The Labour Market Integration of Refugees in Germany: Evidence from a Field Experiment\textsuperscript{a}

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May 15, 2017

Abstract

We design a field experiment to evaluate the role of matching frictions for the labour market integration of refugees. During job counseling sessions, we interview around 400 job-seeking refugees that recently arrived to Munich. All participants receive a standard CV in German and basic job search information. We then randomly allocate half of the refugees to the treatment group, which receives matching services from an NGO: the NGO identifies suitable employers and, upon agreement of a candidate, sends out the CV. This treatment can isolate the effect of matching and information frictions, while it has no effect on the underlying skills of refugees. We track all the participants over time by conducting follow-up surveys every six months. Preliminary results suggest that finding employment is challenging for refugees even in a labour market with little unemployment. While the treatment increases the chances of being in contact with employers, those contacts do not imply large employment differentials, at least in the first six months. Future work will use larger sample and later rounds of the follow-up survey and will consider other outcomes such as employment duration, quality of the match, and wages.

JEL classification: F22, J61, J68

Keywords: Refugees, labour market integration, labour market frictions, field experiment

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\textsuperscript{a}We thank Florian Englmaier, Monika Schnitzer, Panu Poutvaara, Joachim Winter, participants of the ifo CEMIR seminar, MEA expert workshop and two LMU seminars for helpful comments and suggestions. We thank Elham Danesh, Reem Hassan, Kamo Issa, Surayyo Norkobilova, and Ahmad Wali for excellent research assistance and translations. Financial support from the DFG Research Training Group 1928: Microeconomic Determinants of Labour Productivity and the Mercator Foundation is gratefully acknowledged.
1 Introduction

The number of asylum seekers that arrived in OECD countries in 2015 is unprecedented since World War II (OECD 2016). In Germany, the largest refugee receiving country in the EU in terms of absolute numbers, 890,000 refugees arrived in 2015 and a further 220,000 came between January 2016 and October 2016. The vast majority applied for asylum (442,000 asylum requests in 2015, 665,000 from January until October 2016). In 2015, on average fifty percent of asylum requests were accepted for asylum or temporary protection. Thus, around half of the refugees are likely to stay in Germany and are now seeking employment. Their labour market integration is challenging due to at least two overarching reasons: a potential lack of skills and frictions in the labour market. A lack of job related skills, including language, qualifications, degrees and task specific human capital have hindered refugees’ labour market integration. Additionally, matching frictions, a suboptimal network, residency requirements or legal barriers may be larger than for natives or other migrants. While both a lack of skills and frictions pose a barrier in practice, it is essential to separately investigate the role of each, as they lead to quite different policy implications.

In this paper, we design a randomized controlled trial to evaluate the role of matching frictions for the employment prospects of refugees. In a first step, during regular counseling sessions of a Munich-based NGO, we conduct personal interviews with approximately 400 job-seeking refugees in Munich and collect data on their job search behaviour, their job expectations and experiences, their education, skills and social integration. We then provide all participants with a German CV and basic job search information. In a second step, we randomly select half of the participants and add them to the database of the NGO. Thus, refugees in the treatment group in addition get access to the NGO’s matching services: the NGO’s employees search for suitable employers and, when applicable, send out CVs. In this way, without modifying the underlying skills of refugees, the treatment should reduce the matching frictions.

1Source: BAMF (2016)
2The application typically happens a few months later due to processing delays. Data on asylum requests and outcomes are from the German Federal Office for Migration and Refugees: BAMF (2015), BAMF (2016). Many people who arrived in 2015 only applied for asylum in 2016 due to delayed appointments. Only 60,000 refugees have left Germany voluntarily or forcefully in 2015.
3Around 300,000 asylum seekers or recognized refugees have registered as looking for work with the Federal Employment Agency. (Source: Federal Employment Agency 2016.) We denote asylum seekers as those refugees that have not yet finalized the asylum process.
4Simple power calculations have shown that we need at least a sample of 300 refugees if we want to detect a treatment effect of 10%.
The participants of the study are refugees that arrived in Munich in 2015-2016. First survey results by Brücker et al. (2016) of 2,349 recent refugees in Germany show that the education and qualification levels vary strongly by country of origin. There is some indication that refugees from countries such as Syria, that until recently have been peaceful and allowed for an uninterrupted education path, typically have much higher education levels than refugees from enduring war countries such as Afghanistan, Somalia or Eritrea. Registration figures from BAMF (Rich 2016) show that approximately 20 percent of refugees have university or college education, while a further 22 percent have completed upper secondary education. Less than seven percent have no schooling. These figures are in line with our descriptive results on refugee characteristics.

Bevelander (2016) provides an overview of the recent research dealing with the labour market integration of refugees. He finds that there is agreement among most studies that refugees’ labour market integration lags behind that of other migrants both in terms of unemployment and wages. Using data from several countries, Chiswick and Miller (1994), Cortes (2004), Constant and Zimmermann (2005), Jaeger (2006), Aydemir (2011) and Dustmann et al. (2016b) compare short-term labour market outcomes of immigrants arriving with different visa types. They conclude that refugees perform worse than migrants that arrive via student, employment or family reunion visas. Yet, there is evidence that shows that refugees succeed in catching up in the long term. Keller (2016) finds that refugees in Germany catch up with other immigrants in terms of employment after approximately 12 years and in terms of wages after around 17 years. This might be due to the long-term residency perspective refugees take. As refugees often cannot return to their country of origin and can obtain permanent residency relatively fast, it is worthwhile to invest in human capital in the first years after arrival. Cortes (2004) finds that refugees outperform other migrant groups in the United States due to initially higher investments in human capital. Dustmann and Görlich (2016) and Adda et al. (2014) also illustrate that the expected residency duration positively affects human capital investment decisions and thus labour market outcomes.

There are at least four additional reasons why refugees are different from other groups of migrants. First, refugees entered the destination countries for humanitarian reasons in contrast to an employment, study or family reunification visa. They were not chosen by the immigration office due to their high skills, their study or employment prospects or family network. At the same time, refugees did not necessarily chose to leave their

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5 This is even exacerbated if refugees are not allowed to work directly upon arrival.
6 Dustmann et al. (2016b) and Keller (2016) summarise several of those reasons.
country or prepare for migration. While they may have chosen their particular country of destination, the movement was mostly due to so-called push factors. Second, refugees face stricter labour market regulation. In Germany, most refugees are allowed to work three months after arrival but in certain municipalities only with an additional priority review and an approval by the foreigners office. This restriction does not apply to migrants arriving on an employment, student or family reunification visa. Third, most refugees are randomly allocated to a specific municipality and are required to live there until they finish their asylum process and until they have a stable job that makes them independent of welfare benefits. In many cases this prevents them from connecting to immigrant networks. Fourth, numerous refugees are suffering from war and flight related stress, trauma and/or depression. Depending on their war experiences and family ties to war zones, they might be psychologically unable to accept a job offer. For instance, Alpak et al. (2015) find that one third of Syrian refugees experience post-traumatic stress disorder, Couttenier et al. (2016) show that refugees in Switzerland who experienced war crimes are more likely to engage in violent behaviour. The above factors can explain why refugees face a lack of skills or matching frictions on the labour market. Consequently, as suggested by Dustmann et al. (2016b), specific proactive policies could promote refugees labour market integration.

