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The Acceptance of Earnings Losses After Voluntary Mobility

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Abstract Because rational individuals know that they cannot always get what they want, they are assumed to make appropriate adjustments. However, little is known about trade-off reasoning in labor market mobility decision making. The objective of this paper is to analyze the effect of commuting on the decision to voluntarily accept wage cuts. Application of German household data reveals that workers are more likely to accept lower wages when daily commuting expenses can be reduced. In other words, workers trade off amenities and monetary rewards when changing employers.

JEL J24, J30, J62

Keywords Mobility, wage cut, quit

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1 Introduction

Today's labor markets are characterized by a large degree of flexibility. Among a variety of aspects, labor market mobility contributes to this flexibility (OECD (1997)). In recent times, a growing strand of literature corroborates that a considerable fraction of workers are changing jobs at the cost of wage cuts. In Germany, a large number of workers are shown to be mobile toward lower wages. Fitzenberger and Garloff (2007) refer to establishment-to-establishment transitions during two successive years and show that more than one in five individuals are mobile with wage cuts. Jolivet et al. (2006) apply data from the European Community Household Panel Survey to reveal that 36.3% of job-to-job transitions in Germany are accompanied by wage cuts. The authors define job-to-job mobility as transitions without noticeable unemployment spells of less than one month.

Transitions to lower wages are not a typical German phenomenon. In their cross-country analysis, Jolivet et al. (2006) show that almost one in five individuals is mobile to lower wages in Portugal and Belgium. The largest shares of wage cuts are observed in Denmark, France, and Germany. In these countries, more than 34% of mobile individuals suffer wage cuts in the period of mobility. In line with this result, Postel-Vinay and Robin (2002) show that more than one in three workers changing jobs directly did so at the cost of a wage cut.[1] For the United States, Jolivet et al. (2006) indicate that 23% of job-to-job transitions are to lower wages.[2] Nosal and Rupert (2007) utilize the Panel Study of Income Dynamics and show that about two in five individuals (voluntarily) change to lower wages. The results of these studies for different countries indicate that scientists should turn their attention to the reasons for mobility with wage cuts.

Recent literature considers wage cuts a result of job termination. In Jolivet (2009), workers are allowed to change jobs directly to lower wages because their only alternative is non-employment. These transitions are referred to as job reallocations and are also mentioned in other studies (e.g., Jolivet et al. (2006)). Other theoretic approaches explain wage cuts as an investment in future wage growth (Connolly and Gottschalk (2008), Postel-Vinay and Robin (2002)). Schneck (2010) empirically confirmed the prevalence of investments in future wage growth but also revealed that a substantial fraction of workers are mobile to permanently lower wages. Because workers are shown to accept lower wages on a permanent basis, other determinants are hypothesized to

[1] Using French data, Postel-Vinay and Robin (2002) refer to direct mobility as job-to-job mobility with a maximum intervening unemployment spell of 15 days.

[2] Using the Panel Study of Income Dynamics, the authors refer to job-to-job mobility when intervening unemployment, if any, does not exceed three weeks.

affect mobility decisions. For example, it is also suggested that job-specific (non-wage) amenities affect the job choice (Nosal and Rupert (2007)).

Economic and psychological literature, however, lack detailed information about the reasons for accepting lower wages. The basic idea of this paper proposes that differences in wages between two jobs might be balanced out by differences in non-wage job characteristics. Analogously to Rosen (1974, 1987) one could hypothesize that jobs consist of bundles of various characteristics with implicit, or hedonic, prices. Competent and self-supporting individuals, however, know that they cannot always get what they want, and that is the reason why they are expected to make appropriate adjustments. More specifically, individuals are expected to know that it is unlikely to find a *better* job with a higher wage, more flexible work time arrangements, and more job security right at their front door. It is important to analyze the extent of trade-off reasoning in the context of labor market mobility because "Trade-off reasoning should be so pervasive and so well rehearsed as to be virtually automatic for the vast majority of the [...] population" (Tetlock (2000), p. 239).

This paper sets forth an analysis of the reasons for job-to-job mobility to lower wages with a special focus on changes in different non-pecuniary job characteristics after the transition. It utilizes the German Socio-Economic Panel (GSOEP in the following; see Wagner et al. (2007)), which includes questions on the reasons for job termination at the previous employer and surveys comparisons between both jobs. This is a major enhancement to previous papers because it allows one to determine whether workers voluntarily accept wage cuts in order to improve job-specific non-wage amenities.

The paper is structured as follows. The next section illustrates briefly the basic framework and the research hypotheses. Section 3 describes the data set, main variables, and econometric models. I present the econometric results for the impact of subjective improvements in different job-specific characteristics on the decision to accept wage cuts in section 4. A conclusion is presented in section 5.

2 Framework and research questions

This paper addresses the question on whether workers are willing to pay for different (non-pecuniary) aspects of jobs by lower wages. For this reason, the analysis refers to individual trade-off reasoning in the context of job mobility. The innovation of the paper involves the analysis of subjective improvements between workers' old and new jobs.

The main hypothesis of this paper is whether improvements in commuting

expenses affect the acceptance of lower wages. van Ophem (1991) shows that the commuting distance exhibits a significant impact on the search probability. Specifically, results show that the higher the distance from home to the workplace (in minutes), the higher the search propensity. This result suggests that commuting is an important determinant for labor market mobility because job search is a good predictor of actual mobility (see Cornelißen (2009)). However, little is known about the relationship between commuting expenses and mobility to lower wages. For this reason, the paper asks whether subjective improvements in commuting are paid for by wage cuts. Note that commuting might also be expensive in monetary terms because larger distances are assumed to increase the price to get from home to work which directly reduces profitability of the job.

A further major determinant of mobility is whether an individual is a homeowner (owner-occupants) or renter, respectively. Munch et al. (2008) confirms restricted job mobility of owners. More precisely, the authors find "that home ownership has a negative impact on job-to-job mobility both in terms of transition into new local jobs and new jobs outside the local labor market" (p. 130). From this it follows that owners are commonly restricted to search within the local labor market for job offers. Renters, however, can easily terminate their hiring contracts and move to a different location. This enhances the on-the-job search to a variety of regional labor markets which is expected to increase the job offer rate. A larger set of job offers, then, might increase the probability to find an employer with a higher wage offer. For this reason, it might be hypothesized that owning a house increases the acceptance of wage cuts because of regional constrained on-the-job search. Combining both hypotheses about commuting and homeowners, homeowners are likely to be restricted to their housing place as starting point for commuting to the workplace while renters are able to set a new starting point by termination of the hiring contract. For this reason, one might also expect differences in accepting wage cuts between renters and homeowners which are subject to this paper.

The hypothesis about trade-off reasoning is summarized in equation (1). Worker i balances out improvements in job-specific amenities and wages when changing employer in period t. The probability to accept wage cuts, then, is expected to be positively affected by commuting. S summarizes other (sociodemographic) determinants which might affect the decision to accept lower wages. I test the hypotheses by application of the probability model in equation (2) in which Φ is the cumulative density function of the standard normal distribution. Evidence for the trade-off reasoning in mobility decisions

is provided in case of a positive estimate for coefficient β_1.

$$Pr(Wage\ Cut_{it} = 1) = f_{it}(\underbrace{improvement\ in\ commuting}_{+}, S) \tag{1}$$

$$Pr(Wage\ Cut_{it} = 1) = \Phi(\beta_0 + \beta_1 commuting_{it} + \delta' S_{it}) \tag{2}$$

Note that the data address realized transitions with completed trade-off reasoning (a more detailed description of the data follows in the next section). For this reason, individual answers on the questions about subjective improvements in the new job might involve problems regarding cognitive dissonance reduction theory (Festinger (1957)). This particular theory describes that unpleasant arousal drives people to resolve the cognitive inconsistency. In other words, if two cognitions are discrepant, individuals simply change one to make it consistent with the other. Here, workers might act contrary to their attitude because of mobility to lower wages. As a consequence, these workers adjust their cognition about the job in a positive way to balance out this effect. In the underlying case, workers might change their attitude toward the new job in a positive way as a consequence from the decision to be mobile to lower wages. As a consequence, workers who accept wage cuts report to be more satisfied with the new job compared to workers changing without wage cuts. If this is true, the estimated coefficients on subjective comparisons (improvements) between the previous and the current job would be upwardly biased. A direct test of this possible critique cannot be conducted by application of the GSOEP.

