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Overeducation and Emigration Intention

The Effect of Overeducation on Emigration Intention among
Labour Migrants in The Netherlands: The Mediating Role of Job
Satisfaction and the Moderating Role of Gender

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Abstract

Overeducation is a critical factor in negatively affecting job satisfaction. In times of a tight labour market, it is critical that employees are satisfied with their jobs and that organisations retain as much human capital as possible. The current study focuses on the relationship between overeducation and emigration intention. Moreover, the research examined how this relationship is mediated by job satisfaction and moderated by gender. Three different theories were applied, the human capital theory, the psychological contract theory, and the social role theory of gender differences. A total of 1,626 labour migrants in the Netherlands in the 'Share My Voice' panel from Het Kenniscentrum Arbeidsmigranten were analysed to provide answers. After analysing through PROCESS macro models 4 and 8, the results demonstrated that overeducation and emigration intention were not significantly related. However, the study found evidence for a full mediation between overeducation, job satisfaction, and emigration intention. Furthermore, it was found that the relationship between overeducation and job satisfaction is moderated by gender, the other way around than we expected. Finally, the limitations and recommendations for future research are presented.

Keywords: overeducation, emigration intention, job satisfaction, gender, labour migrants

The Effect of Overeducation on Emigration Intentions among Labour Migrants in The Netherlands: The Mediating Role of Job Satisfaction and the Moderating Role of Gender

Labour immigration is one of the solutions to deal with current labour shortages. National governments are constantly looking for more effective programs to attract labour migrants who meet the demands of their economies (Sapeha, 2016). For example, the Dutch labour market is heavily reliant on the 767,571 labour migrants who now work in the country (ABU, 2021). Despite the interest in attracting labour migrants, not much attention is paid to retention strategies for migrants (Haque & Kim, 1995). The emigration of current labour migrants (back home or to a third country), also known as the flight of human capital, can result in a permanent decrease in income and growth of the host country (Haque & Kim, 1995). In this context, it is interesting to understand why migrant workers intend to return home or move on. Research implies that intentions are strong indicators of future behaviour (Van Dalen & Henkens, 2008). In this thesis, overeducation, job satisfaction, and gender are considered in the prediction of emigration intentions.

Overeducation – having a higher degree than is needed for the job people perform (Allen & Van der Velden, 2001) – is known to affect a variety of labour market outcomes, such as occupational choice, wages, job satisfaction, and employee turnover (Duncan & Hoffman, 1981; Hersch, 1991; Tsang & Levin, 1985; Viscus, 1979). Overeducation is a well-known term in migration studies and is known to increase the intention to emigrate (Wanner et al., 2021). The human capital theory explains the effect of overeducation on emigration intention (Becker, 1964). When the host country's labour market fails to match the expectations of overeducated labour migrants, they will look for possibilities in other countries and seriously contemplate emigration to convert their human capital into economic benefits (Pungas et al., 2012; Quinn & Rubb, 2005; Wanner et al., 2021).

One mechanism that explains why overeducated employees consider emigration, is their dissatisfaction with the job they do. Previous studies show that overeducation and job satisfaction are negatively related (Allen & Van der Velden, 2001; Lillo-Bañuls & Casado-Díaz, 2014; Sam, 2019). Furthermore, job dissatisfaction is in turn positively related to emigration intention (Aliyev et al., 2021; Kamali et al., 2020; Sharma et al., 2012). The mediating mechanism can be explained by the psychological contract theory of Rousseau (1989). When the psychological contract's expectations do not match reality, it can lead to negative cognitions (e.g., less job satisfaction), and this can in turn lead to withdrawal behaviour, such as the intention to leave the company or even the country (Johnson & O'Leary-Kelly, 2003; Manalel & Joy, 2016).

To date, little is known about how this mechanism is different for men and women. Following the social role theory of gender differences (Eagly, 1987), it could be assumed that women, compared to men, have different expectations regarding their psychological contract when finding an educational match.

By conducting this research, employers and governments gain new insights into the effect of overeducated labour migrants in their organisation on the emigration intention and thus on an eventual flight of human capital (Haque & Kim, 1995). Utilising employees' talents optimally is important in the current labour market and even more important is that labour migrants are willing to stay within the organisation or the country. Hence, the societal relevance of this research is that the insights gained from it could serve as a starting point for solutions in decreasing labour migrants' overeducation and turnover rates, which in turn can lead to less emigration (intentions).

The research question of this paper is as follows:

To what extent is overeducation related to labour migrants' emigration intention, is this relationship mediated by job satisfaction, and are these relationships moderated by gender?

Theoretical framework

Overeducation and Emigration Intention

Central in this section is why overeducation and emigration intention are related. Overeducation refers to individuals with a job that demands less education than they possess (Allen & Van der Velden, 2001; Bauer, 2002). Furthermore, the overeducation of labour migrants in their country of residence is associated with a higher intention to leave the country of residence (Pungas et al., 2012), also known as the concept of emigration intention.

The human capital theory explains the relationship between overeducation and emigration intention (Becker, 1964). Human capital is also known as the unique set of skills and abilities of an individual. Most of an individual's human capital is acquired via educational attainment and working experience (Borjas, 2013). According to the human capital theory, earnings are positively related to investments in human capital. Employees with high levels of human capital are more productive than employees with lower levels of human capital, and so earn relatively greater wages (Mincer, 1958). Furthermore, migrants may be able to accumulate human capital more quickly in their home country or another foreign country, or they can accumulate types of human capital that are simply not accessible in their host country (Jensen & Pedersen, 2007). When their host country's labour market fails to match their expectations, regarding the level of wages and/or the accumulation of human capital, overeducated labour migrants will look for possibilities in other countries and seriously contemplate emigration as a way to convert their human capital into economic benefits (Quinn & Rubb, 2005).

Empirical evidence has shown that overeducation causes employees to emigrate because of an inability to integrate into the local labour market (Wanner et al., 2021). This is especially true for people who have free mobility (EU27/EFTA migrants) because they can simply leave one EU nation to move to another. Quinn & Rubb (2005) found that overeducation is positively related to the decision to migrate, Mexicans who are overeducated are more likely to migrate. According to the research of Pungas et al. (2012), the overeducation of labour migrants in their country of residence is associated with a higher intention to leave the country of residence.

Building on the human capital theory (Becker, 1964) and empirical evidence (Pungas et al., 2012; Quinn & Rubb, 2005; Wanner et al., 2021), the following hypothesis is proposed:

Hypothesis 1: Overeducation is positively related to labour migrants' emigration intention.

The Mediating Effect of Job Satisfaction

One mechanism explaining the relationship between overeducation and emigration intention is through attitudinal processes. Overeducation is known to affect job satisfaction in a negative way (Tsang & Levin, 1985). Job satisfaction is defined as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976, p. 1304). In this research, we focus on the concept of global job satisfaction, which is concerned with workers' overall attitude toward their jobs (Bowling, 2014). Overeducation harms job satisfaction since workers' expectations about their social position and type of work are not met as they expected when they invested in their higher education (Capsada-Munsech, 2017). Employees who are not satisfied with their job are three times more likely to leave the country than employees who are satisfied with their job (Gödri & Feleky, 2019). Therefore, this research supposes that job satisfaction might be a possible mediator in the relationship between overeducation and emigration intention.

