

## With a Little Help from My Friends

### Social-network Job Search and Overqualification among Recent Intra-EU Migrants Moving from East to West

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*Document Version*

Accepted author manuscript

*Published in:*

Work, Employment and Society

*DOI:*

[10.1177/0950017020926433](https://doi.org/10.1177/0950017020926433)

*Publication date:*

2020

*License*

Unspecified

*Citation for published version (APA):*

Leschke, J., & Weiss, S. (2020). With a Little Help from My Friends: Social-network Job Search and Overqualification among Recent Intra-EU Migrants Moving from East to West. *Work, Employment and Society*, 34(5), 769-788. <https://doi.org/10.1177/0950017020926433>

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Download date: 04. Jul. 2025



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**Abstract**

This article examines the relationship between social networks as a job-finding channel and overqualification among recent EU migrants from Central Eastern to Western European countries. Social networks composed of relatives, friends or acquaintances can facilitate access to employers and thereby enhance labour market integration. However, when labour markets are segmented, (co-ethnic) social networks might also contribute to locking migrants into sectors and occupations characterised by high migrant shares, increasing the probability of a mismatch between skills and occupations. Drawing on data from the special module on migrants and their descendants in the 2014 European Labour Force Survey, this article considers subjective and objective overqualification. The analysis reveals that finding jobs through social networks bears a higher risk of overqualification in general, and especially for recent CEE migrants. The results point to a complex relationship between social-network job search, sectoral segmentation and destination-country language proficiency.

**Keywords:** CEE migrants, employment sectors, EU-LFS data, intra-EU labour mobility, job search, language skills, objective overqualification, segmentation, social networks, subjective overqualification

## Introduction

Social networks composed of relatives, friends or acquaintances are common means to gain access to jobs (Granovetter, 1995), including for migrants (Waldinger and Lichter, 2003).

Several studies highlight a negative impact of such traditional social networks<sup>1</sup> on wages and working conditions in general (e.g. Franzen and Hangartner, 2006) and specifically for recent migrants (e.g. Joassart-Marcelli, 2014), also in the intra-EU free mobility setting (Friberg, 2012).

A commonly proposed explanation is the role of social networks in locking migrant workers into sectors and occupations that already have high shares of migrant labour and are located in secondary segments of the labour market characterised by routine employment requiring only basic qualifications (Doeringer and Piore, 1971).

This article draws on segmentation theory to analyse whether having found a job through social networks contributes to the subjective and/or objective overqualification of recent intra-EU migrants. The focus is on EU migrants from Central Eastern European (CEE) countries who recently moved for work to Western European countries (EU15, Switzerland and Norway). CEE migrants have accounted for substantial shares of migration movements towards Western Europe since the 2004, 2007 and 2013 accession rounds, and these movements are taking place in a context of substantive wage differentials (Eurostat 2014).

CEE migrants in Western Europe, despite their comparatively high education levels (Galgóczi et al., 2012), often work in low-skilled manual jobs of temporary nature in sectors such as agriculture, manufacturing, construction, cleaning and hospitality offering low wages and limited career opportunities (Friberg et al., 2014; McCollum and Findlay, 2015; Ruhs and Anderson, 2010). They are thus a compelling group for studying social networks as potential determinants

of overqualification (Sirkeci et al., 2018) via lock-in effects in secondary labour market segments, including ethnic occupational niches (Friberg and Midtbøen, 2019; Janta, 2011). Few quantitative studies to date have focused on the role of social networks in the employment outcomes of CEE migrants in an intra-EU free mobility setting (but see Verwiebe et al., 2017, on cross-border commuters). Mobile EU workers are privileged compared to third-country nationals because they enjoy unrestricted access to EU and EFTA countries' labour markets.<sup>2</sup> This study tests on the basis of micro data whether the negative outcomes of (co-ethnic) social networks for segmented employment shown for (illegal) migrants from Mexico to the US (e.g. Aguilera and Massey, 2003) and for third-country migrants to selected Western European countries (e.g. Kalter and Kogan, 2014) also hold in an intra-EU free mobility setting (for qualitative evidence, e.g. Ryan et al., 2008).

This article uses the 2014 European Labour Force Survey (EU-LFS) special module on migrants and their descendants (Eurostat, 2014), which provides information on how (recent) migrants and natives found their current job, including through social networks of relatives, friends or acquaintances. The module also contains a subjective measure of overqualification and thus enables comparison of results on self-declared overqualification with results on an objective overqualification measure.

The article proceeds as follows. Section 1 reviews the literature on social networks as a job-finding mechanism; drawing on segmentation theory, it provides a theoretical framework for the subsequent analysis. Section 2 discusses data, methods and operationalisation of the relevant concepts. Section 3 presents the descriptive and multivariate results on the role of social networks in overqualification of recent CEE migrants. Section 4 discusses the results in light of the theory and the existing literature. Section 5 concludes.

## **1. Social networks, migrants and segmented labour markets**

Migrants and natives use a wide range of job-finding methods: direct employer contacts, intermediaries (including temporary work agencies in the origin or destination country; Ortlieb and Weiss, 2019), job ads and, increasingly, online networks through (ethnic) social media (Garapich, 2008; Samaluk, 2016). However, traditional social networks composed of relatives, friends and acquaintances, often segmented along the lines of language, ethnicity and gender (Gavanas, 2013), remain the most common job-finding method of recent CEE migrants (Table A-1, online appendix). CEE migrants' job-search methods are complex: personal networks can provide direct access to employment or, alternatively, assist with access to intermediaries (e.g. Anderson et al., 2006). Structural and relational embeddedness in ethnic enclaves, spatially clustered networks of businesses owned by the same minority (Vershina et al., 2011) and the 'colonisation' of distinct occupational niches (Portes, 1995) are shown to constitute relevant mechanisms facilitating inferior working conditions and overqualification of migrant workers (Waldinger and Lichter, 2003).

Social networks can improve access to jobs by providing information on opportunities (Granovetter, 1995) and are particularly relevant to migrants with little formal knowledge about the destination countries' labour markets, such as the recently arrived and those with limited language skills (Drever and Hoffmeister, 2008). On the other hand, jobs found by 'newcomers' through co-ethnic social networks are often located in distinct occupational niches that, with few exceptions, represent lower segments of the labour market (Portes, 1995; Waldinger and Lichter, 2003). Jobs in this secondary segment (Doeringer and Piore, 1971) – or rather in the many secondary segments found across industries and occupations<sup>3</sup> (Rubery, 1978) – are usually

unskilled, low paid, insecure and with few career opportunities, and connote inferior social status (Piore, 1979). Migrants' dual frames of reference (Piore, 1979) and their typically lower reservation wages make them more willing to accept wages and employment conditions that are poor by the standard of the 'host' country (Ruhs and Anderson, 2010) and for which they are overqualified (Sirkeci et al., 2018). Barriers to the recognition of formal education, insufficient language skills and employer discrimination (Johnston et al., 2015) further exacerbate this segmentation. The location of CEE migrants in secondary segments and in some cases migrant occupational niches, including the UK hospitality industry (Janta, 2011), hospitality and domestic services in Austria (Ortlieb and Weiss, 2019) or hospitality and fishery in Norway (Friberg and Midtbøen, 2019), is thus multi-causal. It is shaped not only by labour demand and supply and the use of social networks and other intermediaries, but also by firm- and societal-level regulations and institutions (Peck, 1996). This is for example illustrated by Wills et al. (2009) for London's migrant division of labour, where intersecting decisions of government, employers and workers constantly reshape the labour market by increasing opportunities for some migrant groups in distinct occupational segments while eroding them for others. CEE migrants' cultural proximity (Garapich, 2008), their whiteness (Samaluk, 2014; Wills et al., 2009), perceived high work ethic (Ruhs and Anderson, 2010) and willingness to fill jobs shunned by native workers (McCollum and Findlay, 2015) put them in a comparatively advantageous labour market position vis-à-vis other migrant and ethnic groups and also some groups of natives. On the other hand, CEE migrants often perceive themselves as inferior (Samaluk, 2014), and their qualifications are commonly undervalued by employers who see them as suited for low-paid and flexible jobs (e.g. McCollum and Findlay, 2015); moreover, they experience discrimination and racialisation (e.g. Favell and Nebe, 2009).

Migrants' destination countries differ in terms of labour market opportunities, labour market regulation and proximity of language (Dustmann and Fabbri, 2003), as well as the size and location of ethnic communities. Similarly, the labour market outcomes – including overqualification – of CEE migrants are likely to differ by country of origin given variations in pull and push factors, as shown with reference to wages in Germany, the UK and Denmark for recent Bulgarian and Romanian workers as compared to CEE migrants from the 2004 accession countries (Felbo-Kolding et al., 2019).

