Are you moving up or falling short? An inquiry of skills-based variation in self-perceived employability among Norwegian employees

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Abstract

This article investigates how educational level, job-related skills and employers' support for competence development jointly determine Norwegian employees' expectations of maintaining employment and career advancement. The data were collected in 2010 and 2013, and they comprise a representative sample of Norwegian employees. In contrast to previous research on self-perceived employability, this study divides expectations of advancement and continued employment. The results show that these are different measures of labour market success. While education is significantly correlated with both measures, the employer's support for competence development is important for expectations of career advancement, especially among the highly educated, whereas the job-skills match is most relevant for the expectation of maintaining employment.

Keywords: competence development, education, employability, job-skills, survey data

Introduction

The current labour market can be characterised by a shift toward a knowledge-driven economy and more flexible employment relationships. In this landscape, 'employability' is a central concept, as it focusses on the employees' attractiveness on the labour market, as well as their ability to maintain employment security by acquiring marketable skills (Heyes, 2011; Kinnunen et al., 2011). Yet, according to scholars in this field, the knowledge concerning factors that precede the individual's perception of being employable, hereafter referred to as antecedents of self-perceived employability, are limited (DeVos et al., 2011; Kinnunen et al., 2011; Kirves et al., 2014). So far, studies have supported the claim that education, job-related skills and employer support for competence development are correlated with self-perceived employability (Berntson et al., 2006; DeVos et al., 2011; Olsen, 2012; Wittekind et al., 2010). However, the interdependence between these antecedents remains largely unexplored, and

researchers have not yet investigated whether they have different effects on the prospects of finding a new or better job.

The current article focusses on education, the job—skills match and the employer's support for competence development as antecedents of self-perceived employability. It contributes to the literature in three ways. First, it distinguishes between two types of employability – 'basic employability' and 'aspiring employability'. This duality is present in previously used definitions because the construct is conceptualised as both career mobility and the ability to maintain employment. The current definitions of self-perceived employability are heterogeneous, and to advance the understanding of its antecedents, the two types of employability need to be investigated separately and then compared.

Second, the stance taken in this article is that the correlations between self-perceived employability and education level, the employer's support for competence development and the job—skills match, documented in previous research, mask a great deal of heterogeneity between different groups of employees. By investigating how employees' individual and situational characteristics interact in terms of predicting self-perceived employability, this study gives new insight into career management. The individual characteristic is education and the situational characteristic is the employer's support for competence development (i.e. whether the employer facilitates opportunities for formal and informal competence development). An employee's evaluation of his or her current job—skills match (i.e. whether the employee perceives his or her skill level as keeping up with, or falling short of, what is required in the present job) is a combination of both individual (i.e. the individual's skill level) and situational (i.e. the job requirements) characteristics.

Finally, the article expands on previous research by investigating the antecedents of employability among a representative sample of Norwegian employees aged 24-56 for the years 2010 and 2013. The current literature mostly relies on data from specific business

sectors and firms, and to date, the Norwegian context has received limited attention. An employee's attractiveness on the labour market depends on his or her resources and the availability of job opportunities. The Norwegian context, which is characterised by a high education level among employees, high employment levels and low long-term unemployment, represents an interesting addition to the current literature. Yet, this labour market is moving in the direction of more flexibility in employment, and the economy is becoming more knowledge intensive; hence, Norwegian employees face the same structural changes as workers in other Western economies.

Self-perceived employability

This article focusses on employees' perceptions of their employability. An assumption underlying the employability literature is that self-perceived employability leads to employment success, but this has not been empirically explored (Clarke, 2008). Nevertheless, Mäkikangas et al. (2013: 490) argue that self-perceived employability is at the core of career research, as employees are likely to act on their perceptions; this means that employees' perceptions concerning whether they have marketable skills may shape subsequent labour market behaviours.

Previous definitions of self-perceived employability

Various definitions and operationalisations have been developed to describe the concept of self-perceived employability in the literature. Many scholars refer to Berntson et al. (2006: 4), who define self-perceived employability as 'the individual's perception of his or her possibilities to achieve a new job' (De Cuyper et al., 2008; Kinnunen et al., 2011; Vanhercke et al., 2014; Wittekind et al., 2010). Kirves et al. (2014: 3) use a slightly different definition that highlights external employment, as follows: 'self-perceived employability refers to a worker's belief about how easy it is to find new employment with another employer'. While Berntson et al.'s (2006) definition emphasises the individual's outlook for new employment,

other definitions also include maintaining employment. For instance, Vanhercke et al. (2014: 593) define self-perceived employability as 'the individual's perception of his or her possibilities of obtaining and maintaining employment'. Common to these definitions is that they do not distinguish between the quality and attractiveness of the job – one should simply be able to *obtain or keep a job*.

Other authors have introduced the attractiveness of the job to the self-perceived employability concept. Rothwell and Arnold (2007: 25) define employability as 'the individual's ability to keep the job one has, or to get the job one desires'; this description is also used by De Cuyper and De Witte (2011). Moreover, Fugate et al. (2004: 16) define employability as 'a form of work specific active adaptability that enables workers to identify and realise career opportunities'. According to this definition, highly employable individuals have a strong career identity that motivates the realisation and creation of opportunities to match their aspirations. Finally, in her study, Olsen (2012: 199) combines the two characterisations described above when asking 'how easy or difficult it would be to obtain a similar or better job with a different employer' (our translation). Common to all these definitions is that employability implies upward mobility, and this is also put forward in the literature discussing employability in continuation of higher education, where the emphasis is not on obtaining *any* job, but rather, finding a high quality, desirable job (Brown et al., 2003; Tomlinson, 2008; Wilton, 2011).

De Cuyper and De Witte (2011: 155) distinguish between finding a new job and a better job, but they view the ability to obtain a desired job as conditional on the ability to establish continued employment. Their argument is that workers who perceive many employment opportunities also have an increased chance of seeing better employment opportunities. However, the meaning of a 'better' job is hard to measure, and it may include both upward and lateral mobility. Instead of considering 'better' jobs, this article uses

responsibility and wage levels as proxies for upward mobility in the operationalisation of aspiring employability, which has the benefit of making the conceptualisation more comparable across employees and industries.

Perceived aspiring and basic employability

The present article suggests that the expectation of remaining in employment is distinct from the expectation of upward mobility in the labour market, and it is important to discuss and investigate the antecedents of both perceptions. One course of action may increase employees' basic employability while decreasing their aspiring employability – for example, some educational choices may lead to 'safe' jobs that have restricted opportunities for advancement (e.g. teaching preschool). Conversely, another course of action may increase aspiring employability while decreasing basic employability; for instance, employees who specialise in narrow fields may be experts with great advancement opportunities, but they may simultaneously be vulnerable to changes in demand. Identifying and comparing the antecedents of basic and aspiring employability requires simultaneous investigation of both concepts.

Basic employability reaches the core of the employability concept and captures an individual's outlook on maintaining employment. Following Vanhercke et al. (2014: 593), basic employability can be defined as 'the individual's perception of his or her possibilities of obtaining and maintaining employment'. The index of basic employability consists of two items that gauge future labour market outcomes in terms of likelihood of unemployment and labour market inactivity for reasons unrelated to health, old age or education.

Aspiring employability gauges future labour market success when it comes to obtaining new employment that is superior to the current job. This is here defined as 'the individual's perception of his or her possibilities of advancing in the labour market'. This measure emphasises career potential as part of an individual's employability. This measure

emphasises career potential as part of an individual's employability. The index of aspiring employability consists of two items, namely the likelihood of obtaining a better-paying job and that of finding a job with more responsibility. Statistical testing (cf. page 14) confirms that these two employability measures are distinct and not opposite sides of the same dimension.

How do education, the job-skills match and the employer's support for competence development relate to self-perceived employability?

Prior research on self-perceived employability has shown a positive association between education level and the belief that one would be able to find new employment with the same or a different employer (Berntson et al., 2006; Olsen, 2012; Wittekind et al. 2010). Highly educated individuals generally experience favourable labour market outcomes in terms of lower unemployment levels and higher wages (Organisation for Economic Co-operation and Development [OECD], 2016); thus, it is not surprising that they also perceive more employment opportunities.

The goals of higher education are to prepare for lifelong employment and ensure that employees are adaptable to changing demands and work tasks. While the employees' education is important, their self-perceived employability also depends on the expertise they have gained through experience in their current job. Most graduates acquire education *before* entering the labour market, which makes the workplace the most important arena for continued learning and development (Bills, 2005). In a longitudinal analysis of employees in four Swiss companies, Wittekind et al. (2010) showed that job-related qualifications had a positive effect on self-perceived employability. Hence, being able to meet the demands of the current job increased the participants' perception of being employable.