Theorising from the psychological contract theory (Rousseau, 1989), employees have certain expectations regarding the psychological contract's content. Psychological contracts are "individual beliefs in a reciprocal obligation between the individual and the organisation" (Rousseau, 1989, p. 121). According to Robinson et al. (1994), these individual beliefs refer to the intrinsic and extrinsic contributions of the employee (i.e., commitment, skills, and dedication) and organisational incentives

(i.e., rewards, promotion, and job security) between the exchange relation of awareness and perception. When expectations of employees regarding the content or level of their job are not met by the employer, for example, when they are overeducated in their current job, it can be said that a psychological contract breach or breach of expectations takes place (Robinson & Rousseau, 1994). This psychological contract breach can lead to negative cognitions, which can be linked to less job satisfaction (Johnson & O'Leary-Kelly, 2003). A meta-analysis by Zhao et al. (2007) confirmed that a perceived breach leads to less job satisfaction. A low level of job satisfaction in turn can lead to withdrawal behaviour (Manalel & Joy, 2016), which can be linked to the intention to leave the company or even the intention to emigrate.

Hence, according to the psychological contract theory (Rousseau, 1989), overeducation will decrease job satisfaction, which in turn will increase the emigration intention. This line of reasoning is supported by empirical evidence, which found that overeducation is negatively related to job satisfaction (Bedemariam & Ramos, 2021; Lillo-Bañuls & Casado-Díaz, 2014; Sam, 2019), and job satisfaction is negatively related to emigration intention (Aliyev et al., 2021; Kamali et al., 2020; Sharma et al., 2012). Because a main effect is expected between overeducation and emigration intention, a partial mediation by job satisfaction is expected (Shrout & Bolger, 2002). This leads to the second hypothesis:

Hypothesis 2: The relationship between overeducation and labour migrants' emigration intention is partially mediated by job satisfaction.

Gender Differences

In this section, it is argued why gender differences affect the overall relation between overeducation and emigration intention, as well as the relation between overeducation and job satisfaction. The social role theory of gender differences (Eagly, 1987) explains why gender affects these relationships. The theory states that men and women are assigned different roles within social systems and are judged based on differing expectations of how they should act (Eagly, 1987). Women are traditionally expected to fulfil the role of housewives (i.e., raising children and cleaning the house), thus are more family oriented (Shihadeh, 1991), whilst men are supposed to play the role of family providers (i.e., being breadwinners) (Eagly & Wood, 2012). Women are still conditioned to believe that being a wife and raising a family comes first in life, with financial freedom and career advancement coming second (Gilbert, 1993; Tabassum & Nayak, 2021). Therefore, according to the theory, it is expected that women's emigration choices depend more on their families and partners rather than on an educational mismatch. This is in line with previous research by Wanner (2019), who found that female migrants report familial reasons for migration far more frequently than male migrants, and being a woman tends to significantly reduce the likelihood of emigration. Men who accepted an occupation that is less qualified than their level of education, and thus are overeducated, are more likely to express emigration intentions than women (Paparusso & Ambrosetti, 2017).

Based on the social role theory of gender differences (Eagly, 1987) and empirical evidence (Paparusso & Ambrosetti, 2017), the third hypothesis is constructed:

Hypothesis 3: Gender moderates the relationship between overeducation and emigration intention, in such a way that the effect of overeducation on emigration intention is stronger for men than for women.

Previous studies found that there was a significant gender difference when researching the relationship between overeducation and job satisfaction. Namely, the negative effect of overeducation on job satisfaction was stronger for men than for women (Lillo-Bañuls & Casado-Díaz, 2014; Sam, 2019; Voces & Cainzos, 2020). According to the social role theory of gender differences (Eagly, 1987), men and women feel and act differently because of different extrinsic expectations. Women's primary motivation for working is something other than finding a job that matches their skill set because overeducated women are far less likely to be significantly dissatisfied with their job than women who have well-matched jobs (Fleming & Kler, 2014). This effect is stronger for women with children compared to women without children. The presence of children may make a difference for overeducated women, as the ability to

perform both domestic and external activities may outweigh any lingering dissatisfaction with being in a job that does not fully utilise their qualifications, because they can still work while caring for their families (Fleming & Kler, 2014). This is in line with our previous reasoning because women are expected to be more family-oriented than men (Shihadeh, 1991). Furthermore, research among university graduates in Cambodia states that women reported higher levels of happiness at work because they prefer more fulfilling jobs, are more passionate, and have fewer aspirations and expectations about their job (Sam, 2019).

When we link the social role theory of gender differences (Eagly, 1987) to the psychological contract theory (Rousseau, 1989), it can be assumed that women have different expectations regarding their psychological contract when finding an educational match, compared to men. According to the theories (Eagly, 1987; Rousseau 1989) and empirical evidence (Lillo-Bañuls & Casado-Díaz, 2014; Sam, 2019; Voces & Caínzos, 2020), the following hypothesis is expected:

Hypothesis 4: Gender moderates the relationship between overeducation and job satisfaction, in such a way that the negative relationship between overeducation and job satisfaction is stronger for men than for women.

Figure 1

Conceptual Model



Methods

Research design

A quantitative and cross-sectional research design was used for this study; the latter implies that data was collected from individuals chosen to reflect a certain target group at a specific point in time (Straits & Singleton, 2018). Furthermore, this study is explanatory since the relationships in the conceptual model are tested and described extensively (Straits & Singleton, 2018).

Procedure

This paper uses secondary quantitative data from Het Kenniscentrum Arbeidsmigranten. They collect, compile, and enrich knowledge and expertise on the position of labour migrants in the labour market, economy, and society, especially in the Netherlands. They collect data from the panel 'Share My Voice' (Het Kenniscentrum Arbeidsmigranten, 2022). At the beginning of 2021, the data was collected via an online questionnaire and is handled confidentially. The research group was in contact with Dr. Jan Cremers, who collected the quantitative data via the I&O research bureau. The research data provides a first insight into several relevant categories of labour migrants who are employed in the Dutch labour market, especially because it includes both their (objective) situation and how they (subjectively) experience and perceive that situation. As a result, the findings might provide insight into the population's ideas and motives (Cremers & Van den Tillaart, 2021). The research group was expected to keep the data obtained confidential.

Table 1 Demographic Characteristics (N = 1100)

Measure	N	%
Age		
18 - 24 years	37	3.4
25 - 34 years	424	38.5
35 - 49 years	492	44.7
50 - 64 years	134	12.2
65 + years	13	1.2
Gender		
Men	572	52
Women	528	48
Country of Origin		
EU	645	58.6
Non-EU	455	41.4
Wage		
Low (€0 - €1,999)	320	29.1
Middle (€2,000 - €2,999)	213	19.4
High (€3,000 or more)	567	51.5

Sample

The raw data file consisted of 1,626 labour migrants in the Netherlands. After listwise deletion, the research sample consisted of 1,100 labour migrants. The participants were exclusively recruited for the labour migrant panel and were not approached for other studies. The participants have been contacted through a communication campaign (Cremers & Van den Tillaart, 2021). The sample is a non-probability

sample in which individuals have an unequal chance of being selected. More specifically, this is a voluntary research design in which individuals participate voluntarily (Vehovar et al., 2016). Consequently, not all labour migrants in the Netherlands were able to participate in the research. Therefore, the research data does not provide a representative picture of all labour migrants in the Netherlands as the sample consists of only 0.2 percent of the total number of labour migrants residing in the Netherlands (ABU, 2021). Additionally, because certain participants are more willing to volunteer than others, this design is potentially biased (Vehovar et al., 2016). The demographic characteristics of the final research sample are presented in Table 1.

Measurement

All concepts of the conceptual model are measured in an online questionnaire by Het Kenniscentrum Arbeidsmigranten.

