

Job Attributes and Turnover

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Abstract

We show how dissatisfaction with different job attributes relates to workers' job mobility. We distinguish between salary, tangible work arrangements and intangible attributes, using ten waves of the Dutch Working Conditions Survey (2014-2023) linked to administrative records covering over 400.000 workers. We find that dissatisfaction with intangible attributes (interesting work, learning opportunities and supervisors) is the strongest and most robust predictor of job separation, associated with a rise in the separation rate of three to five percentage points on a mean of 20.5%. Different sources of dissatisfaction are associated with different mobility behaviours: salary dissatisfaction predicts job-to-job transitions, dissatisfaction with interesting work predicts exits into unemployment, and dissatisfaction with supervisors predicts transitions from wage employment into self-employment. These responses are partly cyclical: the relationship between intangible dissatisfaction and turnover is stronger in tighter labour markets. Overall, we show that the type of job attributes a worker is dissatisfied with matters both for the likelihood of leaving and for the kind of labour market transition that follows.

Keywords: Non-wage job attributes; Job mobility; Labour supply; Labour market tightness; Job quality

JEL Codes: J28; J22; E32

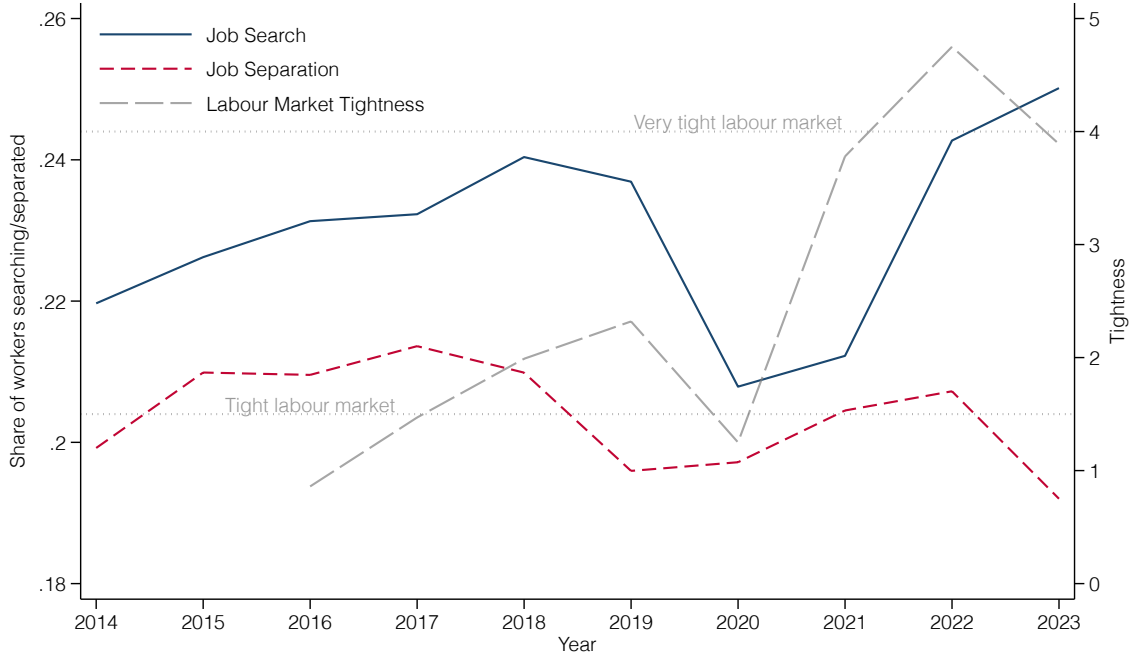
1. Introduction

Turnover is a defining feature of modern labour markets (Lee et al., 2023; Nikolova, 2024), especially in relatively flexible ones like the Netherlands (Bekker and Mailand, 2019; Scheer et al., 2022; Patra et al., 2025). While worker mobility is an important driver in reallocating productive factors (Engbom, 2022; Faberman et al., 2022), it also entails substantial costs: firms bear hiring and training costs equivalent to multiple months of pay (Eeckhout, 2018) while workers incur in search costs (Miano, 2023), foregone learning-by-doing (Burdett et al., 2020), and significant psychological burdens when transitions involve job loss or illness (Knabe and Rätzl, 2011). Understanding the mechanisms underlying worker exits, either into new jobs or out of employment, therefore remains a central question in labour economics.

In this paper, we provide new evidence on the relationship between job attributes and turnover. We study how dissatisfaction with nine job attributes relates not only to job separation, but also to the destination of the exit: job-to-job moves, unemployment, self-employment, or education. We exploit a rich dataset combining large-scale administrative mobility records and survey data on job attribute satisfaction, using ten waves of the Dutch Working Conditions Survey (2014–2023) covering over 400,000 workers. We group attributes into three categories: monetary attributes, tangible work arrangements (contract type, job security, part-time options, control over hours, and working from home), and intangible job attributes (interesting work, learning opportunities, and supervisor quality). These different attribute types are associated with distinct separation and exit destination patterns in the data. We interpret our findings using a simple search-theoretical framework that links dissatisfaction with monetary, non-monetary tangible, and non-monetary intangible attributes to separation decisions.

While the canonical labour supply model emphasizes monetary compensation (Burdett, 1978; Burdett et al., 2020; Faberman et al., 2022), a growing literature shows that workers value a broad set of non-wage job attributes. Our analysis fits in two related but distinct literatures. The first examines how workers value job amenities and how these enter search and self-selection decisions, using stated-preference methods and revealed-preference or structural search models that embed amenities in match surplus (e.g. Mas, 2025; Bagga et al., 2025; Humlum et al., 2025; Wiswall and Zafar, 2018; Maestas et al., 2023; Van Landeghem et al., 2024; De Schouwer and Kesternich, 2024; Sullivan and To, 2014). The second uses job satisfaction measures as reduced-form summaries of job quality to predict quitting and mobility (e.g. Freeman, 1978; Clark, 2001; Böckerman and Ilmakunnas, 2009; Lévy-Garboua et al., 2007). Job satisfaction research demonstrates that evaluations of the combined wage and non-wage bundle predict job search and separations (Clark, 2001; Lévy-Garboua et al., 2007; Böckerman and Ilmakunnas, 2009; Pelly, 2023). While the amenities literature focuses on valuation and trade-offs, the job-satisfaction literature documents predictive links between satisfaction, as proxy for utility, and turnover (intentions). We contribute to both by applying a job satisfaction approach to a series of (non-)wage attributes, combining detailed dissatisfaction measures with linked administrative data on subsequent mobility in the Netherlands.

Figure 1: Labour market dynamics in the Netherlands, 2014-2023



Note: Job search: share of respondents indicating they have actively searched for a new job in the past year, reported in the 4th quarter of each year. Source: Dutch Working Conditions Survey (NEA). Job separation: share of workers no longer working for the same employer in december of the year following the survey. Source: Non-public register data from Netherlands Statistics. Labour market tightness is measured using the UWV Spanningsindicator, which calculates the ratio of job vacancies to unemployed individuals receiving benefits for less than six months, in the fourth quarter of each year. Values above 1.5 indicate a tight labour market, and values above 4 indicate a very tight labour market. Source: Dutch Unemployment Agency (UWV).

The Dutch institutional context is well suited to studying these mechanisms. The labour market is characterised by high turnover (Gonne, 2023) and flexible working-time arrangements (Scheer et al., 2022). Consistent with this, our data show that roughly one in five workers separates in a given year (Figure 1). Outside options are both heterogeneous and salient: workers have access to generous unemployment benefits, widespread part-time work opportunities, and well-developed (adult-)education pathways (Bekker and Mailand, 2019; Patra et al., 2025). Moreover, labour-market tightness increased substantially over the study period, as evidenced by the long-dashed line in Figure 1, with substantial within-occupation variation. Tightness essentially raises the relative value of outside options and thus makes job separation potentially more interesting from the worker perspective. This combination of high mobility, flexible work arrangements, and across-time variation provides a rich environment for examining how dissatisfaction with different job attributes relates to turnover.

Existing job satisfaction contributions underpin the importance of using a satisfac-

tion framework to predict job mobility, though overall satisfaction aggregates across all job components and obscures which specific attributes drive quitting (Pelly, 2023). Clark (2001) for the UK and Faberman et al. (2022) for the US emphasise dissatisfaction with pay and job security as the most salient predictors of quits and on-the-job search, though they also document the important roles of job amenities such as task content, under-utilised skills, and unstable job duties. Using linked Finnish survey-administrative data, Böckerman and Ilmakunnas (2009) show that a broad set of job disamenities, such as hazards, insecurity, lack of supervisor support, mentally demanding tasks, limited promotion prospects and discrimination, lowers satisfaction and thereby increases job search and through search, job separation. Lévy-Garboua et al. (2007) argue that the difference between the job satisfaction in the current job and the expectation of job satisfaction in other jobs best predicts quits, suggesting the relative importance of outside options. Finally, related work from the Netherlands by Delfgaauw (2007) highlights that dissatisfaction with specific attributes predicts not only the search but also the direction of search: dissatisfaction with management predicts employer changes; high valuation of autonomy predicts internal mobility; dissatisfaction with task duties predicts search outside the industry.

Compared with the existing literature, our study offers several conceptual and empirical advances. Conceptually, we embed job attributes into a simple search-theoretic framework in which workers derive utility from three additive components (Mas, 2025): wages, non-wage tangible amenities, and non-wage intangible attributes. The probability of separation increases when the utility from any of these components falls, or when the value of the outside option rises, which we model empirically using differences in occupational tightness. A key implication of our framework is that dissatisfaction with intangible work attributes should be especially predictive of job separation, through the channel of decreased motivation (Gagné and Deci, 2005). Unlike wages or contractual features, intangible aspects of work are largely experienced goods: their true quality is learned only after entering the job. Dissatisfaction with leadership, task interestingness, or workplace relationships with the supervisors therefore reflects negative realised match quality. This prediction is consistent with extensive evidence showing that intangible aspects such as competence, recognition, meaningfulness, task variety, and psychological safety matter substantially for workers’ motivation, well-being, effort and retention (Deci et al., 2017; Nikolova and Cnossen, 2020; Ashraf et al., 2025; Asuyama, 2021; Collis and Van Effenterre, 2025; Cnossen and Nikolova, 2025).¹

We test the predictions from our model in a descriptive, revealed-preference way,

¹These attributes capture the psychological dimensions of work that drive intrinsic motivation, which is increasingly used in economics Deci et al. (2017); Cassar and Meier (2018). Self-determination theory (SDT) (Gagné and Deci, 2005; Deci et al., 2017) identifies three basic needs (autonomy, competence, and relatedness) that drive intrinsic motivation. In our coding scheme, opportunities to apply skills and supportive peer/supervisor relationships are treated as intangible work attributes, while control over one’s schedule is classified as a tangible work arrangement. Survey-based dissatisfaction measures are assumed to reflect shortfalls in these needs.

contributing to the extant literature on revealed-preferences and non-wage amenities. Existing work such as [Bagga et al. \(2025\)](#) focuses on the valuation of working-from-home arrangements, while [Humlum et al. \(2025\)](#) analyse amenity-driven job-to-job mobility. Like [Humlum et al. \(2025\)](#), we incorporate a broad set of job-utility components but we study these components not only in the context of job-to-job transitions but also for non-employment exits (unemployment, education, and self-employment). Our focus is not on estimating willingness-to-pay for amenities ([Mas, 2025](#); [Humlum et al., 2025](#)), but on understanding their role in labour mobility. We use job dissatisfaction as an empirically observable proxy for on-the-job utility, without claiming causal inference. The linked survey-administrative data provide rich descriptive evidence on how different dimensions of job dissatisfaction relate to realised mobility.

Empirically, our main contribution is to show that different dimensions of job dissatisfaction predict not only whether workers separate from their jobs, but also how and when they do so. First, we show that dissatisfaction with non-monetary attributes is strongly associated with subsequent job separation. For instance, dissatisfaction with interesting work and supervisors is linked to a five percentage point increase in the probability of leaving a job, on a sample mean of 20.5%. Next, we demonstrate that different forms of dissatisfaction predict distinct exit destinations: while dissatisfaction with salary and learning opportunities is associated with job-to-job mobility, dissatisfaction with other attributes is more likely to be followed by non-wage employment outcomes. For example, dissatisfaction with leadership predicts transitions into self-employment and unemployment and dissatisfaction with interesting work predicts entry into unemployment or education. Finally, for interesting work and learning opportunities, the relationship is stronger when outside options improve, as captured by higher labour market tightness.

The remainder of the paper is organized as follows. The next section presents a stylized version of a search model and explicitly derives the job mobility choice as a function of a worker’s satisfaction with the three job value components. Section 3 presents the data source and variable construction. Section 4 present the empirical strategy. Section 5 discusses the results and section 6 concludes.

2. Theoretical framework

Worker i in job j derives utility from three additive components of their job: wage w_{ijt} , tangible work arrangements $a_{jk,t}$, and intangible job amenities $z_{jg,t}$. Let realized utility at time $t \geq t_0$ after starting a job be

$$U_{ijt} = \beta \ln(w_{ijt}) + \sum_{k=1}^K \lambda_k a_{jk,t} + \sum_{g=1}^G \gamma_g z_{jg,t} + \varepsilon_{ijt}, \quad (1)$$

where ε_{ijt} is an idiosyncratic shock, assumed i.i.d. extreme-value. This formulation captures the idea that workers select the option delivering the highest utility, while allowing for unobserved taste variation, and follows a standard logit-type random-utility model ([Mas, 2025](#)).