3 Data and Procedure

3.1 Data

This study utilizes the GSOEP household survey to examine the impact of job-specific amenities on the probability of being mobile with wage cuts. The main advantage of this data set stems from the fact that it includes subjective comparisons between the previous and current jobs. I restrict the analysis to German citizens who are employed full-time in two successive years during the period 1994–2007. In the consecutive analysis, the year 1996 is excluded because of a lack of information on the frequency of commuting. The sample considers private sector employees aged between 20 and 60 years. The lower

age boundary is chosen because the considered academic degrees are usually achieved before 20 years of age.[3]

The data include annual information on the last monthly gross wage of individuals.[4] As the data are set up as a panel, information about the wage in the previous year is utilized to determine wage cuts and wage improvements. To examine the probability of wage cuts, a binary dummy variable is constructed that illustrates whether individuals are mobile to lower wages or not:

$$Wage\ Cut_{it} = \begin{cases} 0 & \text{mobility to higher wages} \quad (w_{it} - w_{it-1} \geq 0) \\ 1 & \text{mobility to lower wages} \quad (w_{it} - w_{it-1} < 0) \end{cases} \tag{3}$$

In order to account for the individual trade-off reasoning appropriately, the analysis attempts to identify voluntary mobility, which is defined as an unconstrained decision of the individual. The underlying GSOEP includes detailed retrospective information about labor mobility. Each year, the questionnaire asks whether a new job was started at another employer or after a break.[5] Individuals who reported a job change, then, are asked whether they resigned on their own initiative. In the subsequent analysis, only those reporting a resignation on their own initiative are considered. In addition, I focus on mobile workers who changed employer within one month. This criterion was instituted to meet the definition of job-to-job mobility where individuals have to be mobile within one month (Jolivet et al. (2006), Royalty (1998)). In sum, 659 voluntary employer-to-employer transitions of 582 individuals who are mobile up to five times are considered.

A diversity of subjective improvements of different job characteristics are surveyed in the data. More specifically, the data set includes information about comparisons between the previous and current jobs. The corresponding question read as follows: "How would you judge your present position compared to your last one? In what ways has it improved, stayed the same, or worsened?" This particular question considers the following characteristics: Wages, job type, chances for promotion, work load (strain), length of commute to and from work, work schedule regulations (work time), job benefits, and

[3] Here, I distinguish between the following academic degrees: secondary modern school qualifications (Hauptschulabschluss), secondary school certificates (Realschulabschluss), subject-specific university entrance qualifications (Fachhochschulreife), and university entrance qualifications (Abitur). Then, dummy variables are constructed which indicate the maximum degree of individuals.

[4] I apply the Consumer Price Index provided by the Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung (Table 084; year 2005 = 100) to deflate the wages.

[5] The analysis excludes workers starting their first job and individuals who report a job change within the firm. The analysis, hence, focuses on transitions between different employers. Unique information about this special pattern is available from 1994 onwards.

security against job loss.[6] Another question asks whether the individual uses his or her knowledge and skills more, the same, or less than in the previous job. The answers to these questions are applied to analyze the impact of trade-off reasoning on the decision to be mobile to lower wages. Table A1 shows the descriptive statistics and reveals that only very few transitions (11.99%) are accompanied by a subjective worsening of wages. In the following, the paper concentrates on dummy variables which describe improvements of the subjective comparisons.

3.2 Descriptive Statistics

Table 1 presents descriptive statistics on wage changes induced by voluntary job-to-job mobility. It shows that more than two in five transitions are to lower wages which is in line with the results in Nosal and Rupert (2007) for the US but larger than the results presented in Fitzenberger and Garloff (2007) and Jolivet et al. (2006). On average, all directly mobile workers generate a wage markup of about 6.5%. This average wage premium for mobility is one reason for the conventional hypothesis that employer-to-employer mobility is voluntary. The share of workers who are mobile with wage markups is very different from the workers who are mobile to lower wages. Table 1 shows that the average wage markup amounts to 26.5% for upwardly mobile individuals while downwardly mobile workers suffer an average wage cut of 21.5%. The relative wage cuts and wage markups presented here exceed the ones presented in Fitzenberger and Garloff (2007) substantially. It is also shown that heterogeneity between the group of mobile owners and renters is evident. Owners are commonly affected by wage cuts while renters are less likely to chge jobs at the price of a wage cut. In fact, one in two mobile owners and one in three renters suffer wage cuts when changing jobs. Compared to mobile owners, mobile renters achieve higher relative wage markups. Note that the subjective perception of worsenings in wages shown in Table A1 is by far smaller than the total number of wage cuts. Precisely, only 11.99% of transitions are accompanied by subjective worsenings in wages while 41.58% of transitions are to lower wages. This suggests that the disutility introduced by monetary losses might be be offset by other dimensions of the current job which directly adverts to trade-off reasoning in job mobility. Note that three in four individuals who report subjective worsenings in the wage indeed suffer wage cuts.

[6] The questions and potential answer categories differ slightly over the years. No information is available in the 2008 wave of the GSOEP.

Table 1
Descriptive statistics on wage changes after direct mobility

direct transition after quits	share of workers with wage cut	$w_{it} - w_{it-1}$ (mean)	w_{it}/w_{it-1} (mean)	Observations
all	0.4158	98.4817	1.0650	659
	(0.4932)	(1477.3950)	(0.3860)	
wage markup	0.0000	905.4822	1.2647	385
	(—)	(1118.0220)	(0.3674)	
wage cut	1.0000	-1035.4420	0.7845	274
	(—)	(1137.4240)	(0.1847)	
Owners				
all	0.5000	-97.4185	1.0222	240
	(0.5010)	(1531.8560)	(0.4387)	
wage markup	0.0000	850.7093	1.2592	120
	(—)	(1225.9270)	(0.4909)	
wage cut	1.0000	-1045.5460	0.7852	120
	(—)	(1181.942)	(0.1797)	
Renters				
all	0.36754	210.6919	1.0896	419
	(0.4827)	(1435.1160)	(0.3505)	
wage markup	0.0000	930.2851	1.2672	265
	(—)	(1067.1080)	(0.2961)	
wage cut	1.0000	-1027.5690	0.7840	154
	(—)	(1105.3220)	(0.1891)	

Standard deviations in parentheses
Deflated gross wages are applied (year 2005 = 100)

Table 2 refers to the subjective improvement in length of commute to and from work as illustrated in Table A1. In addition, a dummy variable for the frequency of commuting is introduced. This variable takes the value 1 for workers commuting each day and 0 if workers commute less frequently. About 88% of mobile individuals change to jobs where they have to commute each day. 25.80% of these workers achieve subjective improvements in commuting to the workplace. The interaction variable states that 22.91% of workers commuting daily also improve their commuting expenses subjectively. Differences between owners and renters are hardly to find.

Table 2
Descriptive statistics on commuting

		Mean	Standard Deviation
All	Number of observations: 659		
	Subjective improvement in commuting	0.2580	0.4378
	Dummy variable: Commute to workplace each day	0.8847	0.3197
	(Subjective improvement in commuting)*(Commute each day)	0.2291	0.4206
Owner	Number of observations: 240		
	Subjective improvement in commuting	0.2792	0.4495
	Dummy variable: Commute to workplace each day	0.8667	0.3406
	(Subjective improvement in commuting)*(Commute each day)	0.2458	0.4315
Renter	Number of observations: 419		
	Subjective improvement in commuting	0.2458	0.4311
	Dummy variable: Commute to workplace each day	0.8950	0.3069
	(Subjective improvement in commuting)*(Commute each day)	0.2196	0.4145

Also see Table A1 for subjective improvement in commuting

Table 3 displays the shares of wage cuts and wage markups with respect to the variables described in Table 2. It supports the trade-off reasoning postulated above because a significantly higher share of individuals who achieve daily improvements in commuting change to lower than to higher wages. The corresponding t-test rejects similar means for the interaction variable. This implies that the mean in daily subjective improvements in commuting is significantly different across mobility with wage cuts and wage markups. This result seems to be driven by owners rather than renters.

Table 3
Descriptive statistics on wage cuts and wage markups

	Wage cut	Wage markup	t-test (p-value)
All			
Subjective improvement in commuting	0.2810	0.2416	0.2545
	(0.4503)	(0.4286)	
Dummy variable: Commute to workplace each day	0.9015	0.8727	0.2557
	(0.2986)	(0.3337)	
(Subjective improvement in commuting)*(Commute each day)	0.2628	0.2052	0.0833
	(0.4409)	(0.4044)	
Observations	274	385	
Owner			
Subjective improvement in commuting	0.3083	0.2500	0.3158
	(0.4637)	(0.4348)	
Dummy variable: Commute to workplace each day	0.8917	0.8417	0.2564
	(0.3121)	(0.3666)	
(Subjective improvement in commuting)*(Commute each day)	0.2917	0.2000	0.0999
	(0.4564)	(0.4017)	
Observations	120	120	
Renter			
Subjective improvement in commuting	0.2597	0.2377	0.6150
	(0.4399)	(0.4265)	
Dummy variable: Commute to workplace each day	0.9091	0.0232	0.4740
	(0.2884)	(0.3174)	
(Subjective improvement in commuting)*(Commute each day)	0.2403	0.2075	0.4367
	(0.4286)	(0.4063)	
Observations	154	265	

Standard Deviations in parentheses

In sum, the descriptive statistics show that wage cuts are common during the observed period. Especially homeowners are found to be affected by wage cuts. More than two in five individuals change jobs at the price of a wage cut whereas one in two homeowners suffer wage cuts. In the following, multivariate analysis is applied to analyze the research question.

