Quits and ladders: Does mobility improve outcomes?

August 17, 2018

# Quits and ladders: Does mobility improve outcomes?

#### Purpose:

This article compares internal and external job mobility (quits and promotions) as separate mechanisms for **improving earnings and job-fit.**

#### Design/methodology/approach:

We sample the core workforce from the British Household Panel Survey, estimating the effects of quits and promotions **on two sets of outcomes. The first are subjective; satisfaction with work, pay, and hours. The second are objective realities about the job; gross monthly pay and weekly working hours. We use linear fixed-effects estimation to control for individual heterogeneity.**

#### Findings:

Quits and promotions are distinctly different mechanisms for improving earnings and conditions. External quits improve **satisfaction with work, pay, and hours but have no effect on earnings growth. Internal promotions bring earnings growth but have little effect on satisfaction outcomes. The findings shed light what drives “voluntary” mobility; internal mobility may be driven by higher “reservation wages” and career progression, while external mobility may be driven by a poor job-fit.**

#### Practical implications:

Researchers should treat mobile labour markets with scepticism. The growth of “boundaryless careers” may resemble a release-valve for poor working conditions and poor job-fit, and not a wealth of new opportunities for progress or earnings growth.

#### Originality/value:

Studies of job mobility overwhelmingly focus on the effects quitting without explicitly comparing this mobility to promotions. This omission gives an incomplete picture of mobility; including promotions into the discussion helps to understand why workers commit to internal careers and to firm tenure. Our article shows that quits and promotions have distinctly different consequences for core workers, despite both mobility types being labelled “voluntary”. Inequality in earnings and working conditions are closely tied to access to mobility; those who are able to pursue promotion are rewarded objectively; those who quit for a new employer seek a better job-fit.

## Introduction

Researchers often assume that job mobility is of interest to workers because it leads to “better” positions elsewhere (Gesthuizen and Dagevos 2008; Le Grand and Tåhlin 2002; Kalleberg and Sorensen 1979). This assumption exists in both economic (*job-match* and *job-search* theories) and sociological (*attainment* theory) approaches, widely cited in inequality research (Schmelzer 2010; Jovanovic 1979; Aage B Sørensen 1975; Burdett 1978). Such theories can easily apply to internal promotions as well as external quits, but empirical work have overwhelmingly focused on external mobility alone, ignoring the effect of promotions (Le Grand and Tåhlin 2002; Kalleberg and Mastekaasa 2001). This approach offers an incomplete view of mobility and its consequences.

More so, we suggest the topic of job mobility is underdeveloped in two ways. First, researchers have focused more on the likelihood of mobility than on the effects of mobility (Steenackers and Guerry 2016; Hachen Jr 1990; Hachen Jr 1992). Second, when authors do explore the effects of mobility, they ignore the impact of promotions (Kronberg 2014; Kronberg 2013; Caparrós Ruiz, Lucía Navarro Gómez, and Federico Rueda Narváez 2004). We tackle these limitations below.

The article has two aims. First, we explicitly compare the effects of internal and external mobility for the economic core. Do quits and promotions have a similar effect on earnings and job-fit? Second, we consider mobility’s effects on both subjective and objective outcomes. **Comparing and contrasting the effects of quits and promotions on two different sets of outcomes informs recent debates over the motivations tied to mobility (Mouw and Kalleberg 2010; Steenackers and Guerry 2016). Is mobility used to correct the job-fit between an employee and her working conditions, or is it used to maximise earnings growth by letting workers achieve a reservation wage?**

We use the British Household Panel Survey as a representative sample of British workers. This approach has three strengths, which are relevant to the wider debate. First, we use explicit measures of quits and promotions. **A review of the literature shows that authors often sample and operationalise mobile workers in complex ways, some of which may not be valid (Steenackers and Guerry 2016; Kalleberg and Mastekaasa 2001; Keith and McWilliams 1997; Keith and McWilliams 1995). Second, we consider outcomes other than objective pay. By including subjective outcomes, we are able capture changes in job-fit (Latzke et al. 2016; Dwyer 2004; Kalleberg and Mastekaasa 2001). Third, we use longitudinal data to shift the focus away from comparing movers to non-movers, and instead focus on the effects of moving (Reichelt and Abraham 2017; Cha 2014; Caparrós Ruiz, Lucía Navarro Gómez, and Federico Rueda Narváez 2004).**

We offer two findings. First, voluntary mobility is common; quits and promotions are equally likely and are the dominant form of mobility among the core. Second, internal and external mobility are distinctly different mechanisms for improving outcomes. **Internal mobility has the strongest effect on earnings growth, while external mobility has the strongest effect on job-fit. Crucially, there is no evidence that quits are a substitute for promotions. Instead, British workers may be using external mobility to better match their skills to their working environment and conditions, in an unpredictable market.**

The article is structured as follows; section one summarises the theoretical literature, and introduces a key assumption. Section two summarises the empirical works and presents three hypotheses. Section three outlines a methodology and approach, while section four presents the results. A brief discussion concludes.

## Theoretical framework

Workers seek the highest level of compensation possible (Aage B Sørensen 1975; Aage Bøttger Sørensen and Tuma 1978). Voluntary mobility may be one way of achieving this, whether within firms (Gesthuizen and Dagevos 2008; Gesthuizen 2009; Althauser and Kalleberg 1981) or between them (Jovanovic 1979; Burdett 1978; Keith and McWilliams 1997).

In economics, mobility is understood through two approaches; the *job-search* approach relies on two reservation wages, X and Y (where X<Y). Reservation wage X draws workers into employment, while reservation wage Y draws workers to new positions. Mobility between positions can only occur if workers see financial gain in changing jobs; *“An employed worker who is looking for another job will accept any offer received with a wage greater than his current wage”* (Burdett 1978, p212). Here, mobility is driven by the promise of wages, which results in *“wage quits”*. Thus, Britain’s high rates of job mobility (compared to Germany, for example) stems from its wage inequality, where workers see more opportunities to secure a reservation wage in a new position.

The *job-match* approach sees mobility as stemming from a mismatch between a worker’s skills and her earnings or conditions (Jovanovic 1979). Since work is an “experience good”, workers take time to evaluate whether their productivity fits with their compensation. If a mismatch exists, workers correct this by pursuing new positions (Aage Bøttger Sørensen and Kalleberg 1977; Jovanovic 1979). In this approach too, mobility is (assumedly) the best mechanism to improve earnings or conditions. Thus, Britain’s higher rates of mobility stem from the onus placed on the worker to match their skills to their conditions and responsibilities.