2.1. Separation decision

In each period, the worker decides whether to remain or separate from their job. A separation occurs when the value of the outside option (plus a separation shock ν_{it}) exceeds the current realized utility and the expected continuation value:

$$V_{it}^{\text{out}} + \nu_{it} > U_{ij,t} + \delta E[V_{ij,t+1}^{\text{stay}} \mid \mathcal{F}_{it}], \quad (2)$$

where δ is the discount factor and $\mathcal{F}_{it}$ denotes available information. Outside options depend on labour market cyclicalty and institutional features (e.g., unemployment benefits, education subsidies), all of which raise the value of the outside option V_{it}^{out} . Importantly, the utility from different components can be negative, for instance when poor amenities lead to stress or burn-out, implying that the value of the outside option does not need to be high.

Because V_{it}^{out} and continuation values are unobserved, we estimate a reduced-form hazard model:

$$\Pr(\text{Separate}_{ijt} = 1 \mid \mathcal{F}_{it}) = \Lambda(\alpha_t + U_{ij,t}^w + U_{ij,t}^a + U_{ij,t}^z + X'_{ijt}\beta), \quad (3)$$

where, for ease of notation, U^w , U^a , and U^z denote experienced utility from wage, tangible and intangible amenities, and their coefficients capture how each component predicts mobility in a revealed-preference sense, where utility is expected to relate negatively to separation risk.

Upon separating workers choose among multiple destinations d (job-to-job, unemployment, education and self-employment). Each destination has a latent value:

$$V_{it}^d = \alpha_d + \theta_d U_{ij,t}^w + \psi_d U_{ij,t}^a + \phi_d U_{ij,t}^z + X'_{it}\gamma_d + \eta_{it}^d, \quad (4)$$

with η_{it}^d i.i.d. extreme-value. The chosen destination maximizes V_{it}^d . The probability of choosing destination d depends on the latent value of that option, versus all other options:

$$P_{it}^d = \frac{\exp(V_{it}^d)}{\sum \exp(V_{it}^{d'})} \quad (5)$$

In this way, disutility from work components reduces the value of current jobs as well as the expected value of other jobs. This implicitly raises the value of non-wage-employment outside options.

2.2. Empirical implementation

We link survey-based satisfaction measures on salary, tangible work arrangements, and intangible job attributes to administrative records on wages, hours, contract type, and firm characteristics. Satisfaction serves as a proxy for the evaluative component of realized on-the-job utility. The register data provide independent measures of objective job attributes.

For satisfaction to capture job utility, identification relies on a few conditions. First, reported satisfaction should be monotonically related to underlying utility, so that

higher dissatisfaction corresponds to higher disutility of work. Second, conditional on observed job characteristics, dissatisfaction should not be driven entirely by anticipating a move for reasons unrelated to job attributes.² Third, reporting noise should be random on average, so that measurement error does not systematically bias the results. Under these conditions, coefficients on satisfaction variables can be interpreted as reduced-form links between experienced utility and separation or exit outcomes, consistent with a revealed-preference interpretation.

One consideration is that workers may sort into jobs, either based on contractible, observable characteristics such as salary or tangible work arrangements, or based on expectation about work context, climate or culture. To account for the former, we control for objective job characteristics including hourly wages, contract type, working hours, and the option to work from home. Even after accepting a job with full knowledge of these features, workers may still be dissatisfied with some attributes. Including these controls therefore helps to isolate dissatisfaction that arises from the realised job rather than from baseline contract differences. To account for sorting based on preferences for job content or expectations regarding industry or occupational work culture and values (Burbano et al., 2024; Kesternich et al., 2021; De Schouwer and Kesternich, 2024), we include detailed industry and occupation fixed effects. In addition, we conduct an analysis using survey measures of the relative importance of each job attribute to account for individual preferences

2.3. Theoretical predictions

The framework and the extant literature yield several predictions. First, dissatisfaction with any attribute should relate to higher job separation rates, but we expect differences by type of job attribute.

Dissatisfaction with intangible attributes, such as leadership, learning opportunities, and task content, should increase the likelihood of separation through lower work motivation. Following the motivation literature, workers require an environment that allows them to flourish, satisfying basic psychological needs such as engaging in interesting work that matters, feeling valued and recognized by supervisors, and having opportunities for learning and autonomy (Gagné and Deci, 2005; Deci et al., 2017). When these needs are not met, motivation and effort can decline, which may lead to contracts not being renewed or to voluntary quits (Ashraf et al., 2025; Cnossen and Nikolova, 2025; Lazear et al., 2015). Exits may take multiple forms: workers could move to another job, or leave employment temporarily through unemployment, self-employment, or education to avoid poor working conditions or to acquire new skills. Because these motivational needs are broadly relevant across workers, we expect the effects of dissatisfaction with intangibles to be relatively uniform across the population.

Consistent with the canonical labour supply model, dissatisfaction with salary is primarily driven by comparisons to alternative job opportunities. We therefore expect

²To address potential anticipatory behaviour, we provide an analysis where we split the sample between workers actively searching on the job and those who are not.

it to be most strongly related to job-to-job mobility, or potentially self-employment as a way to obtain higher earnings, rather than to unemployment or education, which involve higher costs (e.g., [Burdett, 1978](#); [Faberman et al., 2022](#)).

Dissatisfaction with tangible work arrangements, such as job security, contract type, working hours, and flexibility, can make it difficult for workers to balance work and personal life. A long line of literature shows that these attributes influence both sorting into a new job and leaving the current one (e.g., [Böckerman and Ilmakunnas, 2009](#); [Lévy-Garboua et al., 2007](#); [Sullivan and To, 2014](#); [Bagga et al., 2025](#)). Even when these features are known at hiring, experience on the job may reveal incompatibilities that increase stress or burnout, which can trigger employment exits. In the Dutch context, widespread part-time work, high flexibility, and available education pathways provide many alternatives to one’s current employment ([Bekker and Mailand, 2019](#); [Scheer et al., 2022](#); [Patra et al., 2025](#)), so dissatisfaction with tangibles may lead not only to job-to-job mobility in search of better arrangements, but also to non-employment spells such as unemployment or education as a temporary break from employment. Because these incompatibilities may differ across workers and life circumstances, we expect the effects of dissatisfaction with tangibles to vary rather than be uniform.

These predictions guide the interpretation of the empirical associations documented below: intangible dissatisfaction as a match-quality signal, salary dissatisfaction primarily as an outside-option mechanism, and work arrangement dissatisfaction as reflecting constraints or incompatibility with life circumstances.

2.4. Institutional context: The Netherlands

The Dutch labour market is characterized by high levels of flexibility and job-to-job mobility ([Gonne, 2023](#)). Apart from relatively high mobility between employers, institutional features support transitions into unemployment or education/training via generous benefits ([Salverda, 2025](#)). These pathways imply that different forms of dissatisfaction may lead to different exit destinations.

Unemployment benefits in the Netherlands are relatively generous and can be received for up to 24 months, conditional on employment history. These benefits are only accessible following separations that involve dismissal, the end of a fixed-term contract, or a mutually agreed termination³, but not after voluntary quits.⁴

These institutional arrangements imply that transitions into unemployment primarily occur through contract expiration, dismissal, or mutually agreed separation rather than voluntary quitting. Our analysis therefore does not interpret such transitions as evidence of workers voluntarily opting for unemployment. Rather, we show that individuals who are more dissatisfied with specific amenities are more likely to experience these forms of job separation. Because the distinction between permanent and temporary contracts is central for determining eligibility for unemployment, and because

³A so-called *vaststellingsovereenkomst* or settlement agreement.

⁴See the Dutch Unemployment Agency for more information: <https://www.uvw.nl/en/individuals/unemployment-benefit/about>.

contract type shapes the likelihood of involuntary separation, we include contract type as a key control in our empirical analysis to account for this institutional structure.

Part-time employment and flexible scheduling are widespread: almost half of Dutch employees work under 35 hours per week and working-time arrangements are often negotiable (Gonne, 2023). This makes flexibility and work-life balance salient and heterogeneous amenities across jobs, and dissatisfaction with these potentially strongly related with turnover.

Since 1 January 2020, the Balanced Labour market Law (Wet Arbeidsmarkt in Balans - WAB) adjusted labour-market rules affecting flexible versus permanent contracts. Employers face lower unemployment-insurance premiums for permanent hires, temporary contracts can now last longer before converting automatically, on-call contracts have stricter minimum requirements, and severance pay is owed from day one, making flexible contracts relatively unattractive to employers (Patra et al., 2025).⁵ Furthermore, the study period (2014-2024) is characterized by increasing labour market tightness as shown in Figure 1, particularly after 2020.⁶ These trends motivate splitting the analysis by year and by pre- versus post-2020, capturing both COVID-19 and WAB effects.

3. Data and Descriptives

3.1. Data sources

This paper uses data from the Dutch Working Conditions Survey (*Nederlandse Enquête Arbeidsomstandigheden*, or NEA), an annual, nationally representative cross-sectional survey conducted in the Netherlands. Each wave includes approximately 50,000 respondents and is administered in the fourth quarter of the year. For our analysis, we use ten pooled survey waves from 2014 through 2023.

The NEA collects detailed information on working conditions, job characteristics, and worker attitudes. Importantly, respondents can be linked at the individual level through pseudonymized personal identifiers to administrative data from the Social Statistical Database (SSB) of Statistics Netherlands (CBS). This allows us to combine rich survey responses with objective data on wages and employer characteristics.

3.1.1. Main independent variables

All respondents are asked to report their satisfaction with various aspects of their job, with answer options very satisfied, satisfied or not satisfied. In our main specifications, we group satisfied and very satisfied together to understand the differential effect of dissatisfied workers. Full questions and answer phrasing is provided in Appendix A1.

⁵While the WAB aimed to increase job security, early evidence suggests effects have been mixed, with some flexible contracts terminated but not always replaced by permanent ones (Patra et al., 2025).

⁶However, because the COVID-19 pandemic coincided with the policy change, our empirical setting does not allow for a clear distinction between the effects of the policy reform and those of the pandemic shock. Consequently, we cannot draw firm conclusions about the magnitude of the policy’s impact.

We divide these aspects into three conceptual categories.

The first category is intangible attributes. It contains variables on satisfaction with interesting work, learning opportunities, and supervisors.⁷ These attributes capture the intrinsic qualities of a job that are not or poorly understood before entering a job. Their satisfaction reflects the quality of the match between the worker preferences and the employer, on job characteristics that are not part of the employment contract.⁸

To capture monetary job attributes we use the item on satisfaction with salary, so the entire income associated with the job. The third category is that of tangible non-monetary work arrangements (Mas and Pallais, 2020), which captures how work is organized and how well it fits into workers’ personal lives. This includes two variables related to job future and stability: job security and contract type (tenured or flexible). It also contains two variables on working time, namely the ability to work part-time and to determine one’s own working hours. And lastly, it contains the amenity remote work possibilities.

3.1.2. *Dependent variables*

Our main dependent variable is whether workers are separating from their employer in the year after the survey. Job separation is measured by linking NEA respondents to administrative employer–employee data. We identify each respondent’s employer at the time of the survey and verify whether the individual is still employed at the same firm in December of the following year. If the individual is no longer employed at that firm, we code them as having separated. To avoid misclassifying separations due to firm closures, we check whether the original employer still exists in the firm registry in the subsequent year.

To measure destinations after separation, we use Statistics Netherlands’ socio-economic status (SECM) measure for the survey year and the year after. SECM is constructed by integrating multiple administrative sources, including tax and social security records, unemployment and disability benefit registers, pension data, and education enrollment. Each individual is assigned to mutually exclusive main socio-economic categories. The main-status assignment follows a fixed Statistics Netherlands priority hierarchy across income and benefit sources rather than hours worked, so the category reflects an individual’s dominant administrative signal rather than their full allocation of time. We

⁷These attributes also tangentially relate to self-determination theory (Deci et al., 2017), which predicts that workers whose psychological needs for competence, autonomy and relatedness are met are more motivated at work (Gagné and Deci, 2005).

⁸The attribute ”learning opportunities” (*mogelijkheid om te leren*) is somewhat ambiguous here. Though we mainly interpret it as informal, on-the-job learning in our categorization, it could also reflect formal training offered by the employer, which contributes to skill accumulation and human capital. In the survey, this item appears immediately after interesting work and before pleasant atmosphere (some years) and good supervisors (all years), suggesting that respondents primarily interpret it as part of the work culture, and thus as an intangible attribute. Still, some ambiguity remains. Importantly, this distinction does not affect the main outcomes of our model. It only concerns the conceptual grouping of variables, as we do not add the variables into one index of intangible attributes.

observe SECM status in December of the year after the survey (approximately $t + 12$ months), ensuring that it primarily captures the post-separation state.

We focus on four categories within the SECM.⁹ Employment captures whether a person’s main status is working for a firm. Unemployment reflects receipt of statutory unemployment benefits. Third, self-employment reflect an individual registered as self-employment entrepreneur or other self-employed type. Fourth, student status indicates that an individual is registered as enrolled in education during the reference month, regardless of whether they also work or receive other income.

3.1.3. Additional covariates

We include a rich set of control variables from the NEA. For individual characteristics, we include gender, age, highest level of education, age of the youngest child (if applicable), and household position. Job characteristics included are contract type (permanent or flexible), part-time status, number of working days per week, self-employment besides current job, working from home, multiple job holding, supervisory role, tenure at the current firm, firm size, and urbanity. Importantly, the objective amenities data is corroborated by administrative records. Lastly, the NEA collects variables on occupation (ISCO 2008), industry (SBI 2008¹⁰) and local labour market region (*arbeidsmarktregio*).

