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HUMAN CAPITAL UTILISATION, QUIET QUITTING AND EMPLOYEE RETENTION

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Key words: employee turnover, motivation, quiet quitting, human capital, skills utilisation, skills development

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CHAPTER 1.
Introduction

When employees leave an organisation, they take their human capital with them. They also take with them any investment that the training organisation may have done to enhance their human capital, both in terms of firm-specific and general skills. Employee turnover has been identified as a major cause for the under-provision of training in companies (Royalty, 1996, Brunello & De Paola, 2009).

However, employers do not always perceive turnover as a threat to investment in human capital (Mueller, 2014). While the intention to quit is affected by the wage workers expect to earn elsewhere and the usefulness of the training they receive in other firms (Nelissen et al., 2017), workers often underestimate the value of their outside options (Jäger et al., forthcoming). In addition, consistent with the view that training may seldomly be purely firm-specific (Stevens, 1996), employees also underestimate the usefulness of the training received for other organisations (Coff & Raffiee, 2015, Raffiee & Coff, 2016).

Training provision is an integral part of the human resource practices, and is often included among the set of practices identified as high-performance work practices (HPWP) (Combs et al., 2006). Consequently, since human resource practices shape how an organisation treats its employees, it is possible that organisation could use training provision as a mean to stabilise turnover (Spell et al., 2014, Nelissen, et al. 2017). Organisations investing in their workers' skill tend to elicit an increase in organisational commitment that binds employees to the workplace (Sieben, 2007, Kampkötter & Marggraf, 2015, Rodrigues et al., 2020, Martini et al., 2022); it is only employees with particular career attitudes that do not respond to the organisational investment in them (Rodrigues et al., 2020).

In this paper we try to reconcile these different perspectives on the relationship between training and turnover building on three observations.

First, organisations are heterogeneous (Bloom & Reenen, 2010, Syverson, 2011, Bloom et al., 2012, Bloom et al., 2019). They are heterogeneous in the way they succeed in the product market (Chadwick & Dabu, 2009, Chadwick et al., 2015). The literature on the distinction between the high-road and low-road show how companies can succeed in adopting very different approaches (Osterman & Schulman, 2011, Osterman, 2018). Some organisations succeed by leveraging workers' human capital, others by leveraging other organisational resources (the superior ability to understand technology, or to keep operating costs down). In general terms, organisations build resources and use these resources to build a competitive advantage. Resources are developed through investments and the return on these investments is affected by the importance of the human resource for the creation of competitive advantage. Consequently, the return on the investment in human capital would tend to be high in organisations that base their competitiveness on their superior ability to utilise human capital (or skills).

Second, human capital (skills, abilities, attitudes, and knowledge) is in people. If organisations decide to base their competitiveness on the use of human capital, they must

first turn the human capital of individual workers into an organisational resource (Ployhart et al., 2014, Nyberg & Moliterno, 2019). Organisations need to take actions to make the human capital of individual workers coalesce into an organisational resource (more about this point in the next section). Consequently, the implementation of these actions by organisations would be associated with a higher provision of training.

Third, in organisation considering human capital an organisational resource to be leveraged for competitive advantage, the poaching externality is not the only threat to the returns on investment. The withdrawal of work effort on the part of workers has a negative effect on the return on the investment in human capital. When workers decrease the level of effort they exert in drawing on their skills, the return on the investment in human capital suffers. If we take this perspective, the poaching externality is just an extreme form of a much wider problem: the withdrawal of work effort. This is an actual topic, that has recently attracted a lot of attention under the tag of 'quiet quitting'. Employees who 'quietly quit' exert just the minimum level of effort and enthusiasm required by their job. By doing so, employees are restricting the potential returns on organisational investments in human capital.

The main conjecture is that organisations place different importance on human capital as a source of competitive advantage. Those that do so must turn the human capital of individual workers into an organisational resource. This process produces two effects: it enhances the returns on the investment in skills (these organisations perceive the importance of human capital for their success); and it stimulates workers to exert effort at work by providing the right set of incentives. The result is that these organisations provide training and tend to experience low turnover. In this framework, it is not training that reduces turnover, but it is rather the measures put in place by organisations to turn the human capital of individual workers into an organisational resource that simultaneously create the conditions to invest in human capital and reduce turnover.

The importance of these two mechanisms will be investigated empirically using the latest wave of the European Company Survey (ECS2019).

The structure of the paper is as follows: Section 2 describes the relationship between organisational efforts aimed at increasing skills utilisation and the investment in human capital; Section 3 introduces the data; and Section 4 presents the empirical estimates. Section 5 offers concluding remarks.

CHAPTER 2.

Utilisation of skills at work

2.1. Human capital as an organisational resource: the importance of performance

Organisations build their competitiveness by combining the different resources they have at their disposal (Barney, 1991). Some organisations consider human capital as an organisational resource, some do not ([1]). This difference is reflected in how organisations utilise their workers' human capital: not all companies are good at enlisting employees' cooperation in the attainment of organisational goals (Gibbons & Henderson, 2012, Card et al., 2013, Helper & Henderson, 2014, Bender et al., 2018) ([2]).

Human capital is embodied in workers: it is the workers who possess the skills, abilities, competences, and knowledge that constitute the human capital. To be able to enlist human capital among the resources that organisations can utilise to be competitive, organisations must be able to turn the human capital of individual workers into an organisational resource; that is, they must be able to transform the individual level (the employee) human capital into a unit level (the organisation) resource (Ployhart & Moliterno, 2011, Ployhart et al., 2014).

The process turns individual level human capital into an organisational resource centred on employees' performance (Nyberg & Moliterno, 2019, Ployhart, 2021).

Performance is to be understood in broad terms. Task performance concerns the execution of the tasks contained in the job description ([3]). Contextual performance consists of the voluntary display of behaviours that helps the smooth running of operations (Borman & Motowildo, 1997, Stone-Romero et al., 2009, Demerouti et al., 2014) ([4]). Contextual performance is particularly important because it subsumes the behaviours that helps human capital to get together into an organisational resource (Crocker, 2019) and the behaviours that help the organisation benefit from this organisational resource. Example of behaviours that help transform individual level human capital into a unit level resource are: helping and supporting colleagues; sharing ideas and information; spread of goodwill; cooperating with colleagues (as opposed to not undermining them); coaching or mentoring newly hired

([1]) This idea that organisations use human resources differently has ample recognition in the literature: high-road low-road (Bosworth, 2005, Osterman, 2018), theory X vs. theory Y (McGregor, 1960), high performance or high involvement work practices (Kalleberg et al., 2001, Ashton & Sung, 2002, Camps & Luna-Arocas, 2009, Sung & Ashton, 2015, Hughes, 2008).

([2]) The difference in how skills are utilised is also reflected in managers' abilities. Managers with good people skills are better at managing employees. These managers can obtain results or achieve organisational goals through the management of human resources and are successful at retaining employees (Hoffman and Tadelis 2018, Rubenstein, Eberly et al. 2018).

([3]) Behaviours that enhance task performance are: autonomous learning, job dedication, staying longer when needed, self-development, precision in one own's work, consciousness, etc.

([4]) Contextual performance is linked to the display of extra role behaviour (Van Dyne et al., 1995, Miles et al., 2002, Erdogan et al., 2020) and organisational citizenship behaviour (Dalal, 2005, Podsakoff et al., 2009, Kizilos et al., 2013).

colleagues; the development and diffusion of knowledge of how to use channels of communication, of who does what at the company; establishing and maintaining workplace norms about learning, helping, and sharing; and the development of good relations with managers and supervisors. Contextual performance also subsumes behaviours that help organisations benefit from human capital: the protection of company's property, the proper use of tools and machinery, the avoidance of waste, and voice behaviours. Examples of the last are engaging with management on what could be improved to sustain motivation, and suggestions for product/service improvements or for eliminating redundancies, or for improvements in the production process. Managers recognise and appreciate the importance of contextual performance and tend to give higher performance ratings to employees who display extra role behaviours (Whiting et al., 2008).

Contextual performance consists of voluntary behaviours, it is hard to plan, and its enactment is hard to observe, or monitor, or evaluate and therefore it cannot be mandated through tight enforcement of the labour contract. The expression of consummate task performance also requires the display of voluntary behaviours that cannot be mandated (i.e., self-development). Therefore, superior performance needs to be encouraged. Employees who quietly quit, do not respond to this encouragement, or refuse to display the voluntary behaviours needed to go 'the extra mile' of 'beyond the call of duty'.

2.2. The employment relationship: the deal at work

The degree of encouragement for superior performance is expressed in the type of employment relationship that organisations establish with their employees. This relationship needs to support workers in the acquisition of the knowledge and skills that are particularly useful at their workplace. For employees this is an asset specific investment (Busemeyer, 2015). As with every asset-specific investment, the accumulation of firm specific knowledge and skills is exposed to the risk of hold-up.