While post-accession CEE migrants' disproportionate location in jobs below their qualification levels and characterised by low wages, insecurity and flexibility is well documented for Western Europe and particularly for the UK (e.g. McCollum and Findlay, 2015), there is limited quantitative research on the role of *social networks* in the segmented employment outcomes and overqualification of recent CEE migrants (for the Mexico-US context, see Aguilera and Massey, 2003; Joassart-Marcelli, 2014). Qualitative studies have examined the role of co-ethnic social networks and other ethnic-niche labour market intermediaries in the outcomes of different CEE migrants (e.g. Janta, 2011; Ortlieb and Weiss, 2019), including the function of social networks in terms of emotional, instrumental and practical support (Ryan et al., 2008). Access to and use of social networks and other labour intermediaries are shown to differ by nationality, qualification, language skills, gender and age (Ryan et al., 2008; Samaluk, 2016). Eade et al. (2008) highlight the complex relationships among (Polish) co-ethnics, featuring high levels of mutual support through chain migration and information and resources exchange. Among the few quantitative studies that consider migrants' use of social networks for job search in Europe, Verwiebe et al. (2017) find a small positive effect on the wages of commuters to Austria who found their jobs via social networks. However, previous studies show that CEE commuters tend to have better

working conditions than recent CEE migrants (Huber, 2012). For Germany, Drever and Hoffmeister (2008) find that persons of foreign origin who used social networks are more likely to end up in bad jobs characterised by heavy physical labour. Kalter and Kogan (2014) show for recent migrants from the former Soviet Union to Germany that having social ties prior to migration is helpful in finding employment quickly, but that this holds only for comparably low positions.

Lack of language skills may be a powerful explanation for the use of social networks and location of migrants in secondary segments and occupational niches (Gavanas, 2013; Ryan et al., 2008). Previous quantitative findings are inconclusive, however, and few studies explicitly consider language as a mediator between job-search method and employment outcome. Aguilera and Massey (2003) find positive effects on wages for migrants with good English, whereas Verwiebe et al. (2017) do not find a significant effect of language proficiency on wages for cross-border commuters. Chiswick and Miller (2009) point to a significant positive relationship between English-language proficiency and the incidence of overeducation vis-à-vis correct matching for foreign-born male workers in the US. Duvander (2001) finds that Polish migrants with very good Swedish skills are more likely to be educationally overqualified than natives. Given the mixed quantitative empirical evidence, the hypothesis here regarding language skills is based on segmentation theory, which would expect migrants with poor language skills to be more likely to seek work through co-ethnic social networks located in secondary segments of the labour market. Based on the theoretical arguments and previous empirical findings, the following hypotheses are tested:

- 1) Recent migrants from CEE countries who found their jobs through social networks are more likely to be overqualified;



- 2) The link between having found a job through social networks and overqualification is more pronounced in economic sectors known to be populated by migrants and with characteristics of secondary labour markets (e.g. hospitality and agriculture);
- 3) Recent CEE migrants with poor destination-country language proficiency who found their job through social networks are more likely to be overqualified.

## **2. Data and methods**

The analysis draws on data from the 2014 EU-LFS – a representative and harmonised household sample survey – and in particular from the special ad-hoc module on the labour market situation of migrants and their immediate descendants. The special module includes a subjective measure on overqualification, information on the use of traditional social networks as a job-search method to find the current job, and migration-specific indicators.

This article considers migrants from CEE countries that joined the EU in 2004 (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia), 2007 (Bulgaria and Romania) and 2013 (Croatia).<sup>4</sup> The destination countries considered are those EU15 countries that provided data for the 2014 ad-hoc module,<sup>5</sup> as well as Switzerland and Norway, to which the EU free labour mobility regime also applies. Between 2005 and 2014, the population stocks of CEE migrants increased significantly within these countries. Small sample sizes for recent CEE migrants per country necessitated clustering of the destination countries. The single destination countries were clustered according to their average unemployment rates from 2010 to 2014 (Table A-2, online appendix).<sup>6</sup> It was assumed that overqualification is more prevalent among migrants in countries with high unemployment (Khattab and Fox, 2016) and, inversely, that

employers will be less likely to offer jobs with secondary labour market characteristics in times of tight labour markets (McCollum and Findlay, 2015).<sup>7</sup>

The focus is on recent CEE migrants (more prone to the dual frame of reference; Piore, 1979), defined as those who arrived in the respective destination-country group within the previous five years (Joassart-Marcelli, 2014; Ryan et al., 2008). Recent migrants with less information on the destination-country labour market provide a better opportunity for investigating the impact of social networks on overqualification (e.g. Kalter, 2011). The analysis focuses on employees aged 15 to 64 years.

### *2.1 Dependent variables*

Overqualification is defined as a situation where a person's labour market status involves underutilisation of his/her education, work experience or skills (Johnston et al., 2015; Sirkeci et al., 2018). Both a subjective and an objective approach were used to measure overqualification. Indicators of overqualification relying on different approaches are less strongly inter-related than one might expect, and correlations to other variables vary considerably depending on the applied measurement method (Verhaest and Omey, 2010).

The first method for capturing overqualification asked those who are (not) affected by overqualification to evaluate their status themselves: '*Considering your education level, experience and skills, do you feel overqualified for your current main job? (yes, no, cannot say)*'. Whereas most other methods rely only on education level and compare it with occupational status, individuals who subjectively identified as overqualified were encouraged to also include other formal and informal skills and work experience in their considerations. A disadvantage, however, is the subjective nature of this method, which is susceptible to bias. Furthermore,

depending on limited personal experiences, including years of work experience, respondents may not always have a good understanding of the education or skill level required for a job.

The so-called objective method relies on experts' ratings of occupational status and looks at mismatch between occupational status and required education level (Ortiz, 2010). The method used here was that proposed by the OECD (2007: 156), which defines overqualification – or more specifically, overeducation – as a mismatch between level of occupational status (ISCO) and education level (ISCED), with both indicators aggregated at the one-digit level. Despite its 'objective' character, this method has been criticised for its rather rough classification (Tijdens and Van Klaveren 2012) and its systematic overestimation of overeducation (Van der Velden and Van Smoorenburg, 1997).

The 'Qualification Level Distance' proposed by Johnston et al. (2015) was not used in this study (for an application, see Sirkeci et al., 2018). In occupations with high percentages of objectively and subjectively overqualified workers this empirical method will 'normalise' the overqualification, thus rendering it invisible.

## *2.2 Explanatory and control variables*

The special module provides information on the method used to find the current job (this study's main predictor) via the following question: '*How did you find your current job?*' This variable was dichotomised in line with Aguilera and Massey (2003) and Verwiebe et al. (2017) to capture jobs found through traditional social networks (*answer option: through relatives, friends or acquaintances*) – the most frequent response by migrants – compared to all other job-finding methods.<sup>8</sup> While a more fine-grained analysis of different job-finding strategies would have been interesting, it was excluded by limited case numbers (Table A-1, online appendix).

Destination-country language proficiency might affect the relationship between job-search method and overqualification. For instance, limited language proficiency might prevent a migrant from searching through alternative channels. Industry sector (Table A-3, online appendix) was used to capture over-representation of migrants in specific sectors prone to secondary labour market characteristics (Table A-4, online appendix).

The reason for migration was included as control because those who migrated for family reasons might also use these family networks to find work. The number of years since entry into the destination country was included to capture potential catch-up effects. Additionally, education level, firm size, permanent or temporary employment, full-time or part-time employment, age group, gender, marital status and destination-country clusters according to labour market accessibility were controlled for.

### **3. Findings**

#### *3.1 Descriptive analysis*

Recent CEE migrants significantly more often found their current job through social networks (45.2%) than nationals (28.4%) (Table 1). In general, the former were significantly more likely to be overqualified. Whereas only around 21% of nationals felt subjectively overqualified, over 39% of recent CEE migrants claimed they were overqualified. The significant difference was particularly pronounced for the objective overqualification measure, with 12% of nationals and 38% of recent CEE migrants being overqualified.

- TABLE 1 here -

Recent CEE migrants worked significantly more frequently than nationals in industries known for jobs with low occupational status and prone to secondary labour market characteristics, such

as hospitality and agriculture (Table A-4, online appendix). They also presented disproportionate shares in manufacturing, construction and other services. Nationals, in turn, worked significantly more often in the public administration, education or health sectors, which usually offer comparatively good working conditions.

- TABLE 2 here -

For both indicators of overqualification, overqualified recent CEE migrants significantly more often had found their job through social networks than those who were not overqualified (Table 2, column 1).<sup>9</sup> Recent CEE migrants who had migrated for family reasons quite often had found their current job through social networks. As predicted in the second hypothesis, the prevalence of social-network job search differed significantly between industries. In public administration, education and health, social-network job search played a minor role (22.6%), whereas it was more important in agriculture (78.3%), construction (63.0%), other services (58.8%) and hospitality (50.0%), all sectors with high shares of recent CEE migrants (Table A-4, online appendix)

- FIGURE 1 here –

Figure 1 shows that overqualified recent CEE migrants who used social networks significantly more often perceived a lack of language skills as a main labour market obstacle compared to those who had found their job through other channels. This finding could indicate that migrants with low destination-country language proficiency (perforce) relied more on social networks to find work. In line with this finding, the descriptive statistics provided in Table 2 show that recent CEE migrants who found their job through other channels had significantly better destination-country language skills than those who found their job through social networks. The pattern was less clear for overqualification, with subjective overqualification relating somewhat differently to

language proficiency than objective overqualification. It is possible that migrants included their language skills as a form of qualification when evaluating overqualification. Regarding industry, the percentage of recent CEE migrants with good destination-country language skills was comparably high in public administration, education and health (63.5%), and hospitality (45.2%). In general, descriptive data on language skills provided a rather ambivalent picture.

### *3.2 Multivariate analysis*

- TABLE 3 here -

In a multivariate setting, irrespective of the measurement method, nationals as well as recent CEE migrants who found their job through social networks were more often overqualified (Table 3). This relationship was particularly pronounced for recent CEE migrants, as seen in the significant interaction between the two variables *job found through social networks* and *recent CEE migrant* for subjective overqualification.