We further augment the data set with two external data sources. First, respondents are linked to administrative wage data from December of the survey year, enabling us to calculate their hourly wage (contractual base wage divided by contractual hours), which we log-transform.

Second, we include labour market tightness indicators of the Dutch Unemployment Agency (UWV), which measures the ratio of job vacancies to unemployed individuals receiving benefits for less than six months, in the fourth quarter of each year. Values below 0.25 indicate a slack labour market, values between 0.25 and 1.5 reflect average tightness, and values above 1.5 indicate a tight labour market. Values above 4, which are increasingly common, especially after 2020, indicate a very tight labour market. This measure is available from Q4 2016 onward, at both the occupation level and the occupation-by-region level.¹¹

⁹CBS defines the following detailed main-status categories: 11 Employee; 12 Director-major shareholder; 13 Self-employed entrepreneur; 14 Other self-employed; 15 Contributing family worker; 21 Unemployment benefit recipient; 22 Social assistance benefit recipient; 23 Other social security benefit recipient; 24 Sickness/disability benefit recipient; 25 Pension benefit recipient; 26 Not yet in school/pupil/student with income; 31 Not yet in school/pupil/student without income; 32 Other without income. In the analysis, we group these into: (1) Employee (11); (2) Unemployed (21); (3) Self-employed (13, 14); (4) Student (26, 31); and (7) Other (12, 15, 22, 23, 25, 24, 32).

¹⁰This is a Dutch industry classification. The first digits are in line with international NACE industry codes.

¹¹The occupations roughly correspond to ISCO 3 digit, with some exceptions. The authors created a crosswalk to match the UWV data to ISCO data, which is available on request. The region-level indicators are on the local labour market (“*arbeidsmarktregio*”) and the provincial level.

3.1.4. Sample cleaning

As final cleaning steps, we exclude respondents in the armed forces. We drop individuals without valid information on job separation, those who cannot be matched to an employer in the registry at the time of the survey, and workers employed at firms that exited the market within a year after the survey, to ensure that observed job separations are not driven by firm closures.

For all categorical dependent variables, we include a ‘missing’ category to retain respondents who skipped one or more survey items, to remove bias from selection into item non-response. These categories are included in the regressions, but not reported in the tables. After all cleaning steps, the final sample includes 429,627 individuals. The population weights provided by the NEA make the results representative of the Dutch population.¹²

3.2. Descriptive statistics

Table 1 reports the means and standard deviations of our main variables. In our sample, job separation occurs for 20.4%. Roughly one in five workers (21.7%) of our sample is in an open-ended flexible contract. Slightly over half of our sample workers 32 hours or less, and so is in a part-time contract. Our sample is predominantly higher educated, followed by middle and low education.¹³

Satisfaction with attributes. Figure 2 presents the satisfaction with job attributes for the entire sample, in percentages. Across all categories, the majority of respondents report being at least satisfied with most aspects of their job.¹⁴ Attributes related to the work intangible show particularly high satisfaction levels: for example, nearly 93% are satisfied or very satisfied with having interesting work, and almost 85% express satisfaction with learning opportunities and supervisors. In contrast, monetary satisfaction is notably lower. About 23% of respondents report being dissatisfied with their salary. Satisfaction with work arrangements shows more variation. While most workers report relatively high satisfaction with job security (84.5% satisfied or very satisfied), attributes such as control over working hours and the ability to work from home show higher dissatisfaction: 22% and 27,5% of respondents are dissatisfied with these aspects, respectively.¹⁵

¹²Although the NEA is set up as a repeated cross-sectional survey, a subset within the final sample of approximately 20,000 individuals appears in the data set more than once in survey waves. These observations form an unbalanced panel. We use this subset to estimate models based on within-individual variation, focusing on approximately 3,500-4,000 individuals who experience a change in the outcome variables (job search or job separation) over time. Descriptive (unweighted) statistics of the panel samples are provided alongside those for the full sample in Table 1.

¹³We use sample weights provided by TNO and Netherlands Statistics to correct for this.

¹⁴Some amenity satisfaction variables are moderately correlated (see Table A1). For instance, control over hours dissatisfaction correlates with working from home dissatisfaction (0.53). This implies that

Table 1: Descriptive statistics

	Mean	SD
Job separation	0.204	0.403
Log hourly wage	2.913	0.543
Flexible contract	0.217	0.412
Part-time	0.524	0.499
WFH	0.369	0.482
Tenure	10.75	10.76
Age	42.80	14.15
Female	0.496	0.500
Low education	0.168	0.374
Mid education	0.395	0.489
High education	0.428	0.495
Job search	0.229	0.420
N	429,647	

Notes: Table reports sample means and standard deviations. Flexible contract, part-time, work from home (WFH), female, and education indicators are dummy variables (1 = yes, 0 = no). *Source:* Authors' calculations using NEA survey data and non-public register data from Statistics Netherlands.

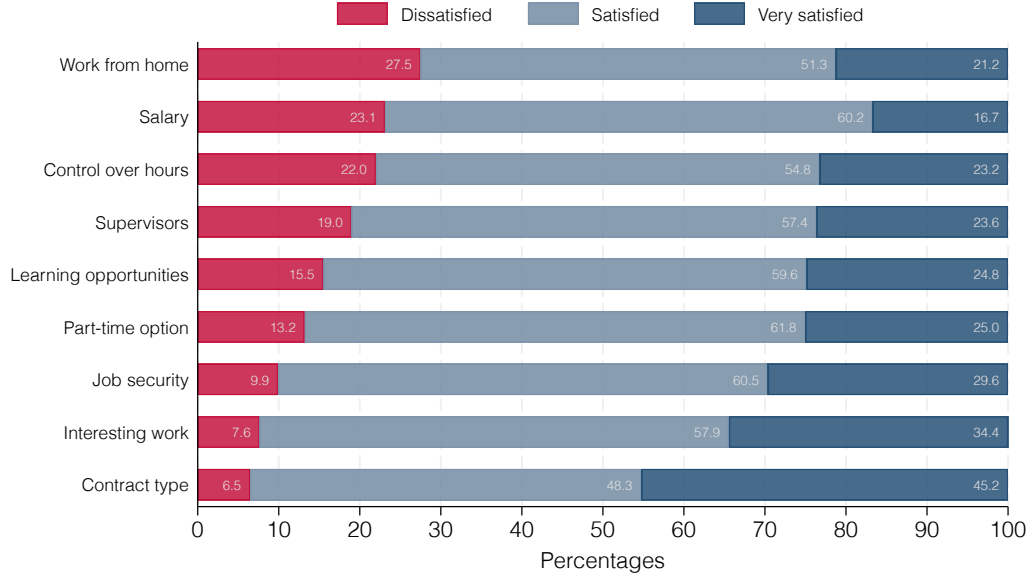
3.2.1. Job separation and attribute satisfaction

Figure 3 presents job separation rates by satisfaction level with various job attributes. Across all attributes, workers who report dissatisfaction are consistently more likely to separate from their job compared to those who are satisfied or very satisfied. However, the magnitude of these differences varies by attribute. The largest gaps are observed for interesting work, job security, and contract type, where dissatisfied workers are substantially more likely to separate from their jobs. The difference between workers satisfied and dissatisfied with monetary attributes is relatively small.

coefficients should be interpreted as conditional associations rather than fully independent effects.

¹⁵Appendix Table A2 reports descriptive logistic regression results on demographic characteristics and objective job characteristics relate to dissatisfaction with specific job attributes. They are briefly described here. Women are more likely to report dissatisfaction with leadership, job security, and control over hours, while men are more often dissatisfied with interesting work, learning opportunities, salary, and part-time options. More educated workers tend to be more dissatisfied with all work intangible variables and salary, but not with work arrangements. Individuals who are self-employed in addition to wage employment report lower dissatisfaction across attributes compared to those without self-employment. Working from home and holding multiple jobs are both associated with greater dissatisfaction. Tenure and age show mixed associations, while higher log hourly wages are generally linked to lower dissatisfaction, except for leadership.

Figure 2: **Satisfaction with job attributes in the Netherlands, in percentages (2014–2023)**



Note: Frequencies of respondents' answers to the question: How satisfied are you with the following aspects of your current job? Data covers 2014–2023. Source: Dutch Working Conditions Survey (NEA).

4. Empirical strategy

Our main empirical approach uses logistic regressions, in which we regress job separation as a binary outcome variable on a set of satisfaction measures, controlling for a rich set of individual and job characteristics.

Job separation is constructed from administrative records, and equals one if the respondent no longer works for the same employer in the December following the survey wave. This definition captures both voluntary and involuntary job separations.

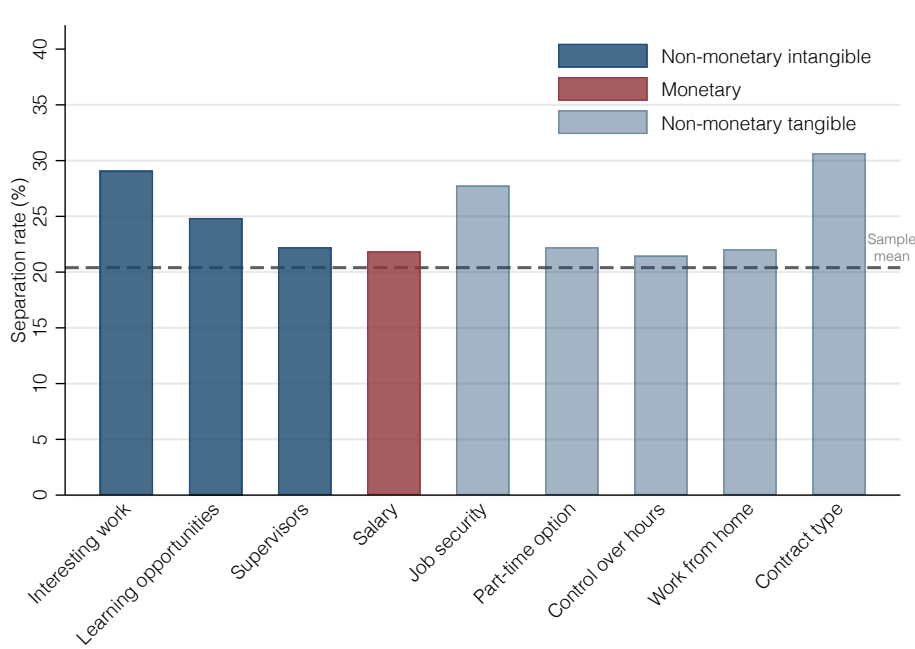
Our key independent variables are a set of satisfaction indicators with job attributes, drawn from the NEA survey. All satisfaction measures are included as dummies. In our main analyses, we group satisfied and very satisfied into one category, which serves as the reference category. We include dummies for missing responses to avoid selection bias due to item non-response.¹⁶

We estimate the following baseline model:

$$\Pr(y_i = 1) = \alpha + \beta' \mathbf{S}_i + \gamma' \mathbf{X}_i + \delta_{o(i)} + \theta_{r(i)} + \zeta_{k(i)} + \lambda_t, \quad (6)$$

¹⁶We run additional specifications without the missing response categories. Results are available do not change and are available in Appendix Table A3. These coefficients have no economically meaningful interpretation, and are therefore not reported in the main text.

Figure 3: **Job separation rates for workers dissatisfied with different job attributes (compared to sample mean)**



Note: Job separation: share of workers no longer working for the same employer in December of the year following the survey. Dissatisfied: Respondents indicating they are dissatisfied with job attribute. Data covers 2014-2023. *Source:* Dutch Working Conditions Survey (NEA) and non-public register data from Netherlands Statistics.

where y_i denotes the binary outcome (either job search or separation) for individual i , $\mathbf{S}_i$ is a vector of satisfaction indicators, and $\mathbf{X}_i$ includes personal characteristics (gender, age, education, household position, presence and age of children) and job characteristics (contract type, tenure, firm size, supervisory status, weekly hours, multiple job-holding, urbanity). We additionally control for the respondent's log hourly wage, constructed from administrative data as the ratio of contracted base wage to contracted hours in December of the survey year. We include 3 digit ISCO occupation ($\delta_{o(i)}$), local labour market ($\theta_{r(i)}$), 2 digit SBI industry ($\zeta_{k(i)}$) and survey-year fixed effects (λ_t). Standard errors are clustered at the occupation $\times$ industry $\times$ local labor market level.

5. Results

5.1. Baseline regressions

Table 2 presents the results of the baseline cross-sectional logistic regressions, where the dependent variable is job separation. The main independent variables capture worker dissatisfaction across three groups of job attributes: work intangibles, monetary rewards, and work arrangements.

Table 2: Logistic regressions of job separation on dissatisfaction with attributes

	(1)	(2)	(3)
<i>Dissatisfaction with:</i>			
Intangible job attributes			
Interesting work	0.640*** (0.017)	0.366*** (0.017)	0.344*** (0.017)
Learning opportunities	0.289*** (0.013)	0.206*** (0.014)	0.194*** (0.014)
Supervisors	0.026** (0.012)	0.334*** (0.012)	0.358*** (0.012)
Monetary attributes			
Salary	0.042*** (0.011)	0.037*** (0.011)	-0.004 (0.012)
Tangible work arrangements			
Job security	0.505*** (0.014)	0.439*** (0.015)	0.414*** (0.015)
Part-time option	-0.044*** (0.015)	0.107*** (0.015)	0.090*** (0.015)
Control over hours	-0.169*** (0.014)	0.018 (0.014)	0.045*** (0.014)
Work from home	0.262*** (0.013)	0.016 (0.013)	0.020 (0.013)
Contract type	0.776*** (0.018)	0.275*** (0.018)	0.297*** (0.018)
Constant	-2.047*** (0.051)	-0.842*** (0.187)	-0.153 (0.226)
Observations	429,647	429,647	429,647
Pseudo R-squared	0.0375	0.116	0.126
Survey-year	X	X	X
Demographics		X	X
Job characteristics			X
Ind, region, occ dummies			X

Notes: Standard errors are reported in parentheses and are clustered at the occupation $\times$ industry $\times$ local labour market level. All regressions are weighted using population-based probability weights. =The reference category for all dissatisfaction variables is "satisfied." Survey year covariates include survey mode and survey year. Demographics contain gender, age, education level, household position, age of the youngest child (if applicable). Job characteristics include a log hourly wage, contract type dummy, tenure at the current firm, a part-time status dummy, firm size, a supervisory role dummy, number of working days multiple job holding, and urbanity. Columns (3) and (4) include fixed effects for industry (SBI 2-digit), region (*arbeidsmarktregio*), and occupation (ISCO 3-digit).

