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Where To Go?
Workers' Reasons to Quit and Intra- versus Interindustry Job Mobility*

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Abstract

This paper employs survey data on the reasons to quit of Dutch job changers who entered or left a public sector job in 2001. We show that workers' reasons to quit their public sector job influence their decision to stay in or leave their industry of employment. A bad experience with, for instance, pay, work pressure, or job duties makes a change in industry more likely. Likewise, many workers who quit out of dissatisfaction with pay or management leave the public sector altogether. Lastly, it is shown that workers' reasons to quit fully explain the differences in wage growth between intra- and interindustry job movers.

Keywords: Reasons to quit, Job mobility, Wages, Change in industry, Public sector workers.

JEL-codes: J28, J31, J33, J45, J63,

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1 Introduction

In many countries, the public sector faces problems recruiting and retaining skilled personnel (OECD, 2001). Borjas (2003) shows that since 1970, the private sector in the US has become financially more attractive to high-skilled workers, as wage dispersion has increased more in the private sector than in the public sector. In the UK, public sector workers felt that problems with bureaucracy, workload, pay, and management were specific to the public sector, and these factors were the main reasons for workers to leave the public sector (Audit Commission, 2002). Still, many workers remained in the public sector, as "personal fulfilment made up for the lack of financial rewards" (p. 29). This makes clear that nonpecuniary factors may influence workers' decision to stay in or leave the public sector.

It has been shown that nonpecuniary factors are important determinants of quit behaviour. Akerlof et al. (1988) find that more people quit their job for nonpecuniary reasons than for pecuniary reasons, and argue that "any realistic portrait of labor turnover must include a role for nonpecuniary rewards" (p. 498). Nonetheless, many authors have ignored these factors in analyses of job mobility, mainly due to lack of data.[1]

In this paper, we employ data from a survey conducted in 2002 by the Dutch Ministry of the Interior and Kingdom Relations among employees who either accepted or left a public sector job in 2001. Employees who had left a job had to indicate the importance of 19 different job aspects in their decision to leave the job. In line with Akerlof et al. (1988), we find that respondents stressed the importance of job duties, atmosphere at work, and management, but considered pay less important.

We show that workers' reasons to quit affect their decision to stay in their industry of employment or to move to another industry. When pay, work pressure, working conditions, job duties, or management are important in the decision to quit, workers are more likely to move to another industry. In contrast, dissatisfaction with the possibilities for education, the atmosphere at work, the number of hours worked, or commuting time makes it less likely that a worker moves to another industry. We argue that, as the first group of job aspects is more likely to be correlated among jobs within an industry than the latter group, workers apparently use their experience in the initial job to update their expectations on other jobs in the industry. When job aspects are correlated among jobs within an industry, a bad experience reduces the expected value of all jobs in the industry, making a change in industry more

[1] See, among many others, Topel and Ward (1992), Light and McGarry (1998), Campbell (2001), McCaughlin and Bils (2001), and Lima (2004).

likely

Relatedly, we find that workers who consider pay or management important in their decision to quit relatively often leave the public sector altogether. In contrast, when the possibilities for education are important in the decision to quit, workers are more likely to stay in the public sector. These findings are an indication of the relative strengths and weaknesses of public sector jobs. Lastly, it appears that interindustry job movers experience larger wage growth than intra-industry job movers. However, this wage premium disappears once the estimation controls for workers' reasons to quit.

A large literature has evolved on the causes and consequences of job mobility. Bartel (1982) studies the effects of several job attributes on quit behaviour, and finds that for young men, repetitive work and bad working conditions increase the probability that a worker quits, whereas for older men repetitive work may actually decrease this probability. Higher starting wages decrease the likelihood of a separation (Topel and Ward, 1992), whereas workers are more likely to quit jobs that are complex (Weiss, 1984), or that pose health and safety risks (Viscusi, 1979). Altonji and Paxson (1992) show that females whose family composition has changed obtain larger changes in the number of hours worked when they move to another employer than by staying in the same job. The authors argue that adjusting working hours to changing preferences may be easier by changing jobs than within a job.

Workers' own assessment of job attributes also provides information on the likelihood of a quit. Freeman (1978) already found that job satisfaction is negatively related to the probability that a worker quits, see also Akerlof et al. (1988) and Clark et al. (1998). A decomposition of job satisfaction into satisfaction with different job aspects reveals that satisfaction with job security is the best predictor of quits among UK workers (Clark, 2001), whereas satisfaction with the type of work appears most important in Denmark (Kristensen and Westergard-Nielsen, 2004).

Topel and Ward (1992) find that one-third of total wage growth of young men in their first ten years in the labor market occurs through job changes. Akerlof et al. (1988) show that workers who quit out of dissatisfaction with pay usually obtain a wage increase, whereas a substantial fraction of workers who quit for nonpecuniary reasons take a wage cut. Still, both groups report being better off after the job change. Keith and McWilliams (1997) find that the wage growth of employees who quit for family-related reasons is smaller than the wage growth of both non-movers and workers who quit for non-family-related reasons.

A common feature of these studies is that the data used contains both movers and non-movers. As we only have information on workers who entered or left a public sector job, we cannot compare movers to non-movers. The

contribution of this paper lies in the extensive set of reasons to quit, which we can relate to a worker's decision to stay in or leave the industry of employment and to the change in a worker's wage.