Several studies, mainly in Scandinavia, have evaluated specific policies targeting the integration of asylum seekers into the labour market. Clausen et al. (2009) analyse the effect of different integration policies on the job search duration for refugees and family reunification migrants. Using administrative data from Denmark and a timing-of-events duration model, they find that wage subsidies are the most effective policy to integrate newly arrived refugees into the labour market. They further find that an improvement in language skills significantly improves refugees’ labour market entry. Also using Danish data, Rosholm and Vejlén (2010) look at how incentives influence the extent to which refugees take up work. They find that lowering income transfers for refugees only increases their labour force participation two years after having obtained residency. They provide evidence which shows that during the first two years, refugees have very few job opportunities. After having learned the language for two years, however, they are more likely to enter the labour market if their benefits are cut. Andersson Joona et al. (2015) evaluate a Swedish labour market reform that aimed at supporting refugees in finding

\footnote{Battisti et al. (2016) show that 54 percent of migrants in Germany find their first job through their network.}

\footnote{As mentioned above, in the long run, this might be different if refugees invest more in human capital and thus catch up.}
employment faster. Using a difference-in-difference design around the introduction of the reform, they do not find any significant short-term results of increased support by the Public Employment Agency. While these three studies focus on refugees, they evaluate a different policy than the one we examine and they also do not use our methodology of a randomized controlled trial.

We believe that this paper makes two main contributions to the existing literature. First, we provide a thorough evaluation of a job matching service for refugees through a randomized controlled trial. Using a clean identification strategy is important in this context, since comparing refugees who voluntarily decide to access services of an NGO with other refugees would create a selection problem. We show that refugees do not know where to look for work and that this friction can be alleviated by a job matching service. This suggests that policies targeted at facilitating labour market entry may be effective. Second, we provide new data and descriptive statistics on newly arrived refugees and their short-term labour market and integration outcomes. This evidence covers the largest inflow of refugees into Germany since World War II. Furthermore Germany is one of the largest refugee receiving countries in the developed world. We thus study a large and very relevant case of refugee labour market integration. The feasibility of refugee labour market integration is a large controversy in German and European politics and is likely to have severe consequences for politics (Dustmann et al. 2016b).

The paper is structured as follows. The subsequent Section provides background information about the legal framework for refugees to access the labour market in Germany. Section 3 explains the experimental set-up and Section 4 describes the collected data. Section 5 provides preliminary results of the follow-up and outlines the next steps. Section 6 outlines limitations of this study and Section 7 concludes and provides policy recommendations.

2 Institutional framework

The word ‘refugee’ is commonly used to denote an individual that his left her country of origin and seeks shelter from persecution or war in a third country. The term is typically used in a broad sense, comprising different categories of refugee statuses with important implications for their labour market access. The following Section will provide a short overview of the German asylum system and in particular the labour market access of refugees. The first differentiation one has to make is between an asylum seeker and a recognised refugee or someone with a temporary residence permit. In Germany, the
asylum process typically takes between four months and two years and during the process different rules apply than afterwards. During the asylum process, most refugees have general labour market access but are subject to several restrictions.

Since 2014, asylum seekers are allowed to start working three months after arrival in Germany. This is typically the time when they live in the initial reception centres in the state to which they were allocated by a certain distribution rule (“Königsteiner Schlüssel”). After three months, they are supposed to move into a new accommodation, so called community accommodation, which are located in the same state but might be in a different municipality. After this move, asylum seekers register with their new municipality and receive a general work permit. Due to space constraints, many times refugees stay in the initial reception centres for up to six months and may receive their work permit later. Asylum seekers from safe countries of origin are excluded from receiving general work permits. A second restriction is that asylum seekers need the approval of the Foreigners Office (“Ausländerbehörde”) before any specific employment starts. This approval can be requested with a simple form and it takes on average two to three weeks to obtain. The Foreigners Office checks that an adequate wage is paid (“salary review”) and that there is no EU citizen that could be hired instead (“priority review”). The third restriction is that work for temporary employment agencies and self-employment are not permitted for asylum seekers. For asylum seekers who have been in Germany for more than 15 months, the priority review and the prohibition to work for temporary employment agencies is dropped. To summarize, working is possible for most asylum seekers after three months and after undergoing bureaucracy.

There are three possible outcomes for an asylum application: refugees either receive asylum status, a form of temporary protection or a rejection. Recognised refugees or asylum seekers with temporary protection have unlimited access to the labour market and are treated like German nationals in terms of employment laws. Rejected asylum seekers lose their right to work and face deportation.

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9The duration of the asylum process strongly varies by nationality and date of arrival. For Syrian nationals, for example, it is on average much faster and takes less than six months.

10In the framework of the new Integration Law, some of these restrictions are no longer applied in certain municipalities. In Munich all restrictions are still in place.

11In 2016, 63 percent have received some form of protection and residency permit. For the non-European top 10 source countries, this percentage varies from 4 percent for Pakistan to 98 percent for Syrian nationals. Source: BAMF (2016).
3 Experimental set-up

Our experimental set-up can be divided into three stages: the CV preparation stage, the treatment stage and the follow-up stage. The difference between the treatment and the control group is made during the second stage; through randomisation 50 percent of participants receive the additional job-matching treatment. The first and second stage have started in May 2016 in Munich and are ongoing until May 2017. The follow-up stage begins six months after the CV preparation stage and is conducted from November 2016 to November 2017. Figure 1 provides a graphical overview of the timeline of the experiment. The first stage (CV preparation stage) is illustrated in green, the second stage (treatment stage) in red and the third stage (follow-up stage) in blue.

Figure 1: Timeline of the experiment

3.1 General Information about the partner NGO

To conduct the experiment we collaborate with a Munich-based NGO that assists job-seeking refugees. The NGO was founded in 2015 and currently counts six employees and about 20 part-time volunteers. It is financed through donations, and in 2016 it had a budget of 50,000 Euros. The NGO conducts weekly CV preparation sessions in central Munich and advises job-seekers about basic legal and cultural specificities of the

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12The experimental design was approved by the Ethics commission of the Economics faculty of the University of Munich.
German labour market. In addition, it organises a number of support activities, including CV photo-shoots, e-mail set-up classes or social activities. The NGO has established a network of local partners including the Federal Employment Agency, the Chamber of Commerce, other initiatives for refugees, and social workers. Through its network, the NGO receives information about open vacancies and, when applicable, forwards CVs of suitable refugees to employers. During the time of the experiment, our research group has participated in all regular CV preparation sessions of the NGO and has organized (on behalf of the NGO) a number of additional ones at different locations in and around Munich.

