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The importance of host country human capital for the labour market integration of different migrant groups in Europe

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Non-technical summary

The paper investigates how the labour market trajectories of three groups of migrants—EU migrants, third-country economic migrants, and third-country non-economic migrants—differ based on their motivations for migrating. It examines the role that acquiring human capital in the host country (such as language skills, new qualifications or equivalising qualifications) plays in these trajectories.

We use a recent update of the cross-nationally comparative data from the EU Labour Force Survey (LFS) for the years 2008, 2014, and 2021. This data allows for a comprehensive view of employment probabilities and occupational gaps between natives and various migrant groups across different European countries. Through matching each migrant to comparable natives and then focusing on explaining how these differences from natives differed for migrant types over years of residence, sex, and the acquisition of host country human capital we can consider in more detail how these integration trajectories differ.

First, we find that non-economic migrants (those who migrate for reasons such as family reunification or seeking protection) face significant disadvantages in the labour market compared to economic migrants (those who migrate primarily for employment). This disadvantage is evident in both employment probabilities and occupational status, although the differences between groups of migrants are much smaller for occupational status than for employment. Second, having better language skills and obtaining equivalent qualifications is beneficial for employment opportunities, but particularly helps close the gap in occupational status. Third, non-economic migrants are more likely to acquire host country human capital over time, and it has a sizeable impact. When considering migrants with equivalised qualifications and good language skills there are far fewer differences in terms of outcomes between types of migrants.

Overall, this study indicates the importance of considering the diverse motivations of migrants and the critical role of host country human capital in improving their labour market outcomes. It suggests that targeted policies to support language acquisition and the recognition of foreign qualifications help the integration of non-economic migrants into the labour market. This has important implications for policymakers, as it underscores the need for tailored integration programs that address the specific needs of different migrant groups.

The importance of host country human capital for the labour market integration of different migrant groups in Europe

Wouter Zwysen[†] and Neli Demireva[‡]

Abstract

The labour market integration of migrants is a heavily politicised topic in Europe. Using detailed and recently updated data on migrant's motivations this paper places a much needed emphasis upon the heterogeneity of migrant groups and the pathways to their labour market integration. We focus on host country human capital and labour market outcomes from three ad-hoc modules of the EU Labour Force Survey to analyse (1) who takes up host country human capital; and (2) determine what the role of host country human capital acquisitions are in the labour market integration of heterogenous migrant groups and across time. Our results indicate that the take-up of host country human capital differs strongly between countries, with some of these differences reflecting the impact of specific policies, as well as variation in the economic context upon arrival. Importantly, we find that whereas non-economic migrants are at a substantial disadvantage compared to the majority, non-economic migrants benefit relatively much more from host-country human capital, particularly better language skills, host country qualifications and having equivalised their degrees. Our analysis points to the need to consider the trajectories of labour market integration of different migrant groups separately as there is great variation with years of residence and the take up of host country human capital.

JEL: J15; J24; J61; F22; R23.

Keywords

Labour market integration, human capital, migrant groups, migration policy, integration trajectories.

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Introduction

The economic integration of migrants is now universally considered imperative in major immigrant societies around the world and even plays a role in their social and political stability. Despite the ever growing literature that addresses the variation in labour market outcomes of different migrant groups and considers their main motivation for migration (Cangiano, 2015; Cortes, 2004; Fasani et al., 2018; Zwysen, 2018, Zwysen and Demireva 2020, Kanas and Steinmetz 2020), further research is needed to ascertain how these differences are shaped by individual factors such as host country human capital, over time and across heterogeneous groups (Guzi, Kahanec and Kureková 2021; Kanas and Steinmetz 2021). Labour market integration patterns vary substantially over countries (Reyneri and Fullin 2011) and the extent of observed disadvantage is likely to depend partially on individual characteristics of different migrants and their interplay with a range of migration policies and context specific opportunities that will influence the extent to which different migrant groups avail of different opportunities to invest in and acquire relevant host country human capital (Cangiano 2015; Tibajev and Hellgren 2019; Guzi, Kahanec and Kureková 2021; Kanas and Steinmetz 2021; Solano, Yilmaz and Huddleston 2022).

This work has specific policy implications. The increasing public opinion scepticism towards immigration has necessitated the examination of welfare generosity in many countries in Europe. In recent years both national and local integration programmes have experienced substantial funding cuts in Denmark, the Netherlands, Hungary, Austria (OECD 2018, 2019) and the UK. Understanding whether there is specific host country human capital that increases the chance of labour market success of migrant groups or what the barriers to the successful utilization of host country human capital are, can support targeted practices and effective policy interventions.

This study contributes to the literature in several ways. Using the 2008, 2014, and 2021 ad-hoc modules on migration of EU-LFS, we build a comprehensive picture of the employment probability difference and the occupational gap between natives and migrant groups. The paper increases our knowledge of who benefits from a variety of host country human capital and offers some empirical evidence as to the political and societal concerns about the allocation of resources to integration programmes.

Literature Review

Host country human capital take-up

Conceptually, migrants' labour market outcomes differ from those of the native-born for several reasons. Partly, migrants generally face a downgrade in their labour market status upon entry, due to legal barriers and a limited recognition of their human capital and skills (Friedberg 2000; Borjas, Kauppinen and Poutvaara 2018) acquired abroad which may be less valued by host country employers. Initial lower wages and occupational standing may be in part driven by inability of the migrant to achieve successful transference of their human capital to the labour market of the host country which often results in deskilling (Chiswick and Miller, 2009).

Research on migrant disadvantage often uses human capital as a 'control' in models on labour market incorporation. The concept of 'ethnic penalty' is thus used to signify the difference that remains unexplained between migrants and natives once observable compositional factors, and in particular human capital, have been taken into account (Heath et al., 2007). In this paper, however, we argue that there is the need for much more fine-tuned examination of different forms of host country human capital that the migrant individual may have accumulated at different stages of the migration journey. Three ad-hoc modules of cross-nationally comparable data allows for a distinction between host country language proficiency, language courses, host country qualifications and equivalization of qualifications obtained abroad. Previous research has focused in particular on tertiary degrees in the host country and shows that they are strongly and positively associated with employment probability and occupational standing (Lo Iacono and Demireva 2018; Verwiebe et al. 2019; Cantalini, Guetto and Panichella 2022). Yet, there is a crucial gap in our understanding of the transferability of different qualifications and the variation between European countries in supporting the equivalization of qualifications (Lancee and Bol, 2017, Rohrbach-Schmidt and Tiemann, 2016). This paper makes first steps in providing empirical examination of differences in the successful utilization of various forms of human capital and the extent to which those affect the gaps compared to natives. This is an important analysis from a policy perspective as well since specific practices can be potentially targeted. Below we lay out what we know about the impact of different host country human capital acquisitions upon the labour market integration of migrant groups.

It is well-established in the literature that fluency of the host country language results in quicker adaptation to the labour market of the receiving society (Borjas 1998; van Tubergen, Maas and Flap 2004). If a migrant possesses knowledge of the language of the host country and relevant

networks in the new context any downgrading of human capital may be less pronounced and even disappear over time (van Tubergen, Maas and Flap 2004; Koopmans 2010). Some studies however question this positive trajectory, pointing to the role of context - although the labour market outcomes of migrants do improve over time, there is clear variation between countries in the extent to which migrants are able to escape unemployment or the worst occupations (Fellini and Guetto 2018; Platt, Polavieja and Radl 2022).

Language courses have been strongly linked to refugees' successful economic integration on the other hand (Damelang and Kosyakova 2021; Kanas and Kosyakova 2023). Whereas, they form the pillar of integration efforts focused primarily non-economic, family and refugee programmes, they can be important sources of support for struggling economic migrants who are also looking for better job opportunities in the future (Lochmann, Rapoport and Speciale 2019).

Host country qualifications, in particular host country university degrees have been found to be particularly important for the achievement of good jobs possibly because of a better match between educational credentials and job allocation (Cantalini, Guetto and Panichella 2023). Both Guetto (2018) and Cantalini and co-authors (2023) point out to a distinctive divide between Southern European and Western European countries, the returns to higher education being pronouncedly larger in the latter. Our analysis adds further nuance by examining differences over time and by migrant motivation highlighting the groups for whom these returns are most pronounced.

Finally, the equivalization of degrees also has important role to play. It requires time and effort. Educational certificates can be particularly difficult to transfer if obtained outside of Europe (Kanas et al. 2012), and migrants from within the EU may have benefited from the convergence of educational systems (Lancee and Bol 2017; Fellini and Guetto 2018).

The interplay between host country human capital and different migrant motivations[§]

Immigrants can be further adversely affected by lack of extensive social networks, and by a lack of knowledge of the host country language (van Tubergen, Maas and Flap 2004).

The previous literature has distinguished between migrant motivations in an attempt to understand whether employment and occupational gaps are driven by group characteristics. By avoiding homogeneous groupings more attention can be paid to the complex journeys

[§] The paper uses the terms type and motivations interchangeably as have other studies.

experienced by different migrant groups as well as devise policy solutions that better target experienced barriers. Research has shown that large gaps exist between the labour market insertion of economic and non-economic migrants, with the gap between the native born and non-economic migrants being quite pronounced (OECD 2018, 2019).

There are several indications that these differences may depend at least partially on differences in host country human capital. Economic migrants are often more likely to be in possession of labour market skills that host country employers value (Polavieja 2015; Borjas, Kauppinen and Poutvaara 2018); whereas non-economic migrants may not necessarily have focused on accumulating human capital relevant to the host country before the onset of their migration. This is especially true of refugees whose main motivation is to leave a place rather than a consideration of their labour market match to the host country. Furthermore, refugees may have faced trauma and have underlying health problems which then limit their labour market opportunities and the utilization of their human capital[**] (Ruiz and Vargas-Silva, 2018).

Research has however suggested that this bleak picture for non-economic migrants may change over time as the outcomes for non-economic migrants may improve faster relative to economic migrants (Cangiano 2015; Dumont et al. 2016; Dustmann et al. 2016; Zwysen 2018). Non-economic migrants might be more likely to acquire some forms of host country human capital as they are often part and parcel of integration programmes (Kanas and Kosyakova 2023). In addition, migrants differ from each other in their time horizons, with economic migrants often planning to come for work and staying short-term while non-economic migrants may (have to) plan for a longer stay (Cangiano 2015). This changes the cost-benefit analysis and/or opportunities when it comes to forming social networks, learning new skills or the language, and other host country human capital (Duleep and Regets 1997; Cortes 2004; Zwysen 2018; Kanas and Kosyakova 2023). Thus, a higher level of investment in the country of residence, such as the acquisition of host country language and further qualifications, or even naturalisation – may result in a progression among non-economic migrants that surpasses that of economic migrants (Cebulla et al., 2010; Cortes, 2004; De Vroome and van Tubergen, 2010; Zwysen 2018).

The impact of language courses is often considered in relation to refugees (Damelang and Kosyakova 2021; Kanas and Kosyakova 2023) for whom they are part of integration

[**] In the LFS respondents are asked about their main motivations, and those mentioning seeking protection are classified as refugees.

programmes as noted above. Less is known however on their impact on other migrant groups. For economic migrants, for example, language courses might come with a trade-off and time spent outside of the labour market activity but can provide important information and advice of tackling practical integration challenges, positives that may be hard to quantify (Lochmann, Rapoport and Speciale 2019). It is important to note that, as some groups of more vulnerable migrants are sometimes obliged to take up language courses also before getting the right of work, there may be negative selection effect.

A policy maker may thus seek to improve employment outcomes among groups by increasing the number of economic migrants in a country and indeed calls for stringent migration policy are continuously issued in major immigrant societies across the world. Yet, the supply of low-skilled jobs and the demand for workers to fill them is not weaning, and immigrant meritocratic host countries should be seriously concerned about the long-term danger to integration and unrest that deskilling presents.

