0.0097 (0.0411) |
| Construction | | -0.0582 (0.0621) | | 0.0210 (0.0300) |
| Manufacturing | | 0.1480** (0.0605) | | 0.0335 (0.0292) |
| Wholesale and retail trade | | 0.1825*** (0.0598) | | 0.0341 (0.0289) |
| Transportation and utilities | | 0.2277*** (0.0626) | | 0.0123 (0.0302) |
| Information | | 0.1472** (0.0673) | | 0.0561* (0.0325) |
| Financial activities | | 0.3348*** (0.0625) | | 0.0403 (0.0302) |
| Prof. and business services | | 0.1743*** (0.0604) | | 0.0274 (0.0291) |
| Education and health | | 0.2490*** (0.0593) | | 0.0364 (0.0286) |
| Leisure and hospitality | | 0.0684 (0.0608) | | 0.0199 (0.0293) |
| Other services | | 0.0674 (0.0644) | | 0.0323 (0.0311) |

Continued

Table 3 Continued

| | Sick Pay Coverage | | Presenteeism | |
|-----------------------|--------------------|--------------------|--------------------|-----------------|
| | (1) | (2) | (3) | (4) |
| Public administration | | 0.4104*** (0.0629) | | 0.0073 (0.0304) |
| Constant | 0.4859*** (0.0440) | 0.1779** (0.0722) | 0.0416*** (0.0131) | 0.0432 (0.0348) |
| Observations | 6,354 | 6,354 | 6,354 | 6,354 |
| R ² | 0.0981 | 0.2695 | 0.0070 | 0.0178 |

Notes: Standard errors are in parentheses. Each column stands for one Linear Probability Model. The results are robust to estimating probit models and calculating marginal effects. All regression models are weighted using the ATUS-provided leave module weights. The binary dependent variable in the first two columns indicates whether interviewed employees have access to paid sick leave. The binary dependent variable in the last two columns indicates whether interviewed employees needed to take sick leave but did not do it in the week prior to the interview. All regressions include controls for the calendar month of the interview. Reference groups are as follows: age 35–65, male, more than three children in household, hourly wage above \$30, part-time work. The findings are robust to excluding those 114 respondents with an hourly wage of more than \$200.

* $p < .1$, ** $p < .05$, *** $p < .01$.

Source: ATUS 2011, Leave Module, own illustration.

Third, the highly significant negative correlations between young employees, old employees, and coverage rates decrease strongly when controlling for the type of job, income, and industry. Yet employees below the age of 25 and above the age of 65 still have 11–12 ppt lower sick pay coverage rates when controlling for these factors.

Fourth, controlling for sociodemographics and job characteristics, full-time work is associated with a significant 29 ppt higher coverage probability.

Fifth, hourly wages between \$10 and \$20 (as compared to wages of more than \$30) are associated with an 11 ppt reduced coverage probability. For jobs that pay less than \$10 an hour, coverage rates decrease even further and are 29 ppt lower as compared to wages above \$30.

Finally, in the regression analysis, the industry reference group *agriculture* has a coverage rate of 29 percent. Nonsignificant coefficients (construction, leisure and hospitality, other services) thus reflect *low* coverage rates. As seen, coverage rates are a significant 23 ppt, 25 ppt, 33 ppt, and 41 ppt higher in *transportation, education and health care, finance, and public administration*, respectively (see Table 3, column 2).

Predictors of Presenteeism. Even when controlling for the type of job, age, and present children, employed women are significantly more likely to report presenteeism behavior. The magnitude of the difference with men is huge: the presenteeism risk for females is more than 70 percent greater than for males. Also note that the coefficient hardly changes when job characteristics are controlled for, reinforcing that higher needs—not lower access rates (also see Table 1)—drive the higher presenteeism rates for females. Explanations could include the “double burden” or “time squeeze” hypothesis according to which the number of working hours and responsibilities have particularly increased for females (Leete and Schor 1994; Costa 2000; Bratberg, Dahl, and Risa 2002).

Second, having more than three children in the household strongly and significantly increases the risk of presenteeism.

Third, and in line with the observation just made, the 25–34 age group reports significantly more often to work despite having needed sick leave. The significant children and age group predictors suggest that children both directly and indirectly increase the need for sick leave through (1) own sickness, and (2) transmission of infectious diseases to parents.

Finally, the hourly wage is significantly related to presenteeism behavior. Employees with a wage of less than \$10 and \$10–\$20 per hour are more

than three times as likely to report presenteeism behavior in the past week—relative to wages above \$30 with a baseline risk of 0.8 percent.

CONCLUSION

This paper describes the sick leave landscape in the United States—the only industrialized country without universal access to paid sick leave. The overall coverage rate among U.S. employees is 55 percent. While middle-aged full-time employees in finance or public administration have relatively high coverage rates, they are below 20 percent for part-time and low-income employees.

We estimate the actual demand for paid sick leave—own or those of a child—to lie at around 10 percent among the U.S. workforce in a given week of the year. About 6.4 percent take sick leave, paid or unpaid, and others find ways to rearrange their working hours or location. However, in any given week of the year, 2 percent of U.S. employees go to work despite being sick. These up to 3 million U.S. employees who work sick are primarily low-income females with kids.

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NOTES

1. We leave the sample as unrestricted as possible. The first filter question was answered by 6,602 respondents (71 missings). To keep the sample size stable across

- models to allow for clean comparisons, we drop an additional 248 (3.8 percent) respondents with missings on one of the other covariates.
2. In fact, 99.3 percent of those who report that they can take paid leave for a sick family member also report that they can take paid leave for their own illness.
 3. “Consolidated” paid leave appears to be superior to paid leave under separate categories. The BLS reports that the average PTO bank has 20 days of *total* paid leave after 5 years of service with the employer. It has been argued that employers offer PTO plans to reduce the overall number of paid leave days (Lindemann and Miller 2012). In addition, PTO plans may not reduce contagious presenteeism in an optimal way because employees are reluctant to use their paid vacation for sickness. Note that employees are always free to use their paid vacation as personal sick pays or for any other reason.
 4. Eighty-nine respondents not only deny that they have separate sick leave plans, indicate to have a PTO plan, but also deny that they can take paid leave when sick. While all these statement could be true at the same time, we suspect small reporting errors among those 89 respondents with a zero on *Sick Pay Coverage*. The findings are robust to recoding these 89 respondents.
 5. As a comparison, under Germany’s generous mandated sick leave scheme—with up to 6 weeks of paid sick leave without wage cuts—on a given workday, 4 percent of the workforce is on sick leave. During the flu season, each day about 1.5 percent are on sick leave due to colds and flus (Techniker Krankenkasse, 2015). About half the workforce report zero sick days per year, but, on average, employees take 15 days of paid sick leave (Ziebarth and Karlsson 2010, 2014). The majority of sick days are due to musculoskeletal diseases—back pain—(20 percent), mental diseases (18 percent), and respiratory diseases (13 percent), which also include influenza (Techniker Krankenkasse, 2015).
 6. Except for four respondents, no one who rescheduled work reported an unmet need for sick leave; that is, the reported shares above are all mutually exclusive.

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SUPPORTING INFORMATION

Additional supporting information may be found in the online version of this article:

Appendix SA1: Author Matrix.