3.3 Methods and Procedure

The dependent variable on whether a wage cut was accepted or not is binary by construction. Literature recommends the analysis of binary dependent variables by application of binary choice models. Here, a probit model that relates to equation (2) was utilized. Equation (4) shows the applied probit model, which contains information on improvements in commuting and

whether individuals commute on a daily basis (X_{it}). S_{it} describes sociodemographic information and Z_{it} summarizes other dimensions of comparisons between the previous and the now job which vary across different specifications. Specifically, Z_{it} stands for improvements in strain, job security, work time arrangements, type of job, promotion, job benefits and the use of skills. The descriptive statistics are displayed in Table A2.

As the data are set up as a panel, I also can make effort to control for unobserved heterogeneity. A likelihood-ratio test was conducted in order to assess whether individual random effects were evident in the probit model. This test cannot reject no individual heterogeneity in each specification with p-values exceeding 0.1. The Breusch-Pagan Lagrange multiplier test (Breusch and Pagan (1980)) was also applied to test for individual random effects. Again, the null hypothesis cannot be rejected, which implies that the pooled models are appropriate. Note that only for the group of renters, the test rejects the Nullhypothesis on the 10% level.

$$Pr(Wage\ Cut_{it} = 1) = \Phi(\alpha + \beta' X_{it} + \gamma' Z_{it} + \delta' S_{it}) \tag{4}$$

In order to account for individual characteristics gender, age, and whether or not individuals live with a partner are included. As high wage workers might go over wage cuts more easily, I include the wage observed at the first employer (w_{it-1}). Regional mobility is included in the analysis because Yankow (2003) shows that changing locale affects wages. More specifically, I accounted for the federal state (Bundesland) in which an individual is working. If a worker changes to a job in a different federal state compared to the previous job, the corresponding dummy variable for regional mobility equals one. In addition, transitions from blue-collar to white-collar jobs are accounted for by a dummy variable. I also account for the economic environment in different years. Precisely, I include the growth of unemployment rate ($unemp$) into the analysis.[7] The number of previous individual mobility describes the calculated number of previous job changes between 1985 and the year of the interview. This also includes layoffs by employers or mobility after bankruptcies.[8]

[7] I apply the unemployment rate provided by the Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung (Table 090). Unemployment growth is defined as $unemp_t - unemp_{t-1}$.

[8] Table A2 presents descriptive statistics for the control variables which are included in the subsequent multivariate analysis. Workers who voluntarily change jobs are, on average, between 35 and 36 years of age. This finding can be interpreted with the hypothesis that middle-aged workers assess their own aspiration levels best (Clark et al. (1996)). Regional mobility plays a minor role by simple consideration of its frequency, since workers are shown to leave their federal state for a new job rarely. Only 5.0% of the transitions are to new federal states. 20.6% of mobile individuals life together with a partner. About one in

4 Results

This section shows the results of the multivariate analysis whereas I present the estimated marginal effects at $\bar{x}$. The first specification only accounts for the dummy variable for subjective improvements in commuting. Specification (2) also includes an interaction term representing daily commuting in combination with subjective improvement in commuting. Specification (3) additionally contains the dummy variable for daily commuting while the last specification only accounts for the interaction representing subjective improvements in daily commuting. The specifications are satisfactory when applying the RESET test-type for the probit model.[9]

Regarding the above hypothesis of trade-off reasoning between commuting and mobility decisions to lower wages, the four specifications of Table 4 provide distinct insights. Specification (1) shows that subjective improvements are not significantly paid for by wage cuts. The coefficient, however, is quite sizable because the subjective perception of an improvement in commuting increases the probability for a wage cut by 0.0604 percentage points or by about 14.8%, respectively. Specification (2) reveals that this effect is not robust across different specifications because the coefficient even becomes negative when including the interaction on subjective improvements in commuting and commuting each day. The interaction term is shown to be highly significant and positive. The third specification, again presents a negative coefficient for the subjective comparison between the old and the new job and confirms the impact of the interaction term. Daily trips from home to the workplace exhibit no significant impact on the decision to accept wage cuts. The last specification confirms that workers who achieve subjective improvements in commuting each day are likely to pay for this improvement by wage cuts. The coefficient is highly significant and amounts in size roughly to the sum of the coefficients presented in specification (2).

In sum, specifications (2) and (4) show that information on the frequency of commuting is a key determinant for trade-off reasoning. The average worker cannot be shown to pay for subjectively decreasing commuting expense by lower wages. Workers who commute each day, in turn, are shown to trade off wage cuts and commuting expenses. This can be explained by trade-off reasoning in the evaluation of the alternatives. Analogously to Rosen (1974, 1987), jobs consist of different job characteristics. Workers, then, are suggested

twenty transitions are from a blue-collar job to a white-collar job. Inclusion of the change in job satisfaction is important because "The empirical analysis has found job satisfaction to be a major determinant of labor market mobility" (Freeman (1978), p. 140).

[9] See Ramsey (1969) for the linear test-type which is analogously applied in the probit model here.

to weight these job characteristics by the frequency of its appearance. For this reason, the average worker (in the first specification) might not pay for improvements in commuting by lower wages because the considered workers might not attribute large impact on commuting. One reason could be that the average worker pays more attention to other characteristics such as flexible work schedules or future career perspectives. Workers who commute each day, in turn, are expected to attribute large impact to improvements in commuting because of their daily arising commuting expenses. For this reason, this group of workers might decide to pay for lower commuting expenses by lower wages while others do not.

All specifications in Table 4 present a highly significant and positive coefficient for the dummy variable describing homeowners. This implies that this group of workers is more likely to accept wage cuts compared to renters. The effect is large in size and owners have a larger probability to accept wage cuts which corresponds to about 0.15 percentage points or 37%, respectively. However, a more distinct analysis is necessary because of the fixed starting point of commuting owners and the more variable starting point of renters who can more easily terminate their hiring contract and set a new starting point for the trip to work. For this reason, I split the samples into homeowners and renters.

Table 5 presents the results of the trade-off reasoning for homeowners and renters separately. Specification (1) presents positive coefficients for subjective improvements in commuting. This suggests that trade-off reasoning might be evident, but the effect is statistically insignificant and not robust across specifications. Similar to the results in Table 4, it turns out that only homeowners who commute each day are strongly affected by subjective improvements in commuting. Owners, thus, seem to assign large impact to commuting expenses if they commute each day while homeowners who commute less frequently pay low attention to this specific job characteristic. Again, this is explained by the individual weighting scheme of the implicit price of commuting.

Table 4
Probit estimation results: Marginal effects at $\bar{x}$
All transitions

Variables	(1)	(2)	(3)	(4)
Subjective improvement in commuting	0.0604	-0.199*	-0.156	
	(0.0456)	(0.105)	(0.123)	
Commute to workplace each day			0.0543	
			(0.0708)	
(Commuting improved)*(Commute daily)		0.302**	0.249*	0.0998**
		(0.118)	(0.141)	(0.0479)
Homeowner	0.150***	0.151***	0.151***	0.150***
	(0.0424)	(0.0426)	(0.0426)	(0.0424)
w_{it-1}	4.74e-05***	4.75e-05***	4.78e-05***	4.74e-05***
	(1.13e-05)	(1.14e-05)	(1.13e-05)	(1.13e-05)
Change in job satisfaction	-0.0154**	-0.0155**	-0.0158**	-0.0155**
	(0.00720)	(0.00721)	(0.00722)	(0.00720)
Growth in unemployment rate	0.0876***	0.0917***	0.0928***	0.0898***
	(0.0260)	(0.0261)	(0.0262)	(0.0261)
Number of previous individual mobility	0.0202	0.0174	0.0184	0.0182
	(0.0198)	(0.0199)	(0.0199)	(0.0200)
Age	-0.0162	-0.0162	-0.0171	-0.0163
	(0.0191)	(0.0192)	(0.0193)	(0.0191)
Age^2	0.000191	0.000192	0.000204	0.000192
	(0.000249)	(0.000250)	(0.000252)	(0.000249)
Secondary school certificate	0.0310	0.0321	0.0340	0.0305
	(0.0474)	(0.0474)	(0.0476)	(0.0475)
Subject-specific university entrance qual.	-0.235***	-0.241***	-0.239***	-0.239***
	(0.0592)	(0.0583)	(0.0586)	(0.0587)
University entrance qualification	-0.145***	-0.141***	-0.136***	-0.146***
	(0.0509)	(0.0508)	(0.0512)	(0.0507)
Blue-collar to white-collar transition	0.172*	0.193**	0.194**	0.180**
	(0.0899)	(0.0894)	(0.0892)	(0.0890)
Male	-0.0395	-0.0361	-0.0330	-0.0375
	(0.0454)	(0.0456)	(0.0459)	(0.0455)
Partner	0.0484	0.0464	0.0451	0.0484
	(0.0524)	(0.0527)	(0.0526)	(0.0526)
Regional mobility	0.00774	0.00187	0.00286	0.00587
	(0.0849)	(0.0843)	(0.0843)	(0.0844)
Predicted Pr(wage cut = 1 $\|\bar{x}$)	0.4075	0.4066	0.4065	0.4072
Pseudo R^2	0.0770	0.0829	0.0836	0.0799
Number of observations			659	