Undoubtedly, the employer has a gatekeeper role in employee competence enhancement, regulating access to the financial and time resources needed to undertake

further education or participate in informal learning. An often-evoked objection to the 'employability' discourse is that it tends to push responsibility for maintaining skills development over to the individual (Brown et al. 2013; Clarke, 2008). Yet, most employees do not participate in lifelong learning (Brown et al., 2003). Clarke and Patrickson (2008) argue that individuals refrain from taking part in education and skills maintenance not because of intellectual capacity, but instead, because of its high costs and uncertainty. Employers are in a better position to determine future skill needs. DeVos et al. (2011) find that perceived support for competency development is positively associated with self-perceived employability among employees in a Belgian financial institution. Similarly, Wittekind et al. (2010) find that support for career and skills development increases self-perceived employability among employees. Training has also been shown to raise the firm-internal employability of low-skilled workers (Sanders and De Grip, 2004). Thus, employees who experience a positive and supportive environment have better employment prospects compared with those who lack support for competence development.

Research has documented the associations of education, job skills and support for competence development for employability; the same direct associations are expected in the current article. However, there are theoretical reasons to expect that these factors mutually condition employees' self-perceived employability. The next section presents hypotheses on the co-dependency of education, the job—skills match and the employer's support for competence development in terms of perceived aspiring and basic employability.

The interdependency of education, the job-skills match and the employer's support for self-perceived employability

The empirical investigations in this article rely on the theories used to explain the mechanisms by which education and skills cause successful labour market outcomes, as these theories can give insight into people's anticipation of future employment and career development. The

expectations derived from the theoretical models further underline the utility of the division between aspiring and basic employability. As will be shown, the models give different predictions for the co-dependency of education, job skills and competence development for the two types of employability.

Human capital theory has been used to explain the relationship between education, job-related skills and employability in previous research (DeVos et al., 2011; Wittekind et al., 2010). Human capital encompasses all marketable resources an individual possesses; the most prominent components of human capital are education, on-the-job training and experience (Becker, 1994: 16). The theory refers to education and training as an investment, positing that individuals engage in rational economic action by acquiring skills that enhance their productivity levels. The gains are a reduced risk of unemployment and higher wages. Hence, having higher stocks of human capital should increase perceived aspiring and basic employability.

In contrast to human capital theory, sociological theory places more emphasis on education as a sorting mechanism. From this perspective, education does not necessarily increase productivity; rather, it identifies the more productive workers and matches them with productive jobs. Employers use education as a signal of trainability; thus, the main value of education is positional, as it places employees further up the labour queue. Education provides employees with general qualifications from which job-specific skills are developed (Reskin and Roos, 1990; Thurow, 1975).

The hypotheses developed in this article emphasise education in general, although the field of specialisation is important for labour market outcomes (Reimer et al., 2008). Some types of education are highly generic and qualify employees for a wide range of job positions, whereas others develop specialised skill sets. Individuals' self-perceived employability is likely influenced by skill specificity, as there is a wider range of jobs available to an engineer

than to an archaeologist. This is not incommensurable with the theoretical positions in this article, although skill enhancement through education is more strongly emphasised in human capital theory. The educational field is not observed in the data; however, the education field's role is reconsidered in the discussion of the findings.

Expectations for aspiring employability

According to the human capital perspective, skills from formal and informal training both contribute to enhanced productivity, and thus, to employees' self-perceived employability. As each year of education and training contributes to rising individual skill levels, employees with more years of education should report higher levels of aspiring employability compared to those with fewer years of education. By this rationale, the effect of education, the job–skills match and the employer's support for competence development ought to be additive.

The positional view posits that education is an entry ticket for jobs, whereas jobrelated skills are acquired after hiring. To attain a higher-paying job or one with more
responsibility, the employee must develop skills and qualify for a new position. Furthermore,
because such employees are entering jobs with higher skill requirements, on-the-job skills
matching and employers' support for competence development are likely especially important
for the career prospects of those employees with higher education. If these resources are
lacking, more educated employees do not necessarily conceive higher aspiring employability
compared to those with lower education.

Skills acquisition is likely important both for firm-internal and external aspiring employability. First, those who manage their current tasks and receive their employers' support for competence development are more likely to envision having aspiring employability, as such employees may have a better grasp of the organisation's hierarchy and requirements for advancement. Moreover, the employee's performance is known to the employer, and it is likely a topic of discussion. Second, experiences of mastery of job tasks

and support for competence development may also help employees to envision having opportunities with other employers. Some positions, such as that of a specialised nurse or teacher, require postgraduate qualifications beyond job experience, and these acquired skills are transferrable. Furthermore, external employers also attempt to investigate prospective employees' competence though interview questions, references and tests.

Hypothesis 1a: The employer's support for competence development is more important for highly educated employees' aspiring employability compared with employees with low levels of education.

Hypothesis 1b: The job—skills match is more important for highly educated employees' aspiring employability compared with employees with low levels of education.

Expectations for basic employability

The human capital perspective posits that both formal and informal resources contribute to an employee's productivity. Hence, the expectation is that both education and informal resources will increase self-perceived basic employability. According to this perspective, informal resources — measured as the job—skills match and employer's support for competence development — may compensate for a lack of formal education.

Concerning basic employability, the positional view suggests that those with higher education are advantaged over those with low or no education. Because of this, they ought to be less concerned with job loss and more confident about reemployment in case of job loss. In this sense, education is the main source of securing basic employability. Consequently, alternative resources, such as the job–skills match and employer's support, may be important for those with low education (Sanders and De Grip, 2004), but they may be relatively less significant for those with higher education.

Hypothesis 2a: The employer's support for competence development is less important for highly educated employees' basic employability compared with employees with low levels of education.

Hypothesis 2b: The job—skills match is less important for highly educated persons' basic employability compared with employees with low levels of education.

The Norwegian labour market

Norway had high levels of employment and low levels of unemployment in the period under study. In 2010 to 2013, the unemployment levels for people aged 25–74 years fluctuated between 2.1% and 2.7% (Table 07458, SSB). Self-perceived employability is higher in prosperous periods (Berntson et al., 2006), and Norwegians report having higher employability than employees in Denmark, the United Kingdom and Germany, which is likely related to labour market institutions and the structural features of the Norwegian economy (Olsen, 2012).

Norway has strong employment protection legislation in comparison with other European countries. The Work Environment Act and collective agreements regulate dismissals and the use of temporary contracts (Svalund, 2013). The protection of permanent workers against individual and collective dismissals is slightly above the OECD average, and the regulation of temporary forms of employment is among the highest (OECD, nd.). Furthermore, according to Statistics Norway, 8% of employees had temporary contracts in 2014 (Table 05612, SSB).

Finally, Norway has a large service sector and a relatively small manufacturing industry. Thus, highly educated workers are in demand (Cappelen et al., 2013), and Norwegian employees report high participation rates in skill-enhancing activities in their jobs (Olsen, 2012). Compared with the OECD average, a substantially higher proportion of Norwegians have attained a tertiary degree (OECD, 2014). Public institutions of higher

education ensure the accessibility of education, and students are entitled to loans from the Norwegian State Educational Loan Fund. Furthermore, tertiary education admits students with vocational training based on a competence evaluation. Thus, Norwegian citizens can change careers in mid-life without great economic costs.

Data

The data used for this study are the pooled waves from the 2010 and 2013¹ editions of the repeated, cross-sectional YS Employment Outlook Survey (YS EOS) on skills, competence development and employment. The YS EOS is a nationally representative sample of the working population. The inclusion criterion for participation is that the respondent must work at least 40% of a full-time job, equalling 2 full days per week. The response rates were 51% and 32% in 2010 and 2013, respectively.²

The sampling procedure stratifies the respondents according to age, gender, education, geography, industry and number of employees in the company to ensure the representativeness of the gross sample (see Bergene and Mamelund, 2017, for more information). The sample is restricted to those employees of primary working age (24–56 years). This restriction excludes those whose primary activity is education and training and employees who are approaching retirement, for whom employability is no concern.

Dependent variables

The two scales for aspiring employability (items 1–2) and basic employability (items 3–4) stem from a question asking,

How likely is it that in five years, you will be:

- (1) In a higher paying job?
- (2) In a job with more responsibility?
- (3) Unemployed?

(4) Labour market inactive (excluding reasons to do with health-related problems and disability, retirement or pursuing further education)?

The responses range from Highly Unlikely (1) to Highly Likely (5; see Appendix 1).

Although 5 years may seem like a long prospect, the concept of 'employability' supports a sense of lasting employment security and lifelong attachment to the labour market.