In sociology, mobility is also assumed to move workers to “better” jobs. Aage B Sørensen (1975 p460) proposes *“A person may be assumed to shift jobs voluntarily if he can obtain a better job”*; while Hachen Jr (1990 p320) claims *“… in industrial societies, individual attainment… is in large part a function of job changes”*. Since sociologists see outcomes as tied to specific positions in a hierarchy, they often see a change in position as the best mechanism to improve outcomes; Aage B Sørensen (1977 p967) suggests *“different people in the same job will obtain the same rewards… the same person will obtain different rewards in different jobs”*.

Few of the theories above, especially those in sociology, differentiate between quits and promotions explicitly. Most only consider the relationship between a given position and the subsequent position; the channels which secure these positions are irrelevant once they are “voluntary”. With this in mind, the theories above can easily apply to internal promotions as well as external quits. Empirical work however, has focused heavily on external changes to new employers without comparing such mobility to promotions.

As a result, many articles frame quitting as the best strategy to improve outcomes, without noting the benefits of pursuing promotions. What is more, the few papers which *do* compare internal and external mobility often show that internal mobility yields greater gains for workers when compared to external mobility. We summarise these papers below.

## Voluntary mobility to “better” positions

Conclusions about the effects of mobility depend on whether promotions are included in the analysis. We illustrate this point by splitting the literature into two camps; first, studies where authors estimate the impact of external quits alone; second, studies which compare the effects of internal and external mobility. When studies estimate the effect of quitting alone, they are framed as a mechanism for improving outcomes **(both job-fit and earnings)**. Studies which compare and contrast internal and external mobility hold different conclusions. **Here, promotions yield higher objective returns, but lower subjective returns. At the very least, authors have shown that quits and promotions yield significantly different outcomes for workers; suggesting two separate mechanisms for improving conditions and earnings** (Kalleberg and Mastekaasa 2001; Gesthuizen and Dagevos 2008; Gesthuizen 2009; Dwyer 2004).

### External mobility

Authors typically find a positive relationship between quitting and **a change in earnings or satisfaction**. Whether the outcomes are subjective feelings about job-fit (Sallaz 2017; Kalleberg and Mastekaasa 2001) or objective measures like gross pay (Kronberg 2013; Kronberg 2014; Cha 2014; Reichelt and Abraham 2017), workers who quit move to more favourable positions; even when remaining in the same occupation (Le Grand and Tåhlin 2002). When authors find a negative relationship between quitting and some outcome, they frame the effect as a concession for greater gains in other measure. For example, Dwyer (2004) explores voluntary downward earnings mobility, finding that workers who quit in this way often seek work-life balance.

In terms of objective pay, workers who quit move to higher paying positions (Kronberg 2014; Kronberg 2013; Schmelzer 2010; Caparrós Ruiz, Lucía Navarro Gómez, and Federico Rueda Narváez 2004). The effect is significant over the long-term, and is increasing for some workers (Latzke et al. 2016; Kronberg 2014). Even when models correct for individual heterogeneity (where certain workers are more likely to quit than others), “economic” quits lead to better paid positions with new employers (Fuller 2008; Keith and McWilliams 1995). **These papers offer a strong support for the *job-search* approach; workers use mobility to reach a certain reservation wage, which they cannot get by remaining with the same employer.**

There are some caveats to the effect. First, Latzke et al. (2016), Schmelzer (2010), and Schmelzer and Ramos (2015) find that the premium of quits depends largely on “direct” mobility where workers avoid unemployment and move from one position directly to another. Successful transitions from one job to another require workers to search for opportunities *on the job*. Second, there are significant differences between workers in the mobility-outcomes relationship. The positive effect of quitting may be mitigated by worker characteristics, where men benefit from mobility more than women, and white workers gain more from mobility more than black workers (Kronberg 2014; Kronberg 2013). Although these differences are not always replicated in other studies, generally, authors agree that core workers benefit from external mobility more than periphery workers (Caparrós-Ruiz et al 2004; Cha 2014; Fuller 2008).

In terms of subjective or “soft” outcomes, external mobility also leads to better positions with a better job-fit. Latzke et al. (2016) show external quits to a new employer have significant and lasting effects on satisfaction with work, as well as general satisfaction. This premium remained strong over time, whereas the premium tied to pay declined over time. In the US, Sallaz (2017) finds that call centre workers with poor conditions see quitting as a strategy to improve their **job-fit** even when moving to objectively lower paid positions. Here, workers are motivated to leave “dead-end” jobs and are willing to accept less pay for better opportunities and conditions. Similarly, Dwyer (2004) shows that downward wage mobility is an explicit strategy to improve conditions and job-fit with a new employer. In both examples, the strategy fits with the *job-matching* approach discussed above. In short, mobility not only has a financial benefit for workers, but is said to have subjective benefits too.

None of the authors above see promotions as a means to improve earnings or job-fit. As a result, the articles take a limited view of “voluntary” mobility. Despite a decline in firm tenure and career opportunities (Jacoby 1999), internal careers are the hope for most workers (Rigotti, Korek, and Otto 2014). It is also the *“most desired type of job mobility, because promotions increase status, esteem, responsibilities, and financial rewards”* (Ng et al. 2007). How does this mobility type compare to quits?

One reason promotions **rarely feature in such articles** may be related to data. Both Fuller (2008) and Keith and McWilliams (1995) sample young workers from the National Longitudinal Survey of Youth, where internal mobility is not measured. Further, this survey splits mobility for family, involuntary, and “other” reasons; where “other” mobility types are operationalised as “economic quits”, and so may not be the most valid measure of “wage quits”. In Germany too, internal mobility captured by the German Socio-Economic Panel may be flawed (Kattenbach et al. 2014). This lead Kattenbach et al. (2014) to drop internal mobility from their analysis, although others have made the case that the measure is valid and important (Pavlopoulos et al 2007). Finding data on internal promotions and external job quits is a challenge. Despite this, when internal promotions are included in the analysis, significant differences emerge between the two “voluntary” mobility types. We summarise these below.

### Internal and external mobility

Studies comparing the consequences of quits and promotions are rare. However, when compared and contrasted, three wrinkles typically emerge. First, promotions lead to stronger and more significant earnings growth than quits (Le Grand and Tåhlin 2002; Gesthuizen and Dagevos 2008). Second, quits lead to stronger and more significant effects on subjective satisfaction than promotions (Gesthuizen 2009; Gesthuizen and Dagevos 2008). Lastly, promotions are associated with a mix of positive and negative consequences for workers (Lup 2017; Rigotti, Korek, and Otto 2014). Overall, if workers want to improve their conditions at work, they must consider which outcomes are in need of attention before committing to a type of change. We consider these points in sequence.