Robust standard errors clustered for individuals (in parentheses)
*** p<0.01, ** p<0.05, * p<0.1

Table 5
Probit estimation results: Marginal effects at $\bar{x}$

Variables	(1)	(2)	(3)	(4)
Homeowners				
Subjective improvement in commuting	0.0785	-0.287*	-0.286*	
	(0.0724)	(0.148)	(0.173)	
Commute to workplace each day			0.00159	
			(0.115)	
(Commuting improved)*(Commute daily)		0.399***	0.398**	0.145*
		(0.136)	(0.164)	(0.0749)
Predicted Pr(wage cut = 1 $\|\bar{x}$)	0.5010	0.5008	0.5008	0.5012
Pseudo R^2	0.0702	0.0836	0.0836	0.0767
Number of observations		240		
Number of individuals		215		
Renters				
Subjective improvement in commuting	0.0526	-0.120	-0.0687	
	(0.0599)	(0.150)	(0.177)	
Commute to workplace each day			0.0623	
			(0.0947)	
(Commuting improved)*(Commute daily)		0.204	0.140	0.0779
		(0.178)	(0.205)	(0.0631)
Predicted Pr(wage cut = 1 $\|\bar{x}$)	0.3519	0.3518	0.3519	0.3518
Pseudo R^2	0.0963	0.0989	0.0998	0.0978
Number of observations		419		
Number of individuals		375		

Robust standard errors clustered for individuals (in parentheses)
*** p<0.01, ** p<0.05, * p<0.1
See Tables A3 and A4 in the appendix for a more detailed estimation output

In addition, Table 5 reveals that renters do not pay for improvements in daily commuting expenses by lower wages while homeowners do. The effect of commuting each day which is described by the interaction term is statistically significant for homeowners but insignificant for renters. The estimated coefficients (with exception of the dummy variable for daily commuting), moreover, are somewhat larger in absolute values for homeowners compared to renters. The acceptance of wage cuts, thus, seems to be different for the group of owners and renters as hypothesized in section 2. An explanation is that homeowners are not that free in deciding from where to commute to the

workplace compared to renters because they are not able to easily terminate the hiring contract and move to another home. In addition, homeowners have a larger probability of accepting wage cuts which might be due to the restricted job mobility of owners as mentioned by Munch et al. (2008). Specifically, if homeowners are restricted to search for alternative jobs within the local labor markets they might suffer a lower job offer rate. Fewer job offers, then, are suggested to result in a lower probability of receiving offers with higher wages. This is one possibility causing the larger acceptance of wage cuts among owners.

The effects of the control variables are to a large extent insignificant. Regional mobility, the number of previous mobility, gender, and living together with a partner do not reveal any statistical significance. Age only reveals a linear negative impact in the specifications for renters. The higher the wage at the old employer, the higher the propensity to accept wage cuts. This can be explained in the way that workers at the top of the wage distribution have to 'invest' in the new job which enforces temporary wage cuts. Renters with higher educational levels are less likely to suffer immediate wage cuts when changing employer voluntarily. For homeowners, this effect is insignificant. The growth in unemployment rate exhibits a strong positive impact on the acceptance of lower wages. Transitions from a blue-collar job to a white-collar job are likely to be associated with wage cuts. The change in job satisfaction reveals a significant impact on the decision to accept wage cuts.

Renters who are able to quit to a more satisfactory job are less likely to pay for the increase in job satisfaction by lower wages. This might be explained in the way that general satisfaction with the job might be associated with the salary or other dimensions of the job. As noted above, jobs consist of bundles of characteristics which workers compare before changing job. The underlying data contain information on more dimensions of subjective comparisons between the old and the new job. Table A1 shows these variables of interest and analogously to commuting, I construct dummy variables indicating whether an improvement is surveyed and include them into the multivariate analysis. This allows for deductions whether workers trade off further (non-wage) amenities and wages.

Some of the possible trade-off reasoning hypotheses are briefly described in the following. First, workers might trade off job-related strain and wages. Strain is shown to negatively affect individual satisfaction (see, e.g., Loscocco and Spitze (1990)) and Cornelißen (2009) finds a negative effect of hard manual labor and stress (which are dimensions of job strain) on job satisfaction. According to Mobley (1977), dissatisfaction with a job is translated into thoughts of leaving the employer, evaluation of alternatives, and mobility because starting a new job is expected to result in a higher satisfaction. In

fact, Judge (1993) shows that dissatisfied workers are more likely to quit than other individuals. Literature, however, lacks information on whether mobile individuals are willing to accept wage cuts in order to leave the dissatisfying job. This paper assesses whether individuals who expect decreasing strain when changing jobs are willing to accept lower wages. Analogous argumentation is expected to hold for improved job security by wage cuts because Cornelißen (2009) shows that satisfaction with the job is negatively affected by worries about (perceived) job security. Based on the question of Altonji and Paxson (1988) on whether workers are willing to sacrifice wage gains for better working hours when quitting a job, I ask whether workers are even willing to accept wage cuts for an improvement of work schedule regulations. The main reason for a special focus on the latter hypotheses is that individuals face a trade-off between time constraints and monetary rewards. To be more precise, if the current employer offers few possibilities for flexible leisure, then, working at a new employer with more flexible working schedules might be preferred despite lower wages. In other words, workers know that it is very problematic (almost impossible) to achieve the highest flexibility without paying a price for it.

Regarding the above hypotheses, Table 6 does not reveal trade-off reasoning for improvements in strain, subjective job security, or work time regulations. Although insignificant, note that the average marginal effect at $\bar{x}$ of work time arrangements is quite sizable. An improvement in work schedules increases the probability of a wage cut by about 17%. Table 6 presents significant evidence that workers who move to jobs with better promotion prospects are less likely to accept wage cuts. In addition, subjective improvements in job benefits reduce the probability of wage cuts significantly. Both effects might be explained by the monetary component of these job characteristics because promotions as well as benefits are frequently associated with higher wages. For commuting, the picture is similar to the one presented in Table 4. For this reason, the estimated marginal effects are robust. The same holds for the large set of control variables.

Table 7 presents the results for homeowners and renters, respectively. The results show that homeowners are significantly affected by daily commuting. Renters are, similar to the findings above, not significantly affected by improvements in commuting. Both groups are less likely to obtain lower wages when job-related benefits can be improved subjectively.

Table 6
Probit estimation results: Marginal effects at $\bar{x}$
All transitions

Variables	(1)	(2)	(3)	(4)
Subjective improvement in commuting	0.0461	-0.222**	-0.192	
	(0.0467)	(0.104)	(0.121)	
Commute to workplace each day			0.0392	
			(0.0721)	
(Commuting improved)*(Commute daily)		0.318***	0.280**	0.0893*
		(0.119)	(0.141)	(0.0489)
Subjective improvement in				
Strain	0.0483	0.0491	0.0476	0.0449
	(0.0478)	(0.0478)	(0.0480)	(0.0477)
Work time	0.0705	0.0687	0.0682	0.0680
	(0.0451)	(0.0453)	(0.0453)	(0.0452)
Security against job loss	-0.0258	-0.0237	-0.0239	-0.0259
	(0.0483)	(0.0484)	(0.0484)	(0.0483)
Chances for promotion	-0.0934**	-0.0908**	-0.0902**	-0.0903**
	(0.0454)	(0.0456)	(0.0456)	(0.0456)
Job type	0.0224	0.0229	0.0222	0.0227
	(0.0460)	(0.0462)	(0.0462)	(0.0461)
Job benefits	-0.110**	-0.121***	-0.120***	-0.114**
	(0.0461)	(0.0458)	(0.0459)	(0.0459)
Use of skills	-0.0314	-0.0270	-0.0280	-0.0298
	(0.0454)	(0.0457)	(0.0457)	(0.0455)
Homeowner	0.150***	0.152***	0.152***	0.149***
	(0.0429)	(0.0432)	(0.0432)	(0.0430)
w_{it-1}	4.93e-05***	4.91e-05***	4.93e-05***	4.91e-05***
	(1.15e-05)	(1.16e-05)	(1.15e-05)	(1.15e-05)
Change in job satisfaction	-0.0129*	-0.0129*	-0.0131*	-0.0129*
	(0.00752)	(0.00744)	(0.00745)	(0.00750)
Growth in unemployment rate	0.0984***	0.103***	0.104***	0.101***
	(0.0263)	(0.0265)	(0.0266)	(0.0264)
Number of previous individual mobility	0.0205	0.0180	0.0187	0.0186
	(0.0200)	(0.0200)	(0.0200)	(0.0201)
Age	-0.00509	-0.00479	-0.00558	-0.00540
	(0.0196)	(0.0197)	(0.0198)	(0.0196)
Age^2	4.94e-05	4.57e-05	5.70e-05	5.37e-05
	(0.000255)	(0.000256)	(0.000258)	(0.000255)
Secondary school certificate	0.0258	0.0280	0.0292	0.0256
	(0.0477)	(0.0477)	(0.0478)	(0.0477)
Subject-specific university entrance qual.	-0.234***	-0.239***	-0.238***	-0.237***
	(0.0608)	(0.0600)	(0.0602)	(0.0603)
University entrance qualification	-0.121**	-0.118**	-0.115**	-0.124**
	(0.0532)	(0.0531)	(0.0536)	(0.0529)
Blue-collar to white-collar transition	0.171*	0.194**	0.195**	0.179**
	(0.0909)	(0.0901)	(0.0898)	(0.0900)
Male	-0.0420	-0.0385	-0.0363	-0.0400
	(0.0456)	(0.0458)	(0.0460)	(0.0457)
Partner	0.0518	0.0501	0.0489	0.0519
	(0.0532)	(0.0534)	(0.0533)	(0.0534)
Regional mobility	-0.00569	-0.0129	-0.0125	-0.00841
	(0.0864)	(0.0858)	(0.0859)	(0.0859)
Predicted Pr(wage cut = 1 $\|\bar{x}$)	0.4043	0.4033	0.4033	0.4041
Pseudo R^2	0.0947	0.101	0.101	0.0973
Number of observations		659		