Research expectations and contribution of the paper

Although other studies have looked at the same data (EU Labour Force Survey or LFS) and have considered some aspects of the labour market context in the receiving society (Fasani, Frattini and Minale 2018; Guzi, Kahanec and Kureková 2021; Kanas and Steinmetz 2021), we expand on this research in several ways as well as using the most recent (2021) data. We consider a comprehensive number of individual host country human capital acquisitions to acknowledge the impact that the accumulation of relevant skills may have on the migrant's insertion into the labour market of the host society. The accumulation of host country human capital can be targeted by policy makers and bring about important interventions and is a worthy subject of a systematic investigation.

To guide our analysis, we have formulated several research expectations. First of all, between host country human capital should be particularly strong in relation to occupational standing compared to employment probability – skills are strongly linked to obtaining a good job (Zwysen and Demireva 2020).

Second, following the literature we assume that non-economic migrants may have a longer time horizon and invest more in host country human capital (Cortes 2004; Zwysen 2018) than non-economic migrants. Language proficiency, host country qualifications have been strongly linked to the labour market placement of migrants; the contribution of our study lies in examining those patterns for language courses and equivalization of degrees.

Our study ascertains the differences between several heterogeneous groups. We consider differences by gender, migrant motivation and over time which underscore our analyses. In addition. in our sensitivity tests we examine differences for those with tertiary education and those without.

Data and methods

We use the 2008, 2014 and 2021 ad-hoc modules on migration of the EU Labour Force Survey (EU LFS). This is a large-scale representative survey of the population aged 15+ in European countries[††]. The analyses include all migrants arriving after 2000 and no more than 8 years prior to the survey, aged 16-64 and not retired or in education. This focus on recent immigrants is necessitated as not all relevant variables are asked of migrants who arrived later, and in order to link to the context of arrival variables which are in some cases only available since 2000. This approach has some methodological strengths as well – it limits recollection bias and may limit the extent to which motivations change retro-actively when being reported (Gillespie, Mulder and Eggleston 2021).

Migrants groups

In the ad-hoc modules, respondents have been asked about their region of birth and main motivation for migrating which we use to construct three main migrant groups, each with their own distinctive characteristics – EU migrants, economic and non-economic migrants. The main distinction we draw is between EU migrants, who face a very different environment when arriving, third country migrants who arrive for economic reasons (meaning they report their primary reason for migration as employment) – or non-economic reasons – these include family or seeking international protection. We combine the latter partly because of the small sample size, and partly because there may be some overlap between both categories. We exclude students from the analysis as by default their access to the labour market of the host country may be limited. We further distinguish between migrants by their sex, as outcomes are substantially different for male and female migrants, and by their years of residence. We expect labour market outcomes to improve substantially over time (Zwysen 2018).

[††] Austria, Belgium, Bulgaria, Switzerland, Cyprus, Czech republic, Germany (only 2008), Estonia, Spain, Finland (only 2014), France, Greece, Croatia (only 2014), Hungary, Ireland (only 2008), Italy, Lithuania, Latvia, Luxembourg, Netherlands (only 2008), Norway, Poland, Portugal, Romania, Sweden, Slovenia, Slovakia, UK. In the 2008 ad-hoc module detailed questions on migrants were only asked in Austria, Belgium, Switzerland, Cyprus, Germany, Spain, France, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Sweden and the UK.

Year of residence

As described above, we have restricted the analyses to those who have been in the host country for less than 8 years. Within this group, we distinguish between relatively recent arrivals (0 to 2 years in the host country), intermediate group (of 3 to 5 years), and relatively more established groups (in the host country between 6 to 8 years). We capture in this way important variation in the length of time that migrants have spent in the host country and their interactions with host country institutions including its labour market, and further capture different cohorts of arrival through the combination with year of survey and country[‡‡].

Host country labour market participation

We consider two main outcomes to capture the labour market participation of migrant individual – their probability of employment and occupational status. Both are commonly used measures of labour market insertion – the former allows us to relate to policy concerns that migrants may not be net contributors to the economy if they are unemployed; the latter, places our research in the nexus of debates on deskilling and inability to translate human capital into occupational gains (Fellini and Guetto 2018; Zwysen and Demireva 2018) (). In terms of employment probability, we use ILO definitions and differentiate between those who are employed rather than unemployed or inactive. As part of our further analyses and sensitive checks, we restrict the analysis to a narrower definition of employment rather than being unemployed, excluding the inactive. Our second measure of host country labour market insertion is occupational status, measured as the ISEI scale incorporated into occupational codes (Ganzeboom and Treiman 1996).

Host country human capital

First, speaking the ***host country language*** well[§§] brings substantial returns in the labour market (e.g. Campbell, 2014; Cebulla et al., 2010; Cheung, 2013; Cheung and Phillimore, 2014; Cortes, 2004; De Vroome and van Tubergen, 2010; Dustmann and Fabbri, 2003). These language skills are typically acquired before the migration journey has begun. In the 2008 wave

[‡‡] In the analyses we analyse migrants given a combination of country-year of survey - migrant type - year of arrival

[§§] It is important to note here that language proficiency may not have come about through an investment in the host country but may reflect (former colonial) ties between the country of origin and destination. This makes it very important to account for the selection on background variables. For this reason we compare between groups of migrants from similar regions; and also repeat the analysis leaving out those who have mother tongue levels in 2014 and 2021. In 2021 57% of migrants reported having had poor language skills prior to migrating, 8% intermediate, 9.5% advanced and 26% mother-tongue level. Of those with poor skills around 3 quarters improved it, as did 2/3ds of those with intermediate skills.

respondents were asked whether they need to improve their host country language skills to get an appropriate job; while in 2014 and 2021 respondents were asked whether their language skills were at mother tongue, advanced, intermediate, or beginner or less level. This is recoded to a dummy variable indicating either no improvement is needed (2008) or skills are at advanced or mother tongue level (2014 or 2018).

Second, we examine ***language courses attended/ training*** undertaken in the host country after migration. This further language training can be important part of social, cultural and economic integration attempts in the receiving society, especially for refugees who often have fewer opportunities to learn the language through immersion and social contacts (Dustmann and Fabbri 2003; Dumont et al. 2016; Kosyakova, Kristen and Spörlein 2021) but also is taken-up in great numbers by family migrants. In 2008 respondents were asked about the use of services for labour market integration in the 2 years following arrival with one of the answer options being host country language tuition. In 2014 and 2021 respondents were asked whether they attended language courses. This is then combined to a dummy variable indicating respondents attended language courses.

Third, we include a variable on whether migrants ***obtained their highest qualifications in the host country***. This is approximated for everyone by comparing the year in which someone received their last qualifications with the year of arriving. In 2008 and 2021 this is also added on by using a variable on whether there is either no need to equivalise as the highest qualification was obtained in the host country (2008) or a report by the respondent that the highest level of qualification was obtained in the host country.

Finally, we capture whether the migrant individual has ***equivalised their existing qualifications*** in the host country. This variable is derived from a question regarding recognition or equivalisation of qualifications. In 2008 and 2021 respondents were asked whether they had established equivalence. This is recoded into a dummy variable being 1 where education is either being equivalised or there was no need, rather than it not being done. For these variables we exclude those who did not receive their upper secondary end-of-school qualifications, as there equivalisation is not as relevant. In 2014 this can be approximated by using a question on the obstacles respondents observe in finding a suitable job where one option is non-equivalent qualifications. We recode this in such a way that a positive value indicates it is not an issue.

As the coding of the different variables do change over time, we carry out robustness tests analysing the effect separately in each wave.

Context of arrival

As part of the analysis we also consider how the contextual factors in the host country and at the time of arrival may shape the take-up of host country human capital. we also include indicators of the policy context and context of arrival which is a well-established practice in the literature as migrants may differ considerably by the conditions they experience upon arrival. Unlike previous research which often focuses on one particular contextual factor such as labour market policies (Kanas and Steinmetz 2021) or asylum decisions (Fasani, Frattini and Minale 2018) we examine several reception characteristics that might affect different groups of migrants and the acquisition of host country human capital. These indicators of policy context, we argue, captures the context of arrival. The ***policy context*** in the country of residence is captured through ***MIPEX scores*** for different policies. These are compiled to reflect integration policies in a country on eight different domains based on 167 indicators. A higher score indicates the policy context is more favourable to migrants. We further include the labour dimension of the MIPEX scores, which is focused on access to the labour market. It is likely that this will have a pronounced effect on economic migrants – which has been demonstrated in the research of Kanas and Steinmetz (2021). We use three-year averages around the year of the survey for 2008 and 2014, and the average scores of 2018-2019 for 2020. As these do not vary much over time and are more consistently available in later years we use MIPEX scores at the time of the survey.

Similarly to Fasani et al. (2018) who have highlighted the importance of this measure, we consider the ***initial uncertainty*** faced by refugees, which is approximated by including information obtained through a variety of variables related to the ***United Nations High Commission on Refugees (UNHCR)***[***] ***on the decisions made on asylum applications in each country***. We compute the ***rate of decisions***[†††]***out of all new applications; as well as the rate of positive decisions (granting asylum) made***. A greater sense of stability and security upon arrival may also contribute to further investments in host country human capital, particularly for non-economic migrants (Fasani, Frattini and Minale 2018). There are several reasons why

[***] Downloaded 03/07/2017 from http://popstats.unhcr.org/en/asylum_seekers, providing information from 2000 for the total pending applications by the start of a year, the new applications, the decisions made, recognized, rejected and granted, as well as the total number of decisions pending by the end of the year. This is provided by year, from country of origin and to country of residence. We aggregated country of origin to categories allowing for merging to the EU-LFS: EU15, NMS10, NMS3, EFTA, other Europe, North Africa, Other Africa, Near Middle East, East Asia, South South-East Asia, North America, Central America, South America, Australia/Oceania.

this measure may be relevant to the labour market insertion of all migrant groups, while of course being expected to particularly affect non-economic migrants. We already know that initial uncertainty proxied through the rate of asylum decisions affects long-term labour market outcomes of refugees (De Vroome and van Tubergen 2010; Hainmueller, Hangartner and Lawrence 2016; Fasani, Frattini and Minale 2018) but may also have spill-over effects to other migrant groups. Thus, we would not expect asylum claim decisions to affect labour or family migrants who are not directly affected by them but perhaps these decisions represent an aspect of the hostile climate of the receiving societies that should not be ignored. Further, the LFS captures self-reported motivations rather than legal categories of entry, meaning some migrants with multiple motivations – following a family member as well as seeking protection – may have actually entered as refugees while not classified as a refugee in our data, or may be dependent on a refugee.

Finally, to capture ***initial employment conditions*** and the business cycle the harmonized ***unemployment rate***[‡‡‡] at the year of arrival at country level is included for everyone. Migrants are more likely to be sensitive to economic conditions compared to the native-born. A high initial unemployment rate in the receiving society may affect migrants particularly hard as lower skilled workers will be crowded out of [good] jobs (Pollmann-Schult 2005; Zwysen 2016) and there can be increased competition between low skilled migrant workers. At the same time, economic migrants may be substantially more flexible than non-economic migrants who are less mobile and therefore less able to move and avoid shocks (Røed and Schøne 2012).

Table A1 in the appendix describes the sample for natives and migrants overall and by year of the survey.

Outline of Method

To acknowledge the heterogeneity within migrant groups which is one of the main contributions of our paper, we draw three important distinctions between migrants that we adopt in all analyses to present a unified approach. We first consider time spent in the host country, differentiating between recent migrants (0-2 years), those that have been in the country between 3 to 5 years, and more established groups who resided in the host country between 6 to 8 years. We differentiate between the following migrant groups accounting for migrant

[‡‡‡] downloaded from Eurostat, for 15-74-year olds, on 203/04/2018

motivations: EU, economic, non-economic migrants (refugee and family migrants, student migrants have been excluded from the analysis).