On the first point, mobility within the firm often results in greater earnings growth than mobility to a new firm (Le Grand and Tåhlin 2002; Gesthuizen and Dagevos 2008; Pavlopoulos et al. 2007). In Sweden Le Grand and Tåhlin (2002) compare internal and external mobility, controlling for a variety of biases. They find internal promotions have the strongest effect on earnings growth, although external movement also carries a premium. The effect is also “pure”, in that it remains when controlling for occupational change. In the Netherlands Gesthuizen and Dagevos (2008) report a similar finding; internal promotion has the strongest effect on earnings growth and socio-economic status. As before, quits hold a premium for both outcomes, but this premium is weaker and less significant than the premium tied to promotions.

One caveat to the findings above is that it may rely on a market’s institutional setting. Pavlopoulos et al. (2007) analyse panel data from the UK and Germany. Results from Britain confirm Le Grand and Tahlin’s (2006) findings, promotions have the strongest effect on British workers’ earnings growth. However, results from Germany are the reverse; quits have the strongest effect on German workers’ earnings. Generally, when authors compare quits and promotions, it is the latter which has the strongest effect on earnings.

On the second point, authors consistently find that quits have the stronger effect on job-fit and satisfaction, when compared to promotions. In the Netherlands, Gesthuizen (2009) finds quits improve several subjective outcomes, while internal mobility has a weak effect on these. Moving to a new employer improves workers’ job-fit, their satisfaction with wages, and their satisfaction with hours. Gesthuizen and Dagevos (2008) also find that external mobility has the strongest effect on subjective feelings about work using several measures of satisfaction. These papers suggest that subjective feelings about work and the mismatch between a worker’s expectations and working conditions, drive mobility. Since the majority of these papers look at difference scores and within estimators, it’s possible that those who quit are at a lower base than those who take a promotion. However, the intervention of quitting still has a stronger and more significant effect for each outcome than the effect of promotion.

On the last point, the two sets of findings above make sense when we consider the wider effects of promotion. Respondents who experience promotion report both positive and negative changes in outcomes (Lup 2017; Rigotti, Korek, and Otto 2014). In the UK Lup (2017) finds that women who are promoted often report lower working conditions after the transition, despite seeing minor positive changes in satisfaction with work. In Germany Rigotti, Korek, and Otto (2014) show that promotions lead workers to a mix of both positive and negative outcomes. Here, higher career satisfaction is balanced with increased strain and increased demands. It makes sense that promotions would yield stronger earnings growth but negative effects on subjective feelings about work; after all, these workers transition to positions with new responsibilities and pressures. These pressures are often greater than the objective rewards and resources given to those who are promoted, and so internal mobility moves workers to “better” jobs in some outcomes, but compromises in others. For this reason, it’s possible that internal promotions are mostly motivated by reservation wages, while external mobility, may be motivated by concerns over job fit.

The empirical results above challenge the idea that mobility is a utilitarian process which brings workers to “better” positions elsewhere. We draw two conclusions from the review; first, there is a lack of studies which compare the impact of both quits and promotions. Second, there is a lack of studies which use outcomes other than pay; in this way, job-fit is left unexplored. With this in mind, we propose three hypotheses, which stem from the above review:

##### Hypothesis 1: Internal and external mobility will have significantly different effects on outcomes

##### Hypothesis 2: External mobility will bring greater subjective satisfaction than internal mobility

##### Hypothesis 3: Internal mobility will bring greater earnings growth than external mobility

## Methodology

Our general approach can be summarised as follows. We sample nine rounds of the BHPS covering the pre-crisis period (2000-2008). Using the sample, we draw subjective and objective measures of job-fit and earnings, a number of controls, and a measure of job mobility. In order to focus on the core workforce, we restrict the sample to a semi-balanced panel, allowing respondents to miss only a single year in the 2000-2008 period.

**We first consider random-effects estimation, which estimates the effect of moving within cluster-groups. However, these models fail the Hausman test, suggesting differences between clusters bias within-cluster estimates. In order to avoid this bias, we remove between-cluster differences from our model using fixed-effects estimation, as suggested by the literature.**

First, we estimate the effect of job mobility on subjective outcomes using fixed-effects linear regression. We then compare the estimates for internal and external mobility using an f-test. Lastly, we carry out the same estimation for objective outcomes, and discuss the results. In the section below, we discuss the approach in greater detail.

### Sample

The British Household Panel Survey is a longitudinal study of UK respondents (Taylor et al. 1993). The data was collected at the household level between 1991 and 2008, and contains work histories, socio-economic measures, and measures of work reward. It is routinely used to represent the wider British workforce (Pavlopoulos et al. 2007), and is particularly useful for studies of job mobility since it operationalises both internal and external mobility types.

We define the sample as; observations from respondents missing no more than one wave between 2000 and 2008; observations where respondents are employed at each interview and are not in self-employment, inactivity, or education; and observations where respondents have no missing job history information for a given survey year. The final data shape takes the form of a semi-balanced, person-year file, which ignores households and focuses on individual responses. It is made up of 3,782 respondents and 32,560 person-year observations. Although authors argue that unbalanced panels do not hinder multilevel estimation techniques (Gelman and Hill 2006), we use a semi-balanced panel for theoretical reasons, avoiding respondents who are not part of the core workforce, and are prone to periods of unemployment.

### Variables

For clarity, we discuss three sets of variables separately; starting with measures of job mobility, followed by controls, and finally outcomes. Two file-sets contain the variables used throughout, the individual response files “INDRESP”, and the individual job history files “JOBHIST”. Individual response files measure the status of respondents in a given survey year. They contain all outcomes used in estimation and most of the controls. The job history files measure job mobility and changes in job spell for a given year. These take the form of job-spells which are nested in individual responses, rather than observations nested in individuals.

For the purpose of the paper, we focus only the most recent spell in a given respondent’s work history file. Brief, earlier, spells (lasting less than a year) represent economic turbulence rather than clear transitions to new positions. As a result, they are not representative of career transitions as discussed in the literature. Further, although previous authors often control for unemployment, this is not the aim of this article, and so these periods are ignored. In short, respondents are permitted brief periods of unemployment when changing positions, although these are rare.