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Column (1) includes controls for survey mode and year, Column (2) adds demographic controls, and Column (3) presents the full set of covariates, including objective measures of work arrangements (part-time status, working days, tenure, contract type, and working from home), 3-digit ISCO occupation, 2-digit SBI industry, local labor market dummies, log hourly wage and socio-economic status at the time of the survey. Figure 4 reports the marginal effects from the full specification, showing that the coefficients correspond to economically significant differences between the probability of job separation for different satisfaction levels.¹⁷

In the full model, dissatisfaction with all intangible work attributes is associated with a higher likelihood of job separation. For example, workers dissatisfied with interesting work have a predicted probability of separation from their job that is roughly 5 percentage points higher than those who are satisfied (26.3 versus 21%), equivalent to about a quarter of the national mean separation rate (21%). As intangibles are only partly observed before entering a job, we treat these associations as evidence of a poor match quality between the worker and the work environment, pushing workers out of their current job.

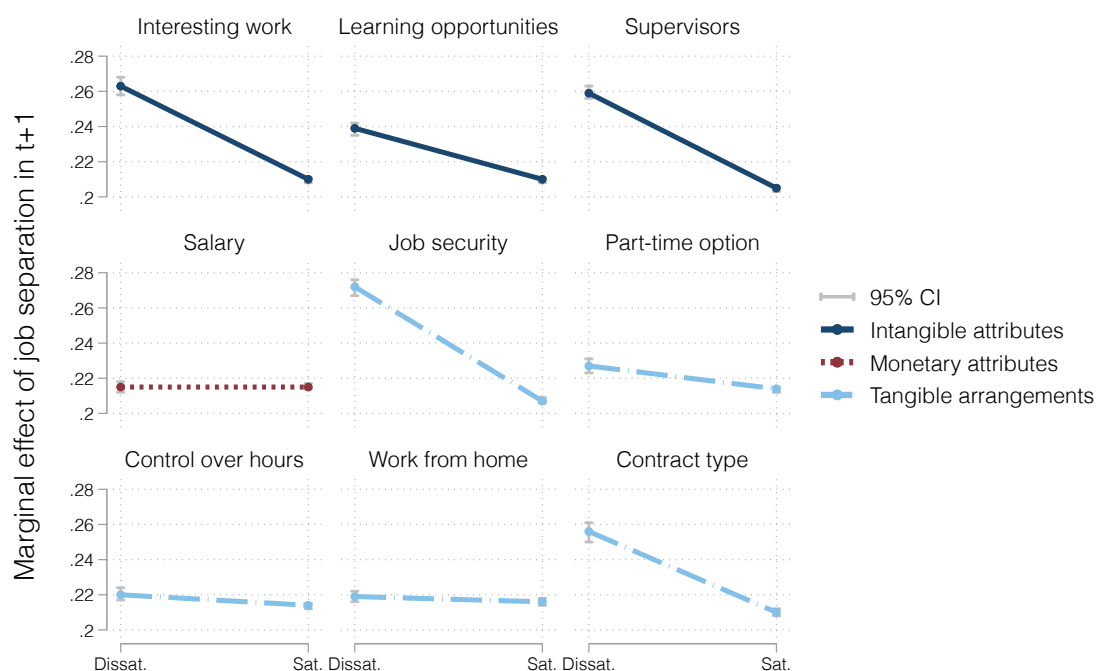
We find heterogeneous results for tangible work arrangements: whereas workers dissatisfied with job security and contract type show substantially higher separation rates (with differences of approximately 4 to 5 percentage points), we observe smaller differences between workers dissatisfied with working time components, such as part-time options and control over hours. We find no significant effect for dissatisfaction with working from home. The association with working time dissatisfaction and separation rates may reflect incompatibilities between home and working life, whereas the association for the job stability related amenities are more likely to reflect longer-run preferences for security.

In contrast dissatisfaction with salary does not significantly predict job separation for the full sample.¹⁸ To shed light on the mechanisms through which dissatisfaction with job amenities may translate into turnover, we next examine heterogeneity in these associations across worker and job characteristics.

¹⁷Note that the sample average is slightly lower than the probability associated with the group of satisfied workers as satisfied and very satisfied workers are grouped together. Appendix Table A4 shows that the difference in separation rates between satisfied and very satisfied workers can also be substantial.

¹⁸To evaluate the relative importance of different groups of variables in explaining job separation rates, we apply a Shapley decomposition of the model’s pseudo R-squared. The results are shown in Appendix Table A5. Dissatisfaction with salary only explains 0.6% of total explained variation, while non-monetary components together explain over 20%, of which intangibles account for roughly half (10.3%) and tangibles the other half (11.1%). However, objective job characteristics, including hourly wage, contract type, tenure, and part-time status, together explain a greater share of the variation than the satisfaction-based measures.

Figure 4: Marginal effects of job attribute (dis)satisfaction on probability of leaving job in the year after survey



Note: Job separation is defined as no longer working for the same employer in December of the year following the survey, which is administered in Q4 every year. Marginal effects are also presented in Appendix Table A6. Non-public register data from Netherlands Statistics. Dissatisfied: Respondents indicating they are dissatisfied with job attribute. Satisfied: Respondents indicating they are either satisfied or very satisfied with job attribute (aggregated). Data covers 2014-2023. Source: Dutch Working Conditions Survey (NEA)

Table 3: Subsample analysis: regression on job separation, by categories

	Gender		Contract type		Tenure			On-job-search	
	Men	Women	Permanent	Flexible	<2 years	2-5 years	5 + years	Searched	Did not search
<i>Dissatisfaction with:</i>									
Intangible job attributes									
Interesting work	0.322*** (0.024)	0.364*** (0.023)	0.399*** (0.022)	0.276*** (0.027)	0.361*** (0.028)	0.311*** (0.034)	0.336*** (0.027)	0.220*** (0.023)	0.277*** (0.024)
Learning opportunities	0.183*** (0.019)	0.210*** (0.019)	0.227*** (0.017)	0.159*** (0.023)	0.246*** (0.025)	0.254*** (0.027)	0.210*** (0.021)	0.152*** (0.021)	0.089*** (0.018)
Supervisors	0.318*** (0.017)	0.401*** (0.017)	0.381*** (0.014)	0.325*** (0.024)	0.446*** (0.024)	0.455*** (0.026)	0.341*** (0.017)	0.322*** (0.018)	0.209*** (0.016)
Monetary attributes									
Salary	-0.008 (0.016)	-0.005 (0.016)	-0.003 (0.014)	0.028 (0.019)	0.076*** (0.020)	0.075*** (0.024)	-0.061*** (0.018)	-0.090*** (0.019)	-0.013 (0.015)
Tangible work arrangements									
Job security	0.397*** (0.022)	0.427*** (0.021)	0.437*** (0.020)	0.343*** (0.023)	0.369*** (0.025)	0.391*** (0.034)	0.453*** (0.023)	0.370*** (0.022)	0.375*** (0.021)
Part-time option	0.102*** (0.020)	0.103*** (0.024)	0.117*** (0.018)	0.032 (0.027)	0.136*** (0.026)	0.084*** (0.032)	0.057*** (0.024)	0.059** (0.024)	0.068*** (0.020)
Control over hours	-0.001 (0.020)	0.087*** (0.020)	0.035** (0.018)	0.065*** (0.023)	0.080*** (0.024)	0.009 (0.030)	0.040* (0.022)	0.022 (0.023)	0.032* (0.019)
Work from home	0.003 (0.019)	0.033* (0.018)	0.030* (0.017)	0.019 (0.021)	0.018 (0.021)	0.046 (0.028)	0.016 (0.021)	0.009 (0.022)	0.004 (0.016)
Contract type	0.351*** (0.027)	0.248*** (0.026)	0.302*** (0.035)	0.225*** (0.023)	0.202*** (0.025)	0.282*** (0.042)	0.300*** (0.043)	0.197*** (0.027)	0.322*** (0.026)
Constant	-0.400 (0.301)	0.276 (0.350)	-0.341 (0.419)	0.720** (0.349)	0.982* (0.382)	0.443 (0.496)	-1.357* (0.379)	0.492 (0.432)	-0.352*** (0.270)
Observations	216,614	212,993	336,517	93,075	102,579	81,508	245,473	98,348	331,272
Pseudo R-squared	0.124	0.124	0.124	0.124	0.124	0.124	0.124	0.105	0.123

Notes: Coefficients from separate regressions for each subgroup. All set of controls are included. Standard errors are reported in parentheses and are clustered at the occupation $\times$ industry $\times$ local labour market level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

5.2. Heterogeneity analysis

We assess the heterogeneity of our findings by conducting a set of stratified analyses across key demographic and employment contexts (as in [Clark \(2001\)](#)). In [Table 3](#) we show the results based on: (i) gender, (ii) contract type (permanent vs. flexible), (iii) tenure levels (categorized as < 2 years, 2–5 years, and > 5 years) and (iv) based on job search activity. We further complement this by specifying analyses by educational levels, supervisory role, age groups, public versus private sector¹⁹, pre- and post-COVID-19 periods, and by survey years (see [Appendix Tables A7 and A8](#)).

Overall, the results clearly support that all intangible work attributes demonstrate high consistency in both sign and statistical significance across all subgroups. The same holds for the tangible attributes of job security and contract type. Instead, we observe little heterogeneity for the attribute control over hours which vary based on gender and tenure. The former finding aligns with the notion that women have a greater imperative for flexible scheduling to accommodate family care responsibilities ([De Schouwer and Kesternich, 2024](#)) and, at the same time, that work arrangements are still insufficient to meet these needs. The latter result suggests that workers with less than two years of tenure are initially more controlled, as their productivity is still not fully known, as well as their knowledge about the organization routines not yet at the level of more experienced workers.

Overall, we document higher heterogeneity of results for the salary component. This may explain why the monetary dimension is insignificant in the full specified baseline model. A breakdown by tenure intervals reveals counteracting forces at play. Dissatisfaction with salary predicts separation for workers with short tenure (< 5 years), but has a negative association for those with tenure over 5 years. While the former aligns with the general expectation, two main explanations are used to rationalized with the second evidence. First, it is a consolidated fact that salary rise with tenure ([Topel, 1991](#)). Thus, notwithstanding the dissatisfaction with salary, longer-tenure workers have supposedly higher salary which render the separation based on monetary considerations more costly. Secondly, due to their higher valuable specific-human capital ([Parsons, 1972](#)), they may exert higher bargaining power over salary, possibly increasing the satisfaction with salary in the near future. These considerations find further support also when referring to the heterogeneity observed based on age groups (see [Table A7](#), column (6) and (7)).

A notable finding is the sign flip of salary dissatisfaction between pre- and post-COVID-19 ([Table A7](#)), changing from negative to positive. Looking at the annual data, we generally see an overall non-significant and negative association between salary dissatisfaction and the likely to separate in the 2014-2020 interval which explain the slight negative sign before 2020. For the period after COVID-19, the annual data points to 2021 as a significant anomaly, with salary positively and significantly predicting

¹⁹For public sector we select public administration (O), as well as education (P) and health (Q) sectors, even though some companies within health and education may be private.

separation (Appendix Table A8), driving the post-pandemic result. We attribute this to the highly unique business cycle dynamics of the post-pandemic recovery. Crucially, 2020 and 2021 saw an unprecedented surge in labour market tightness (Figure 1), a critical external factor influencing salary setting and growth (Brunow et al., 2022; Heise et al., 2024), making satisfaction with salary a more compelling dimension.²⁰

Arguably, reported job dissatisfaction may partly reflect forward-looking behaviour: workers who are already searching for alternative jobs may retrospectively report dissatisfaction with job attributes. To assess this possibility, we split the sample by on-the-job search behaviour using a survey question that asks whether respondents actively searched for other work in the past year.²¹ The results are reported in Columns 8 and 9 in Table 3. For non-monetary job attributes, we observe some differences in coefficient magnitudes, but no substantial changes in signs or statistical significance. In contrast, dissatisfaction with salary is negatively associated with job separation among workers who engage in on-the-job search. This pattern is consistent with workers using outside options and quit intentions as bargaining leverage to negotiate higher salary (Yamaguchi, 2010). Overall, these findings indicate that our results for non-monetary job attributes are not (fully) driven by anticipatory job search or planned job quits.

5.3. Where do job separators go to?

Having established that dissatisfaction with specific job attributes is associated with job separation, either consistently or heterogeneously across subsamples, we now turn to the question of where workers go after leaving their employer. To shed light on the underlying mechanisms, we exploit the linked survey–administrative structure of our data, which allows us to observe not only whether individuals separate from their job, but also their subsequent labour market destination. We distinguish four post-separation states²²: two employment outcomes (moving to a new employer (wage employment) or becoming self-employed) and two non-employment outcomes (unemployment or (re-)entry into education). The employment outcomes capture situations in which workers leave their employer while remaining attached to the labour market, potentially seeking a different type of job. These analyses provide new insights into the pathways through which job-attribute dissatisfaction translates into turnover. To the best of our knowledge, this is the first study to document these pathways in such detail for a sample of this size.