In organisations that base their competitive advantage on (the organisational resource) human capital, the employment relationship must shield the asset-specific investment by opportunistic behaviour through the establishment of (self-enforcing) implicit contracts leading to a long-term relationship between the organisation and its employees (Bull, 1987, MacLeod & Malcomson, 1989) ([5]). In organisations that base their competitive advantage on (the organisational resource) human capital, the employment relationship needs also to induce workers to draw on their skills abilities and knowledge to avoid that they withhold work effort or quit (which are both instances of hold-up on the side of workers which affect the returns on the organisational investment in human capital). The employment relationship can do this

([5]) The terms employee-organisation relationship, psychological contract, and relational contract, are used by different disciplines to stress different aspects of this phenomenon (Rousseau 1989, Tsui et al., 1997, Rousseau, 2001, Baker et al., 2002, Shore et al., 2004, Bird, 2005, Jensen et al., 2010, Gibbons & Henderson, 2012, Halac, 2012, Helper & Henderson, 2014, Blader et al., 2015, Malcomson, 2015, Schalk & Rousseau, 2017, Audenaert et al., 2018, Baruch & Rousseau, 2018, Tomaskovic-Devey & Avent-Holt, 2019).

because it subsumes the exchange at work in a much broader way than that allowed by the labour contract (Simon, 1951, Baron & Kreps, 2013).

The employment relationship is based on an exchange: requirements against inducements. Requirements summarise the type of contributions that the organisation expects from its workers; it covers both task and contextual performance, and it may be expressed in terms of desired behaviours. Requirements convey the type of performance and the level of work effort that the organisation expects from its employees and directs it towards work activities that are deemed to be important for the success of the organisation. The work effort that organisations require derive from workers' exertion as they draw on their skills. Requirements translates organisational expectations into demands on workers' skills (Morrison et al., 2005, Wielenga-Meijer et al., 2012, Pouliakas & Russo, 2015, Russo, 2017).

The requirements need to be balanced with adequate inducements, i.e., broadly defined incentives, including both monetary and non-monetary ones. Following the ability, motivation, opportunity (AMO) framework, organisations can sustain high performance by supporting the development of their workers' skills, by providing a motivating work context, and by offering opportunities to contribute (Boon et al., 2018, Kellner et al., 2020). Any organisational feature that does this can be listed among the inducements. Organisations can create opportunities for employees to contribute through two main channels: employee involvement (Riordan, et al., 2005, Pot, 2011, Kizilos et al., 2013), and job design, especially autonomy in decision-making and problem solving. Both these features provide opportunities for employees to draw on their knowledge and abilities to produce superior task performance (Evans & Fischer, 1992, Zábojník, 2002, Morgeson et al., 2005, Vidal, 2013, Wu et al., 2015, Barrenechea-Méndez et al., 2016). In an organisational context, the distinction between what practices support motivation and which support the provision of opportunities to contribute might be blurred because the provision of opportunities to contribute has motivational effects.

2.3. Employment relationship and the investment in human capital

Organisational features aimed at supporting motivation also sustain the exertion of effort at work (thus preventing the onset of quiet quitting) ([6]) and incentivise skills utilisation (Morrison,

([6]) Organisations must carefully manage the employment relationship. The provision of too little or the wrong type of inducements can cause workers to express behaviours that prevent access to their skills and reduce the value of human capital for the organisation. Withdrawal behaviours are the actions taken by employees who become physically or psychologically disengaged from the organisation, the workplace, or the task (Carmeli, 2005, Pajo et al., 2010, Berry et al., 2012, Swider & Zimmerman 2014). Withdrawal behaviours include: passive compliance or non-compliance, minimal effort on the job, lack of intense thinking on the job, and lack of creativity (Carpenter & Berry 2017). Quiet quitting is a more recent name subsuming a variety of withdrawal behaviours. Workers can also draw on their skills to display counterproductive work behaviour (Zhao et al., 2007, Jensen et al., 2010, Balducci et al., 2011, Bruursema et al., 2011, Marcus, et al. 2016, Griep & Vantilborgh, 2018), which extends the concepts of withdrawal to damaging actions (Spector & Fox 2010). For example, stealing, withholding valuable information from colleagues, unethical behaviours, damage and sabotage, resistance in general (Roscigno & Hodson 2004, Lawrence & Robinson, 2007, Brett et al., 2016, Serenko & Bontis, 2016, Serenko, 2019).

Cordery et al., 2005, Nelissen et al., 2017). In this way the organisation leverages human capital and protects the returns on the investment in human capital. The inducements also tend to increase job satisfaction (Maynard et al., 2006, Preenen et al., 2011, Van Iddekinge et al., 2011, Berry et al., 2012, Jiang et al., 2012, Campbell et al., 2013, Dysvik & Kuvaas, 2013, Heavey et al., 2013, Boon & Biron, 2016, Hom et al., 2017, Rothausen et al., 2017) and increase the likelihood that employees would embed in the workplace; that is, that they connect with their colleagues (Spreitzer et al., 2005, Holmes et al., 2013, Lee et al., 2014). In turn, embeddedness, job satisfaction and skills utilisation tend to reduce turnover.

Organisations that leverage the organisational resource human capital to be competitive on the product market would use the employment relationship to turn the human capital of individual workers into an organisational resource. The requirements signal the importance of high performance (task and contextual). The requirements trace the path through which the human capital benefits the organisation and they give an indication of the expected return on investment in human capital ([7]). The requirements must be matched by an appropriate set of inducements ([8]). The matching inducements reduce the risk of workers holding-up the organisational investment in human capital, they encourage workers to make firm-specific investment, they induce workers to draw on their skills and tend to reduce turnover.

Consequently, the working hypothesis is that the type of employment relationship that the organisation establishes with its employees, on the one hand, supports organisational investment in human capital; on the other hand, it sustains motivation and reduces withdrawal behaviour and turnover.

([7]) For example, managers in organisations that consider human capital an organisational resource effectively leverage workers' skills to reach organisational goals through people (Deming, 2017, Oh et al., 2017, Hoffman & Tadelis, 2018, Edin et al., 2022). These managers understand employees' contributions and recognise the various channels through which the returns on the investment in human capital materialise (Ton 2023).

([8]) The balance between requirements and inducements is assessed through the lenses of organisational trust and justice (Mayer & Gavin, 2005, Tzafrir, 2005, Blader & Tyler, 2009, Karriker & Williams, 2009, Kramer & Lewicki, 2010, Colquitt & Zipay, 2015, Heffernan & Dundon, 2016, Hughes et al., 2018).

CHAPTER 3.

Data and variables

3.1. The data set

The European Company Survey 2019 (ECS 2019) is an EU-wide establishment survey, commissioned by the European Foundation for the Improvement of Living and Working Conditions (Eurofound) and the European Centre for the Development of Vocational Training (Cedefop). It covers European establishments with 10 employees or more (oversampling large establishments), carrying out 'market activities' (excluding public administrations), as well as excluding agriculture and sectors in which there is a high concentration of public administration institutions, such as education ([9]). The survey was aimed at two respondents: a (human resource) manager and a member of the employee representative body (if present).[10] The analysis is based on the management interviews.

Where possible a high-quality, establishment-level business register was used; however, in half the countries, establishment-level registers were not available, or were of insufficient quality, and company-level registers were used. In those countries, the screener included a first step to record all the establishments within the company (if more than one); from this list, up to three establishments were randomly selected ([11]).

The total sample of management interviews numbers 21 869, and varies from 122 cases in Cyprus, to 1 498 in Italy. We only use the management data set in the current analysis. The estimation sample is reduced to 18 044 observations after the deletion of missing cases.

([9]) NACE Rev 2 categories B to N, R and S. The public sector has been excluded due to a lack of suitable sample frames. Following a sampling error discovered after data collection, NACE categories M, N, R and S were excluded from the Slovenian sample.

([10]) The ECS 2019 is the first pan-European establishment survey carried out using a push-to-web approach. The approach consisted of a short telephone screening interview to assess eligibility, identify, and contact the management respondent to secure cooperation and obtain the contact details of an employee representative respondent (where present). These target respondents were subsequently invited to complete the questionnaire online.

([11]) The yield rate for the management interviews, as in other business surveys, was 5% overall. It varied between 2% in Poland and 16% in Lithuania. The data have been weighted to correct for sample design and response bias in terms of sector of activity and size class. A non-response analysis was carried out to assess whether the conversion from telephone to web would introduce bias, but no evidence of this was found. The data collected were of good quality in terms of response patterns (e.g. speeding, item non-response, straight lining, substantive inconsistencies); less than 1% of responses had to be discarded due to quality concerns. An external data quality assessment concluded that the internal validity of the management dataset is high (Data quality assessment). Additional technical information on the survey methodology and quality of the data can be found in the technical report (Technical and fieldwork report).