The analysis is carried out in two main parts. The first part considers descriptively how different migrant groups differ in their take-up of host country human capital. The second part of the analysis then focuses on a comparison of recent migrants of different motivations to the majority in the country of residence, with the aim of uncovering (1) the variation; and (2) the role of different type of host country human capital.

What are the patterns of host country human capital take up by migrant groups?

The first question we aim to answer is what drives variation in the take-up of host-country human capital. For this purpose, we estimate a binary logistic regression for each of the four host country human capital outcomes on migrant groups – with EU migrants as a reference category – using fixed effects for the combination of country and survey year, and controlling for sex, age and age squared, urbanity, having a dependent child, and education. The analyses are carried out separately for men and women. All analyses are weighted. Based on these estimates we show the differences between migrant groups, and by years of residence. We further estimate the trend in host country human capital take-up by examining the difference between relatively established migrants (those who have resided in the host country between 6 to 8 years) and relatively recent arrivals (0-2 years). To assess the impact of host country context or the context of arrival these measures are introduced separately into the model, and country fixed effects are left out.

How does host country human capital affect the gap between majority members and migrants?

Regarding the second question, our main approach is to estimate the difference between groups of migrants and natives (defined on the basis of main motivation for migration or EU origin as described above), further acknowledging heterogeneity by sex, and years of residence in the host country. As we are interested in how migrants, depending on their sex, year of arrival and motivation, differ from otherwise similar natives in the same country we prepare the sample following the approach of coarsened exact matching (Blackwell et al. 2009). This means we only include natives or migrants if there is at least one of the other of the same sex, age (16-34;35-49;50-69), educational level (university or not) and region[§§§] within country and year of the survey. The benefit is that we only estimate migrant penalties on the common support,

[§§§] NUTS0, NUTS1, NUTS2

which is appropriate as there are several countries in the EU LFS where there are very few migrant workers, particularly in central and Eastern Europe. The aim of this approach is to compare migrants to majority members or other migrants that are as similar as possible to them. In a second step, linear regression models are then used to estimate the gap on this pre-prepared sample, further controlling for detailed socio-demographic characteristics – highest level of qualification (low, middle or high), age and age squared, having a dependent child, urbanity of where someone lives – within the cluster on which the matching happened. The analyses are weighted and carried out separately for the gap of each type of migrant (by sex, motivation, and years of residence) to the majority[****]. To assess the impact of host country human capital two coefficients are estimated: the difference to the majority of a migrant without a specific type of host country human capital, and the gap for a migrant with the host country human capital. The difference between those coefficients can then be estimated and interpreted as the change in the gap of having host country human capital.

Results

Description of economic gaps

Table 1 shows the total, weighted, number of migrants by sex, origin group and years of residence where sufficient controls are available. This shows that on average, the share of employment for EU and economic migrants is higher than the natives, while that of non-economic migrants is substantially below.

Table 1: number and labour market outcomes of each group by years of residence and sex

	Men: N	Men: share employed	Men: occupational status	Women: N	Women: share employed	Women: occupational status
Native	986,212	73.8	43.5	1,019,810	62.9	46.2
EU: less than 2	5,006	86.4	40.8	4,995	68.1	39.8
EU: 3-5	6,803	85.5	41.1	6,807	69.1	40.1
EU: 6-8	6,090	84.2	39.6	6,856	66.8	38.3
Economic: less than 2	2,313	85.2	49.0	2,009	78.5	38.1

[****] For the analyses of non-EU migrants we actually include dummy variables for each migrant by large origin region given their main motivation, and combine this into one average coefficient to account for differences between motivation groups in their origin.

Economic: 3-5	3,430	84.1	41.4	2,739	75.7	32.6
Economic: 6-8	3,701	81.5	37.3	2,774	77.4	30.1
Non-economic: less than 2	2,653	53.6	38.9	4,890	27.9	41.0
Non-economic: 3-5	4,630	59.4	34.7	8,139	33.1	35.1
Non-economic: 6-8	4,526	63.2	34.8	7,669	39.8	33.0

Source: LFS ad-hoc module 2008, 2014, 2021

Table 2 shows the average difference between migrants and natives, accounting for country, in the full sample and when restricting to only those cases where both migrants and natives are sampled in the same group of region, age, university degree, and sex. Restricting to common support, meaning that for a specific combination of variables there are both migrants and natives who can be compared, reduces the sample substantially, as the number of natives being used drops. The differences remain broadly comparable though. EU migrants are between 4 and 6 percentage points more likely to be employed than natives, while economic migrants have between 11.5 to 14 percentage point advantage over natives - a result that holds both for men and women; and an advantage that further increase with time. In contrast, non-economic migrants are substantially less likely to be employed, but this difference also declines over time: from 32-33 percentage points lower for recent arrives to 20-21 percentage points lower for established non-economic migrants.

In terms of occupational status there is a clearer pattern of disadvantage. All migrants, with the exception of recently arrived economic migrants, work on average on lower quality jobs than natives. These gaps do not improve with time spent in the country, with non-economic migrants faring worst, particularly those who arrived 6 to 8 years prior to the survey.

Table 2: Estimated gap prior to restricting the sample to those on common support and after

Employed	**Full**	**Common support**
EU: less than 2	4.3 (0.7)***	4.5 (0.7)***

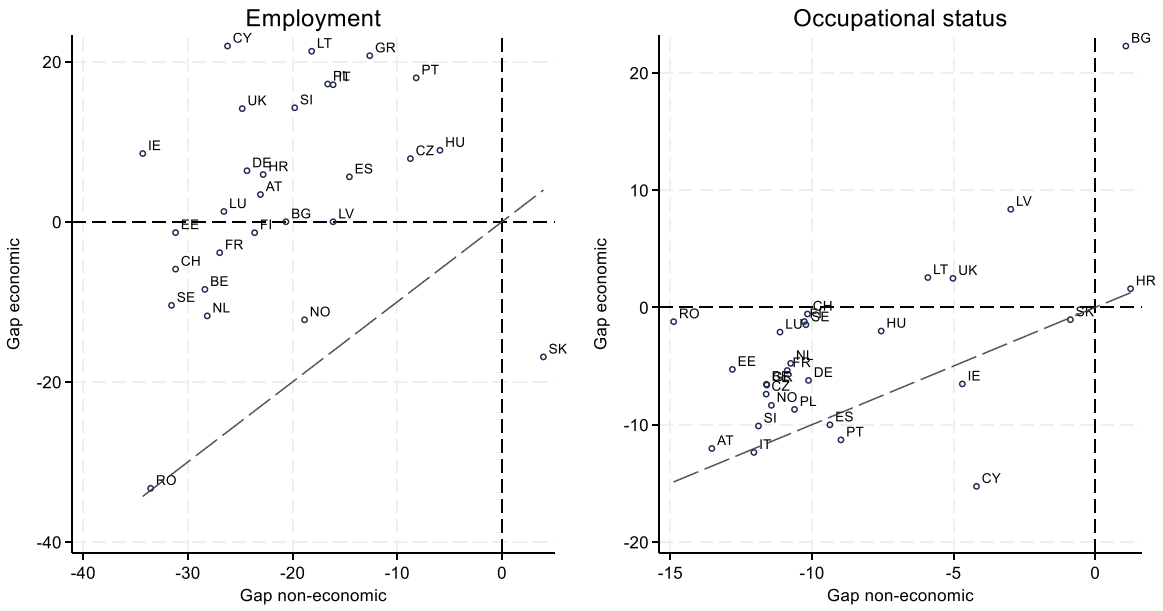
EU: 3-5	5.8 (0.7)***	5.9 (0.7)***
EU: 6-8	5 (0.7)***	5.1 (0.7)***
Economic: less than 2	13.2 (1)***	11.5 (1.1)***
Economic: 3-5	13.2 (0.9)***	12.4 (0.9)***
Economic: 6-8	13.8 (0.8)***	14.2 (0.8)***
Non-economic: less than 2	-33.4 (0.9)***	-32.4 (0.9)***
Non-economic: 3-5	-27.1 (0.7)***	-26.2 (0.8)***
Non-economic: 6-8	-20.9 (0.7)***	-19.5 (0.7)***
Occupational status	**Full**	**Common support**
EU: less than 2	-6.3 (0.4)***	-5.6 (0.4)***
EU: 3-5	-5.6 (0.4)***	-4.9 (0.4)***
EU: 6-8	-7 (0.4)***	-6.2 (0.4)***
Economic: less than 2	-0.2 (0.7)	-1 (0.7)
Economic: 3-5	-6.7 (0.5)***	-6.4 (0.5)***
Economic: 6-8	-10 (0.4)***	-8.6 (0.4)***
Non-economic: less than 2	-5.5 (0.7)***	-5.4 (0.7)***
Non-economic: 3-5	-10.7 (0.4)***	-10.1 (0.4)***
Non-economic: 6-8	-11.6 (0.4)***	-10.3 (0.4)***

Source: LFS ad-hoc module 2008, 2014, 2021. Controlling for country fixed effects.

Figure 1 plots this relation between the gaps for economic and non-economic migrants in terms of both employment (left) and occupational status (right). It shows quite clearly that economic migrants are much more likely to be employed, experiencing positive advantages in several countries. On the other hand, with the exception of Slovakia and Romania, non-economic migrants suffer worse employment gaps compared to natives than economic migrants. In terms of occupational status both economic and non-economic migrants work on lower quality jobs than similar natives, and the difference between both groups is smaller and less structural. Figure A1 in the appendix shows the estimated employment gaps with confidence intervals for

the three types of migrants. This highlights the variation between countries in terms of migrant outcomes. Indeed, EU movers and third country economic migrants tend to have somewhat better employment outcomes on average, while non-economic migrants have uniformly poor employment outcomes. While in some countries such as Sweden and Romania all third country migrants do particularly poor, there are also countries such as Germany where economic migrants face no disadvantage but non-economic migrants face sizeable gaps.

Figure 1: Relation between the estimated employment gap of non-economic and economic migrants



Note: Estimated employment gap (left) and occupational status (right) for economic and non-economic migrants compared to the majority (rather than not working) of EU-movers (left), third country migrants who reported arriving for employment reasons (middle) and third country migrants arriving for family, protection or other reasons, excluding students, with 95% C.I.. Sample is restricted to migrants arriving in the last 8 years, and the gap is estimated by a country-specific logistic regression controlling for gender, age, urbanity and year of survey. Source: EU-LFS 2008, 2014, 2021

Who takes up host country human capital

The role of individual predictors

Table 2 summarises the average take-up of host country human capital among recent migrants as well as the trend of host country human capital take-up[††††]. There are two important patterns that emerge. Two forms of host country human capital stand out by most migrants being in possession of them – host country language proficiency and equivalised degrees. Among migrant men and women, more than half of the sample report host country language proficiency (54 percent of EU Men, 62 per cent of economic migrant men and 58 percent of non-economic migrant men; with similar patterns among women: 51 percent of EU women, 62 percent of economic migrant women, and just less than half – 46 percent among non-economic migrant women– the latter being the only exception to the pattern). Over half of the sampled migrants report having taken steps to equivalise qualifications, which is particularly high in 2014 – where it was recorded only when there was an issue on the labour market. These attest to the significant host country relevant human capital that all migrant groups have acquired. As discussed in the literature review section, these two forms of host country human capital, language proficiency and the equivalization of degrees are also frequently highlighted as being of great relevance to the economic integration of migrants to the host country labour market and are particularly valued by employers. Notably, language courses which are often advanced as part of social and cultural integration programmes of host countries register greater take-up among non-economic migrants than among economic or EU migrants (25 percent of non-economic migrant men have attended a language course and 27 percent of non-economic migrant women, whereas among economic migrant men this share falls to 14 percent and to 18 percent among economic migrant women – a difference of around 10 percentage points). Such result is to be expected, and it reflects perhaps the fact that language courses are often aimed at non-economic migrants and can be offered for free or at a reduced cost to these group of migrants, especially the recent arrivals among them, as part of integration packages. Having obtained the highest qualifications in the host country is somewhat lower, with this being the case for 19 percent of non-economic migrant women and 17 percent of non-economic migrant men, compared to 12 percent of economic men and women, and 11-12 percent of EU migrants.