In our data, employees who considered pay an important reason to quit their job obtain significantly larger wage increases, as in Akerlof et al. (1988). The same holds for employees seeking more autonomy. By contrast, employees experience significantly smaller wage growth if they left their former job out of dissatisfaction with work pressure or with the combination of work and private life. The magnitude of these effects is substantial. Employees complaining about financial rewards obtain wage increases up to 10.8 percentage points higher than employees who regarded pay not important in their decision to quit. Dissatisfaction with work pressure yields up to 4.8 percentage points lower wage growth. The latter result is close to findings by Villanueva (2004). He estimates that German job movers who indicate that their work load has worsened obtain 5 percent higher wage growth, whereas an improvement of work load yields 3 percent smaller wage growth, both relative to workers whose work load did not change.

A common finding in the literature is that job movers who voluntarily left their job receive larger wage increases than workers who are laid of or discharged (McCaughlin, 1991, Keith and McWilliams, 1997). We find similar effects for a somewhat weaker distinction: Employees who consider the threat of an employer-initiated separation important in their decision to quit receive significantly smaller wage increases.[2] However, we can not rule out that this result is due to a small number of actual layoffs and discharges in the sample.

Rather than the effects of workers' reasons to quit, Mathios (1989) studies the effect of US workers' reasons for entering their current job on their wages. In accordance with our findings, employees claim to attach less value to pay than to interesting, challenging, and enjoyable work in their decision to enter their job. Moreover, Mathios (1989) finds that employees who entered their job for financial rewards earn significantly higher wages than other workers. Highly educated workers with preferences for convenient hours or aiding other people receive lower wages, while preferences for status and enjoyable work are positively related to the level of pay.

The remainder of this paper is organized as follows. The next section describes the data. Section 3 reports the effects of the reasons to quit on wage growth and relates these findings to earlier work on the relation between wages and workers' evaluation of different job aspects. Section 4 looks at the effect of workers' reasons to quit on the decision to stay in or leave the

[2]The literature on displaced workers is surveyed by Kletzer (1998) and Kuhn (2002).

industry of employment. Furthermore, this section shows that neglecting workers' reasons to quit may lead to incorrect estimates of the effect of a change in industry on workers' wages. Section 5 concludes.

2 The data

In 2002, the Dutch Ministry of the Interior and Kingdom Relations conducted a survey among employees who started in or left a public sector job in 2001. Information about employees who had either entered or left an organisation in the public sector was collected from salary administrations. Samples were drawn and 22,000 employees who left an organisation and 20,250 employees who entered an organisation received a questionnaire, yielding 7,854 and 6,942 respondents, respectively.[3] The data are weighted in two steps. First, weights are applied so as to reflect the information from the salary administrations on gender, age, tenure, province, and wage for each industry in the public sector independently. These industries are the central government, local governments, education, research, the police, the judicial system, defense, and university hospitals.[4] Second, each industry receives a weight corresponding to its share in total public sector employment.

We merge the two samples, and divide the respondents in four groups, depending on their former and new industry of employment. *Stayers* move to another employer within the same industry, *movers* leave their former industry of employment but remain employed in the public sector, *leavers* move from the public sector to the private sector, and *entrants* move from the private sector to the public sector. This gives 3,105 stayers, 1,967 movers, 2,483 entrants, and 1,112 leavers.[5] Partial non-response reduces these numbers to 2,261, 1,430, 1,912, and 717, respectively. Implausible wage levels or wage changes made us remove another 64 stayers, 34 movers, 79 entrants, and 28 leavers from the analysis.[6]

[3] Employees who moved from one job in the public sector to another may have received two questionnaires. However, we find no evidence of duplicate cases in the dataset.

[4] The data also distinguish nine different industries in the private sector.

[5] The focus on job-to-job mobility removes 2,904 respondents from the sample who did not have a job before entering their public sector job, as well as 3,234 respondents who did not take up another job after leaving their public sector job.

[6] We have set the floor and the ceiling for both the former and the new hourly wage at 3 euro and 60 euro, respectively. The floor is slightly below the legal minimum wage for 18-year old employees, and the ceiling is (in terms of monthly income) slightly above a Minister's wage in the Netherlands. The cut-off levels for relative wage change have arbitrarily been set such that workers whose hourly wages more than halved or more than tripled were excluded. Inspection of the data reveals that most of these cases involve typo's, misspecifications, or misinterpretation of the questions (for instance, some respondents

One of the main purposes of the survey was to gain insight into employees' reasons for entering or leaving a public sector job. The respondents who had left a job were asked to indicate on a 5-point scale the importance of 19 potential reasons to quit in their decision to leave their old job. Furthermore, they had to rank the three most important reasons to quit. We follow Mathios (1989) in the construction of the reason-to-quit variables. A reason-to-quit variable is assigned the value 0 if the respondent did not consider this reason to quit important (1-3 on the 5-point scale), the value 1 if the respondent considered the reason to quit important (4-5 on the 5-point scale), but did not indicate it as one of the three most important reasons to quit, the value 2 if this reason to quit was the third most important reason, the value 3 if this reason was the second most important reason, and the value 4 if it was the most important reason to quit.[7]

Table 1 lists for each group of job movers the means of the reason-to-quit variables. Interestingly, financial motives appear less important than dissatisfaction with management, (future) job duties, or the atmosphere at work. Several differences between the four groups emerge from Table 1. The threat of involuntary separations prevails more often among entrants than among the other job changers.[8] Relatively many leavers have financial motives, whereas they complain least about work pressure. A relatively small fraction of stayers indicate that they were unhappy with their job duties.