Table 4 reports multinomial logit estimates for the employment status of workers one year after they leave their employer (81,083 individuals).²³ Coefficients are relative

²⁰Public sector employees are less likely to separate in response to salary dissatisfaction, consistent with lower wage flexibility in this sector and motivations to remain employed in the public sector (Delfgaauw and Dur, 2008).

²¹We use the following survey item: “In the past 12 months, have you actually taken any action to find another job?” which can be answered with either yes or no.

²²See the Data section for a detailed description of these outcomes and how they are measured and Appendix Table A9 for descriptive statistics for separated and non-separated workers.

²³Binary logistic regressions for each socio-economic outcome appear in Appendix Table A10.

Table 4: Multinomial regression: employment status one year after survey on sample of separated workers

	Employment status (base: employed)		
	Unemployed	Self-employed	Student
<i>Dissatisfaction with:</i>			
Intangible job attributes			
Interesting work	0.331*** (0.054)	0.060 (0.073)	0.261*** (0.050)
Learning opportunities	0.002 (0.047)	-0.124** (0.062)	0.073 (0.047)
Supervisors	0.269*** (0.041)	0.187*** (0.058)	0.019 (0.052)
Monetary attributes			
Salary	-0.159*** (0.043)	0.071 (0.057)	-0.159*** (0.041)
Tangible work arrangements			
Job security	0.529*** (0.045)	-0.177** (0.069)	-0.039 (0.053)
Part-time option	0.105** (0.053)	-0.068 (0.078)	-0.084 (0.064)
Control over hours	0.014 (0.051)	0.053 (0.072)	-0.155*** (0.049)
Work from home	0.028 (0.051)	-0.029 (0.068)	0.024 (0.041)
Contract type	-0.049 (0.060)	-0.257*** (0.090)	-0.229*** (0.063)
Constant	-2.823*** (0.750)	0.218 (1.116)	9.687*** (0.701)
Observations	81,083		
Pseudo R-squared	0.411		

Notes: Multinomial logit coefficients on dissatisfaction measures for individuals who separated from their employer at the time of the survey. Base category is employed (but at another firm than during the survey). All set of controls are included. Standard errors are reported in parentheses and are clustered at the occupation $\times$ industry $\times$ local labour market level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

to moving to a new employer (i.e., job-to-job mobility).

Dissatisfaction with task interestingness is associated with exits into education, consistent with workers seeking to retrain or acquire new skills to move into jobs that better match their interests (Delfgaauw, 2007). It is also linked to unemployment, potentially reflecting temporary disengagement through the channel of reduced motivation (Deci et al., 2017) or even boredom (Spanouli et al., 2023), resulting in counterproductive work behaviour.

On the other hand, dissatisfaction with supervision increases the likelihood of entering unemployment but also appears to push workers toward self-employment. These patterns are consistent with evidence showing that supervisors can play a significant role in pushing workers out of jobs, while high-quality supervision is associated with lower turnover (Lazear et al., 2015; Hoffman and Tadelis, 2021). Some workers may temporarily exit employment to avoid unsatisfactory supervision (Hommelhoff et al., 2025), whereas poor supervision can also serve as intrinsic motivation to start a business to increase autonomy (Douglas and Shepherd, 2000; Lange, 2012).

Dissatisfaction with learning opportunities is not significantly associated with transitions into non-employment states, but is related to job-to-job mobility.²⁴ Conceptually, dissatisfaction with learning opportunities may reflect concerns about future skill accumulation, which workers may address by changing employers in the hopes of finding better learning environments.

Overall, we find contrasting patterns within the intangible variables. One interpretation is that dissatisfaction with supervision and task content directly undermines motivation and well-being (Gagné and Deci, 2005; Deci et al., 2017; Lazear et al., 2015; Hommelhoff et al., 2025), which reduces not only one’s motivation to work for the current employer, but also for future employers (Elliot, 2006). This may push workers into non-employment or self-employment states (Henley, 2021). Dissatisfaction with learning opportunities, by contrast, is primarily forward-looking and potentially less immediately detrimental to work motivation. As a result, the former is more likely to induce exits into non-employment, while the latter leads to reallocation within wage employment.

Next, we examine tangible work arrangements. Dissatisfaction with job security follows the expected pattern: it predicts shifts into unemployment but reduces transitions into self-employment, consistent with a preference for stability among those concerned about security (Delfgaauw and Dur, 2008). This may partly reflect the sorting of risk-averse workers into stable jobs, such that dissatisfaction leads primarily to unemployment or job-to-job mobility, but not self-employment, which is negatively related to security concerns (Bonin et al., 2007).

Dissatisfaction with part-time options is positively related to exits into unemployment, but not to job-to-job mobility. This pattern may reflect a poor match between work and home responsibilities: workers who cannot obtain satisfactory part-time ar-

²⁴See also Appendix Table A10.

rangements may leave employment altogether rather than transition directly to another job. The high prevalence of part-time work in the Netherlands, particularly among women, and the limited flexibility or career prospects associated with part-time roles make such mismatches more likely (Gonne, 2023).

Although dissatisfaction with salary is not associated with higher separation overall, it is strongly predictive of job-to-job mobility rather than transitions into non-employment.²⁵ This is consistent with standard job-search theory and evidence that monetary dissatisfaction drives workers to seek better-paid opportunities rather than exit the labour force. Dissatisfaction with intangible attributes, by contrast, is more strongly linked to exits into non-employment states, though we cannot determine whether these separations are voluntary or involuntary, the results nevertheless show that different types of dissatisfaction are associated with distinct exit pathways.

These results can also be interpreted in light of the broader institutional context. The Dutch labour market is characterised by high flexibility, with large shares of part-time and other non-standard work arrangements. While this flexibility can facilitate labour market matching, it has also been linked to deteriorating protection for more vulnerable workers as risk is shifted onto employees (Salverda, 2025). Flexible arrangements and self-employment opportunities may help workers dissatisfied with salary to optimize their income, but for those dissatisfied with non-monetary outcomes, such arrangements can increase the likelihood of separations not immediately followed by a new job.

5.4. *Labour market tightness: raising the value of outside options*

To assess how external conditions shape job separations, we test whether labour market tightness moderates the link between the various job-attribute dissatisfaction and mobility. In our framework, tighter labour markets raise the value of the outside option, for instance by improving expected job offers or by increasing workers' bargaining power. This implies that dissatisfaction should be more strongly associated with separation when tightness is high.

To study this, we use occupation-level tightness at the 3-digit level (*UWV Spanningsindicator*) for 2016–2023²⁶, grouped into slack (baseline), average, and tight conditions.²⁷ Table 5 reports selected interaction estimates for work-intangible and wage satisfaction. Full results, including those using region-by-occupation tightness, appear in Appendix Table A11.

Column (1) shows the baseline specification with tightness dummies included; column (2) adds interactions with dissatisfaction.

²⁵Appendix Table A10 shows similar findings in a binary logistic model.

²⁶This period is shorter than our main analysis. To ensure that the results in Table 5 are not driven by sample selection, we reran the analyses for the 2016–2023 subgroup. The results are consistent with the baseline findings for 2014–2023.

²⁷We also estimate models using occupation-by-region tightness to capture regional variation.

Table 5: Logit regressions: selected interactions with labour market tightness (occupation-level)

	(1)	(2)
Dissatisfaction with:		
Interesting work	0.414***	0.308***
Learning opportunities	0.210***	0.055
Supervisors	0.370***	0.290***
Salary	-0.002	0.068
Labour market tightness (ref: slack)		
Average	0.067**	0.031
Tight	0.130***	0.050
Interactions:		
Interesting work $\times$ Average		0.079
Interesting work $\times$ Tight		0.152**
Learning opp. $\times$ Average		0.127**
Learning opp. $\times$ Tight		0.195***
Supervisors $\times$ Average		0.063
Supervisors $\times$ Tight		0.090*
Salary $\times$ Average		-0.095*
Salary $\times$ Tight		-0.065
Observations	299,535	299,535
Pseudo R-squared	0.107	0.107

Notes: Logit regressions using population-based weights. Standard errors clustered at the occupation $\times$ industry $\times$ local labour market level. Baseline of the satisfaction variables: satisfied. Baseline of the tightness variables: Slack. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Full model with all interaction terms reported in Appendix Table [A11](#).

The results show that the association between work-intangible dissatisfaction and separation depends on labour market tightness. Workers who are dissatisfied with interesting work are even more likely to separate when outside options are plentiful. Dissatisfaction with one’s supervisor appears largely independent of tightness, while dissatisfaction with learning opportunities seems to drive separation only in tight labour markets. This suggests that supervisory quality is an important driver of job separation, consistent with avoidance behaviour, regardless of labour market conditions, whereas dissatisfaction with interesting work and learning opportunities may be tolerable under limited outside options but becomes more likely to trigger separation when these options are more abundant.

By contrast, salary dissatisfaction shows no significant moderation, and dissatisfaction with tangible work arrangements is likewise unaffected by tightness (Appendix Table A11). To examine whether these null effects reflect the coarse measure of job separation, which includes exits to non-employment states, we reran the tightness analyses using the specific post-separation states as dependent variables. Even in these models, we find no evidence that salary dissatisfaction is associated with higher job-to-job mobility in tight labour markets. This suggests that salary dissatisfaction may partly reflect belief updating, with workers taking outside options into account when evaluating their pay, which would explain why dissatisfaction does not trigger more (job-to-job) mobility as tightness increases.²⁸

6. Conclusion

This paper has examined how dissatisfaction with different job attributes relates to workers’ job separation and quit using rich survey and administrative data from the Netherlands. We propose a multidimensional approach to job value which allows to differentiate between the different components. We find that dissatisfaction with work intangibles factors are robustly associated to job separation across different specification and when considering outside options by considering labour market tightness at the occupational and local labour level. In contrast, dissatisfaction with monetary rewards and work arrangements, apart from job security and contract type, shows more heterogeneous and context-dependent associations. Our analysis of post-separation destinations further examines the role of non-monetary attributes. Workers dissatisfied with work intangible factors are more likely to exit into unemployment or other non-employment statuses, suggesting that poor work intangibles may push workers out of employment altogether, not just from one employer to another. Conversely, wage dissatisfaction primarily drives job-to-job transitions, highlighting its role in matching processes rather than pushing workers out of the labor force.

While these findings provide robust evidence for the role of (non-)monetary job attributes in shaping mobility, a potential limitation is self-selection into job attributes based on worker preferences, particularly for intangible features. We partly address

²⁸Results not reported here, but available on request.

this by controlling for objective job characteristics, and exploratory checks including perceived importance of job attributes in some survey years do not materially change the results (Burbano et al., 2024; Kesternich et al., 2021; De Schouwer and Kesternich, 2024) (see Appendix Table A12). Another limitation is the cross-sectional nature of our main models, which limits causal interpretation. Finally, the Dutch institutional context, with strong employment protections and generous social insurance, may limit generalisability to other settings with different labor market institutions. For example, the relationship between dissatisfaction and exit into unemployment may be shaped by the accessibility of these benefits.

Our findings carry several important implications for both employers and policy-makers. The results underscore the value of investing in non-monetary aspects of job quality as a means to retain employees and reduce unwanted turnover. Employers and policymakers should particularly focus on the quality of leadership (Hoffman and Tadelis, 2021; Hommelhoff et al., 2025; Lazear et al., 2015) and on the intrinsic interest of the work (Deci et al., 2017; Asuyama, 2021). Furthermore, policymakers should note the central role played by intangible aspects in predicting labour supply decisions: dissatisfaction with supervision predicts self-employment and low satisfaction with the interesting content of work is associated to human capital development through education. Policymakers may consider measures in order to support the positive externalities associated to these decisions in term of jobs creation and human capital development.

References

- Ashraf, N., Bandiera, O., Minni, V. and Zingales, L. (2025), Meaning at work, Technical report, National Bureau of Economic Research.
- Asuyama, Y. (2021), ‘Determinants of job interestingness: Comparison of Japan and other high-income countries’, *Labour Economics* **73**, 102082.
- Bagga, S., Mann, L. F., Şahin, A. and Violante, G. L. (2025), ‘Job Amenity Shocks and Labor Reallocation’.
- Bekker, S. and Mailand, M. (2019), ‘The European flexicurity concept and the Dutch and Danish flexicurity models: How have they managed the Great Recession?’, *Social Policy & Administration* **53**(1), 142–155. eprint: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/spol.12441>.
- Bonin, H., Dohmen, T., Falk, A., Huffman, D. and Sunde, U. (2007), ‘Cross-sectional earnings risk and occupational sorting: The role of risk attitudes’, *Labour Economics* **14**(6), 926–937.
- Brunow, S., Lössch, S. and Okhrin, O. (2022), ‘Labor market tightness and individual wage growth: evidence from germany’, *Journal for Labour Market Research* **56**(1), 16.
- Burbano, V., Padilla, N. and Meier, S. (2024), ‘Gender Differences in Preferences for Meaning at Work’, *American Economic Journal: Economic Policy* **16**(3), 61–94.