Overeducation

Overeducation was measured by comparing two different questions in the questionnaire. The first question was "Could you use the categories below to indicate the profession for which you were qualified in your country of origin?". The second question was "Could you use the categories below to indicate the profession that you practice in the Netherlands?". With these two questions, insight is gained into the difference between the occupational category for which the migrant worker was educated in the country of origin and in which occupational category they are employed in the Netherlands. When the labour migrant's educational level is approximately higher than where they are employed, we speak of the term 'overeducation'. Defining overeducation using these questions regarding the labour migrant's occupational category is not preferred, but it is common (Joona et al., 2014). The recoding of answer categories into the different levels is displayed in Table 2.

Table 2 Response Categories Overeducation

Response category	Level
(1) Advanced intellectual or liberal profession (e.g., architect, doctor, scientific researcher, university lecturer, engineer)	High
(2) Advanced managerial profession (e.g., manager, director, owner of a large company, senior civil servant)	High
(3) Secondary intellectual or liberal profession (e.g., teacher, artist, nurse, social worker, policy officer)	Middle
(4) Secondary managerial or commercial profession (e.g., sales manager, department manager, or retailer)	Middle
(5) Other non-manual labour (e.g., administration officer, accountant, salesman, family carer)	Middle
(6) Qualified and supervisory manual labour (e.g., car mechanic, foreman, electrician)	Middle
(7) Semi-trained manual labour (e.g., driver, factory worker, carpenter, baker)	Low
(8) Unqualified and self-learned manual labour (e.g., cleaner, packer)	Low
(9) Agricultural profession (e.g., farm labourer, independent farmer)	Low
(10) I don't know	Missing value
(11) Not applicable/not working	Missing value

In measuring an individual's overeducation (OV_i^*), the formula of Verhaest and Omey (2010) was used. They define being overeducated (OV_i^*) if the educational level e_i^* is higher than the degree of education required to do the job r_i^* . For example, when a labour migrant is working in the Netherlands as a cleaner ($r_i^* = 1$, Low), and in their country of origin they were employed as a professor ($e_i^* = 3$, High), it can be stated that the labour migrant is overeducated in their role as a cleaner ($OV_i^* = e_i^* > r_i^* = 3 > 1$). Table 3 shows the different categories, formulas, scores, and descriptive statistics. Hence, it can be concluded that 22.2 percent of the sample is overeducated.

Table 3 Descriptive Statistics Job-Matched, Undereducation, and Overeducation

Category	Formula	Score	N	%
Job-matched	$e_i^* = r_i^*$	0	819	74.5
Undereducated	$e_i^* < r_i^*$	0	37	3.4
Overeducated	$e_i^* > r_i^*$	1	244	22.2
Total			1100	100

Emigration Intention

Emigration intention was measured with the question: "Do you also expect to stay in the Netherlands in the future?" There were eight response options (1) Yes, I would like to stay in the Netherlands, (2) No, I want to return to my country of origin within three months, (3) No, I want to return to my country of origin within three months to a year, (4) No, I want to return to my country of origin within 1 to 3 years, (5) No, I want to return to my country of origin within 3 to 5 years, (6) No, I want to return to my country of origin within a period longer than 5 years, (7) No, I want to go to another country, and (8) I do not know yet. When answer 1 is given, it is assumed that there is no emigration intention. When the answers 2, 3, 4, 5, 6, and 7 are given, it is assumed that there is an emigration intention. Therefore, response option 1 is recoded in 'No' (0), and response options 2 to 7 in 'Yes' (1). Response option 8 is recoded into a missing value, which was deleted listwise. The descriptive statistics show that 386 labour migrants have an emigration intention, in comparison to 714 labour migrants, who do not have an emigration intention.

Job Satisfaction

Job satisfaction was measured with the following statement: "I am satisfied with my current job and working conditions". In previous research, the statements "I am satisfied with my current job" and "I am satisfied with my working conditions" are used to measure the concept of job satisfaction (Roelen et al., 2008). In the research of Cremers and Van den Tillaart (2021), these two statements are combined. Answers were collected using a five-point Likert scale, ranging from: completely disagree (1 point) to completely agree (5 points). The response option 'don't know/no opinion' is recoded into a missing value, which was deleted listwise. The scores were used in the study, with higher scores indicating better levels of job satisfaction. Because job satisfaction is a one-item scale, no reliability testing, or factor analysis could be performed. Nevertheless, Dolbier et al. (2005) determined that just utilising one item to test reliability and validity for job satisfaction is appropriate. Additionally, a meta-analysis by Wanous et al. (1997) found single-item measures for job satisfaction to be acceptable.

Gender

Gender was measured by the question "What is your gender", the answer options are (1) Man, (2) Woman, (3) Other, and (4) Would rather not say. The answer options 3 and 4 are interpreted as missing values, which were deleted listwise.

Control variables

Control variables were added to the analyses to detect possible spurious relationships. The control variables were age, sector, country of origin, and wage.

Age. Age was measured as a categorical variable, the answer options are (1) 18-24, (2) 25-34, (3) 35-49, (4) 50-64, and (5) 65+. Age is known to affect emigration intentions. The younger the individual, the more likely the intention to emigrate (Van Dalen & Henkens, 2008). Canache et al. (2013) also found that when age increases, the emigration intention decreases. According to Wanner (2020), this does depend on the migrant worker's age when he or she arrived in the nation and the degree to which the migrant is integrated into the country. Besides, age is also known to affect job satisfaction, in such a way that the older people get, the more satisfied they are with their job (Dobrow Riza et al., 2016). Therefore, age is used as a control variable in this study and is normally distributed in our sample.

Sector. The sector in which the labour migrant operates was measured by a categorical variable with 16 answer options, which were recoded into five different categories. In Table 4 the different response options and sectors are shown.

Table 4 Response Categories Sector

Response Category	Sector
(1) Agriculture, forestry	Primary
(2) Industry and production	Secondary
(3) Construction	Secondary
(4) Wholesale and retail	Tertiary
(5) Transport, distribution, and logistics	Tertiary
(6) ICT	Tertiary
(7) Financial sector	Tertiary
(8) Business services	Tertiary
(9) Justice, security, and public administration	Quaternary
(10) Education	Quaternary
(11) Healthcare and well-being	Quaternary
(12) Culture, sport, and recreation	Tertiary
(13) Other services	Other
(14) Other sector	Other
(15) I don't know	Other
(16) Not applicable/not working	Other

Because there are five categories, four dummy variables were created, where the primary sector is the reference category. The chance of being overeducated varies significantly between economic sectors, with workers in the service sector being less likely to be overeducated than those in manufacturing or agriculture (Morano, 2014). Besides, levels of job satisfaction tend to differ among different sectors (Sharma & Gupta, 2020). Therefore, the sector is used as a control variable in this study. Table 5 shows the descriptive statistics.

Table 5 Descriptive Statistics Sector

Category	N	%
Primary sector	46	4.2
Secondary sector	256	23.3
Tertiary sector	533	48.5
Quaternary sector	110	10
Other	155	14.1
Total	1100	100

Country of Origin. The country of origin was measured by the item: "What is your country of origin?" The responses were recoded into (0) EU, and (1) non-EU. Freedom of movement and open borders could influence the intention to emigrate among labour migrants (Bonifazi & Paparusso, 2018). Therefore, the country of origin is used as a control variable.