3.2 Participants

The participants of the experiment are job-seeking refugees who come to the CV preparation sessions of the NGO. In addition, three eligibility rules apply to ensure that the participants qualify to enter the German labour market. First, they have to possess a general work permit. Asylum-seekers usually obtain work permits three months after arrival in Germany. This excludes refugees from “safe origin countries” (Bosnia-Herzegovina, Macedonia, Serbia, Montenegro, Albania, Kosovo, Ghana, and Senegal). Consequently, the NGO cannot effectively support them in the job search and they are thus excluded from our analysis. Second, refugees in our sample must be able to communicate in a language spoken by the members of the NGO or our research team. These languages include Arabic, Dari, English, Farsi, French, German, Italian, Kurdish and Russian and cover around 98 percent of the refugees that come to CV sessions. Third, participants must be 18 years of age or older. The NGO does not include under-age refugees in its target group as it is probably better for them to attend an educational institution. Additionally, the age restriction is necessary for us to obtain the participation consent. We are aware that these restrictions imply that our sample is not representative of the refugee population at large. We believe that this was to some extent unavoidable, given that we need participants to voluntarily take part in the session and be willing and qualified to enter

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13At the time of writing, there is an active debate whether Algeria, Morocco, and Tunisia should be declared as “safe origin countries” or not. There is no political consensus yet and we have not excluded these nationalities. However, the number of refugees from these countries in Munich has been very small and so far none of our participants are nationals of any of these countries.

14So far, we have met five candidates, whom we had to send away because they only spoke Urdu or Pashto. These were probably rather low educated refugees that would not have a good chance to integrate into the German labour market and who would need to focus on German classes first.

15To comply with the data protection laws of Bavaria, every participant needs to sign a data protection agreement (available in the Appendix). Refugees below the age of 18 cannot legally sign the data protection agreement.
the German labour market. We also believe, however, that this is the natural population for evaluating a job matching programme.

3.3 Set-up of the experiment

First Stage: CV Preparation

The first stage of the experiment consists of CV preparation sessions, which are jointly organized by the NGO and our research team. The regular sessions take place once a week in the centre of Munich. The participants can easily reach the location by public transportation. We have organized several additional sessions in a support centre for refugees (provided by Caritas) and in big refugee camps in Munich. The NGO advertises the sessions through social workers, Facebook, word of mouth, and partner organisations. The main incentives for the refugees to come to these sessions are receiving a CV in German (that they can then forward to employers or to the job centre), as well as acquiring information on their job-search process. The standard NGO’s procedures apply for all sessions. The flyer for these sessions and some pictures can be found in the Appendix.

During the CV preparation sessions, the interviewers (the volunteers of the NGO and our research team) conduct one-to-one interviews with job-seeking refugees to collect the information needed to prepare their CVs. After collecting the CV data, the interviewers ask questions from a baseline survey to determine the job-search behaviour, salary expectations, and job preferences of the participants. Additionally, the interviewers ask the participants about their family circumstances, their perceptions of integration, and their progress in studying German. The complete baseline survey can be found in the Appendix.

In general, it takes the NGO around two weeks to process the collected information and to prepare the CV. The finished CV includes a participant’s personal picture and copies of the work permit and certificates, if available. The NGO sends out the CV to all participants as a pdf attachment by e-mail two weeks after their session. If participants do not have an e-mail address, the NGO sends it to them as pdf attachment via the text messaging application “WhatsApp” and, if possible, to the responsible social worker. The pdf attachment is accompanied by an e-mail text, which outlines that “there is a chance that we match” the candidate with a possible employer, but “while we do our best to support” in the job search, “we cannot guarantee that we can find” a suitable employer, this is why we highly encouraged the candidates to keep searching for a job on their own. In addition to this text, advice is sent on how to search for work in Germany. The NGO recommends every participant to register with the federal employment agency.
and search on websites that publish vacancies such as monster.de and stepstone.de. The NGO also advises the refugees to continue to learn German as this would greatly improve their chances of finding a job. The complete e-mail text can be found in the Appendix.

Second Stage: Treatment

During the treatment stage, we randomly assign the participants to either the treatment or the control group. For the treatment group (50% of the participants), we add the CVs to the NGO’s database of potential candidates. During May 2016-April 2017, an additional 310 CVs have thus been added to the database, which initially comprised around 100 candidates. This database is searched for suitable candidates every time a vacancy arrives and up to five suitable CVs are sent directly to the firm. The vacancies are received through the network of the NGO, which includes a partnership with the Federal Employment Agency and the Chamber of Commerce. In addition to the available offers, the NGO employees look for other vacancies that would fit the participants in the database on websites and through their network. Once the NGO identifies a potential match, it informs the participant about the vacancy and sends the CV to the employer. It is important to note, that while this intervention reduces the matching frictions between employers and job-seekers, it does not affect the skill set of participants in any way. Besides, both control and treated participants can take part in other activities organized by the NGO or, upon request, receive information support (for example, about the interview or the hiring process).

To determine which candidates are allocated to the treatment and the control group, we randomize for each session separately, thereby insuring that for each session we have the same number of participants in the treatment and in the control group. For every session, participants are ranked by a random number generator and the upper 50 percent of participants are allocated to the treatment. As the sessions take place at different locations and time and individuals in the same session are more likely to be similar, we believe that this procedure helps us in having people with similar characteristics in the treatment and in the control group. Therefore this provides a useful (albeit weak) stratification. People who attend the regular CV sessions are likely to differ from those who get interviewed directly in their camp, participants from different camps might have access to varying degrees of support services through local social workers, etc. Moreover, it is logistically impossible to reach and to interview all potential participants within a

\[16\] If the number of candidates is odd, the additional person is randomly allocated to the control or the treatment group.
short time span. This means that a single randomisation of all candidates would not be feasible. We conduct this session-based individual randomization every two weeks, so that the NGO receives new CVs twice a month. We thereby guarantee a stable flow for the NGO and ensure that the treatment starts at about the same time after the first meeting with the participants. Table 7 in the Appendix provides a balance table on personal and labour market characteristics to provide evidence that the randomisation has worked well and created two comparable groups.

**Third Stage: Follow-Up**

During the last stage, we contact all participants of the treatment and the control group after 6 months to ask them about their labour market status and to update our integration measures. Our research team contacts the candidates preferably by phone or alternatively by WhatsApp, Facebook messenger, E-mail or through an additional contact person, who was previously indicated. Refugees that found a job were asked about the details of their new work and how they obtained it. Refugees that have not found a job were asked about their job search behaviour and their challenges. All refugees were additionally asked the same questions about integration outcomes and perceptions and their progress in studying German and some additional questions. The follow-up questionnaires are in the Appendix.