Robust standard errors clustered for individuals (in parentheses)
*** p<0.01, ** p<0.05, * p<0.1

Table 7
Probit estimation results: Marginal effects at $\bar{x}$

Variables	(1)	(2)	(3)	(4)
Homeowners				
Subjective improvement in commuting	0.0762	-0.352**	-0.384**	
	(0.0754)	(0.159)	(0.179)	
Commute to workplace each day			-0.0445	
			(0.118)	
(Commuting improved)*(Commute daily)		0.471***	0.501***	0.166**
		(0.140)	(0.157)	(0.0778)
Subjective improvement in				
Strain	0.00884	0.00370	0.00880	0.000556
	(0.0789)	(0.0791)	(0.0812)	(0.0791)
Work time	0.0780	0.0826	0.0838	0.0781
	(0.0783)	(0.0790)	(0.0790)	(0.0786)
Security against job loss	0.00184	7.88e-05	-6.39e-05	0.00415
	(0.0810)	(0.0805)	(0.0806)	(0.0807)
Chances for promotion	-0.101	-0.0899	-0.0954	-0.0950
	(0.0808)	(0.0816)	(0.0816)	(0.0812)
Job type	-0.00851	-0.0155	-0.0153	-0.0118
	(0.0804)	(0.0810)	(0.0810)	(0.0809)
Job benefits	-0.183**	-0.226***	-0.229***	-0.202**
	(0.0788)	(0.0801)	(0.0807)	(0.0793)
Use of skills	-0.0771	-0.0709	-0.0656	-0.0714
	(0.0762)	(0.0778)	(0.0794)	(0.0769)
Predicted Pr(wage cut = 1 $\|\bar{x}$)	0.4987	0.4996	0.4996	0.4990
Pseudo R^2	0.103	0.122	0.123	0.111
Number of observations			240	
Number of individuals			215	
Renters				
Subjective improvement in commuting	0.0328	-0.139	-0.0899	
	(0.0614)	(0.150)	(0.176)	
Commute to workplace each day			0.0617	
			(0.0928)	
(Commuting improved)*(Commute daily)		0.207	0.143	0.0588
		(0.181)	(0.206)	(0.0642)
Subjective improvement in				
Strain	0.0712	0.0737	0.0735	0.0698
	(0.0603)	(0.0604)	(0.0603)	(0.0599)
Work time	0.0850	0.0823	0.0816	0.0826
	(0.0555)	(0.0556)	(0.0557)	(0.0556)
Security against job loss	-0.0435	-0.0401	-0.0409	-0.0437
	(0.0597)	(0.0598)	(0.0596)	(0.0596)
Chances for promotion	-0.0812	-0.0796	-0.0816	-0.0785
	(0.0558)	(0.0559)	(0.0557)	(0.0559)
Job type	0.0462	0.0483	0.0469	0.0471
	(0.0552)	(0.0552)	(0.0552)	(0.0552)
Job benefits	-0.103*	-0.106*	-0.105*	-0.104*
	(0.0567)	(0.0565)	(0.0565)	(0.0565)
Use of skills	0.00469	0.00767	0.00889	0.00558
	(0.0563)	(0.0565)	(0.0566)	(0.0563)
Predicted Pr(wage cut = 1 $\|\bar{x}$)	0.3470	0.3466	0.3467	0.3469
Pseudo R^2	0.116	0.118	0.119	0.117
Number of observations			419	
Number of individuals			375	

Robust standard errors clustered for individuals (in parentheses)
*** p<0.01, ** p<0.05, * p<0.1
See Tables A5 and A6 in the appendix for a more detailed estimation output

In brief, the results on objective wage cuts advert to robust trade-off reasoning when considering daily commuting. In a last step, I conduct a robustness check using the reported subjective worsenings in wages in order to reveals whether individuals balance out subjective worsenings in wages by adjustments in their cognition about the job. The dependent variable in Table 8, then, is a dummy variable indicating a subjective worsening in wages. As can be seen in Table A1, 79 individuals or a fraction of 11.99% report subjective worsening in wages. The share is slightly larger for homeowners (12.08%) compared to renters (11.93%). The Table presents the results on the estimated coefficients which, again, describe marginal effects at $\bar{x}$. In the following, only the results for the specification including the interaction variable for daily improvements in commuting are presented because this effect was robust in the results shown above. In addition, a dummy variable which indicates whether an individual really suffers a wage cut is included. This dummy variable is a strong predictor of the subjective perception of a worsening in wages. Note that the predictions at $\bar{x}$ are very imprecise because the deviations from the observed probabilty of subjective worsenings in wages are quite large (at least for the subgroups of homeowners and renter). A RESET test, moreover, adverts to a dissatisfactory specification for all transitions (specification 1) on the 5% level.

When turning the focus on the the subjective comparisons between the current and the previous job, the basic finding is that trade-off reasoning of non-wage amenities becomes evident. Among all transitions, workers are suggested to trade off subjective improvements in strain with perceptions of worsenings in wages. The same holds for more flexible work time regulations and daily improvements in commuting. However, the hypothesized effect about balancing out job security and wages cannot be supported using this specification. Workers who achieve subjective improvements in promotion opportunities and the general job type are suggested to decrease the probability of perceptions of worsening in wages. Finally, specification (1) does not advert to significant differences across homeowners and renters.

Specifications (2) and (3) in Table 8 refer to the samples of homeowners and renters, respectively. The results differ strongly from the first specification. In fact, the marginal effects for the subjective improvements are very different by pure consideration of both subgroups. Most important, the estimates do not show any significant effects of improvements in daily commuting. An explanation is hardly to find. However, it is shown that the trade-off reasoning between improvements in strain and worsening in wages is driven by homeowners rather than renters. Renters, in turn, are suggested to trade off work schedules while homeowners are insignificantly affected by improvements in work time flexibility.

Table 8
Probit estimation results for subjective worsening in wages: Marginal effects at $\bar{x}$