In this study, the two instruments were tested via an exploratory factor analysis with the maximum likelihood method and oblique rotation. To ensure that the employability constructs provided unique information that would not be covered by related constructs, such as job security, the analysis included 10 additional questions regarding work prospects (e.g. 'How likely is it that in five years, you will be in the same job?', 'How likely is it that in five years, you will be in the same profession?', 'To what extent do you worry that you might lose your current job?'). The analysis supported the claim that aspiring employability and basic employability are two separate factors – each item loaded strongly on one factor (>0.68) and weakly on the other (<.14). Both factors showed good reliability, with Cronbach's alpha values above 0.7 (see Appendix 1). A Pearson's correlation coefficient of -0.06 provided further support for the view that the two employability measures are not two opposite sides of the same dimension. Furthermore, the analysis gave evidence that both employability constructs provided unique information not covered by questions regarding job security and other work prospects, with two exceptions. First, the perceived likeliness of being on disability pension in 5 years loaded on the same factor as basic employability (0.69), highlighting the importance of controlling for work-related health. Second, the perceived likeliness of being in an educational programme in 5 years loaded on the same factor as aspiring employability (0.42). Pursuing further education may be one way of achieving aspiring employability. Because the analysis excluded employees younger than 24 years, this

potential bias on aspiring employability from those who worked prior to starting higher education, or while studying, was minimised.

The average score for perceived aspiring employability was 1.85 points on the 5-point Likert scale. Due to the small number of respondents who expected to be out of employment, basic employability was dichotomised at scores of 0 to <2 and ≥2 to 4. Seven percent of respondents considered it highly likely, somewhat likely or neither likely nor unlikely that they would be unemployed or labour market inactive 5 years after the time of the survey.

Independent variables

The explanatory variables in this analysis were education and scales for employer support for competence development and job—skills matching (see Appendix 1). The variable for education distinguished between four education levels, as follows: elementary education or high school education (reference group), vocational education, bachelor's degree and master's degree or higher. The scale for employer support consisted of four items (e.g. 'The employer facilitates skills development'), while the scale for job-related skills consisted of three items (e.g. 'You do not have enough competence to do your work tasks'). All items were scored on a 5-point Likert scale from Never (1) to Always (5). The scales were divided by the number of items.

Control variables

The regressions adjusted for variables that have been previously shown to be relevant, or variables that may be a confounding factor with the main independent variables of interest and aspiring and basic employability, respectively. The control variables are: age, business sector, part-time employment, work-related health, ambition level, previous unemployment history, job characteristics, working conditions and the quality of the job.

Appendix 1 provides a full account of all items used for the dependent, independent and control variables. Appendix 2 displays the descriptive statistics for the dependent

variables, independent variables and control variables. Table A2.1 lists mean and standard deviations for the continuous variables and shares for the categorical variables. Appendix 3 contains a full description of the control variables.

Method

Ordinary least squares (OLS) regression was used on the aspiring employability scale. OLS regression is a robust technique, and model diagnostics using different post-estimation tools confirmed that the model assumptions hold. The tests for homoscedastic errors showed some deviations from equal variance for the variables identifying working conditions and industry. Because these variables are control variables, heteroscedasticity was corrected with robust standard errors.

The measure for basic employability did not pass the OLS post-estimation tests. For that reason, the variable was dichotomised and a logistic analysis was used instead. The goodness of fit test showed that the logistic model had a good approximation of a logistic curve (p > 0.05) and that the model's ability to predict 0 and 1 values correctly was satisfactory (ROC area=0.8).

The logistic regression displayed odds ratios. An advantage of odds ratios is that the interaction terms are directly interpretable, as a positive interaction indicates an increase relative to the baseline odds of each group, while a negative interaction indicates the reverse (Buis, 2010). Additional calculations were performed to determine whether the significance of the interaction term changed across the distribution (see Appendix 4). A drawback of logistic regression is that coefficients cannot be compared across models due to unobserved heterogeneity. However, this does not apply when the results are presented as average marginal effects (AMEs; see Mood, 2010). The results from Table 2 are available as AMEs in Appendix 3.

Results

Results for aspiring employability

Table 1 presents the regression results for aspiring employability. Model 1 shows the main terms, and models 2 and 3 show the interaction terms (see Appendix 3 for the full models).

TABLE 1 here.

In model 1, there was a positive correlation between the employer's support for competence development and perceived aspiring employability. Respondents who had obtained sufficient training and whose employers facilitated access to training reported a stepwise increase in aspiring employability of 0.07 points. The coefficient for the job—skills match displayed no correlation with perceived aspiring employability. Respondents with a bachelor's or master's degree had a higher perceived aspiring employability compared with those who had elementary school or high school as their highest level of education (the reference category).

Model 2 in Table 1 was used to test whether the strength of the correlation between the employer's support for competence development depends on formal education levels. Figure 1 displays the interaction terms.

FIGURE 1 here.

The main term of the employer's support for competence development was significant, which implies that it affected career expectations among the lower-educated respondents. The main terms for vocational education, bachelor's and master's degrees were positive but insignificant. These terms referred to respondents whose employers never supported competence development. The interaction terms between the employer's support for competence development and formal education were only significant for master's degree holders, as seen in the slightly steeper increase of the line referring to master's degree holders in Figure 1. The results partially support hypothesis 1a.

Model 3 in Table 1 was used to test whether the correlation between aspiring employability and the job–skills match depended on respondents' education level. Figure 2 displays the interaction terms.

FIGURE 2 here.

The interaction between the job—skills match and education was significant, as bachelor's and master's degree holders had higher aspiring employability that was conditional on having a good job—skills match. This association is visible in Figure 2. The main terms for the job—skills match were negative — hence the downward slope for those with low education — but the coefficient was insignificant. The result supports hypothesis 1b.

Results for basic employability

Table 2 presents the regression results for basic employability. Model 1 shows the main terms, and models 2 to 4 show the interaction terms (see Appendix 3 for the full models).

TABLE 2 here.

The results from model 1 in Table 2 show that the employer's support for competence development had no statistically significant association with the likelihood of having basic employability. A good job—skills match increased the odds of perceiving basic employability by a ratio of 1.7%, adjusted for the other variables in the model. Respondents with bachelor's or master's degrees had higher odds of reporting perceived basic employment of 1.8% and 0.8%, respectively. Yet, the coefficient for having a master's degree was not significant due to a substantially larger standard error, which indicated more variability among master's degree holders.

Model 2 in Table 2 was used to test whether the association between the employer's support for competence development and basic employability is moderated by the respondents' level of education. In the results, there were no significant interaction terms³. Thus, hypothesis 2a is not supported.

Model 3 in Table 2 was employed to test whether the respondents' education level moderates the association between basic employability and the job—skills match. The results showed no significant interaction terms for education and the job—skills match⁴. Thus, hypothesis 2b is not supported.

Discussion

This study investigated the interdependencies of education, the job–skills match and the employer's support for competence development in self-perceived aspiring and basic employability. The three resources have been investigated in previous research, although this has often been done from a human capital perspective and in relation to an individual's perception that it is possible for him or her to enter a new job (DeVos et al., 2011; Wittekind et al., 2010). This study has drawn a distinction between the employee's perceptions of his or her ability to achieve a better job or maintain his or her current employment, and it has engaged different theoretical perspectives to illustrate the contingency between the different resources.

For aspiring employability, the model without interaction terms showed a significant relationship between education and aspiring employability, as well as between the employer's support for competence development and aspiring employability. These results are in line with those of previous research (DeVos et al., 2011; Wittekind et al., 2010), and they are commensurable with a human capital interpretation, wherein education and competence development are thought to independently increase employees' productivity. In this study, there was no direct relationship between the job–skills match and aspiring employability.

Based on the positional approach, the first two hypotheses were that the employer's support for competence development (hypothesis 1a) and job—skills match (hypothesis 1b) would be more important for highly educated persons' aspiring employability. The result supported hypotheses 1a and 1b. The contrast between the results in the models with and

without interaction terms is highly interesting. The main term of education lost significance in the interaction models. This suggests that higher education is not significantly related to aspiring employability among those who do not experience a good job—skills match or receive support for competence development from their employers. However, both the experience of being able to fulfil job requirements (i.e. job—skills match) and receiving the employer's support for competence development were significantly stronger for those with higher education. In line with the positional approach, the results suggest that education, the employer's support for competence development and the job—skills match are not merely additive resources, as could be expected from the human capital perspective; instead, they are interdependent. Because higher-educated employees can enter jobs with higher skill requirements, their aspiring employability also depends more on post-hire skills development. The findings thus support the theoretical argument that education is an entry ticket to employment, and mobility is achieved by acquiring more skills and training (Brown et al., 2003; Tomlinson, 2008).