Table 4 presents the results of the binary logistic regression analysis on the two overqualification measures for employed recent CEE migrants. Model 1 displays only main effects, while Model 2 includes interactions between job found through social networks and language skills and, respectively, industry. Because Model 2 revealed no statistically significant interaction effects, Model 1 was relied on to interpret the significant main effects. While social-network job search increased the likelihood of recent CEE migrants being overqualified irrespective of the measurement method, other effects differed depending on the measurement approach. For subjective overqualification, the likelihood of recent CEE migrants being overqualified was high in wholesale and retail, hospitality and other services. Regarding objective overqualification, the likelihood of being overqualified was high in the sector comprising finance, real estate,

professional, administrative and support activities (a surprising result potentially deriving from the crudeness of the objective indicator or the broadness of this sectoral category), and there was a statistical tendency for manufacturing and for hospitality.

- TABLE 4 here -

The reason for migration was only weakly related to overqualification depending on the measurement method. There was a tendency for recent CEE migrants who migrated for family reasons to feel subjectively more overqualified than those who migrated for labour reasons (with no job found before migration). As female CEE migrants more often migrated for family reasons and also differed significantly regarding a number of other characteristics (Table A-9, online appendix), sensitivity analyses with separate regression models by gender were carried out (Table A-10, online appendix). The results were rather similar for both groups.

The number of years since entry into the destination country reduced objective overqualification but was not associated with subjective overqualification. Subjective overqualification showed an association with the unemployment rate of the destination country: the higher the unemployment rate in a destination-country cluster, the higher the probability of recent CEE migrants being overqualified.

#### **4. Discussion**

The descriptive and multivariate analyses presented in this article provide strong support for the first hypothesis, which states that recent CEE migrants who found their jobs through traditional social networks (as compared to all other channels combined) are more likely to be in positions for which they are overqualified; this holds for both the subjective and the objective measures of overqualification. This effect is stronger for recent migrants than for nationals. The results are

thus supportive of the theoretical assumption that information on labour market opportunities from social networks can lock migrants into secondary segments of the labour market (Doeringer and Piore, 1971). The results also corroborate Granovetter (1995) who points to different impacts of social networks on job-quality outcomes depending on social strata, given that individuals tend to interact with those sharing their own characteristics. Recent migrants will interact with co-ethnics already segmented into specific economic sectors (e.g. Ryan et al., 2008), although unfortunately there is no direct measure in the data capturing the type and location of social networks.

The findings are partly supportive of the second hypothesis – that the link between job search through social networks and overqualification is more pronounced in economic sectors with characteristics of secondary labour markets and populated by migrant workers. Clearly descriptively, recent CEE migrants – despite their relatively high education levels – are over-represented vis-à-vis nationals in a number of sectors that require little formal education or skills and represent the secondary labour market segment (Piore, 1979). This is especially true for hospitality as well as agriculture, construction, other services and manufacturing – all but the latter characterised by a higher likelihood of having found the job through social networks. Recent CEE migrants are less likely than nationals to work in public administration, education and health – economic sectors characterised by comparatively good working conditions and low shares of overqualified employees. Only for hospitality are positive significant effects found across the two measures of overqualification; hospitality has been identified as a migrant occupational niche by Janta (2011) in reference to an ‘overqualified’ (Polish) migrant workforce in the UK. The sectoral data and clustering of information on country of origin and destination, however, do not enable capturing of such highly context-specific migrant niches. Even if none of



the interactions between job search and sectors are statistically significant the quantitative data partly support the rich qualitative findings that recently arrived CEE migrants find employment through co-ethnic social networks but that this predominantly leads to poor working conditions and overqualification in secondary labour market segments (Friberg, 2012; Ryan et al., 2008; Samaluk, 2016).

The third hypothesis states that recent CEE migrants with poor destination-country language proficiency who have found work through social networks are more likely to be overqualified. The findings show that recent CEE migrants with poorer language proficiency are more likely than those with good language proficiency to have found their job through social networks than through other channels. Also, those who are overqualified and have found a job through social networks are considerably more likely to perceive language skills as a main labour market obstacle than those who have used other channels. Recent migrants with poor language skills are descriptively more overqualified on the objective measure than those with good language skills, whereas the relationship with subjective overqualification is inverse. In the multivariate model, no significant effects between destination-country language proficiency and overqualification are found. Neither does the analysis reveal significant interaction effects between social-network job search and language skills. These inconclusive findings are in line with previous quantitative evidence (e.g. Chiswick and Miller, 2009; Duvander, 2001). A potential explanation for not finding significant effects in the multivariate model could be the objective measure's basis in a rather rough classification matching occupation categories to education categories (see below). Also, it is likely that respondents in their subjective self-assessment of overqualification took language into account because they were primed to consider not only education level and work experience but also skills. Additionally, language effects may be under- or overestimated

because of the endogenous choice in learning a language, and by measurement errors (Dustmann and Fabbri, 2003).

The fact that hospitality is characterised by social-network job search and overqualification but at the same time employs many migrants with good destination-country language skills underlines that the relationship between job-search strategy, labour market segmentation and language skills is not straight forward, as also shown in previous qualitative studies (e.g. Ryan et al., 2008).

## **5. Conclusions and limitations**

This article shows that recent CEE migrants in Western European countries are more often overqualified when they have found their job through social networks as compared to other job-search strategies. This mechanism works through ethnic social networks (Waldinger and Lichter, 2003), which channel recently arrived CEE migrants – despite their comparatively high education levels – to jobs with lower social status located in the secondary labour market and sometimes in ethnic occupational niches, which they are likely to accept due to their dual frame of reference (Piore, 1979).

Thus, substantively, the quantitative findings on social-network job search and labour market segmentation for the intra-EU labour mobility setting complement previous qualitative studies on the role of social networks in substandard working conditions for recent CEE migrants (e.g. Friberg, 2012; Ryan et al., 2008). While a quantitative approach necessarily obscures the complexities of job-finding strategies and labour market experiences of CEE migrants (Samaluk, 2016), it bears the advantage of rigorously testing the relationship across a larger sample and thereby generalisation of the findings. Notwithstanding the context of legal and unrestricted

intra-EU movement, the negative relationship between social-network job search and qualitative employment outcomes previously shown for the Mexico-US migration context (Aguilera and Massey, 2003; Joassart-Marcelli, 2014) and for foreign workers in Germany (Drever and Hoffmeister, 2008; Kalter and Kogan, 2014) also holds for CEE migrants moving to Western European countries.

Methodologically, the differences found with regard to some explanatory variables, for example language skills, across the two measures of overqualification call for careful consideration of the advantages and downsides of specific overqualification or overeducation measurement methods. Although the objective measure adopted here is commonly used in research on overqualification (and migrants), its main disadvantage is that it is a very crude tool based on major ISCO and ISCED groups. Furthermore, the objective measure indeed captures overeducation rather than overqualification. Subjective overqualification measures have a number of advantages but are seldom available. They capture work experience, skills (including likely destination-country language skills) and learning on the job. They are, however, prone to bias in that the subjective assessment is likely to be influenced by the frame of reference (e.g. co-workers and their skill levels).

The 2014 EU-LFS special module provides a number of new possibilities for researching social-network job-search strategies among recent CEE migrants. However, the data have important shortcomings that limit the scope of analysis and the concurrent contributions to segmentation theory (Peck, 1996). First, the data provide only limited information on job-search behaviour. Even if respondents might have combined different job-search methods, the data only provide information on the main method that led to the current job. A comparison with job-search channels used by the unemployed (Table A-11, online appendix) offers some evidence that there

is a selection effect for recent CEE migrants, with social-network job search being associated more often with employment. This could mean that social-network job search is quite an efficient route into the labour market for migrants. However, it could also reflect their compromise between being overqualified or having no job at all. As there is no information about which additional job-search channels have been used, masking the complexity of migrants' job-finding strategies (Anderson et al., 2006) and how long it took to find the current job, direct conclusions about the efficacy of social-network job search cannot be drawn. Most importantly, the EU-LFS data provide no information on the type of social networks (co-ethnic vs. native, private vs. professional contacts, face-to-face vs. online contacts via (co-ethnic) social media (Janta, 2011)), their location (origin or destination country, specific economic sector) or their strength (Granovetter, 1995). Thus, the data capture traditional social networks only in a rather unspecific way and without the possibility to disaggregate family, friends or acquaintances. Furthermore, there is no information on the degree of social capital related to social networks. Ryan et al. (2008) argue that social networks and social capital cannot be seen as being synonymous. The findings of this study underline this argument because they show that social networks can also be related to negative labour market outcomes.

Second, the data do not enable disaggregation of migrants by country of origin. This leaves limited options for considering structural embeddedness (Portes, 1995) or the multi-faceted experiences of migrants, for example across space and ethnic groups (Samaluk, 2014). The models merely include controls for country groups with similar labour market accessibility, whereas country-specific analysis would enable consideration, for example, of ethnic community size and sectoral distribution of already established co-ethnic migrants (Ruhs and Anderson, 2010) and thereby also reveal migrant occupational niches. Third, the EU-LFS data are known to

underestimate numbers of migrant workers, in particular short-term migrants. It is also likely that migrants included in this data are positively selected on employability and language skills.