3.2. Dependent variables

The model encompasses the relationship between five dependent variables. Two of them, the percentage of employees who have participated in paid training sessions (in the premises or other locations) and on-the-job training (including forms of direct instruction in the workplace from more experienced colleagues), capture organisations' investment in human capital. The first, paid training, records 'the fraction of employees who participated in training sessions on the establishment premises or at other locations during paid working time'; the second, on-the-job training, records 'the fraction of employees who received on-the-job training or other forms of direct instruction in the workplace from more experienced colleagues'.

The answers are coded into 5 categories: less than 20%, 20% to 39%, 40% to 59%, 60% to 79%, and 80% or more.

In general, the content of on-the-job training tends to be firm-specific, in the sense that the skills developed are particularly valuable in the firm offering the training than in other firms.

The analysis is based on these 2 extensive measures of the investment in human capital: the percentage of employees involved in paid training and on-the-job training. The data set does not contain any information about the topic of the training, the duration of training or the number of training activities undertaken in the year. Also, the training costs incurred by the firm are not recorded. The lack of information on the intensive measures of the investment in human capital is a limitation of this study.

The ability of the organisation to retain employees is captured by the answers to the following question 'How difficult is it for this establishment to retain employees?'. The answer categories followed a 4-point Likert scale with higher values reflecting higher difficulties in the retention of employees. The answer to this question reflects the ability of the organisation to establish long term relationship with its workforce.

The answer from the question 'Do you think the level of sickness leave in this establishment is too high?' is used as a measure of the incidence of withdrawal behaviours. An excess of uncertified sickness leaves has a long tradition as an example of lack of motivation (March & Simon, 1958). The answer categories are yes (1) and no (0). We acknowledge that the answer to this question may compound various causes: poor safety culture, dangerous working conditions, and effort withdrawal.

Therefore, workplace motivation was added to the model following the intuition that where morale is high there will be little withholding of effort at work and that a motivated workforce would tend to stay with the company. This variable is derived from the following question: 'How motivated do you think employees in this establishment are?'. The answers categories followed a 4-point Likert scale with higher values reflecting higher perceived levels of motivation in the workforce.

3.3. Independent variables

The degree of involvement of employees will be determined by a variable capturing the extent to which employee influence (a 4-point Likert scale, from 'no influence at all' to 'a great extent of influence') various organisational decisions ([12]).

Job complexity is captured by two variables: the incidence of jobs (% of employees) in which employees can autonomously organise their work and the incidence of jobs requiring problem solving. Job design features also include the incidence of jobs requiring continuous training, in which the pace of work is set by machines, and in which there is little need for learning new things.

Managerial attitudes towards employees will be captured by three variables: whether managers control employees following the tasks assigned to them or rather facilitate employees' work; if work schedules are rearranged in order for employees to participate in training (or if participation in training was possible only when work schedule allows it); and the extent to which employee involvement is believed to be a source of competitive advantage.

The data contain many organisational features: establishment size (number of employees); if the establishment is a headquarters or a subsidiary; if the organisation is a single or multi-establishment; and years in operations. The pressure on skills requirements is captured by a variable characterising the speed with which skill requirements change at the establishment.

The conditions in which establishments operate are captured by the degree of predictability of the demand for its product or service, and the intensity of competition in the product market.

Information on cooperation with other establishments is also included among the control variables. Finally, there are country and industry indicators.

The descriptive statistics in the estimation sample for all the variables used in the empirical analysis are shown in Annex A.

3.4. Employment relationship: importance of human capital, requirements, and inducements

The variables chosen to model the employment relationship tap general concepts; consequently, the analysis encompasses the pooled sample.

The overall importance of human capital for the organisation is captured by one variable recording the extent to which employee involvement is a source of competitive advantage (4-point Likert scale, from 'not at all' to 'a great extent').

The requirements subsume the importance of performance, both contextual and task; three variables assess the relevance for the management of voluntary behaviours: helping colleagues, providing suggestions to improve how things are done in the establishment, and the willingness to stay long hours when needed (4-point Likert scale from 'not important at all'

([12]) The organisational decisions included in the index are training and skills development, improvement in the efficiency of the work process, flexibility, pay, and dismissal.

to ‘very important’). The last variable might also have a negative connotation since it may capture an element of presenteeism and, possibly, workplace control.

The inducements subsume multiple dimensions. Four variables capture the frequency of motivational levers: monetary rewards, provision of challenging jobs, opportunities to learn and develop skills, and the communication of the vision and mission statements. Two items regard the reasons for training provision: to support motivation and contextual performance (to support employees in providing suggestions to improve the production process). One variable captures the subjective evaluation of the quality of the relationship between management and employees (5-point Likert scale, from ‘very bad’ to ‘very good’).

Latent class analysis detects four latent groups behind the 11 variables above (Collins & Lanza, 2010, Weller et al., 2020) ([13]). The results are displayed in Annex B. The four latent groups correspondingly identify four different employment relationships:

(a) Group 1: Balanced low requirements – low inducements group (12.59% of the sample). This consists of establishments ascribing low importance to human capital as a means to gain competitive advantage, place little importance on contextual performance and place low importance on the use of the various motivational levers. The establishments in this group tend to have adequate employee – management relationship (the lowest quality of the employee-management relationship across all groups).

(b) Group 2: Balanced moderate requirements - moderate inducements group (30.46% of the sample). The employment relationship balances middle level requirements and middle level inducements. The group consists of establishments that are lukewarm about the importance of human resources as a source of competitive advantage, place moderate importance on contextual performance and use motivational levers with moderate frequency. The establishments in this group tend to have good management-employee relationship.

(c) Group 3: Unbalanced high requirements – moderate inducements group (37.6% of the sample). This group consists of establishments that are lukewarm about the importance of human resources as a source of competitive advantage, place high importance on contextual performance and use motivational levers with moderate frequency. The establishments in this group tend to have good management-employee relationship.

Group 4: Balanced high requirements – high inducements group (19.35% of the sample). This consists of establishments that ascribe very high importance to human capital as a means to gain competitive advantage, place very high importance on contextual

([13]) The average modal probability, (av_modprob), of the establishments belonging to each of the four groups is 86%, 81%, 81%, and 85%; respectively. The (normalised) entropy measure associated with the classification in 0.70 (Celeux and Soromenho 1996). The average probability that an establishment would belong to one of the four groups (av_prob) is given in the text. LCA returns a set of 4 probabilities for each observation, denoting the probability to belong to each of the four groups. Group membership was determined based on the modal probability. The average modal probability of the unit assigned to group k is denoted $av_modprob_k$.
The odds of correct classification ratio for group k is defined as:
$(av_modprob_k/(1 - av_modprob_k))/(av_prob_k/(1 - av_prob_k))$.
The odds of correct classification ratio for the four groups are: 44.11, 10.04, 6.97, and 24.44; respectively. Overall, these indicators point to a latent class model with good latent class separation and high assignment accuracy (Nagin 2005).

performance, and use all motivational levers very frequently. The establishments in this group tend to have very good management-employee relationship (the highest quality of the employee-management relationship across all groups).

CHAPTER 4.
Empirical results

Given the ordinal nature of the dependent variable, a multivariate ordinal probit model is used in the empirical analysis. The model consists of five equations that are jointly estimated: the incidence of training provision, the incidence of on-the-job training provision, the degree of difficulty in retaining employees, a too high incidence of sick leave, and workplace morale. The two equations concerning training and on-the-job training are specified as ordered probit models with five levels. The equation concerning a too high incidence of sick leave is specified as a probit model. The two equations concerning the difficulties in retaining employees and workplace morale are specified as ordered probit models with four levels. All equations contain the same set of explanatory variables; the error terms are assumed to follow a multivariate normal distribution with correlation ρ across the five dependent variables (10 correlation coefficients), which are also to be estimated.

The results of the multivariate model are presented in Table 1.

Establishments with an employment relationship balancing high requirements with high inducements (group 4) tend to provide training and on-the-job training to a higher percentage of employees than those establishing an employment relationship balancing low requirements with low inducements (group 1, the reference group). Having established an employment relationship balancing high requirements and high inducements (group 4) is associated with fewer problems in retaining employees, with a lower likelihood of having a too high rate of sick leave, and with a higher likelihood of a high morale workplace compared to having established an employment relationship balancing low requirements and low inducements (group 1).

