ISER Working Paper Series

Who Benefits from Host Country Skills? Evidence of Heterogeneous Labour Market Returns to Host Country Skills by Migrant Motivation

Wouter Zwysen

European Trade Union Institute
Sociology Department, University of Essex

Neli Demireva

Sociology Department and ISER
University of Essex

No. 2020-06
April 2020

INSTITUTE FOR SOCIAL & ECONOMIC RESEARCH

Economic and Social Research Council

University of Essex

www.iser.essex.ac.uk

Non-Technical Summary

European receiving societies have seen a huge rise in migration scepticism calling migration governance and the successful operation and implementation of migration policies into question. In the last 10 years, successive European governments have tightened their migration schemes to favour 'net contributors' who bring a range of fiscal benefits while having good social integration prospects.

While a small but growing literature addresses the variations in labour market outcomes between types of migrants, little is known about the drivers of these different labour market integration patterns. As policies such as offering language courses or further training to migrants are based on the expectation that migrant outcomes improve over time through host country acquisitions, it is crucial to know if they affect all migrants similarly. Understanding the role these factors play can help explain the substantial variance in labour market integration patterns over countries as well as the extent to which non-economic migrants are at a disadvantage.

In this paper we use repeated cross-sectional data from the EU Labour Force Survey 2008 and 2014 ad hoc modules to address the mechanisms behind varied labour market integration directly by considering whether host country acquisitions: language proficiency, further language courses, and gaining further host country qualification – which can be targeted through a variety of policies – are important pathways to better labour market integration. We also aim to explore whether they affect all migrants similarly.

This paper highlights that the same integration strategies do not work similarly for all types of migrants, meaning a more tailored integration strategy is needed. We make several important contributions. First, we recognize that systematic differences exist between migrant types. We make a two-fold distinction of migrants. Migrants from EU/EFTA countries enjoy freedom of movement and variety of other benefits, and our first distinction focuses on third countries versus EU/EFTA countries migrants. We further differentiate according to the main reason for migration: economic migrants with a previously acquired position, economic migrants who come looking for work, and non-economic migrants. Within the group of third country nationals, we have the numbers to distinguish between family migrants and those seeking protection. Furthermore, we account for the crucial role of climate of reception. The latter is defined as the country's standing on migrant integration policy indices, initial labour market conditions, and decision rates on asylum applications. This approach allows us to consider the strong differences between migrants of which considerable evidence already exists and thereby provide a framework for the estimation of the returns to their host country acquisitions. Importantly, we consider whether acquisitions benefit all migrants, or whether benefits mainly accrue to those who already have higher human capital by studying differences by qualifications.

We find that the institutional context can strongly affect the probability of migrants investing in host country human capital. Migrants are generally more likely to invest in a context with a more positive labour policy environment; while negative initial conditions, such as a high unemployment rate or a low rate of decisions on asylum applications for refugees, reduce further host country acquisitions. It is precisely for this group of non-economic migrants that acquisitions have higher returns.

While some of the acquisitions we studied do not lead to better outcomes immediately, taking up host country qualifications or attending language courses can have long-term benefits, particularly for the more disadvantaged migrants. In designing migration policies, it is also important to note that further courses, training and good language skills primarily benefit the employment probability of economic migrants who already have higher qualifications, but are also especially crucial for lower-qualified non-economic migrants.

Who benefits from host country skills? Evidence of heterogeneous labour market returns to host country skills by migrant motivation

Abstract

Despite the extensive literature on the economic incorporation of migrants, little is known about the ways in which integration patterns differ across migrants depending on their motivation for migrating (e.g. economic, family, humanitarian). These initial motivations are associated with very different outcomes in the host society. Migrants generally do better in the labour market over time as they acquire host country human capital and labour market performance-relevant skills, but does the same pattern hold for each type of migrant? Policies that aim to increase overall labour market participation should take account of the increasingly diverse migrant population in Europe. We use detailed data from the 2008 and 2014 ad hoc modules of the EU Labour Force Survey to study labour market returns to host country-relevant skills, taking into account a range of individual and contextual factors. We show these patterns differ between recent migrants: higher host-country acquisitions are associated with improved labour market outcomes, but particularly for non-economic migrants. These findings are consistent over qualification levels and persist even within the more established migrant groups.

Keywords: employment; migrant motivations; refugees; economic migrants

1. Introduction

European receiving societies have seen a huge rise in migration scepticism which calls migration governance and the successful operation and implementation of migration policies into question. In the last 10 years, successive European governments have tightened their migration schemes to favour 'net contributors' who bring a range of fiscal benefits while having good social integration prospects (OECD, 2016, 2017).

While a small but growing literature addresses the variations in labour market outcomes between types of migrants (Cangiano, 2015; Cortes, 2004; Fasani et al., 2018; Zwysen, 2018), little is known about the drivers of labour market integration patterns. As policies such as offering language courses or further training to migrants are based on the expectation that migrant outcomes improve over time through host country acquisitions, it is crucial to know whether they affect all migrants similarly (Chiswick, 2009; Duleep and Regets, 1999). Understanding the role these factors play can help explain the substantial variance in labour market integration patterns between countries (Reyneri and Fullin, 2011) as well as the extent to which non-economic migrants are at a disadvantage (Cangiano, 2015).

In this paper we use repeated cross-sectional data from the EU Labour Force Survey 2008 and 2014 ad hoc modules to address directly the mechanisms behind labour market integration by considering whether host country acquisitions – which can be targeted through a variety of policies – are important pathways to better labour market integration. We also

aim to explore whether they affect all migrants similarly. We focus on language proficiency, further language courses, and gaining further host country qualifications (OECD, 2016, 2017).

This paper highlights that the same integration strategies do not work similarly for all types of migrants, and so a more tailored integration strategy is needed. We make several important contributions. First, we recognize that systematic differences exist between migrant types. We make a two-fold distinction of migrants. Migrants from EU/EFTA countries enjoy freedom of movement and variety of other benefits, and our first distinction focuses on third countries versus EU/EFTA countries migrants. We further differentiate according to the main reason for migration: economic migrants with a previously acquired position; economic migrants who come looking for work; and non-economic migrants. Within the group of third-country nationals, we have the numbers to distinguish between family migrants and those seeking protection. Furthermore, we account for the crucial role of climate of reception. The latter is defined as the country's standing on migrant integration policy indices, initial labour market conditions, and decision rates on asylum applications. This approach allows us to consider the strong selection differences between migrants of which considerable evidence already exists (Cortes, 2004; Dustmann et al., 2016; Kogan, 2016) and thereby provide a framework for the estimation of the returns to their host country acquisitions. Importantly, we consider whether acquisitions benefit all migrants, or whether benefits mainly accrue to those who already have higher human capital by studying differences by qualifications.

2. Background

Differences by initial motivation

The operation of migration polices ensures that migrants with a variety of motivations are admitted to the receiving societies. Understanding how migrants differ in their integration by

motivation is particularly important within the European context where the composition of migrants varies strongly between countries (Reyneri and Fullin, 2011)[1]. Changes in the political climates in many major receiving societies necessitate closer examination of existing integration provisions.

There are large differences in the labour market performance of migrants depending on their selection and reason for migration (Cortes, 2004; Fasani et al., 2018; Kogan, 2016). Economic migrants make the conscious choice to migrate to a specific country with the purpose of work and generally match the economic conditions in the receiving country well. Family migrants are more dependent on other conditions for their migration as well as often not facing the same stringent entry requirements as economic migrants. This applies even more so for refugees, who have little agency in their migration, have likely faced substantial trauma prior to arrival and often face legal hindrances that make it difficult to work initially (Aydemir, 2011; Connor, 2010; Zwysen, 2018).

Besides different starting points, further integration patterns also differ by motivation. Non-economic migrants, whose initial labour market prospects are bleaker than those of economic migrants who have specified economic reasons as their main migration route, can have strong incentives to improve their position as they are less likely to return to the country of origin (Connor, 2010; Cortes, 2004). In addition, non-economic migrants are by definition less likely to focus only on finding work and their opportunity costs of further host-country

[1] Compositions of migrants vary strongly between countries and from the estimates of the EU Labour Force Survey 2008 and 2014 (not shown here) we see that Luxembourg, Denmark and Belgium stand out as having very many migrants from EU-15 countries while their proportion is quite low in the Southern European states. Southern European states, together with UK, Norway, Ireland and Austria host many post 2004 and 2007 enlargement EU migrants. The UK and France has a high share of migrants arriving as students. Sweden, Norway, the Netherlands and Germany stand out as hosting high large shares of protection migrants, unlike the UK and Southern Europe.

acquisitions are lower than those of economically-motivated migrants (Duleep and Regets, 1999; Luthra et al., 2016). We acknowledge that migrants may come to the receiving society with a variety of motivations, but can only focus on their expressly stated main purpose for migrating due to data limitations. We acknowledge the crudeness of this measure and, further on, discuss the limitations this imposes on our analysis.