Wage. The wage was measured by one item: "What is your personal monthly gross salary? In this case, we mean the amount before tax has been deducted, based on a full-time job. You can provide an estimate if you do not know the exact amount.". This item and the corresponding response options were separated by age. Labour migrants under the age of 30 had different response options than migrants older than 30. Individuals under the age of 30 had the following response options: (1) Less than 1,000 euros, (2) €1,000 - €1,499, (3) €1,500 - €1,999, (4) €2,000 - €2,499, (5) €2,500 - €2,999, (6) €3,000 - €3,380, (7) €3,381 or more, (8) I do not want to say. Individuals older than 30 had these answer options: (1) Less than €1,000, (2) €1,000 - €1,499, (3) €1,500 - €1,999, (4) €2,000 - €2,499, (5) €2,500 - €2,999, (6) € 3.000 - € 3.499, (7) € 3.500 - € 3.999, (8) € 4.000 - € 4.611, (9) € 4.612 or more, and (10) I do not want to say. These items are merged and recoded into (1 - low) €0 - €1,999, (2 - middle) €2,000 - €2,999, (3 - high) €3,000 or more. The response option 'I do not want to say' was recoded into missing values, which was deleted listwise. Wages are widely acknowledged to be an important driver of job satisfaction (Díaz-Serrano & Cabral Vieira, 2005; Ehsan Malik et al., 2012). Therefore, the wage is used as a control variable in this study. See Appendix A for a more detailed measure description.

Analysis

IBM SPSS Statistics 28 was used to analyse the data. First, irrelevant survey questions were deleted from the data file. The remaining survey questions were then recoded into (model) variables. Missing values were deleted listwise, reducing the research sample from 1,626 to 1,100 labour migrants. After that, the data was controlled for normality, outliers, missing values, and errors by using histograms and frequency tables. Dummy variables were created for age, sector, and wage. Furthermore, before the model was tested, a correlation table, including mean scores, standard deviations, and Pearson correlation (r) was calculated to detect potential multicollinearity and provide insights into the relationships between the variables. Because age, sector, and wage are dummies with three or more categories, a Chi-square test was conducted, to check whether the variables were related.

To test the main and moderation effect of gender on the relationship between overeducation and emigration intention, the mediation effect of job satisfaction and the effect of gender on this PROCESS model 4 and 8 developed by Hayes (2013) was used to conduct the (logistic) regression analyses. A relation is significant when $p < 0.05$.

Finally, to determine the output of a significant interaction (moderation) effect the interaction was plotted. For confirmation of hypothesis 4, it was expected that the line for men will most likely be steeper than for women.

Results

Descriptive statistics and correlations

Table 6 presents the means, standard deviations, and correlations of the variables of this research, excluding the dummy variables. It shows a positive significant correlation between overeducation and emigration intention ($r = .061, p < .05$). Furthermore, overeducation and job satisfaction are negatively significantly correlated ($r = -.195, p < .01$). Additionally, a negative significant correlation exists between job satisfaction and emigration intention ($r = -.139, p < .01$). Moreover, moderator variable gender and overeducation are positively significantly correlated, thus women seem to be more overeducated than men ($r = .131, p < .01$). Besides, a negative significant correlation exists between the control variable country of origin and overeducation ($r = -.240, p < .01$), emigration intention ($r = -.130, p < .01$), and gender ($r = -.086, p < .01$). Hence, labour migrants originated from the EU are more overeducated, have stronger emigration intention and are more likely to be a woman.

Table 6 Means, Standard Deviations, and Correlations ($N = 1100$)

Measures	M/%	SD	1	2	3	4	5
1. Overeducation	.222	.416	1				
2. Emigration intention	.351	.477	.061*	1			
3. Job Satisfaction	3.825	1.168	-.195**	-.139**	1		
4. Gender (men)	.480	.500	.131**	-.058	-.022	1	
5. Country of origin (EU)	.414	.493	-.240**	-.130**	.035	-.086**	1

Note. Overeducation (0 = not overeducated, 1 = overeducated), Emigration intention (0 = No Emigration Intention, 1 = Emigration Intention), Job Satisfaction (1-5), Gender (0 = men, 1 = women), Country of origin (0 = EU, 1 = non-EU)

** . Correlation is significant at the 0.01 level (2-tailed)

* . Correlation is significant at the 0.05 level (2-tailed)

To analyse the relationships between the dummy variables and the other model variables, a Chi-Square test of Independence (χ^2) was performed, Table 7 presents the results. It shows that overeducation significantly differs within the different categories of age $\chi^2(4, N = 1100) = 28.866, p < .01$, sector $\chi^2(4, N = 1100) = 29.890, p < .01$, and wage $\chi^2(2, N = 1100) = 205.724, p < .01$. This means that those variables are associated. It can be concluded that 48.8 percent of the people who are overeducated are 34 years or younger. Besides, 61.9 percent of overeducated labour migrants have a low income, and 50.4 percent are working in the tertiary sector. Emigration intention also significantly differs within age categories $\chi^2(4, N = 1100) = 18.679, p < .01$, where 50.3 percent of the labour migrants who have an emigration intention are 34 years or younger. Moreover, the relation between job satisfaction and wage is found to be significant $\chi^2(8, N = 1100) = 81.826, p < .01$, which confirms the distribution of wages within the different levels of job satisfaction, namely that higher wage is associated with higher job satisfaction. Besides, job satisfaction significantly differs within the different categories of age $\chi^2(16, N = 1100) = 27.787, p < .05$, and sector $\chi^2(16, N = 1100) = 27.881, p < .05$. The last model variable gender differs significantly within sector $\chi^2(4, N = 1100) = 36.980, p < .01$, and wage $\chi^2(2, N = 1100) = 31.465, p < .01$, which means that those variables are associated. It can be concluded that 43.8 percent of women and 58.7 percent of men have a high wage. Further results can be found in Table 7 and Appendix B.

Table 7 Chi-Square Test of Independence (χ^2)($N = 1100$)

Variables	Age	Sector	Wage
1. Overeducation	28.866**	29.890**	205.724**
2. Emigration Intention	18.679**	6.281	5.285
3. Job Satisfaction	27.787*	27.881*	81.826**
4. Gender	5.139	36.982**	31.465**
5. Country of Origin	35.422**	73.657**	181.256**
6. Age	-	-	-
7. Sector	47.254**	-	-
8. Wage	116.380**	59.352**	-

Note. **. Pearson Chi-Square is significant at the 0.01 level (2-tailed)

*. Pearson Chi-Square is significant at the 0.05 level (2-tailed)

After running the Chi-Square test of Independence, a linear regression analysis was conducted, to check multicollinearity. The dependent variable here was emigration intentions and all the other model variables were seen as independent variables. It was found that all VIF values are below 10, so there is no multicollinearity between variables in the model.

Model and hypothesis testing

As aforementioned, the hypotheses were tested by using models 4 and 8 of Hayes (2013) PROCESS macro. The results of the analyses can be found in Tables 8 to 11. Because the interaction term of gender influences the mediation in model 8 (see Tables 8 and 9), model 4 was added to the analysis to test the mediation, leaving out the interaction term of gender.

Hypothesis 1 stated that overeducation is positively related to labour migrants' emigration intention. To test this hypothesis, the moderated mediation model 8 of PROCESS macro was used, see Table 9. The results show that the direct relationship between overeducation and emigration intention is positive but not significant ($B = .064$, $p > .05$). Therefore, hypothesis 1 is not supported. This means that overeducation is not positively significantly related to emigration intention.