An employment relationship balancing moderate requirements with moderate inducements (group 2) or an unbalanced employment relationship subsuming high requirements and moderate inducements (group 3) falls somewhat in between; they tend to provide training and on-the-job training to a wider fraction of employees than establishments with an employment relationship balancing low requirements and low inducements (group 1). Also, organisational approaches to skills utilisation described in group 2 and 3 are less likely to be associated with difficulties in retaining employees and more likely be associated with high morale than establishments with group 1 features.

Differences in the type of employment relationship established, which underlie different ways to leverage human capital, are generally associated with difference in provision of training and on-the-job training, with the organisation's ability to retain staff and with workforce morale.

However, only the employment relationship configured on high requirements balanced by high inducement is associated with a lower risk of withdrawal behaviour.

The employment relationship does not subsume the whole array of choices that organisations have; job design choices and managerial styles continue to play a role.

Three job design features are particularly important: work autonomy, problem solving, and continuous training. A high incidence of jobs in which employees can autonomously

organise their work is associated with a decrease in turnover and in the risk of withdrawal behaviour (a reduction of the likelihood that the rate of sick leave is perceived as too high). A high incidence of jobs requiring problem solving is associated with an increase in participation in on-the-job training and with an increase in workplace morale.

Managerial support for participation in training (managers changing the work schedule so that workers can participate in training, rather than training participation only possible when work allows for it) is associated with an increase in the percentage of employees participating in training and on-the-job training. It is also associated with a fall in turnover, a reduction in the risk of withdrawal, and an increase in workplace motivation.

Managerial style that creates an environment in which workers can autonomously work (as opposed to one in which managers control that workers do what is asked from them), while not directly linked to the organisational investment in human capital, it is associated with an increase in workplace motivation and with a reduction in the risk of withdrawal and in difficulty in retaining employees.

Table 1. **Estimate of multivariate ordered probit model, clustered standard errors in parenthesis, weighted (*: significant at 5%, **: significant at 1%).**

	Workers participating in paid training (%)		Workers participating in on-the -job training (%)		Level of difficulty in retaining employees		Too high level of sickness leave		Level of workplace motivation	
Type of employment relationship										
Group 2: balanced moderate requirements – moderate inducements	0.217	**	0.223	**	-0.150	*	-0.138		0.480	**
	(0.061)		(0.048)		(0.076)		(0.105)		(0.062)	
Group 3: imbalanced high requirements – moderate inducements	0.294	**	0.289	**	-0.239	**	-0.126		0.753	**
	(0.061)		(0.051)		(0.061)		(0.105)		(0.058)	
Group 4: balanced high requirements – high inducements	0.483	**	0.399	**	-0.461	**	-0.348	**	1.399	**
	(0.075)		(0.069)		(0.130)		(0.092)		(0.071)	
Workers in jobs in which they can autonomously organise their work (%)	0.006		0.030		-0.024	**	-0.076	**	0.025	
	(0.012)		(0.016)		(0.009)		(0.024)		(0.018)	
Workers in jobs requiring problem solving (%)	0.026		0.066	**	-0.001		-0.001		0.060	**
	(0.016)		(0.010)		(0.010)		(0.016)		(0.012)	
Workers in jobs that require continuous training (%)	0.239	**	0.138	**	0.026		0.016		-0.022	
	(0.017)		(0.016)		(0.016)		(0.030)		(0.017)	
Managerial support (work scheduled changed to allow participation in training)	0.375	**	0.105	**	-0.157	**	-0.138	**	0.105	*
	(0.046)		(0.029)		(0.037)		(0.026)		(0.046)	
Managers create an environment in which employees can autonomously carry out their tasks	0.010		0.022		-0.172	**	-0.044		0.241	**
	(0.029)		(0.022)		(0.032)		(0.024)		(0.026)	
Number of observations	18,244									

	Workers participating in paid training (%)	Workers participating in on-the -job training (%)	Level of difficulty in retaining employees	Too high level of sickness leave	Level of workplace motivation
Wald test, χ2(85)	19,475.670**	20,030.210**	140,000.000**	30765.010**	100,000.000**

NB: The full set of estimates is shown in Annex C. The reference group of the variables is in parenthesis: Group (Group 1: balanced low requirements - low inducements), Teamwork (Management led teams), Establishment size (Small, 10 – 49 employees), Managerial support (Participation in training and professional development activities is only possible if workload and work schedules allow for it), Managers create an environment in which employees can autonomously carry out their tasks (Managers control if employees follow the task assigned to them), No innovation introduced (Innovation introduced), Establishment age (10 years or less), Design and development of new product and services (Carried out in house), Production of goods, assembly of parts, delivery of services (Carried out in house), Type of establishment (Single establishment), Industry (Mining and quarrying), and Country (Austria).

Table 2 shows the patterns of correlations across the equations. Unobserved variables increasing the provision of paid training tend to increase on-the-job training, but do not show any relationship with changes in withdrawal, turnover, or workplace morale. Unobserved variables increasing the difficulties experienced in retaining employees also increase the risk of withdrawal behaviour, while reducing workers' morale. Unobserved variables increasing the risk of withdrawal also contribute to a reduction in morale.

Table 2. **Correlations between the residuals of the equations in the empirical model (Table 1)**

	Workers participating in on-the -job training (%)	Level of difficulty in retaining employees	Too high level of sickness leave	Level of workplace motivation
Workers participating in paid training (%)	0.351**	-0.019	0.020	-0.006
	(0.026)	(0.018)	(0.019)	(0.013)
Workers participating in on-the -job training (%)		0.045**	0.009	0.004
		(0.021)	(0.023)	(0.018)
Level of difficulty in retaining employees			0.126**	-0.195**
			(0.028)	(0.023)
Too high level of sickness leave				-0.334**
				(0.025)

CHAPTER 5.
Conclusions

Turnover has been identified as the most important cause of the under provision of training in organisations. However, investment in human capital does not take place in a vacuum. Organisational choices regarding such investments are framed within the context of competitiveness, which entails the combination of organisational resources to be successful in the product market.

Organisations that leverage human capital to be competitive see their investment in human capital threatened by turnover. However, they also understand that turnover is an extreme manifestation of a more general threat to their investments in human capital: the withdrawal of work effort. This phenomenon, also known as quiet quitting, materialises when workers exert minimal effort in drawing on their skills, to produce the minimum performance acceptable. In this way, workers prevent the organisation having access to their skills (the fruit of their labour). Since organisations that base their competitive advantage on human capital encourage workers to draw on their skills, they establish an employment relationship that also minimises the risk of withdrawal, quiet quitting, and the risk that trained workers would quit.

The type of employment relationship organisations establish with their employees is what connects investments in human capital and turnover. The employment relationship guides the process that makes the human capital of individual workers gel into an organisational resource (or not). It does so by encouraging the enactment of high performance, both task and contextual (the requirements), with appropriate inducements. The encouragement of high performance discourages the withholding of effort at work and quiet quitting. At the same time, the employment relationship can effectively bind workers to the organisation. The empirical analysis supports this conjecture. The type of employment relationship established is related to training provision (both paid training and on-the-job training), turnover, withdrawal behaviour (encompassing quiet quitting), and workplace morale. In addition, managerial support for training is also able to generate similar effects.

In this way, we reconcile two seemingly irreconcilable views of the relationship between the investment in human capital and turnover: the one that sees turnover as a threat to the investment in human capital and the one that regards training as helping to stabilise turnover.

In our analysis, turnover remains a threat to the returns on the investment in human capital, just as it is the withdrawal of effort at work and quiet quitting. In organisations that base their competitiveness on human capital, organisational efforts encouraging workers to draw on their skills encourage training provision and reduce the risk of turnover. These efforts, not training, are associated with a reduced risk of withdrawal, quiet quitting, and turnover.