Studies on refugees – the type of non-economic migrant most often studied – did indeed find evidence of their catching up over time (e.g. Cangiano, 2015; Dumont et al., 2016; Dustmann et al., 2016). Zwysen (2018) uses 2008 EU LFS data to show substantial differences in how labour market outcomes – activity, employment and having a good job – vary with time, with family migrants and particularly refugee migrants starting at a lower point compared to natives, but while economic migrants also catch up they have relatively less improvement over time. This improvement is partly driven by host country acquisitions – language skills, further training or even naturalising. Similarly, Fasani, Frattini and Minale (2018) use 2008 and 2014 LFS data to compare migrants to each other and show substantially worse initial outcomes for refugees than any other group; however, the differences by motivation reduce after around 10 years of residence. They further highlight that refugees do relatively worse in the labour market when they face more initial uncertainty – proxied by lower rates of recognition of protection status and dispersion policies of refugees.

There are several drawbacks of previous frameworks – an estimation of the effect of thost country acquisitions should be considered within each migrant type in order to minimize the effect of unobservables on differences between migrant types (Cortes, 2004), and which are unlikely to be captured by the contextual effects in our models. Fasani et al (2018) do not distinguish between recent and established migrants – refugee waves can differ greatly so it

is unwise to compare across them (Aydemir 2011). Kogan (2006) adopts a similar approach to the framework in this paper and uses propensity score matching for ad hoc 2008 data considering only participation in training. We expand on this literature by accounting for a variety of important host country acquisitions (language proficiency, further training and further qualifications).

The acquisition of skills sends strong signals of motivation and productivity to employers, and would benefit those migrants who are most disadvantaged because of uncertainty about their skills (Chiswick, 2009; Duleep and Regets, 1999). For recent migrants, we distinguish between acquisitions, such as language proficiency, most likely obtained before the migrant moved (although the survey does not include a follow-up question of whether the migrant has had proficiency before coming to their destination) and those obtained in the receiving country such as training and further qualifications. Further informed by the literature, we consider three types of labour market outcomes: first, whether migrants are active on the labour market[2]; then whether they are employed rather than unemployed; and finally job quality to provide a better overview of labour market insertion.

Our analyses are guided by several expectations formulated on the basis of the previous literature. We expect that non-economic migrants – refugee and family migrants – benefit most from host country acquisitions to find work, particularly good work. Economic migrants, on the other hand, should benefit less from acquisitions in terms of probability of

[2] Legal access to the labour market is sometimes restricted for some groups, particularly for asylum seekers while waiting for a decision. There has been a convergence between EU member states towards a right to work after 9 months of no decision, but over the time period considered in this paper, and over countries, some variation remains for very recent migrants who would not have obtained a final status yet (Poptcheva and Stuchlik, 2015). While these migrants may not be very well represented in the LFS to start with used here; we partly deal with this by comparing migrants as much as possible to those of the same origin group, with the same motivation, who have been in the same destination country equally long. This matching method reduces the differences due to legal regimes.

employment, because there is less uncertainty about their skills, or they are likely to take low-skilled jobs in which acquisitions are less needed (or operate as strong signal to employers, especially ethnic niche employers). Nevertheless, host country acquisitions may help this group in finding better jobs within the mainstream economy.

Hypotheses 1 and 2 relate to migrant group differences (the two-fold distinction between third country migrants and EU/EFTA migrants; and within those two groups between economic and non-economic migrants).

Hypothesis 1. Returns to host country acquisitions are highest for refugee and family migrants and lowest for economic migrants.

Hypothesis 2. These group differences would be largest with regards to labour market participation and employment, and smallest in terms of occupational status. Good jobs, usually located in a mainstream labour market that is meritocratic should go to individuals with better host country acquisitions and credentials irrespective of the migrant motivation.

Heterogeneity Hypothesis

We consider heterogeneity of outcomes dependent upon the skill sets of migrants (Brand and Xie, 2010). That is to say, new skill gains further augment human capital already held, and may primarily benefit those who are high-skilled, but whose human capital was initially partly discounted (Duleep and Regets, 1999).

Hypothesis 3: The highly skilled among the different types of migrants will particularly benefit from further acquisition of skills.

The Context of Reception Hypothesis

A particular strength of this paper is that it considers a variety of contextual characteristics that may shape the outcomes of different migrant types. We focus on *three aspects of the context of reception*. First, countries differ strongly in their *policies related to labour market access and integration policies*, which affect labour market outcomes directly as well as the options open to all different types of migrants (Cangiano, 2015). Second, countries also differ in the *security* they offer specifically to non-economic migrants through family reunion policies and the speed and results of the asylum application system. This *initial uncertainty* may affect long-term labour market outcomes, partly through the gains in host country relevant skills – migrants who face a lot of initial uncertainty can be slow on the uptake of host country acquisitions (De Vroome and van Tubergen, 2010; Fasani et al., 2018; Hainmueller et al., 2016). Third, migrants and especially non-economic migrants – who are less flexible and able to avoid economic shocks – are likely to be more sensitive to *economic conditions* compared to majority counterparts (Røed and Schøne, 2012). A period of unemployment may reduce the opportunity cost of host country acquisitions, particularly of taking up further official courses and training, and the returns to such acquisitions are expected to be higher as fewer jobs are available and competition fiercer. Yet, 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). The uncertainty of arriving during an economic downturn may then decrease further host country acquisitions.

Hypothesis 4: We expect that migrants are more likely to invest in host country acquisitions when arriving during a period where more support is being offered for training

and education, possibly combined with work prospects; that is to say, a context that offers more security enabling migrants to plan for the longer term (fast asylum decisions for asylum seekers; supportive policies for family reunion; good economic outlook).

Hypothesis 5. It is also possible that arriving during good economic conditions may lower the benefits of taking up further training in host country relevant skills, and increase the costs of further acquisitions, particularly for economic migrants.

3. Data

3.1. European Labour Force Survey

We make use of the 2008 and 2014 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[3]. While it does not primarily target migrants to the EU, LFS has been shown to produce reliable estimates in terms of stocks of non-nationals, although it may miss irregular migrants (Martí and Ródenas, 2007). The 2008 and 2014 ad-hoc modules contain questions on the main reason for migration as well as on perceptions of language skills and services used. The analyses include migrants arriving after 2000 and no more than 10 years prior to the survey, aged 16-64 and not retired or in education[4]. While pooling two different waves brings some disadvantages (such as different question wording), the larger size and

[3] 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.

[4] The exact year of arrival – crucial to account for initial conditions – is only recorded up to 10 years of residence. As a sensitivity test we include more established migrants and find comparable results.

relative homogeneity of the analyses focusing on recent migrants allows us for a consideration of specific groups.

3.2. Variable description

We consider several important types of migrants. First of all, we distinguish between EU/EFTA (hereafter called EU migrants) and non-EU migrants. EU migrants are a specific category since the principle of free movement ensures that they have a very different access to the labour market of European societies than other migrants. Within both categories we distinguish between economic migrants arriving with a contract, economic migrants arriving without a contract, and non-economic migrants[5]. Among non-EU migrants we divide non-economic migrants into family migrants and those seeking protection (refugees)[6].

Labour market success is measured through three variables. First, whether migrants are active on the labour market rather than not working. Second, whether migrants are employed rather than unemployed; and third we analyse the occupational status of the current job as an indicator of whether migrants find themselves working in good jobs (Ganzeboom and Treiman, 1996).

The ad hoc modules include variables that allow for measuring three types of host country acquisitions. First, ***language proficiency***[7] is crucial for sustained integration and is often a requirement for finding good employment and making use of public services. It therefore brings substantial returns in the labour market (e.g. Campbell, 2014; Cebulla et al.,

[5] 98.5% of non-economic migrants from the EU arrived for family reasons.

[6] We use protection migrant and refugee interchangeably here, but it is important to recognise that our data contains self-reported motives, rather than the legal category of for instance an asylum seeker or a recognised refugee.

[7] 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.

2010; Cheung, 2013; Cheung and Phillimore, 2014; Cortes, 2004; De Vroome and van Tubergen, 2010; Dustmann and Fabbri, 2003). The two ad-hoc modules include a question on self-reported host country language skills, but the question differed slightly in each wave. In 2008 respondents were asked whether they believe they need to improve their language skills to find a good job; while in 2014 respondents were asked to report their host country language skills in four categories: mother tongue, advanced, intermediate, or beginner or less. We combined these in a dummy variable to capture the upper end of ability with 1 indicating that respondents think they do not need to improve their language skills or that they report speaking the host country language to mother tongue or advanced level. While these questions are likely to be interpreted differently, an evaluation of the 2014 LFS showed that the proportions of migrants who reported not needing better language skills corresponded strongly to the proportion of migrants who reported their language skills as advanced or mother tongue in 2014, indicating that the two questions can be compared (Eurostat, 2015).

Besides language proficiency, we also include a variable to capture whether migrants attended any sort of ***language training***. Again, this question differs between the 2008 and 2014. In 2008, migrants who had arrived no longer than 10 years ago were asked whether they had made use of any host country language tuition in the first 2 years after their last arrival. In 2014 respondents were asked whether they had attended any language courses since arrival. We combine these two variables into one indicator for having attended some language training. Kogan (2006) links this variable directly to the policy considerations of European societies and an important aspect to be actioned upon in a policy framework.

Third, we include a variable on whether migrants obtained their ***highest qualifications in the country of residence***. We define this as having arrived in the country of residence prior to the year in which the highest qualification was obtained.