#### Job Mobility

Each job history file contains spell data for the last 12 months of a respondent’s career. Respondents recount each spell of employment, from their most recent, working backwards. Respondents who work in the same job, with the same employer, describe “spell 0” and have only one entry in the job history file.

Of those who change spell, it’s possible to discern between internal and external changes (JHSTAT). It’s also possible to discern between voluntary and involuntary changes (JHSTPY). Those who list a “promotion” or a move to a “better job” are said to move for voluntary reasons. Those who move due to “dismissal”, “redundancy”, or “temporary contracts” are said to move for involuntary reasons. **The purpose of the article is to estimate the effect of voluntary mobility, but is important to control for involuntary, or forced mobility also, which likely has an effect on earnings and job-fit (Keith and McWilliams 1997; Aage B Sørensen 1975)**. Respondents who change positions for “other” reasons are controlled for in a category marked “other”; these estimates are not relevant to the analysis and are ignored, although they feature in the models.

#### Outcomes

**The literature notes *“jobs may be characterized by the economic, social and psychological rewards they provide incumbents”* (Aage Bøttger Sørensen and Kalleberg 1977: p967). Thus, this paper focuses on two theoretical approaches to mobility; the job-search model and the job-match model. The job-search approach focuses on workers seeking a reservation wage. The job-match approach focuses on workers matching their skills to their position, a more subjective measure.**

**Changes in the wages can be captured easily using gross monthly wages (paygu), and weekly working hours. Changes in job-fit are more challenging, but authors appear to focus on subjective measures of satisfaction with work. For this reason, we consider three subjective outcomes, related to pay, hours, and the work itself (jobsat2, jobsat6, and jobsat7). These changes in worker-specific evaluations of their work should clearly capture the effects of movement.**

#### Controls

Measuring the impact of mobility without considering controls would give an untrue estimate. Previous authors cite the importance of controlling for industry and occupation when predicting the effect of mobility (Le Grand and Tåhlin 2002). Others cite the importance of age and the number of children in the home, which are strong predictors of earnings (Cha 2014; Keith and McWilliams 1997; Fuller 2008). Contract type, and the size of the firm are standard controls for the economic sector (Schmelzer 2010; Steenackers and Guerry 2016). Lastly, the survey year, the country’s unemployment rate, and the rate of economic growth are included in an effort to control for macro changes which may affect wages and subjective evaluations of work (Gesthuizen 2009).

### Estimation

Since we are interested in the impact of moving between positions; and not in the differences between movers and non-movers, we take a longitudinal approach. This introduces an issue regarding whether mobility is a random event, or not (Longhi and Nandi 2014). Part of the reason authors report strong and significant estimates between mobility and outcomes is due to fundamental differences between mobile and immobile workers (individual heterogeneity). We first consider this difference by comparing random-effects and fixed-effects estimates using a Hausman test.

**We originally considered a random-effects approach, which estimates person-specific effects for moving from one position to another. However, a Hausman test revealed that person-level errors correlated with controls. Considering satisfaction with work (*Hausman = 24.00, p=0.0005*), and gross monthly wages (*Hausman = -492.14, p= 0.0005*) neither model was able to avoid the influence of person-level errors, which inflated the estimates for job mobility. Since worker characteristics play a part in deciding who quits and who is promoted, we remove their influence from estimation using the fixed-effects approach, as recommended in the literature (Allison 2009; Longhi and Nandi 2014).**

The within-transformation, or fixed-effect, removes all unobserved individual heterogeneity from the model’s estimates by subtracting each term from its cluster mean. Wooldridge (2010:p 485) refers to this process as “time demeaning”, claiming *“…any explanatory variable that is constant over time for all [individuals] gets swept away by the fixed effects transformation”*. In this approach, all time invariant measures, both observed and unobserved, are dropped from the estimates. The method is particularly suited to two authors mentioned above.

The three satisfaction outcomes are recorded on a likert scale using seven categories. These were converted to a binary outcome and modelled using a conditional logistic regression (Stata command clogit). These estimates were similar to a those in a linear model, and so linear fixed-effects are reported throughout for ease. Weekly working hours and gross wages are continuous variables, and so are estimated using linear fixed-effects regression.

Two limitations of this method should be noted. First, fixed-effects estimation is inefficient and relies only on variance within clusters, discarding variance between clusters which are “contaminated” by unobserved subject-specific characteristics (Allison 2009; Longhi and Nandi 2014). Therefore, fixed effects estimates produce larger standard errors, wider confidence intervals, and larger p-values. For this reason, we treat estimates with p-values of less than 0.1 as statistically significant. Second, fixed effects estimates**, like those in many forms of regression,** are susceptible to omitted variable bias. If models omit crucial time-variant variables, other measures which correlate with the effect will produce significant results. However, the models below already consider a wide range of explanations for inequality in outcomes, including changes in the occupation and industry of respondents. On average, the models presented here are more conservative than those found in the wider literature.

## Results

Table 1 summarises the frequency of mobility in the sample. Here, the aim is to summarise the commonality of voluntary mobility before checking the commonality of quits and promotions. Table 1 is split in three ways; overall, between, and within respondents. The first column considers all observations overall. Most of the UK’s mobility is “voluntary”, either to a new employer or a new position with the same employer (column 1). Thinking of mobility between respondents (column 2), 33% of respondents quit voluntarily at least once during the panel; 30% of respondents took a promotion at least once during the panel. Regarding mobility for the average respondent (column 3), both types of voluntary mobility are more common throughout the 9 wave period than the other mobility types listed. Together, the figures suggest *British workers move often for voluntary reasons*. Mobility is common, and several respondents will move more than once over the 8-year period. We now move on to the main research question, what do workers get from this mobility?

[TABLE 1 HERE]

### Mobility and subjective outcomes

The results of three fixed-effects regression models are listed below. We consider three subjective outcomes; satisfaction with work (model 1), satisfaction with pay (model 2), and satisfaction with hours (model 3). For clarity, we omit the estimates for “other” mobility types, which are controlled for, but are not relevant to our wider argument. Specifically, we are interested in whether **both** quits and promotions lead to significantly different effects in outcomes (hypothesis 1) and whether quits have a stronger effect on outcomes than promotions (hypothesis 2).

[TABLE 2 HERE]

There is a clear distinction between voluntary and involuntary mobility in each model. Voluntary mobility leads workers to subjectively better positions while involuntary mobility has no effect. This is consistent with the *job-matching* approach (Jovavich 1979, Kalleberg and Maouw 2010) and the wider *attainment* approach (Sørensen 1979) discussed above. However, there are also significant differences between quits and promotions within each model.