Table 3: Take-up and trends in host country human capital

[††††] calculated as the difference in the probability of taking up a type when more established [6-8 years] than when recently arrived [less than 2 years]

		Language proficiency		Language course		Host country qualification		Equivalised qualification	
		average	**trend**	**average**	**trend**	**average**	**trend**	**average**	**trend**
Men	EU	54.2	16.6	16.7	10.4	11.3	12.8	56.5	6.6
		(0.8)	(1.8)	(0.6)	(1.4)	(0.5)	(1.4)	(1)	(2.5)
	Economic	61.9	5.8	14.3	7.4	12.3	12.7	54.7	4.5
		(0.9)	(2.2)	(0.6)	(1.6)	(0.7)	(1.6)	(1.2)	(3)
	Non-economic	58	14.2	25.5	2.3	18.8	17.2	53	14
		(0.9)	(2.2)	(0.7)	(2)	(0.7)	(1.8)	(1.2)	(3)
Women	EU	50.6	13.8	21.3	6.5	12.1	16.3	55.6	9.4
		(0.7)	(1.7)	(0.6)	(1.4)	(0.5)	(1.3)	(0.9)	(2.1)
	Economic	62.2	10.4	17.7	10.3	11.8	11.7	55.2	9.6
		(1)	(2.5)	(0.9)	(2.1)	(0.8)	(2)	(1.4)	(3.4)
	Non-economic	45.9	13.3	27.3	8	16.8	19.7	50.8	8.9
		(0.6)	(1.5)	(0.5)	(1.3)	(0.5)	(1.2)	(0.8)	(1.9)

Note: The table shows the average share of each group of migrants, by their origin and sex or education level, who have a certain type of host country human capital, averaged over the groups arrived less than 2 years, 3-5 or 6-8 years ago, as well as the estimated difference between the later and more recent arrivals, estimated from a logistic regression of the human capital type on migrant origin and years of residence for the specific subgroup of migrants, controlling for country by year fixed effects, sex, education, age, having a dependent child, and urbanity.

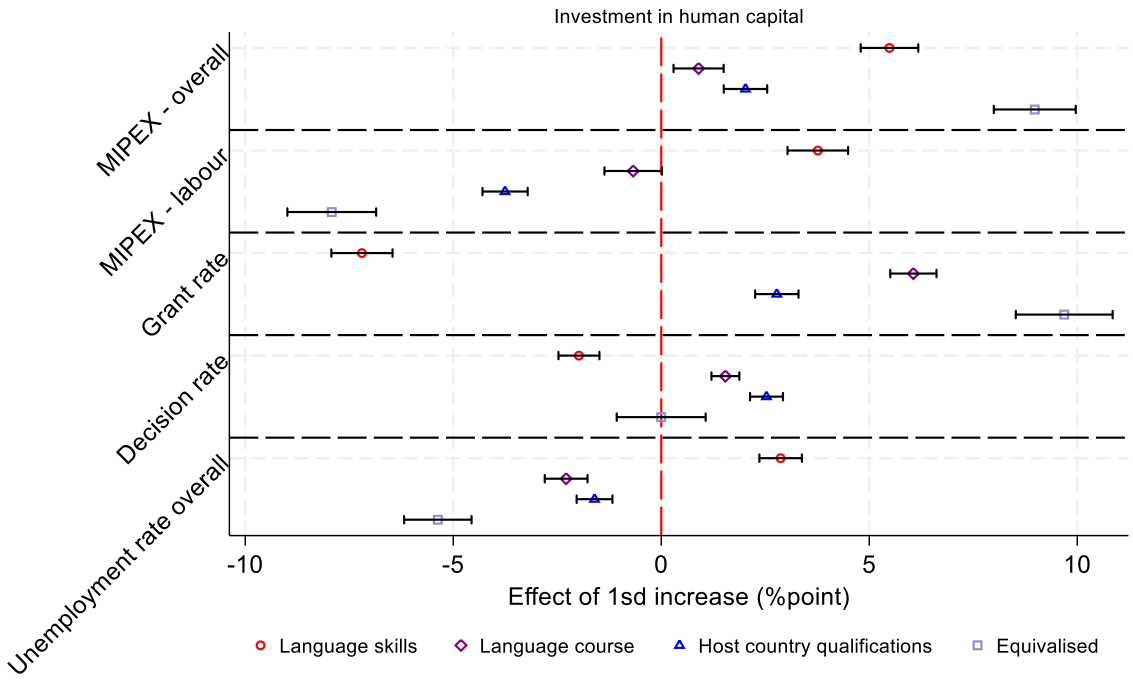
The second key result is the trends of host country human capital acquisition in different groups. Language skills, followed by host country qualifications, and finally equivalised degrees are where, over time, migrants focus their human capital investments, whereas the importance of language courses wanes with time. This is especially the case for non-economic migrants who register the sharpest increase in take-up of the aforementioned three types of human capital – 14 percentage point estimated difference in language skills for non-economic men, 17 percentage point difference in host country qualification and 14 percentage point difference for equivalised degrees for non-economic men; while for example, among economic men we have 6 points difference (language proficiency), 13 percentage points (host country highest qualification) and respectively 4.5 percentage points difference (equivalised degrees). The same is true of migrant women - with the exception of equivalized degrees - where the point difference between economic (10 percentage points) and non-economic (9 percentage points) migrant women is very similar.

These results align with what we expect for the labour market insertion of individuals over time. With an increase in the years spent in the host country, it is likely that migrant individuals acquire less human capital in the form of language courses which are part of integration programmes targeting recent arrivals and focus more on the acquisition of degrees and qualifications that can be important for affirming and improving their occupational standing in the host country.

The role of contextual factors

Does the take-up of host country human capital depend on the context – e.g. country-specific policies? Research has suggested that context can play a pronounced role (Mumtaz, Roscigno and Sobering 2024) . Figure 2 reports the marginal effects of a variety of contextual factors (Mipex overall, Labour Mipex policies, grant and decision rate of asylum applications and finally unemployment rate in the host country at the time of arrival of the migrant. We have plotted the categorical change of the dependent variable corresponding to 1sd change in the independent variables (which are ordinal or continuous in this case). There is a clear take-home message from Figure 2 - context matters and significantly so. Migrants tend to have better language skills, take up more language courses, host country qualifications or equivalize their qualifications at a higher rate in countries with higher MIPEX scores (more migrant permissive regimes). In comparison, more permissive labour regulations (MIPEX labour) seem to be associated with a more positive selection (host country language proficiency) of migrants but less take-up of other forms of host country human capital. Migrants whose group experiences a higher rate of international protection being granted (grant rate) or faster decisions (decision rate) based on year of arrival and region of origin tend to be less likely to report host country language proficiency but are much more likely to acquire other forms of host country human capital. This suggests that a supportive asylum regime is associated with higher rates of acquisitions of host country human capital. Finally, migrants who arrive at times of higher unemployment in the host country also report lower levels of acquisition of all forms of host country human capital in our data apart from language proficiency – migrants do badly in terms of host country human capital acquisition in times of uncertainty for the economy which strengthens the advantage of strongly selected migrants.

Figure 2: Drivers of obtaining host country human capital



Note: Estimated impact of 1 standard deviation increase in contextual factors on the probability of taking up a specific type of host country human capital, controlling for migrant group, sex, sex interacted with age squared, with highest qualification, with having a dependent child and urbanity.

Does host country human capital matter for the employment prospects of different migrant groups

Describing the difference between natives and migrant groups

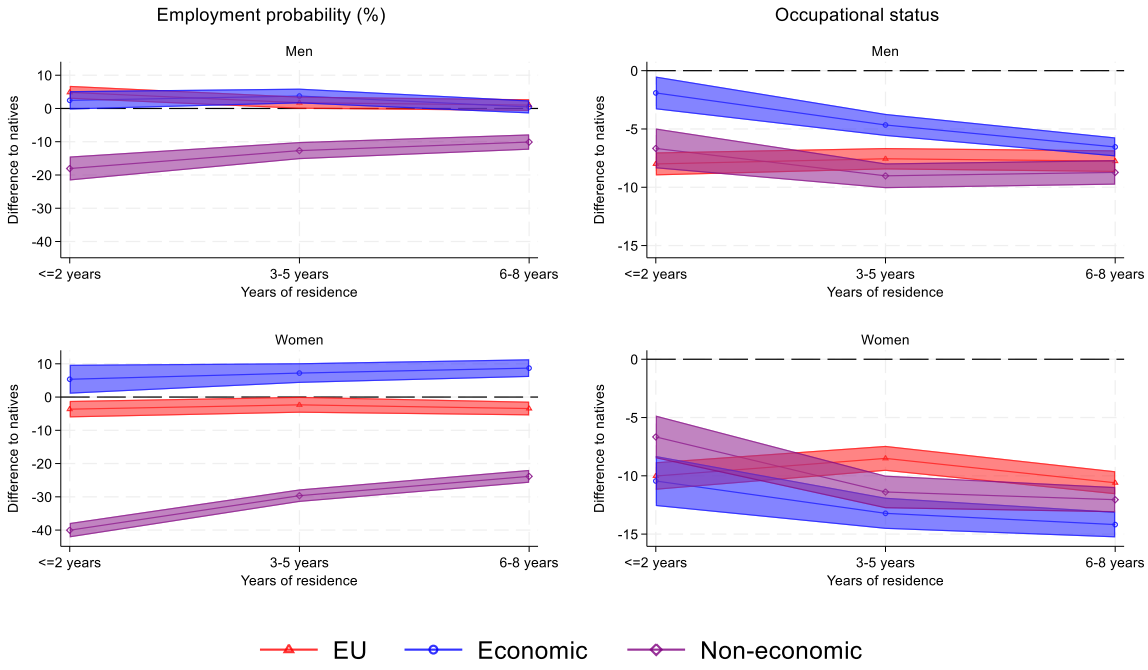
Figure 3 shows the estimated differences between natives and migrants differentiated by the migrant motivation – we further explore heterogenous groupings: men and women, and years of residence.

Several notable patterns emerge in terms of the labour market insertion of migrants. We focus on two outcomes: employment and occupational attainment. There is a clear hierarchy in terms of employment outcomes that holds both for men and women. Economic migrants (men and women) are more likely to be employed than their respective native counterparts especially at the time of arrival and in the first 5 years, and their advantage holds over time especially among economic migrant women. EU migrants also hold an advantageous position in terms of their employment probability (although the rate of employment is slightly lower to begin with

among EU migrant women but it improves over time). In contrast, non-economic migrants experience sizeable gaps (25 percentage points for men) which are particularly pronounced among women (around 40 percentage points).

Finally, occupational status shows a different pattern – one in which all migrant groups have much lower occupational status than their respective native counterparts. Economic migrant men and women face particular downward slope in their occupational status over time but non-economic and EU migrant men and women also experience clear negative gap in their occupational status that does not close over time.

Figure 3: Employment and occupational status gap between migrants and natives



Note: estimated difference in employment and occupational status between migrants and natives, by sex, reason of migration and years of residence. Controls for socio-demographic characteristics and within clusters of region, broad age and broad education and year of survey. Source: EU-LFS 2008, 2014, 2021

As a sensitivity test of our specification of employment, in figure A2 in the appendix we have removed the inactive from the analyses – which reduces the employment difference to natives to under 10 percentage points for men, and less than 25 percentage points for women, in line with what is observed in previous studies (Cortes 2004; Zwysen 2018). Importantly, among economic migrant men and EU women, there is some decline in employment probability

relative to the majority for the more established group in the analysis (in the host country for 6 to 8 years). This result perhaps captures the importance of coming to the host country with initial contracts and subsequent hurdles of finding work once the employment contract with a particular employer finishes[14].