Variables	(1) All transitions	(2) Homeowner	(3) Renter
Dummy variable for observed wage cut	0.108***	0.120***	0.0776***
	(0.0236)	(0.0341)	(0.0295)
(Commuting improved)*(Commute daily)	0.0630**	0.0616	0.0507
	(0.0266)	(0.0379)	(0.0316)
Subjective improvement in			
Strain	0.0532**	0.0714*	0.0427
	(0.0255)	(0.0415)	(0.0281)
Work time	0.0648***	0.0200	0.0639**
	(0.0244)	(0.0219)	(0.0302)
Security against job loss	-0.00289	-0.0174	0.00875
	(0.0218)	(0.0177)	(0.0279)
Chances for promotion	-0.0878***	-0.0694**	-0.0699***
	(0.0210)	(0.0285)	(0.0233)
Job type	-0.0461**	0.00306	-0.0759***
	(0.0219)	(0.0184)	(0.0284)
Job benefits	-0.0356*	0.0219	-0.0580**
	(0.0200)	(0.0235)	(0.0233)
Use of skills	0.00641	0.0131	0.00241
	(0.0211)	(0.0199)	(0.0247)
Homeowner	-0.0205		
	(0.0181)		
w_{it-1}	6.99e-06	8.83e-06**	3.33e-06
	(5.02e-06)	(4.07e-06)	(7.90e-06)
Change in job satisfaction	-0.000840	-0.00180	-9.89e-05
	(0.00341)	(0.00381)	(0.00362)
Growth in unemployment rate	-0.0132	-0.0433**	0.00561
	(0.0121)	(0.0168)	(0.0158)
Number of previous individual mobility	0.00929	-0.0161*	0.0266***
	(0.00838)	(0.00856)	(0.00994)
Age	0.0112	-0.0125	0.0164
	(0.0101)	(0.00989)	(0.0125)
Age^2	-0.000142	0.000161	-0.000213
	(0.000132)	(0.000127)	(0.000166)
Secondary school certificate	0.000662	0.0345	-0.00980
	(0.0204)	(0.0324)	(0.0226)
Subject-specific university entrance qual.	-0.0155	0.0344	-0.0333
	(0.0344)	(0.0740)	(0.0288)
University entrance qualification	-0.0457**	0.000777	-0.0559**
	(0.0215)	(0.0321)	(0.0233)
Blue-collar to white-collar transition	0.202**	0.0110	0.293***
	(0.0808)	(0.0407)	(0.110)
Male	-0.00597	-0.0124	0.0178
	(0.0220)	(0.0217)	(0.0231)
Partner	0.0546*	0.0216	0.0650*
	(0.0308)	(0.0344)	(0.0349)
Regional mobility	0.00951	0.128	-0.0227
	(0.0419)	(0.111)	(0.0327)
Observed Pr(subjective worsening in wages = 1)	0.1199	0.1208	0.1193
Predicted Pr(subjective worsening in wages = 1 $\|\bar{x}$)	0.0634	0.0281	0.0572
Pseudo R^2	0.240	0.379	0.280
Number of observations	659	240	419
Number of individuals	582	215	375

Robust standard errors clustered for individuals (in parentheses)
*** p<0.01, ** p<0.05, * p<0.1

To sum up, trade-off reasoning, as hypothesized above, is a key feature of the acceptance of wage cuts. I am, however, not able to find any significant support for the hypothesis that workers trade off improvements in job strain, work time arrangements, and the acceptance of lower wages. In addition, no evidence is shown for the hypothesis that workers pay for immediate improvements in subjective job security by wage cuts. Most of the purely non-wage amenities, thus, are shown to play a statistically insignificant but economically sizable role in the decision to be mobile to lower wages. The results for trade-off reasoning between wages and commuting must be viewed differently because of differences between homeowners and renters. Owners are significantly affected by daily commuting to the workplace while renters are not. This might be explained in the way that renters can easily terminate their hiring contract and move closer to the workplace. Among homeowners, only the individuals who commute to work each day are found to be willing to pay for improvements in commuting expenses by immediate wage cuts. The findings on non-wage amenities change by consideration of subjective worsenings in wages as dependent variables. Individuals are shown to change their attitude toward worsenings in wages by a change in cognition about different job characteristics such as flexible work schedules and strain.

5 Discussion

This paper investigates the relation between subjective improvements between two jobs and voluntary mobility to lower wages. This allows to assess the impact of trade-off reasoning on individual labor market decisions. The results suggest that job-specific (non-wage) amenities affect the job choice. More specifically, workers are shown to voluntarily accept wage cuts when improvements in daily commuting expenses can be achieved. A further major finding is that this result differs across homeowners and renters. Renters are not found to significantly trade-off commuting expenses and wages while homeowners are shown to balance out wages and commuting expenses. Note that commuting expenses are predictable before changing employer. In fact, economic uncertainty is almost inexistent because the new firm's location and the frequency of commuting is known beforehand. Because workers are sure about the improvements in this particular job characteristics, they are even willing to accept wage cuts. The loss of utility through decreasing wages is, thus, compensated for by an increase in utility through improvements in job-specific amenities in the new job.

The results also have important implications for employers. Offering non-wage amenities can attract workers of competitors who pay higher wages. This

implies that those employers who offer such amenities are suggested to attract employees of competitors despite lower wages. In addition, employers are able to attract workers by locating companies in regions where workers have low costs of commuting. This also includes the time component of commuting to the workplace. It is also suggested that the absence of compensating wage differentials can be explained by such non-wage amenities (see Bonhomme and Jolivet (2009)). Since Schneck (2010) showed that transitions to permanently lower wages are common, it might be hypothesized that workers trade off permanent lower wages with subjective improvements in certain job-specific characteristics. This study shows that commuting expenses are a potential candidate for the acceptance of downward mobility.

Appendix

Table A1
Frequencies of subjective comparisons between old and new job

How would you judge your present position compared to your last one? In what ways has it improved, stayed the same, or worsened			
Variable	improved	stayed the same	worsened
Length of commute to and from work	170	222	267
	(25.80)	(33.69)	(40.52)
Work load (strain)	215	307	137
	(32.63)	(46.59)	(20.79)
Work schedule regulations (work time)	273	276	110
	(41.43)	(41.88)	(16.69)
Security against job loss	221	377	61
	(33.54)	(57.21)	(9.26)
Chances for promotion	280	324	55
	(42.49)	(49.17)	(8.35)
Job type	383	245	31
	(58.12)	(37.18)	(4.70)
Job benefits	233	363	63
	(35.36)	(55.08)	(9.56)
Use of skills	281	300	78
	(42.64)	(45.52)	(11.84)
Wages	420	160	79
	(63.73)	(24.28)	(11.99)
Number of observations		659	

Shares in parentheses

Table A2
Descriptive statistics of the control variables

	Mean	Standard Deviation
Subjective improvement in		
Work load (strain)	0.3263	0.4692
Work schedule regulations (work time)	0.4143	0.4930
Security against job loss	0.3354	0.4725
Chances for promotion	0.4249	0.4947
Job type	0.5812	0.4937
Job benefits	0.3536	0.4784
Use of skills	0.4264	0.4949
Dummy variable for homeowners	0.3642	0.4816
w_{it-1}	4147.2910	2123.4860
Change in job satisfaction	1.1548	2.7189
Growth in unemployment rate	-0.1648	0.7978
Number of previous individual mobility	1.6540	0.9365
Age	35.4021	8.176848
Age^2	1320.0700	618.7736
Dummy variable for secondary modern school qualification[i]	0.2944	0.4561
Dummy variable for secondary school certificate[ii]	0.3748	0.4844
Dummy variable for subject-specific university entrance qualification[iii]	0.0789	0.2698
Dummy variable for university entrance qualification[iv]	0.2519	0.4344
Dummy variable for blue-collar to white-collar transition	0.0516	0.2214
Dummy variable for males	0.7026	0.4575
Dummy variable for partner	0.2064	0.4050
Dummy variable for regional mobility	0.0501	0.2183
Number of observations		659
Number of individuals		582

[i] *Hauptschulabschluss;* [ii] *Realschulabschluss;* [iii] *Fachhochschulreife;* [iv] *Abitur*

Table A3
Probit estimation results: Marginal effects at $\bar{x}$
Homeowners

Variables	(1)	(2)	(3)	(4)
Subjective improvement in commuting	0.0785	-0.287*	-0.286*	
	(0.0724)	(0.148)	(0.173)	
Commute to workplace each day			0.00159	
			(0.115)	
(Commuting improved)*(Commute daily)		0.399***	0.398**	0.145*
		(0.136)	(0.164)	(0.0749)
w_{it-1}	3.28e-05**	3.24e-05**	3.24e-05**	3.29e-05**
	(1.53e-05)	(1.53e-05)	(1.53e-05)	(1.52e-05)
Change in job satisfaction	0.00967	0.0106	0.0106	0.0114
	(0.0145)	(0.0145)	(0.0146)	(0.0144)
Growth in unemployment rate	0.0879**	0.107**	0.107**	0.0956**
	(0.0439)	(0.0450)	(0.0453)	(0.0440)
Number of previous individual mobility	0.0252	0.0212	0.0212	0.0198
	(0.0295)	(0.0299)	(0.0298)	(0.0297)
Age	0.0293	0.0314	0.0313	0.0284
	(0.0321)	(0.0327)	(0.0329)	(0.0322)
Age^2	-0.000347	-0.000386	-0.000385	-0.000340
	(0.000415)	(0.000424)	(0.000426)	(0.000417)
Secondary school certificate	0.186**	0.181**	0.181**	0.186**
	(0.0781)	(0.0793)	(0.0796)	(0.0786)
Subject-specific university entrance qual.	-0.100	-0.129	-0.129	-0.120
	(0.129)	(0.128)	(0.129)	(0.129)
University entrance qualification	-0.0685	-0.0647	-0.0645	-0.0693
	(0.102)	(0.102)	(0.102)	(0.102)
Blue-collar to white-collar transition	0.0284	0.0522	0.0522	0.0379
	(0.141)	(0.138)	(0.138)	(0.139)
Male	-0.110	-0.113	-0.113	-0.109
	(0.0800)	(0.0807)	(0.0811)	(0.0803)
Partner	0.0640	0.0630	0.0628	0.0640
	(0.106)	(0.106)	(0.107)	(0.106)
Regional mobility	0.178	0.159	0.159	0.168
	(0.210)	(0.215)	(0.215)	(0.210)
Predicted Pr(wage cut = 1 $\|\bar{x}$)	0.5010	0.5008	0.5008	0.5012
Pseudo R^2	0.0702	0.0836	0.0836	0.0767
Number of observations			240	