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Acronyms

AMO	ability motivation opportunity
ECS2019	European Company Survey 2019
NACE	National Association of Colleges and Employers
VET	vocational education and training

Annex A.
Descriptive statistics

Table A1. **Descriptive statistics of the sample, unweighted (Number of observations = 18,244).**

Variable	Mean	Std. dev.	Min	Max
Workers who received paid training (%)				
Less than 20%	0.303	0.460	0	1
From 20% to 39%	0.192	0.394	0	1
From 40% to 59%	0.142	0.349	0	1
From 60% to 79%	0.120	0.325	0	1
80% and more	0.243	0.429	0	1
Workers who received on-the-job training (%)				
Less than 20%	0.234	0.423	0	1
From 20% to 39%	0.227	0.419	0	1
From 40% to 59%	0.172	0.378	0	1
From 60% to 79%	0.141	0.348	0	1
80% and more	0.226	0.418	0	1
Too high level of sick leave within the establishment				
No	0.774	0.418	0	1
Yes	0.226	0.418	0	1
Level of difficulty in retaining employees within the establishment				
Not at all difficult	0.156	0.363	0	1
Not very difficult	0.563	0.496	0	1
Fairly difficult	0.252	0.434	0	1
Very difficult	0.029	0.167	0	1
Level of workplace motivation				
Not at all motivated	0.010	0.100	0	1
Not very motivated	0.164	0.370	0	1
Fairly motivated	0.661	0.473	0	1
Very motivated	0.165	0.372	0	1
Use of monetary reward to motivate and retain employees				
Never	0.093	0.290	0	1
Not very often	0.464	0.499	0	1
Fairly often	0.360	0.480	0	1
Very often	0.083	0.276	0	1
Use of interesting and stimulating jobs to motivate and retain employees				
Never	0.028	0.164	0	1
Not very often	0.302	0.459	0	1

Variable	Mean	Std. dev.	Min	Max
Fairly often	0.512	0.500	0	1
Very often	0.158	0.365	0	1
Use of mission and vision to motivate and retain employees				
Never	0.040	0.195	0	1
Not very often	0.306	0.461	0	1
Fairly often	0.467	0.499	0	1
Very often	0.188	0.391	0	1
Use of opportunities for training and development to motivate and retain employees				
Never	0.021	0.143	0	1
Not very often	0.315	0.465	0	1
Fairly often	0.472	0.499	0	1
Very often	0.192	0.394	0	1
Quality of the manager-employee relations				
Very bad	0.001	0.037	0	1
Bad	0.010	0.101	0	1
Neither good nor bad	0.146	0.353	0	1
Good	0.598	0.490	0	1
Very good	0.244	0.430	0	1
Importance of making suggestions for company's improvements				
Not all important	0.012	0.107	0	1
Not very important	0.085	0.278	0	1
Fairly important	0.455	0.498	0	1
Very important	0.449	0.497	0	1
Importance of helping colleagues without being asked				
Not all important	0.008	0.090	0	1
Not very important	0.056	0.230	0	1
Fairly important	0.408	0.492	0	1
Very important	0.528	0.499	0	1
Importance of staying longer when needed				
Not all important	0.056	0.229	0	1
Not very important	0.210	0.407	0	1
Fairly important	0.500	0.500	0	1
Very important	0.235	0.424	0	1
Employee involvement is a source of competitive advantage				
Not at all	0.077	0.266	0	1
To a small extent	0.222	0.416	0	1
To some extent	0.435	0.496	0	1
To a great extent	0.267	0.442	0	1

Variable	Mean	Std. dev.	Min	Max
Workers in jobs in which they can autonomously organise their work (%)				
Less than 20%	0.394	0.489	0	1
From 20% to 39%	0.205	0.403	0	1
From 40% to 59%	0.131	0.337	0	1
From 60% to 79%	0.105	0.306	0	1
80% and more	0.166	0.372	0	1
Workers in jobs requiring problem solving (%)				
Less than 20%	0.437	0.496	0	1
From 20% to 39%	0.228	0.420	0	1
From 40% to 59%	0.135	0.341	0	1
From 60% to 79%	0.085	0.278	0	1
80% and more	0.115	0.319	0	1
Workers in jobs that require continuous training (%)				
Less than 20%	0.452	0.498	0	1
From 20% to 39%	0.193	0.394	0	1
From 40% to 59%	0.116	0.320	0	1
From 60% to 79%	0.089	0.285	0	1
80% and more	0.150	0.357	0	1
Team work				
No teams	0.251	0.433	0	1
Management directed teams	0.597	0.491	0	1
Autonomous teams	0.153	0.360	0	1
Managerial support (work scheduled changed to allow participation in training)				
Participation in training is only possible if workload and work schedules allow for it	0.322	0.467	0	1
Workload and work schedules are adjusted to allow employees to participate in training	0.678	0.467	0	1
Managers control if employees follow the task assigned to them				
Managers control whether employees follow their tasks	0.288	0.453	0	1
Managers set out the conditions for workers to carry out their tasks	0.712	0.453	0	1
Frequency of skills requirements change				
No change	0.046	0.210	0	1
Not very quickly	0.561	0.496	0	1
Fairly quickly	0.359	0.480	0	1
Very quickly	0.034	0.182	0	1
Degree of direct influence exerted by employees	2.393	0.663	1	4
Employee involvement causes delay				
Not at all	0.237	0.425	0	1
To a small extent	0.431	0.495	0	1

Variable	Mean	Std. dev.	Min	Max
To some extent	0.269	0.443	0	1
To a great extent	0.062	0.242	0	1
Workers with permanent contracts (%)				
Less than 20%	0.065	0.247	0	1
From 20% to 39%	0.029	0.166	0	1
From 40% to 59%	0.038	0.191	0	1
From 60% to 79%	0.096	0.294	0	1
80% and more	0.773	0.419	0	1
Workers with part - time contracts (%)				
Less than 20%	0.764	0.425	0	1
From 20% to 39%	0.110	0.312	0	1
From 40% to 59%	0.046	0.209	0	1
From 60% to 79%	0.034	0.180	0	1
80% and more	0.047	0.212	0	1
No innovation				
No	0.546	0.498	0	1
Yes	0.454	0.498	0	1
It is difficult to find the required skills				
No at all	0.024	0.153	0	1
Not very difficult	0.225	0.418	0	1
Fairly difficult	0.526	0.499	0	1
Very difficult	0.224	0.417	0	1
Workers in jobs in which the pace of work is set by machines (%)				
Less than 20%	0.628	0.483	0	1
From 20% to 39%	0.110	0.313	0	1
From 40% to 59%	0.094	0.292	0	1
From 60% to 79%	0.073	0.260	0	1
80% and more	0.095	0.294	0	1
Workers in jobs in which there is no need to learn new skills (%)				
Less than 20%	0.548	0.498	0	1
From 20% to 39%	0.178	0.383	0	1
From 40% to 59%	0.118	0.322	0	1
From 60% to 79%	0.089	0.285	0	1
80% and more	0.067	0.250	0	1
Workers in jobs in which a computer is used (%)				
Less than 20%	0.288	0.453	0	1
From 20% to 39%	0.206	0.404	0	1
From 40% to 59%	0.114	0.318	0	1
From 60% to 79%	0.078	0.268	0	1

Variable	Mean	Std. dev.	Min	Max
80% and more	0.314	0.464	0	1
Design and development of new products and services				
Yes, this is mainly carried out internally at this establishment	0.308	0.461	0	1
Yes, carried out in collaboration with other establishments within our company	0.038	0.192	0	1
Yes, carried out in collaboration with other companies	0.090	0.286	0	1
Yes, this is mainly contracted out	0.020	0.142	0	1
No	0.544	0.498	0	1
Production of goods, assembly of parts, delivery of services				
Yes, carried out internally at this establishment	0.462	0.499	0	1
Yes, carried out in collaboration with other establishments within our company	0.053	0.223	0	1
Yes, carried out in collaboration with other companies	0.121	0.326	0	1
Yes, this is mainly contracted out	0.044	0.205	0	1
No	0.321	0.467	0	1
Establishment size (number of employees)				
Small (10 - 49)	0.619	0.486	0	1
Medium (50 - 249)	0.290	0.454	0	1
Large (250 and more)	0.090	0.287	0	1
Establishment type				
Single establishment	0.723	0.447	0	1
Headquarter	0.173	0.379	0	1
Subsidiary establishment	0.104	0.305	0	1
Industry (NACE)				
Mining and quarrying	0.004	0.064	0	1
Manufacturing	0.246	0.431	0	1
Electricity, gas, steam and air conditioning supply	0.009	0.092	0	1
Water supply, sewerage waste management and remediation activities	0.015	0.123	0	1
Construction	0.103	0.304	0	1
Wholesale and retail trade, repair of motor vehicles	0.199	0.399	0	1
Transportation and storage	0.060	0.237	0	1
Accommodation and food services activities	0.058	0.234	0	1
Information and communication	0.040	0.196	0	1
Financial and insurance activities	0.021	0.142	0	1
Real estate activities	0.013	0.113	0	1
Professional, scientific, and technical activities	0.068	0.251	0	1
Administrative and support services activities	0.031	0.174	0	1
Arts, entertainment, and recreation	0.030	0.171	0	1
Other service activities	0.103	0.304	0	1
Establishment age				
10 years or less	0.139	0.346	0	1