Does having host country human capital play a role in the labour market insertion of migrant groups?

We then turn to host country human capital and examine whether language proficiency, attending a language course, having obtained qualifications (highest) in the host country, and equivalizing a qualification – affect the employment probability difference to natives and the occupational status gap.

Probability of employment

What is the predictive capacity of host country human capital acquisitions on the employment difference to natives of different migrant groups. Figure 4 suggests that host country human capital does make a difference. The figure reports the percentage point employment probability difference between migrants and comparable natives by a categorical change in our host country human capital variables. We differentiate between sex and years of residence. Several results need to be highlighted. Except for language courses, and with little change for men in terms of equivalisation, other forms of host country human capital generally predict better employment probability for all migrant groups compared to natives. Thus, host country human capital, in particular language proficiency and equivalized qualifications, make a difference and have a pronounced positive association with employment. This is particularly important for non-economic migrants, and especially for women. Language skills are most crucial, but having obtained the highest qualification abroad also has a strong positive association with better employment outcomes for more established non-economic migrants. The differences can be pronounced and up to 15 percentage points – for example, established non-economic migrant men with language proficiency see a 15 percentage points increase in their probability of employment compared to natives, relative to other similar migrants who lack these skills. Having attended a language course is, if anything, associated with a somewhat lower

[14] When restricting the analysis to employment rather than unemployment, excluding the inactive, male economic migrants face somewhat more of a disadvantage. Importantly, for male EU movers there is no longer a statistically significant employment probability difference to natives which mainly indicates somewhat fewer inactive movers – see Figure A in the Appendix.

probability of employment compared to those who have not attended one. This likely reflects a selection of workers in to such a course when they could not find work – the negative association is notable among EU and economic migrant men, or as part of their social or cultural integration – again, we note that the negative association is more pronounced for recent arrivals among non-economic migrant men and women.

Figure A3 in the appendix shows similar results for a stricter definition of employment. In this case we see some more positive association for recent economic migrants, where good language skills and equivalent or host country qualifications reduce the risk of employment relative to similar natives substantially. Further, non-economic migrants do seem to be affected more, which is particularly important as they experience higher gaps in employment probability on average.

Figure 4: Differences in employment gaps compared to natives when having host country human capital

Note: estimated difference in employment gap of migrants with a type of host country human capital to those without, by sex, reason of migration and years of residence. Controls for socio-demographic characteristics and within clusters of region, broad age and broad education and year of survey. Source: EU-LFS 2008, 2014, 2021

Table 4 delves deeper into the difference the host country human capital makes, by contrasting how the estimated gap differs between those migrants of a specific group, sex, and time spent in the country and the natives without one of these investments, and those that have it. The table indicates whether there is a statistically significant ($p<0.1$) difference between the two and if so, whether a negative gap worsens or improves, or whether an advantage declines or increases. It also shows the relative change between the two as a percentage change.

Language skills are associated with an employment advantage for recently arrived EU and economic male migrants, and reduced gaps by between 50% and 80% lower for non-economic migrants. Among women the small employment disadvantage of EU migrants disappears when they have good language skills; while large employment gaps faced by non-economic migrant women are reduced by 50% for recently arrived migrants and by 74% for more established. This then indicates that having good language skills accounts for a sizeable part of the disadvantage of non-economic migrants.

Having attended language courses is somewhat less clearly positive, it generally reduces the employment advantage of EU and economic male migrants somewhat, while also being associated with a widening of the employment gap of recent non-economic male migrants. This may reflect that this recent group is attending language courses instead of working. Among women the gaps of EU and particularly non-economic migrants are more negative for those following language courses than those that do not.

Having obtained the highest qualification in the host country is associated with an improvement in the outcomes of recently arrived EU and economic male migrants but makes no real change later on. For non-economic migrants there is a closing of the gap faced by more established migrants by about 45%, and for women by about 37%. This may then contribute to better outcomes on the long-term. Having equivalised the qualifications from abroad is associated with better outcomes for male and female economic migrants who arrived very recently as they then gain an advantage, and it is also associated with a reduction of the employment gap of non-economic female migrants by 14% to 21%.

In summary then, particularly good language skills are associated with experiencing less disadvantage in terms of employment, but host country qualifications and equivalising foreign qualifications also generally either do not do much or close disadvantages. Second, non-economic migrants benefited more from having good language skills, from having host country qualifications (but only after 6-8 years) and from equivalising qualifications than the other

groups. Crucially as well, these benefits are greater for those who have been in the host country longer, which can reflect they do indeed function as investments that may lead to better outcomes later on; and therefore reflect the longer time horizon of non-economic migrants (Zwysen 2018). On the other hand, the benefits for EU and economic migrants appear earlier on.

Table 4: mediation of host country human capital on employment

Men	**Language skills**	**Language course**	**Host country qualifications**	**Equivalised**
EU <=2	advantage increases by 90%	advantage declines by -88%	advantage increases by 152%	no significant change
EU 3-5	gap closes by -314%	no significant change	no significant change	no significant change
EU 6-8	no significant change	advantage increases by 2211%	no significant change	gap widens by 587%
Economic <=2	advantage increases by 1034%	advantage declines by -222%	gap closes by -4325%	gap closes by -128%
Economic 3-5	no significant change	advantage declines by -268%	no significant change	no significant change
Economic 6-8	no significant change	no significant change	no significant change	no significant change
Non-economic <=2	gap closes by -65%	gap widens by 73%	no significant change	no significant change
Non-economic 3-5	gap closes by -49%	no significant change	no significant change	no significant change
Non-economic 6-8	gap closes by -78%	no significant change	gap closes by -45%	no significant change
Women	**Language skills**	**Language course**	**Host country qualifications**	**Equivalised**

EU <=2	gap closes by -158%	gap widens by 602%	no significant change	no significant change
EU 3-5	gap closes by -155%	no significant change	gap closes by -169%	gap closes by -67%
EU 6-8	gap closes by -130%	gap widens by 247%	no significant change	no significant change
Economic <=2	no significant change	no significant change	no significant change	gap closes by -144%
Economic 3-5	advantage increases by 227%	advantage declines by -166%	no significant change	no significant change
Economic 6-8	no significant change	advantage declines by -120%	no significant change	no significant change
Non-economic <=2	gap closes by -48%	gap widens by 28%	no significant change	gap closes by -14%
Non-economic 3-5	gap closes by -56%	gap widens by 24%	no significant change	gap closes by -21%
Non-economic 6-8	gap closes by -74%	gap widens by 29%	gap closes by -37%	gap closes by -21%

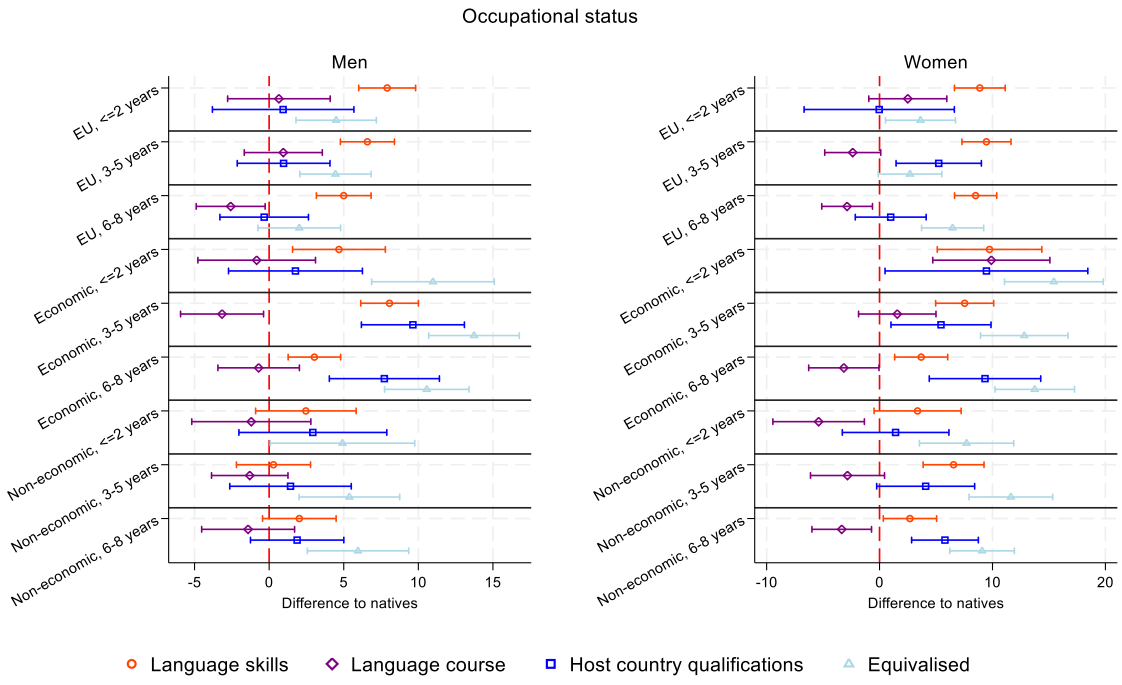
Note: Changes to the relative gap between not having and having a type of host country human capital on employment. The text indicates that the gap closes if there is a significant improvement ($p<0.1$) of a negative association for those without a host country qualification when they have it, it indicates the gap widens when there is a negative decline of a negative gap, it indicates an advantage declines if there is a significant decrease from a positive association, and an advantage increases when there is a significant increase from a positive association. In these case it also indicates the relative change as ((with – without)/without * 100). When there is no significant difference between those with and those without host country human capital, we indicate this by using "no significant change".

Occupational status

A similar pattern can be noted for the occupational status gap, as shown in figure 4, with that exception that there is generally a positive association for all types of host country qualification, with some exception for language courses. There is a more positive association for women,

who experienced sufficiently worse occupational status gaps compared to native women. Overall, the predictive power of host country language proficiency, having host country qualifications and equivalised qualifications is very strong and possessing such forms of host country human capital does reduce the occupational status gap between migrant groups and natives. This positive effect of host country human capital on achieving better occupational status is more pronounced over time for non-economic migrants as this may take somewhat more time to affect the quality of jobs and migrants' options. For female non-economic migrants there is a generally positive association between good language skills and employment, as well as between host country qualifications or equivalising degrees. For female movers from another country in the EU having host-country qualifications s particularly important for the status of their job. Particularly equivalising qualifications and host country degrees seem to be important here.

Figure 5: Differences in occupational status compared to natives when having host country human capital



Note: estimated difference in occupational status gap of migrants with a type of host country human capital to those without, by sex, reason of migration and years of residence. Controls for socio-demographic characteristics and within clusters of region, broad age and broad education and year of survey. Source: EU-LFS 2008, 2014, 2021

Table 5 then again indicates the extent to which having a particular type of host country human capital is associated with changing the gap or advantage faced by those who do not have it. Having good language skills is associated with a much lower disadvantage in terms of occupational status for all migrants, with the exception of male non-economic migrants. For more recent economic migrants it closes the gap by close to 90% while for EU migrants it ranges between 50 and 60%. Female non-economic migrants do tend to have less disadvantage in terms of occupational status than similar migrants with worse language skills, with the gap being 20 to 40% lower. Having attended a language course makes very little change for male migrants, but among women is associated with a generally widening gap. Economic migrants who obtained their highest qualification in the host country have relatively much better outcomes than their counterparts who did not, with the gap being completely closed or even reversed for male economic migrants and recent female economic migrants, and closing by between 40 and 60% for more established economic migrants. For non-economic female migrants who were in the country for at least 3 years having obtained their qualifications in the host country is associated with gaps that are 30 to 40% lower.