Robust standard errors clustered for individuals (in parentheses)
*** p<0.01, ** p<0.05, * p<0.1

Table A4
Probit estimation results: Marginal effects at $\bar{x}$
Renters

Variables	(1)	(2)	(3)	(4)
Subjective improvement in commuting	0.0526	-0.120	-0.0687	
	(0.0599)	(0.150)	(0.177)	
Commute to workplace each day			0.0623	
			(0.0947)	
(Commuting improved)*(Commute daily)		0.204	0.140	0.0779
		(0.178)	(0.205)	(0.0631)
w_{it-1}	5.95e-05***	6.05e-05***	6.11e-05***	5.97e-05***
	(1.47e-05)	(1.49e-05)	(1.49e-05)	(1.47e-05)
Change in job satisfaction	-0.0238***	-0.0237***	-0.0237***	-0.0241***
	(0.00833)	(0.00835)	(0.00836)	(0.00835)
Growth in unemployment rate	0.0855***	0.0840**	0.0848**	0.0857***
	(0.0330)	(0.0330)	(0.0330)	(0.0329)
Number of previous individual mobility	0.0164	0.0150	0.0171	0.0157
	(0.0257)	(0.0257)	(0.0258)	(0.0258)
Age	-0.0391*	-0.0401*	-0.0410*	-0.0394*
	(0.0233)	(0.0232)	(0.0233)	(0.0232)
Age^2	0.000455	0.000474	0.000489	0.000461
	(0.000306)	(0.000305)	(0.000307)	(0.000304)
Secondary school certificate	-0.0447	-0.0434	-0.0410	-0.0451
	(0.0571)	(0.0571)	(0.0573)	(0.0571)
Subject-specific university entrance qual.	-0.265***	-0.266***	-0.265***	-0.265***
	(0.0604)	(0.0600)	(0.0605)	(0.0603)
University entrance qualification	-0.167***	-0.164***	-0.160***	-0.167***
	(0.0564)	(0.0564)	(0.0570)	(0.0561)
Blue-collar to white-collar transition	0.220*	0.237*	0.241*	0.226*
	(0.126)	(0.128)	(0.126)	(0.125)
Male	-0.0110	-0.00664	-0.00261	-0.00852
	(0.0538)	(0.0537)	(0.0543)	(0.0537)
Partner	0.0293	0.0296	0.0311	0.0300
	(0.0614)	(0.0615)	(0.0616)	(0.0616)
Regional mobility	-0.0121	-0.0184	-0.0172	-0.0143
	(0.0898)	(0.0892)	(0.0890)	(0.0893)
Predicted Pr(wage cut = 1 $\|\bar{x}$)	0.3519	0.3518	0.3519	0.3518
Pseudo R^2	0.0963	0.0989	0.0998	0.0978
Number of observations			419	

Robust standard errors clustered for individuals (in parentheses)
*** p<0.01, ** p<0.05, * p<0.1

Table A5
Probit estimation results: Marginal effects at $\bar{x}$
Homeowners

Variables	(1)	(2)	(3)	(4)
Subjective improvement in commuting	0.0762	-0.352**	-0.384**	
	(0.0754)	(0.159)	(0.179)	
Commute to workplace each day			-0.0445	
			(0.118)	
(Commuting improved)*(Commute daily)		0.471***	0.501***	0.166**
		(0.140)	(0.157)	(0.0778)
Subjective improvement in				
Strain	0.00884	0.00370	0.00880	0.000556
	(0.0789)	(0.0791)	(0.0812)	(0.0791)
Work time	0.0780	0.0826	0.0838	0.0781
	(0.0783)	(0.0790)	(0.0790)	(0.0786)
Security against job loss	0.00184	7.88e-05	-6.39e-05	0.00415
	(0.0810)	(0.0805)	(0.0806)	(0.0807)
Chances for promotion	-0.101	-0.0899	-0.0954	-0.0950
	(0.0808)	(0.0816)	(0.0816)	(0.0812)
Job type	-0.00851	-0.0155	-0.0153	-0.0118
	(0.0804)	(0.0810)	(0.0810)	(0.0809)
Job benefits	-0.183**	-0.226***	-0.229***	-0.202**
	(0.0788)	(0.0801)	(0.0807)	(0.0793)
Use of skills	-0.0771	-0.0709	-0.0656	-0.0714
	(0.0762)	(0.0778)	(0.0794)	(0.0769)
w_{it-1}	3.37e-05**	3.24e-05**	3.23e-05**	3.35e-05**
	(1.60e-05)	(1.60e-05)	(1.61e-05)	(1.59e-05)
Change in job satisfaction	0.0178	0.0208	0.0213	0.0205
	(0.0157)	(0.0153)	(0.0154)	(0.0154)
Growth in unemployment rate	0.109**	0.138***	0.137***	0.119**
	(0.0461)	(0.0477)	(0.0479)	(0.0463)
Number of previous individual mobility	0.0312	0.0262	0.0261	0.0243
	(0.0295)	(0.0298)	(0.0297)	(0.0296)
Age	0.0448	0.0496	0.0515	0.0444
	(0.0337)	(0.0347)	(0.0352)	(0.0339)
Age^2	-0.000543	-0.000619	-0.000642	-0.000543
	(0.000435)	(0.000448)	(0.000454)	(0.000437)
Secondary school certificate	0.186**	0.186**	0.185**	0.189**
	(0.0798)	(0.0816)	(0.0821)	(0.0803)
Subject-specific university entrance qual.	-0.0857	-0.123	-0.126	-0.109
	(0.133)	(0.132)	(0.134)	(0.132)
University entrance qualification	-0.0418	-0.0333	-0.0365	-0.0423
	(0.103)	(0.105)	(0.105)	(0.104)
Blue-collar to white-collar transition	0.0330	0.0597	0.0593	0.0438
	(0.144)	(0.140)	(0.139)	(0.143)
Male	-0.103	-0.106	-0.109	-0.102
	(0.0829)	(0.0837)	(0.0840)	(0.0834)
Partner	0.0933	0.0997	0.106	0.0967
	(0.112)	(0.111)	(0.111)	(0.112)
Regional mobility	0.176	0.141	0.145	0.158
	(0.217)	(0.227)	(0.226)	(0.219)
Predicted Pr(wage cut = 1 $\|\bar{x}$)	0.4987	0.4996	0.4996	0.4990
Pseudo R^2	0.103	0.122	0.123	0.111
Number of observations		240		

Robust standard errors clustered for 215 individuals (in parentheses)
*** p<0.01, ** p<0.05, * p<0.1