The results for aspiring employability also showed interesting implications for employees with lower education. Although the employer's support for competence development benefitted the aspiring employability of all groups, this was not the case for the job—skills match. Having a good job—skills match did not increase perceived aspiring employability; in fact, those with low education who reported never being under-skilled on the job perceived that they had lower aspiring employability. A possible explanation for this result is that employees with low education, who are trained on the job, have obtained a high skill level based on experience, but their lack of formal education makes mobility difficult. Even internal mobility can be conditional on higher education, as senior positions tend to have specific educational requirements. This result is commensurable with the positional approach, as formal educational credentials take precedence in hiring. Education can then be seen not

only as an entry ticket into the labour market and an employee's first job, but also as necessary for future jobs and advancement in the labour market.

The analysis of self-perceived basic employability gave mixed results. The initial model without interaction terms showed that having a good job—skills match and having a bachelor's degree were significantly related to perceived basic employability. This finding corroborates the results of Wittekind et al. (2010), who found that respondents' job qualifications affected their belief that they could enter a new job. However, the finding does not support the hypothesis on the importance of employers' support or previous research by Wittekind et al. (2010), who concluded in favour of the importance of employers' support for achieving a new job.

The hypotheses that the employer's support for competence development (hypothesis 2a) and the job—skills match (hypothesis 2b) were less important for more educated persons' basic employability were not supported by the data. Thus, the results suggest an additive effect of the job—skills match and education (bachelor's degree). This is in line with the tenets of the human capital perspective, which suggests that education does not secure the employees' basic employability to such a degree that other resources are made redundant.

While education seemed to function as a protection mechanism by maintaining higher levels of basic employability to some extent, the results are not conclusive. The finding of higher basic employability among employees with a bachelor's degree in this research is in line with the results of previous studies on self-perceived employability (Berntson et al., 2006; Olsen, 2012; Wittekind et al., 2010). It is also in line with both the positional approach and the human capital perspective, which suggest that education is either an important entry ticket into employment or an important marketable skill.

Master's degree holders did not have significantly higher odds of reporting basic employability. Notably, the coefficient for master's degree holders was higher than that for

bachelor's degree holders, but the standard error was also substantially larger, indicating greater variation in this group. The hypotheses concerned education levels, not educational fields. According to the positional approach, employers show preference for employees with higher education due to a higher general skill level among this segment of the population. There are at least three possible explanations for the lack of a significant estimate for highly educated employees. First, the skill types associated with different fields of education vary, and typically, the higher the education level is, the more specialised the credential will be. Hence, employees with a master's degree can have high aspiring employability, but at the same time, perceive few opportunities to maintain employment if they were to lose their current job.

Second, the use of temporary employment is more widespread among highly educated people, especially those with master's and doctoral degrees (Nergaard, 2004). These employees are highly specialised and likely envision aspiring employability, while at the same time, they also perceive a possibility for unemployment that results in low basic employability.

A third explanation could be a negative selection mechanism if those who struggle to find employment after a bachelor's degree are more likely to return to university to obtain a master's degree. This would create a subgroup of employees with master's degrees who are either more at risk of unemployment or more aware of the possibility for unemployment for various reasons. Reimer et al. (2008) support this explanation in terms of humanities and social sciences degrees.

The Norwegian context provides an interesting case for understanding employability in a positive economic climate. As already stated, the Norwegian economy is characterised by the same developments as other Western economies, but with lower unemployment levels.

Thus, the challenges reported by Norwegian employees are likely more salient in other countries, where unemployment levels are higher.

The current study has some limitations that should be addressed in future research. First, it did not distinguish between internal and external employability, which have been shown to be relevant in previous research (Sanders and De Grip, 2004). An investigation of internal and external basic and aspiring employability would further highlight the complex nuances of the employability concept. For example, because current employers can assess the employees' productivity level more easily, it is possible that education is a more important signal for external basic employability, while skill level is more important for the employees' internal employability. It could also explain group differences if some employees are more likely to receive support for transferable skill development, while others are more likely to gain support for firm-specific skill development. Related to this, the current job may influence the perception of aspiring employability. Employees may be more likely to perceive having aspiring employability in organisations or occupations where there is a job ladder or hierarchy. Variations across occupations is a topic for future research.

Second, the study did not investigate the consequence of being overqualified, as the measure of the job—skills match captured a continuum from underqualified to having adequate skills for the job. Being overqualified in a position may indicate that the employee is prevented from advancing due, for example, to a lack of necessary credentials, few available positions in the field or having no desire to advance. This could explain why the present results do not support a general relationship between the job—skills match and aspiring employability.

Third, the theoretical model assumes that education, the job-skills match and support for competence development lead to higher aspiring and basic employability, but the empirical model cannot identify causal effects due to the lack of longitudinal data. In part,

previous research documented that the relationship operates in the expected direction (Wittekind et al., 2010). Nevertheless, it is likely that the causal effects would be lower than the observed correlations.

Conclusion

This study has made three contributions to the research field. First, the analysis confirms different results for the antecedents of aspiring and basic employability. Thus, the argument concerning the need for differentiation of the concept of employability in the research literature is supported. At least in part, education is positively related to both basic and aspiring employability. The employer's support for competence development, however, is associated with aspiring employability, while the job—skills match is associated with basic employability. Intuitively, this might reflect that the employer's support for competence development largely reflects mobility; employees are supported to enhance their skills to qualify for better jobs. In contrast, the job—skills match may largely reflect stability:

Employees are qualified for the job they have, thereby reducing the risk of losing it and increasing the probability of obtaining a similar job if necessary. The results shows that both constructs are relevant for the employees' perception of their attractiveness on the labour market, but they are distinct constructs that need to be investigated separately. Hence, the results contradict De Cuyper and De Witte's (2011) claim that those who perceive more employment opportunities also tend to perceive better employment opportunities.

Second, the results partially supports the importance of viewing the three antecedents in combination. The main terms indicates that higher education will increase employees' perception of aspiring employability throughout their career. However, further analysis nuances this picture by supporting the view that higher education will only positively enhance employees' aspiring employability when it is complemented with the employer's support for competence development. The results also clearly indicate that the employer's support for

competence development significantly increases aspiring employability among all employees. The total contribution of employers' support is more than twice as large as the contribution of having a master's degree. These results have implications for career management, as they suggest that more educated employees depend on skills acquisition to maintain a positive employment outlook. Without supervisor support, they will not continue to benefit from their education in terms of higher aspiring employability compared to employees with lower education. This shows that the employer has a key role in ensuring a strong labour market attachment throughout employees' working lives.

Third, this study expands on previous research by investigating the antecedents of employability among a representative sample of Norwegian employees. Most other studies on employability have focussed on specific sectors, businesses or firms, and so far, the Norwegian context has received limited attention. Because a population sample was used, the results showed that these antecedents predict employability across all sectors and across the life course.

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Conflict of Interest

No conflict of interest has been declared by the authors.

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¹ The YS EOS consists of a core questionnaire and rotating modules. The 2010 and 2013 data contain the information necessary to construct the scales.

² The average response rate for individuals in published studies is 52.7%, with a standard deviation of 20.4% (Baruch and Holtom, 2008).

³ Secondary analysis confirmed the lack of significant interactions.

⁴ Secondary analysis confirmed the lack of significant interactions.

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Author biographies

Ida Drange holds a PhD in Professional Studies and her research interests are wage development and job mobility among highly skilled workers, and particularly the labour market integration of highly educated immigrants. She is currently researching how labour market institutions affect occupational wage inequalities in Norway. Drange has published work in Journal of Education and Work, Sociology, European Sociological Review and Acta Sociologica.

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Tables and figures

Table 1: Regression Results for Aspiring Employability

Model 1	Model 2	Model 3
b/se	b/se	b/se
0.098***	0.071*	0.097***
(0.020)	(0.031)	(0.020)
0.009	0.008	-0.060
(0.024)	(0.026)	(0.037)
		-0.098
,	,	(0.162)
		-0.140
,	,	(0.157)
		-0.122
(0.054)	(0.134)	(0.205)
	,	
	,	
	(0.060)	
		0.079
		(0.058)
		0.119*
		(0.057)
		0.167*
		(0.075)
1.337***	1.385***	1.543***
(0.401)	(0.419)	(0.409)
27 %	27 %	27 %
3937	3937	3937
	b/se 0.098*** (0.020) 0.009 (0.024) 0.113** (0.039) 0.177*** (0.040) 0.322*** (0.054)	b/se b/se 0.098*** 0.071* (0.020) (0.031) 0.009 0.008 (0.024) (0.026) 0.113** 0.074 (0.039) (0.092) 0.177*** 0.113 (0.040) (0.095) 0.322*** 0.071 (0.054) (0.134) 0.021 (0.045) 0.033 (0.045) 0.121* (0.060) 1.337*** 1.385*** (0.401) (0.419) 27 % 27 %

^{*} *p* < 0.05, ** *p* < 0.01, *** *p* < 0.001

Figure 1: Interactions between education and the employer's support for competence development for aspiring employability.