We expect the effects of host country acquisitions to differ depending on the initial, possibly discounted, human capital of migrants. We measure *education* using three categories: none, primary or lower secondary qualifications; upper secondary and non-tertiary post-secondary qualifications; and tertiary qualifications. We further include socio-demographic characteristics such as *age* and *marital state*. We also account for the *degree of urbanisation* (metropolitan; intermediate or rural) of the respondent[8]. *Gender* is likely to be very important as the labour market outcomes of male and female migrants may differ substantially, and they may differ in their reported reasons for migration with the majority of family migrants being refugees (Cangiano, 2015). We further control for the *regional unemployment rate in the year of the survey*, estimated from the LFS itself[9].

We include a range of contextual factors thought to affect the choices of acquiring host country human capital. The policy context in the country of residence is captured through *MIPEX scores* for integration policies, which are compiled to reflect the integration policies in place in a country on 8 different domains based on 167 indicators. In considering the effect of MIPEX, we also consider the type of migrant by motivation to which it is most likely to apply. A higher score indicates the policy context is more geared towards integration. We include the score on labour market mobility, measuring the extent to which migrants have

[8] Degree of urbanisation was not asked in Romania, Switzerland and Norway in 2008 and respondents in those countries in 2008 were all assigned the intermediate categories.

[9] Region is defined by NUTS-0 in Cyprus, Lithuania, Estonia, Luxembourg, Latvia, Malta, Netherlands; NUTS-1 in Austria, Switzerland, Germany, Croatia, Ireland, Norway, Slovenia, Slovakia, UK; NUTS-2 in Belgium, Bulgaria, Czech Republic, Spain, France, Greece, Hungary, Italy, Poland, Portugal, Romania, Sweden.

equal rights and opportunities to access jobs and improve their skills to natives, for all migrants; family reunion which captures the ease of reuniting with families in terms of eligibility, conditionality, security of status and associated rights; and ease of acquiring nationality. The MIPEX scores are limited in that they reflect existing policies, but not the extent to which they are used or even implemented (Koopmans, 2010). We measure the MIPEX scores at the year of the survey[10].

To capture initial employment conditions and the business cycle the *harmonized unemployment rate*[11] at the year of arrival at country level is included for everyone. Finally, the *initial legal uncertainty* faced by refugees is approximated by including information obtained through the United Nations High Commission on Refugees (UNHCR)[12] on the decisions made on asylum applications in each country. The UNHCR data is available since 2000 and is matched to migrants by the region of origin and the country. We compute the rate of decisions out of all applications; as well as the rate of positive decisions made. These approximate the initial stage of uncertainty faced by refugee-seekers (Fasani et al., 2018). We further include the overall rate of asylum applications[13].

[10] As MIPEX scores are not available in 2008 for all countries the average of the non-missing MIPEX scores from 2008 to 2014 is used instead in those cases. For more information on MIPEX, please see www.mipex.eu

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

[12] 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.

[13] This is obtained from official EU data, as well as national reports where other data was missing.

Selection

Estimating how acquisitions affect migrants is made more difficult by the differences in selection faced by different migrants – depending on the individual and contextual factors shaping their experience. Previous studies argue that economic migrants are generally more positively selected and fit the labour market more closely as they made a conscious choice to migrate to a specific host country. Non-economic migrants made a less conscious choice, either because of strong push factors as in the case of refugees or if they travelled as dependents, in the case of family migrants (Cortes, 2004). This has repercussions on their labour market insertion as well as on the benefits from further host country relevant skills obtained (Lundborg, 2013; van Tubergen et al., 2004). Moreover, non-economic migrants, who arrive for family and particularly protection reasons, compared to economic migrants, generally receive state-funded and institutional support in the form of integration courses, language courses and career support (Bevelander and Pendakur, 2014; Cangiano, 2015; De Vroome and van Tubergen, 2010; Huddleston et al., 2016). This means they would have lower costs to obtain acquisitions and to invest further in integration.

We consider these selection issues by running the analysis within each type of migrant group. Within each group, we then compare the effect of host country acquisitions after matching on origin and destination as well as recency at arrival.

3.3. Description of the data

Table 1 presents the average of all variables of interest for each migrant group. 67% of EU migrants in our sample report economic reasons as their main reason for migration, compared to 38% of non-EU migrants. 33% of EU migrants arrive for non-economic reasons;

while 55% of non-EU migrants arrived for family reasons and a further 7% report seeking protection.

The vast majority of economic migrants are active on the labour market (91-96%) with little difference between EU and non-EU migrants. Activity is substantially lower for non-economic migrants, particularly from outside the EU. Almost all EU economic migrants are employed as are non-EU economic migrants who have a contract upon arrival. Interestingly, non-EU economic migrants without a contract have similar employment rates to EU non-economic migrants. Non-EU non-economic migrants occupy the bottom end of the employment hierarchy with 70-78% employed. Economic migrants who arrive with a contract work on relatively high status jobs (43-48 ISEI scores); while economic migrants who come without a contract ready work on the lowest status jobs. Non-economic migrants are in between, with EU non-economic migrants doing better than non-EU non-economic migrants.

Economic migrants, particularly those arriving with a contract, are more matched to the host country in terms of speaking the language well than non-economic migrants. Only 49% of non-EU family migrants and 36% of non-EU protection migrants report speaking the language well. Non-economic migrants are more likely than economic migrants to have taken language courses; the rate of take up is especially high for protection migrants (56%) which reflects the support they often receive. Non-EU economic migrants are particularly unlikely to have attended language courses. While 17-19% of non-economic migrants obtained further qualifications in the host country; the proportion is only 10-11% among EU economic migrants and 6-7% among non-EU economic migrants. Economic migrants arriving with a contract are substantially more highly educated than all other groups (41-49%) followed by EU family migrants. These averages indicate that economic migrants with a contract are most

positively selected (with those from outside the EU being somewhat higher educated than those within the EU, due to stricter selection); while non-economic migrants are less positively selected and arrive with lower qualifications and worse language skills on average.

EU economic migrants without a contract predominantly come from the new EU member states; as do family migrants. Protection migrants are much more likely to come from North Africa and the Middle East, and Other Africa, than economic or family migrants.

The context of arrival variables indicate that migrant groups go to different countries. Migrants seeking protection are part of an origin group that receive more positive decisions and file more applications in the host country at the time of arrival, which supports the measuring of migrant status using self-reported motivation.

Table 1: Description of Migrant Groups

	EU and EFTA			non-EU			
	Economic with contract	Economic without contract	Non-economic	Economic with contract	Economic without contract	Family	Refugee
Active on labour market	0.96	0.92	0.65	0.96	0.91	0.55	0.53
Employed	0.94	0.92	0.85	0.94	0.86	0.78	0.7
Occupational status (ISEI)	42.85	30.08	37.01	48.14	31.37	33.99	32.77
Host Country Language	0.6	0.52	0.55	0.74	0.64	0.49	0.36
Language Course	0.22	0.18	0.24	0.12	0.14	0.29	0.56
Host Country Qualifications	0.1	0.11	0.19	0.07	0.06	0.19	0.17
Highest Qualification							
Low Qualifications	0.15	0.24	0.26	0.22	0.41	0.41	0.48
Middle Qualifications	0.44	0.55	0.45	0.29	0.38	0.35	0.32
High Qualifications	0.41	0.21	0.29	0.49	0.21	0.24	0.2
Domicile							
Thinly Populated	0.14	0.14	0.18	0.11	0.11	0.11	0.09
Intermediate	0.29	0.24	0.3	0.19	0.22	0.24	0.18
Densely Populated	0.56	0.62	0.52	0.7	0.67	0.65	0.73
Male	0.64	0.55	0.29	0.63	0.59	0.31	0.57
Age	34.65	33.32	32.5	36.95	35.7	32.09	34.93
Region of origin							
EU15 and EFTA	0.36	0.11	0.28	N.A.	N.A.	N.A.	N.A.
new EU member states	0.64	0.89	0.72	N.A.	N.A.	N.A.	N.A.
North America and Australia	N.A.	N.A.	N.A.	0.09	0.02	0.02	0.01
Other Europe	N.A.	N.A.	N.A.	0.12	0.17	0.18	0.17
North Africa and Middle East	N.A.	N.A.	N.A.	0.09	0.15	0.19	0.3
Other Africa	N.A.	N.A.	N.A.	0.11	0.12	0.13	0.29
South and East Asia	N.A.	N.A.	N.A.	0.35	0.17	0.28	0.22
Central and South America	N.A.	N.A.	N.A.	0.24	0.36	0.19	0.02
Years of Residence	4.57	4.89	5.11	5.15	5.94	5.2	5.74
Current Regional UR	6.47	7.78	8.08	8.62	10.47	8.76	6.39
Asylum Applications	149	143	249	4832	3606	5324	9089
Positive Asylum Decisions	1.2	0.99	1.22	10.06	9.73	10.19	13.07
Rate Asylum Decisions Taken	81.93	84.28	79.67	84.18	82.79	81.59	80.2
Initial Unemployment Rate	6.24	6.92	7.04	7.29	8.74	7.74	6.41
MIPEX Family Reunion	48.34	51.19	56.57	56.92	67.06	59	54.78
MIPEX Labour Mobility	60.59	60.35	63.52	61.55	64.31	63.53	65.89
Observations	*4,811*	*6,044*	*5,280*	*3,314*	*5,172*	*12,297*	*1,674*
Fraction out of region	*30%*	*37%*	*33%*	*15%*	*23%*	*55%*	*7%*