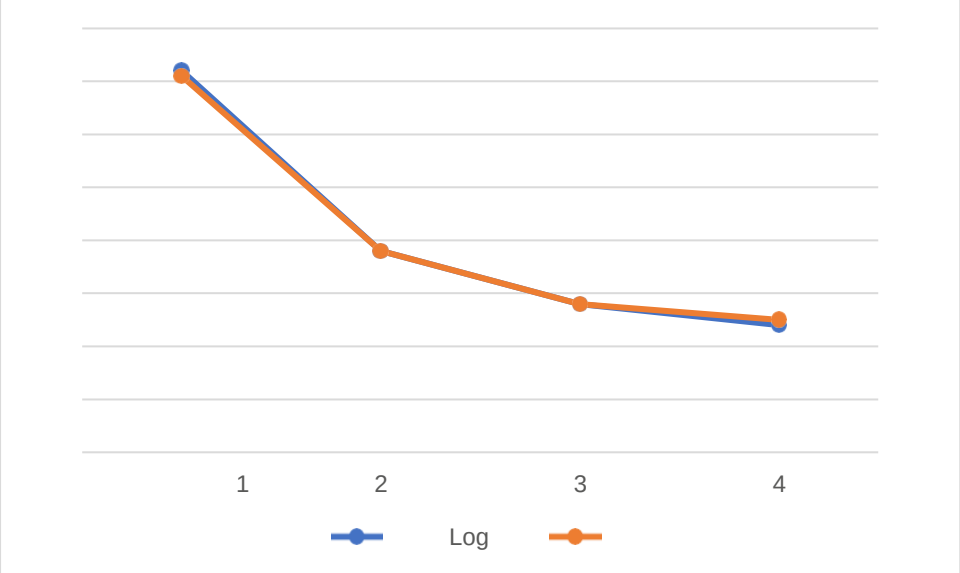
Variable	Mean	Std. dev.	Min	Max
11 to 20 years	0.234	0.424	0	1
21 to 30 years	0.257	0.437	0	1
More than 30 years	0.370	0.483	0	1
Employee representation body present				
No	0.614	0.487	0	1
Yes	0.386	0.487	0	1
Predictability of the demand for the main products or services				
Not at all predictable	0.032	0.176	0	1
Not very predictable	0.285	0.451	0	1
Fairly predictable	0.604	0.489	0	1
Very predictable	0.079	0.270	0	1
Market competition for the main products or services				
Not at all competitive	0.030	0.171	0	1
Not very competitive	0.105	0.307	0	1
Fairly competitive	0.504	0.500	0	1
Very competitive	0.361	0.480	0	1
Country				
Austria	0.047	0.211	0	1
Belgium	0.048	0.213	0	1
Bulgaria	0.043	0.204	0	1
Croatia	0.025	0.155	0	1
Cyprus	0.005	0.071	0	1
Czechia	0.040	0.196	0	1
Denmark	0.049	0.217	0	1
Estonia	0.023	0.151	0	1
Finland	0.052	0.222	0	1
France	0.060	0.238	0	1
Germany	0.032	0.176	0	1
Greece	0.022	0.146	0	1
Hungary	0.048	0.213	0	1
Ireland	0.013	0.115	0	1
Italy	0.068	0.252	0	1
Latvia	0.023	0.151	0	1
Lithuania	0.022	0.147	0	1
Luxembourg	0.011	0.102	0	1
Malta	0.007	0.081	0	1
Netherlands	0.051	0.220	0	1
Poland	0.036	0.187	0	1
Portugal	0.046	0.209	0	1
Romania	0.033	0.178	0	1

Variable	Mean	Std. dev.	Min	Max
Slovakia	0.016	0.125	0	1
Slovenia	0.026	0.159	0	1
Spain	0.068	0.252	0	1
Sweden	0.052	0.223	0	1
United Kingdom	0.033	0.179	0	1

Source: Author's calculations.

Annex B.
Latent class analysis relative to the balance between requirements and inducements

Figure 1. **Goodness of fit measures relative to latent class analysis solutions by number of groups**



Source: Author's calculations

Table B1. **Incidence of responses on the variables used in the latent class analysis by group.**

Variables	Group 1	Group 2	Group 3	Group 4	Sample
Helping colleagues without being asked					
Not at all important	0.060	0.002	0.000	0.003	0.010
Not very important	0.244	0.058	0.003	0.012	0.058
Fairly important	0.467	0.684	0.227	0.111	0.413
Very important	0.228	0.256	0.769	0.874	0.520
Staying longer when needed					
Not at all important	0.112	0.053	0.037	0.065	0.059
Not very important	0.274	0.252	0.168	0.140	0.207
Fairly important	0.409	0.581	0.477	0.374	0.500
Very important	0.205	0.114	0.317	0.421	0.235
Making suggestions to improve operations					
Not at all important	0.082	0.004	0.001	0.007	0.013

Variables	Group 1	Group 2	Group 3	Group 4	Sample
Not very important	0.393	0.106	0.004	0.010	0.087
Fairly important	0.387	0.796	0.326	0.151	0.456
Very important	0.138	0.095	0.670	0.832	0.444
Monetary rewards					
Never	0.303	0.080	0.099	0.100	0.101
Not very often	0.494	0.504	0.465	0.298	0.462
Fairly often	0.166	0.367	0.372	0.406	0.356
Very often	0.037	0.049	0.064	0.196	0.081
Mission and vision statements					
Never	0.283	0.016	0.012	0.005	0.046
Not very often	0.588	0.430	0.235	0.019	0.308
Fairly often	0.115	0.513	0.613	0.281	0.463
Very often	0.014	0.042	0.141	0.695	0.184
Challenging jobs					
Never	0.209	0.005	0.005	0.003	0.034
Not very often	0.608	0.374	0.215	0.023	0.308
Fairly often	0.165	0.579	0.668	0.365	0.504
Very often	0.018	0.042	0.112	0.609	0.154
Training opportunities					
Never	0.172	0.008	0.013	0.004	0.029
Not very often	0.624	0.417	0.282	0.057	0.321
Fairly often	0.174	0.507	0.551	0.342	0.463
Very often	0.030	0.069	0.153	0.597	0.187
Training to improve morale					
Not at all important	0.137	0.010	0.002	0.004	0.019
Not very important	0.431	0.145	0.061	0.030	0.122
Fairly important	0.307	0.735	0.440	0.146	0.478
Very important	0.125	0.110	0.497	0.820	0.381
Training to increase employee capacity of suggesting improvements					
Not at all important	0.156	0.004	0.006	0.003	0.020
Not very important	0.493	0.249	0.057	0.037	0.167
Fairly important	0.274	0.698	0.600	0.257	0.528
Very important	0.077	0.049	0.338	0.703	0.285
Employee involvement as source of competitive advantage					
Not at all	0.268	0.088	0.055	0.073	0.087
To a small extent	0.365	0.295	0.184	0.094	0.223
To some extent	0.243	0.498	0.481	0.357	0.428
To a great extent	0.124	0.119	0.280	0.476	0.263

Variables	Group 1	Group 2	Group 3	Group 4	Sample
Quality of the manager-employee relations					
Very bad	0.004	0.000	0.002	0.002	0.002
Bad	0.044	0.004	0.004	0.000	0.010
Neither good nor bad	0.383	0.163	0.099	0.034	0.148
Good	0.463	0.674	0.648	0.423	0.597
Very good	0.105	0.159	0.248	0.541	0.244

Source: Author's calculations.

Annex C.
Full set of estimates

Table C1. **Joint estimation of the empirical models, clustered standard errors in parenthesis, weighted (*: significant at 5%, **: significant at 1%).**

	Workers participating in paid training (%)		Workers participating in on-the-job training (%)		Level of difficulty in retaining employees		Too high level of sickness leave		Level of workplace motivation	
Type of employment relationship										
Group 2: balanced moderate requirements – moderate inducements	0.217	**	0.223	**	-0.150	*	-0.138		0.480	**
	(0.061)		(0.048)		(0.076)		(0.105)		(0.062)	
Group 3: imbalanced high requirements – moderate inducements	0.294	**	0.289	**	-0.239	**	-0.126		0.753	**
	(0.061)		(0.051)		(0.061)		(0.105)		(0.058)	
Group 4: balanced high requirements – high inducements	0.483	**	0.399	**	-0.461	**	-0.348	**	1.399	**
	(0.075)		(0.069)		(0.130)		(0.092)		(0.071)	
Workers in jobs in which they can autonomously organise their work (%)	0.006		0.030		-0.024	**	-0.076	**	0.025	
	(0.012)		(0.016)		(0.009)		(0.024)		(0.018)	
Workers in jobs requiring problem solving (%)	0.026		0.066	**	-0.001		-0.001		0.060	**
	(0.016)		(0.010)		(0.010)		(0.016)		(0.012)	
Workers in jobs that require continuous training (%)	0.239	**	0.138	**	0.026		0.016		-0.022	