Beginning with work satisfaction (model 1), an F-test reveals that quits have a stronger effect on the outcome than promotions (F(1, 3723)= 25.54, p >F = 0.000). A similar result emerges for satisfaction with pay (model 2), an F-test shows that quits have a stronger effect on the outcome (F(1, 3723) = 18.21, p > F = 0.000). Lastly, satisfaction with time (model 3) is affected in the same way as the previous outcomes. Those who quit see a larger effect than those who take a promotion (F(1, 3723) = 10.32, p > F= 0.001). In every case respondents who leave an employer, find more satisfying positions than respondents who take promotions with the same employer.

Using the findings above, we confirm hypothesis 1; voluntary mobility has a significant effect on outcomes. Further, we confirm hypothesis 2; external mobility has a stronger effect on subjective outcomes than internal mobility. Quitting may be driven by job-mismatch instead of attainment, or reservation wages as they are described in the literature. Workers who quit a firm may be less interested in career progression, and more interested in leaving poor conditions behind (Jovanovic 1979). The findings above resemble previous studies of mobility on subjective outcomes (Latzke et al. 2016, Gesthuizen 2009, Gesthuizen and Dagevos 2008, Kalleberg and Mastekaasa 2001)

It’s worth briefly considering a second explanation. Sørensen (1977) implicitly suggests that working conditions tend to vary less within the firm than between firms, because “opportunity structures” within the firm are smaller than they are in the wider market. As a result, workers are limited in the extent they can improve outcomes with the same employer. If such opportunity structures exist, a set of objective outcomes will respond to mobility in the same way as above; with external mobility yielding strong effects, and internal mobility yielding weaker effects. We keep this idea in mind while revisiting hypothesis 1 and testing hypothesis 3.

### Mobility and objective outcomes

The models in Table 3 are similar to those in Table 2; they estimate the effect of mobility on weekly hours worked (1) and log wages (2). Since mobility has a significant effect on both outcomes, we run the model for wages a second time, controlling for weekly hours worked (model 3). As before, we are interested in whether quits and promotions have significantly different effects on both outcomes (hypothesis 1), and whether promotions have a stronger effect on outcomes than quits (hypothesis 3).

[TABLE 3 HERE]

The effects of voluntary mobility are less clear than before. Voluntarily changing jobs has an effect on hours and pay, but only under certain conditions. Promotions have the strongest effect on pay without a corresponding effect on hours. Quits have a positive effect on pay, but this is followed by a rise in working hours. While promotions reward workers with higher pay, quits appear to be a bargain over working time. We elaborate on this point below.

Starting with weekly working hours; the estimates for voluntary mobility have mixed effects. Quitting leads workers to positions with longer hours (model 1), and promotions lead workers to positions with fewer hours (the estimate is not significant). Considering gross monthly pay (model 2), both quits and promotions lead to workers to higher paying positions. However, there is no difference between quitting and gaining a promotion in terms of higher pay. Although an increase exists, it is small; workers may need to pursue several new positions over the course of a career before seeing a substantial change in pay. Thinking of both models together, the 1% increase in pay may be tied to longer hours. With this in mind, we re-estimate the effect of mobility on pay, while controlling for weekly working hours (model 3). This eliminates the positive estimate for quitting, but not for promotions. Thus external mobility is tied to bargains over hours for similar rates of pay; while internal mobility is tied to *higher paying positions in themselves*.

From the estimates above, we confirm hypothesis 1. Voluntary mobility has a significant effect on outcomes. We also confirm hypothesis 3, internal mobility rewards workers best when outcomes are objective. These findings add further support to our main argument; that two separate mechanisms influence mobility. Promotions resemble the career progress and earnings growth described by Sørensen (1975), and the reservation wage proposed by Burdett (1978); quits on the other hand appear to be a strategy of gaining more hours, or moving from part-time work.

The estimates in Table 3 resemble those of previous authors who compare internal and external mobility. Gesthuizen and Dagevos (2008), and elsewhere Le Grand and Tåhlin (2002) both report higher earnings growth from promotions when compared to quits. In the UK, Pavlopoulos et al. (2007) too report greater earnings growth from internal mobility when compared to external mobility, although this result is flipped in the results for Germany. Thus, the idea that high inter-firm mobility stems from greater opportunities between firms than within them, does not emerge.

## Discussion

This article compares the impact of internal and external mobility on worker outcomes. Internal mobility types have largely been ignored in the literature. As a result, studies of job mobility focus extensively on who experiences job quits or job hopping (Gesthuizen 2009; Steenackers and Guerry 2016), and what are the returns to job quits or job hopping (Caparrós Ruiz, Lucía Navarro Gómez, and Federico Rueda Narváez 2004; Kronberg 2014). This approach has a tendency to frame mobile working lives as the result of workers shopping for better opportunities elsewhere (Brown, Haltiwanger, and Lane 2008; OECD. 2010). The view minimises precarity and ignores the fact that internal and traditional, channels for career progression often carry the best rewards for workers.

We find that internal and external mobility types are distinctly different mechanisms, with different consequences for workers. Internal mobility leads workers to marginally better conditions but significantly higher pay. External mobility leads workers to positions with better conditions without increased pay. Authors often cite the death of internal labour markets and a rise in “boundaryless” career types (Cappelli 1999; Jacoby 1999); it is important to ask, what do workers get from these new institutional settings? The work above shows that external labour markets are no substitute for the rewards offered by traditional career ladders. Instead, job quits likely stem from a worker’s need to correct poor conditions and a poor job-person fit.

As working conditions continue to change, widen, and become individualised, mobility will increase. The British referendum to leave the European Union is already having an impact on working conditions, like the European Working Time Directive. This will likely lead to larger rates of inter-firm mobility as workers try to bargain for greater job fit in a market of increasingly varied outcomes.

The assumption that workers have much to gain from mobile labour markets should be treated with scepticism; this conclusion assumes the interests of labour and the interests of capital are the same. Instead, mobile markets may act as a release valve for poor working conditions, or an alternative to a lack of career ladders in the market; which employers purposely avoid constructing. As Sørensen (1983) notes later in his career, *“One may see the considerable amount of inequality in personal attainments found in labor markets… to be created in large organization as deliberate devices to move employee performance from perfunctory to consummate.”* This catch may have spilled into the wider economy, where precarity and mobility are “deliberate devices” to maintain a turning market of poor working conditions. Keeping employees mobile means limiting the commitments and obligations that employers have to their staff; authors may suggest mobility is still a crucial strategy to placing workers into organisations with better conditions and opportunities. We should consider the importance of ensuring such conditions as standard.