Source: EU-LFS 2008 and 2014 for recent migrants, weighted means

4. Methodology

4.1. Methodological approach

This paper aims to show the effect of host country acquisitions on labour market outcomes for different types of migrants, based on their initial motivation and origin. As the role of host country acquisitions may differ between groups depending on lection, we estimate a treatment effect. The effect of interest (Δ) is the average difference between the outcomes y (labour market integration) had everyone received the treatment (y_1) - the treatment here is achieving a certain level of host country acquisitions - and their outcomes had they not received the treatment (y_0); the average is among those who received the required level of host country acquisitions (T = 1). This effect is called the treatment effect for the treated (ATT) and is shown in equation 1.

$$\Delta = E[y_1 - y_0 \mid T = 1], \qquad \text{[Equation 1]}$$

where E is the expectation, or average. The problem is that only y_1 or y_0 but not both is observed, meaning Δ cannot be directly estimated (Cameron and Trivedi, 2005). We hence use propensity score matching to estimate Δ. The propensity score p(x) indicates the probability of receiving the treatment, conditional on the observed characteristics x, as shown in equation 2 below (Caliendo and Kopeinig, 2008); observables can be powerful drivers of differential behaviour[14]. To estimate unobserved y_0 for those with host country acquisitions and propensity score p(x) = p, we match them with the persons among those without host country acquisitions whose propensity scores are equal, or closest to, p. The ATT is then

[14] There may be some cultural aspects, eg related to country of origin, which are not captured here, but can still matter and differentiate between migrants with the same initial motivation.

estimated using the average difference between the observed outcomes for each treated person and their match.

$$p(x) = Pr(T = 1 \mid X = x) \quad \text{[Equation 2]}$$

$$\mathrm{HC} = \mathrm{f}(\mathrm{SD} + \mathrm{Reg} + \mathrm{CA} + \mathrm{year} + \mathrm{country}) \quad \text{[Equation 3]}$$

We estimate the propensity of having made a host country skill acquisition. Human capital acquisitions (HC: language proficiency, language training, or further qualifications) are logistically regressed on personal characteristics (SD: education, gender, age [squared], marital status, years of residence, region of origin), regional factors (Reg: degree of urbanisation, current regional unemployment rate), context of arrival (CA: initial unemployment rate, MIPEX scores on labour integration and family; and applications, rate of decisions and rate of positive decisions granting protection status to migrants of the same region of origin into the host country at the time of arrival – each estimated for the relevant migrant group to which they apply), and fixed effects for year of survey (year) and host country (country). We estimate the propensity score (p(x)) as the prediction from this model.

This rich set of controls means we compare activity, employment and occupational status of migrants of a specific type who have good language skills, took a language course, or obtained their highest qualifications in the host country to their counterparts who have a similar socio-demographic profile, region, migrant history and faced a comparable context of arrival, but did not make that acquisition.

We further study heterogeneous treatment effects – that is to say, whether they differ by qualifications. Based on the idea that further host country human capital would help unlock the potential of general human capital we expect that migrants with higher

qualifications, rather than lower or middle qualifications, benefit from these skill gains (Duleep and Regets, 1999). We also test gender differences and differences by time spent in the host country – these additional tests can be seen in our technical appendix, as well as extensions of the model that allow us to test the mediating role of host country acquisitions.

All main analyses are carried out for migrants who have been in the country no longer than 10 years. Methodologically, this allows us to consider all variables specified in the Hypotheses as they are available for this sub-group. Importantly as well, country policies regarding labour marker insertion are perhaps most relevant for the recent group of migrants at whom they are aimed rather than established groups (Kogan 2016).

4.2. Matching

The quality of the match is assessed by the difference between the distributions of the control variables in the treated and (matched) control groups. We obtain a good match and reduction in bias using 3 nearest neighbours[15]. Table 2 shows the mean and median bias before (prior) and after (post) matching with three nearest neighbours on the propensity score, estimated as in equation 3. This shows that the matching results in a substantially lower mean and median differences between the covariates in the treated and control group with the bias generally remaining under the rule-of-thumb number of 5. We obtain a less good match for host country qualifications for EU family migrants.

[15] We also carried out matching using only the nearest neighbour, and added callipers of 0.1 and 0.05, and included interactions between some of the control variables, but found the best results in terms of remaining bias using the linear specification of the propensity score and matching on three nearest neighbours with no calliper.

Table 2: Average bias in propensity score before and after matching by migrant type

			Language skills		Language course		Host country qual.	
			Prior	post	prior	post	prior	post
EU		mean	14.33	2.79	19.64	2.63	18.16	3.76
	economic with contract	median	7.94	2.05	10.60	2.51	11.83	2.58
		mean	9.07	2.41	16.72	1.88	23.12	3.64
	economic without contract	median	6.40	1.66	12.90	1.32	19.93	3.15
		mean	10.36	3.18	15.33	2.87	25.21	10.90
	non-economic	median	7.56	2.18	11.40	1.53	10.91	6.43
Non-EU		mean	19.31	5.28	18.36	5.38	23.12	5.77
	economic with contract	median	13.21	4.48	14.88	5.19	20.26	4.95
		mean	13.17	4.17	14.82	4.38	27.35	4.37
	economic without contract	median	10.34	2.79	11.86	4.48	25.01	3.77
		mean	13.03	3.69	13.03	2.67	17.74	8.30
	family	median	9.26	2.94	7.83	1.92	9.52	4.81
		mean	9.04	3.14	19.18	5.09	22.33	5.52
	refugee	median	5.67	2.25	12.74	4.09	21.06	4.03

Shows average bias (relative difference of sample means) among all covariates after matching on 3 nearest neighbours, with propensity score estimation including all socio-demographic and contextual controls as well as country of residence, region of origin and year of survey.

5. Results

5.1. Acquisition of host country skills

This section describes the individual and contextual factors associated with an increase in the possession of host country relevant skills as estimated through logistic regression of the model specified in equation 3, separately by migrant type, in more detail. For ease of interpretation all results are shown as average marginal effects in table 3. Full results are available from the authors.

Highly qualified migrants are substantially more likely than those with lower qualifications to be proficient in the host country language, and to have obtained their highest qualifications in the country of residence. There is no educational gradient in taking up language courses for most groups, with non-EU family and refugee migrants with low qualifications being most likely to take up a language course; and EU non-economic migrants with higher degrees more likely than those with low or no qualifications. Years of residence is positively associated with all host-country acquisitions, albeit often the observed association is not statistically significantly for language courses.

Table 3: Estimated acquisition of host country human capital among recent migrants

	EU			Non-EU			
Good Language skills	**Economic with contract**	**Economic without contract**	**Non-economic**	**Economic with contract**	**Economic without contract**	**Non-economic**	**Economic with contract**
Middle qual.	0.113***	0.059***	0.132***	0.019	0.085***	0.147***	0.210***
High qual.	0.289***	0.214***	0.200***	0.154***	0.178***	0.333***	0.217***
Years of residence	0.031***	0.040***	0.052***	0.012**	0.032***	0.033***	0.048***
Language course							
Middle qual.	-0.011	0.016	-0.015	0.007	0.019*	-0.011	-0.078*
High qual.	0.028	0.023	0.046*	-0.004	-0.022	-0.055***	-0.006
Years of residence	0.006	0.004	-0.004	0.006**	0.000	0.004*	-0.005
Further Education							
Middle qual.	0.027*	0.054***	0.038***	0.062***	0.031***	0.061***	0.117***
High qual.	0.047***	0.070***	0.120***	0.070***	0.041***	0.114***	0.156***
Years of residence	0.014***	0.016***	0.026***	0.007***	0.007***	0.030***	0.031***
Obs.	**4,811**	**6,044**	**5,280**	**3,314**	**5,172**	**12,297**	**1,674**

**: p<0.1; **: p<0.05; ***: p<0.01; Source: EU LFS 2008 and 2014. Marginal effect at grand mean of education, years of residence, and contextual factors (initial unemployment rate, MIPEX, asylum applications and decisions for group-host country), controlling for gender, urbanisation, marital status, age (squared), year, current regional unemployment rate, region of origin.*

5.2. Effects of host country human capital

This section shows the estimated effect of host country acquisitions on labour market outcomes for different types of migrants. We account for differences in human capital, origin, migration history and context of arrival through propensity score matching. Table 4 shows the estimated treatment effect for treated (ATT).

Migrants with better language proficiency are substantially more likely to be active, generally more likely to be employed; and work on better quality jobs. Speaking the language well is associated with a substantially higher activity rate for non-economic migrants (24-25 percentage points higher). Family migrants with better language skills are also substantially more likely to be employed; but there is no such effect for non-EU economic and protection migrants. Migrants with better language skills also generally work on higher quality jobs than their counterparts with worse language skills. Overall, language proficiency is clearly related to better performance on the labour market. In terms of activity and employment the differences between groups are higher; with non-economic migrants particularly benefiting in terms of higher labour force activity. Thus, in terms of the size of the effect we find some substantial evidence to support our Hypothesis 1, although language proficiency does impact labour market integration positively almost universally across groups. Likewise, as we hypothesized in Hypothesis 2; the effect in terms of finding good jobs is pronounced across migrant types.