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appear to report yearly rather than monthly income).

[7]This specification imposes arbitrary weights on the questions regarding the importance of job aspects, which is also acknowledged by Mathios (1989). We have checked the robustness of our results by using different specifications. Specifications including only the most important reason to quit or the three most important reasons to quit (equally weighted) yield qualitatively similar results, but perform worse than the 0-1-2-3-4 specification in terms of explanatory power. Furthermore, we used a specification which imposes no structure of weights, by inserting a dummy variable for each level of importance of all job aspects. Again, qualitatively similar results emerge, although for several job aspects, the magnitude of the coefficients is not monotonically increasing in the level of importance. Still, the estimated effects of job aspects being 'most important' relative to being 'not important' closely resemble the estimations reported in the paper.

[8]Unfortunately, the survey among employees who entered a public sector job did not explicitly ask whether the respondent quit their previous job. Hence, there may have been some actual layoffs and discharges in the sample. The survey among employees who left a public sector job did ask whether the employee voluntarily left the job or had been displaced. Given the evidence in the literature that the consequences of a separation differ between workers who quit and workers who are displaced, we have checked whether elimination of all respondents who considered threats of involuntary separations important in their decision to quit would affect our results.It turns out that all results are qualitatively similar in this restricted sample, except for the effect of the reason-to-quit variable 'contractual hours' on wage growth, which becomes smaller and insignificant (see Table 3).

Entrants emphasize (the lack of) possibilities for education and the number of hours worked more often than the other groups. Many stayers report that commuting time drove them to leave their old job, whereas leavers complain less about this job aspect. Lastly, many leavers indicate that the management at their former job was a reason for them to quit.

Summary statistics for several worker and job characteristics are listed in Table 2. The variables married and children at home are dummy variables, representing whether or not the respondent has a partner or children, respectively. The education dummies depend on the highest completed level of schooling. Low education comprises respondents who completed primary school only and respondents who completed lower vocational education. Medium education consists of workers with high school education or medium vocational education, and higher vocational education and university speak for themselves. Tenure describes the number of years a worker has been employed by his former employer. Experience is measured as the number of years since the respondent finished education. Hourly wages are computed from the respondents' monthly income and contractual hours.[9]

Table 2 shows that compared to the other job changers, entrants have less education, experience, and tenure, and earn less. The fraction of stayers with higher vocational education or a university degree is relatively large. Leavers obtain the largest wage growth, whereas stayers receive the smallest increase in hourly wage. The average increase in hourly wage is 9.15 percent, which is close to the estimates by Topel and Ward (1992).

This study focusses on job-to-job mobility. We also have data on the reasons to quit of 237 employees who left a public sector job but did not take up another job. In comparison to the figures in Table 1 and Table 2, these employees were more often female, less educated and worked fewer hours. They considered work pressure and in particular the combination of work and private life more important in their decision to quit. By contrast, financial prospects and future job duties were less important. This points to the argument that some women may invest less in human capital, because they expect to withdraw (temporarily) from the labour market at some point in time to dedicate themselves to their family (see Weiss and Gronau, 1981, Blau and Ferber, 1986, and Polachek and Kim, 1994).

[9]Respondents' age is recorded in 5-year intervals, and is therefore not used in the analysis.

3 Wage effects

Workers change jobs to improve upon job aspects which cause discomfort. Hence, it is likely that the new job offers better conditions with respect to these troubling job aspects. Unfortunately, we can not assess the effect of the reasons to quit on all job aspects, as the survey did not ask workers to compare job aspects of their former and new job. The data do allow us to estimate the effect of a worker's reasons to quit on his wage. Hence, we estimate:

$$\Delta(w_i) = \alpha + \beta Q_i + \gamma X_i + e_i \tag{1}$$

where $\Delta(w_i)$ is the difference in log hourly wage between the new and the former job of employee i and Q_i is a vector of the 19 reason-to-quit variables. X_i is a vector of other explanatory variables, containing the change in the number of hours worked, tenure, tenure-squared, experience, experience-squared, and dummies for gender, minority, partner, children, educational levels, and former and new industry.[10] Table 3 reports the results of the estimation of equation (1).

The results in Table 3 square well with the findings of previous studies. In line with Keith and McWilliams (1997), but in contrast to Loprest (1992), we find no evidence of smaller wage growth for females. On the contrary, after the inclusion of the reasons-to-quit variables, the coefficient on the female dummy turns positive. Wage growth is positively related to the level of education, as in Lima (2004) and Villanueva (2004), using Portuguese and German data, respectively. Employees with a partner obtain a significantly smaller wage increase than singles. Villanueva (2004) reports a marriage effect of similar magnitude.

The reason-to-quit variables are jointly significant at the 0.01 level, and several are individually significant as well. We find that the threat of an employer-initiated separation leads to significantly smaller wage growth. This is in line with evidence that job changers who quit obtain larger wage increases than job changers who are laid-off or discharged (McCaughlin, 1991, Keith and McWilliams, 1997). However, as acknowledged before, we can not rule out that this result is caused by a (small) number of actual layoffs and discharges in the sample. This suspicion is reinforced by the finding that the effect becomes insignificant if we restrict the sample to the survey among employees who left a public sector job (recall that this survey explicitly asked workers whether they quit their job or were displaced).