### 4 Descriptive Statistics of Baseline Characteristics

This Section presents descriptive statistics of the personal characteristics of the participants, their job search behaviour, expectations and perceptions of integration. All this information was collected during the first stage, when questions related to the CV were asked and the baseline survey was administered. There is currently very little information available about the characteristics of recently arrived refugees in Germany. In particular, there is only one report by Brücker et al. (2016) on education levels, labour market history, expectations and integration of the recent refugee wave. Their report documents interview answers of 2,349 refugees in Germany. The results are largely in line with our descriptive statistics and there are no contradictory findings. However, one has to keep in mind that our study has low numbers of observations and possibly a selected sample (see Section 6.1), so it is difficult to extrapolate this information to the population of recent refugees in Germany.

\footnote{On average, every week we meet with 15 new job-seekers during the CV preparation sessions.}
4.1 Personal characteristics

Table 1 shows gender, age, marital status, percentage of participants with at least one child, number of months spent in Germany, average years of education and work experience for the different countries or regions of origin. It also shows the percentage of refugees who have at least some university education and the percentage of refugees who have no formal schooling. Countries of origin with more than forty observations are listed separately (Afghanistan, Nigeria, Syria). Other African\textsuperscript{18} and Asian\textsuperscript{19} countries are grouped.

Table 1: Descriptive Statistics by Country

<table>
<thead>
<tr>
<th></th>
<th>Afghanistan</th>
<th>Nigeria</th>
<th>Syria</th>
<th>r_Africa</th>
<th>r_Asia</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>0.947</td>
<td>0.941</td>
<td>0.980</td>
<td>0.887</td>
<td>0.906</td>
<td>0.941</td>
</tr>
<tr>
<td></td>
<td>(0.225)</td>
<td>(0.237)</td>
<td>(0.143)</td>
<td>(0.320)</td>
<td>(0.208)</td>
<td>(0.236)</td>
</tr>
<tr>
<td>Age</td>
<td>24.10</td>
<td>49.29</td>
<td>31.75</td>
<td>26.52</td>
<td>29.99</td>
<td>34.17</td>
</tr>
<tr>
<td></td>
<td>(5.461)</td>
<td>(195.1)</td>
<td>(9.254)</td>
<td>(7.550)</td>
<td>(8.201)</td>
<td>(106.1)</td>
</tr>
<tr>
<td>Married</td>
<td>0.211</td>
<td>0.188</td>
<td>0.388</td>
<td>0.226</td>
<td>0.356</td>
<td>0.260</td>
</tr>
<tr>
<td></td>
<td>(0.411)</td>
<td>(0.393)</td>
<td>(0.492)</td>
<td>(0.423)</td>
<td>(0.484)</td>
<td>(0.439)</td>
</tr>
<tr>
<td>At least one child</td>
<td>0.158</td>
<td>0.224</td>
<td>0.306</td>
<td>0.302</td>
<td>0.378</td>
<td>0.263</td>
</tr>
<tr>
<td></td>
<td>(0.368)</td>
<td>(0.419)</td>
<td>(0.466)</td>
<td>(0.463)</td>
<td>(0.490)</td>
<td>(0.441)</td>
</tr>
<tr>
<td>Months since arrival</td>
<td>7.622</td>
<td>5.836</td>
<td>10.76</td>
<td>6.830</td>
<td>7.905</td>
<td>7.528</td>
</tr>
<tr>
<td>Years of education</td>
<td>10.98</td>
<td>9.706</td>
<td>13.76</td>
<td>9.811</td>
<td>10.96</td>
<td>10.86</td>
</tr>
<tr>
<td>Years of work exper.</td>
<td>5.211</td>
<td>6.694</td>
<td>9.224</td>
<td>5.943</td>
<td>9.156</td>
<td>7.076</td>
</tr>
<tr>
<td>Attended university</td>
<td>0.281</td>
<td>0.0824</td>
<td>0.633</td>
<td>0.208</td>
<td>0.356</td>
<td>0.280</td>
</tr>
<tr>
<td></td>
<td>(0.453)</td>
<td>(0.277)</td>
<td>(0.487)</td>
<td>(0.409)</td>
<td>(0.484)</td>
<td>(0.450)</td>
</tr>
<tr>
<td>No formal education</td>
<td>0.0351</td>
<td>0.0471</td>
<td>0</td>
<td>0.0943</td>
<td>0.0444</td>
<td>0.0450</td>
</tr>
<tr>
<td></td>
<td>(0.186)</td>
<td>(0.213)</td>
<td>(0)</td>
<td>(0.295)</td>
<td>(0.208)</td>
<td>(0.208)</td>
</tr>
</tbody>
</table>

Note: This table shows the gender, age, marital status, percentage with at least one child, number of months in Germany, average years of education and work experience, percentage of refugees who have at least some university education and the percentage of refugees who have no formal education. Countries of origin with more than 45 observations are listed separately (Afghanistan, Nigeria, Syria). Other African countries include: Congo, Eritrea, Mali, Sierra Leone, Somalia, Tanzania and Uganda. Other Asian countries include Iran, Iraq, Jordan, Pakistan, Palestine, Turkey and the United Arab Emirates.

One can see that most of the participating refugees are young unmarried men without children. The majority arrived in 2015 and, on average, has been in Germany eight months at the time of the baseline survey. Figure 2 shows the distribution of educational attainments for the whole sample. Yet, there is substantial heterogeneity across countries.

\textsuperscript{18}Other African country include: Congo, Eritrea, Mali, Sierra Leone, Somalia, Tanzania and Uganda. 
\textsuperscript{19}Other Asian countries include Iran, Iraq, Jordan, Pakistan, Palestine, Turkey and the United Arab Emirates.
In line with the findings of Brücker et al. (2016), refugees from countries, which until recently had a well functioning educational system, for instance Syria, have relatively high levels of education. The average years of education for Syrian refugees is 13.8 years and everyone has finished primary school. Figure 3 shows the percentage of refugees that have started university and those that have graduated for different countries of origin. While 63 percent of Syrians have attended university, only 27 percent have graduated. This difference can be explained by a lot of young men, whose university education was interrupted by the war. Countries that had war for more than a decade, such as Afghanistan or Iraq, have much worse educational attainments.

Participants from African countries are less likely to have attended university. In particular, Nigeria has a very low tertiary education rate of below nine percent. Furthermore, the percentage of participants with no formal education is highest for African countries. We attribute this to the high poverty rates and the ongoing conflicts in some of the countries such as Congo, Eritrea, Nigeria, Mali and Somalia.