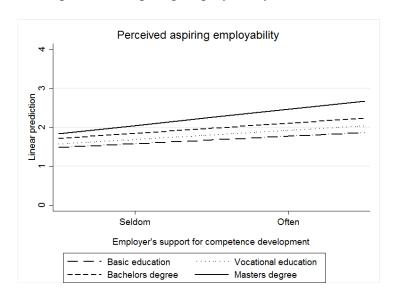


Figure 2: Interactions between education and job-skills match for aspiring employability.

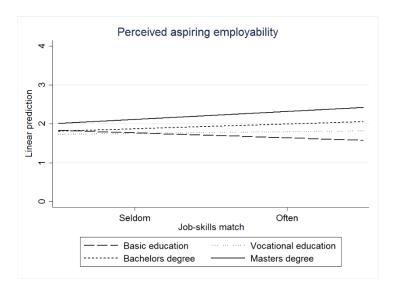


Table 2: Regression Results for Basic Employability

	Model 1	Model 2	Model 3
	OR/se	OR/se	OR/se
Employer's support for competence development	0.951	0.873	0.951
	(0.087)	(0.107)	(0.087)
Job-skills match	1.540***	1.553***	1.382*
	(0.164)	(0.166)	(0.212)
Vocational education	0.903	0.575	0.535
	(0.142)	(0.194)	(0.322)
Bachelor's degree	1.546*	1.275	0.671
	(0.310)	(0.557)	(0.478)
Master's degree	1.552	3.203	3.230
	(0.513)	(2.734)	(3.961)
Vocational education * Employer's support for competence development		1.311	
		(0.237)	
Bachelor's degree * Employer's support for competence development		1.122	
		(0.253)	
Master's degree * Employer's support for competence development		0.721	
		(0.258)	
Vocational education * Job–skills match			1.232
			(0.286)
Bachelor's degree * Job–skills match			1.405
			(0.396)
Master's degree * Job–skills match			0.744
			(0.341)
Constant	0.009**	0.011*	0.012*
	(0.016)	(0.021)	(0.022)
McFadden's pseudo- R^2	15%	15%	15%
N	3937	3937	3937

^{*} *p* < 0.05, ** *p* < 0.01, *** *p* < 0.001

Appendix 1: Scales and items

Table A1.1: Dependent, independent and control variables.

Scale	Item	Cronbach's	Item-test
		alpha	correlation
Aspiring employability	In five years: (highly likely-highly unlikely)	0.91	
	Hold a better paid job		
	Hold a job with more responsibility		
Basic employability	In five years: (highly likely-highly unlikely)	0.76	
	Be unemployed		
	Be inactive		
Job–skills match	How often do you experience that: (never–always)	0.64	
JOO-SKIIIS IIIateli		0.04	0.74
	You do not have enough competence to do your work tasks?		0.76
	It is difficult to fill the demands on your job?		0.76
	You are required to do tasks for which you do not have the skills?		0.78
Supervisor support	How often do you experience that: (never-always)	0.84	
	The employer facilitates skills development?		0.85
	The employer facilitates education?		0.88
	You receive sufficient training to do a good job?		0.74
	The employer is amenable to paying for skills development?		0.83
Job demands	How often: (never–always)	0.00	
Job demands		0.80	
	Is the work load uneven, causing work to accumulate?		0.79
	Is it necessary to work at a rapid pace?		0.79
	Do you have too much to do?		0.84
	Do you have to work overtime?		0.74
Working conditions	How often: (never-always)	0.65	
	Do you come home from work exhausted?		0.70
	Do you have to do hard physical work?		0.76
	Do you find your work stressful?		0.63
	Do you work in dangerous conditions?		0.71

Ambition level	How often do you experience that: (never-always)	0.68	
	You have competence and skills that you cannot use?		0.77
	The job correlates with your ambitions (reversed)?		0.77
	You wish for bigger challenges?		0.79
Job quality	Job description: (strongly agree–strongly disagree)	0.57	
	My job is secure		0.52
	My income is high		0.59
	My job is interesting		0.61
	I can work independently in my job		0.66
	I have a job with flexible work hours		0.68

Appendix 2: Descriptive statistics

Table A2.1: Descriptive Statistics (N = 3937).

Continuous variables	Mean	Std. dev.
Aspiring employability	1.85	0.02
Age	42.4	0.13
Employer's support for competence development	1.91	0.01
Job-skills match	2.66	0.01
Work-related health	1.04	0.02
Ambition level	1.80	0.01
Job quality	3.53	0.01
Working conditions	1.57	0.01
Job demands	2.29	0.01
Categorical variables	Shares	
Basic employability	0.93	
Gender		
Male	0.49	
Education level		
Basic education	0.37	
Vocational education	0.24	
Bachelor's degree	0.28	
Master's degree	0.12	
Previous unemployment history		
Unemployed < 6 months	0.20	
Unemployed ≥ 6 months	0.19	
Part-time employment	0.18	
Business industry		
Public administration	0.11	
Education	0.14	
Health and social services	0.15	
Manufacturing	0.25	
Sales and services	0.22	
Research and media	0.05	
Miscellaneous occupations	0.07	

Appendix 3: Regression tables

Appendix 3 provides the full regression tables, including control variables. Age was included as a quadric function, as age is a proxy measure for labour market experience. The business sector variable had six categories, as follows: public administration and services (reference category), education, health and social services, industry, sales and service occupations, research and media and miscellaneous occupations. A dummy variable identified part-time employment. Work-related health was measured with one item ('How likely is it that you will have to work less because of health issues?'), with responses of Highly Unlikely (1) to Highly Likely (5).

Displaying high aspiring employability may result in higher employer support for competence development in response; thus, ambitions were highly correlated with aspiring employability and the perception of the job—skills match and employer support. To alleviate this source of endogeneity, the models adjusted for employees' ambition level. Previous unemployment history was controlled for, as previously unemployed individuals may have a weaker labour market attachment. The analysis was also adjusted for job characteristics, such as job demands (e.g. 'How often is the workload uneven, causing work to accumulate?'), working conditions (e.g. 'How often do you come home from work exhausted?') and the quality of the job (e.g. 'My job is secure'). This is because these job characteristics may be a confounding factor with education and employer support for competence development.

Table A3.1: Regression table for aspiring employability

employability	Model 1 b/se	Model 2 b/se	Model 3 b/se
Employer's support for competence development	0.098***	0.071*	0.097***
Job–skills match	(0.020) 0.009	(0.031) 0.008	(0.020) -0.060
Education level (ref: Upper secondary education)	(0.024)	(0.026)	(0.037)
Vocational education	0.113** (0.039)	0.074 (0.092)	-0.098 (0.162)
Bachelor's degree	0.177***	0.113	-0.140
Master's degree	(0.040) 0.322*** (0.054)	(0.095) 0.071 (0.134)	(0.157) -0.122 (0.205)
Vocational education * Employer's support for competence development	(0.034)	0.021	(0.203)
Bachelor's degree * Employer's support for competence development		(0.045) 0.033 (0.045)	
Master's degree * Employer's support for competence development		0.121*	
Vocational education * Job–skills match		(====,	0.079 (0.058)
Bachelor's degree * Job–skills match			0.119* (0.057)
Master's degree * Job–skills match			0.167* (0.075)
Age	-0.030 (0.010)	-0.031 (0.010)	-0.031
Age squared	(0.019) -0.000	(0.019) -0.000	(0.018)
Work-related health	(0.000) -0.031*	(0.000) -0.032*	(0.000) -0.031*
Unemployment history (ref: no unemployment)	(0.015)	(0.016)	(0.015)
Unemployed < 6 months	0.126*** (0.038)	0.126*** (0.038)	0.125*** (0.038)
Unemployed > 6 months	0.050	0.050	0.051
Business industry (ref:	(0.039)	(0.039)	(0.039)
Education	-0.277*** (0.061)	-0.270*** (0.063)	-0.271*** (0.061)
Health and social services	-0.128*	-0.126*	-0.125*
Manufacturing	(0.061) 0.031	(0.061) 0.033	(0.061) 0.033
Manufacturing	(0.055)	(0.054)	(0.055)
Sales and services	0.097 (0.056)	0.099 (0.053)	0.102 (0.056)
Research and media	0.021	0.021	0.028
Miscellaneous occupation	(0.077) -0.064	(0.075) -0.063	(0.077) -0.061
Part-time	(0.070) -0.143***	(0.072) -0.145***	(0.070) -0.145***
Job demands	(0.040) 0.120***	(0.042) 0.120***	(0.040) 0.120***
Working conditions	(0.025) -0.116***	(0.027) -0.118***	(0.025) -0.116***
	(0.026) 0.174***	(0.028) 0.176***	(0.026) 0.173***
Job quality	(0.032)	(0.034)	(0.032)
Ambition level	0.502*** (0.024)	0.505*** (0.025)	0.498*** (0.024)
Constant	1.337***	1.385***	1.543***