In line with Akerlof et al (1988), we find that employees leaving their job

[10] Elimination of constant characteristics from the set of explanatory variables turns out not to affect the results.

out of dissatisfaction with pecuniary rewards receive relatively large wage increases. The specification of the reason-to-quit variables implies that an employee for whom pay was the most important reason to quit obtains a wage increase which is 10.8 percentage points higher than an employee for whom rewards were not important in the decision to quit.

Responsibility and autonomy are also being rewarded, as employees complaining about this job aspect receive significantly larger wage increases. Predictions of both theory and previous empirical work are mixed. Efficiency wage theory predicts a positive relation between employees' autonomy and wages, while the theory of compensating differentials suggests that employees may be willing to give up a fraction of their income in return for more autonomy (see e.g. Dur and Glazer, 2004). In line with our result, some authors find a negative relation between supervision and pay (Krueger, 1991, Kruse, 1992, Rebitzer, 1995), while some find a positive relation (Smith et al. 1997), and others finding no relation (Leonard, 1987, Brunello, 1995). Similarly, in line with our finding, Brown and Sessions (2002) report a positive relation between supervisors' pay and the number of supervisees, but Frey and Kucher (1999) find no effect of the number of subordinates on supervisors' wages.

Somewhat surprising is the positive relation between dissatisfaction with the number of hours worked and the wage change. Inspection of the data reveals that workers for whom the number of hours worked was important in their decision to quit on average increase the number of hours worked, but variation is large.

Lastly, dissatisfaction with work pressure or with the combination of work and private life appears to induce workers to accept significantly smaller wage growth. The coefficient on work pressure implies that the difference between the wage growth of an employee for whom work pressure was the most important reason to quit and an employee who did not consider work pressure important is 4.8 percentage points, about half of the average wage increase in the sample. Villanueva (2004) finds that job movers who indicate that their work load has worsened obtain 5 percent higher wage growth, whereas an improvement of work load yields 3 percent smaller wage growth, both relative to workers whose work load did not change.

Overall, the findings presented in this section fit reasonably well into the previous literature on the relation between wages and workers' evaluation of different job aspects. The next section shows that workers' evaluation of job aspects not only affects their wage, but also their decision on where to (seek) work.

4 Where to go?

4.1 Intra- vs interindustry mobility

Insofar as job characteristics are correlated among jobs within an industry, the employee's experience in the initial job affects the expectations of these characteristics in other jobs in the industry. Then, workers' experience in a job not only influences his decision to stay in or quit the job, but also his decision to stay in or leave the industry. For instance, the experience with job duties or working conditions may affect the employee's expectations of these characteristics at other employers in the industry. A bad experience then reduces the expected value of all jobs in the industry, making a change in industry more likely. In contrast, several other job aspects, such as commuting time and atmosphere at work, are unlikely to be related among employers within an industry.

The information on workers' reasons to quit provides us with the opportunity to examine the relation between workers' subjective evaluation of job aspects and their decision to stay in or leave their industry of employment. Thereto, we explore the differences in the reasons to quit between stayers, movers and leavers. These employees all quit jobs in public sector industries, but only stayers have taken a new job in the same industry.[11] Table 4 shows the results of a logistic regression of the reasons to quit on the decision to stay in or leave the industry of employment.[12] The dependent variable is 0 if the respondent is a stayer, and 1 if the respondent is a mover or a leaver. Hence, a positive coefficient implies that a higher value of the variable increases the probability that a respondent leaves the industry, whereas a negative coefficient implies that a higher value of the variable increases the probability that a respondent stays in the industry.

From Table 4, we conclude that workers' experience indeed affects their decision to stay in or leave the industry. Workers dissatisfied with pay, work pressure, working conditions, and job duties are more likely to move to another industry. These job aspects may very well be related among employers in an industry. By contrast, the possibilities for education, the atmosphere at work, the number of hours worked, and commuting time are reasons to quit which decrease the probability that a worker moves to another industry,

[11] The lack of data on employees who change jobs within the private sector hinders a similar estimation for private sector industries.

[12] We have found no other papers that investigate this decision for workers who voluntarily leave their job. Seitchik and Zornitsky (1989), Fallick (1993), Neal (1995), and Kletzer (1996) analyse the determinants of the decision to stay in or leave the industry for displaced workers.

and are likely to be unrelated among employers in an industry. Somewhat puzzling are the positive coefficients on management and leadership. Apparently, workers who are dissatisfied with their superiors lose confidence in the management of other employers in their industry.

These findings point to an extension of the theory of job shopping (Johnson, 1978, Jovanovic, 1979). This theory postulates that workers are uncertain about their valuation of jobs. By spending time on a job, workers learn their true valuation of the job. A separation occurs when it becomes clear that the match between the worker's preferences or productivity and the conditions of the job is bad. The results in Table 4 suggests that besides information on their own job, workers also receive information on other jobs in the industry. Hence, workers' experience on the job not only aides them in deciding whether to stay in or quit the job, but also in where to go.

4.2 Reasons to leave the public sector

By regrouping the respondents, we can use the same method to analyse which reasons to quit are related to leaving the public sector altogether. Stayers and movers change jobs within the public sector, whereas leavers move from a public sector job to a job in the private sector. Table 5 reports the result of a logistic regression where the dependent variable is 0 if the respondent is a stayer or a mover, and 1 if the respondent is a leaver. A positive coefficient thus indicates a positive relation between the variable and the likelihood that the worker leaves the public sector.