## References

1. Allison, Paul D. 2009. *Fixed Effects Regression Models*. Vol. 160. SAGE publications.
2. Althauser, Robert P, and Arne L Kalleberg. 1981. “Firms, Occupations, and the Structure of Labor Markets: A Conceptual Analysis.” *Sociological Perspectives on Labor Markets* 8. Academic Press New York: 119–49.
3. Brown, Clair, John Haltiwanger, and Julia Lane. 2008. *Economic Turbulence: Is a Volatile Economy Good for America?* University of Chicago Press.
4. Burdett, Kenneth. 1978. “A Theory of Employee Job Search and Quit Rates.” *The American Economic Review*. JSTOR, 212–20.
5. Caparrós Ruiz, Antonio, María Lucía Navarro Gómez, and Mario Federico Rueda Narváez. 2004. “Gender Wage Gaps and Job Mobility in Spain.” *International Journal of Manpower* 25 (3/4). Emerald Group Publishing Limited: 264–78.
6. Cappelli, Peter. 1999. “Career Jobs Are Dead.” *California Management Review* 42 (1). SAGE Publications Sage CA: Los Angeles, CA: 146–67.
7. Cha, Youngjoo. 2014. “Job Mobility and the Great Recession: Wage Consequences by Gender and Parenthood.” *Sociological Science* 1: 159–77.
8. Dwyer, Rachel E. 2004. “Downward Earnings Mobility After Voluntary Employer Exits.” *Work and Occupations* 31 (1). Sage Publications: 111–39.
9. Fuller, Sylvia. 2008. “Job Mobility and Wage Trajectories for Men and Women in the United States.” *American Sociological Review* 73 (1). Sage Publications Sage CA: Los Angeles, CA: 158–83.
10. Gelman, Andrew, and Jennifer Hill. 2006. *Data Analysis Using Regression and Multilevel/Hierarchical Models*. Cambridge university press.
11. Gesthuizen, Maurice. 2009. “Job Characteristics and Voluntary Mobility in the Netherlands: Differential Education and Gender Patterns?” *International Journal of Manpower* 30 (6). Emerald Group Publishing Limited: 549–66.
12. Gesthuizen, Maurice, and Jaco Dagevos. 2008. “Mismatching of Persons and Jobs in the Netherlands: Consequences for the Returns to Mobility.” *Work, Employment and Society* 22 (3). SAGE Publications Sage UK: London, England: 485–506.
13. Hachen Jr, David S. 1990. “Three Models of Job Mobility in Labor Markets.” *Work and Occupations* 17 (3). Sage Publications: 320–54.
14. ———. 1992. “Industrial Characteristics and Job Mobility Rates.” *American Sociological Review*. JSTOR, 39–55.
15. Hirschman, Albert. 1982. “1970. Exit, Voice and Loyalty.” *Cambridge/Mass. Google Scholar*.
16. Jacoby, Sanford M. 1999. “Are Career Jobs Headed for Extinction?” *California Management Review* 42 (1). SAGE Publications Sage CA: Los Angeles, CA: 123–45.
17. Jovanovic, Boyan. 1979. “Job Matching and the Theory of Turnover.” *Journal of Political Economy* 87 (5, Part 1). The University of Chicago Press: 972–90.
18. Kalleberg, Arne L, and Arne Mastekaasa. 2001. “Satisfied Movers, Committed Stayers: The Impact of Job Mobility on Work Attitudes in Norway.” *Work and Occupations* 28 (2). Sage Publications: 183–209.
19. Kalleberg, Arne L, and Aage B Sorensen. 1979. “The Sociology of Labor Markets.” *Annual Review of Sociology* 5 (1). Annual Reviews 4139 El Camino Way, PO Box 10139, Palo Alto, CA 94303-0139, USA: 351–79.
20. Kattenbach, Ralph, Thomas M Schneidhofer, Janine Lücke, Markus Latzke, Bernadette Loacker, Florian Schramm, and Wolfgang Mayrhofer. 2014. “A Quarter of a Century of Job Transitions in Germany.” *Journal of Vocational Behavior* 84 (1). Elsevier: 49–58.
21. Keith, Kristen, and Abagail McWilliams. 1995. “The Wage Effects of Cumulative Job Mobility.” *ILR Review* 49 (1). SAGE Publications Sage CA: Los Angeles, CA: 121–37.
22. ———. 1997. “JOB Mobility and Gender-Based Wage Growth Differentials.” *Economic Inquiry* 35 (2). Wiley Online Library: 320–33.
23. Kronberg, Anne-Kathrin. 2013. “Stay or Leave? Externalization of Job Mobility and the Effect on the Us Gender Earnings Gap, 1979-2009.” *Social Forces* 91 (4). Oxford University Press: 1117–46.
24. ———. 2014. “Stay or Leave? Race, Education, and Changing Returns to the External Labor Market Strategy, 1976–2009.” *Work and Occupations* 41 (3). Sage Publications Sage CA: Los Angeles, CA: 305–49.
25. Latzke, Markus, Ralph Kattenbach, Thomas Schneidhofer, Florian Schramm, and Wolfgang Mayrhofer. 2016. “Consequences of Voluntary Job Changes in Germany: A Multilevel Analysis for 1985–2013.” *Journal of Vocational Behavior* 93. Elsevier: 139–49.
26. Le Grand, Carl, and Michael Tåhlin. 2002. “Job Mobility and Earnings Growth.” *European Sociological Review* 18 (4). Oxford University Press: 381–400.
27. Longhi, Simonetta, and Alita Nandi. 2014. *A Practical Guide to Using Panel Data*. Sage.
28. Lup, Daniela. 2017. “Something to Celebrate (or Not): The Differing Impact of Promotion to Manager on the Job Satisfaction of Women and Men.” *Work, Employment and Society*. SAGE Publications Sage UK: London, England, 0950017017713932.
29. Mouw, Ted, and Arne L Kalleberg. 2010. “Occupations and the Structure of Wage Inequality in the United States, 1980s to 2000s.” *American Sociological Review* 75 (3). Sage Publications Sage CA: Los Angeles, CA: 402–31.
30. Ng, Thomas WH, Kelly L Sorensen, Lillian T Eby, and Daniel C Feldman. 2007. “Determinants of Job Mobility: A Theoretical Integration and Extension.” *Journal of Occupational and Organizational Psychology* 80 (3). Wiley Online Library: 363–86.
31. OECD. 2010. *OECD Employment Outlook 2010: Moving Beyond the Jobs Crisis*. Organisation for Economic Co-operation; Development.
32. Pavlopoulos, Dimitris, Didier Fouarge, Ruud Muffels, and Jeroen Vermunt. 2007. “Who Benefits from a Job Change: The Dwarfs or the Giants?”
33. Reichelt, Malte, and Martin Abraham. 2017. “Occupational and Regional Mobility as Substitutes: A New Approach to Understanding Job Changes and Wage Inequality.” *Social Forces* 95 (4). Oxford University Press: 1399–1426.
34. Rigotti, Thomas, Sabine Korek, and Kathleen Otto. 2014. “Gains and Losses Related to Career Transitions Within Organisations.” *Journal of Vocational Behavior* 84 (2). Elsevier: 177–87.
35. Sallaz, Jeffrey J. 2017. “Exit Tales: How Precarious Workers Navigate Bad Jobs.” *Journal of Contemporary Ethnography* 46 (5). SAGE Publications Sage CA: Los Angeles, CA: 573–99.
36. Schmelzer, Paul. 2010. “The Consequences of Job Mobility for Future Earnings in Early Working Life in Germany—placing Indirect and Direct Job Mobility into Institutional Context.” *European Sociological Review* 28 (1). Oxford University Press: 82–95.
37. Schmelzer, Paul, and Alberto Veira Ramos. 2015. “Varieties of Wage Mobility in Early Career in Europe.” *European Sociological Review* 32 (2). Oxford University Press: 175–88.
38. Steenackers, Kelly, and Marie-Anne Guerry. 2016. “Determinants of Job-Hopping: An Empirical Study in Belgium.” *International Journal of Manpower* 37 (3). Emerald Group Publishing Limited: 494–510.
39. Sørensen, Aage B. 1975. “The Structure of Intragenerational Mobility.” *American Sociological Review*. JSTOR, 456–71.
40. ———. 1977. “The Structure of Inequality and the Process of Attainment.” *American Sociological Review*. JSTOR, 965–78.
41. ———. 1983. “Processes of Allocation to Open and Closed Positions in Social Structure.” *Zeitschrift Für Soziologie* 12 (3). Lucius & Lucius: 203–24.
42. Sørensen, Aage Bøttger, and Arne L Kalleberg. 1977. “An Outline of a Theory of the Matching of Persons to Jobs.” Institute for Research on Poverty.
43. Sørensen, Aage Bøttger, and Nancy Brandon Tuma. 1978. *Labor Market Structures and Job Mobility*. University of Wisconsin–Madison.
44. Taylor, Marcia Freed, John Brice, Nick Buck, and Elaine Prentice-Lane. 1993. *British Household Panel Survey User Manual*. University of Essex.
45. Wooldridge, Jeffrey M. 2010. *Econometric Analysis of Cross Section and Panel Data*. MIT press.