To test hypothesis 2, the PROCESS macro analysis mediation model 4 (Hayes, 2013) was used, see Tables 10 and 11. Hypothesis 2 stated that the relationship between overeducation and labour migrants' emigration intention is partially mediated by job satisfaction. The results show that overeducation has a significant negative effect on job satisfaction (a path) ($B = -.305$, $p < .01$), and job satisfaction in turn significantly negatively affects emigration intention (b path) ($B = -.250$, $p < .01$). The results indicated that the indirect effect (ab unstandardised = .076) between overeducation and emigration intention through job satisfaction was significant (a bias-corrected bootstrap confidence interval with 5,000 bootstraps did not include zero [.026 to .146]). Therefore, the results indicated that labour migrants who are overeducated have a lower level of job satisfaction, which in turn was negatively linked to emigration intention. Moreover, the result showed a full mediation because the c' path was not statistically significant (Morera & Castro, 2013). Thus, the result did not support hypothesis 2, which stated that the relationship between overeducation and emigration intention would be partially mediated by job satisfaction.

Hypothesis 3 stated that gender moderates the relationship between overeducation and emigration intention, in such a way that the effect of overeducation on emigration intention is stronger for men than for women, PROCESS macro analysis moderated mediation model 8 (Hayes, 2013) was used to test this hypothesis. Based on the logistic regression analysis in Table 9, there was no significant relationship found between overeducation and emigration intention moderated by gender ($B = .044$, $p > .05$). Therefore, the third hypothesis is rejected.

Hypothesis 4 stated that gender moderates the relationship between overeducation and job satisfaction, in such a way that the negative relationship between overeducation and job satisfaction is stronger for men than for women. The results show that gender does significantly moderate the relationship between overeducation and job satisfaction ($B = -.369, p < .05$), see Table 8. Although hypothesis 4 is not supported because the negative relationship is stronger for women than for men, the interaction plot is shown in Figure 2.

Table 8 PROCESS Macro Model 8, Part 1: Analysis Results to Test Hypothesis 4 ($N = 1100$)

Predictor Variable	B	SE	t	R ²
<i>Model 1: Effect on Job Satisfaction (MED)</i>				
<i>F(14) = 8.237</i>				.096**
Constant	3.632**	.249	14.573	
Overeducation	-.098	.131	-.747	
Gender (men)	.147	.079	1.862	
Overeducation x Gender	-.369*	.166	-2.218	
Age (25 - 34 years)	-.299	.197	-1.519	
Age (35 - 49 years)	-.277	.198	-1.399	
Age (50 - 64 years)	-.134	.212	-.630	
Age (65+ years)	.268	.364	.736	
Sector (secondary sector)	.141	.182	.776	
Sector (tertiary sector)	.115	.178	.647	
Sector (quaternarily sector)	.163	.204	.801	
Sector (other sector)	.069	.193	.355	
Country of origin (EU)	-.200**	.077	-2.593	
Wage (middle)	.284**	.103	2.762	
Wage (high)	.695**	.096	7.281	

Note. Bootstrap sample size = 5,000. Unstandardised regression coefficients are reported.

** $p < .01$, * $p < .05$ (2-tailed).

Table 9 PROCESS Macro Model 8, Part 2: Analysis Results to Test Hypotheses 1 and 3 ($N = 1100$)

Predictor Variable	B	SE	z	-2LL
<i>Model 2: Effect on Emigration Intention (Y)</i>				1361.605**
Constant	1.326**	.506	2.618	
Overeducation	.064	.243	.263	
Job Satisfaction	-.249**	.058	-4.322	
Gender (men)	-.325*	.155	-2.098	
Overeducation x Gender	.044	.314	.139	
Age (25 - 34 years)	-.101	.362	-.279	
Age (35 - 49 years)	-.676	.366	-1.848	
Age (50 - 64 years)	-.512	.393	-1.304	
Age (65+ years)	-.396	.708	-.559	
Sector (secondary sector)	-.343	.336	-1.020	
Sector (tertiary sector)	-.355	.328	-1.080	
Sector (quaternarily sector)	-.593	.388	-1.528	
Sector (other sector)	-.406	.360	-1.128	
Country of origin (EU)	-.589**	.152	-3.881	
Wage (middle)	.038	.196	.192	
Wage (high)	.240	.188	1.273	

Note. Bootstrap sample size = 5,000. Unstandardised regression coefficients are reported.

** $p < .01$, * $p < .05$ (2-tailed).

Table 10 PROCESS Macro Model 4, Part 1: Analysis Results to Test Hypothesis 2 (N = 1100)

Predictor variable	B	SE	t	R ²
<i>Model 1: Effect on Job Satisfaction (MED)</i>				
<i>F(13) = 8.461</i>				.092**
Constant	3.688**	.248	14.843	
Overeducation	-.305**	.092	-3.325	
Gender (men)	.067	.070	.951	
Age (25 - 34 years)	-.307	.197	-1.556	
Age (35 - 49 years)	-.291	.198	-1.468	
Age (50 - 64 years)	-.152	.212	-.716	
Age (65+ years)	.265	.365	.727	
Sector (secondary sector)	.125	.182	.688	
Sector (tertiary sector)	.095	.178	.536	
Sector (quaternarily sector)	.144	.204	.706	
Sector (other sector)	.055	.193	.284	
Country of origin (EU)	-.202**	.077	-2.615	
Wage (middle)	.303**	.103	2.953	
Wage (high)	.706**	.096	7.386	

Note. Bootstrap sample size = 5,000. Unstandardised regression coefficients are reported.

** $p < .01$, * $p < .05$ (2-tailed).

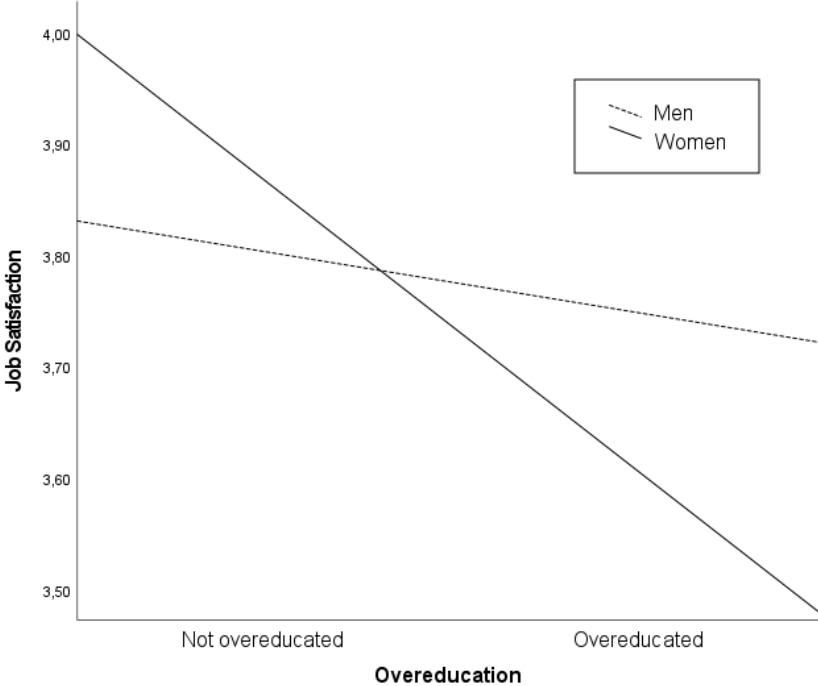
Table 11 PROCESS Macro Model 4, Part 2: Analysis Results to Test Hypothesis 2 (N = 1100)