- Burdett, K. (1978), ‘A theory of employee job search and quit rates’, *The American Economic Review* **68**(1), 212–220.
- Burdett, K., Carrillo-Tudela, C. and Coles, M. (2020), ‘The cost of job loss’, *The Review of Economic Studies* **87**(4), 1757–1798.
- Böckerman, P. and Ilmakunnas, P. (2009), ‘Job Disamenities, Job Satisfaction, Quit Intentions, and Actual Separations: Putting the Pieces Together’, *Industrial Relations: A Journal of Economy and Society* **48**(1), 73–96.
- Cassar, L. and Meier, S. (2018), ‘Nonmonetary Incentives and the Implications of Work as a Source of Meaning’, *Journal of Economic Perspectives* **32**(3), 215–238.
- Clark, A. E. (2001), ‘What really matters in a job? hedonic measurement using quit data’, *Labour economics* **8**(2), 223–242.
- Cnossen, F. and Nikolova, M. (2025), ‘Work meaningfulness and effort’, *Journal of Behavioral and Experimental Economics* **119**, 102460.
- Collis, M. R. and Van Effenterre, C. (2025), Workplace Hostility, Technical report.
- De Schouwer, T. and Kesternich, I. (2024), ‘Work Meaning and the Flexibility Puzzle’.
- Deci, E. L., Olafsen, A. H. and Ryan, R. M. (2017), ‘Self-determination theory in work organizations: The state of a science’, *Annual review of organizational psychology and organizational behavior* **4**(1), 19–43.
- Delfgaauw, J. (2007), ‘The effect of job satisfaction on job search: not just whether, but also where’, *Labour Economics* **14**(3), 299–317.
- Delfgaauw, J. and Dur, R. (2008), ‘Incentives and Workers’ Motivation in the Public Sector’, *The Economic Journal* **118**(525), 171–191. _eprint: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1468-0297.2007.02108.x>.
- Douglas, E. J. and Shepherd, D. A. (2000), ‘Entrepreneurship as a utility maximizing response’, *Journal of Business Venturing* **15**(3), 231–251.
- Eeckhout, J. (2018), ‘Sorting in the labor market’, *Annual Review of Economics* **10**(1), 1–29.
- Elliot, A. J. (2006), ‘The Hierarchical Model of Approach-Avoidance Motivation’, *Motivation and Emotion* **30**(2), 111–116.
- Engbom, N. (2022), Labor market fluidity and human capital accumulation, Technical report, National Bureau of Economic Research.
- Faberman, R. J., Mueller, A. I., Şahin, A. and Topa, G. (2022), ‘Job search behavior among the employed and non-employed’, *Econometrica* **90**(4), 1743–1779.

- Freeman, R. B. (1978), ‘Job Satisfaction as an Economic Variable’, *The American Economic Review* **68**(2), 135–141.
- Gagné, M. and Deci, E. L. (2005), ‘Self-determination theory and work motivation’, *Journal of Organizational behavior* **26**(4), 331–362.
- Gonne, N. (2023), ‘Lifting labour supply to tackle tightness in the netherlands’, *Documents de travail du Département des Affaires économiques de l’OCDE*.
- Heise, S., Pearce, J. and Weber, J. (2024), ‘Wage growth and labor market tightness’, *FRB of New York Staff Report* (1128).
- Henley, A. (2021), ‘The rise of self-employment in the UK: entrepreneurial transmission or declining job quality?’, *Cambridge Journal of Economics* **45**(3), 457–486.
- Hoffman, M. and Tadelis, S. (2021), ‘People Management Skills, Employee Attrition, and Manager Rewards: An Empirical Analysis’, *Journal of Political Economy* **129**(1), 243–285.
- Hommelhoff, S., Keller, F. and Stemmler, M. (2025), ‘Turnover reasons are more complex than “people quit bosses”: An approach-avoidance perspective’, *Journal of Vocational Behavior* **158**, 104099.
- Humlum, A., Rasmussen, M. and Rose, E. K. (2025), ‘Firm Premia and Match Effects in Pay vs. Amenities’.
- Kesternich, I., Schumacher, H., Siflinger, B. and Schwarz, S. (2021), ‘Money or meaning? labor supply responses to work meaning of employed and unemployed individuals’, *European Economic Review* **137**, 103786.
- Knabe, A. and Rätzl, S. (2011), ‘Scarring or Scaring? The Psychological Impact of Past Unemployment and Future Unemployment Risk’, *Economica* **78**(310), 283–293.
- Lange, T. (2012), ‘Job satisfaction and self-employment: autonomy or personality?’, *Small Business Economics* **38**(2), 165–177.
- Lazear, E. P., Shaw, K. L. and Stanton, C. T. (2015), ‘The Value of Bosses’, *Journal of Labor Economics* **33**(4), 823–861.
- Lee, D., Park, J. and Shin, Y. (2023), Where are the workers? from great resignation to quiet quitting, Technical report, National Bureau of Economic Research.
- Lévy-Garboua, L., Montmarquette, C. and Simonnet, V. (2007), ‘Job satisfaction and quits’, *Labour Economics* **14**(2), 251–268.
- Maestas, N., Mullen, K. J., Powell, D., von Wachter, T. and Wenger, J. B. (2023), ‘The Value of Working Conditions in the United States and the Implications for the Structure of Wages’, *American Economic Review* **113**(7), 2007–2047.

- Mas, A. (2025), Non-wage amenities, in ‘Handbook of Labor Economics’, Vol. 6, Elsevier, pp. 373–446.
- Mas, A. and Pallais, A. (2020), ‘Alternative work arrangements’, *Annual Review of Economics* **12**(1), 631–658.
- Miano, A. (2023), ‘Search costs, outside options, and on-the-job search’, *Job market paper, Harvard University*.
- Nikolova, M. (2024), ‘Loud or Quiet Quitting? The Influence of Work Orientations on Effort and Turnover’, *GLO Discussion Paper, No. 1429*.
- Nikolova, M. and Cnossen, F. (2020), ‘What makes work meaningful and why economists should care about it’, *Labour economics* **65**, 101847.
- Parsons, D. O. (1972), ‘Specific human capital: An application to quit rates and layoff rates’, *Journal of political economy* **80**(6), 1120–1143.
- Patra, K., Neuteboom, N., Kapetanios, G. and Ventouri, A. (2025), ‘Reducing labour market flexibility: A causal inference study on reform in the netherlands’, *Economics Letters* p. 112198.
- Pelly, D. (2023), ‘Worker Well-Being and Quit Intentions: Is Measuring Job Satisfaction Enough?’, *Social Indicators Research* **169**(1), 397–441.
- Salverda, W. H. (2025), ‘The labor market in the Netherlands, 2001–2024’, *IZA World of Labor*.
- Scheer, B., van den Berge, W., Goos, M., Manning, A. and Solomons, A. (2022), ‘Alternative work arrangements and worker outcomes: evidence from payrolling’. Medium: PDF Version Number: CPB discussion paper, 435.
- Spanouli, A., Hofmans, J. and Dalal, R. S. (2023), ‘Coping with daily boredom: Exploring the relationships of job boredom, counterproductive work behavior, organizational citizenship behavior, and cognitive reappraisal’, *Motivation and Emotion* **47**(5), 810–827.
- Sullivan, P. and To, T. (2014), ‘Search and nonwage job characteristics’, *Journal of Human Resources* **49**(2), 472–507.
- Topel, R. (1991), ‘Specific capital, mobility, and wages: Wages rise with job seniority’, *Journal of political Economy* **99**(1), 145–176.
- Van Landeghem, B., Dohmen, T., Hole, A. R. and Künn-Nelen, A. (2024), ‘The value of commuting time, flexibility, and job security: Evidence from current and recent jobseekers in Flanders’, *Labour Economics* **91**, 102631.

- Wiswall, M. and Zafar, B. (2018), ‘Preference for the Workplace, Investment in Human Capital, and Gender*’, *The Quarterly Journal of Economics* **133**(1), 457–507.
- Yamaguchi, S. (2010), ‘Job search, bargaining, and wage dynamics’, *Journal of Labor Economics* **28**(3), 595–631.

Appendix for “Job Attributes and Turnover”

Appendix A1. Questions from NEA

Appendix A1.1. Job attribute satisfaction

For the job attribute satisfaction variables, we use the Employment Conditions (*arbeidsvoorwaarden*) section of the NEA survey. This section follows the general job satisfaction questions and asks workers to specify their satisfaction with particular aspects of their job. It begins with: “How satisfied are you with the following aspects of your current job?” (*Hoe tevreden bent u over uw huidige baan als het gaat om:*)²⁹.

Respondents rate fourteen attributes on a three-point scale: 1. not satisfied, 2. satisfied, or 3. very satisfied. Below we list these fourteen attributes, showing both the English translation and the original Dutch text. In brackets, we indicate the assigned category used in our analysis:

- a Interesting work (*Interessant werk*) [Intangible]
- b Opportunities to learn (*Mogelijkheid om te leren*) [Intangible]
- c Pleasant atmosphere at work (*Prettige sfeer op het werk*) [Not included³⁰]
- d Good supervisors (*Goede leidinggevers*) [Intangible]
- e Good salary (*Goed salaris*) [Monetary Attributes]
- f Good job security (*Goede werkzekerheid*) [Tangible Work Arrangements]
- g Possibility of working part-time (*Mogelijkheid om in deeltijd te werken*) [Tangible Work Arrangements]
- h Possibility of determining my own working hours (*Mogelijkheid om zelf uw werktijden te bepalen*) [Tangible Work Arrangements]
- i Possibility of working from home (*Mogelijkheid om thuis te werken*) [Tangible Work Arrangements]
- j Commuting time/distance to work (*Reistijd/afstand naar het werk*) [Not included³¹]

²⁹Exact phrasing, including underlined text.

³⁰This variable was discontinued and excluded from the NEA dataset.

³¹This is not strictly a characteristic of the job itself, but rather influenced by personal and contextual factors such as housing location or partner’s job.

- k Healthy work (small chance of becoming sick at work) (*Gezond werk (kleine kans op ziek worden door het werk)*) [Not included³²]
- l Your employment/type of contract (e.g. permanent, temporary, temp) (*Uw dienstverband/contractvorm (vast, tijdelijk, uitzendkracht, e.d.)*) [Tangible Work Arrangements]
- m Representation of your interests by trade unions (*Vertegenwoordiging van uw belangen door vakbonden*) [Not included³³]
- n The collective labour agreement for your company (CAO) (*De cao (collectieve arbeidsovereenkomst) voor uw bedrijf*) [Not included³⁴]
- o Representation of your interests by personnel representative bodies (e.g. works council (OR) or employee participation council (MR)) (*Vertegenwoordiging van uw belangen door personeelsvertegenwoordiging (zoals ondernemingsraad (OR) of medezeggenschapsraad (MR))*) [Not included³⁵]
- p Your pension scheme (*Uw pensioenregeling*) [Not included³⁶]

Appendix A1.2. Job search

For the job search question, we use questions from the block “Your Career” (“Uw Loopbaan”). This block first asks four questions on whether the respondents has seen changes over the past two years in job description, received promotion, expanded in position, or was demoted. This is followed by two questions on the future of their career. The first question is whether respondents are concerned about keeping their job, and then there is a question about whether respondents have searched for a new job. This is the variable that we use for our job search indicator. The exact phrasing is: ‘In the past 12 months, have you actually taken any action to find another job?’ (*Heeft u in de afgelopen 12 maanden ook daadwerkelijk iets ondernomen om ander werk te vinden?*)

³²This variable was discontinued and excluded from the NEA dataset.

³³This variable reflects institutional representation rather than an individual-level job attribute.

³⁴This item captures institutional arrangements that vary at the firm or sector level, not necessarily at the individual level.

³⁵Similar to union representation, this item relates to institutional governance rather than individual job attributes, and is therefore outside the scope of the current analysis.

³⁶This variable reflects institutional arrangements rather than an individual-level job attribute. Pension schemes in the Netherlands are typically determined at the sectoral or national level and are not directly influenced by individual employer practices or negotiable within the employment relationship.

Table A1: Correlation matrix of job separation, and dissatisfaction with job attributes

	Job separation	Interesting work	Learning opp.	Supervisors	Salary	Job security	Part-time	Control over hours	Work from home	Contract type	Hourly wage
Job separation	1.00										
Interesting work	0.14	1.00									
Learning opportunities	0.12	0.40	1.00								
Supervisors	0.06	0.18	0.29	1.00							
Salary	0.05	0.13	0.19	0.17	1.00						
Job security	0.13	0.16	0.19	0.18	0.17	1.00					
Part-time option	0.04	0.10	0.17	0.16	0.12	0.15	1.00				
Control over hours	0.03	0.13	0.19	0.19	0.21	0.12	0.39	1.00			
Work from home	0.07	0.17	0.23	0.15	0.20	0.12	0.31	0.53	1.00		
Contract type (perm/flex)	0.14	0.11	0.12	0.07	0.14	0.35	0.11	0.11	0.11	1.00	
Hourly wage	-0.23	-0.16	-0.14	0.05	-0.18	-0.06	-0.01	-0.06	-0.19	-0.10	1.00

Notes: Interesting work to contract type are dissatisfaction dummies.

Source: Authors' calculations using NEA data and non-public microdata from Statistics Netherlands.

Table A2: Who is more likely to report dissatisfaction with work aspects?