We find that employees who quit their public sector job out of dissatisfaction with rewards, financial prospects, or management are more likely to move to a job in the private sector. Similar, but somewhat less strong effects are found for physical working conditions and future job duties. This resembles the reasons given by UK workers for their exit from the public sector (Audit Commission, 2002). Likewise, Table 5 suggests that the public sector may offer better conditions regarding the opportunities for education. Yet, a similar analysis of the decision of private sector workers whether to stay in or leave the private sector is needed for a more conclusive comparison between public and private sector jobs.

The relatively high discontent with management among workers who leave the public sector may be related to Dixit's (2002) observation that public agencies often face multiple principals. When the management of a public agency is unable to translate the diverse interests and pressures of the principals into a clear organisational goal and consistent objectives, workers may lose confidence in their management's capacities. Private firms are less prone to pursue conflicting goals, as the ultimate objective of a private firm is to

generate shareholder value.

4.3 Wage effect of a change in industry

In Table 6, we explore differences in wage growth between stayers, movers and leavers. Thereby, we can compare the wage growth of intra-industry job movers (stayers) to the wage growth of interindustry job movers (movers and leavers).[13] The estimation without the reason-to-quit variables indicates that leavers obtain a significantly larger wage increase than stayers. Lima (2004) reports a wage premium for a change in industry of similar magnitude in a large sample of Portuguese workers. However, the second column of Table 6 makes clear that the differences in wage growth between stayers, movers, and leavers are fully explained by differences in the reasons to quit the initial job. Hence, we conclude that neglecting workers' reasons to quit may yield incorrect estimates of the effect of a change in industry on wage growth.

Data limitations prevent us from differentiating between workers entering, leaving, or staying in specific industries. Recent studies using matched employer-employee data have shown that unobserved worker heterogeneity explains most of the interindustry wage differentials (Abowd et al., 1999, Goux and Maurin, 1999). Relatedly, McLaughlin and Bils (2001), who find that workers leaving declining industries and workers entering growing industries tend to have higher wage growth than their new colleagues who did not change industry, conjecture that "the wage changes of interindustry movers could be [explained] by an extension to compensating wage differentials for industry attributes" (p. 131). Although on a more aggregate level, the results in Table 6 confirm that differences in wage growth between intra- and interindustry job movers may be explained by heterogeneous preferences for industry-specific components of job characteristics.

5 Conclusions

Using data from a survey among Dutch job changers, this paper has shown that workers' experience in their initial job affects their decision to stay in or leave their industry of employment. When pay, work pressure, working conditions, job duties, or management were important in the decision to quit, workers were more likely to change their industry of employment. By contrast, a quit out of dissatisfaction with commuting time, atmosphere at work,

[13] The difference with the estimations in Table 3 is that the dummies for the new industry of employment have been replaced by dummies for movers and leavers, with stayers as base category.

educational opportunities, or working hours makes a change in industry less likely. Apparently, workers use their experience to update their expectations on other jobs in the industry, as the first group of job aspects is more likely to be related among jobs within an industry than the latter group of job aspects. Relatedly, many workers who quit out of dissatisfaction with pay, physical working conditions, or management leave the public sector altogether. Hence, improvement of these job aspects should receive priority if employee turnover in the public sector is to be reduced. Furthermore, it has been shown that the apparent wage premium of interindustry job movers relative to intra-industry job movers vanishes once the estimation controls for workers' reasons to quit.

A similar, but economy-wide survey of job changers would improve the analysis of the effects of workers' reasons to quit. For instance, with the addition of job changers within the private sector, an analysis of the relatively attractive and repulsive aspects of public sector jobs would be feasible. Moreover, if the sample would be large enough, then for each industry the main reasons to enter or leave the industry can be assessed. As called for by McLaughlin and Bils (2001), this may facilitate the estimation of industry attributes and their effect on workers' wages.

References

[1] Abowd, John M., Kramarz, Francis, and Margolis, David N., 1999, High Wage Workers and High Wage Firms, Econometrica, Vol. 67 (2), pp. 251-333.

[2] Akerlof, George A., Rose, Andrew K., and Yellen, Janet L., 1988, Job Switching and Job Satisfaction in the Labor Market, Brookings Papers on Economic Activity, Vol. 2, pp. 495-582.

[3] Altonji, Joseph G. and Paxson, Christina H., 1992, Labor Supply, Hours Constraints, and Job Mobility, Journal of Human Resources, Vol. 27 (2), pp. 256-278.

[4] Audit Commission, 2002, Recruitment and Retention: A Public Service Workforce for the Twenty-First Century (url: http://www.audit-commission.gov.uk/reports).

[5] Bartel, Ann P., 1982, Wages, Nonwage Job Characteristics, and Labor Mobility, Industrial and Labor Relations Review, Vol. 35 (4), pp. 578-589.

[6] Blau, Francine D. and Ferber, Marianne A., 1986, The Economics of Women, Men, and Work, Prentice-Hall.

[7] Borjas, George J., 2003, The Wage Structure and the Sorting of Workers into the Public Sector, in: Donahue, John D. and Nye, Joseph S. Jr., eds., For the People; Can We Fix Public Service?, pp. 29-54, Washington, D.C.: Brookings Institution Press.

[8] Brown, Sarah and Sessions, John G., 2002, Supervisor Heterogeneity: An Analysis of UK Microdata, Scottish Journal of Political Economy, Vol. 49 (4), pp. 407-417.