Table A6
Probit estimation results: Marginal effects at $\bar{x}$
Renters

Variables	(1)	(2)	(3)	(4)
Subjective improvement in commuting	0.0328	-0.139	-0.0899	
	(0.0614)	(0.150)	(0.176)	
Commute to workplace each day			0.0617	
			(0.0928)	
(Commuting improved)*(Commute daily)		0.207	0.143	0.0588
		(0.181)	(0.206)	(0.0642)
Subjective improvement in				
Strain	0.0712	0.0737	0.0735	0.0698
	(0.0603)	(0.0604)	(0.0603)	(0.0599)
Work time	0.0850	0.0823	0.0816	0.0826
	(0.0555)	(0.0556)	(0.0557)	(0.0556)
Security against job loss	-0.0435	-0.0401	-0.0409	-0.0437
	(0.0597)	(0.0598)	(0.0596)	(0.0596)
Chances for promotion	-0.0812	-0.0796	-0.0816	-0.0785
	(0.0558)	(0.0559)	(0.0557)	(0.0559)
Job type	0.0462	0.0483	0.0469	0.0471
	(0.0552)	(0.0552)	(0.0552)	(0.0552)
Job benefits	-0.103*	-0.106*	-0.105*	-0.104*
	(0.0567)	(0.0565)	(0.0565)	(0.0565)
Use of skills	0.00469	0.00767	0.00889	0.00558
	(0.0563)	(0.0565)	(0.0566)	(0.0563)
w_{it-1}	6.20e-05***	6.29e-05***	6.35e-05***	6.20e-05***
	(1.47e-05)	(1.48e-05)	(1.49e-05)	(1.47e-05)
Change in job satisfaction	-0.0244***	-0.0245***	-0.0244***	-0.0248***
	(0.00868)	(0.00869)	(0.00869)	(0.00870)
Growth in unemployment rate	0.0869***	0.0854**	0.0862**	0.0873***
	(0.0336)	(0.0336)	(0.0337)	(0.0335)
Number of previous individual mobility	0.0121	0.0111	0.0131	0.0117
	(0.0255)	(0.0255)	(0.0256)	(0.0256)
Age	-0.0265	-0.0274	-0.0283	-0.0268
	(0.0240)	(0.0238)	(0.0240)	(0.0239)
Age^2	0.000295	0.000312	0.000328	0.000302
	(0.000314)	(0.000313)	(0.000316)	(0.000313)
Secondary school certificate	-0.0525	-0.0502	-0.0479	-0.0529
	(0.0571)	(0.0571)	(0.0573)	(0.0571)
Subject-specific university entrance qual.	-0.259***	-0.260***	-0.260***	-0.259***
	(0.0629)	(0.0625)	(0.0629)	(0.0629)
University entrance qualification	-0.152***	-0.150**	-0.146**	-0.154***
	(0.0588)	(0.0587)	(0.0594)	(0.0584)
Blue-collar to white-collar transition	0.209	0.228*	0.233*	0.214*
	(0.130)	(0.131)	(0.129)	(0.129)
Male	-0.0149	-0.0103	-0.00635	-0.0125
	(0.0540)	(0.0539)	(0.0544)	(0.0540)
Partner	0.0274	0.0278	0.0288	0.0280
	(0.0623)	(0.0622)	(0.0623)	(0.0625)
Regional mobility	-0.0269	-0.0321	-0.0317	-0.0282
	(0.0908)	(0.0902)	(0.0901)	(0.0904)
Predicted Pr(wage cut = 1 $\|\bar{x}$)	0.3470	0.3466	0.3467	0.3469
Pseudo R^2	0.116	0.118	0.119	0.117
Number of observations		419		

Robust standard errors clustered for 375 individuals (in parentheses)
*** p<0.01, ** p<0.05, * p<0.1

References

Altonji, J. G., and Paxson, C. H. (1988). Labor Supply Preferences, Hours Constraints, and Hours-Wage Trade-Offs. *Journal of Labor Economics*, 6(2): 254–276. URL http://ideas.repec.org/a/ucp/jlabec/v6y1988i2p254-76.html.

Bonhomme, S., and Jolivet, G. (2009). The pervasive absence of compensating differentials. *Journal of Applied Econometrics*, 24(5): 763–795. URL http://ideas.repec.org/a/jae/japmet/v24y2009i5p763-795.html.

Breusch, T. S., and Pagan, A. R. (1980). The Lagrange Multiplier Test and Its Applications to Model Specification in Econometrics. *Review of Economic Studies*, 47(1): 239–253. URL http://ideas.repec.org/a/bla/restud/v47y1980i1p239-53.html.

Clark, A. E., Oswald, A. J., and Warr, P. B. (1996). Is job satisfaction U-shaped in age? *Journal of Occupational and Organizational Psychology*, 69: 57–81.

Connolly, H., and Gottschalk, P. (2008). Wage Cuts as Investment in Future Wage Growth. *LABOUR*, 22(1): 1–22. URL http://ideas.repec.org/a/bla/labour/v22y2008i1p1-22.html.

Cornelißen, T. (2009). The Interaction of Job Satisfaction, Job Search, and Job Changes. An Empirical Investigation with German Panel Data. *Journal of Happiness Studies*, 10(3): 367–384. URL http://ideas.repec.org/a/spr/jhappi/v10y2009i3p367-384.html.

Festinger, L. (1957). *A Theory of Cognitive Dissonance*. Stanford: Stanford University Press. URL http://www.sup.org/book.cgi?id=3850.

Fitzenberger, B., and Garloff, A. (2007). Labor Market Transitions and the Wage Structure in Germany. *Journal of Economics and Statistics (Jahrbuecher fuer Nationaloekonomie und Statistik)*, 227(2): 115–152. URL http://ideas.repec.org/a/jns/jbstat/v227y2007i2p115-152.html.

Freeman, R. B. (1978). Job Satisfaction as an Economic Variable. *American Economic Review*, 68(2): 135–141. URL http://ideas.repec.org/a/aea/aecrev/v68y1978i2p135-41.html.

Jolivet, G. (2009). A longitudinal analysis of search frictions and matching in the U.S. labor market. *Labour Economics*, 16(2): 121–134. URL http://ideas.repec.org/a/eee/labeco/v16y2009i2p121-134.html.

Jolivet, G., Postel-Vinay, F., and Robin, J.-M. (2006). The empirical content of the job search model: Labor mobility and wage distributions in Europe and the US. *European Economic Review*, 50(4): 877–907. URL http://ideas.repec.org/a/eee/eecrev/v50y2006i4p877-907.html.

Judge, T. A. (1993). Does Affective Disposition Moderate the Relationship Between Job Satisfaction and Voluntary Turnover? *Journal of Applied Psychology*, 78(3): 395–401. URL http://psycnet.apa.org/journals/apl/78/3/.

Loscocco, K. A., and Spitze, G. (1990). Working Conditions, Social Support, and the Well-Being of Female and Male Factory Workers. *Journal of Health and Social Behavior*, 31(4): 313–327. URL http://www.jstor.org/stable/2136816.

Mobley, W. H. (1977). Intermediate linkages in the relationship between job satisfaction and employee turnover. *Journal of Applied Psychology*, 62(2): 237–240. URL http://psycnet.apa.org/journals/apl/62/2/.

Munch, J. R., Rosholm, M., and Svarer, M. (2008). Home ownership, job duration, and wages. *Journal of Urban Economics*, 63(1): 130–145. URL http://ideas.repec.org/a/eee/juecon/v63y2008i1p130-145.html.

Nosal, E., and Rupert, P. (2007). How Amenities Affect Job and Wage Choices Over the Life Cycle. *Review of Economic Dynamics*, 10(3): 424–443. URL http://ideas.repec.org/a/red/issued/05-64.html.

OECD (1997). *OECD Employment Outlook*. Paris: OECD. URL http://www.oecdbookshop.org/oecd/display.asp?lang=EN&sf1=identifiers&st1=811997051p1.

Postel-Vinay, F., and Robin, J.-M. (2002). Equilibrium Wage Dispersion with Worker and Employer Heterogeneity. *Econometrica*, 70(6): 2295–2350. URL http://ideas.repec.org/a/ecm/emetrp/v70y2002i6p2295-2350.html.

Ramsey, J. B. (1969). Tests for Specification Errors in Classical Linear Least-Squares Regression Analysis. *Journal of the Royal Statistical Society. Series B (Methodological)*, 31(2): 350–371. URL http://www.jstor.org/stable/2984219.

Rosen, S. (1974). Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition. *Journal of Political Economy*, 82(1): 34–55. URL http://ideas.repec.org/a/ucp/jpolec/v82y1974i1p34-55.html.

Rosen, S. (1987). The theory of equalizing differences. In O. Ashenfelter, and R. Layard (Eds.), *Handbook of Labor Economics*, volume 1 of *Handbook of Labor Economics*, chapter 12, pages 641–692. Elsevier. URL http://ideas.repec.org/h/eee/labchp/1-12.html.

Royalty, A. B. (1998). Job-to-Job and Job-to-Nonemployment Turnover by Gender and Education Level. *Journal of Labor Economics*, 16(2): 392–443. URL http://ideas.repec.org/a/ucp/jlabec/v16y1998i2p392-443.html.

Schneck, S. (2010). Monetary Consequences Of Labor Mobility. *mimeo*.

Tetlock, P. E. (2000). Coping with Trade-Offs: Psychological Constraints and Political Implications. In M. D. M. A. Lupia, and S. L. Popkin (Eds.), *Elements of Reason: Cognition, Choice, and the Bounds of Rationality*, chapter 11, pages 239–263. Cambridge University Press. URL http://www.cambridge.org/catalogue/catalogue.asp?isbn=0521653320.

van Ophem, H. (1991). Wages, Nonwage Job Characteristics and the Search Behavior of Employees. *The Review of Economics and Statistics*, 73(1): 145–151. URL http://ideas.repec.org/a/tpr/restat/v73y1991i1p145-51.html.

Wagner, G. G., Frick, J. R., and Schupp, J. (2007). The German Socio-Economic Panel Study (SOEP) - Scope, Evolution and Enhancements. *Schmollers Jahrbuch: Journal of Applied Social Science Studies / Zeitschrift für Wirtschafts- und Sozialwissenschaften*, 127(1): 139–169. URL http://ideas.repec.org/a/aeq/aeqsjb/v127_y2007_i1_q1_p139-169.html.

Yankow, J. J. (2003). Migration, Job Change, and Wage Growth: A New Perspective on the Pecuniary Return to Geographic Mobility. *Journal of Regional Science*, 43(3): 483–516. URL http://ideas.repec.org/a/bla/jregsc/v43y2003i3p483-516.html.