Two avenues for future research seem pertinent. First, do similar links as those uncovered for overqualification exist between social networks and other indicators of job quality including wages or contract type?; second, do the findings on overqualification also hold for intra-EU migrants from North-Western Europe who have higher reservation wages and have been shown to differ from recent CEE migrants in terms of migration motivations, occupational positions (Recchi, 2015) and working conditions (Felbo-Kolding, 2019)?

## Endnotes

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<sup>1</sup> Contemporary migrant social networks also include online ethnic-niche social media, which can likewise facilitate job search (Janta, 2011; Samaluk, 2016). The data presented in this article do not capture these adequately as they only feature an item combining job ads in newspapers and on the Internet.

<sup>2</sup> Most countries applied transition measures upon accession of the CEE countries. In 2014, the year of analysis, transition measures applied only to Croatian workers.

<sup>3</sup> There is no agreement on a methodology to consistently produce a specific number of segments or the characteristics differentiating segments (Leontaridi, 1998).

<sup>4</sup> The EU-LFS data aggregate these countries into one category which additionally includes Malta and Cyprus, both with negligible numbers of migrants.

<sup>5</sup> Data were available for the following destination countries: Austria, Belgium, Finland, France, Greece, Italy, Luxembourg, Portugal, Spain, Sweden, UK.

<sup>6</sup> [http://appsso.eurostat.ec.europa.eu/nui/show.do?wai=true&dataset=une\\_rt\\_q](http://appsso.eurostat.ec.europa.eu/nui/show.do?wai=true&dataset=une_rt_q) (extracted 16 February 2018).

<sup>7</sup> For sensitivity analysis using a standard welfare-regime approach, see Table A-8, online appendix.

<sup>8</sup> Other answer options: *‘responding to advertisements in the media, the Internet or another channel; via the public employment office; via a private employment agency; through an education or training institution; by direct application to the employer; employer contacted you directly; some other method; cannot say’*.

<sup>9</sup> A Chi-squared test showed the difference in objective overqualification to be statistically significant only at the  $p < 0.10$  level.

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## Tables and figures

**Table 1.** Descriptive statistics: Case numbers and percentages for employed nationals and recent CEE migrants

	Nationals (N = 94,782)		Recent CEE migrants (N = 658)	
	N	%	N	%
Job found through social networks	10,589	28.4	279	45.2
Subjective overqualification	20,245	21.8	251	39.1
Objective overqualification	11,369	12.2	248	38.2
Education level				
Low	19,818	21.1	118	18.1
Medium	39,642	42.1	326	50.2
High	34,628	36.8	206	31.7
Industry				
Public admin, education & health	30,569	32.4	64	9.8
Agriculture	1,200	1.3	27	4.1
Manufacturing	15,185	16.1	131	20.1
Construction	5,040	5.3	52	7.9
Wholesale & retail	12,629	13.4	78	12.0
Hospitality	4,067	4.3	116	17.8
Transport & communication	8,100	8.6	57	8.8
Finance, real estate, profess., adm. & support	12,862	13.6	73	11.2
Other services	4,679	5.0	54	8.3
Firm size				
Small	22,013	25.2	150	23.9
Medium	24,500	28.0	199	31.7
Large	40,946	46.8	278	44.4
Temporary employment	12,234	12.9	108	16.5
Part-time	19,360	20.4	141	21.4
Age group				
15–24	8,948	9.4	123	18.8
25–34	21,169	22.3	349	53.0
35–49	38,536	40.7	148	22.6
50–64	26,129	27.6	37	5.6
Sex (woman)	46,368	48.9	338	51.5
Marital status				
Single	37,667	39.7	358	54.4
Married	47,486	50.1	247	37.6
Divorced/separated	9,627	10.2	52	8.0
Country cluster				
Low unemployment (AT, CH, LU, NO)	8,074	8.5	132	20.1
Medium unemployment (BE, FI, SE, UK)	32,341	34.1	425	64.7
High unemployment (ES, FR, GR, IT, PT)	54,367	57.4	100	15.2

Source: EU-LFS ad-hoc module (Eurostat, 2014).

Note: Employees (15–64 years).

Case numbers and percentages based on weighted case numbers.

Percentages refer to data on respective ethnic group (nationals or recent CEE migrants), e.g. if 21.8% of nationals are subjectively overqualified, then 78.2% of nationals are not subjectively overqualified.

Additional information on statistical differences between shares of nationals and recent CEE migrants is provided in the online appendix (Table A-5).

**Table 2.** Descriptive statistics on employed recent CEE migrants: Job-finding method and destination-country language skills (%)

	Job-finding method		Destination-country language skills <sup>a</sup>	
	Social networks	Other channels	Poor	Good
Job-finding method				
Social networks			29.6	29.6
Other channels			24.5	38.2
Subjective overqualification				
Yes	54.7	45.3	24.5	35.3
No	38.7	61.3	29.3	32.9
Objective overqualification				
Yes	50.0	50.0	28.5	31.3
No	42.1	57.9	26.1	35.4
Reason for migration				
Labour; job found after migration	43.2	56.8	30.6	29.6
Labour; job found before migration	45.1	54.9	27.8	30.2
Family reasons	55.6	44.4	25.6	38.0
Study and other reasons	32.6	67.4	11.5	53.8
Years since entry into destination country				
1 year	42.0	58.0	48.0	17.3
5 years	47.4	52.6	13.7	43.8
Education level				
Low	50.0	50.0	39.7	22.4
Medium	47.5	52.5	29.2	28.9
High	39.0	61.0	16.7	48.0
Industry				
Public admin, education & health	22.6	77.4	11.1	63.5
Agriculture	78.3	21.7	42.3	15.4
Manufacturing	37.3	62.7	33.3	24.8
Construction	63.0	37.0	45.1	17.6
Wholesale & retail	45.9	54.1	28.6	27.3
Hospitality	50.0	50.0	20.9	45.2
Transport & communication	36.0	64.0	14.3	33.9
Finance, real estate, profess., adm. & support	44.9	55.1	37.5	26.4
Other services	58.8	41.2	20.8	39.6
Labour market obstacles <sup>b</sup>				
No particular obstacle	39.7	60.3	18.3	58.3
Lack of language skills	64.1	35.9	48.8	4.8
Lack of recognition	45.0	55.0	4.9	58.5
Other obstacles	63.5	36.5	12.3	40.0

Source: EU-LFS ad-hoc module (Eurostat, 2014).

Note: Employees (15–64 years).

Percentages based on weighted case numbers ( $N = 658$ ).

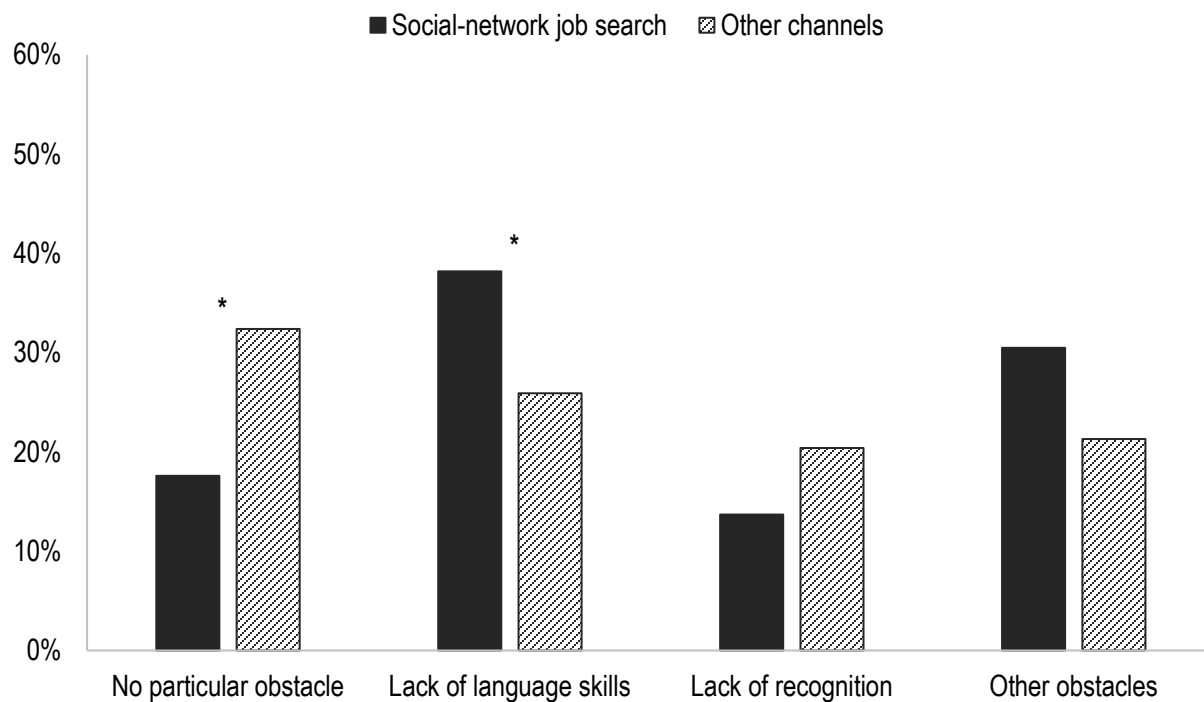
Reading instruction: Consider shares for job-finding method and, respectively, destination-country language skills separately and variable by variable.

<sup>a</sup> Destination-country language skills: poor = beginner or less, good = advanced or mother tongue. For readability, percentages for intermediate skills are not presented in the table; thus, the shares in each line for language skills do not sum up to 100%.