Finally, having equivalised qualifications obtained abroad is associated with substantially smaller disadvantages compared to natives than for otherwise similar migrants who did not equivalise their qualifications. The gaps almost disappear for male economic migrants and are reduced by between 55 and 75% for female economic migrants. They also close for EU migrants and decline by around 40% for male non-economic migrants and by 45-60% for female economic migrants.

Again then, the impacts seem to be higher for women than men. Second, there is a clear difference in how occupational gaps are affected compared to employment gaps – with the latter particularly non-economic migrants are on average more likely to be employed when having equivalent qualifications or good language skills, while for the former these investments really affect the probability of obtaining a good quality job.

Table 5: mediation of host country human capital on employment

Occupational status			Men	
Men	**Language skills**	**Language course**	**Host country qualifications**	**Equivalised**

EU <=2	gap closes by -65%	no significant change	no significant change	gap closes by -40%
EU 3-5	gap closes by -57%	no significant change	no significant change	gap closes by -44%
EU 6-8	gap closes by -46%	gap widens by 36%	no significant change	no significant change
Economic <=2	gap closes by -87%	no significant change	no significant change	gap closes by -117%
Economic 3-5	gap closes by -88%	gap widens by 83%	gap closes by -175%	gap closes by -94%
Economic 6-8	gap closes by -36%	no significant change	gap closes by -95%	gap closes by -77%
Non-economic <=2	no significant change	no significant change	no significant change	gap closes by -44%
Non-economic 3-5	no significant change	no significant change	no significant change	gap closes by -40%
Non-economic 6-8	no significant change	no significant change	no significant change	gap closes by -39%
Women	**Language skills**	**Language course**	**Host country qualifications**	**Equivalised**
EU <=2	gap closes by -58%	no significant change	no significant change	gap closes by -29%
EU 3-5	gap closes by -66%	gap widens by 30%	gap closes by -54%	gap closes by -23%

EU 6-8	gap closes by -54%	gap widens by 29%	no significant change	gap closes by -42%
Economic <=2	gap closes by -60%	gap closes by -81%	gap closes by -84%	gap closes by -73%
Economic 3-5	gap closes by -43%	no significant change	gap closes by -38%	gap closes by -55%
Economic 6-8	gap closes by -22%	gap widens by 23%	gap closes by -56%	gap closes by -56%
Non-economic <=2	gap closes by -38%	gap widens by 120%	no significant change	gap closes by -57%
Non-economic 3-5	gap closes by -43%	gap widens by 27%	gap closes by -32%	gap closes by -61%
Non-economic 6-8	gap closes by -19%	gap widens by 31%	gap closes by -39%	gap closes by -45%

Note: Changes to the relative gap between not having and having a type of host country human capital on employment. The text indicates that the gap closes if there is a significant improvement ($p<0.1$) of a negative association for those without a host country qualification when they have it, it indicates the gap widens when there is a negative decline of a negative gap, it indicates an advantage declines if there is a significant decrease from a positive association, and an advantage increases when there is a significant increase from a positive association. In these cases it also indicates the relative change as ((with – without)/without * 100). When there is no significant difference between those with and those without host country human capital it mentions no significant change.

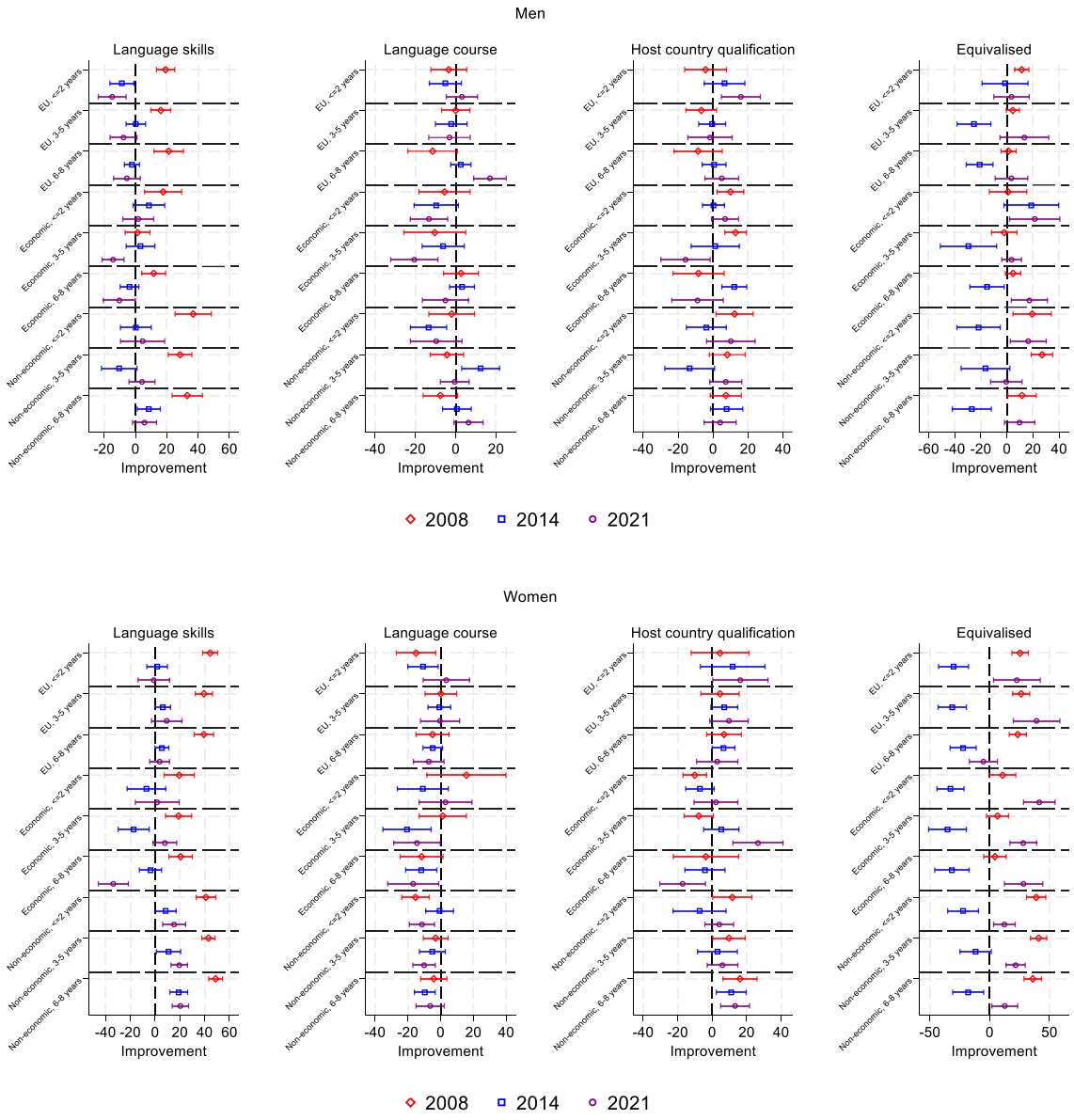
There are three main patterns to be noted for the occupational status gap. The initial results suggested that all migrant groups, and both men and women, trail considerably behind natives in terms of occupational status. However, particular forms of host country human capital can really help to close this gap and even notably reverse it. The predictive power of language proficiency is notably smaller among all non-economic migrant groups attesting to the difficulties that non-economic migrants may experience in utilizing their human capital in the host country labour market. Finally, language courses are generally associated with widening of the occupational status gap to natives, with the exception of recently arrived EU and economic migrants. As with the employment probability, language courses seem to be of little

benefit to the economic integration of migrant groups perhaps because they are particularly focused on their cultural and social integration.

Robustness tests, data limitations and further analyses

The specific types of host country human capital investment considered here are operationalised in somewhat different ways across the waves of the survey. For that reason, it is important to consider whether their impact differs substantially by year of the survey. Of course, there may also be substantive changes in the effect of the underlying mechanisms, but our data does not allow for a thorough analysis of that. Figure 6 shows how such associations vary over time. Regarding language skills, there is a more positive association generally in 2008 than the other years, although for non-economic migrants, particularly women, there is still a positive association throughout. This is because language skills in 2008 reflect that better language skills are no needed to improve the job, which is a somewhat different question. For language courses, there are no such systematic differences. Regarding host country qualifications there is some variation, but systematic pattern. Finally, for the equivalent degree there is a clear impact of the way the question is operationalised in 2014 as in that year the question concerned whether having equivalent qualifications was a struggle in finding work. This may involve a very different selection process. In the analyses the models do all match also on the year of the survey to minimize the impact regarding patterns from this.

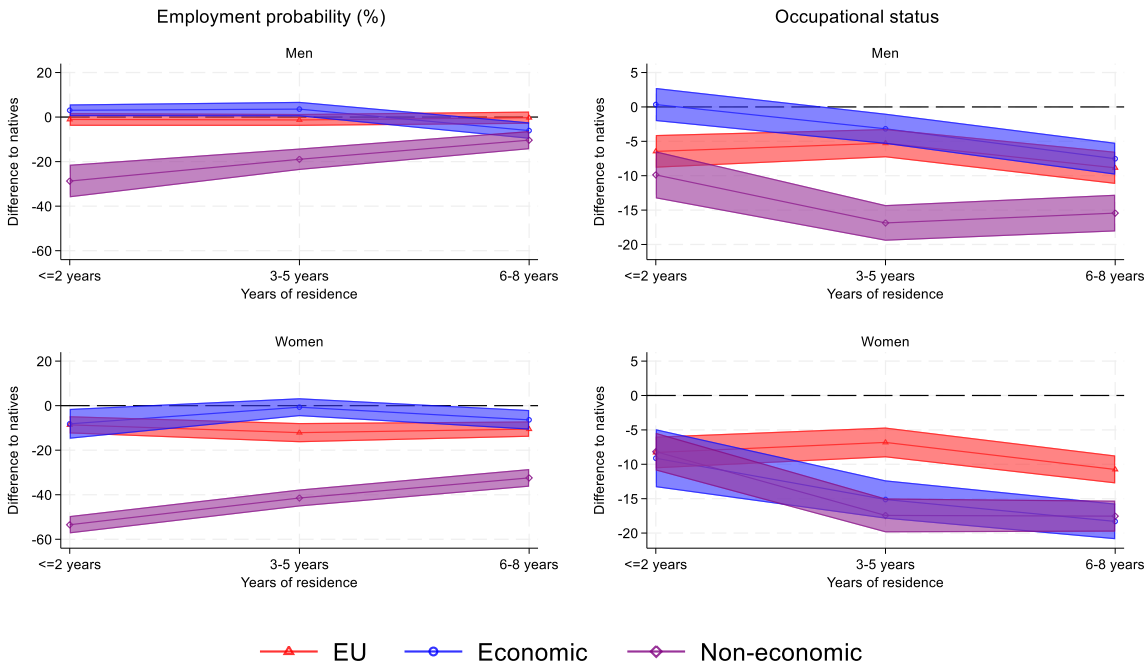
Figure 6: estimated variation in impact of host country human capital on employment



Note: estimated difference in employment gap of migrants with a type of host country human capital to those without, by sex, reason of migration and years of residence, separately by year. Controls for socio-demographic characteristics and within clusters of region, broad age and broad education and year of survey. Source: EU-LFS 2008, 2014, 2021

This section takes a deeper look at the outcomes only of tertiary qualified migrant workers, who may on the one hand do better given their higher qualifications, but on the other see these qualifications more heavily discounted (Zwysen and Demireva 2020). Indeed, as figure 7 shows the outcomes of tertiary qualified migrants compared to similarly qualified natives are actually somewhat worse, with particularly the non-economic migrants facing higher gaps.