	Work climate			Monetary	Work arrangements				
	Interesting work	Learning opp.	Supervisors	Salary	Job security	Part-time option	Control over hours	Work from home	Contract type
Female	-0.121*** (0.017)	-0.065*** (0.013)	0.074*** (0.012)	-0.100*** (0.012)	0.072*** (0.016)	-0.100*** (0.015)	0.108*** (0.013)	0.018 (0.012)	0.018 (0.020)
Age	-0.013*** (0.001)	-0.006*** (0.001)	0.006*** (0.001)	0.008*** (0.001)	0.014*** (0.001)	-0.005*** (0.001)	-0.007*** (0.001)	-0.011*** (0.001)	0.012*** (0.001)
Low education	0.267*** (0.040)	0.148*** (0.031)	0.128*** (0.030)	0.078*** (0.026)	0.103*** (0.037)	-0.044 (0.030)	-0.065** (0.026)	-0.031 (0.023)	-0.091* (0.047)
Middle education	0.559*** (0.040)	0.459*** (0.030)	0.331*** (0.028)	0.287*** (0.025)	0.283*** (0.036)	-0.020 (0.029)	0.006 (0.025)	0.027 (0.022)	-0.007 (0.044)
Bachelor degree	0.877*** (0.044)	0.719*** (0.033)	0.410*** (0.030)	0.455*** (0.027)	0.355*** (0.038)	-0.056* (0.032)	-0.071** (0.028)	0.013 (0.025)	0.102** (0.048)
Master degree	1.004*** (0.049)	0.699*** (0.036)	0.407*** (0.033)	0.508*** (0.030)	0.321*** (0.042)	-0.109*** (0.035)	-0.243*** (0.032)	-0.145*** (0.029)	0.151*** (0.053)
Self-employed	-0.310*** (0.031)	-0.225*** (0.023)	-0.156*** (0.021)	-0.168*** (0.021)	-0.095*** (0.027)	0.028 (0.029)	-0.020 (0.023)	-0.075*** (0.022)	-0.118*** (0.035)
Work from home	0.405*** (0.021)	0.260*** (0.015)	0.052*** (0.013)	0.028** (0.013)	0.016 (0.017)	0.360*** (0.016)	0.638*** (0.016)	1.389*** (0.019)	0.156*** (0.024)
Multiple job holding	0.078*** (0.025)	0.094*** (0.019)	0.005 (0.020)	0.060*** (0.018)	0.126*** (0.023)	-0.007 (0.025)	-0.026 (0.020)	0.043** (0.018)	0.143*** (0.028)
Flexible contract	0.132*** (0.017)	0.027** (0.013)	-0.145*** (0.014)	-0.025* (0.013)	1.351*** (0.016)	0.093*** (0.016)	-0.105*** (0.014)	0.033*** (0.012)	2.480*** (0.024)
Part-time	-0.187*** (0.022)	-0.092*** (0.015)	0.038*** (0.014)	-0.043*** (0.014)	-0.057*** (0.018)	0.584*** (0.018)	0.093*** (0.014)	0.039*** (0.014)	-0.108*** (0.025)
Tenure	-0.004*** (0.001)	-0.001* (0.001)	0.006*** (0.001)	0.001 (0.001)	-0.006*** (0.001)	-0.004*** (0.001)	0.003*** (0.001)	0.002*** (0.001)	-0.052*** (0.002)
Supervisory role	0.296*** (0.020)	0.166*** (0.014)	0.044*** (0.012)	-0.133*** (0.012)	0.064*** (0.017)	-0.144*** (0.014)	0.039*** (0.013)	-0.045*** (0.012)	0.010 (0.024)
Log hourly wage	-0.240*** (0.023)	-0.164*** (0.017)	0.070*** (0.017)	-1.680*** (0.024)	-0.237*** (0.021)	-0.139*** (0.020)	-0.290*** (0.018)	-0.206*** (0.016)	-0.385*** (0.027)
Constant	-2.638*** (0.376)	-1.614*** (0.275)	-2.524*** (0.241)	2.110*** (0.264)	-2.580*** (0.290)	-2.282*** (0.280)	-2.326*** (0.272)	-1.930*** (0.251)	-4.400*** (0.440)
Observations	429,557	429,630	429,602	429,621	429,601	429,622	429,630	429,635	393,901
Pseudo R ²	0.106	0.062	0.029	0.081	0.086	0.105	0.096	0.143	0.241

Notes: Authors' calculations using NEA data and non-public microdata of Statistics Netherlands (CBS). Included variables: survey year, survey mode, gender (reference category: male), age, highest obtained level of education (ref. cat. no education), position in household, age of oldest child (if any), self-employed (ref.cat. not self-employed), work from home (ref.cat. not working from home), multiple job holding (ref.cat. one job), flexible contract (ref.cat. permanent contract), part-time (ref.cat. full time), supervisory role (ref.cat. no supervisory role), number of working days, tenure, local labour market, 3-digit ISCO occupation, 2-digit SBI industry, urbanity, socio-economic status in year of survey, log hourly wage.

Table A3: Regressions on job separation, without and with missing indicators for categorical variables

	Without (1)	With (2)
<i>Dissatisfaction with:</i>		
Intangible job attributes		
Interesting work	0.349*** (0.020)	0.344*** (0.017)
Missing		0.111** (0.056)
Learning opportunities	0.207*** (0.016)	0.194*** (0.014)
Missing		0.073 (0.044)
Supervisors	0.370*** (0.014)	0.358*** (0.012)
Missing		0.060 (0.050)
Monetary attributes		
Salary	0.007 (0.014)	-0.004 (0.012)
Missing		0.057 (0.064)
Tangible work arrangements		
Job security	0.404*** (0.018)	0.414*** (0.015)
Missing		0.088 (0.060)
Part-time option	0.107*** (0.017)	0.090*** (0.015)
Missing		-0.041 (0.030)
Control over hours	0.030* (0.016)	0.045*** (0.014)
Missing		0.006 (0.032)
Work from home	0.042*** (0.015)	0.020 (0.013)
Missing		-0.085*** (0.021)
Contract type		
Contract type	0.314*** (0.022)	0.297*** (0.018)
Missing		0.080* (0.041)
Observations	300,303	429,647
Pseudo R-squared	0.133	0.126

Notes: Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A4: Logistic regression results on job separation, with three categories of satisfaction (baseline: very satisfied)

	Job Separation		
	(1)	(2)	(3)
Intangible job attributes			
Interesting work: not satisfied	0.851*** (0.021)	0.503*** (0.020)	0.444*** (0.020)
Interesting work : satisfied	0.285*** (0.013)	0.166*** (0.013)	0.126*** (0.013)
Learning opportunities: not satisfied	0.237*** (0.018)	0.236*** (0.019)	0.236*** (0.019)
Learning opportunities : satisfied	-0.026* (0.014)	0.061*** (0.014)	0.070*** (0.014)
Supervisory quality: not satisfied	-0.123*** (0.017)	0.364*** (0.017)	0.423*** (0.017)
Supervisory quality : satisfied	-0.186*** (0.013)	0.060*** (0.013)	0.096*** (0.014)
Monetary attributes			
Salary: not satisfied	-0.147*** (0.017)	-0.119*** (0.017)	-0.187*** (0.018)
Salary : satisfied	-0.194*** (0.015)	-0.149*** (0.015)	-0.169*** (0.015)
Tangible work arrangements			
Job security: not satisfied	0.579*** (0.018)	0.500*** (0.019)	0.458*** (0.019)
Job security : satisfied	0.123*** (0.013)	0.093*** (0.014)	0.065*** (0.014)
Part-time option: not satisfied	-0.132*** (0.019)	0.128*** (0.020)	0.103*** (0.020)
Part-time option : satisfied	-0.126*** (0.014)	0.023 (0.014)	0.012 (0.014)
Control over hours: not satisfied	-0.338*** (0.020)	-0.066*** (0.019)	-0.021 (0.019)
Control over hours : satisfied	-0.212*** (0.015)	-0.068*** (0.015)	-0.052*** (0.015)
Working from home: not satisfied	0.338*** (0.020)	-0.047** (0.018)	-0.005 (0.018)
Working from home : satisfied	0.125*** (0.017)	-0.081*** (0.016)	-0.031* (0.016)
Contract type: not satisfied	1.069*** (0.019)	0.356*** (0.020)	0.392*** (0.020)
Contract type : satisfied	0.457*** (0.012)	0.148*** (0.012)	0.150*** (0.012)
Constant	-2.113*** (0.053)	-0.593*** (0.186)	0.068 (0.227)
Observations	429,669	429,669	429,669
Pseudo R-squared	0.0469	0.115	0.126

Notes: Omitted category: very satisfied with each attribute.
Robust standard errors in parentheses. . Standard errors clustered at the occ $\times$ ind $\times$ llm level. *** p<0.01, ** p<0.05, * p<0.1. Weighted using population-based weights.

Table A5: Shapley value decomposition by variable group

Dependent variable: Job separation			
Group of Variables	Subgroup	Shapley value	Percent
<i>Satisfaction</i>	Intangible Work attributes	0.0116	10.3%
	Monetary rewards	0.0007	0.6%
	Tangible Work arrangements	0.0125	11.1%
<i>Job attributes</i>	Wage	0.0183	16.2%
	Contract type	0.0331	29.4%
	Part-time	0.0032	2.8%
	Tenure	0.0120	10.7%
<i>Other</i>	Demographic variables	0.0125	11.1%
	Remaining covariates	0.0221	7.7%
Total pseudo R-squared		0.1240	100%

Notes: Intangible work attributes includes satisfaction with interesting work, learning opportunities, and leadership. Monetary rewards: satisfaction with salary. Tangible work arrangements: satisfaction with job security, part-time option, control over hours, work from home, and contract type. Wage: log hourly wage in December of the survey year. Contract type: fixed or permanent. Part-time and tenure are listed separately as non-monetary job attributes. Demographic variables include age, gender, and highest attained level of education. Remaining covariates (not shown here) include position in the household, age of youngest child, self-employment, multiple jobs, number of working days, firm size, supervisory role, urbanity, industry (SBI 2-digit), region (local labour market), and occupation (ISCO 3-digit) fixed effects.

Table A6: Marginal Effects of Job Satisfaction on Job Separation

<i>Dissatisfaction with:</i>	Job Separation
Interesting work	
Dissatisfied	0.263*** (0.00261)
Satisfied	0.210*** (0.00074)
Learning opportunities	
Dissatisfied	0.239*** (0.00184)
Satisfied	0.210*** (0.00080)
Supervisors	
Dissatisfied	0.259*** (0.00175)
Satisfied	0.205*** (0.00077)
Salary	
Dissatisfied	0.215*** (0.00142)
Satisfied	0.215*** (0.00083)
Job security	
Dissatisfied	0.272*** (0.00237)
Satisfied	0.207*** (0.00076)
Part-time option	
Dissatisfied	0.227*** (0.00204)
Satisfied	0.214*** (0.00078)
Control over hours	
Dissatisfied	0.220*** (0.00178)
Satisfied	0.214*** (0.00084)
Work from home	
Dissatisfied	0.219*** (0.00151)
Satisfied	0.216*** (0.00095)
Contract type	
Dissatisfied	0.256*** (0.00291)
Satisfied	0.210*** (0.00099)
Observations	429,647

Notes: Standard errors in parentheses. ***
 $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A7: Subsample analysis: regression on job separation, alternative categories

	Education			Supervisory role		Age Groups		Sector		Covid-19 (2020)	
	Low	Middle	High	Yes	No	25-35	35-50	Public	Private	Pre	Post
<i>Dissatisfaction with:</i>											
Intangible job attributes											
Interesting work	0.237*** (0.036)	0.360*** (0.026)	0.441*** (0.028)	0.416*** (0.038)	0.329*** (0.019)	0.411*** (0.027)	0.331*** (0.034)	0.508*** (0.039)	0.307*** (0.018)	0.313*** (0.021)	0.405*** (0.028)
Learning opportunities	0.148*** (0.031)	0.165*** (0.021)	0.264*** (0.022)	0.185*** (0.029)	0.200*** (0.016)	0.318*** (0.031)	0.261*** (0.026)	0.249*** (0.029)	0.178*** (0.015)	0.201*** (0.017)	0.185*** (0.023)
Supervisors	0.240*** (0.032)	0.349*** (0.019)	0.420*** (0.018)	0.436*** (0.024)	0.328*** (0.014)	0.430*** (0.027)	0.498*** (0.022)	0.362*** (0.022)	0.357*** (0.015)	0.323*** (0.015)	0.431*** (0.021)
Monetary attributes											
Salary	0.048* (0.025)	-0.028* (0.017)	0.006 (0.019)	-0.025 (0.025)	0.006 (0.013)	0.064** (0.025)	-0.042* (0.023)	-0.058** (0.023)	0.019 (0.013)	-0.031** (0.015)	0.040** (0.019)
Tangible work arrangements											
Job security	0.392*** (0.037)	0.415*** (0.023)	0.445*** (0.024)	0.513*** (0.032)	0.388*** (0.017)	0.366*** (0.035)	0.530*** (0.028)	0.396*** (0.031)	0.420*** (0.017)	0.434*** (0.018)	0.368*** (0.029)
Part-time option	0.023 (0.036)	0.090*** (0.023)	0.155*** (0.024)	0.089*** (0.028)	0.087*** (0.018)	0.091*** (0.031)	0.106*** (0.029)	0.156*** (0.034)	0.075*** (0.017)	0.084*** (0.019)	0.112*** (0.026)
Control over hours	0.065** (0.033)	0.044** (0.020)	0.064*** (0.024)	0.021 (0.030)	0.053*** (0.016)	0.058* (0.031)	0.053* (0.028)	0.092*** (0.025)	0.035** (0.017)	0.038** (0.018)	0.056** (0.024)
Work from home	-0.013 (0.028)	0.045** (0.019)	0.023 (0.023)	0.036 (0.028)	0.016 (0.015)	0.030 (0.031)	0.045 (0.027)	0.039 (0.026)	0.017 (0.015)	0.017 (0.016)	0.026 (0.023)
Contract type	0.323*** (0.044)	0.301*** (0.028)	0.300*** (0.030)	0.322*** (0.043)	0.292*** (0.021)	0.271*** (0.039)	0.308*** (0.037)	0.255*** (0.035)	0.310*** (0.022)	0.299*** (0.023)	0.298*** (0.033)
Constant	0.129 (0.562)	0.241 (0.380)	-0.368 (0.471)	-0.724 (0.532)	-0.324 (0.368)	0.153 (0.796)	-0.646 (0.531)	0.102 (0.461)	-0.192 (0.260)	-0.282 (0.266)	0.432 (0.424)
Observations	72,248	169,571	183,782	108,243	314,911	69,283	129,093	153,094	276,469	269,024	160,561
Pseudo R-squared	0.124	0.124	0.124	0.124	0.124	0.124	0.124	0.124	0.124	0.130	0.123

Notes: Coefficients from separate regressions for each subgroup. All set of controls are included. Standard errors are reported in parentheses and are clustered at the occupation $\times$ industry $\times$ local labour market level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A8: Regressions on job separation, by year and pre-and post-covid.