	(0.401)	(0.419)	(0.409)
R^2	27 %	27 %	27 %
N	3937	3937	3937

Table A3.2: Regression Table for Basic Employability

Employer's support for competence development OR/se OR/se Job-skills match 0.951 0.873 0.951 Job-skills match 1.540*** 1.552*** 1.352** Job-skills match 0.064 (0.164) (0.165) 0.212* Education level (ref: Upper secondary education) 0.903 0.575 0.535 Bachelor's degree 1.546* 1.275 0.671 0.671 Master's degree 1.546* 1.275 0.671 0.671 0.671 0.672 0.671 0.672 0.671 0.672 0.671 0.671 0.672 0.671 0.671 0.672 0.671 0.672 0.671 0.672 0.671 0.672 0.671 0.672 0.671 0.672 0.671 0.672 0.671 0.672 0.671 0.672 0.671 0.672 0.672 0.671 0.672 0.672 0.671 0.672 0.672 0.672 0.672 0.672 0.672 0.672 0.672 0.672 0.672 0.628 0.628 <th></th> <th>Model 1</th> <th>Model 2</th> <th>Model 3</th>		Model 1	Model 2	Model 3
Dis-skills match 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540** 1,540		OR/se	OR/se	OR/se
Dis-skills match 1.543** 1.553** 1.382** 1.524** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525** 1.525	Employer's support for competence development	0.951	0.873	0.951
John-skills match		(0.087)	(0.107)	(0.087)
Education level (ref: Upper secondary education) Vocational education Vocational education Notational education Bachelor's degree Bachelor's degree Notational education Vocational education Notational education	Job–skills match	1.540***		
Education level (ref: Upper secondary education) 0,903 0,575 0,535 Vocational education 0,0142 (0,149) (0,149) (0,149) (0,149) (0,149) (0,149) (0,149) (0,149) (0,147) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170) (0,170		(0.164)	(0.166)	
Vocational education 0,034 0,154 0,124 Bachelor's degree 1,546* 1,279 0,671 Master's degree 1,552 2,030 3,230 Mostional education * Employer's support for competence development 1,031 (0,273) 3,901 Bachelor's degree * Employer's support for competence development 1,121 (0,237) 1,212 Master's degree * Employer's support for competence development 1,022 (0,258) 1,232 Master's degree * Employer's support for competence development 1,025 (0,286) 1,232 Master's degree * Job-skills match 1,025 (0,286) 1,405 (0,286) Bachelor's degree * Job-skills match 1,087 (0,286) 1,405 (0,286) Master's degree * Job-skills match 1,308** 1,308** 1,307** 1,405 (0,286) Mage Job-skills match 1,308** 1,308** 1,308** 1,307** 1,405 (0,286) (0,286) (0,286) (0,286) (0,286) (0,286) (0,286) (0,286) (0,286) (0,286) (0	Education level (ref: Upper secondary education)	(0.20.)	(0.200)	(/
Bachelor's degree 1.546* 1.275 0.671 Master's degree 1.550* 3.230 3.230 Vocational education * Employer's support for competence development 1.311 (0.310) (0.2734) Bachelor's degree * Employer's support for competence development 1.121 (0.253) Master's degree * Employer's support for competence development 1.122 (0.258) Vocational education * Job-skills match 1.232 (0.258) Bachelor's degree * Job-skills match 1.024 (0.396) Bachelor's degree * Job-skills match 1.308** 1.308** 1.307** Master's degree * Job-skills match 1.308** 1.308** 1.307** Mage 1.308** 1.308** 1.307** (0.396) Master's degree * Job-skills match (0.109) 0.0190 (0.396) (0.396) Master's degree * Job-skills match 1.308** 1.308** 1.307** (0.396) (0.396) (0.396) (0.396) (0.396) (0.396) (0.396) (0.396) (0.090) (0.090) (0.090) (0.090) (0.090) <		0 903	0 575	0 535
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Master's degree 1.552	Rachelor's degree	. ,		
Master's degree 1.552 3.203 3.230 Vocational education * Employer's support for competence development education * Employer's support for competence development in the competence of the competence development in the competence of the competence development in the competence of th	Buchelor 3 degree			
Vocational education * Employer's support for competence development (0.237) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.961) (3.	Master's degree			
Vocational education * Employer's support for competence development 1.311 Bachelor's degree * Employer's support for competence development 0.237) Master's degree * Employer's support for competence development 0.253) Master's degree * Employer's support for competence development 0.721 Vocational education * Job-skills match 1.302 Bachelor's degree * Job-skills match 1.405 Master's degree * Job-skills match 1.308** 1.308** Age 1.308** 1.308** 1.307** Master's degree * Job-skills match 0.099** 0.744 0.341 Age 1.308** 1.308** 1.308** 1.307** Work-related health 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.009 0.	Waster 3 degree			
Bachelor's degree * Employer's support for competence development 1.122 (0.253) Master's degree * Employer's support for competence development (0.258) Vocational education * Job−skills match (0.286) Bachelor's degree * Job−skills match (0.386) Bachelor's degree * Job−skills match (0.386) Master's degree * Job−skills match (0.396) Master's degree * Job−skills match (0.399) Master's degree * Job−skills match	Vacational adjustion * Employer's support for competence devalopment	(0.513)		(3.901)
Bachelor's degree * Employer's support for competence development 1.122 (0.253) Master's degree * Employer's support for competence development 0.273 (0.28) Vocational education * Job-skills match 1.232 (0.286) Bachelor's degree * Job-skills match 1.405 (0.286) Master's degree * Job-skills match 1.308** (0.34) Age 1.308** (0.109) (0.109) (0.109) (0.109) Age squared (0.09) (0.001) (0.001) (0.001) Work-related health 0.566*** (0.565*** (0.565***) (0.355***) (0.355***) Unemployment history (ref: no unemployment) (0.001) (0.001) (0.001) (0.001) Unemployed < 6 months	vocational education Employer's support for competence development			
Master's degree * Employer's support for competence development	Darkelanda da mara # Furnia and a sumant for a consistence development			
Master's degree * Employer's support for competence development 0,721 (0.258) Vocational education * Job-skills match 1,232 (0.286) Bachelor's degree * Job-skills match 1,405 (0.396) Master's degree * Job-skills match 1,308 (0.396) Age 1,308 (0.109) 1,307* (0.341) Age squared (0,109) (0,109) (0,109) Work-related health (0,001) (0,001) (0,001) Work-related health (0,003) (0,005) (0,001) Unemployment history (ref: no unemployment) (0,003) (0,001) (0,001) Unemployed < 6 months	Bachelor's degree * Employer's support for competence development			
Vocational education * Job-skills match (0.286) Bachelor's degree * Job-skills match 1.405 Master's degree * Job-skills match (0.396) Master's degree * Job-skills match 1.308** 1.307** Age 1.308** 1.303** 1.307** Age squared (0.109) (0.10) (0.010) Work-related health (0.035) (0.035) 0.035) Unemployment history (ref: no unemployment) (0.092) (0.091) (0.071) Unemployed < 6 months				
Vocational education * Job-skills match 1.232 (0.286) Bachelor's degree * Job-skills match 1.405 (0.396) Master's degree * Job-skills match 0.744 (0.341) Age 1.308** 1.303** 1.307** 1.307** Age squared 0.997** 0.997*** 0.997*** 0.997** 0.997*** Work-related health 0.566** 0.565** 0.568** 0.568** Unemployment history (ref: no unemployment) 0.035 (0.035) (0.035) 0.035 Unemployed < 6 months	Master's degree * Employer's support for competence development			
Bachelor's degree * Job−skills match Master's degree * Job−skills match Age 1.308** 1.303** 1.307** (0.109) (0.109) (0.109) (0.109) Age squared 1.001) (0.001) (0.001) (0.001) (0.001) Work-related health 1.002) (0.001) (0.001) (0.001) (0.001) Work-related health 1.00566** 0.565** 0.568** 0.568** 0.0035 (0.0035) (0.0035) (0.0035) Unemployment history (ref: no unemployment) Unemployed > 6 months 1.059** 0.559** 0.551** 0.561*** 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0000; 0.0			(0.258)	