Figure 2: Education attainment of the whole sample

Note: This figure shows the education attainment of the whole sample.
4.2 Job search behaviour and expectations

Besides their personal characteristics, refugees were also asked about their job search behaviour and about their expectations of working in Germany. The descriptive statistics provide interesting insights about the challenges refugees face during the search and about their expectations of labour market integration.

Around half of the refugees had already actively looked for work before attending the CV preparation session. Figure 5 and Table 2 show that the most common way to search for work is to ask employers directly (22 percent), for instance by going to their shop or restaurant. Almost the same percentage is relying on friends (21 percent) or their social worker (18 percent). About a quarter of refugees have registered as looking for work at the Federal Employment Office and 16 percent are actively using the Federal Employment Agency to find work. Surprisingly, relatively few of the refugees surveyed (19 percent) are searching for work online. There is, however, a large heterogeneity across nationalities. While almost 50 percent of Syrians are using the Internet during their job search, less than 12 percent of refugees from Afghanistan or Nigeria are searching for work in the Internet. This is probably due to both the unavailability of computers for refugees and their ignorance about online job searches and applications. Figure 4 shows what refugees
perceive as their difficulties during the job search. More than a quarter (28 percent) of refugees indicated that they do not know where to search for a job. This is the second largest difficulty after the language barrier (55 percent).

Figure 4: **What difficulties refugees have during their job search**

![Figure 4: What difficulties refugees have during their job search](image)

*Note:* This figure shows the percentage of individuals that name these difficulties during their job search.

Another challenge is the unavailability of school, university or vocational certificates. A majority (69 percent) of participants do not have the original certificate of their highest degree with them in Germany. This percentage is lower for participants that have attended university (29 percent) and graduated from university (33 percent). In all three cases, the unavailability of original documents will be an administrative challenge for the further academic or professional career of refugees.

On average, refugees expect a monthly net wage of 1,330 Euros. A majority (65 percent) would be willing to work for less than the minimum wage. This again varies tremendously by country of origin. Refugees from Afghanistan have the highest expected net wage with 1,775 Euros, whereas refugees from Nigeria expect only 1,177 Euros. Syrians expect a net wage of roughly 1372 Euros. It is interesting to note that the initial reaction of most refugees to this question is “I do not know”. Due to language barriers, unfamiliarity with the system of online job search and applications and unfamiliarity with the German labour market in general, refugees seem to have difficulties to look for work without support.
Figure 5: How refugees look for work

![Graph showing job search strategies](image)

**Note:** This figure shows the percentage of individuals that have used the named job search strategies during their job search.

### Table 2: Search Behaviour by Country

<table>
<thead>
<tr>
<th>Search Behaviour</th>
<th>Afghanistan</th>
<th>Nigeria</th>
<th>Syria</th>
<th>r_Africa</th>
<th>r_Asia</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Searches at Arbeitsagentur</td>
<td>0.158</td>
<td>0.176</td>
<td>0.224</td>
<td>0.130</td>
<td>0.156</td>
<td>0.169</td>
</tr>
<tr>
<td></td>
<td>(0.368)</td>
<td>(0.383)</td>
<td>(0.422)</td>
<td>(0.339)</td>
<td>(0.367)</td>
<td>(0.375)</td>
</tr>
<tr>
<td>Searches in Internet</td>
<td>0.0702</td>
<td>0.106</td>
<td>0.490</td>
<td>0.111</td>
<td>0.111</td>
<td>0.166</td>
</tr>
<tr>
<td></td>
<td>(0.258)</td>
<td>(0.310)</td>
<td>(0.505)</td>
<td>(0.317)</td>
<td>(0.318)</td>
<td>(0.372)</td>
</tr>
<tr>
<td>Searches with social worker</td>
<td>0.0877</td>
<td>0.212</td>
<td>0.224</td>
<td>0.167</td>
<td>0.222</td>
<td>0.183</td>
</tr>
<tr>
<td></td>
<td>(0.285)</td>
<td>(0.411)</td>
<td>(0.422)</td>
<td>(0.376)</td>
<td>(0.420)</td>
<td>(0.387)</td>
</tr>
<tr>
<td>Searches by asking in shops directly</td>
<td>0.211</td>
<td>0.235</td>
<td>0.367</td>
<td>0.0185</td>
<td>0.333</td>
<td>0.228</td>
</tr>
<tr>
<td></td>
<td>(0.411)</td>
<td>(0.427)</td>
<td>(0.487)</td>
<td>(0.136)</td>
<td>(0.477)</td>
<td>(0.420)</td>
</tr>
<tr>
<td>Searches with friends</td>
<td>0.228</td>
<td>0.153</td>
<td>0.429</td>
<td>0.130</td>
<td>0.133</td>
<td>0.207</td>
</tr>
<tr>
<td></td>
<td>(0.423)</td>
<td>(0.362)</td>
<td>(0.500)</td>
<td>(0.339)</td>
<td>(0.344)</td>
<td>(0.406)</td>
</tr>
<tr>
<td>Difficulty: Language</td>
<td>0.579</td>
<td>0.482</td>
<td>0.633</td>
<td>0.352</td>
<td>0.622</td>
<td>0.524</td>
</tr>
<tr>
<td></td>
<td>(0.498)</td>
<td>(0.503)</td>
<td>(0.487)</td>
<td>(0.482)</td>
<td>(0.490)</td>
<td>(0.500)</td>
</tr>
<tr>
<td>Difficulty: Don’t know where to search</td>
<td>0.263</td>
<td>0.200</td>
<td>0.306</td>
<td>0.296</td>
<td>0.356</td>
<td>0.272</td>
</tr>
<tr>
<td></td>
<td>(0.444)</td>
<td>(0.402)</td>
<td>(0.406)</td>
<td>(0.461)</td>
<td>(0.484)</td>
<td>(0.446)</td>
</tr>
<tr>
<td>Observations</td>
<td>59</td>
<td>90</td>
<td>74</td>
<td>94</td>
<td>49</td>
<td>338</td>
</tr>
</tbody>
</table>

**Note:** This table shows job search behaviour and the difficulties during the job search. It indicates what percentage of participants are using the Federal Employment Office, the internet, the social workers or friends to look for work and what percentage asks directly in shops. It also shows, what fraction of participants indicates that language is a difficulty during the job search and what fraction of participants does not know where to search. Countries of origin with more that forty observations are listed separately (Afghanistan, Nigeria, Syria). Other African country include: Congo, Eritrea, Mali, Sierra Leone, Somalia, Tanzania and Uganda. Other Asian countries include Iran, Iraq, Pakistan, Palestine and the United Arab Emirates.
The descriptive statistics thus provide some preliminary evidence that both missing skills, mainly language skills, and frictions in the labour market hinder refugees labour market integration. The friction that 28 percent of refugees mention is that they “do not know where to search”. This friction is alleviated for the treatment group as CVs are sent directly to suitable employers. The randomised controlled trial thus evaluates if such search and matching frictions can be alleviated for refugees through the services provided by the NGO.