Predictor Variable	B	SE	z	-2LL
<i>Model 2: Effect on Emigration Intention (Y)</i>				1361.625**
Constant	1.321**	.505	2.615	
Overeducation	.088	.174	.505	
Job Satisfaction	-.250**	.058	-4.339	
Gender (men)	-.314*	.136	-2.314	
Age (25 - 34 years)	-.100	.362	-.277	
Age (35 - 49 years)	-.675	.366	-1.844	
Age (50 - 64 years)	-.510	.392	-1.299	
Age (65+ years)	-.395	.708	-.558	
Sector (secondary sector)	-.341	.336	-1.015	
Sector (tertiary sector)	-.352	.328	-1.074	
Sector (quaternarily sector)	-.590	.388	-1.523	
Sector (other sector)	-.404	.360	-1.123	
Country of origin (EU)	-.588**	.152	-3.880	
Wage (middle)	.035	.195	.181	
Wage (high)	.239	.188	1.269	
	<i>B</i>	<i>SE</i>	<i>LLCI</i>	<i>ULCI</i>
<i>Indirect effect of X on Y</i>	.076	.031	.026	.146

Note. Bootstrap sample size = 5,000. LL = lower limit; CI = confidence interval 95%; UL = upper limit. Unstandardised regression coefficients are reported. ** $p < .01$, * $p < .05$ (2-tailed).

Figure 2

Interaction Plot: The Relationship between Overeducation and Job Satisfaction Moderated by Gender



Discussion

This research examined the relationship between overeducation and emigration intention, using a sample of 1,626 labour migrants staying in the Netherlands. Furthermore, this study examines if the relationship between overeducation and emigration intention is mediated by job satisfaction and moderated by gender. The results of this study partially confirm the expectations. Although there was no evidence found for a direct relationship between overeducation and emigration intention, there was evidence for a full mediation between overeducation, job satisfaction, and emigration intention. Additionally, it has been established that women who are overeducated report less job satisfaction than men. The study results are discussed below to provide answers and possible explanations for the stated hypotheses and research question.

Main findings

Regarding the first and second hypotheses, it can be stated that the overeducation of labour migrants does not directly affect the intention to emigrate to another country or the home country. However, a full mediation between overeducation, job satisfaction, and emigration intention was confirmed. Hence, the finding of no direct effect contradicts previous research where overeducation is significantly associated with emigration intention (Pungas et al., 2012; Quinn & Rubb, 2005; Wanner et al., 2021) and is additionally not in line with the human capital theory of Becker (1964). Initially, the economic motive as a reason for labour migrants to migrate to the Netherlands is an important explaining factor here. According to previous research, obtaining a higher salary in the host country compared to the home country is one of the primary reasons labour migrants migrate to another country (Khoo et al., 2007; Zaiceva & Zimmermann, 2008), which is in line with the neoclassical economic theory of international migration (Sjaastad 1962; Todaro, 1969). According to this theory, geographic variations in the supply and demand for labour might explain migration. Hence, labour migrants shift from low-wage, labour-surplus regions to high-wage, labour-scarce regions because of pay differences that arise (De Haas, 2010). In the Netherlands, many labour migrants are hired to do work that the local people are unable or unwilling to do. Due to labour shortages, the Netherlands needs around 50,000 extra people per year only from the European Union (NOS, 2019). This shows that, currently, the Netherlands is a labour-scarce region, which needs labour migrants and therefore offers a relatively high wage, compared to labour-surplus regions. In conclusion, based on previous studies and the neoclassical economic theory, it might be the case that the labour migrants in the sample do not come to the Netherlands to find a job that fits their degree; instead, they moved there to earn (more) money than in their home country.

Finding a full mediation contributes to the literature and is compatible with previous findings. Hence, the data in this study confirm the negative relationship between overeducation and job satisfaction (Bedemariam & Ramos, 2021; Lillo-Bañuls & Casado-Díaz, 2014; Sam, 2019) and prove that the lower the job satisfaction the higher the emigration intention (Aliyev et al., 2021; Kamali et al., 2020; Sharma et al., 2012). Besides, this study's findings are in line with the psychological contract theory (Rousseau, 1989), which suggests that when a psychological contract breach occurs, this can lead to lower levels of job satisfaction, which in turn can lead to withdrawal behaviour. Therefore, when an employer fails to meet a labour migrant's expectations regarding the character and nature of their work, the psychological contract breaches and leads to negative cognitions (Robinson & Rousseau, 1994), which is linked to lower job satisfaction (Johnson & O'Leary-Kelly, 2003; Zhao et al., 2007). Withdrawal behaviour, which has been connected to the intention to leave the organisation or even to emigrate to another country, might result from lower levels of job satisfaction (Manalel & Joy, 2016).

The remaining hypotheses delved into gender differences. Gender does not moderate the relationship between overeducation and emigration intention, which was proposed in the third hypothesis. However, in line with previous research (Wanner, 2019), the findings indicate that women have lower emigration intentions than men. This is in line with the social theory of gender differences (Eagly, 1987), which states

that women have more family-related reasons to move whereas men's motives to emigrate are more related to performance and financial reasons.

Finally, as for the fourth hypothesis, it was hypothesised that the effect of overeducation on job satisfaction was stronger for men than for women, but the data indicate it is the other way around. This finding is not in line with the social role theory of gender differences (Eagly, 1987). One explanation for this is the fact that the women in this sample are very driven to work abroad, have high expectations, and are hence less willing to accept an educational mismatch. In the past, women were seen as people who migrate to join men and create or reunite a family (Pedraza, 1991; Watts, 1983). This changed over time. Nowadays, the proportion of female labour migrants with a high degree of education has increased (ILO, 2020). This is due in part to global progress in girls' and women's educational attainment, as well as increased demand for skilled labour in areas with a largely female workforce, such as health and social care. Highly qualified female labour migrants (33%) outweigh their male counterparts (31%) in the Netherlands (ILO, 2020). Given that a big majority of women have advanced degrees, this information may help to explain the current study's findings because women will probably have higher expectations for their employment abroad.

Limitations and Implications for Future Research

A range of methodological limitations has been found in the present study. First and foremost, the study was cross-sectional, therefore the results cannot be interpreted causally. Longitudinal designs, particularly those that assess variables at several points in time, may enhance the recognition of causal relations. Therefore, it is recommended for future research to collect data in different periods of time considering differences in, for example, levels of job satisfaction and emigration intention at the beginning or at a later time, when working in the Netherlands.

Secondly, overeducation was not measured by educational attainment, but by categories of certain professions. The labour migrants answered the following questions *"Could you use the categories below to indicate the profession for which you were qualified in your country of origin?"* and *"Could you use the categories below to indicate the profession that you practice in the Netherlands?"*. With these two questions, insight was gained into the difference between the occupational category for which the migrant worker was educated in the country of origin and in which occupational category they are employed in the Netherlands. According to Joona et al. (2014), overeducation can be measured using job analysis. When the labour migrant's educational level is approximately higher than where they are employed, we speak of the term 'overeducation'. More commonly, overeducation is measured by comparing the discrepancy between a person's educational level with the qualifications needed for the job they perform (Bauer, 2002). Future research could thus focus on the labour migrant's educational attainment rather than using different profession categories. Therefore, it becomes more specific whether overeducation is occurring.