[9] Brunello, Giorgio, 1995, The Relationship between Supervision and Pay: Evidence from the British New Earnings Survey, Oxford Bulletin of Economics and Statistics, Vol. 57 (3), pp. 309-321

[10] Campbell, David, 2001, Estimating the Wage effects of Job Mobility in Britain, University of Kent, Department of Economics Discussion Paper 01/17.

[11] Clark, Andrew E., 2001, What Really Matters in a Job? Hedonic Measurement Using Quit Data, Labour Economics, Vol. 8, pp. 223-242.

[12] Clark, Andrew E., Georgellis, Yannis, and Sanfey, Peter, 1998, Job Satisfaction, Wage Changes, and Quits: Evidence from Germany, Research in Labor Economics, Vol. 17, pp. 95-121.

[13] Dixit, Avinash, 2002, Incentives and Organizations in the Public Sector: An Interpretative Review, Journal of Human Resources, Vol. 37 (4), pp. 696-727.

[14] Dur, Robert and Glazer, Amihai, 2004, The Desire for Impact, Tinbergen Institute Discussion Paper no. 04-115/1.

[15] Fallick, Bruce C., 1993, The Industrial Mobility of Displaced Workers, Journal of Labor Economics, Vol. 11 (2), pp. 302-323.

[16] Freeman, R.B., 1978, Job Satisfaction as an Economic Variable, American Economic Review, Vol. 68 (2), pp. 135-141.

[17] Frey, Bruno S. and Kucher, Marcel, 1999, Managerial Power and Compensation, Institute for Empirical Research in Economics Working Paper No. 28, University of Zurich.

[18] Goux, Dominique and Maurin, Eric, 1999, Persistence of Interindustry Wage Differentials: A Reexamination Using Matched Worker-Firm Panel Data, Journal of Labor Economics, Vol. 17 (3), pp. 492-533.

[19] Johnson, William R., 1978, A Theory of Job Shopping, Quarterly Journal of Economics, Vol. 92 (2), pp. 261-277.

[20] Jovanovic, Boyan, 1979, Job Matching and the Theory of Turnover, Journal of Political Economy, Vol. 87 (5), pp. 972-990.

[21] Keith, Kristen and McWilliams, Abagail, 1997, Job Mobility and Gender-Based Wage Growth Differentials, Economic Inquiry, Vol 35 (2), pp. 320-333.

[22] Kletzer, Lori G., 1996, The Role of Sector-Specific Skills in Postdisplacement Earnings, Industrial Relations, Vol. 35 (4), pp. 473-490.

[23] Kletzer, Lori G., 1998, Job Displacement, Journal of Economic Perspectives, Vol. 12 (1), pp. 115-136.

[24] Kristensen, Nicolai and Westergard-Nielsen, Niels, 2004, Does Low Job Satisfaction Lead to Job Mobility? IZA Discussion Paper No. 1026.

[25] Krueger, Alan B., 1991, Ownership, Agency, and Wages: An Examination of Franchising in the Fast Food Industry, Quarterly Journal of Economics, Vol. 106 (1), pp. 75-101.

[26] Kruse, Douglas, 1992, Supervision, Working Conditions, and the Employer Size-Wage effect, Industrial Relations, Vol. 31 (2), pp. 229-249.

[27] Kuhn, P., 2002, Losing Work, Moving On: Worker Displacement in International Perspective, W. E. Upjohn Institute for Employment Research.

[28] Leonard, Jonathan S., 1987, Carrots and Sticks: Pay, Supervision, and Turnover, Journal of Labor Economics, Vol. 5 (4), pp. S136-S152.

[29] Light, Audrey and McGarry, Kathleen, 1998, Job Change Patterns and the Wages of Young Men, Review of Economics and Statistics, Vol. 80 (2), pp. 276-286.

[30] Lima, Francisco, 2004, How Much Mobility? Careers, Promotions, and Wages, CEG-IST Research Paper No. 3/2004.

[31] Loprest, Pamela J., 1992, Gender Differences in Wage Growth and Job Mobility, American Economic Review, Vol. 82 (2), pp. 526-532.

[32] Mathios, Alan D., 1989, Education, Variation in Earnings, and Non-monetary Compensation, Journal of Human Resources, Vol. 24 (3), pp. 456-468.

[33] McLaughlin, Kenneth J., 1991, A Theory of Quits and Layoffs with Efficient Turnover, Journal of Political Economy, Vol. 99 (1), pp. 1-29.

[34] McLaughlin, Kenneth J. and Bils, Mark, 2001, Interindustry Mobility and the Cyclical Upgrading of Labor, Journal of Labor Economics, Vol. 19 (1), pp. 94-135.

[35] Neal, Derek, 1995, Industry-Specific Human Capital: Evidence from Displaced Workers, Journal of Labor Economics, Vol. 13 (4), pp. 653-677.

[36] OECD, 2001, Public Sector - An Employer of Choice? Report on the Competitive Employer Project, OECD Public Management Service.

[37] Polachek, Solomon W. and Kim, Moon-Kak, 1994, Panel Estimates of the Gender Earnings Gap, Journal of Econometrics, Vol. 61 (1), pp. 23-42.

[38] Rebitzer, James B., 1995, Is There a Trade-off between Supervision and Wages? An Empirical Test of Efficiency Wage Theory, Journal of Economic Behavior and Organization, Vol. 28 (1), pp. 107-129.