4.3 Perceptions of integration

Although the integration of refugees is a key policy objective, there is neither a unique definition of integration, nor a clear way of measuring it (Ager and Strang 2008)[20] In practice, integration has different facets and this paper uses a number of different questions to proxy integration[21] We first look at the answers for individual questions by nationality and then we form an index of these questions to have one integration measure. The questions we use to proxy integration are the following:

- Did you make new friends in Germany?
  - Multiple answer options: Yes, from Germany; Yes, from my country; Yes, from other countries; No.
- Do you already feel at home in Germany?
  - Answer scale from 0 to 4, 0 meaning not at all and 4 meaning completely.
- Have you ever been invited to the house of a German?
  - Answer options: Yes or No.
- What activities do you do outside of the community accommodation?
  - Multiple answer options: Study/German; sports; meeting friends; shopping; or other activities.
- Level of German as assessed by interviewer
  - Answer options: Absolute Beginner, A1, A2, B1, B2, C1.

[20]The economic literature has sometimes used the earnings gap between natives and foreigners to measure integration. However, as earnings typically take more than a decade to assimilate for refugees and most of our participants are not working yet, this project focuses on other outcomes with a more short-term view and a stronger focus on the integration into the German society.

[21]The inspiration for some questions was taken from the European Social Survey and the Longitudinal Survey of Immigrants to Canada. The questions were then adapted to the specific context of refugees in Germany.
Table 3 shows the percentage of refugees from a certain country answering yes to these questions. For the second question, we consider the answer to be yes, if the candidate answered 4 or 5. For the fourth question we consider the answer to be yes, if he does at least two activities outside his community accommodation and for the last question we consider the level A2 or above (which corresponds to basic German knowledge).

Table 3: Integration by Country

<table>
<thead>
<tr>
<th>Integration Index</th>
<th>Afghanistan</th>
<th>Nigeria</th>
<th>Syria</th>
<th>r_Africa</th>
<th>r_Asia</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.060</td>
<td>1.830</td>
<td>2.839</td>
<td>2.100</td>
<td>2.044</td>
<td>2.153</td>
</tr>
<tr>
<td></td>
<td>(1.047)</td>
<td>(0.907)</td>
<td>(1.073)</td>
<td>(1.046)</td>
<td>(1.127)</td>
<td>(1.083)</td>
</tr>
<tr>
<td>Return intention</td>
<td>0.289</td>
<td>0.280</td>
<td>0.429</td>
<td>0.241</td>
<td>0.267</td>
<td>0.298</td>
</tr>
<tr>
<td></td>
<td>(0.411)</td>
<td>(0.398)</td>
<td>(0.408)</td>
<td>(0.409)</td>
<td>(0.434)</td>
<td>(0.412)</td>
</tr>
<tr>
<td>friends_German</td>
<td>0.298</td>
<td>0.476</td>
<td>0.796</td>
<td>0.593</td>
<td>0.467</td>
<td>0.516</td>
</tr>
<tr>
<td></td>
<td>(0.462)</td>
<td>(0.502)</td>
<td>(0.407)</td>
<td>(0.496)</td>
<td>(0.505)</td>
<td>(0.501)</td>
</tr>
<tr>
<td>Feel at home</td>
<td>3.439</td>
<td>3.583</td>
<td>2.898</td>
<td>3.222</td>
<td>3.200</td>
<td>3.311</td>
</tr>
<tr>
<td></td>
<td>(0.866)</td>
<td>(0.795)</td>
<td>(1.159)</td>
<td>(1.058)</td>
<td>(0.991)</td>
<td>(0.982)</td>
</tr>
<tr>
<td>invited</td>
<td>0.263</td>
<td>0.226</td>
<td>0.633</td>
<td>0.352</td>
<td>0.422</td>
<td>0.356</td>
</tr>
<tr>
<td></td>
<td>(0.444)</td>
<td>(0.421)</td>
<td>(0.487)</td>
<td>(0.482)</td>
<td>(0.499)</td>
<td>(0.480)</td>
</tr>
<tr>
<td>active</td>
<td>2.211</td>
<td>1.619</td>
<td>2.510</td>
<td>1.722</td>
<td>2.022</td>
<td>1.969</td>
</tr>
<tr>
<td></td>
<td>(1.206)</td>
<td>(1.029)</td>
<td>(1.063)</td>
<td>(0.899)</td>
<td>(0.988)</td>
<td>(1.088)</td>
</tr>
<tr>
<td>German</td>
<td>0.368</td>
<td>0.107</td>
<td>0.429</td>
<td>0.167</td>
<td>0.111</td>
<td>0.225</td>
</tr>
<tr>
<td></td>
<td>(0.487)</td>
<td>(0.311)</td>
<td>(0.500)</td>
<td>(0.376)</td>
<td>(0.318)</td>
<td>(0.418)</td>
</tr>
<tr>
<td>Observations</td>
<td>59</td>
<td>90</td>
<td>74</td>
<td>64</td>
<td>49</td>
<td>338</td>
</tr>
</tbody>
</table>

Note: This table shows the integration index and the individual components by country. The integration index is described in details in subsection 4.3 of this paper. German friends indicates the percentage of people indicating that they have German friends. Feel at home is a subjective measure ranging from 1 to 5, 5 being the highest. Invited is an indicator measuring if the person has ever been invited to the house of a German. Active means that the person does at least two leisure activities and German means that the person has at least reached level A2. Additionally, return measures the desire to return to ones country if it was safe. Countries of origin with more that forty observations are listed separately (Afghanistan, Nigeria, Syria). Other African country include: Congo, Eritrea, Mali, Sierra Leone, Somalia, Tanzania and Uganda. Other Asian countries include Iran, Iraq, Pakistan, Palestine and the United Arab Emirates.
To take the analysis one step further, an integration index is built using these questions. The index covers the range from zero to five and takes the value of five if the person is fully integrated. A value of five is obtained, if one individual fulfils all five criteria:

- He has German friends (binary)
- He feels at home (on a scale from 0 to 4)
- He has been invited to the house of a German (binary)
- Number of activities he does outside the community housing (on a scale from 0 to 4)
- His level of German is at least A2 (binary)

If only one criterion is fulfilled, the individual obtains a value of 1 in the integration index, if two criteria are fulfilled the value 2, etc. The variable feel at home and number of activities is divided by 4, so that it ranges between 0 and 1. Of course, the aggregation of various questions to one index comes at a cost: the index depends on the questions and cut-offs one selects. Furthermore the individual components are correlated as shown in Table 8 in the Appendix. Yet, it is useful to have a comprehensive measure of integration covering various different aspects.