	Workers participating in paid training (%)		Workers participating in on-the-job training (%)		Level of difficulty in retaining employees		Too high level of sickness leave		Level of workplace motivation	
	(0.017)		(0.016)		(0.016)		(0.030)		(0.017)	
Team work										
Directed teams	0.100		0.130	**	0.056	**	-0.044		-0.007	
	(0.057)		(0.044)		(0.019)		(0.059)		(0.038)	
Autonomous / self-directed teams	0.084		0.091	*	-0.065		-0.154		0.077	
	(0.074)		(0.039)		(0.043)		(0.104)		(0.041)	
Managerial support (work scheduled changed to allow participation in training)	0.375	**	0.105	**	-0.157	**	-0.138	**	0.105	*
	(0.046)		(0.029)		(0.037)		(0.026)		(0.046)	
Managers create an environment in which employees can autonomously carry out their tasks	0.010		0.022		-0.172	**	-0.044		0.241	**
	(0.029)		(0.022)		(0.032)		(0.024)		(0.026)	
Frequency of skills requirements change	0.003		0.020		0.034	*	-0.039	*	0.080	**
	(0.028)		(0.023)		(0.014)		(0.017)		(0.026)	
Degree of direct influence exerted by employees	0.088	**	0.117	**	0.023		0.023		0.210	**
	(0.018)		(0.021)		(0.023)		(0.027)		(0.029)	
Employee involvement causes delay	-0.036	*	-0.012		0.108	**	0.143	**	-0.178	**
	(0.014)		(0.022)		(0.016)		(0.019)		(0.018)	
Workers with permanent contracts (%)	0.039	*	0.015		-0.011		0.000		-0.020	
	(0.018)		(0.014)		(0.021)		(0.014)		(0.012)	
Workers with part-time contracts (%)	0.030		0.058	**	0.001		0.026	*	0.007	

	Workers participating in paid training (%)		Workers participating in on-the-job training (%)		Level of difficulty in retaining employees		Too high level of sickness leave		Level of workplace motivation	
	(0.019)		(0.008)		(0.011)		(0.011)		(0.021)	
The establishment use data analytics to improve the processes	0.031		0.091	*	0.057		0.122	**	-0.021	
	(0.034)		(0.039)		(0.046)		(0.044)		(0.036)	
The establishment use data analytics to monitor employee performance	0.134	*	0.122	**	0.034		0.042		-0.034	
	(0.058)		(0.040)		(0.035)		(0.039)		(0.028)	
No innovation introduced	-0.068	**	-0.103	**	-0.070	**	-0.129	**	0.083	*
	(0.022)		(0.026)		(0.024)		(0.025)		(0.042)	
It is difficult to find the required skills	0.022		0.004		0.478	**	0.261	**	-0.137	**
	(0.016)		(0.019)		(0.034)		(0.027)		(0.028)	
Workers in jobs in which the pace of work is set by machines (%)	-0.001		0.005		-0.003		0.027		-0.039	**
	(0.013)		(0.014)		(0.013)		(0.014)		(0.011)	
Workers in jobs in which there is no need to learn new skills (%)	-0.014		0.009		0.017		0.016		-0.062	**
	(0.015)		(0.012)		(0.012)		(0.013)		(0.020)	
Workers in jobs in which a computer is used (%)	0.035	**	-0.006		-0.023	*	-0.070	**	0.022	
	(0.014)		(0.014)		(0.009)		(0.011)		(0.016)	
Design and development of new products and services										
Yes, carried out in collaboration with other establishments within our company	0.070		0.085		0.033		0.198	*	0.050	
	(0.048)		(0.114)		(0.128)		(0.082)		(0.096)	

	Workers participating in paid training (%)		Workers participating in on-the-job training (%)		Level of difficulty in retaining employees		Too high level of sickness leave		Level of workplace motivation	
Yes, carried out in collaboration with other companies	0.189	**	0.145	**	0.139		0.036		-0.035	
	(0.058)		(0.056)		(0.073)		(0.061)		(0.086)	
Yes, this is mainly contracted out	0.070		0.006		0.005		0.012		-0.173	
	(0.100)		(0.062)		(0.088)		(0.188)		(0.092)	
No	0.182	**	0.030		0.042		0.100	*	-0.034	
	(0.042)		(0.033)		(0.022)		(0.039)		(0.030)	
Production of goods, assembly of parts, delivery of services										
Yes, carried out in collaboration with other establishments within our company	-0.166	*	-0.075		-0.101		-0.151		0.101	
	(0.079)		(0.081)		(0.114)		(0.162)		(0.086)	
Yes, carried out in collaboration with other companies	-0.101		-0.008		0.006		0.042		-0.117	*
	(0.065)		(0.051)		(0.082)		(0.097)		(0.052)	
Yes, this is mainly contracted out	-0.155	*	-0.011		0.024		-0.060		0.030	
	(0.078)		(0.085)		(0.105)		(0.061)		(0.048)	
No	-0.034		-0.007		-0.037		-0.042		-0.065	
	(0.021)		(0.034)		(0.024)		(0.051)		(0.059)	
Establishment size (number of employees)										
Medium (50 - 249)	-0.034		-0.019		0.258	**	0.414	**	-0.152	**
	(0.024)		(0.030)		(0.038)		(0.053)		(0.030)	

	Workers participating in paid training (%)		Workers participating in on-the-job training (%)		Level of difficulty in retaining employees		Too high level of sickness leave		Level of workplace motivation	
Large (250 and more)	-0.001		0.024		0.402	**	0.643	**	-0.091	
	(0.085)		(0.057)		(0.051)		(0.070)		(0.070)	
Establishment type										
Headquarter	0.077	*	0.044		0.057		0.036		-0.083	
	(0.033)		(0.038)		(0.054)		(0.072)		(0.048)	
Subsidiary establishment	0.302	*	0.180	**	0.217	*	0.293		-0.184	**
	(0.118)		(0.054)		(0.099)		(0.152)		(0.061)	
Industry (NACE)										
Manufacturing	0.011		0.463		0.156		0.538		-0.264	
	(0.406)		(0.324)		(0.228)		(0.316)		(0.151)	
Electricity, gas, steam and air conditioning supply	0.252		0.496		0.062		0.105		-0.462	**
	(0.643)		(0.329)		(0.232)		(0.259)		(0.149)	
Water supply, sewerage waste management and remediation activities	0.279		0.385		0.170		0.590		-0.368	*
	(0.429)		(0.292)		(0.215)		(0.346)		(0.150)	
Construction	0.255		0.460		0.174		0.443		-0.122	
	(0.472)		(0.333)		(0.216)		(0.383)		(0.096)	
Wholesale and retail trade, repair of motor vehicles	0.046		0.422		0.226		0.344		-0.214	*
	(0.444)		(0.322)		(0.197)		(0.342)		(0.109)	
Transportation and storage	0.121		0.253		0.310		0.396		-0.118	
	(0.458)		(0.368)		(0.185)		(0.321)		(0.123)	

	Workers participating in paid training (%)		Workers participating in on-the-job training (%)		Level of difficulty in retaining employees		Too high level of sickness leave		Level of workplace motivation	
Accommodation and food services activities	-0.039		0.748	*	0.538	*	0.196		-0.081	
	(0.418)		(0.313)		(0.231)		(0.361)		(0.126)	
Information and communication	-0.223		0.445		0.418	*	0.205		-0.084	
	(0.445)		(0.283)		(0.192)		(0.345)		(0.146)	
Financial and insurance activities	0.333		0.545		0.531		0.233		-0.161	
	(0.453)		(0.302)		(0.280)		(0.239)		(0.115)	
Real estate activities	0.311		0.346		0.315		0.345		-0.221	
	(0.432)		(0.351)		(0.232)		(0.265)		(0.212)	
Professional, scientific, and technical activities	0.202		0.565		0.312		0.250		-0.163	
	(0.452)		(0.290)		(0.176)		(0.335)		(0.112)	
Administrative and support services activities	0.187		0.532		0.218		0.476		-0.213	*
	(0.429)		(0.338)		(0.206)		(0.306)		(0.107)	
Arts, entertainment, and recreation	0.035		0.503		0.423		0.261		0.075	
	(0.402)		(0.323)		(0.243)		(0.331)		(0.118)	
Other service activities	0.106		0.514		0.308		0.484		-0.157	
	(0.402)		(0.325)		(0.220)		(0.333)		(0.126)	
Establishment age										
11 to 20 years	0.119		-0.068		-0.020		0.012		0.004	
	(0.071)		(0.050)		(0.035)		(0.063)		(0.049)	
21 to 30 years	0.123		-0.161	**	-0.072		-0.016		-0.091	
	(0.093)		(0.036)		(0.060)		(0.077)		(0.057)	