Table 4: Estimated treatment effect on labour market performance for migrants

		EU and EFTA			Non-EU			
		Economic with contract	**Economic without contract**	**Non-economic**	**Economic with contract**	**Economic without contract**	**family**	**refugee**
Active								
Language proficiency	ATE	0.046 (0.009)***	0.062 (0.009)***	0.236 (0.014)***	0.087 (0.017)***	0.106 (0.011)***	0.237 (0.01)***	0.25 (0.02)***
	N treat/contr	3226/1573	3111/2918	3003/2270	2067/1233	2993/2160	5645/6651	590/1076
Language course	ATE	-0.02 (0.012)*	0.007 (0.013)	0.009 (0.022)	-0.018 (0.006)***	-0.002 (0.016)	0.063 (0.01)***	0.12 (0.03)***
	N treat/contr	785/3994	1004/5016	1161/4059	433/2871	784/4380	4021/8246	984/656
Host country qualifications	ATE	0.03 (0.004)***	0.022 (0.007)***	0.146 (0.03)***	-0.145 (0.136)	-0.01 (0.036)	0.084 (0.015)***	-0.042 (0.041)
	N treat/contr	365/4418	479/5485	788/4475	196/3063	282/4814	2202/10087	254/1385
Employed								
Language proficiency	ATE	0.03 (0.004)***	0.022 (0.007)***	0.146 (0.03)***	-0.145 (0.136)	-0.01 (0.036)	0.084 (0.015)***	-0.042 (0.041)
	N treat/contr	3153/1469	2933/2591	2305/1176	2019/1131	2803/1799	3849/2862	448/493
Language course	ATE	-0.031 (0.02)	-0.009 (0.012)	-0.079 (0.024)***	-0.002 (0.015)	-0.068 (0.033)**	-0.043 (0.012)***	-0.063 (0.034)*
	N treat/contr	755/3845	925/4591	820/2629	402/2752	678/3935	2318/4391	607/324
Host country qualifications	ATE	0.025 (0.004)***	-0.004 (0.011)	0.052 (0.017)***	0.024 (0.006)***	-0.059 (0.094)	-0.047 (0.026)*	0.008 (0.054)
	N treat/contr	357/4249	452/5000	421/3038	189/2925	251/4302	1073/5628	142/784
Occupational status								
Language proficiency	ATE	3.039 (0.595)***	5.209 (0.376)***	3.973 (0.791)***	4.896 (0.816)***	4.288 (0.417)***	4.365 (0.459)***	4.309 (0.981)***
	N treat/contr	3046/1363	2727/2333	2062/961	1907/1077	2500/1505	3119/2152	366/314
Language course	ATE	1.828 (1.296)	-0.621 (0.543)	-1.958 (0.822)**	-4.266 (1.174)***	-1.651 (1.055)	-2.338 (0.741)***	-0.854 (0.975)
	N treat/contr	701/3692	852/4202	700/2290	378/2610	557/3458	1763/3502	428/233
Host country qualifications	ATE	1.904 (2.929)	4.248 (0.901)***	6.026 (1.003)***	4.598 (6.155)	6.22 (0.825)***	3.468 (1.15)***	10.906 (0.9)***
	N treat/contr	345/4053	424/4548	345/2659	183/2745	229/3734	786/4472	106/497

**:p<01; **: p<0.05; ***: p<0.01. The table shows the estimated average treatment effect of human capital on labour market outcomes after propensity score matching with at least 3 nearest neighbours, with the standard error. The propensity score includes gender, marital state, urbanity, age (squared) education, year of survey, years of residence, country of residence, region of origin, initial conditions and contextual factors.*

While having a good language proficiency can indicate human capital acquisition as well as higher selection, language courses represent the acquiring of a clear host country-relevant skill post migration (can depend both on individual decisions, and host country policy, and on the job training – the survey question does not allow us to differentiate). We find that attending language courses is slightly negatively related to employment for economic migrants with a contract (2 percentage points lower) in support of Hypothesis 1. Similarly, non-EU non-economic migrants who attended a language course are substantially more likely to be active on the labour market however (6 to 12 percentage points higher). Taking up language courses is in the short term associated with lower employment and worse occupational status for EU non-economic and non-EU economic and non-economic migrants which highlights that the hypothesized positive effect of credentials is strongest in terms of participation. This can also reflect reverse causality, where those that are unemployed or in worse positions are more likely to take up language courses.

Finally, EU migrants who obtained their highest qualifications in the host country are more likely to be active; as are non-EU migrants who arrived for family reasons. Having host country qualifications is also associated with higher employment for EU and non-EU economic migrants with a contract; and for EU family migrants. All migrants are more likely to work on higher quality work when having host country qualifications or good language skills. This effect is particularly high for protection migrants and EU family migrants, and thus Hypothesis 2 gets only partial support.

To sum up, we find some support for Hypothesis 1 in that host country skills on average benefit non-economic migrants somewhat more than they do economic migrants– although language courses have a cost in terms of employment, at least in the short term. As expected

in Hypothesis 2, the effects of host country skills on occupational status are somewhat less differentiated between groups with almost everyone benefiting from language skills and qualifications obtained in the host country, although the latter are more important for non-economic migrants – thus Hypothesis 2 is only partially supported and points to the importance of considering different skill acquisitions. These findings indicate strongly that having or obtaining further host country relevant skills – possibly sponsored by the host country – can be very important drivers of economic activation of more vulnerable migrants.

While the matching means we compare similar migrants to each other, there may still be unobservable characteristics driving these findings. Some of the associations may also be driven by reverse causality, where labour market outcomes affect host country relevant skills – for example, if vulnerable unemployed migrants are particularly encouraged to attend language courses. Migrants who are working are for instance more likely to have more opportunity to learn the language which may explain the high positive effect.

5.3. Heterogeneity of treatment effect

In this section we further explore heterogeneity within migrant types to address Hypothesis 3 and study whether migrants of different skill levels within each group benefit uniformly from host country relevant skills. It is important to consider this heterogeneity by qualifications, as further investments might be most beneficial for those who already have higher qualifications. If host country acquisitions particularly serve to complement pre-existing qualifications, policy makers should consider the availability of courses to all migrants as a standard integration practice, particularly for the more qualified. We estimate treatment effects for subgroups of migrants depending on their qualifications. We only show results for

activity and employment as the sample size becomes too small for meaningful interpretation in terms of occupational status.

Language skills are associated with higher activity for everyone [table 5], but language courses, in contrast to our Hypothesis 3, primarily benefit lower educated non-economic (EU and non-EU) migrants, especially refugees, as well as non-EU economic migrants without a prior contract. Having obtained the highest qualifications in the host country is positively associated with activity of most highly skilled migrants. Regarding employment (table 6) we find that language proficiency very much benefits non-economic migrants over economic migrants (economic migrants with a contract upon arrival benefit the least), at each prior qualification level. The returns are relatively low for those with low qualifications however. Yet, language courses negatively affect employment probability among the more highly qualified, but do not really affect the lower qualified. Thus, we have only partial evidence in support of Hypothesis 3 and it is confined to the economic migrants.

Table 5: Effect of host country human capital by migrant type and highest qualification on activity

Low qualifications	**Language skills**	**Language course**	**Further qual.**
EU economic with contract	0.049 (0.022)**	-0.039 (0.097)	
EU economic without contract	0.061 (0.016)***	-0.036 (0.018)*	
EU non-economic	0.157 (0.031)***	0.046 (0.015)***	
non-EU economic with contract	0.081 (0.019)***	-0.01 (0.043)	
non-EU economic without contract	0.096 (0.016)***	0.027 (0.015)*	
non-EU family	0.278 (0.015)***	0.035 (0.023)	0.175 (0.051)***
non-EU refugee	0.222 (0.032)***	0.154 (0.029)***	
Middle qualifications	**Language skills**	**Language course**	**Further qual.**
EU economic with contract	0.037 (0.011)***	0 (0.011)	0.042 (0.005)***
EU economic without contract	0.063 (0.012)***	0.019 (0.014)	
EU non-economic	0.231 (0.019)***	0.013 (0.027)	
non-EU economic with contract	0.074 (0.017)***	0.008 (0.011)	-0.058 (0.121)
non-EU economic without contract	0.099 (0.018)***	-0.005 (0.017)	-0.077 (0.114)
non-EU family	0.254 (0.015)***	0.017 (0.027)	0.087 (0.032)***
non-EU refugee	0.203 (0.033)***	0.111 (0.051)**	
High qualifications	**Language skills**	**Language course**	**Further qual.**
EU economic with contract	0.068 (0.006)***	-0.046 (0.04)	0.013 (0.007)*
EU economic without contract	0.093 (0.022)***	-0.023 (0.016)	0.037 (0.012)***
EU non-economic	0.291 (0.02)***	-0.03 (0.03)	0.123 (0.028)***
non-EU economic with contract	0.127 (0.017)***	-0.032 (0.073)	-0.069 (0.068)
non-EU economic without contract	0.106 (0.019)***	0.008 (0.011)	
non-EU family	0.251 (0.02)***	-0.045 (0.019)**	0.037 (0.031)
non-EU refugee	0 (0)***	0.074 (0.083)	0.056 (0.064)