Additional information on statistical differences between the categories of the different variables is provided in the online appendix (Table A-6).

<sup>b</sup> Only subjectively overqualified employees ( $N = 250$ ).





**Figure 1.** Percentages of perceived main labour market obstacle separately for recent CEE migrants who found current job through social networks and those who used other channels

Source: EU-LFS ad-hoc module (Eurostat, 2014).

Note: Only subjectively overqualified employees (15–64 years).

Percentages based on weighted case numbers ( $N = 250$ ).

\* Significant difference between social-network search and other channels according to Chi-squared test ( $X^2 = 11.57$ ;  $p < 0.01$ ) and z-tests with Bonferroni-adjusted  $p$ -values.

**Table 3.** Logistic regression analyses for subjective and objective overqualification

	<b>Subjective overqualification</b>		<b>Objective overqualification</b>	
	Odds ratio	S.E.	Odds ratio	S.E.
Job found through social networks	1.30**	0.03	1.08*	0.03
Recent CEE migrant (ref = nationals)	1.87**	0.12	3.04**	0.12
Social networks x CEE migrant	1.44*	0.18	1.22	0.18
<i>Intercept</i>	0.08**	0.08	0.06**	0.09
<i>Chi<sup>2</sup></i>	1,904.35**		918.57**	
<i>-2 Log likelihood</i>	37,495.90		28,782.45	
<i>Cox &amp; Snell R<sup>2</sup></i>	.05		.03	
<i>Nagelkerke R<sup>2</sup></i>	.08		.05	
<i>N</i>	34,108		34,396	

Source: EU-LFS ad-hoc module (Eurostat, 2014).

Note: Employees (15–64 years).

Control variables included in the models (not shown in table but available in online appendix, Table A-7): education level (only for subjective overqualification), industry, firm size, temporary vs. permanent employment, part-time vs. full-time, age, marital status, country cluster.

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

**Table 4.** Logistic regression analyses for subjective and objective overqualification – only recent CEE migrants

	Subjective overqualification				Objective overqualification			
	Model 1		Model 2		Model 1		Model 2	
	Odds ratio	S.E.	Odds ratio	S.E.	Odds ratio	S.E.	Odds ratio	S.E.
<b>Main effects</b>								
Job found through social networks	1.94**	0.20	3.49	0.84	1.47*	0.20	1.88	0.82
Destination-country language skills (ref = poor)								
Intermediate	1.14	0.26	1.53	0.37	1.13	0.24	1.10	0.34
Good	0.94	0.28	1.34	0.39	1.24	0.27	1.21	0.35
Industry (ref = public admin, education & health)								
Agriculture	2.44	0.61	2.08	1.16	2.58	0.59	1.64	1.06
Manufacturing	1.43	0.41	1.47	0.49	2.06 <sup>T</sup>	0.40	2.55 <sup>T</sup>	0.48
Construction	1.01	0.55	1.45	0.79	1.35	0.53	2.28	0.71
Wholesale & retail	3.61**	0.43	3.62*	0.53	1.05	0.44	1.17	0.55
Hospitality	2.86*	0.41	2.37 <sup>T</sup>	0.50	1.98 <sup>T</sup>	0.40	1.96	0.51
Transport & communication	1.34	0.47	1.66	0.57	2.13	0.46	3.29*	0.55
Finance, real estate, profess., adm. & support	1.14	0.45	1.51	0.57	2.43*	0.43	1.30	0.57
Other services	2.80*	0.51	6.75**	0.70	1.34	0.50	1.93	0.67
<b>Interaction effects</b>								
Language skills (ref = poor) x social networks								
Intermediate x social networks			0.63	0.50			1.06	0.47
Good x social networks			0.56	0.54			1.19	0.52
Industry (ref = public admin, education & health) x social networks								
Agriculture x social networks			1.07	1.42			1.48	1.33
Manufacturing x social networks			1.02	0.86			0.49	0.84
Construction x social networks			0.51	1.12			0.36	1.05
Wholesale & retail x social networks			1.01	0.92			0.71	0.91
Hospitality x social networks			1.35	0.86			0.91	0.83
Transport & communication x social networks			0.58	1.00			0.24	1.00
Finance, real estate, profess., adm. & support x social networks			0.59	0.94			3.20	0.94
Other services x social networks			0.20	1.02			0.45	0.99

**Table 4.** (Continued)

	Subjective overqualification				Objective overqualification			
	Model 1		Model 2		Model 1		Model 2	
	Odds ratio	S.E.	Odds ratio	S.E.	Odds ratio	S.E.	Odds ratio	S.E.
<b>Controls</b>								
Migration reason (ref = labour, job found after migration)								
Labour, job found before migration	1.32	0.24	1.27	0.24	0.81	0.23	0.79	0.24
Family reasons	1.64 <sup>†</sup>	0.27	1.56	0.28	1.31	0.26	1.21	0.27
Study or other reasons	1.28	0.39	1.20	0.40	0.80	0.40	0.73	0.41
Years since entry into destination country	0.95	0.08	0.95	0.08	0.74**	0.08	0.74**	0.08
Education level (ref = low)								
Medium	3.33**	0.30	3.70**	0.31	a	a	a	a
High	5.82**	0.35	6.06**	0.35	a	a	a	a
Firm size (ref = small)								
Medium	1.24	0.30	1.20	0.31	1.28	0.29	1.36	0.30
Large	1.52	0.30	1.43	0.31	1.08	0.29	1.16	0.30
Temporary employment	1.09	0.28	1.09	0.29	0.88	0.27	0.88	0.28
Part-time	1.75*	0.26	1.75*	0.27	1.67*	0.25	1.64 <sup>†</sup>	0.26
Age group (ref = 35–49)								
15–24	1.67	0.34	1.61	0.34	0.54 <sup>†</sup>	0.34	0.53 <sup>†</sup>	0.35
25–34	1.03	0.26	1.01	0.26	1.26	0.25	1.28	0.26
50–64	0.58	0.53	0.66	0.54	0.79	0.47	0.81	0.48
Sex (1 = woman, 0 = man)	1.12	0.22	1.13	0.22	1.60*	0.21	1.61*	0.22
Marital status (ref = single)								
Married	0.80	0.22	0.75	0.23	1.01	0.22	1.04	0.22
Divorced/separated	0.67	0.42	0.66	0.42	1.30	0.39	1.45	0.40
Country cluster (ref = low unemployment)								
Medium unemployment	1.29	0.28	1.27	0.29	1.50	0.28	1.45	0.29
High unemployment	2.99**	0.40	3.13**	0.40	1.26	0.39	1.27	0.40
<i>Intercept</i>	0.04**	0.66	0.03**	0.73	0.30*	0.57	0.28*	0.65
<i>Chi2</i>	99.06**		106.95**		58.99**		71.65**	
<i>-2 Log likelihood</i>	663.18		655.29		695.62		682.95	
<i>Cox &amp; Snell R<sup>2</sup></i>	.16		.17		.10		.12	
<i>Nagelkerke R<sup>2</sup></i>	.22		.23		.13		.16	
<i>N</i>	564				571			

Source: EU-LFS ad-hoc module (Eurostat, 2014).

Note: Employees (15–64 years).

<sup>a</sup> Education level not included as a control variable in the model for objective overqualification because this indicator is directly composed of education level and occupational status.

<sup>†</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ .

## Online Appendix

**Table A-1.** Case numbers and percentages for job-finding methods of nationals and recent CEE migrants

<b>Job found through</b>	<b>Nationals</b> ( <i>N</i> = 37,312)		<b>Recent CEE migrants</b> ( <i>N</i> = 618)	
	<i>N</i>	%	<i>N</i>	%
Social networks	10,589	28.4	279	45.2
Job ads	6,702	18.0	109	17.7
Public employment services	1,962	5.3	13	2.1
Private agency	2,107	5.6	81	13.2
Direct contact with employer	11,548	31.0	94	15.2
Other channel	4,404	11.8	41	6.6

Source: EU-LFS ad-hoc module (Eurostat, 2014).

Note: Employees (15–64 years).

Case numbers and percentages based on weighted case numbers.

Reading instruction: Consider shares for job-finding method separately for nationals and recent CEE migrants.

**Table A-2.** Country clusters according to average unemployment rates 2010–2014 with case numbers of nationals and recent CEE migrants

		Unemployment rate (2010–2014) <sup>a</sup>	Nationals <sup>b</sup>	Recent CEE migrants <sup>b</sup>
Countries with low unemployment rate	AT Austria	5.1	3,039	50
	CH Switzerland	4.7	2,973	23
	LU Luxembourg	5.3	213	2
	NO Norway	3.4	2,126	55
	Total – low unemployment		8,351	130
Countries with medium unemployment rate	BE Belgium	8.0	3,465	40
	FI Finland	8.1	2,042	4
	SE Sweden	8.1	3,957	12
	UK United Kingdom	7.5	22,790	366
	Total – medium unemployment		32,253	422
Countries with high unemployment rate	FR France	9.8	21,248	8
	ES Spain	23.3	12,602	18
	GR Greece	21.8	2,036	6
	IT Italy	10.4	14,623	67
	PT Portugal	14.2	3,422	2
	Total – high unemployment		53,931	101

Source: <sup>a</sup> Eurostat data: [http://appsso.eurostat.ec.europa.eu/nui/show.do?wai=true&dataset=une\\_rt\\_q](http://appsso.eurostat.ec.europa.eu/nui/show.do?wai=true&dataset=une_rt_q) (extracted 16 February 2018). OECD data were used to calculate the average unemployment rate for Switzerland (see <https://data.oecd.org/unemp/unemployment-rate.htm>; extracted 27 July 2018).