		By survey year									
	Pooled	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Intangible job attributes											
Interesting work	0.344*** (0.017)	0.204*** (0.062)	0.315*** (0.052)	0.310*** (0.056)	0.350*** (0.051)	0.384*** (0.043)	0.317*** (0.047)	0.434*** (0.049)	0.449*** (0.051)	0.316*** (0.068)	0.392*** (0.065)
Learning opportunities	0.194*** (0.014)	0.214*** (0.047)	0.177*** (0.041)	0.160*** (0.041)	0.227*** (0.041)	0.215*** (0.036)	0.236*** (0.038)	0.188*** (0.039)	0.154*** (0.042)	0.271*** (0.056)	0.153*** (0.058)
Supervisors	0.358*** (0.012)	0.287*** (0.043)	0.284*** (0.038)	0.289*** (0.037)	0.351*** (0.038)	0.407*** (0.032)	0.321*** (0.034)	0.414*** (0.036)	0.482*** (0.037)	0.359*** (0.051)	0.462*** (0.050)
Monetary attributes											
Salary	-0.004 (0.012)	-0.078* (0.044)	-0.015 (0.038)	0.006 (0.039)	-0.002 (0.037)	-0.033 (0.029)	-0.064** (0.031)	0.031 (0.033)	0.089*** (0.034)	0.057 (0.043)	-0.069 (0.045)
Tangible work arrangements											
Job security	0.414*** (0.015)	0.525*** (0.046)	0.492*** (0.043)	0.343*** (0.043)	0.401*** (0.048)	0.394*** (0.040)	0.473*** (0.043)	0.402*** (0.045)	0.280*** (0.054)	0.318*** (0.072)	0.530*** (0.072)
Part-time option	0.090*** (0.015)	0.065 (0.060)	0.081 (0.050)	0.061 (0.051)	0.077 (0.049)	0.110*** (0.037)	0.107*** (0.040)	0.084** (0.042)	0.064 (0.045)	0.112* (0.064)	0.301*** (0.066)
Control over hours	0.045*** (0.014)	0.134** (0.056)	0.030 (0.047)	0.033 (0.046)	-0.040 (0.047)	0.031 (0.034)	0.056 (0.037)	0.071* (0.038)	0.072* (0.040)	-0.015 (0.058)	0.065 (0.061)
Work from home	0.020 (0.013)	-0.056 (0.051)	0.069* (0.040)	-0.001 (0.041)	0.030 (0.042)	0.043 (0.031)	0.021 (0.033)	0.030 (0.037)	0.006 (0.039)	0.124* (0.065)	-0.028 (0.066)
Contract type	0.297*** (0.018)		0.328*** (0.054)	0.321*** (0.056)	0.240*** (0.057)	0.284*** (0.046)	0.384*** (0.049)	0.366*** (0.053)	0.354*** (0.058)	0.238*** (0.077)	0.072 (0.079)
Constant	-0.153 (0.226)	0.468 (0.664)	-0.780 (0.641)	-0.776 (0.613)	-0.792 (0.687)	0.648 (0.682)	0.808 (0.671)	1.195* (0.652)	-1.265 (0.786)	2.030 (1.489)	-0.667 (0.974)
Observations	429,647	35,473	39,745	40,184	39,050	59,108	55,215	54,663	47,132	29,015	29,619
Pseudo R ²	0.126	0.142	0.158	0.137	0.134	0.132	0.152	0.133	0.127	0.132	0.136

Notes: All controls are included. Standard errors are reported in parentheses and are clustered at the occupation $\times$ industry $\times$ local labour market level *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Missing cells indicate unavailable estimates or dropped variables.

Table A9: Assigned socio-economic status based on register data, for A. workers in the same employer, and B. separated workers

Year	Socio-economic status					N
	Employed	Unemp	Self-emp	Student	Others*	
<i>Panel A: Did not separate</i>						
2014	91.4%	0.1%	0.5%	4.2%	3.8%	28,473
2015	90.9%	0.1%	0.5%	5.0%	3.5%	31,440
2016	90.9%	0.2%	0.5%	4.9%	3.5%	31,783
2017	90.8%	0.2%	0.5%	5.1%	3.4%	30,730
2018	90.6%	0.1%	0.4%	4.9%	4.0%	46,741
2019	91.0%	0.2%	0.4%	4.9%	3.4%	44,437
2020	90.8%	0.1%	0.5%	4.6%	3.9%	43,899
2021	91.4%	0.1%	0.5%	3.9%	4.0%	37,518
2022	91.0%	0.1%	0.6%	3.9%	4.3%	23,048
<i>Panel B: Separated</i>						
2014	53.7%	8.1%	3.3%	16.8%	16.8%	7,083
2015	54.8%	6.5%	2.8%	19.6%	15.4%	8,352
2016	58.1%	6.3%	3.2%	17.8%	13.6%	8,426
2017	58.3%	5.5%	2.7%	17.9%	14.7%	8,348
2018	58.8%	5.4%	3.0%	17.4%	14.5%	12,418
2019	50.4%	6.5%	2.9%	20.6%	18.6%	10,832
2020	56.4%	4.7%	2.8%	18.1%	16.9%	10,784
2021	59.4%	3.0%	3.6%	16.0%	16.9%	9,647
2022	58.3%	3.7%	3.3%	15.6%	17.7%	6,027

Notes: Authors' calculations using SECMBUS data on NEA respondents. Statistics Netherlands (CBS) constructs this variable by integrating multiple administrative sources (e.g., tax, social security, unemployment/disability benefits, pensions, education enrollment) to assign individuals to mutually exclusive categories such as employed, unemployed, self-employed, student, or others, based on their most important status at each time. This means that even when workers did not separate from their employer (Panel A), their dominant state may be different from 'employed' as they are for instance student for the majority of the time.

Table A10: Logistic regression of dissatisfaction with job attributes on socio-economic status

	Employed (1)	Unemployed (2)	Self-employed (3)	Student (4)
<i>Dissatisfaction with:</i>				
Intangible work attributes				
Interesting work	-0.245*** (0.030)	0.251*** (0.054)	0.117 (0.080)	0.194*** (0.052)
Learning opportunities	0.082*** (0.025)	0.024 (0.047)	-0.135** (0.067)	0.056 (0.049)
Supervisors	-0.061** (0.024)	0.283*** (0.040)	0.221*** (0.060)	-0.003 (0.054)
Monetary attributes				
Salary	0.196*** (0.023)	-0.133*** (0.044)	0.088 (0.061)	-0.119*** (0.043)
Tangible work arrangements				
Job security	-0.015 (0.028)	0.583*** (0.045)	-0.151** (0.075)	-0.009 (0.056)
Part-time option	-0.040 (0.032)	0.044 (0.053)	-0.086 (0.081)	-0.101 (0.067)
Control over hours	0.008 (0.028)	0.023 (0.052)	0.016 (0.077)	-0.081 (0.052)
Work from home	-0.018 (0.026)	0.054 (0.051)	-0.022 (0.072)	0.021 (0.043)
Contract type	0.199*** (0.034)	-0.035 (0.060)	-0.144 (0.097)	-0.163** (0.067)
Observations	81,881	81,788	81,137	81,185
Pseudo R-squared	0.253	0.157	0.247	0.679

Source Authors' calculations using NEA data and SECMBUS data on the sample of NEA respondents. Statistics Netherlands (CBS) constructs this variable by integrating multiple administrative sources, including tax and social security records, unemployment and disability benefits registers, pension data, and education enrollment, to assign individuals to mutually exclusive socio-economic categories such as employed, unemployed, self-employed, student, or other, based on the most important status at each moment in time.

Notes: Standard errors are reported in parentheses and are clustered at the occupation $\times$ industry $\times$ local labour market level. All regressions are weighted using population-based probability weights. The reference category for all dissatisfaction variables is "satisfied". Covariates included: survey mode, survey year, gender, age, log hourly wage, education level, household position, age of the youngest child (if applicable), contract type, tenure at the current firm, part-time, firm size, supervisory role, number of working days, multiple job holding, and urbanity, and fixed effects for industry (SBI 2-digit), region (*arbeids-marktregio*), and occupation (ISCO 3-digit).

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A11: Full logit regressions with interaction terms between dissatisfaction domains and labour market tightness

	Occupation		Occupation $\times$ LLM	
	(1)	(2)	(3)	(4)
<i>Dissatisfaction with:</i>				
Intangible job attributes				
Interesting work	0.414*** (0.021)	0.308*** (0.054)	0.400*** (0.022)	0.271*** (0.056)
Learning opportunities	0.210*** (0.017)	0.055 (0.047)	0.204*** (0.018)	0.053 (0.046)
Supervisors	0.370*** (0.015)	0.290*** (0.051)	0.370*** (0.015)	0.379*** (0.045)
Monetary attributes				
Salary	0.002 (0.014)	0.068 (0.045)	0.006 (0.015)	0.042 (0.041)
Tangible work arrangements				
Job security	0.425*** (0.019)	0.369*** (0.053)	0.421*** (0.020)	0.384*** (0.050)
Part-time option	0.113*** (0.018)	0.067 (0.061)	0.116*** (0.019)	0.037 (0.057)
Control over hours	0.025 (0.017)	0.110** (0.052)	0.041** (0.018)	0.018 (0.064)
Work from home	-0.002 (0.016)	-0.013 (0.044)	-0.008 (0.016)	0.063 (0.045)
Contract type	0.291*** (0.022)	0.312*** (0.062)	0.296*** (0.023)	0.380*** (0.057)
Labour market tightness (ref: slack)				
Average	0.067*** (0.024)	0.031 (0.033)	0.052** (0.023)	0.054* (0.032)
Tight	0.130*** (0.024)	0.050 (0.031)	0.089*** (0.022)	0.031 (0.029)
Interactions				
Interesting work $\times$ Average		0.079 (0.068)		0.104 (0.072)
Interesting work $\times$ Tight		0.152** (0.060)		0.179*** (0.062)
Learning opportunities $\times$ Average		0.127** (0.059)		0.175*** (0.061)
Learning opportunities $\times$ Tight		0.195*** (0.052)		0.180*** (0.050)
Supervisors $\times$ Average		0.063 (0.059)		-0.102* (0.055)

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	Occupation		Occupation $\times$ LLM	
	(1)	(2)	(3)	(4)
Supervisors $\times$ Tight		0.090* (0.053)		0.013 (0.049)
Salary $\times$ Average		-0.095* (0.054)		-0.065 (0.051)
Salary $\times$ Tight		-0.065 (0.047)		-0.033 (0.044)
Job security $\times$ Average		0.070 (0.066)		0.036 (0.065)
Job security $\times$ Tight		0.061 (0.059)		0.047 (0.057)
Part-time option $\times$ Average		0.079 (0.072)		0.135* (0.070)
Part-time option $\times$ Tight		0.040 (0.064)		0.076 (0.061)
Control over hours $\times$ Average		-0.128* (0.068)		0.055 (0.075)
Control over hours $\times$ Tight		-0.085 (0.056)		0.018 (0.068)
Work from home $\times$ Average		0.013 (0.056)		-0.136** (0.056)
Work from home $\times$ Tight		0.018 (0.048)		-0.063 (0.049)
Contract type $\times$ Average		0.002 (0.073)		-0.115 (0.072)
Contract type $\times$ Tight		-0.030 (0.067)		-0.090 (0.063)
Observations	299,535	299,535	264,854	264,854
Pseudo R-squared	0.107	0.107	0.107	0.107

Notes: Logistic regressions weighted using population-based survey weights. Standard errors are clustered at the occupation $\times$ industry $\times$ local labour market level. Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. The reference category is "satisfied". Columns (1)–(2) use occupation-level tightness measures from UWV, while columns (3)–(4) incorporate tightness indicators at both the occupation and local labour market (*arbeidsmarktregio*) level. The number of observations is slightly lower in the latter due to data availability constraints in some region-occupation combinations of the UWV data. Results using tightness indicators on the LLM-level or on the occupation-province level are available on request.

Table A12: Logit regressions: Dissatisfaction with job attributes and job separation (including preferences for job attributes)

	Job Separation
<i>Dissatisfaction with:</i>	
Intangible job attributes	
Interesting work	0.332*** (0.021)
Learning opportunities	0.197*** (0.017)
Supervisors	0.355*** (0.015)
Monetary attributes	
Salary	0.000 (0.015)
Tangible work arrangements	
Job security	0.412*** (0.019)
Part-time option	0.077*** (0.019)
Control over hours	0.035* (0.019)
Work from home	0.029* (0.017)
Contract type	0.344*** (0.023)
Constant	-0.639** (0.299)
Observations	261,816
Pseudo R-squared	0.134

Notes: Logit regression with population-based weights. Standard errors clustered at the occupation $\times$ industry $\times$ local labour market level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Column includes controls for job attribute importance.