## Tables

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | N | Mean | Std. Dev. | Min | Max |
| Ref: Same job, same employer |  |  |  |  |  |
| Changed employer-voluntary | 32,560 | 0.057 | 0.233 | 0 | 1 |
| Changed employer-involuntary | 32,560 | 0.014 | 0.119 | 0 | 1 |
| Changed employer-other | 32,560 | 0.027 | 0.162 | 0 | 1 |
| Changed job, kept employer-Voluntary | 32,560 | 0.050 | 0.218 | 0 | 1 |
| Changed job kept employer- involuntary | 32,560 | 0.003 | 0.054 | 0 | 1 |
| Changed job kept employer-other | 32,560 | 0.016 | 0.127 | 0 | 1 |
|  |  |  |  |  |  |
| z\_pay satisfaction | 31,765 | 0.000 | 1.000 | -2.916 | 1.385 |
| z\_security satisfaction | 31,719 | 0.000 | 1.000 | -3.379 | 1.091 |
| z\_work satisfaction | 31,773 | 0.000 | 1.000 | -3.663 | 1.257 |
| z\_time satisfaction | 31,781 | 0.000 | 1.000 | -3.150 | 1.310 |
|  |  |  |  |  |  |
| Weekly number of hours worked | 32,396 | 35.025 | 9.730 | 0.000 | 99.000 |
| Gross monthly pay | 31,147 | 1808.980 | 1322.109 | 27.324 | 72055.430 |
| Log gross monthly pay | 31,147 | 7.298 | 0.665 | 3.308 | 11.185 |
|  |  |  |  |  |  |
| (Ref: male) |  |  |  |  |  |
| female | 32,046 | 0.484 | 0.500 | 0 | 1 |
|  |  |  |  |  |  |
| education (Ref:third level) |  |  |  |  |  |
| second level | 31,021 | 0.599 | 0.490 | 0 | 1 |
| basic level | 31,021 | 0.209 | 0.407 | 0 | 1 |
|  |  |  |  |  |  |
| agecat: ref (16-30) |  |  |  |  |  |
| (31-45) | 32,556 | 0.475 | 0.499 | 0 | 1 |
| (46-65) | 32,556 | 0.376 | 0.484 | 0 | 1 |
| (66-80) | 32,556 | 0.007 | 0.085 | 0 | 1 |
|  |  |  |  |  |  |
| children (Ref: No children) |  |  |  |  |  |
| 1 child | 32,560 | 0.186 | 0.389 | 0 | 1 |
| 2 children | 32,560 | 0.178 | 0.382 | 0 | 1 |
| 3+ children | 32,560 | 0.048 | 0.213 | 0 | 1 |
|  |  |  |  |  |  |
| contract: (ref: temporary) |  |  |  |  |  |
| Permanent | 31,205 | 0.984 | 0.127 | 0 | 1 |
|  |  |  |  |  |  |
| jbsize1: ref(1-99) |  |  |  |  |  |
| 100-499 | 32,066 | 0.240 | 0.427 | 0 | 1 |
| 500-1000+ | 32,066 | 0.185 | 0.388 | 0 | 1 |
|  |  |  |  |  |  |
| industry |  |  |  |  |  |
| Agriculture | 29,946 | 0.008 | 0.090 | 0 | 1 |
| Energy | 29,946 | 0.017 | 0.128 | 0 | 1 |
| Mining | 29,946 | 0.002 | 0.047 | 0 | 1 |
| Manufacturing | 29,946 | 0.169 | 0.374 | 0 | 1 |
| Construction | 29,946 | 0.048 | 0.214 | 0 | 1 |
| Trade | 29,946 | 0.134 | 0.340 | 0 | 1 |
| Transport | 29,946 | 0.062 | 0.242 | 0 | 1 |
| Bank/Insurance | 29,946 | 0.059 | 0.236 | 0 | 1 |
| Services | 29,946 | 0.460 | 0.498 | 0 | 1 |
|  |  |  |  |  |  |
| isco10 |  |  |  |  |  |
| Professionals | 29,728 | 0.139 | 0.346 | 0 | 1 |
| Technicians | 29,728 | 0.145 | 0.352 | 0 | 1 |
| Clerical staff | 29,728 | 0.165 | 0.371 | 0 | 1 |
| Service workers | 29,728 | 0.137 | 0.344 | 0 | 1 |
| skilled agricultural | 29,728 | 0.006 | 0.079 | 0 | 1 |
| Craft | 29,728 | 0.102 | 0.302 | 0 | 1 |
| Plant and machinery | 29,728 | 0.078 | 0.268 | 0 | 1 |
| Elementary | 29,728 | 0.067 | 0.250 | 0 | 1 |
|  |  |  |  |  |  |
| Wave (ref: 10) |  |  |  |  |  |
| 11 | 32,560 | 0.113 | 0.317 | 0 | 1 |
| 12 | 32,560 | 0.113 | 0.317 | 0 | 1 |
| 13 | 32,560 | 0.113 | 0.317 | 0 | 1 |
| 14 | 32,560 | 0.114 | 0.317 | 0 | 1 |
| 15 | 32,560 | 0.114 | 0.318 | 0 | 1 |
| 16 | 32,560 | 0.115 | 0.319 | 0 | 1 |
| 17 | 32,560 | 0.114 | 0.318 | 0 | 1 |
| 18 | 32,560 | 0.109 | 0.311 | 0 | 1 |
|  |  |  |  |  |  |
| Growth | 32,560 | 2.575 | 1.284 | -4.31 | 4.3 |
| unemployment | 32,560 | 5.088 | 0.296 | 4.7 | 6.7 |