**: p<0.1; **: p<0.05; ***: p<0.01. The figure shows the estimated average treatment effect of human capital on labour market outcomes after propensity score matching with at least 3 nearest neighbours for migrants for those with at most lower secondary qualifications (low); upper secondary or post-secondary non-tertiary qualifications (middle); or tertiary qualifications (high), with 90% confidence interval. The propensity score includes gender, marital state, urbanity, age (squared) education, year of survey, years of residence, country of residence, region of origin, initial conditions and contextual factors.*

Table 6: Effect of host country human capital by migrant type and highest qualification on employment

Low qualifications	**Language skills**	**Language course**	**Further qual.**
EU economic with contract	-0.002 (0.018)	0 (0.016)	
EU economic without contract	0.015 (0.02)	0.002 (0.029)	
EU non-economic	0.079 (0.035)**	0.06 (0.035)*	
non-EU economic with contract	-0.066 (0.032)**	-0.161 (0.164)	
non-EU economic without contract	0.043 (0.018)**	-0.018 (0.015)	
non-EU family	0.07 (0.022)***	-0.039 (0.042)	-0.091 (0.081)
non-EU refugee	0.146 (0.049)***	0.012 (0.076)	
Middle qualifications	**Language skills**	**Language course**	**Further qual.**
EU economic with contract	0.038 (0.012)***	-0.026 (0.012)**	0.041 (0.005)***
EU economic without contract	0.024 (0.009)***	-0.023 (0.014)*	
EU non-economic	0.107 (0.023)***	-0.184 (0.037)***	
non-EU economic with contract	-0.024 (0.015)	-0.031 (0.036)	
non-EU economic without contract	0.084 (0.019)***	-0.081 (0.09)	-0.081 (0.028)***
non-EU family	0.074 (0.019)***	-0.06 (0.017)***	-0.01 (0.025)
non-EU refugee	0.212 (0.037)***	-0.007 (0.071)	
High qualifications	**Language skills**	**Language course**	**Further qual.**
EU economic with contract	0.02 (0.01)**	-0.012 (0.013)	0.005 (0.006)
EU economic without contract	0.027 (0.014)*	-0.011 (0.014)	0.021 (0.004)***
EU non-economic	0.056 (0.021)***	-0.025 (0.021)	-0.014 (0.033)
non-EU economic with contract	-0.023 (0.011)**	-0.001 (0.025)	0.016 (0.005)***
non-EU economic without contract	0.06 (0.024)**	-0.061 (0.018)***	
non-EU family	0.126 (0.018)***	-0.056 (0.009)***	-0.051 (0.033)
non-EU refugee	0.28 (0.087)***	-0.218 (0.058)***	-0.104 (0.087)

**: p<0.1; **: p<0.05; ***: p<0.01. The figure shows the estimated average treatment effect of human capital on labour market outcomes after propensity score matching with at least 3 nearest neighbours for migrants for those with at most lower secondary qualifications (low); upper secondary or post-secondary non-tertiary qualifications (middle); or tertiary qualifications (high), with 90% confidence interval. The propensity score includes gender, marital state, urbanity, age (squared) education, year of survey, years of residence, country of residence, region of origin, initial conditions and contextual factors.*

These findings then suggest that language proficiency and further host country qualifications indeed benefit the more highly qualified economic migrants with and without contract, compared to the lower qualified within these groups. Yet, importantly, host country acquisitions are beneficial to non-economic migrants at each skill level. Courses, qualifications and proficiency seem to be part and parcel of the integration journey of refugees along the skill spectrum, which is a good argument for continuous financing of courses targeting protection migrants despite budgetary considerations in many receiving societies. Finally, we should note that the observed patterns are quite complex: e.g. -language courses can help individuals with the lowest qualifications and worst prospects to enter the labour market; while, at the same time, be less beneficial to the more highly skilled by increasing their reservation wages and thus probability of unemployment. An increase in reservation wages may be ultimately beneficial in terms of bringing to the individual just remuneration for their human capital but which can make policy makers apprehensive because of higher levels of unemployment, at least in the short run. More longitudinal analyses are needed to elucidate these patterns.

5.4. Context of reception

Overall in support of Hypothesis 4, we do find that in countries with more opportunities for training and higher certainty through the asylum system the probability of migrants to possess host country acquisitions increases, although there are exceptions. Policies that seem associated with lower conditionality (family policies) seem somewhat negatively associated with further skill gains; while the initial economic uncertainty can create opportunities for

further acquisitions among economic migrants but appears to negatively impact upon non-economic migrants. A possible reason for this is that economic migrants may have a broader range of options within their destination and, if they arrive during worse times, they may be more likely to have strategies or plans in place (Fasani et al., 2018), while non-economic migrants have limited destination options, and may therefore be fully negatively affected by initial adversity.

It is important to note that, since the data is cross-sectional, the patterns in Table 7 do not show causal effects. At least partly the association between contextual factors and host country human capital is due to selection of migrants into a specific setting and confounded by the choice of whether migrants stay as those who experience too much disadvantage initially are likely to move to a different country or migrate back.

Table 7. Estimated acquisition of host country human capital among recent migrants: the context of reception

	EU			Non-EU			
Good Language skills	**Economic with contract**	**Economic without contract**	**Non-economic**	**Economic with contract**	**Economic without contract**	**Family**	**Refugee**
Initial UR	0.010	-0.008	-0.018***	0.006	-0.005	0.005	0.024**
MIPEX: labour	-0.008***	-0.005***	-0.006***	-0.005***	-0.010***	-0.005***	0.001
MIPEX: family	0.006***	0.006***	0.005***	0.000	0.004***	-0.001	0.001
MIPEX: nationality	0.002	0.003***	0.000	0.007***	0.007***	0.005***	-0.003**
Asylum appl.	0.000	-0.000	0.000	0.000***	0.000***	-0.000	0.000**
Asylum grants	-0.001	-0.002	-0.003	-0.000	0.001	0.000	-0.000
Asylum decisions	0.001	0.000	-0.001*	0.003***	0.001	0.001***	0.000
Language course							
Initial UR	-0.030***	-0.017***	-0.008	-0.010***	-0.000	-0.006**	-0.021*
MIPEX: labour	0.002	0.002**	0.010***	0.003***	0.003***	0.014***	0.012***
MIPEX: family	0.001	-0.002**	-0.005***	0.001*	-0.001	-0.003***	-0.002
MIPEX: nationality	0.005***	0.001*	0.001	-0.002***	-0.000	-0.004***	0.001
Asylum appl.	0.000	0.000	-0.000	-0.000**	-0.000***	0.000**	-0.000
Asylum grants	-0.003	-0.000	0.004**	0.001*	0.000	0.002***	0.005**
Asylum decisions	-0.000	-0.000	0.001	-0.001***	-0.001***	-0.001***	-0.002**
Further Education							
Initial UR	-0.003	0.003	-0.002	0.000	0.002**	-0.003**	0.004
MIPEX: labour	-0.001	0.002***	-0.001**	0.001*	0.001***	0.001***	0.003**
MIPEX: family	-0.002***	-0.004***	-0.000	-0.001***	-0.002***	-0.002***	-0.005***
MIPEX: nationality	0.000	0.000	0.001*	0.001	0.001***	0.001***	0.001
Asylum appl.	0.000	-0.000	-0.000	-0.000	-0.000	-0.000*	0.000
Asylum grants	-0.000	-0.000	-0.001	-0.001*	-0.000	0.000	0.002**
Asylum decisions	0.001**	-0.000	0.000	0.001***	0.000*	0.001***	0.000
Obs.	**4,811**	**6,044**	**5,280**	**3,314**	**5,172**	**12,297**	**1,674**

**: p<0.1; **: p<0.05; ***: p<0.01; Source: EU LFS 2008 and 2014. Marginal effect at grand mean of education, years of residence, and contextual factors (initial unemployment rate, MIPEX, asylum applications and decisions for group-host country), controlling for gender, urbanisation, marital status, age (squared), year, current regional unemployment rate, region of origin.*

5.5. Extensions and sensitivity

This section discusses the sensitivity of our results to the chosen sample and method and whether the results hold across European regions. While this paper discusses the effects of host country acquisitions in European countries as a whole, there are substantial country differences in the types of migrants and their labour market outcomes (Cangiano, 2015; Dumont et al., 2016). As a sensitivity test, we assess whether the associations found here hold in four different European regions, based on their socio-economic regime, by matching within those clusters (Esping-Andersen, 1989). Results for activity are shown in table A1 in the supplementary material. There are regional differences, but overall, language proficiency, attending a language course and having obtained host country qualifications are associated with higher labour force participation; and this benefits non-economic migrants more than economic migrants.

In a further extension, we consider naturalization as a possible host country acquisition. Obtaining citizenship requires conditions to be met and can positively affect labour market integration – for instance by reducing the transaction costs of being hired, by opening up restricted parts of the labour market; and by serving as a strong signal. The options for naturalization differ strongly between countries however. The European literature on this topic finds small "naturalization premiums" on the labour market, which are stronger for less advantaged migrants (Corluy et al., 2011; Helgertz et al., 2014; Jarreau, 2015). Using the same matching methods, we find a small positive effect of naturalization on activity for refugees, but not for the other groups (see table A2). It also increases the probability of being employed for non-EU non-economic migrants. Non-EU family migrants benefit from naturalization in

terms of occupational status. These findings then indicate that naturalization is associated with somewhat better labour market outcomes, particularly for non-economic migrants. Full results are available from the authors.