Figure 7: Employment and occupational status gap between migrants and natives – tertiary qualifications

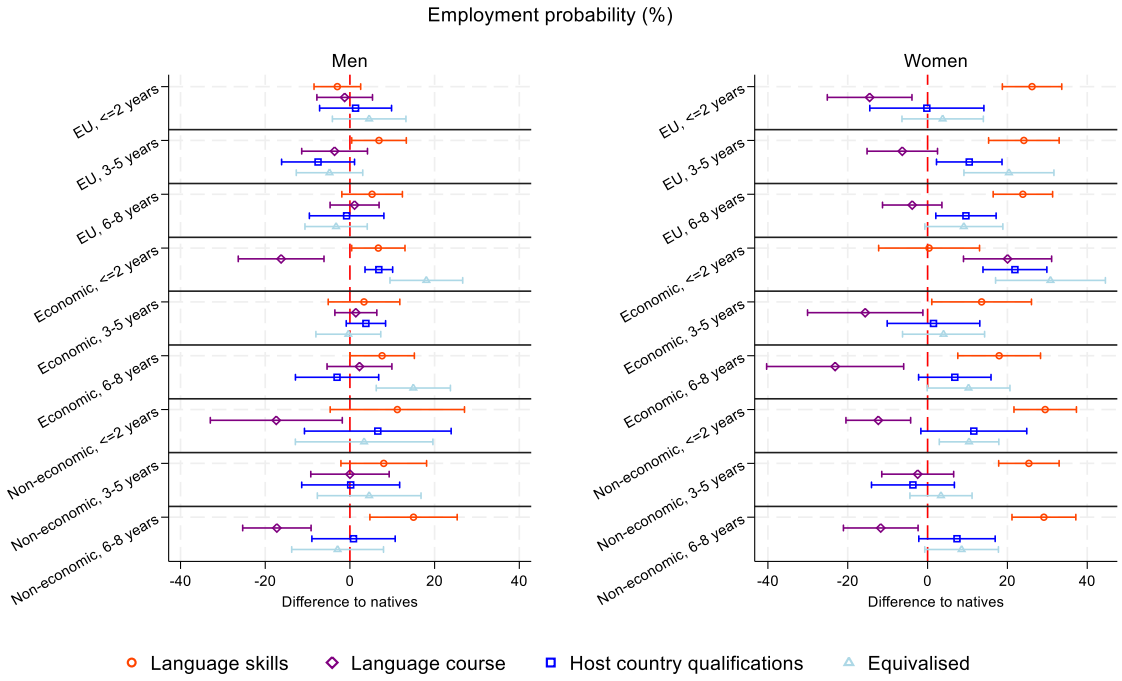


Note: estimated difference in employment and occupational status between migrants and natives, by sex, reason of migration and years of residence. Controls for socio-demographic characteristics and within clusters of region, broad age and broad education and year of survey. Source: EU-LFS 2008, 2014, 2021

Figure 8 then looks at the difference between those with host country human capital and those without for the university qualified.

As the sample is lower the estimates are less precise. For this subgroup having equivalised qualifications improves employment probabilities of economic migrants, and language skills as well as host country qualifications are particularly beneficial for female EU and non-economic migrants. Generally though, this group seems to benefit somewhat less from the different types of host country human capital, although equivalising degrees and having good language proficiency may serve to limit the discounting of qualifications.

Figure 8: Differences in employment gaps compared to natives when having host country human capital - tertiary

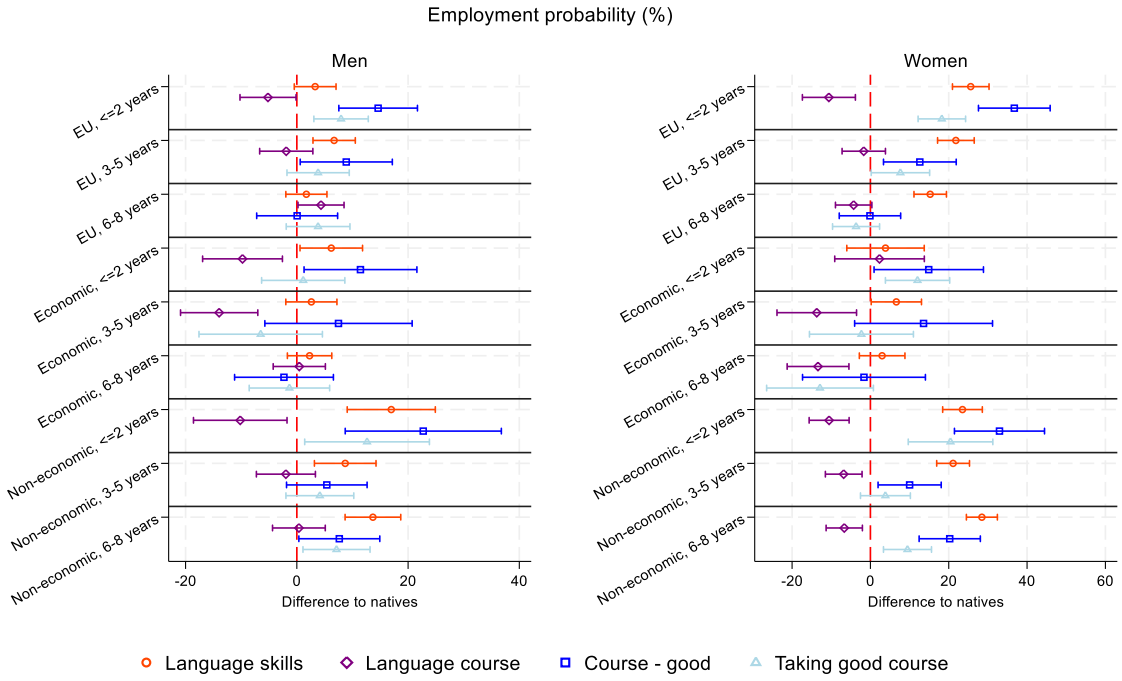


Note: estimated difference in employment gap of migrants with a type of host country human capital to those without, by sex, reason of migration and years of residence. Controls for socio-demographic characteristics and within clusters of region, broad age and broad education and year of survey. Source: EU-LFS 2008, 2014, 2021

Throughout this paper we consider whether migrants attended a type of language course. However, there are substantial selection effects where some migrants, particularly more at risk of adverse labour market outcomes, may be mandated to follow courses. One way to deal with this is to differentiate between language courses by considering those that took a language course and now report high language skills and contrasting those that did not take a course. Figure 9 below shows the impact of two types of language courses – either those who took a language course and have good language skills rather than others who took a course but report poor language skills [Course – good]; and those that did a course and report good language skills rather than others who either report poor language skills or did not take a course. This shows that indeed, language courses that may have led to better language skills do have a positive effect on employment for almost all migrants, particularly EU and non-economic. The

issue may then very well be that the language course variable does not differentiate enough by the quality of the course.

Figure 9: Employment gap by different types of language course



Note: estimated difference in employment gap of migrants with a type of language course – either having good language skills when having taken a course recently [Course-good] or having done a language course and having good language skills [taking good course], contrasted with earlier results on language skills and language courses it shows the difference of those with to those without, by sex, reason of migration and years of residence. Controls for socio-demographic characteristics and within clusters of region, broad age and broad education and year of survey. Source: EU-LFS 2008, 2014, 2021

Discussion

In countries around the world, heated migration debates dominate the political agenda and there is growing concern about the impact of migration on host country societies. Moreover, the effectiveness of various integration programmes has been called into question as all as the ability for migration to be managed effectively. As perspectives become increasingly stacked against migrants, it becomes very pertinent to employ social science data to provide a substantive examination of migration patterns. Using data from three ad-hoc migration

modules of the EU Labour Force Survey, 2014, 2018, and very recently added 2021 data, this paper contributes to these debates in several ways. We focus on two measures of labour market insertion – employment probability and occupational status. We consider the outcomes of three main migrant groups – EU migrants, economic and non-economic migrants, and heterogeneous effects by sex and year of residence.

There are several patterns that stand out. Whereas economic and EU migrants, men and women have in general better employment probability than their native counterparts, all migrant groups experience sizeable occupational deskilling. Host country human capital however plays important role in the economic integration of different groups. The significance of three types of host country human capital should be highlighted. In terms of the probability of employment these are language proficiency and equivalising qualifications; while having host country qualifications and equivalising qualifications predict positively an improvement in occupational status. One of the contributions of this analysis lies in examining a variety of host country human capital to provide a rich and more nuanced picture of the importance of different types of human capital rather than flattening the analysis by just focusing on one type. Thus, lack of host country human capital goes a long way to explain the disadvantage of migrant groups; and it is non-economic migrants and women in particular who benefit from the possession of these forms of host country human capital.

Importantly, we demonstrate that the context of reception matters considerably for different host country human capital acquisitions. Countries with migrant favourable policies, reduction of initial uncertainty encourage the acquisition of human capital. Further work should focus on improving our understanding of how the policy context helps reduce structural barriers or advance further individual migrant aspirations.

Different forms of host country capital also matter at different stages of the migrant journey. Language proficiency is highly important for recent arrivals; in comparison, acquiring host country and equivalising qualifications carries greater weight for established migrants. Attending a language course does little to aid the economic integration of different migrants but it is likely that these courses are important for the social and cultural integration of recent migrants and vulnerable migrant groups, thus, still performing an important function as to a migrant's successful incorporation. Indeed, the take-up of this form of host country human capital is substantial in these two groups. Even though these results may align with policy and societal concerns about the cost of integration programmes, our analyses are not set up to

ascertain their effectiveness and we should stress this important limitation as other research has noted as well (Lochman et al. 2019). A migrant who has attended a language course might then go on to obtain a host country qualification or equivalize their existing qualification. Language proficiency in the host country language, one can imagine is a prerequisite for further host country investments especially obtaining a host country qualification. Yet, without knowing the exact timing of each of these steps in the acquisition of host country human capital differentiating their true impact is a difficult task. Furthermore, the data is not set up to understand the interdependence of human capital acquisitions, a weakness that we hope further survey research will address. Lochman et al's (2019) case study of the French labour market indicates for example that the integration benefits of language course can have spill-over effects to the labour market insertion of economic migrants. Whereas policy makers may treat each of these acquisitions as discrete, the lived experience of migrants may disprove such linear interpretations. Future studies should aim to establish the interconnectedness between programmes before limiting support or their discontinuation are being recommended as an option.

Whereas the conclusions that we draw are not causal – we have cross-sectional data, our analyses go beyond existing studies in two ways: 1.by analysing the impacts for specific cohorts of migrants; and 2.by using a matching method to obtain suitable counterparts in the different countries in our examination. The inclusion of all countries is an improvement on previous research that tends to focus on primarily western immigrant societies, and we provide a comprehensive picture of migration patterns across Europe.

Conclusion

This research carries significant policy implications. Employment probability differences and occupational status gaps can be reduced by facilitating the investment in particular forms of human capital such as language proficiency, the equivalizing of degrees or the acquiring of host country human capital. These forms of host country human capital are often perceived as being dependent upon the aspirations of individuals; and structural constraints are overlooked. Moreover, policy makers may be quick to berate the little importance for economic integration of language courses while having incomplete information about the interdependence of different human capital acquisitions or indeed about the interdependence of economic, social and cultural forms of integration. Yet, if we view the successful economic integration of

different individuals as a public and societal good, considering how to facilitate the obtaining of host country human capital (or at the very least create a climate of reception that does not discourage such investments) should be a policy priority.