Bachelor's degree * Job−skills match 1,405 (0.396) Master's degree * Job−skills match 1,308** 1,307** Age 1,308** 1,309** 1,307** Age squared 0,997*** 0,997*** 0,997*** Work-related health 0,566*** 0,565*** 0,568*** Unemployment history (ref: no unemployment) 0,002 (0,001) (0,002) Unemployed > 6 months 0,559*** 0,559*** 0,561*** Unemployed > 6 months 0,559*** 0,551*** 0,561*** Unemployed > 6 months 0,002 (0,001) (0,101) (0,101) Business industry (ref: public administration) 0,105 0,550*** 0,561*** Education 1,059 1,052 1,078 Health and social services 1,165 1,151 1,153 Health and social services 1,165 1,151 1,153 Ages and services 1,019 (0,128) (0,390) (0,390) Ages and services 0,640 0,640** 0,440** 0,442** 0,445** Ages and services 0,640 0,550** 0,010**	Vocational education * Job–skills match			_
Master's degree * Job-skills match Age 1.308** 1.308** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307** 1.307*				(0.286)
Master's degree * Job-skills match 0.744 (0.341) Age 1.308** 1.308** 1.307** Age squared 0.997*** 0.997*** 0.997*** Work-related health 0.566*** 0.566*** 0.568*** Unemployment history (ref: no unemployment) 0.035 0.035) 0.035) Unemployed < 6 months	Bachelor's degree * Job–skills match			1.405
Age 1.308** 1.308** 1.307** (.100				(0.396)
Age 1.308** 1.303** 1.307** Age squared (0.109) (0.109) (0.109) (0.109) Work-related health (0.907*** 0.997*** 0.997*** Work-related health (0.566*** 0.566*** 0.566*** 0.568*** Unemployment history (ref: no unemployment) 0.035 (0.035) (0.035) (0.035) Unemployed > 6 months 0.559*** 0.551*** 0.561*** Unemployed > 6 months 0.650* 0.649* 0.646* (0.110) (0.110) (0.110) (0.110) Business industry (ref: public administration) 1.059 1.052 1.078 Education 1.059 1.059 1.078 Health and social services 1.165 1.151 1.153 Health and social services 1.165 1.151 1.153 Manufacturing 0.446** 0.442** 0.445** Sales and services 0.648 0.641 0.647 Research and media 0.589 0.591 0.580 Miscellaneous occupations 0.729 0.716 0.736	Master's degree * Job–skills match			0.744
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Unemployment history (ref: no unemployment) 0.559*** 0.551*** 0.561*** Unemployed < 6 months	Work-related freatti			
Unemployed < 6 months	Unomployment history (ref: no unomployment)	(0.033)	(0.033)	(0.033)
Unemployed > 6 months		0 550***	0 551***	0 561***
Unemployed > 6 months 0.649* 0.649* 0.646* Business industry (ref: public administration) 1.059 1.052 1.078 Education 1.059 1.052 1.078 Health and social services 1.165 1.151 1.153 Manufacturing 0.446** 0.442** 0.445** Sales and services 0.648 0.641 0.647 Sales and media 0.593 (0.235) (0.230) Research and media 0.593 (0.235) (0.230) Miscellaneous occupations 0.729 0.716 0.736 Part-time 0.723 0.724 0.722 Job demands 0.976 0.976 0.983 Working conditions 0.931 0.933 0.930	onemployed < 6 months			
(0.110) (0.110) (0.110) (0.110)	Harmalanada Carantha			
Business industry (ref: public administration) Education 1.059 1.052 1.078 (0.365) (0.363) (0.373) Health and social services 1.165 1.151 1.153 (0.393) (0.389) (0.390) Manufacturing 0.446** 0.442** 0.445** (0.128) (0.127) (0.128) Sales and services 0.648 0.641 0.647 (0.193) (0.191) (0.193) Research and media 0.589 0.591 0.580 Miscellaneous occupations 0.729 0.716 0.736 Part-time 0.723 0.724 0.722 Job demands 0.976 0.976 0.983 Working conditions 0.931 0.933 0.930 Working conditions 0.931 0.933 0.930	Unemployed > 6 months			
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(0.365) (0.363) (0.373)				
Health and social services 1.165 1.151 1.153 Manufacturing 0.446** 0.442** 0.445** Column (0.128) (0.127) (0.128) Sales and services 0.648 0.641 0.647 Modern (0.193) (0.191) (0.193) Research and media 0.589 0.591 0.580 Miscellaneous occupations 0.729 0.716 0.736 Miscellaneous occupations 0.723 0.724 0.722 Part-time 0.723 0.724 0.722 Job demands 0.976 0.976 0.983 Working conditions 0.931 0.933 0.930 Working conditions 0.931 0.933 0.930	Education			
Manufacturing (0.393) (0.389) (0.390) Manufacturing 0.446** 0.442** 0.445** (0.128) (0.127) (0.128) Sales and services 0.648 0.641 0.647 (0.193) (0.191) (0.193) Research and media 0.589 0.591 0.580 (0.233) (0.235) (0.230) Miscellaneous occupations 0.729 0.716 0.736 (0.261) (0.256) (0.264) Part-time 0.723 0.724 0.722 Job demands 0.976 0.976 0.983 Working conditions 0.931 0.933 0.930 (0.105) (0.105) (0.105) (0.105)		(0.365)	(0.363)	(0.373)
Manufacturing 0.446** 0.442** 0.445** Sales and services 0.648 0.641 0.647 Research and media 0.589 0.591 0.580 Miscellaneous occupations 0.729 0.716 0.736 Part-time 0.723 0.724 0.722 Job demands 0.976 0.976 0.983 Working conditions 0.931 0.933 0.930 (0.105) (0.105) (0.105) (0.105)	Health and social services	1.165	1.151	1.153
Sales and services (0.128) (0.127) (0.128) Sales and services (0.648 0.641 0.647 (0.193) (0.191) (0.193) Research and media (0.589 0.591 0.580 (0.233) (0.235) (0.230) Miscellaneous occupations (0.261) (0.256) (0.264) Part-time (0.723 0.724 0.722 (0.124) (0.124) (0.124) Job demands (0.976 0.976 0.983 (0.115) (0.116) (0.116) Working conditions (0.931 0.933 0.930 (0.105) (0.105)		(0.393)	(0.389)	
Sales and services 0.648 (0.193) (0.191) (0.193) (0.191) (0.193) Research and media 0.589 (0.235) (0.235) (0.230) Miscellaneous occupations 0.729 (0.261) (0.256) (0.264) Part-time 0.723 (0.124) (0.124) (0.124) Job demands 0.976 (0.976 (0.983) (0.115) (0.116) (0.116) Working conditions 0.931 (0.933 (0.930) (0.105) (0.105)	Manufacturing	0.446**	0.442**	0.445**
(0.193) (0.191) (0.193) (0.193) (0.194) (0.193) (0.193) (0.233) (0.235) (0.230) (0.233) (0.235) (0.230) (0.261) (0.261) (0.266) (0.261) (0.266) (0.264) (0.124) (0.124) (0.124) (0.124) (0.124) (0.124) (0.124) (0.124) (0.124) (0.115) (0.116) (0.116) (0.116) (0.116) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105) (0.105)		(0.128)	(0.127)	(0.128)
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Research and media 0.589 0.591 0.580 Miscellaneous occupations 0.729 0.716 0.736 Part-time 0.723 0.724 0.722 Job demands 0.976 0.976 0.983 Working conditions 0.931 0.933 0.930 Working conditions 0.105 (0.105) (0.105)		(0.193)	(0.191)	(0.193)
Miscellaneous occupations 0.729 0.716 0.736 (0.261) (0.256) (0.264) Part-time 0.723 0.724 0.722 (0.124) (0.124) (0.124) Job demands 0.976 0.976 0.983 (0.115) (0.116) (0.116) Working conditions 0.931 0.933 0.930 (0.105) (0.105) (0.105)	Research and media			
Miscellaneous occupations 0.729 0.716 0.736 (0.261) (0.256) (0.264) Part-time 0.723 0.724 0.722 (0.124) (0.124) (0.124) Job demands 0.976 0.976 0.983 (0.115) (0.116) (0.116) Working conditions 0.931 0.933 0.930 (0.105) (0.105) (0.105)		(0.233)	(0.235)	(0.230)
Part-time (0.261) (0.256) (0.264)	Miscellaneous occupations			
Part-time 0.723 0.724 0.722 (0.124) (0.124) (0.124) (0.124) Job demands 0.976 0.976 0.983 (0.115) (0.116) (0.116) Working conditions 0.931 0.933 0.930 (0.105) (0.105) (0.105)				
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Job demands 0.976 0.976 0.983 (0.115) (0.116) (0.116) Working conditions 0.931 0.933 0.930 (0.105) (0.105) (0.105)	i dit time			
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Working conditions 0.931 0.933 0.930 (0.105) (0.105)	JOD GEHIGHUS			
(0.105) (0.105) (0.105)	Modelanosadelano			
	working conditions			
Job quality 1.956*** 1.947*** 1.957***				
	Job quality	1.956***	1.947***	1.957***