Lastly, there are several limitations regarding the sample's representativeness. One of them is that only 3.8 percent of the research sample is working in the primary sector, whereas in the Netherlands, the primary sector employs around 25 percent of labour migrants (ABU, 2021). Hence, as not all sectors are proportionally represented evenly in the sample, this may not give a good image of, for instance, the actual overeducation among labour migrants. Therefore, this sample is not representative for all labour migrants in the Netherlands. A recommendation for future research would be to focus proportionally on different sectors or elaborate further on one of the sectors to get a better picture of the effects within a certain sector.

Practical Implications

The current study has three important practical implications. First, employers of labour migrants have a significant role in classifying them into the appropriate positions within the company. When the labour migrant's level of education is well matched to their position in the company, this leads to higher job satisfaction, which is in turn related to a decrease in willingness to leave the company or even the country. Furthermore, women's intentions should not be underestimated in this. Employers do not want to lose valuable employees, especially during times of tightness in the labour market. Therefore, HR professionals should inquire about the migrant worker's educational background throughout the recruiting and selection process so that migrant labour may be effectively matched with a certain level of employment. Meritless recruiting to fill positions should be obsolete. Furthermore, HR professionals should examine the current workforce to determine the extent to which overeducation exists within the company. To better match employment and education, it should be considered whether overeducated immigrant workers may be redeployed within the organisation, for instance, into a more managerial role.

Second, the labour migrants themselves are also crucial in this. Before entering the organisation and throughout their careers, they should express their desires and explicitly declare their talents and level of education.

Third, policymakers should consider instituting occupational counselling for labour migrants. To ensure a better fit between education and job, the labour migrant's interests and previous education should be considered upon arrival in the Netherlands. Therefore, a better match leads to higher job satisfaction, which leads to the willingness to stay in the Netherlands. Foreign talent can be best utilised this way.

Conclusion

The current research contributes to the literature on overeducation and emigration intention by applying the human capital theory, psychological contract theory, and social role theory of gender differences to investigate the mediating role of job satisfaction and the moderating effect of gender on this relationship.

The study found that overeducated labour migrants experience less job satisfaction, which increases their motivation to migrate. For women, being overeducated leads to more job dissatisfaction than for men. Therefore, an effective intervention to increase labour migrants' job satisfaction and hence decrease their willingness to emigrate is to match their educational level appropriate to their level of work.

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Appendix A

Survey Questions & Scales / Model Variables

Overeducation

[Q26] Based on the categories below, can you indicate which occupational category you were trained for in your country of origin?

1. Advanced intellectual or liberal profession (e.g., architect, doctor, scientific researcher, university lecturer, engineer, etc.)
2. Advanced managerial profession (e.g., manager, director, owner of large company, senior civil servant, etc.)
3. Secondary intellectual or liberal profession (e.g., teacher, artist, nurse, social worker, policy officer, etc.)
4. Secondary managerial or commercial profession (e.g., sales manager, department manager or retailer)
5. Other non-manual labour (e.g., administration officer, accountant, salesman, family carer, etc.)
6. Qualified and supervisory manual labour (e.g., car mechanic, foreman, electrician, etc.)
7. Semi-trained manual labour (e.g., driver, factory worker, carpenter, baker, etc.)
8. Unqualified and self-learned manual labour (e.g., cleaner, packer, etc.)
9. Agricultural profession (e.g., farm labourer, independent farmer, etc.)
10. I don't know

[Q27] Based on the categories below, can you indicate which occupational category you work in in the Netherlands?

1. Advanced intellectual or liberal profession (e.g., architect, doctor, scientific researcher, university lecturer, engineer, etc.)
2. Advanced managerial profession (e.g., manager, director, owner of large company, senior civil servant, etc.)
3. Secondary intellectual or liberal profession (e.g., teacher, artist, nurse, social worker, policy officer, etc.)
4. Secondary managerial or commercial profession (e.g., sales manager, department manager or retailer)
5. Other non-manual labour (e.g., administration officer, accountant, salesman, family carer, etc.)
6. Qualified and supervisory manual labour (e.g., car mechanic, foreman, electrician, etc.)
7. Semi-trained manual labour (e.g., driver, factory worker, carpenter, baker, etc.)
8. Unqualified and self-learned manual labour (e.g., cleaner, packer, etc.)
9. Agricultural profession (e.g., farm labourer, independent farmer, etc.)
10. I don't know
11. Not applicable/not working

Values

7 - 9 = 1 = Low

3 - 6 = 2 = Middle

1 - 2 = 3 = High

10 - 11 = Missing Values

In measuring an individual's overeducation (OV_i^*) the formula of Verhaest and Omey (2010) is used. They define being overeducated (OV_i^*) if the educational level e_i^* is higher than the degree of education required to do the job r_i^* . E.g., when a labour migrant is working in the Netherlands as a cleaner ($r_i^* = 1$), and in their country of origin they were employed as a professor ($e_i^* = 3$), it can be stated that the labour migrant is overeducated in their role as a cleaner ($OV_i^* = e_i^* > r_i^* = 3 > 1$).

Scores overeducation

Category	Formula	Score
Job-matched	$e_i^* = r_i^*$	0
Undereducated	$e_i^* < r_i^*$	0
Overeducated	$e_i^* > r_i^*$	1

Values

$e_i^* = r_i^*$; $e_i^* < r_i^* = 0$ = Not Overeducated

$e_i^* > r_i^* = 1$ = Overeducated

Emigration Intention

[Q17] Do you also expect to stay in the Netherlands in the future?

1. Yes, I would like to stay in the Netherlands
2. No, I want to return to my country of origin within three months
3. No, I want to return to my country of origin within three months to a year
4. No, I want to return to my country of origin within 1 to 3 years
5. No, I want to return to my country of origin within 3 to 5 years
6. No, I want to return to my country of origin within a period longer than 5 years
7. No, I want to go to another country
8. I do not know yet

Values

1 = 0 = No Emigration Intention

2 - 7 = 1 = Emigration Intention

8 = Missing Value

Job Satisfaction

[Q12] To what extent do you agree or disagree with the following statements?

	Completely agree	Slightly agree	Neutral	Slightly disagree	Completely disagree	Don't know/no opinion
1. I am satisfied with my current job and working conditions						

Values

1 = completely disagree

2 = slightly disagree

3 = neutral

4 = slightly agree

5 = completely agree

Gender

[Q20] What is your gender?

1. Man
2. Woman
3. Other
4. Prefer not to say

Values

0 = Men

1 = Women

3 - 4 = Missing values

Control Variables

Age

[Q21] In which year were you born?

→ Recoded by I&O research into categories to guarantee anonymity:

1. 18-24 years old
2. 25-34 years old
3. 35-49 years old
4. 50-64 years old
5. 65+ years old

Values

- 1 = 18-24
- 2 = 25-34
- 3 = 35-49
- 4 = 50-64
- 5 = 65+

Sector

[Q28] In which economic sector do you work? If you are not working at this moment in time, could you indicate the economic sector for your last job/work in the Netherlands?

1. Agriculture, forestry, and fishing
2. Industry and production
3. Construction
4. Wholesale and retail
5. Transport, distribution, and logistics
6. ICT
7. Financial sector
8. Business services
9. Justice, security, and public administration
10. Education
11. Healthcare and well-being
12. Culture, sport, and recreation
13. Other services
14. Other sector
15. I don't know
16. Not applicable/not working

Values

- 1 = 1 (Primary sector)
- 2 - 3 = 2 (Secondary sector)
- 4 - 8, 12 = 3 (Tertiary sector)
- 9 - 11 = 4 (Quaternary sector)
- 13 - 16 = 5 (Other)

Country of Origin

[Q22] What is your country of origin? (Dropdown featuring countries)

→ Recoded by I&O research into categories to guarantee anonymity:

1. Western Europe (FR, DLD, BE, LUX, UK, DK, NO, SW, FI).
2. Southern Europe (Spain, Greece, Portugal, Italy)
3. Eastern Europe A8(EU8)
4. Eastern Europe A2(EU2)
5. Outside Europe
6. Unknown

Values

- 1 - 4 = 0 = EU
- 5 = 1 = non-EU
- 6 = Missing Value

Wage

[Q24][If younger than 30 years:] What is your personal monthly gross salary? In this case, we mean the amount before tax has been deducted, based on a full-time job. You can provide an estimate if you do not know the exact amount.

