



## Sickness absenteeism during a period of job-to-job transition



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### HIGHLIGHTS

- We investigate the pattern of sickness absence from work for job-to-job movers.
- The increase in absence prior to the job move is relatively strong.
- After transition, the decrease in absence is weaker and limited to a shorter period.
- Absence responds to various financial incentives during a job transition.

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### ABSTRACT

We examine a novel pattern of workplace sickness absenteeism for job-to-job movers, covering the periods before and after their job transitions. The movers display two opposite changes of absenteeism—an upward and a downward spike before and after job change. The estimates indicate a behavioural effect related to differences in financial incentives for job movers.

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### 1. Introduction

Sickness absence is an important topic for empirical investigation, since it may reveal differences in both the work effort and productivity in the workplace (Treble and Barmby, 2011). There is a broad range of literature demonstrating that sickness absence from work is procyclical by nature. Many studies – over a long period of time – have documented a negative correlation between sickness absenteeism and the unemployment rate (e.g. Behrend, 1959; Scoppa and Vuri, 2014). Work effort is higher during recessions (Lazear et al., 2016).

Literature has provided two explanations for this stylized fact. First, there are behavioural effects. According to this line

of reasoning, employers lack costly information about the effort of individual employees. Consequently, the employee's decision to report sick can be motivated by financial incentives—for, unemployment has a weaker disciplinary effect in a tight labour market. Second, there is a composition effect. During an economic expansion there is a relatively larger influx of unhealthy employees who are more prone to sickness absence (e.g. Arai and Skogman Thoursie, 2005; Nordberg and Røed, 2009).

This article adds to this literature by focusing on the absence pattern during an employee's job transition. Financial incentives are different before and after the job change. The disciplinary effect of dismissal is relatively weak during the period that employees are entitled to give their old employer notice. In contrast, the disciplinary effect during their new job's probationary period might be relatively strong, because the employer is allowed to dismiss the employee without further notice. Consequently, absenteeism may be relatively high (low) before (after) the job transition. Our contribution is that we identify the two partial

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**Table 1**  
Summary statistics for job-to-job movers<sup>a</sup>.

Employee characteristics	Average
Monthly absence rate	0.069 (0.209)
Male (=1)	0.537 (0.499)
Age (years)	35.32 (10.37)
Number of children	1.066 (1.161)
Unmarried (=1)	0.506 (0.500)
Married (=1)	0.421 (0.494)
Divorced (=1)	0.069 (0.254)
Widowed (=1)	0.004 (0.066)
<b>Firm characteristics</b>	
Absence rate (old firm)	0.057 (0.026)
Absence rate (new firm)	0.060 (0.028)
Number of employees (old firm)	1829 (5303)
Number of employees (new firm)	1901 (4833)
Salary in old firm (in euros)	26,208 (16,856)
Salary in new firm (in euros)	26,187 (16,904)
Number of firms	9233
Number of employees	18,188

<sup>a</sup> Old/new firm: before/after job transition. Descriptives for economic sector are not reported. Standard deviations in parentheses.

disciplinary effects, after correcting for the composition effect. By following individuals over time we are able to isolate behaviour from composition.

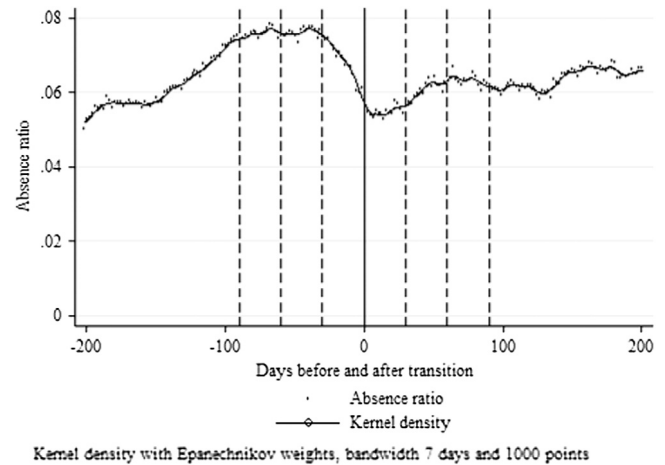
So far, the empirical literature has only partially investigated both effects. With regard to the separations of employees, [Drago and Wooden \(1992\)](#) demonstrate that workplace absences of employees in Australia, Canada, New Zealand, and the United States will be higher if they are searching for a new job. As to hiring new employees, [Ichino and Riphahn \(2005\)](#) show that employees in an Italian bank had a lower absence level during their probation period, and that this increased as soon as the period was over.

Our analysis is based on three institutional features that are common in Dutch labour relations (as they are in other European countries). First, Dutch law stipulates that employees who resign (e.g. due to a transition to another employer) are required to give an advance notice of one calendar month; for dismissal, this advance notice period is about one to three months ([Frenk, 2013](#)). Second, employees usually have a probationary period of two to three months in their new job. Third, as absence due to sickness is imperfectly monitored by employers, a certain amount of shirking may occur ([Hassink and Koning, 2009](#)).

## 2. Data

For our analysis, various administrative datasets from Statistics Netherlands were used. The Dutch Social Statistical Dataset on Jobs 2002–05 is an employer–employee matched dataset. We were able to trace employee movements across employers, based on the exact dates of leaving the old firm and starting at the new one. In addition, we had all the employee information as regards both firms involved in the job-to-job transition. Job-to-job movers were identified as employees starting their new employment period immediately after the previous one had ended, without experiencing a spell of unemployment. These job-to-job transitions could involve both voluntary resignations and involuntary layoffs. We cannot rule out that perhaps a small number of the job-to-job transitions are of an involuntary nature, although this is likely to be a relatively minute fraction, because the employees selected had switched from one employer to the other without any period of unemployment.