Appendix

Table A 1: Table with descriptive statistics

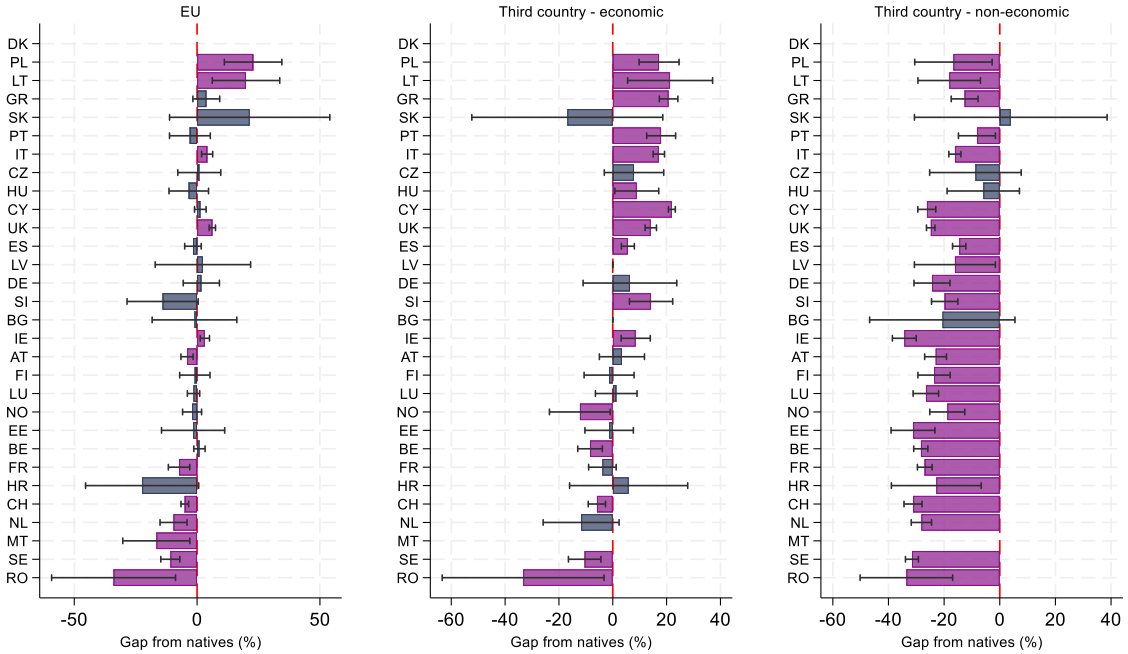
	Overall		2008		2014		2021	
	Native	**Migrant**	**Native_2008**	**Migrant_2008**	**Native_2014**	**Migrant_2014**	**Native_2021**	**Migrant_2021**
Employed rather than not working	0.68	0.63	0.68	0.68	0.65	0.62	0.71	0.58
Employed vs unemployed	0.92	0.86	0.94	0.89	0.89	0.85	0.92	0.82
Occupational status	44.76	38.13	44.13	36.79	44.33	38.33	45.85	39.94
Language skills	NA	0.51	9.00	0.60	9.00	0.50	9.00	0.40
Language course	NA	0.24	9.00	0.15	9.00	0.30	9.00	0.31
Nationality	1.00	0.09	1.00	0.07	1.00	0.09	1.00	0.11
Obtained qualifications in host country	NA	0.13	9.00	0.07	9.00	0.16	9.00	0.15
Equivalised qualifications	NA	0.50	9.00	0.32	9.00	0.84	9.00	0.53
Upper secondary	0.44	0.37	0.44	0.44	0.44	0.36	0.43	0.30
Tertiary qualifications	0.27	0.31	0.21	0.23	0.26	0.35	0.35	0.38

2014	0.32		0.33		0.00		0.00		1.00		1.00		0.00	0.00
2021	0.32		0.29		0.00		0.00		0.00		0.00		1.00	1.00
Native	1.00	NA			1.00	NA			1.00	NA			1.00	NA
Born in EU	NA		0.35	NA			0.35	NA			0.44	NA		0.26
Born in North America	NA		0.03	NA			0.04	NA			0.03	NA		0.01
Born in other Europe	NA		0.11	NA			0.11	NA			0.09	NA		0.13
Born in MENA	NA		0.12	NA			0.11	NA			0.10	NA		0.15
Born in other Africa	NA		0.09	NA			0.09	NA			0.08	NA		0.09
Born in South-East Asia	NA		0.14	NA			0.13	NA			0.17	NA		0.12
Born in central/South America	NA		0.17	NA			0.18	NA			0.09	NA		0.24
Reason: employment	NA		0.43	NA			0.46	NA			0.46	NA		0.36
Reason: family	NA		0.43	NA			0.39	NA			0.44	NA		0.46
Reason: protect	NA		0.06	NA			0.05	NA			0.04	NA		0.11
Reason: other	NA		0.08	NA			0.10	NA			0.06	NA		0.07
Big city	0.23		0.12		0.18		0.13		0.25		0.13		0.26	0.11
Rural area	0.44		0.61		0.50		0.66		0.42		0.61		0.40	0.56
age2	39.72		34.36		39.40		33.90		39.85		33.87		39.95	35.51
Age squared	1760.07		1281.23		1740.39		1239.43		1778.09		1250.04		1765.02	1370.51

Married	0.50	0.55	0.50	0.60	0.46	0.54	0.53	0.49
Men	0.50	0.46	0.49	0.47	0.50	0.46	0.50	0.46
Years of residence	NA	4.54	NA	4.48	NA	4.88	NA	4.22
Regional unemployment rate	8.71	8.32	6.47	6.71	11.21	9.41	8.83	9.18
Unemployment rate when arriving	NA	8.53	NA	7.48	NA	7.54	NA	11.00
UNHCR applications	NA	2510.08	NA	3742.34	NA	2886.40	NA	697.48
UNHCR grant rate	NA	20.45	NA	12.51	NA	15.96	NA	35.93
UNHCR decision rate	NA	81.88	NA	87.57	NA	87.14	NA	70.18

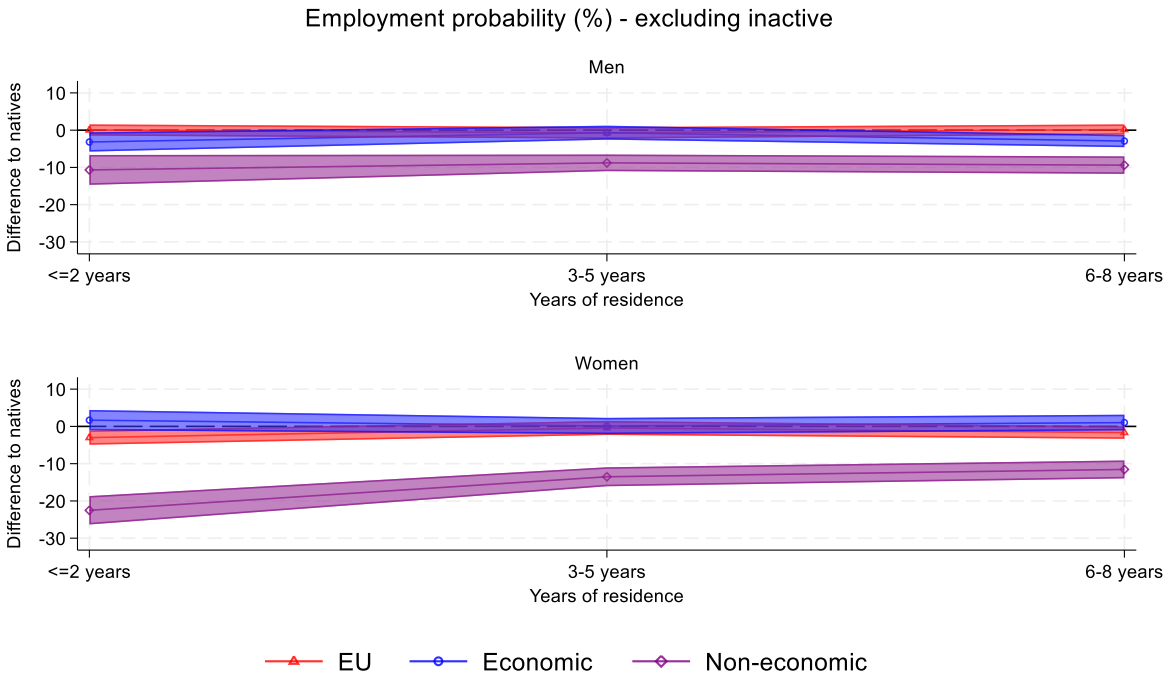
Source: EU-LFS 2008, 2014, 2021, plus contextual factors

Figure A 1Estimated gap of movers/migrants compared to the majority



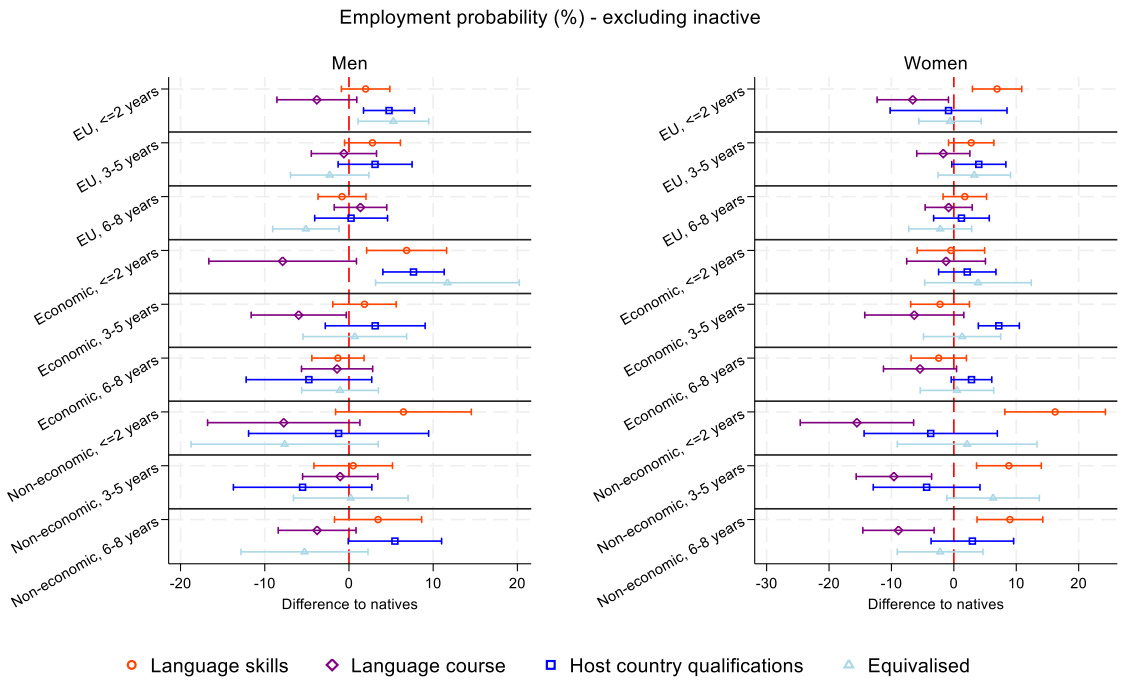
Note: Estimated employment gap (rather than not working) of EU-movers (left), third country migrants who reported arriving for employment reasons (middle) and third country migrants arriving for family, protection or other reasons, excluding students, with 95% C.I.. Sample is restricted to migrants arriving in the last 8 years, and the gap is estimated by a country-specific logistic regression controlling for gender, age, urbanity and year of survey.
Source: EU-LFS 2008, 2014, 2021

Figure A 2: Estimated gap in terms of employment



Note: estimated difference in employment and occupational status between migrants and natives, by sex, reason of migration and years of residence. Controls for socio-demographic characteristics and within clusters of region, broad age and broad education and year of survey. Source: EU-LFS 2008, 2014, 2021

Figure A 3: Differences in employment gaps compared to natives when having host country human capital



Note: Estimated effect of host country human capital on the gaps of migrants to similar majority respondents by exact matching on country, year of survey, region, urbanity, age, education, having a dependent child. The coefficient shows the difference and 95% confidence interval around it of the difference between the gap of someone with a specific type of host country human capital and someone without.

Source: EU LFS 2008, 2014, 2021

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