<sup>b</sup> EU-LFS ad-hoc module (Eurostat, 2014).

Note: Employees (15–64 years).  
Case numbers and percentages based on weighted case numbers.

**Table A-3.** NACE codes for industries

Industry	NACE code(s)
Agriculture	A Agriculture, forestry and fishing
Manufacturing	B Mining and quarrying C Manufacturing D Electricity, gas, steam and air-conditioning supply E Water supply; sewerage, waste management and remediation activities
Construction	F Construction
Wholesale & retail	G Wholesale and retail; repair of motor vehicles and motorcycles
Hospitality	I Accommodation and food service
Transport & communication	H Transport and storage J Information and communication
Finance, real estate, profess., adm. & support	K Financial and insurance activities L Real-estate activities M Professional, scientific and technical activities N Administrative and support service activities
Public admin, education & health	O Public administration and defence; compulsory social security P Education Q Human health and social work activities
Other services	R Arts, entertainment and recreation S Other service activities T Activities of households as employers; undifferentiated goods- and services-producing activities of household for own use
<i>(Not included in analyses)</i>	U Activities of extraterritorial organisations and bodies

**Table A-4.** Labour market characteristics and shares of recent CEE migrants in different industries

Industry	ISEI <sup>a</sup> (median)	Income <sup>b</sup> (median)	Temporary employment <sup>c</sup> (%)	Recent CEE migrants <sup>d</sup> (%)
Public admin, education & health	55	6	12.8	0.2
Agriculture	18	3	36.4	2.2
Manufacturing	35	6	11.0	0.9
Construction	34	6	13.9	1.0
Wholesale & retail	34	4	11.1	0.6
Hospitality	25	3	24.5	2.8
Transport & communication	45	7	9.9	0.7
Finance, real estate, profess., adm. & support	55	6	10.3	0.6
Other services	35	3	20.1	1.1

Source: EU-LFS ad-hoc module (Eurostat, 2014).

Note: Employees (15–64 years).

Medians and percentages based on weighted case numbers.

<sup>a</sup> The international socio-economic index (ISEI) scales occupations (according to ISCO-08) by the average level of education and average earnings of job holders (see <http://www.harryganzeboom.nl/isco08/>, extracted 25 October 2019).

<sup>b</sup> Monthly take-home pay from main job (in deciles).

<sup>c</sup> Share of fixed-term compared to permanent employment.

<sup>d</sup> Share of recent CEE migrants in relation to nationals.



**Table A-5.** Descriptive statistics: Case numbers and percentages for employed nationals and recent CEE migrants – with statistics on significant differences between the two groups

	Nationals (N = 94,782)		Recent CEE migrants (N = 658)		Chi-squared test
	N	%	N	%	X <sup>2</sup>
Job found through social networks	10,589	28.4 <sup>a</sup>	279	45.2 <sup>b</sup>	83.59***
Subjective overqualification	20,245	21.8 <sup>a</sup>	251	39.1 <sup>b</sup>	112.82***
Objective overqualification	11,369	12.2 <sup>a</sup>	248	38.2 <sup>b</sup>	402.59***
Education level					
Low	19,818	21.1	118	18.1	17.03***
Medium	39,642	42.1 <sup>a</sup>	326	50.2 <sup>b</sup>	
High	34,628	36.8 <sup>a</sup>	206	31.7 <sup>b</sup>	
Industry					
Public admin, education & health	30,569	32.4 <sup>a</sup>	64	9.8 <sup>b</sup>	443.84***
Agriculture	1,200	1.3 <sup>a</sup>	27	4.1 <sup>b</sup>	
Manufacturing	15,185	16.1 <sup>a</sup>	131	20.1 <sup>b</sup>	
Construction	5,040	5.3 <sup>a</sup>	52	7.9 <sup>b</sup>	
Wholesale & retail	12,629	13.4	78	12.0	
Hospitality	4,067	4.3 <sup>a</sup>	116	17.8 <sup>b</sup>	
Transport & communication	8,100	8.6	57	8.8	
Fin., real estate, profess., adm. & support	12,862	13.6	73	11.2	
Other services	4,679	5.0 <sup>a</sup>	54	8.3 <sup>b</sup>	
Firm size					
Small	22,013	25.2	150	23.9	4.28*
Medium	24,500	28.0 <sup>a</sup>	199	31.7 <sup>b</sup>	
Large	40,946	46.8	278	44.4	
Temporary employment	12,234	12.9 <sup>a</sup>	108	16.5 <sup>b</sup>	7.19**
Part-time	19,360	20.4	141	21.4	0.40
Age group					
15–24	8,948	9.4 <sup>a</sup>	123	18.8 <sup>b</sup>	500.84***
25–34	21,169	22.3 <sup>a</sup>	349	53.0 <sup>b</sup>	
35–49	38,536	40.7 <sup>a</sup>	148	22.6 <sup>b</sup>	
50–64	26,129	27.6 <sup>a</sup>	37	5.6 <sup>b</sup>	
Sex (woman)	46,368	48.9	338	51.5	1.67
Marital status					
Single	37,667	39.7 <sup>a</sup>	358	54.4 <sup>b</sup>	59.26**
Married	47,486	50.1 <sup>a</sup>	247	37.6 <sup>b</sup>	
Divorced/separated	9,627	10.2	52	8.0	
Country cluster					
Low unemployment (AT, CH, LU, NO)	8,074	8.5 <sup>a</sup>	132	20.1 <sup>b</sup>	482.22***
Medium unemployment (BE, FI, SE, UK)	32,341	34.1 <sup>a</sup>	425	64.7 <sup>b</sup>	
High unemployment (ES, FR, GR, IT, PT)	54,367	57.4 <sup>a</sup>	100	15.2 <sup>b</sup>	

Source: EU-LFS ad-hoc module (Eurostat, 2014).

Note: Employees (15–64 years).

Case numbers and percentages based on weighted case numbers.

Percentages refer to data on the respective ethnic group (nationals or recent CEE migrants), e.g. if 21.8% of nationals are subjectively overqualified, then 78.2% of nationals are not subjectively overqualified.

Different superscript letters indicate a significant difference between nationals and recent CEE migrants according to z-tests with Bonferroni-adjusted *p*-values (compare shares line by line).

**Table A-6.** Descriptive statistics for employed recent CEE migrants on job-finding method and poor or good destination-country language skills (%) – with statistics on significant differences

	Job-finding method		Destination-country language skills		
	Social networks	X <sup>2</sup> test	poor	good	X <sup>2</sup> test
Job-finding method					
Social networks			29.6	29.6 <sup>a</sup>	5.23 <sup>t</sup>
Other channels			24.5	38.2 <sup>b</sup>	
Subjective overqualification					
Yes	54.7 <sup>a</sup>	15.06 <sup>***</sup>	24.5	35.3	1.74
No	38.7 <sup>b</sup>		29.3	32.9	
Objective overqualification					
Yes	50.0	3.63 <sup>t</sup>	28.5	31.3	1.21
No	42.1		26.1	35.4	
Reason for migration					
Labour; job found after migration	43.2 <sup>a,b</sup>	8.83 <sup>*</sup>	30.6 <sup>a</sup>	29.6 <sup>a</sup>	16.09 <sup>*</sup>
Labour; job found before migration	45.1 <sup>a,b</sup>		27.8 <sup>a,b</sup>	30.2 <sup>a</sup>	
Family reasons	55.6 <sup>b</sup>		25.6 <sup>a,b</sup>	38.0 <sup>a,b</sup>	
Study and other reasons	32.6 <sup>a</sup>		11.5 <sup>b</sup>	53.8 <sup>b</sup>	
Years since entry into destination country					
1 year	42.0	1.75	48.0 <sup>a</sup>	17.3 <sup>a</sup>	45.18 <sup>***</sup>
5 years	47.4		13.7 <sup>b</sup>	43.8 <sup>b</sup>	
Education level					
Low	50.0 <sup>a</sup>	15.86 <sup>***</sup>	39.7 <sup>a</sup>	22.4 <sup>a</sup>	35.90 <sup>***</sup>
Medium	47.5 <sup>a</sup>		29.2 <sup>a</sup>	28.9 <sup>a</sup>	
High	39.0 <sup>b</sup>		16.7 <sup>b</sup>	48.0 <sup>b</sup>	
Industry					
Public admin, education & health	22.6 <sup>b</sup>	38.62 <sup>***</sup>	11.1 <sup>c</sup>	63.5 <sup>e</sup>	64.93 <sup>***</sup>
Agriculture	78.3 <sup>a</sup>		42.3 <sup>a,b</sup>	15.4 <sup>a,b,c,d</sup>	
Manufacturing	37.3 <sup>b,c</sup>		33.3 <sup>a,b</sup>	24.8 <sup>c,d</sup>	
Construction	63.0 <sup>a,c</sup>		45.1 <sup>b</sup>	17.6 <sup>b,d</sup>	
Wholesale & retail	45.9 <sup>a,b,c</sup>		28.6 <sup>a,b,c</sup>	27.3 <sup>a,b,c,d</sup>	
Hospitality	50.0 <sup>a,c</sup>		20.9 <sup>a,b,c</sup>	45.2 <sup>a,e</sup>	
Transport & communication	36.0 <sup>b,c</sup>		14.3 <sup>a,c</sup>	33.9 <sup>a,b,c,d</sup>	
Finance, real estate, profess., adm. & support	44.9 <sup>a,b,c</sup>		37.5 <sup>a,b</sup>	26.4 <sup>a,b,c,d</sup>	
Other services	58.8 <sup>a,c</sup>		20.8 <sup>a,b,c</sup>	39.6 <sup>a,b,c,d,e</sup>	
Labour market obstacles <sup>f</sup>					
No particular obstacle	39.7 <sup>a</sup>	11.57 <sup>**</sup>	18.3 <sup>a</sup>	58.3 <sup>a</sup>	74.92 <sup>***</sup>
Lack of language skills	64.1 <sup>b</sup>		48.8 <sup>b</sup>	4.8 <sup>b</sup>	
Lack of recognition	45.0 <sup>a,b</sup>		4.9 <sup>a</sup>	58.5 <sup>a</sup>	
Other obstacles	63.5 <sup>a,b</sup>		12.3 <sup>a</sup>	40.0 <sup>a</sup>	

Source: EU-LFS ad-hoc module (Eurostat, 2014).