As discussed above, migrants' origin and the context of arrival affect their probability of having obtained host country acquisitions. In an extension analysis, we estimate the effect of these characteristics on labour market outcomes, both directly and through language proficiency, following a language course, having host country qualifications, or naturalization. Results from such a linear probability path model on the probability of working rather than not working (including inactive) are available in table A3 in the supplementary material. We group all EU migrants together in these models. The direct effects of host country acquisitions support the findings above, with language proficiency being the most important host country relevant skill for employment; and differentiating most among non-economic migrants. General education has strongly positive direct and indict associations with employment for EU and non-economic migrants. As expected, migrants who have been in the country longer are more likely to be employed; and at least partly so because of the higher host country human capital (Zwysen, 2018). The policy context does not make a big difference overall, although it differs by groups. Non-economic migrants benefit somewhat from arriving at times of higher unemployment through their take-up of host country acquisitions. Finally, the amount of asylum applications from the own group has a somewhat positive indirect effect on the probability of employment for refugees, while the rate of decisions and positive decisions is positively associated, but the association is not statistically significant ($p<0.1$).

Finally, we go beyond the integration of very recent migrants and estimate how language proficiency and host country qualifications affect the labour market outcomes of migrants

who have been in the country for longer than 10 years. We again use nearest neighbour matching and account for individual characteristics, years of residence and host country, but do not include the initial conditions as this is not known exactly for more established migrants. Results are shown in table A4 in the supplementary material. The findings are generally consistent with those among recent migrants, but differences between groups are somewhat smaller. Language proficiency is strongly associated with activity and occupational status of migrants. Host country qualifications have more long-term rather than short-term benefits, and are associated with higher activity, employment for some groups, and especially with higher occupational status. The overall consistency indicates that our results are not unduly biased by the restriction to recent migrants who may face – in the case of non-economic migrants – more limitations and barriers to work, or by the higher turnover and temporary migration among recent migrants (Campbell, 2014; Zwysen, 2018).

6. Conclusion

This paper demonstrates the importance of recognizing the motivations of different migrant groups. Migrants' labour market integration is a topic of increasing public concern, particularly in the light of the recent refugee crisis faced by mainland Europe. Non-economic migrants are often seen as an economic burden, which can result in tight rules and strict restrictions on the right to work. As opposed to economic migrants, non-economic migrants, especially refugee migrants, are described as being "…closer to "forced marriage" than the "chosen match" typical in economic migrations" (Dustmann et al., 2016, p.30). Yet, in this paper we highlight that non-economic migrants should not be seen as an inevitable burden but as further investments in the host country whose relevant skills can serve to close existing labour market gaps and improve their integration substantially.

Our analysis points to considerable differences in the importance of host country acquisitions between migrant types. While family and refugee migrants, both from outside and within the EU, are indeed less likely to be incorporated in the labour market compared to their counterparts migrating for economic reasons, their labour market participation increases substantially with further host country acquisitions such as language proficiency or more courses. We find that good language skills help all migrants in their employment and attachment to the labour market. Moreover, language proficiency leads to higher quality jobs. Having attended language courses can also be positive particularly for non-economic family and refugee migrants as it increases labour force participation which highlights the importance of the integration efforts of the receiving society.

This paper underlines the importance of investing in training and labour market support for migrants who do not come to the destination country through economic channels.

The institutional context can strongly affect the probability of migrants investing in host country human capital. Migrants are generally more likely to invest in a context with a more positive labour policy environment; while negative initial conditions, such as a high unemployment rate or a low rate of decisions on asylum applications for refugees, reduce further host country acquisitions. It is precisely for this group of non-economic migrants that acquisitions have higher returns.

While some of the acquisitions we studied do not lead to better outcomes immediately, taking up host country qualifications or attending language courses can have long-term benefits, particularly for the more disadvantaged migrants. In designing migration policies, it is also important to note that further courses, training and good language skills primarily benefit the employment probability of economic migrants who already have higher qualifications, but are also especially crucial for lower-qualified non-economic migrants.

7. References

Aydemir, A. (2011). Immigrant selection and short-term labor market outcomes by visa category. J. Popul. Econ. *24*, 451–475.

Bevelander, P., and Pendakur, R. (2014). The labour market integration of refugee and family reunion immigrants: a comparison of outcomes in canada and sweden. J. Ethn. Migr. Stud. *40*, 689–709.

Brand, J.E., and Xie, Y. (2010). Who Benefits Most from College? Evidence for Negative Selection in Heterogeneous Economic Returns to Higher Education. Am. Sociol. Rev. *75*, 273–302.

Caliendo, M., and Kopeinig, S. (2008). Some practical guidance for the implementation of propensity score matching. J. Econ. Surv. *22*, 31–72.

Cameron, A.C., and Trivedi, P.K. (2005). Microeconometrics: Methods and Applications (New York, US: Cambridge University Press).

Campbell, S. (2014). Does it matter why immigrants came here? Original motives, the labour market, and national identity in the uk. DQSS Work. Pap. 65.

Cangiano, A. (2015). Migration policies and migrant employment outcomes. Comp. Migr. Stud. *2*, 417–443.

Cebulla, A., Daniel, M., Zurawan, A., Brown, V., Tipping, S., and Tomaszewski, W. (2010). Spotlight on refugee integration: findings from the survey of new refugees in the united kingdom (London, UK: Home Office and UK Visas and Immigration).

Cheung, S.Y. (2013). Ethno-religious minorities and labour market integration: generational advancement or decline? Ethn. Racial Stud. *37*, 140–160.

Cheung, S.Y., and Phillimore, J. (2014). Refugees, Social Capital, and Labour Market Integration in the UK. Sociology *48*, 518–536.

Chiswick, C.U. (2009). The economic determinants of ethnic assimilation. J. Popul. Econ. *22*, 859–880.

Connor, P. (2010). Explaining the refugee gap: economic outcomes of refugees versus other immigrants. J. Refug. Stud. *23*, 377–397.

Corluy, V., Marx, I., and Verbist, G. (2011). Employment chances and changes of immigrants in Belgium: The impact of citizenship. Int. J. Comp. Sociol. *52*, 350–368.

Cortes, K.E. (2004). Are refugees different from economic immigrants? Some empirical evidence on the heterogeneity of immigrant groups in the united states. Rev. Econ. Stat. *86*, 465–480.

De Vroome, T., and van Tubergen, F. (2010). The employment experience of refugees in the netherlands. Int. Migr. Rev. *44*, 376–403.

Duleep, H.O., and Regets, M.C. (1999). Immigrants and Human-Capital Investment. Am. Econ. Rev. *89*, 186–191.

Dumont, J.-C., Liebig, T., Preschner, J., Tanay, F., and Xenogiani, T. (2016). How are refugees faring on the labour market in Europe? (Brussels, Belgium: European Commission and OECD).

Dustmann, C., and Fabbri, F. (2003). Language proficiency and labour market performance of immigrants in the UK. Econ. J. *113*, 695–717.

Dustmann, C., Fasani, F., Frattini, T., Minale, L., and Schonberg, U. (2016). On the economics and politics of refugee migration (London, UK: Centre for Economic Policy Research).

Esping-Andersen, G. (1989). The Three Worlds of Welfare Capitalism (Cambridge, UK: Polity Press).

Eurostat (2015). The labour market situation of migrants and their immediate descendants: Evaluation fo the 2014 labour force survey.

Fasani, F., Frattini, T., and Minale, L. (2018). (The Struggle for) Refugee Integration into the Labour Market: Evidence from Europe (Rochester, NY: Social Science Research Network).

Ganzeboom, H.B.G., and Treiman, D.J. (1996). Internationally comparable measures of occupational status for the 1988 international standard classification of occupations. Soc. Sci. Res. *25*, 201–239.

Hainmueller, J., Hangartner, D., and Lawrence, D. (2016). When lives are put on hold: Lenghty asylum processes decrease employment among refugees. ScienceAdvances *2*.

Helgertz, J., Bevelander, P., and Tegunimataka, A. (2014). Naturalization and Earnings: A Denmark–Sweden Comparison. Eur. J. Popul. *30*, 337–359.

Huddleston, T., Tánczos, J., and Wolffhardt, A. (2016). Strategic Developments on Migrant Integration Policies in Europe (Oxford, UK: Centre on Migration, Policy and Society (COMPAS)).

Jarreau, J. (2015). The Impact of Naturalizations on Job Mobility and Wages: Evidence from France (Aix-Marseille, France: Aix Marseille school of economics).

Kogan, I. (2006). Labor Markets and Economic Incorporation among Recent Immigrants in Europe. Soc. Forces *85*, 697–721.

Kogan, I. (2016). Integration Policies and Immigrants' Labor Market Outcomes in Europe. Sociol. Sci.

Koopmans, R. (2010). Trade-Offs between Equality and Difference: Immigrant Integration, Multiculturalism and the Welfare State in Cross-National Perspective. J. Ethn. Migr. Stud. *36*, 1–26.

Lundborg, P. (2013). Refugees' Employment Integration in Sweden: Cultural Distance and Labor Market Performance. Rev. Int. Econ. *21*, 219–232.