The Dutch National Absence Statistics were available for the period 2004–05. These data had been collected for administrative purposes, because firms were required to submit this information to the Dutch Health and Safety Executives. The information contained the dates on which a spell of sickness started and ended.



**Fig. 1.** Average daily absence rate before and after the job-to-job transition.

Furthermore, we matched the data to administrative information about the Municipal Administration in order to include individual characteristics.

We used a sample of 18,188 job-to-job movers, who were employed at 9233 employers and whose transition took place in 2004 or 2005. As to these employees, we used information on absenteeism both at a daily and monthly level. [Table 1](#) gives the summary statistics of the information used for the regressions. The average absence rate is 0.069.

## 3. Results

We examine the pattern of daily absence as regards our sample of employees who had experienced a job-to-job transition. Time is rescaled to the variable  $d$ , which is defined as the number of days after – or before – the job transition took place (at  $d = 0$ ). [Fig. 1](#) shows the development of the average daily absence rate; the dashed vertical lines indicate 30, 60, and 90 days before and after the transition. Before the job-to-job move, absenteeism increases to a peak of about 8.0% at  $d = -30$ . The absence peak previous to the job transition corresponds with the obligatory one-month notice before terminating the labour contract.

The pattern of absence suggests disciplinary effects around the job transition, but alternatively there may be a composition effect, based on the reversed causality of sick leave on job mobility. More specifically, job mobility may be triggered by unobserved differences in health. Although the decrease in absence during the month before the transition might confirm the suggestion, the upward trend before refutes this explanation. There are various explanations for the decrease in the average absence rate during the last days before transition. First, because of the statutory entitlement to paid holidays (which is a legal right; all full-time employees are entitled to at least 25 days per year) employees may have accrued a number of paid holidays during the year. It is common practice that any remaining days are then taken up just before the job move, so that employees need not report absent. Alternative explanations are that absence is less precisely recorded before a job transition, or perhaps there may be a brief shirking without sick pay during this period.

On the day of the job move, average absence is relatively low at 5.2%, but it increases steadily afterwards to 6.3%, which is about the same level of absence as before the job move.

We performed a fixed-effects regression by using the monthly data, so that the within variation removes some of the endogeneity of health (the composition effect). We regressed the monthly rate of absenteeism on a set of six dummy variables that cover each

**Table 2**  
Estimation results; dependent variable: monthly absence rate.<sup>a</sup>

	(1)	(2)
3 months before transition	0.0074*** (0.0016)	0.0079*** (0.0016)
2 months before	0.0116*** (0.0016)	0.0082*** (0.0018)
1 month before	0.0111*** (0.0016)	0.0049*** (0.0018)
1 month after transition	−0.0075*** (0.0013)	−0.0023 (0.0014)
2 months after	−0.0050*** (0.0013)	−0.0002 (0.0013)
3 months after	−0.0068*** (0.0013)	−0.0002 (0.0012)
Absence rate (old firm)		0.502*** (0.060)
Absence rate (new firm)		0.611*** (0.062)
F-test: Number of employees (old firm) (9)		2.51***
F-test: Number of employees (new firm) (9)		1.85*
F-test: Salary (old firm) (10)		0.51
F-test: Salary (new firm) (10)		0.46
F-test: Sector (old firm) (12)		0.56
F-test: Sector (new firm) (12)		0.65
F-test: Monthly dummies (23)		40.05***

\* Statistically significant at the 10-percent level.

\*\*\* Statistically significant at the 1-percent level.

<sup>a</sup> Fixed effects estimates. Based on the monthly information of 18,188 employees; in total 404,268 observations. Clustered standard errors by employee in parentheses. Old/new firm: before/after job transition. For variables with multiple categories, the *F*-statistic is reported; the number of categories are in parentheses.

of the three months before and after the job-to-job transition. The specification includes employee-fixed effects to control for differences in unobserved health across employees. Standard errors were clustered by employee, in order to remove some of the intertemporal correlations of health that are not related to the move.

Table 2 presents the estimated parameters on each of the six months. The estimates of column (1) indicate that the total increase of the sickness absence rate in the three months preceding the job-to-job transition is 0.0100 (standard error: 0.0013) and that the total decline in the three months after changing jobs is 0.0064 (0.0011).

As a robustness check, we included additional explanatory variables on firm characteristics, which were distinguished by the firm prior to moving and the “new firm”, as well as the sector (column (2)). By including controls for firm (average absence rate, not including the employee’s own absence), sector, firm size,

salary, and month, the total effect of the three months before the job change becomes somewhat smaller (0.0070, standard error: 0.0014), whereas the sum of the three months’ total afterwards becomes insignificant (−0.0009, standard error: 0.0011). For one month after the job move, the estimated parameter is −0.0023, with a *p*-value of 0.103.

Overall, the panel estimates suggest that the increase in absenteeism before the job change is substantial, whereas the decrease afterwards is relatively weaker. The estimates which include a full set of controls imply that the decrease is limited to a shorter period of one month only.

#### 4. Conclusion

Our empirical analysis is about a specific pattern of sickness absenteeism from work—job-to-job movers exhibiting two opposite pulsations of absenteeism, just before and right after the job transition. The estimates indicate different behavioural effects that are associated with the job change—the increase in absence prior to the job move is relatively strong, whereas the decrease in absence after the job change is relatively weak and limited to a short period of time.

The estimates suggest that job movers experience a change in the financial value of their outside option before and after the job transition. We leave it to further research whether these financial incentives for the employee change across the business cycle. It will require data over a longer period of time covering the entire business cycle.

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