[39] Seitchik, Adam and Zornitsky, Jeffrey, 1989, From One Job to the Next: Worker Adjustment in a Changing Labor Market, W. E. Upjohn Institute for Employment Research.

[40] Smith, Michael, Masi, Anthony, and Lemay, Paula, 1997, The Determinants of Blue Collar Wage Rates: An Analysis of a Dataset Incorporating Observed Job Characteristics, Labour, Vol 11 (1), pp. 113-140.

[41] Topel, Robert H. and Ward, Micheal P., 1992, Job Mobility and the Careers of Young Men, Quarterly Journal of Economics, Vol. 107 (2), pp. 439-479.

[42] Villanueva, Ernesto, 2004, Compensating Wage Differentials and Voluntary Job Changes: Evidence from West Germany, Mimeo, University of Pompeu Fabra.

[43] Viscusi, W.K., 1979, Job Hazards and Worker Quit Rates: An Analysis of Adaptive Worker Behavior, International Economic Review, Vol. 20 (1), pp. 29-58.

[44] Weiss, Andrew, 1984, Determinants of Quit Behavior, Journal of Labor Economics, Vol. 2 (3), pp. 371-387.

[45] Weiss, Yoram and Gronau, Reuben, 1981, Expected Interruptions in Labour Force Participation and Sex-related Differences in Earnings Growth, Review of Economic Studies, Vol. 48 (4), pp. 607-619.

Table 1: Means of the reason-to-quit variables

Reasons to quit	**Stayers**	**Movers**	**Leavers**	**Entrants**
Threat of reorganisation	0.17	0.18	0.14	0.35
Threat of losing job	0.18	0.19	0.13	0.26
Duration of contract	0.37	0.37	0.24	0.24
Rewards	0.52	0.63	0.84	0.65
Financial prospects	0.66	0.79	1.06	0.85
Work pressure	0.64	0.60	0.47	0.64
Facilities at work	0.25	0.24	0.25	0.28
Physical working conditions	0.26	0.29	0.27	0.44
Job duties	0.90	1.38	1.16	1.35
Future job duties	1.02	1.36	1.38	1.11
Possibilities for education / training	0.45	0.54	0.43	0.79
Atmosphere	1.13	0.96	0.98	1.07
Contractual hours	0.28	0.23	0.19	0.49
Combination of work and private life	0.74	0.61	0.52	0.75
Commuting time	0.98	0.59	0.34	0.63
Personnel management	0.84	0.86	1.20	0.78
Management of the organisation	0.81	0.98	1.26	0.84
Style of leadership	1.01	1.03	1.28	0.86
Autonomy / responsibility	0.84	0.91	0.92	0.88
Observations	2197	1396	689	1833

Data source: BZK, Mobiliteitsonderzoek 2002.

Table 2: Summary statistics

Variables	**Stayers**	**Movers**	**Leavers**	**Entrants**
Female	0.532	0.542	0.379	0.462
	(0.499)	(0.498)	(0.486)	(0.499)
Minority	0.029	0.038	0.042	0.054
	(0.167)	(0.191)	(0.200)	(0.226)
Married / living together	0.806	0.766	0.777	0.680
	(0.395)	(0.424)	(0.416)	(0.467)
Kids at home	0.535	0.473	0.435	0.368
	(0.499)	(0.499)	(0.496)	(0.483)
Low education	0.035	0.074	0.073	0.136
	(0.185)	(0.261)	(0.261)	(0.343)
Medium education	0.140	0.209	0.256	0.337
	(0.347)	(0.407)	(0.437)	(0.473)
Higher vocational education	0.604	0.392	0.379	0.304
	(0.489)	(0.488)	(0.485)	(0.460)
University	0.221	0.325	0.292	0.223
	(0.415)	(0.469)	(0.455)	(0.416)
Tenure (in years)	7.370	6.870	7.060	4.690
	(7.427)	(6.615)	(6.670)	(5.463)
Experience (in years)	13.635	11.684	11.490	10.051
	(9.326)	(8.701)	(8.109)	(8.276)
Hours worked in old job	33.024	32.586	35.379	32.819
	(7.941)	(7.900)	(5.688)	(8.859)
Hours worked in new job	33.186	32.913	35.473	34.079
	(7.764)	(7.421)	(5.293)	(7.034)
Hourly wage old job (€)	15.611	14.855	15.591	12.643
	(5.581)	(5.884)	(6.109)	(5.967)
Hourly wage new job (€)	16.978	16.406	17.424	13.761
	(6.346)	(6.696)	(7.250)	(6.066)
Δ log hourly wage	0.079	0.096	0.105	0.098
	(0.180)	(0.241)	(0.219)	(0.257)
Observations	2197	1396	689	1833

Data source: BZK, Mobiliteitsonderzoek 2002.
Standard deviations in parentheses.