Luthra, R., Platt, L., and Salamońska, J. (2016). Types of Migration: The Motivations, Composition, and Early Integration Patterns of "New Migrants" in Europe. Int. Migr. Rev. n/a-n/a.

Martí, M., and Ródenas, C. (2007). Migration Estimation Based on the Labour Force Survey: An EU-15 Perspective. Int. Migr. Rev. *41*, 101–126.

OECD (2016). International Migration Outlook 2016 (Paris, France: OECD Publishing).

OECD (2017). International Migration Outlook 2017 (Paris, France: OECD Publishing).

Pollmann-Schult, M. (2005). Crowding-out of unskilled workers in the business cycle: evidence from West Germany. Eur. Sociol. Rev. *21*, 467–480.

Poptcheva, E.-M., and Stuchlik, A. (2015). Work and social welfare for asylum-seekers and refugees (Brussels, Belgium: European Parliamentary Research Service).

Reyneri, E., and Fullin, G. (2011). Labour market penalties of new immigrants in new and old receiving west european countries. Int. Migr. *49*, 31–57.

Røed, M., and Schøne, P. (2012). Does immigration increase labour market flexibility? Labour Econ. *19*, 527–540.

van Tubergen, F., Maas, I., and Flap, H. (2004). The economic incorporation of immigrants in 18 western societies: origin, destination, and community effects. Am. Sociol. Rev. *69*, 704–727.

Zwysen, W. (2016). Crowding Out of Disadvantaged Young Adults in Germany: Background Matters Depending on Local Labour Market. Eur. Sociol. Rev. *32*, 662–674.

Zwysen, W. (2018). Different patterns of labour market integration by migration motivation in Europe: the role of host country human capital. Int. Migr. Rev.

Appendix

Table A1: Estimated effect of host country human capital investments on activity by migrant motivation by region

		Continental	Liberal	Scandinavia	Southern	New EU
Language skills	EU economic with contract	0.05***	0.03***	0.04***	0.03	0.2
	EU economic no contract	0.01	0.06***	0.05**	0.07***	
	EU non-economic	0.23***	0.34***	0.21***	0.14***	-0.05
	Non-EU economic with contract	0.05**	0.22***		0.08***	-0.08**
	Non-EU economic no contract	0.03	0.19***		0.11***	0.08***
	Non-EU family	0.23***	0.31***	0.24***	0.24***	0.12***
	Non-EU refugee	0.27***	0.25***	0.27***	0.24	
Language course	EU economic with contract	-0.02	0	0	-0.08	
	EU economic no contract	0.03*	0	0.05	0	
	EU non-economic	-0.03	-0.01	0.05	0.16***	
	Non-EU economic with contract	0	0.01	-0.04	-0.01	
	Non-EU economic no contract	0.04	0.01		-0.06	
	Non-EU family	0.07***	0	-0.03	0.03	0.03
	Non-EU refugee	0.09**	0.04	0.04		
Host country qualifications	EU economic with contract	0.02***	0.01			
	EU economic no contract		-0.02		0.11***	
	EU non-economic	0.08	0.2***		0.14***	
	Non-EU economic with contract					
	Non-EU economic no contract	0.09***	-0.01		-0.04	

	Non-EU family	0.04	0.14***
	Non-EU refugee	0.02	-0.01

**: p<0.1; **: p<0.05; ***: p<0.01. The table shows the estimated average treatment effect of human capital on labour market outcomes after propensity score matching with at least 3 nearest neighbours for migrants by host region within Europe. The propensity score includes gender, marital state, urbanity, age (squared) education, year of survey, and years of residence. Cells where the difference could not be estimated are left empty. Continental countries comprise Austria, Belgium, Switzerland, Germany, France, Luxembourg and the Netherlands; Scandinavian countries are Norway, Sweden, Denmark, Finland; Southern Europe is Greece, Italy, Spain, Portugal; and all post-2004 EU member states are clustered in the new EU.*

Table A2: Estimated effect of citizenship on labour market performance for migrants

		EU and EFTA			Non-EU			
		Economic with contract	**Economic without contract**	**Non-economic**	**Economic with contract**	**Economic without contract**	**Family**	**Refugee**
Active								
Citizenship	ATE		-0.048 (0.076)	-0.068 (0.052)	-0.157 (0.102)	-0.071 (0.028)**	-0.009 (0.023)	0.085 (0.053)
	N treat/contr		105/5319	301/4902	288/2911	439/4691	1937/10220	334/1230
Employed								
Citizenship	ATE		-0.046 (0.022)**	0.043 (0.017)**	0.02 (0.008)**	-0.065 (0.024)***	-0.019 (0.026)	0.078 (0.027)***
	N treat/contr		84/4901	179/3226	266/2745	380/4176	1131/5478	227/673
Occupational status								
Citizenship	ATE	-4.579 (9.014)	0.062 (2.943)	2.79 (5.32)		0.674 (0.895)	5.288 (0.927)***	0.297 (1.888)
	N treat/contr	62/2620	75/3740	158/2796		321/3645	890/4296	173/472

**:p<01; **: p<0.05; ***: p<0.01. The table shows the estimated average treatment effect of human capital on labour market outcomes after propensity score matching with at least 3 nearest neighbours, with the standard error. The propensity score includes gender, marital state, urbanity, age (squared) education, year of survey, years of residence, country of residence, region of origin, initial conditions and contextual factors.*

Table A3. Direct and indirect effects of selected individual and contextual factors on probability of working

	EU/EFTA		Non-EU							
			Economic with contract		Economic without contract		Family		Refugee	
	direct	indirect	direct	indirect	direct	indirect	direct	indirect	direct	Indirect
Good language	0.123***		0.054**		0.107***		0.231***		0.29***	
Language course	0.013		0.03		-0.078***		0.01		0.058*	
Citizen	-0.125***		0.002		-0.057**		-0.048***		0.002	
Further qual.	-0.049***		0.032**		-0.001		-0.06***		-0.014	
Highest qualification (ref. low)										
Middle	0.076***	0.008***	-0.023	0.003	0.031*	0.005*	0.064***	0.023***	0.101***	0.049***
High	0.113***	0.021***	0.03	0.01**	0.031	0.016***	0.062***	0.053***	0.083**	0.053***
years of residence	0	0.002***	-0.005	0.002*	0.006	0.002*	0.018***	0.002**	0.036***	0.012***
Initial unemployment rate	-0.003	-0.001***	0.002	0	-0.002	-0.001	0.002	0.001**	0.037***	0.005*
MIPEX labour	0	-0.001***	-0.001	0	0	-0.001***	0.002***	-0.001***	-0.001	0.001
MIPEX family	-0.003***	0.001***	-0.002*	0	-0.002***	0.001***	-0.003***	0	0.001	0
MIPEX nationality	0	0	0.001	0*	0.001	0.001***	-0.001**	0.001***	-0.001	-0.001**
asylum applications	0	0	0***	0	0**	0***	0	0***	0	0*
asylum grant rate	-0.003***	0*	0	0	0.002**	0	-0.001	0	-0.001	0
asylum decision rate	0	0	0	0**	0	0***	0*	0***	-0.001*	0
Obs.	16,135		3,314		5,172		12,297		1,674	

**p<0.1; **: p<0.05; ***: p<0.01; estimated structural equation model with individual and contextual factors affecting employment directly as well as indirectly through host country human capital outcomes, estimated separately by migrant type*

Table A4: Effect of human capital acquisitions on labour market outcomes for more established migrants

		EU			Non-EU			
		Economic with contract	Economic without contract	Non-economic	Economic with contract	Economic without contract	Family	Refugee
Active	**Language proficiency**	0.272 (0.016)***	0.223 (0.016)***	0.214 (0.018)***	0.211 (0.017)***	0.149 (0.009)***	0.258 (0.015)***	0.222 (0.016)***
	Host country qualifications	0.016 (0.018)	0.063 (0.019)***	0 (0)***	0.026 (0.029)	0.051 (0.015)***	0.137 (0.02)***	0.038 (0.03)
Employed	**Language proficiency**	-0.003 (0.008)	-0.004 (0.012)	0.026 (0.018)	-0.01 (0.012)	0.03 (0.01)***	0.025 (0.011)**	0.076 (0.025)***
	Host country qualifications	-0.005 (0.027)	-0.027 (0.021)	0.021 (0.013)*	0.064 (0.017)***	-0.081 (0.043)*	0.003 (0.009)	-0.028 (0.03)
Occupational status	**Language proficiency**	2.759 (0.845)***	3.096 (0.932)***	1.328 (0.965)	3.928 (0.814)***	3.27 (0.364)***	3.904 (0.8)***	5.186 (0.693)***
	Host country qualifications	2.39 (0.861)***	4.74 (1.14)***	3.825 (0.979)***	2.659 (1.427)*	2.508 (0.904)***	3.328 (0.508)***	4.168 (1.128)***

**: p<0.1; **: p<0.05; ***: p<0.01. The table shows the estimated average treatment effect of human capital on labour market outcomes after propensity score matching with at least 3 nearest neighbours for migrants who were resident in the host country for more than 10 years. The propensity score includes gender, marital state, urbanity, age (squared) education, year of survey, years of residence, country of residence, region of origin, contextual factors.*