	Workers participating in paid training (%)		Workers participating in on-the-job training (%)		Level of difficulty in retaining employees		Too high level of sickness leave		Level of workplace motivation	
More than 30 years	0.147		-0.204	**	-0.240	**	0.059		-0.029	
	(0.095)		(0.048)		(0.067)		(0.056)		(0.072)	
Presence of a recognised body for employee representation										
Employee representation body present	0.130	**	0.022		-0.038		0.241	**	-0.163	**
	(0.030)		(0.051)		(0.032)		(0.061)		(0.045)	
Predictability of the demand for the main products or services										
Not very predictable	0.037		-0.037		-0.043		0.105		0.173	
	(0.071)		(0.072)		(0.095)		(0.118)		(0.194)	
Fairly predictable	0.077		0.013		-0.061		0.112		0.174	
	(0.069)		(0.092)		(0.073)		(0.120)		(0.161)	
Very predictable	0.052		-0.040		-0.147	*	0.037		0.236	
	(0.059)		(0.094)		(0.065)		(0.066)		(0.161)	
Market competition for the main products or services										
Not very competitive	-0.049		0.138		0.266	**	0.161		-0.019	
	(0.095)		(0.119)		(0.092)		(0.187)		(0.094)	
Fairly competitive	-0.026		0.111		0.392	**	-0.051		0.073	
	(0.079)		(0.112)		(0.090)		(0.190)		(0.070)	
Very competitive	-0.020		0.159		0.435	**	-0.025		0.149	
	(0.083)		(0.125)		(0.121)		(0.193)		(0.088)	
Country										
Belgium	0.527	**	-0.069	**	-0.146	**	0.464	**	0.169	**

	Workers participating in paid training (%)		Workers participating in on-the-job training (%)		Level of difficulty in retaining employees		Too high level of sickness leave		Level of workplace motivation	
	(0.022)		(0.016)		(0.016)		(0.030)		(0.024)	
Bulgaria	-0.273	**	0.047	*	-0.177	**	-0.533	**	-0.561	**
	(0.028)		(0.023)		(0.026)		(0.036)		(0.035)	
Croatia	0.092	**	-0.593	**	-0.153	**	-0.647	**	-0.529	**
	(0.019)		(0.014)		(0.027)		(0.034)		(0.031)	
Cyprus	0.320	**	-0.040	*	-0.532	**	-0.704	**	-0.558	**
	(0.026)		(0.017)		(0.021)		(0.051)		(0.028)	
Czechia	0.677	**	-0.380	**	0.138	**	-0.433	**	-0.635	**
	(0.032)		(0.017)		(0.038)		(0.034)		(0.030)	
Denmark	-0.025		-0.188	**	-0.519	**	-0.028		0.521	**
	(0.025)		(0.014)		(0.019)		(0.018)		(0.023)	
Estonia	0.018		-0.006		0.131	**	-0.206	**	-0.522	**
	(0.026)		(0.025)		(0.038)		(0.028)		(0.022)	
Finland	0.634	**	0.140	**	-0.529	**	0.103	**	0.167	**
	(0.019)		(0.022)		(0.038)		(0.024)		(0.036)	
France	0.194	**	-0.400	**	-0.027		0.034		-0.094	**
	(0.039)		(0.015)		(0.032)		(0.020)		(0.017)	
Germany	-0.004		-0.054	**	-0.092	**	0.629	**	0.081	**
	(0.014)		(0.012)		(0.030)		(0.020)		(0.014)	
Greece	-0.265	**	-0.455	**	-0.659	**	-1.002	**	-0.739	**
	(0.018)		(0.019)		(0.036)		(0.021)		(0.026)	
Hungary	-0.288	**	-0.306	**	0.341	**	-0.732	**	-0.688	**

	Workers participating in paid training (%)		Workers participating in on-the-job training (%)		Level of difficulty in retaining employees		Too high level of sickness leave		Level of workplace motivation	
	(0.018)		(0.016)		(0.025)		(0.042)		(0.034)	
Ireland	0.778	**	0.332	**	-0.309	**	-0.161	**	-0.031	
	(0.047)		(0.032)		(0.027)		(0.028)		(0.036)	
Italy	0.498	**	-0.741	**	0.062	**	-0.679	**	-0.526	**
	(0.025)		(0.014)		(0.018)		(0.024)		(0.027)	
Latvia	0.284	**	-0.067	**	0.009		-0.249	**	-0.556	**
	(0.017)		(0.024)		(0.032)		(0.030)		(0.031)	
Lithuania	0.152	**	-0.235	**	-0.264	**	-0.567	**	-0.331	**
	(0.031)		(0.038)		(0.022)		(0.051)		(0.039)	
Luxembourg	0.235	**	-0.311	**	-0.033		0.592	**	-0.047	
	(0.022)		(0.024)		(0.017)		(0.019)		(0.036)	
Malta	0.358	**	-0.129	**	0.394	**	-0.198	**	-0.217	**
	(0.033)		(0.016)		(0.036)		(0.031)		(0.030)	
Netherlands	0.557	**	-0.425	**	-0.126	**	0.103	**	0.845	**
	(0.019)		(0.015)		(0.020)		(0.021)		(0.017)	
Poland	0.484	**	-0.340	**	0.049		-0.183	**	-0.092	**
	(0.031)		(0.022)		(0.034)		(0.026)		(0.022)	
Portugal	0.937	**	0.041		-0.440	**	-0.341	**	-0.261	**
	(0.042)		(0.024)		(0.043)		(0.031)		(0.027)	
Romania	-0.432	**	-0.647	**	0.367	**	-0.739	**	-0.061	*
	(0.021)		(0.032)		(0.021)		(0.054)		(0.031)	
Slovakia	0.622	**	-0.217	**	0.377	**	-0.461	**	-0.500	**

	Workers participating in paid training (%)		Workers participating in on-the-job training (%)		Level of difficulty in retaining employees		Too high level of sickness leave		Level of workplace motivation	
	(0.039)		(0.031)		(0.020)		(0.032)		(0.031)	
Slovenia	0.383	**	-0.286	**	-0.281	**	-0.078	**	-0.440	**
	(0.021)		(0.015)		(0.032)		(0.028)		(0.028)	
Spain	0.585	**	-0.241	**	-0.558	**	-0.163	**	-0.828	**
	(0.039)		(0.024)		(0.025)		(0.055)		(0.019)	
Sweden	0.683	**	-0.090	**	-0.282	**	0.098	**	0.302	**
	(0.020)		(0.020)		(0.021)		(0.023)		(0.034)	
United Kingdom	0.572	**	0.271	**	-0.300	**	0.181	**	-0.119	**
	(0.035)		(0.021)		(0.020)		(0.032)		(0.018)	
Ancillary parameters										
Intercept 1	1.826	**	0.954	*	0.558	*	-2.076	**	-2.399	**
	(0.539)		(0.373)		(0.232)		(0.494)		(0.277)	
Intercept 2	2.458	**	1.666	**	2.433	**			-0.769	**
	(0.560)		(0.391)		(0.259)				(0.272)	
Intercept 3	2.910	**	2.171	**	3.902	**			1.715	**
	(0.577)		(0.400)		(0.267)				(0.259)	
Intercept 4	3.320	**	2.617	**						
	(0.580)		(0.409)							
Wald test, $\chi2(85)$	19,475.670**		20,030.210**		140,000.000**		30,765.010**		100,000.000**	
Number of observations	18,244									

Source: Author's calculations.

Table C2. **Correlations between the residuals of the equations in the empirical model**

	Workers participating in on-the -job training (%)	Level of difficulty in retaining employees	Too high level of sickness leave	Level of workplace motivation
Workers participating in paid training (%)	0.351**	-0.019	0.020	-0.006
	(0.026)	(0.018)	(0.019)	(0.013)
Workers participating in on-the -job training (%)		0.045**	0.009	0.004
		(0.021)	(0.023)	(0.018)
Level of difficulty in retaining employees			0.126**	-0.195**
			(0.028)	(0.023)
Too high level of sickness leave				-0.334**
				(0.025)

Source: Author's calculations.

HUMAN CAPITAL UTILISATION, QUIET QUITTING AND EMPLOYEE RETENTION

Employee turnover is the main cause of the under-provision of training in organisations. However, the returns on organisational investments in human capital are also jeopardised by the under-utilisation of skills. This happens when employees withhold work effort and display forms of organisational withdrawal (quiet quitting). Turnover can be regarded as an extreme manifestation of quiet quitting.

Organisations vary in their reliance on human capital for their success; this heterogeneity affects turnover, too, while those relying on human capital for their success encourage workers to draw on their skills (and discourage quiet quitting). The encouragement to perform serves to turn the human capital of individual workers into an organisational resource. The inducements offered to support performance decrease the likelihood of quiet quitting, and turnover. Turnover is a threat to the returns on organisational investments in human capital. However, the threat is less acute in organisations relying on human capital for their success.

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