Table 3: The effects of the reason-to-quit variables on wage growth

	Reasons to quit excluded		Reasons to quit included	
Variable	**Coefficient**	**SE**	**Coefficient**	**SE**
Constant	0.112***	(0.019)	0.054**	(0.021)
Female	0.000	(0.006)	0.011*	(0.006)
Minority	0.012	(0.014)	0.002	(0.014)
Married	-0.022***	(0.007)	-0.017**	(0.007)
Kids at home	0.006	(0.006)	0.008	(0.007)
Medium education	0.021*	(0.012)	0.021*	(0.012)
Higher voc. education	0.044***	(0.012)	0.048***	(0.012)
University	0.040***	(0.013)	0.046***	(0.013)
Threat of reorganisation			-0.009**	(0.004)
Threat of losing job			-0.009**	(0.004)
Duration of contract			0.004	(0.003)
Rewards			0.027***	(0.003)
Financial prospects			0.014***	(0.003)
Work pressure			-0.012***	(0.003)
Facilities at work			0.001	(0.005)
Working conditions			-0.001	(0.004)
Job duties			0.003	(0.002)
Future job duties			0.001	(0.002)
Education			-0.002	(0.003)
Atmosphere			0.001	(0.002)
Contractual hours			0.008**	(0.004)
Work vs private life			-0.007***	(0.003)
Commuting time			-0.003	(0.002)
Pers. management			0.002	(0.003)
Management org.			-0.001	(0.003)
Style of leadership			0.002	(0.003)
Autonomy/responsibility			0.010***	(0.002)
R^2	0.076		0.118	
Observations	6115		6115	

Data source: BZK, Mobiliteitsonderzoek 2002.

* significant at the 0.10 level. ** significant at the 0.05 level. *** significant at the 0.01 level. Also included, but not reported, were the change in the number of working hours, tenure, tenure-squared, experience, experience-squared and dummies for the former and new sector of employment.

Table 4: Reasons to stay in or leave the industry

Dependent variable: 0 = stayer, 1 = mover or leaver		
Variable	**Coefficient**	**SE**
Constant	2.702***	(0.434)
Female	-0.071	(0.083)
Minority	0.284	(0.197)
Married	0.015	(0.094)
Kids at home	-0.143*	(0.085)
Medium education	-0.215	(0.189)
Higher voc. education	-0.533***	(0.192)
University	-0.190	(0.208)
Log hourly wage old job	-0.353***	(0.130)
Threat of reorganisation	-0.003	(0.056)
Threat of losing job	0.048	(0.056)
Duration of contract	-0.076*	(0.041)
Rewards	0.096***	(0.036)
Financial prospects	0.095***	(0.034)
Work pressure	0.099***	(0.034)
Facilities at work	-0.020	(0.069)
Working conditions	0.138**	(0.054)
Job duties	0.141***	(0.028)
Future job duties	0.115***	(0.030)
Education	-0.171***	(0.044)
Atmosphere	-0.079***	(0.029)
Contractual hours	-0.119**	(0.058)
Work vs private life	-0.026	(0.036)
Commuting time	-0.193***	(0.034)
Pers. management	0.040	(0.035)
Management org.	0.212***	(0.035)
Style of leadership	0.081**	(0.032)
Autonomy/responsibility	-0.021	(0.031)
Nagelkerke R^2	0.315	
Observations	4282	

Data source: BZK, Mobiliteitsonderzoek 2002.

* significant at the 0.10 level. ** significant at the 0.05 level. *** significant at the 0.01 level. Also included, but not reported, were the number of working hours, tenure, tenure-squared, experience, experience-squared, and dummies for the former sector of employment.

Table 5: Reasons to stay in or leave the public sector

Dependent variable: 0 = stayer or mover, 1 = leaver		
Variable	**Coefficient**	**SE**
Constant	-2.217***	(0.557)
Female	-0.229	(0.105)
Minority	0.197	(0.231)
Married	0.078	(0.118)
Kids at home	-0.280***	(0.106)
Medium education	0.113	(0.206)
Higher voc. education	-0.392*	(0.220)
University	-0.214	(0.240)
Log hourly wage old job	0.171	(0.167)
Threat of reorganisation	-0.024	(0.075)
Threat of losing job	-0.045	(0.079)
Duration of contract	-0.117**	(0.059)
Rewards	0.153***	(0.042)
Financial prospects	0.131***	(0.041)
Work pressure	-0.015	(0.048)
Facilities at work	-0.015	(0.089)
Working conditions	0.132*	(0.071)
Job duties	0.008	(0.036)
Future job duties	0.092**	(0.038)
Education	-0.178***	(0.065)
Atmosphere	-0.029	(0.038)
Contractual hours	-0.074	(0.084)
Work vs private life	-0.063	(0.050)
Commuting time	-0.380***	(0.057)
Pers. management	0.121***	(0.042)
Management org.	0.154***	(0.041)
Style of leadership	0.108***	(0.039)
Autonomy/responsibility	0.013	(0.039)
Nagelkerke R^2	0.180	
Observations	4282	

Data source: BZK, Mobiliteitsonderzoek 2002.

* significant at the 0.10 level. ** significant at the 0.05 level. *** significant at the 0.01 level. Also included, but not reported, were the number of working hours, tenure, tenure-squared, experience, experience-squared, and dummies for the former sector of employment.

Table 6: Reasons to quit and the wage growth of intra- and interindustry job movers

	Reasons to quit excluded		Reasons to quit included	
Variable	**Coefficient**	**SE**	**Coefficient**	**SE**
Movers	0.007	(0.008)	0.002	(0.007)
Leavers	0.016*	(0.009)	0.001	(0.009)
Reasons to quit	NO		YES	
R^2	0.088		0.125	
Observations	4282		4282	

Data source: BZK, Mobiliteitsonderzoek 2002.

* significant at the 0.10 level. ** significant at the 0.05 level. *** significant at the 0.01 level. Except for the dummies for the new sector of employment, all variables included in the specifications of Table 3 are also included here.