Note: Employees (15–64 years).

Percentages based on weighted case numbers (*N* = 658).

Percentages in first column provide information on shares of recent CEE migrants who found their job through social networks compared to other channels. Percentages in the column for destination-country language skills provide

information on poor (beginner or less) or good (advanced or mother tongue) language skills line by line. For clarity, percentages for intermediate skills are not presented in the table; thus, shares in each line for language skills do not sum up to 100%.

Different superscript letters indicate a significant difference between percentages within the respective variable according to z-tests with Bonferroni-adjusted  $p$ -values. Values are compared column by column within each category. Considering, for example, the variable 'reason for migration' and the column 'good': the share for 'good' language skills in the category 'study and other reasons' differs significantly from the shares for 'good' language skills in the two categories of 'labour' but is not statistically different from the share in the category 'family reasons'.

<sup>f</sup> Only subjectively overqualified employees ( $N = 250$ ).

**Table A-7.** Logistic regression analyses for subjective and objective overqualification with control variables

	<b>Subjective overqualification</b>		<b>Objective overqualification</b>	
	Odds ratio	S.E.	Odds ratio	S.E.
Job found through social networks	1.30**	0.03	1.08*	0.03
Recent CEE migrant	1.87**	0.12	3.04**	0.12
Social networks x CEE migrant	1.44*	0.18	1.22	0.18
Education level (ref = low)				
Medium	1.63**	0.04	a	a
High	2.71**	0.04	a	a
Industry (ref = public admin, education & health)				
Agriculture	1.51**	0.10	1.57**	0.12
Manufacturing	1.36**	0.05	1.06	0.06
Construction	0.87 <sup>†</sup>	0.07	0.90	0.08
Wholesale & retail	1.87**	0.04	1.35**	0.05
Hospitality	2.27**	0.05	1.62**	0.06
Transport & communication	1.24**	0.05	0.96	0.07
Finance, real estate, profess., adm. & support	1.25**	0.04	1.22**	0.05
Other services	1.39**	0.06	1.24**	0.07
Firm size (ref = small)				
Medium	0.96	0.03	1.16**	0.04
Large	0.98	0.03	1.25**	0.04
Temporary employment	1.37**	0.03	1.08*	0.04
Part-time	1.68**	0.03	1.64**	0.04
Age group (ref = 35–49)				
15–24	0.81**	0.04	0.95	0.05
25–34	0.84**	0.03	1.11*	0.04
50–64	1.07	0.04	0.89*	0.05
Sex (1 = woman, 0 = man)	1.00	0.03	1.37**	0.03
Marital status (ref = single)				
Married	0.92**	0.03	0.83**	0.04
Divorced/separated	1.06	0.05	1.03	0.06
Country cluster (ref = low unemployment)				
Medium unemployment	1.44**	0.05	1.80**	0.06
High unemployment	1.96**	0.05	1.87**	0.06
<i>Intercept</i>	0.08**	0.08	0.06**	0.09
<i>Chi2</i>	1,904.35**		918.57**	
<i>-2 Log likelihood</i>	37,495.90		28,782.45	
<i>Cox &amp; Snell R<sup>2</sup></i>	.05		.03	
<i>Nagelkerke R<sup>2</sup></i>	.08		.05	
<i>N</i>	34,108		34,396	

Source: EU-LFS ad-hoc module (Eurostat, 2014).

Note: Employees (15–64 years).

<sup>a</sup> Education level is not included as a control variable in the model for objective overqualification because this indicator is directly composed of education level and occupational status.

<sup>†</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ .

**Table A-8.** Sensitivity analysis with country cluster according to welfare regimes for logistic regression analyses for subjective and objective overqualification – only recent CEE migrants

	Subjective overqualification				Objective overqualification			
	Model 1		Model 2		Model 1		Model 2	
	Odds ratio	S.E.	Odds ratio	S.E.	Odds ratio	S.E.	Odds ratio	S.E.
<b>Main effects</b>								
Job found through social networks	1.94**	0.20	3.50	0.84	1.46 <sup>T</sup>	0.20	1.81	0.82
Destination-country language skills (ref = poor)								
Intermediate	1.15	0.26	1.51	0.37	1.08	0.24	1.03	0.34
Good	0.95	0.29	1.34	0.39	1.19	0.27	1.14	0.36
Industry (ref = public admin, education & health)								
Agriculture	2.54	0.61	2.15	1.16	2.53	0.59	1.55	1.06
Manufacturing	1.48	0.41	1.54	0.49	2.04 <sup>T</sup>	0.40	2.50 <sup>T</sup>	0.48
Construction	1.05	0.56	1.48	0.79	1.41	0.53	2.42	0.71
Wholesale & retail	3.63**	0.43	3.62*	0.53	1.03	0.44	1.14	0.55
Hospitality	2.98**	0.41	2.43 <sup>T</sup>	0.50	1.93	0.40	1.91	0.51
Transport & communication	1.36	0.47	1.65	0.57	2.13	0.46	3.25*	0.55
Finance, real estate, profess., adm. & support	1.21	0.44	1.55	0.57	2.51*	0.43	1.32	0.57
Other services	3.33*	0.50	8.36**	0.68	1.33	0.50	1.96	0.66
<b>Interaction effects</b>								
Language skills (ref = poor) x social networks								
Intermediate x social networks			0.65	0.50			1.10	0.48
Good x social networks			0.57	0.54			1.24	0.52
Industry (ref = public admin, education & health) x social networks								
Agriculture x social networks			1.05	1.42			1.53	1.33
Manufacturing x social networks			0.97	0.86			0.49	0.85
Construction x social networks			0.51	1.12			0.35	1.06
Wholesale & retail x social networks			1.01	0.92			0.72	0.91
Hospitality x social networks			1.36	0.86			0.91	0.84
Transport & communication x social networks			0.59	1.00			0.24	1.00
Finance, real estate, profess., adm. & support x social networks			0.60	0.94			3.27	0.94
Other services x social networks			0.18	1.01			0.43	0.99

**Table A-8.** (Continued)

	Subjective overqualification				Objective overqualification			
	Model 1		Model 2		Model 1		Model 2	
	Odds ratio	S.E.	Odds ratio	S.E.	Odds ratio	S.E.	Odds ratio	S.E.
<b>Controls</b>								
Migration reason (ref = labour, job found after migration)								
Labour, job found before migration	1.31	0.24	1.25	0.24	0.80	0.23	0.78	0.24
Family reasons	1.63 <sup>T</sup>	0.27	1.53	0.28	1.31	0.26	1.21	0.27
Study or other reasons	1.42	0.40	1.31	0.40	0.84	0.41	0.76	0.41
Years since entry into destination country	0.97	0.08	0.96	0.08	0.74**	0.08	0.74**	0.08
Education level (ref = low)								
Medium	3.19**	0.30	3.57**	0.31	a	a	a	a
High	5.60**	0.34	5.89**	0.35	a	a	a	a
Firm size (ref = small)								
Medium	1.21	0.30	1.19	0.31	1.27	0.29	1.36	0.30
Large	1.52	0.31	1.45	0.31	1.07	0.30	1.15	0.31
Temporary employment	1.16	0.28	1.15	0.28	0.89	0.27	0.88	0.28
Part-time	1.69*	0.26	1.70*	0.27	1.67*	0.25	1.65 <sup>T</sup>	0.26
Age group (ref = 35–49)								
15–24	1.66	0.34	1.61	0.34	0.53	0.34	0.52 <sup>T</sup>	0.35
25–34	1.06	0.26	1.03	0.26	1.26	0.25	1.27	0.26
50–64	0.57	0.53	0.66	0.53	0.78	0.47	0.81	0.48
Sex (1 = woman, 0 = man)	1.12	0.22	1.13	0.22	1.61*	0.21	1.62*	0.22
Marital status (ref = single)								
Married	0.83	0.22	0.78	0.23	1.02	0.22	1.06	0.22
Divorced/separated	0.68	0.42	0.68	0.42	1.27	0.39	1.42	0.40
Country cluster (ref = continental countries)								
Mediterranean countries	2.28*	0.39	2.58*	0.40	1.17	0.39	1.26	0.40
Nordic countries	1.02	0.49	1.04	0.49	0.87	0.50	0.90	0.51
Anglo-Saxon countries (UK)	1.18	0.27	1.17	0.28	1.43	0.27	1.45	0.27
Intercept	0.04**	0.66	0.03**	0.72	0.30*	0.57	0.30 <sup>T</sup>	0.64
Chi2	95.66**		106.95**		59.23**		72.31**	
-2 Log likelihood	666.57		657.97		695.38		682.30	
Cox & Snell R <sup>2</sup>	.16		.17		.10		.12	
Nagelkerke R <sup>2</sup>	.21		.23		.13		.16	
N	564				571			

Source: EU-LFS ad-hoc module (Eurostat, 2014).