	(0.271)	(0.271)	(0.272)
Ambition level	0.785*	0.780*	0.779*
	(0.085)	(0.085)	(0.085)
Baseline	0.009**	0.011*	0.012*
	(0.016)	(0.021)	(0.022)
McFadden's pseudo-R ²	15 %	15 %	15 %
N	3937	3937	3937

^{*} p < 0.05, ** p < 0.01, *** p < 0.001

Table A3.3: Average Marginal Effects of Basic Employability Model 1 Model 2 Model 3

Employer's support for competence development	-0.001	-0.005	-0.001
Job–skills match	0.024	0.017	0.013
Vocational education	-0.006	-0.030	-0.084
Bachelor's degree	0,023	0.011	-0.037
Master's degree	0,025	0.023	0.037
Vocational education * Employer's support for competence development		0.009	
Bachelor's degree * Employer's support for competence development		-0.002	
Master's degree * Employer's support for competence development		-0.008	
Vocational education * Job-skills match			0.026
Bachelor's degree * Job–skills match			0.018
Master's degree * Job-skills match			0.008

Appendix 4: Interaction terms

We used the code developed by Matt Golder (http://mattgolder.com/interactions#code) to evaluate whether the interaction terms between education level and the employer's support for competence development created significant differences between the groups at any point of the probability distribution.

Figure A4.1 show the difference in perceived basic employability for employees with basic education and vocational education, bachelor's degrees and master's degrees, respectively, conditional on the employer's support for competence development. The x-axis is the employer's support for competence development, and the y-axis is the difference in predicted probabilities between the two educational groups being compared. As can be seen, the interaction between educational level and the employer's support is not significantly different from zero at any value of the employer's support.

Figure A4.1: Evaluation of interaction effects for education level and the employer's support for competence development.

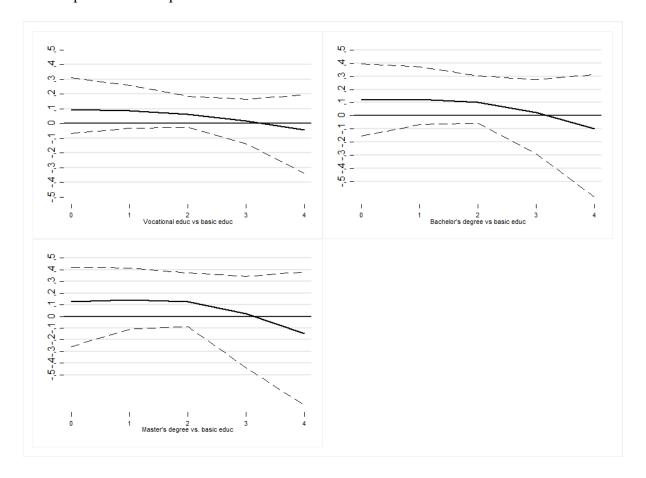
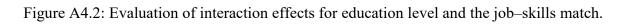
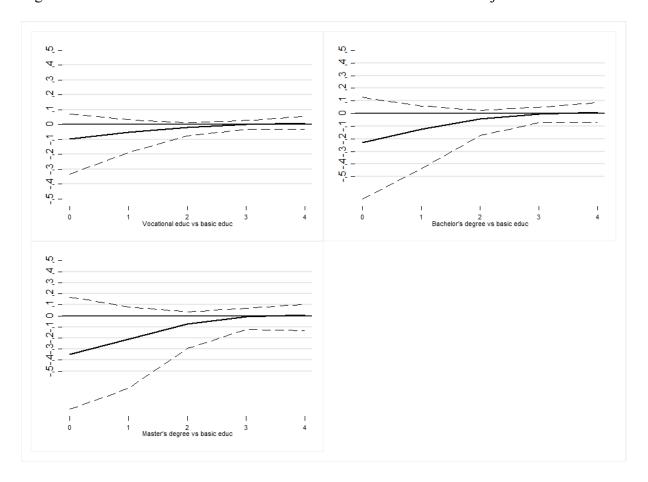


Figure A4.2 shows the difference in perceived basic employability for employees with basic education and vocational education, bachelor's degrees and master's degrees, respectively, conditional on the job—skills match. The x-axis is the job—skills match, and the y-axis is the difference in predicted probabilities between the two educational groups that are being compared. As can be seen, the interaction between education level and the job—skills match is not significantly different from zero at any value of the job—skills match. Hence, the conclusion from these plots is that the interaction effects observed in Table 2 are not significant at any point of the distribution.





Appendix 5: Distribution of employees with high/low basic and aspiring employability across business industries.

Table A5.1: The first column shows all employees, while the second and third column show employees with some tertiary education and no tertiary education, respectively. The scale on aspiring employability is dichotomized in table A1. Those who score in the range >3 – 4 have high aspiring employability. The statistics show that most employees (63%) have high basic employability, but lower aspiring employability. Employees working in the education industry, likely teachers, are overrepresented in this group. Industrial workers are overrepresented among employees with both low basic and aspiring employability, while the restaurant/service sector is overrepresented among the high basic and aspiring group, and the tourism sector is overrepresented among employees with low basic but high aspiring employability.

	High basic, Low aspiring		High	High basic, High aspiring			basic, Low as	piring	Low basic, High aspiring			
		tertiary	no tertiary		tertiary	no tertiary		tertiary	no tertiary		tertiary	no tertiary
	All	education	education	All	education	education	All	education	education	All	education	education
Public administration	68 %	57 %	80 %	24 %	36 %	10 %	7 %	6 %	9 %	1 %	2 %	1 %
Education	75 %	77 %	72 %	15 %	15 %	15 %	8 %	6 %	11 %	2 %	1 %	3 %
Health services	70 %	66 %	74 %	20 %	26 %	13 %	9 %	6 %	12 %	2 %	2 %	1 %
Social services	62 %	57 %	70 %	31 %	36 %	20 %	5 %	4 %	7 %	3 %	3 %	2 %
Care work	73 %	66 %	77 %	18 %	27 %	14 %	7 %	4 %	8 %	2 %	3 %	2 %
Social security (defense, police, guards)	65 %	56 %	69 %	27 %	39 %	21 %	7 %	5 %	8 %	1 %	0 %	1 %
Primary industries	58 %	38 %	64 %	27 %	47 %	21 %	12 %	9 %	13 %	3 %	6 %	2 %
Industrial/technical industries	62 %	52 %	64 %	21 %	37 %	18 %	14 %	7 %	15 %	2 %	4 %	2 %
Construction	59 %	64 %	58 %	24 %	31 %	23 %	13 %	5 %	15 %	4 %	1 %	4 %
Sales and private service	55 %	38 %	58 %	31 %	51 %	27 %	10 %	6 %	11 %	4 %	5 %	4 %
Transportation	66 %	61 %	67 %	18 %	29 %	16 %	13 %	9 %	14 %	3 %	1 %	4 %
Culture and sports	56 %	47 %	67 %	31 %	43 %	15 %	11 %	9 %	14 %	3 %	1 %	4 %
Media and advertising	60 %	51 %	65 %	27 %	43 %	18 %	11 %	6 %	13 %	2 %	0 %	3 %
Scientific research and development	57 %	54 %	69 %	32 %	37 %	17 %	6 %	4 %	14 %	4 %	5 %	0 %
Tourism	46 %	39 %	48 %	34 %	43 %	32 %	11 %	4 %	13 %	9 %	14 %	8 %
Restaurants	39 %	25 %	40 %	43 %	50 %	43 %	11 %	25 %	10 %	7 %	0 %	7 %
Telecommunication	50 %	48 %	51 %	37 %	44 %	32 %	9 %	6 %	12 %	4 %	1 %	6 %
Financial industry	64 %	53 %	73 %	25 %	41 %	14 %	8 %	4 %	10 %	3 %	2 %	3 %
Administrative and support service activities	58 %	47 %	64 %	29 %	39 %	23 %	10 %	10 %	11 %	2 %	4 %	2 %
Petroleum industry	54 %	44 %	59 %	34 %	48 %	28 %	8 %	4 %	9 %	4 %	4 %	3 %
Miscellaneous	64 %	55 %	69 %	22 %	35 %	16 %	10 %	8 %	12 %	3 %	2 %	3 %
Total	63 %	60 %	65 %	24 %	32 %	20 %	10 %	6 %	12 %	3 %	2 %	3 %