1. Less than €1,000
2. €1,000 - €1,499
3. €1,500 - €1,999
4. €2,000 - €2,499
5. €2,500 - €2,999
6. €3,000 - €3,380
7. €3,381 or more
8. Prefer not to say

Values

1 - 3 = 1 = Low

4 - 5 = 2 = Middle

6 - 7 = 3 = High

8 = Missing Value

[Q25][If 30 years or older:] What is your personal monthly gross salary? In this case, we mean the amount before tax has been deducted, based on a full-time job. You can provide an estimate if you do not know the exact amount.

1. Less than €1,000
2. €1,000 - €1,499
3. €1,500 - €1,999
4. €2,000 - €2,499
5. €2,500 - €2,999
6. €3,000 - €3,499
7. €3,500 - €3,999
8. €4,000 - €4,611
9. €4,612 or more
10. Prefer not to say

Values

1 - 3 = 1 = Low

4 - 5 = 2 = Middle

6 - 9 = 3 = High

10 = Missing Value

Q24 & Q25 are merged into one variable.

Appendix B

Chi-square tests of independence (χ^2)

Table 1 Crosstabulation of Overeducation and Age

Overeducation	Age					Total	χ^2	p
	18-24	25-34	35-49	50-64	65+			
Not overeducated	21	321	409	92	13	856	28.866	<.001
Overeducated	16	103	83	42	0	244		
Total	37	424	492	134	13	1100		

Table 2 Crosstabulation of Overeducation and Wage

Overeducation	Wage			Total	χ^2	p
	Low	Middle	High			
Not overeducated	169	154	533	856	205.724	<.001
Overeducated	151	59	34	244		
Total	320	213	567	1100		

Table 3 Crosstabulation of Overeducation and Sector

Overeducation	Sector					Total	χ^2	p
	Primary	Secondary	Tertiary	Quaternary	Other			
Not overeducated	27	186	410	95	138	856	29.890	<.001
Overeducated	19	70	123	15	17	244		
Total	46	256	533	110	155	1100		

Table 4 Crosstabulation of Emigration Intention and Age

Emigration intention	Age					Total	χ^2	p
	18-24	25-34	35-49	50-64	65+			
No Emigration Intention	20	247	350	88	9	714	18.679	<.001
Emigration Intention	17	177	142	46	4	386		
Total	37	424	492	134	13	1100		

Table 5 Crosstabulation of Emigration Intention and Wage

Emigration Intention	Wage			Total	χ^2	p
	Low	Middle	High			
No Emigration Intention	195	133	386	714	5.285	.071
Emigration Intention	125	80	181	386		
Total	320	213	567	1100		

Table 6 Crosstabulation of Emigration Intention and Sector

Emigration Intention	Sector					Total	χ^2	p
	Primary	Secondary	Tertiary	Quaternary	Other			
No Intention	25	161	343	80	105	714	6.281	.179
Emigration intention	21	95	190	30	50	386		
Total	46	256	533	110	155	1100		

Table 7 Crosstabulation of Job Satisfaction and Age

Job Satisfaction	Age					Total	χ^2	p
	18-24	25-34	35-49	50-64	65+			
1	2	30	23	6	0	61	27.787	.034
2	3	42	59	19	1	124		
3	6	58	48	11	2	125		
4	19	171	189	47	1	427		
5	7	123	173	51	9	363		
Total	37	424	492	134	13	1100		

Table 8 Crosstabulation of Job Satisfaction and Wage

Job Satisfaction	Wage			Total	χ^2	p
	Low	Middle	High			
1	31	13	17	61	81.826	<.001
2	57	26	41	124		
3	44	31	50	125		
4	129	81	217	427		
5	59	62	242	363		
Total	320	213	567	1100		

Table 9 Crosstabulation of Job Satisfaction and Sector

Job Satisfaction	Sector					Total	χ^2	p
	Primary	Secondary	Tertiary	Quaternary	Other			
1	2	10	35	3	11	61	27.881	.033
2	13	36	51	9	15	124		
3	4	27	66	10	18	125		
4	14	98	204	55	56	427		
5	13	85	177	33	55	363		
Total	46	256	533	110	155	1100		

Table 10 Crosstabulation of Gender and Age

Gender	Age					Total	χ^2	p
	18-24	25-34	35-49	50-64	65+			
Men	13	218	265	70	6	572	5.139	.273
Women	24	206	227	64	7	528		
Total	37	424	492	134	13	1100		

Table 11 Crosstabulation of Gender and Wage

Gender	Wage			Total	χ^2	p
	Low	Middle	High			
Men	127	109	336	572	31.465	<.001
Women	193	104	231	528		
Total	320	213	567	1100		

Table 12 Crosstabulation of Gender and Sector

Gender	Sector						χ^2	p
	Primary	Secondary	Tertiary	Quaternary	Other	Total		
Men	17	158	295	47	55	572	36.980	<.001
Women	29	98	238	63	100	528		
Total	46	256	533	110	155	1100		

Table 13 Crosstabulation of Country of Origin and Age

Country of Origin	Age					Total	χ^2	p
	18-24	25-34	35-49	50-64	65+			
EU	32	250	255	100	8	645	35.422	<.001
Non-EU	5	174	237	34	5			
Total	37	424	492	134	13			

Table 14 Crosstabulation of Country of Origin and Wage

Country of Origin	Wage			Total	χ^2	p
	Low	Middle	High			
EU	260	162	223	645	181.256	<.001
Non-EU	60	51	344			
Total	320	213	567			

Table 15 Crosstabulation of Country of Origin and Sector

Country of Origin	Sector					Total	χ^2	p
	Primary	Secondary	Tertiary	Quaternary	Other			
EU	43	191	284	44	83	645	73.657	<.001
Non-EU	3	65	249	66	72			
Total	46	256	533	110	155			

Table 16 Crosstabulation of Age and Wage

Age	Wage			Total	χ^2	p
	Low	Middle	High			
18-24	32	5	0	37	116.380	<.001
25-34	127	111	186			
35-49	106	68	318			
50-64	50	27	57	134		
65+	5	2	6			
Total	320	213	567			

Table 17 Crosstabulation of Age and Sector

Age	Sector					Total	χ^2	p
	Primary	Secondary	Tertiary	Quaternary	Other			
18-24	4	10	18	1	4	37	47.254	<.001
25-34	9	76	235	43	61			
35-49	22	120	232	48	70			
50-64	10	48	44	14	18	134		
65+	1	2	4	4	2			
Total	46	256	533	110	155			

Table 18 Crosstabulation of Wage and Sector

Wage	Sector					Total	χ^2	p
	Primary	Secondary	Tertiary	Quaternary	Other			
Low	32	88	142	18	40	320	59.352	<.001
Middle	9	54	97	21	32	213		
High	5	114	294	71	83	567		
Total	46	256	533	110	155	1100		