Table 1: Mobility overall, between, and within workers (BHPS 2000-2008)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Mobility Event | Overall (1) |  | Between (2) |  | Within (3) |
|  | Freq. | % | Freq. | % | % |
|  |  |  |  |  |  |
| Same job | 27,091 | 83.20 | 3,781 | 99.97 | 83.17 |
| Changed employer, voluntary | 1,872 | 5.75 | 1,238 | 32.73 | 17.68 |
| Changed employer, involuntary | 468 | 1.44 | 418 | 11.05 | 13.11 |
| Changed employer, other | 873 | 2.68 | 726 | 19.2 | 14.05 |
| Changed job kept employer, voluntary | 1,630 | 5.01 | 1,120 | 29.61 | 16.89 |
| Changed job kept employer, involuntary | 96 | 0.29 | 84 | 2.22 | 13.29 |
| Changed job kept employer, other | 530 | 1.63 | 436 | 11.53 | 14.11 |
|  |  |  |  |  |  |
| Total | 32,560 | 100 | 3,782 |  |  |

Table 2: Results, UK 2000-2008: Linear estimated fixed-effect of mobility on subjective outcomes.

|  |  |  |  |
| --- | --- | --- | --- |
|  | (1) | (2) | (3) |
| VARIABLES | Satisfaction with work, linear z-scores | Satisfaction with pay, linear z-scores | Satisfaction with time, linear z-scores |
| External, voluntary | 0.36\*\*\* | 0.24\*\*\* | 0.14\*\*\* |
|  | (0.03) | (0.02) | (0.02) |
| External involuntary | 0.06 | 0.05 | 0.05 |
|  | (0.06) | (0.05) | (0.05) |
| Internal voluntary | 0.18\*\*\* | 0.10\*\*\* | 0.04\* |
|  | (0.03) | (0.02) | (0.02) |
| Internal involuntary | -0.09 | 0.02 | -0.00 |
|  | (0.12) | (0.11) | (0.12) |
| Constant | 0.38 | -0.19 | 0.01 |
|  | (0.25) | (0.27) | (0.24) |
|  |  |  |  |
| Observations | 26,036 | 26,016 | 26,032 |
| R-squared | 0.02 | 0.07 | 0.14 |
| Number of pid | 3,698 | 3,698 | 3,698 |
| Wave | 10-18 | 10-18 | 10-18 |
| Weights | Clustered SE | Clustered SE | Clustered SE |

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The models above control for age, contract type, firm size, whether the respondent has children, the size of the firm, the industry, the occupation, and the survey wave. We also control for general job satisfaction in each model (except for the model estimating satisfaction with work), and two macro variables; the unemployment rate and the rate of economic growth.

Table 3: Results, UK 2000-2008: Linear estimated fixed-effect of moving on objective outcomes.

|  |  |  |  |
| --- | --- | --- | --- |
|  | (1) | (2) | (3) |
| VARIABLES | Number of hours worked weekly | Log Gross monthly pay | Log gross monthly wages (controlling for weekly hours) |
|  |  |  |  |
| External voluntary | 0.47\*\*\* | 0.01\* | 0.01 |
|  | (0.18) | (0.01) | (0.01) |
| External involuntary | -0.68 | -0.07\*\*\* | -0.05\*\* |
|  | (0.42) | (0.02) | (0.02) |
| Internal voluntary | -0.14 | 0.01\* | 0.02\*\* |
|  | (0.19) | (0.01) | (0.01) |
| Internal involuntary | -0.48 | -0.09\* | -0.09\* |
|  | (0.95) | (0.05) | (0.04) |
| Constant | 34.93\*\*\* | 7.47\*\*\* | 6.85\*\*\* |
|  | (1.94) | (0.08) | (0.08) |
|  |  |  |  |
| Observations | 26,020 | 26,057 | 26,020 |
| R-squared | 0.02 | 0.25 | 0.25 |
| Number of pid | 3,698 | 3,698 | 3,698 |
| Wave | 10-18 | 10-18 | 10-18 |
| Weights | Clustered SE | Clustered SE | Clustered SE |

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The models control for age, contract, firm size, whether the respondent has children, the size of the firm, the industry, and survey wave. We also control for two macro variables- the unemployment rate, and the rate of economic growth.