Note: Employees (15–64 years).

<sup>a</sup> Education level is not included as a control variable in the model for objective overqualification because this indicator is directly composed of education level and occupational status.

<sup>T</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ .

**Table A-9.** Descriptive statistics: Percentages for male and female recent CEE migrants – with statistics on significant differences between the two groups

	<b>Men</b> (N = 319) %	<b>Women</b> (N = 338) %	<b>Chi-squared test</b> X <sup>2</sup>
Job found through social networks	47.3	43.3	1.06
Subjective overqualification	34.6 <sup>a</sup>	43.5 <sup>b</sup>	5.26*
Objective overqualification	41.9 <sup>a</sup>	58.1 <sup>b</sup>	7.00**
Destination-country language skills			
Poor	29.9	25.4	
Intermediate	43.4 <sup>a</sup>	34.7 <sup>b</sup>	12.50***
Good	26.8 <sup>a</sup>	39.8 <sup>b</sup>	
Industry			
Public admin, education & health	3.5 <sup>a</sup>	15.5 <sup>b</sup>	
Agriculture	4.7	3.6	
Manufacturing	27.8 <sup>a</sup>	12.8 <sup>b</sup>	
Construction	15.1 <sup>a</sup>	1.2 <sup>b</sup>	
Wholesale & retail	12.3	11.9	122.19***
Hospitality	14.8	20.6	
Transport & communication	11.0	6.9	
Finance, real estate, profess., adm. & support	8.8	13.1	
Other services	1.9 <sup>a</sup>	14.3 <sup>b</sup>	
Reason for migration			
Labour; job found after migration	48.9	43.1	
Labour, job found before migration	33.0 <sup>a</sup>	20.2 <sup>b</sup>	34.08***
Family reasons	11.4 <sup>a</sup>	27.7 <sup>b</sup>	
Study and other reasons	6.7	9.0	
Years since entry into destination country			
1 year	17.9	13.0	
5 years	17.9 <sup>a</sup>	26.3 <sup>b</sup>	14.29**
Education level			
Low	18.4	17.9	
Medium	56.3 <sup>a</sup>	44.5 <sup>b</sup>	12.33***
High	25.3 <sup>a</sup>	37.6 <sup>b</sup>	
Firm size			
Small	17.6 <sup>a</sup>	30.0 <sup>b</sup>	
Medium	34.0	29.7	13.16**
Large	48.4 <sup>a</sup>	40.3 <sup>b</sup>	
Temporary employment	16.3	16.9	0.04
Part-time	10.0 <sup>a</sup>	32.2 <sup>b</sup>	48.04***
Age group			
15–24	19.1	18.3	
25–34	53.9	52.2	
35–49	23.2	22.1	4.05
50–64	3.8	7.4	
Marital status			
Single	57.7	51.5	7.76*

Married	37.3	37.9	
Divorced/separated	5.0 <sup>a</sup>	10.7 <sup>b</sup>	
Country cluster			
Low unemployment (AT, CH, LU, NO)	20.9	19.2	
Medium unemployment (BE, FI, SE, UK)	68.8 <sup>a</sup>	60.9 <sup>b</sup>	11.57 <sup>**</sup>
High unemployment (ES, FR, GR, IT, PT)	10.3 <sup>a</sup>	19.8 <sup>b</sup>	

Source: EU-LFS ad-hoc module (Eurostat, 2014).

Note: Employees (15–64 years).

Case numbers and percentages based on weighted case numbers.

Percentages refer to data of the respective gender group (men or women), e.g. if 43.5% of women are subjectively overqualified, then 56.5% of women are not subjectively overqualified.

Different superscript letters indicate a significant difference between men and women according to z-tests with Bonferroni-adjusted *p*-values (compare percentages line by line).

\* *p* < 0.05, \*\* *p* < 0.01. \*\*\* *p* < 0.001, N.S. = not significant.



**Table A-10.** Logistic regression analyses for subjective and objective overqualification separately for men and women – only recent CEE migrants

	Subjective overqualification				Objective overqualification			
	Men		Women		Men		Women	
	Odds ratio	S.E.	Odds ratio	S.E.	Odds ratio	S.E.	Odds ratio	S.E.
<b>Main effects</b>								
Job found through social networks	1.81 <sup>T</sup>	0.31	1.83*	0.29	1.16	0.30	1.67 <sup>T</sup>	0.29
Destination-country language skills (ref = poor)								
Intermediate	1.30	0.38	0.93	0.39	1.35	0.37	0.78	0.37
Good	1.21	0.44	0.62	0.41	1.05	0.43	1.15	0.38
Industry (ref = public admin, education & health)								
Agriculture	2.82	1.13	3.69	0.91	9.88 <sup>T</sup>	1.21	1.25	0.85
Manufacturing	2.63	0.88	1.13	0.53	3.88	1.02	2.74 <sup>T</sup>	0.52
Construction	2.09	0.99	0.16	2.41	3.58	1.09	0.87	1.45
Wholesale & retail	5.92 <sup>T</sup>	0.93	3.54*	0.55	2.17	1.09	1.13	0.53
Hospitality	9.02*	0.95	1.96	0.49	3.12	1.07	1.99	0.48
Transport & communication	2.12	0.96	1.50	0.62	6.30 <sup>T</sup>	1.07	1.43	0.64
Finance, real estate, profess., adm. & support	1.11	0.98	1.42	0.55	12.36*	1.07	1.30	0.53
Other services	4.48	1.59	2.45	0.58	5.20	1.63	1.07	0.57
<b>Controls</b>								
Migration reason (ref = labour, job found after migration)								
Labour, job found before migration	1.42	0.33	1.41	0.38	0.64	0.34	1.18	0.37
Family reasons	2.21	0.48	1.40	0.36	2.28 <sup>T</sup>	0.46	1.13	0.34
Study or other reasons	1.89	0.67	1.12	0.54	1.24	0.66	0.74	0.56
Years since entry into destination country	0.99	0.11	0.92	0.12	0.78*	0.11	0.70**	0.11
Education level (ref = low)								
Medium	2.69*	0.43	4.37**	0.43	a	a	a	a
High	3.52*	0.52	8.96**	0.50	a	a	a	a
Firm size (ref = small)								
Medium	0.77	0.48	1.50	0.42	1.67	0.51	1.28	0.41
Large	1.38	0.48	1.56	0.42	1.67	0.51	0.91	0.41
Temporary employment	1.38	0.44	0.93	0.40	1.21	0.41	0.65	0.40
Part-time	2.34	0.54	1.57	0.33	1.49	0.50	2.04*	0.33
Age group (ref = 35–49)								
15–24	1.74	0.49	1.97	0.51	0.37*	0.49	0.60	0.51
25–34	0.61	0.37	1.82	0.39	0.69	0.37	2.06 <sup>T</sup>	0.38
50–64	0.44	1.06	0.71	0.65	0.51	0.95	1.01	0.59
Marital status (ref = single)								
Married	0.86	0.35	0.89	0.31	0.39**	0.35	1.96*	0.31
Divorced/separated	0.48	0.80	0.92	0.52	0.78	0.65	1.85	0.53
Country cluster (ref = low unemployment)								
Medium unemployment	1.35	0.44	1.06	0.40	1.21	0.44	1.98 <sup>T</sup>	0.40
High unemployment	1.70	0.69	3.71*	0.53	1.64	0.69	1.34	0.52
<i>Intercept</i>	0.03**	1.18	0.03**	0.87	0.20	1.20	0.33	0.75
<i>Chi2</i>	54.67**		64.83**		41.29*		54.67**	
<i>-2 Log likelihood</i>	303.50		335.40		309.75		344.92	

<i>Cox &amp; Snell R<sup>2</sup></i>	.18	.20	.14	.17
<i>Nagelkerke R<sup>2</sup></i>	.25	.27	.19	.23
<i>N</i>	273	291	277	294

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Source: EU-LFS ad-hoc module (Eurostat, 2014).

Note: Employees (15–64 years).

Results of these regression analyses should be interpreted cautiously because of limited statistical power due to small case numbers.

<sup>a</sup> Education level is not included as a control variable in the model for objective overqualification because this indicator is directly composed of education level and occupational status.

<sup>†</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ .

**Table A-11.** Employment status and use of social networks for job search when unemployed for nationals and recent CEE migrants

	<b>Nationals</b> ( <i>N</i> = 177,379)		<b>Recent CEE migrants</b> ( <i>N</i> = 1,057)	
	<i>N</i>	%	<i>N</i>	%
Employed <sup>a</sup>	112,946	63.7	761	72.0
Unemployed	14,628	8.2	108	10.3
Inactive	49,761	28.1	187	17.7
Use of social networks for search for (new) job	14,082	66.1	106	53.6

Source: EU-LFS ad-hoc module (Eurostat, 2014).

Note: Working-age population: 15–64 years.

Case numbers and percentages based on weighted case numbers.

<sup>a</sup> Employed, self-employed or family worker.