This index can be correlated with individual characteristics such as education, age, gender or total time spent in Germany. Figure 6 shows the correlation between the integration index and education. As expected, there is a clear positive relationship between education and integration. One interesting observation is that the variation seems to be coming from individuals with either minimal or considerable education, while integration outcomes are very heterogeneous for intermediate levels of education. Refugees also seem to need time for integration. It is reassuring to see that the more time a refugee spends in Germany, the more developed his integration is (Figure 7).

### Figure 6: Correlation between Integration and Education

**Note:** The Integration Index is measures as described in Section 3.3. One dot equals one participant.

### Figure 7: Correlation between Integration and Time in Germany

**Note:** The Integration Index is measures as described in Section 3.3. One dot equals one participant.

#### 4.4 Multivariate regressions results for integration

While the graphs show us a positive association between integration and education or duration of stay respectively, it is important to conduct regression analysis in order to
control for observable factors. To determine the effect of different explanatory variables on integration we estimate the following empirical model:

\[ \text{Integ}_i = \beta_0 + \beta_1 \text{Educ}_i + \beta_2 \text{Months}_i + \beta_3 \text{Eng}_i + \beta_4 \text{Syr}_i + \beta_5 \text{Afg}_i + \beta_6 \text{Nig}_i + \beta_7 X_i + \epsilon_i \]  \hspace{1cm} \text{(1)}

where the index \( i \) denotes an individual. \( \text{Integ}_i \) is the outcome of interest - the Integration Index or different measures of integration respectively. \( \text{Educ}_i \) is the years of education, \( \text{Months}_i \) denotes the months spent in Germany, \( \text{Eng}_i \) the level of English, and \( \text{Syr}_i, \text{Afg}_i \) and \( \text{Nig}_i \) are country dummies for the largest nationalities that occur in our sample. \( X_i \) includes additional controls, in particular if the individual is married and if he has children.

Table 4 shows the results of ordinary least squares regressions\(^\text{22}\), where the integration index is regressed on the years of schooling. For each additional year of schooling, the integration index increases by about 0.06 points. This means that the integration index of a participant that has some university experience (e.g. 14 years of schooling) is 0.6 points higher than of someone who has just finished primary school. The amount of time spent in Germany also has a positive and significant effect on integration. This makes sense, as refugees are more likely to have improved their German language skills or have German friends. Furthermore, a good level of English is beneficial for integration. Keeping other observables constant, Syrian nationals seem to be better integrated than other participants. One explanation could be their considerably faster asylum process and their protection rate of 98 percent. This in turn allows them to participate in government support programmes and language courses much faster than participants from Afghanistan, Nigeria or other countries.

It is interesting to see how the manifold personal characteristics influence the five components of the integration index differently. Table 5 illustrates that higher education is positively associated with having German friends, doing activities outside one’s home and speaking good German. The time spent in Germany appears to be most important for being invited to the house of a German, doing activities outside ones’ home and speaking good German. A good level of English is positively associated only with the likelihood of having German friends.

Given the structure of the data, the possibility exists that different observations are not independent from each other. Candidates that arrived in Germany at the same time,\(^\text{22}\)The integration index is measured with two digits after the comma. It takes 60 different realisations, which is a justification to use OLS instead of Ordered Probit regressions. Ordered Probit regressions have been estimated for robustness and lead to exactly the same results in terms of magnitude and significance.
Table 4: Integration by personal characteristics

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Integrated</td>
<td>Integrated</td>
<td>Integrated</td>
<td>Integrated</td>
</tr>
<tr>
<td>Years of education</td>
<td>0.0708***</td>
<td>0.0799***</td>
<td>0.0592***</td>
<td>0.0626***</td>
</tr>
<tr>
<td></td>
<td>(0.0138)</td>
<td>(0.0131)</td>
<td>(0.0136)</td>
<td>(0.0144)</td>
</tr>
<tr>
<td>Months since arrival</td>
<td>0.0533***</td>
<td>0.0459***</td>
<td>0.0475***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.00872)</td>
<td>(0.00951)</td>
<td>(0.00902)</td>
<td></td>
</tr>
<tr>
<td>Good English</td>
<td>0.333***</td>
<td>0.306**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.122)</td>
<td>(0.125)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syria</td>
<td>0.609***</td>
<td>0.619***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.188)</td>
<td>(0.184)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Afghanistan</td>
<td>0.0977</td>
<td>0.0118</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.180)</td>
<td>(0.182)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nigeria</td>
<td>-0.158</td>
<td>-0.175</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.135)</td>
<td>(0.140)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional Controls</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>283</td>
<td>283</td>
<td>283</td>
<td>283</td>
</tr>
<tr>
<td>R2</td>
<td>0.0842</td>
<td>0.202</td>
<td>0.254</td>
<td>0.274</td>
</tr>
</tbody>
</table>

Note: This table shows OLS regressions of the integration index on years of education, months since arrival, level of English and a Syria, Afghanistan and Nigeria dummy. Additional controls are age, age squared, being married and having at least one child. * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 5: Different integration outcomes by personal characteristics

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>German friends</td>
<td>Feel at home</td>
<td>Invited</td>
<td>Active</td>
<td>Level of German</td>
</tr>
<tr>
<td>Years of education</td>
<td>0.0199***</td>
<td>-0.00734</td>
<td>0.0168***</td>
<td>0.0597***</td>
<td>0.0156***</td>
</tr>
<tr>
<td></td>
<td>(0.00676)</td>
<td>(0.0152)</td>
<td>(0.00615)</td>
<td>(0.0153)</td>
<td>(0.00521)</td>
</tr>
<tr>
<td>Months since arrival</td>
<td>0.00746</td>
<td>-0.0118</td>
<td>0.0189***</td>
<td>0.0382***</td>
<td>0.0159***</td>
</tr>
<tr>
<td></td>
<td>(0.00468)</td>
<td>(0.00674)</td>
<td>(0.00339)</td>
<td>(0.00978)</td>
<td>(0.00403)</td>
</tr>
<tr>
<td>Good English</td>
<td>0.123*</td>
<td>-0.0728</td>
<td>0.136**</td>
<td>0.0513</td>
<td>0.0399</td>
</tr>
<tr>
<td></td>
<td>(0.0657)</td>
<td>(0.135)</td>
<td>(0.0568)</td>
<td>(0.135)</td>
<td>(0.0520)</td>
</tr>
<tr>
<td>Syria</td>
<td>0.203**</td>
<td>-0.314</td>
<td>0.189**</td>
<td>0.359*</td>
<td>0.213***</td>
</tr>
<tr>
<td></td>
<td>(0.0855)</td>
<td>(0.208)</td>
<td>(0.0917)</td>
<td>(0.199)</td>
<td>(0.0809)</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>-0.210**</td>
<td>0.168</td>
<td>-0.0574</td>
<td>0.270</td>
<td>0.187**</td>
</tr>
<tr>
<td></td>
<td>(0.0860)</td>
<td>(0.174)</td>
<td>(0.0828)</td>
<td>(0.197)</td>
<td>(0.0757)</td>
</tr>
<tr>
<td>Nigeria</td>
<td>-0.0619</td>
<td>0.313**</td>
<td>-0.109*</td>
<td>-0.150</td>
<td>-0.0250</td>
</tr>
<tr>
<td></td>
<td>(0.0747)</td>
<td>(0.141)</td>
<td>(0.0637)</td>
<td>(0.148)</td>
<td>(0.0534)</td>
</tr>
<tr>
<td>Controls</td>
<td>X</td>
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<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Observations</td>
<td>283</td>
<td>282</td>
<td>283</td>
<td>283</td>
<td>283</td>
</tr>
<tr>
<td>R2</td>
<td>0.168</td>
<td>0.0695</td>
<td>0.191</td>
<td>0.183</td>
<td>0.190</td>
</tr>
</tbody>
</table>

Note: This table shows OLS regressions of different integration measures on years of education, months since arrival, level of English and a Syria, Afghanistan and Nigeria dummy. Additional controls are age, age squared, being married and having at least one child. * p < 0.10, ** p < 0.05, *** p < 0.01.
have the same education level or come from the same country might be correlated. Table 9 in the Appendix shows regression results equivalent to Table 4 column 4 (including all controls). It shows that all significance levels are robust to different ways of clustering (with the exception of the English language coefficient that becomes significant for country level clustering).

It is important to keep in mind that in this Section of the paper, we do not make any causal statements. Results of these simple OLS regressions might be biased due to reverse causality or omitted variable biases. The causal part of the paper is provided only by the results from the randomised controlled trial. We still think, however, that these regression results are interesting as they provide first insights for a new and under-researched topic.

### 4.5 Other results

There are a number of other factors that are not directly linked to job search or integration but are nonetheless interesting to understand the labour market integration of refugees. These are the return intentions and the willingness to move within Germany or Europe, the experience of xenophobia and the reason for choosing Germany as the destination country.

A majority (62 percent) of refugees in the sample do not want to return to their country once it is safe. 22 percent want to return and 16 percent do not know. With 27 percent, the intention to return is highest amongst Syrian refugees. 89 percent of all refugees would like to live in Munich at least for some years if they are given the possibility to stay and work in Munich. The majority (74 percent) would, however, be willing to move within Germany or Europe if they were offered a job there. This shows that from the point of view of the refugees, they hope to stay if given the opportunity.

When it comes to the behaviour of natives towards refugees, 75 percent of refugees report that they have never felt being treated with less courtesy or respect because they are refugees. 22 percent have felt this way sometimes and only three percent have had this experience often or all the time. This is the subjective feeling of the refugees and it might have ramifications on their integration and return intentions.

It is striking that Germany has recently received many more asylum seekers than other European countries. There are a number of institutional, geographic and other reasons for this. If one asks the refugees directly why they chose Germany as opposed to Italy, France or the UK, the most common answer is safety (52 percent), followed by a good reputation (39 percent), job opportunities (24 percent) and asylum possibilities
Nine percent chose Germany due to relatives residing in Germany. In comparison with labour migrants, the majority of refugees have thus not chosen Germany due to job related reasons.

5 Results of first follow-up (pilot)

The following results come from a pilot follow-up survey that we conduct in October 2016. It is comprised of 56 refugees we initially met in March and April for the CV preparation stage. We contact them by phone six months later to question them about their current labour market status. If they found work, we ask them about the details of their work, how they found it and how satisfied they are with different aspects of their work. If they did not find work, we ask them about their search behaviour and experience. There is also the possibility that they are currently neither working nor looking for work and in this case we ask them about the reason for being out of the labour force. In addition, we ask about perceptions of integration, German language progress and in general about their life in Germany. This pilot sample has not been randomised as we did not have the approval of the ethics commission in April and we were still experimenting with the baseline survey. For this reason everyone of the pilot sample has received the treatment and has thus been added to the database of the NGO.

5.1 Labour market outcomes

Of the 56 follow-up surveys conducted, 20 participants have found work, 34 participants are currently not working but would like to work and two participants are not looking for work as they are in full-time German language classes. Of those 20 refugees, who have found work, seven found the work through the NGO, six with the help of friends or relatives, three through a social worker and two with the help of their teacher. Only two refugees have found work by themselves, one through the internet and one by asking in a

---

23 Respondents could chose up to three answers.
24 This Section provides some initial ideas about the kind of analysis that is feasible once we have collected the follow-up data for the real sample of around 500 refugees. At this stage it is difficult to draw significant conclusions due to the small sample size.
25 We have no opportunity to independently verify the obtained information, except in a few cases in which the NGO is in contact with the employer. We assume that the obtained information is correct as the refugees have very little incentives to lie and can benefit from obtaining an updated CV.
26 The complete follow-up survey can be found in the Appendix.
27 It is not possible to systematically analyse the baseline survey for this pilot group as we were still adapting and improving the survey during the pilot in March and April.
shop directly. This seems to suggest that matching frictions matter. At the same time, it also highlights the importance of a randomised controlled trial for generating a credible counterfactual. It is interesting that none of the refugees found work through the Federal Employment Agency.

How the refugees have found their work seems to determine the kind of work they found. While most refugees that have found their work without the NGO are now working in the cleaning industry (four candidates) or in a restaurant (four candidates), refugees that have found their work through the NGO have positions that mostly match their education and experience in: administration, agriculture, accounting, engineering, IT, child care and in a theatre. The treatment thus does not only determine the probability of a match but also the match quality.

Of those twenty working refugees, half found employment in a regular job, while 25 percent are doing an internship and a further 25 percent are doing part-time work. Three salaries are above the minimum wage and two contracts are longer than one year. With regards to work satisfaction, 77 percent of workers are happy with their colleagues and 61 percent are happy with their tasks at work. However, only 23 percent are happy with the salary. Half of the working refugees feel overqualified for the work and 68 percent are looking for better work.

Of the 34 refugees who are currently actively looking for work, 17 people had no contact to employers, ten had unsuccessful informal meetings or job interviews and three people had job offers, which they did not accept due to the low wage, being overqualified and missing documents respectively. Four people have worked but ended the work relationship. Two have quit due to a low salary, one contract ended and one person was dismissed.

5.2 Integration outcomes

Table 6 shows the different components of the integration index by working status. We are using the same questions as in the baseline survey and the same explanations as outlined in Section 4.3. One can clearly see that working refugees score higher on the integration index. They are more likely to have German friends and more likely to have been invited to the house of a German. Moreover, they have a higher level of German and are less likely to wish to return to their home country. They also do less leisure activities outside their house, probably due to time constraints and, surprisingly, refugees that work feel less at home.

Two caveats apply. First, this Table does not capture a causal relationship between work status and integration. It is currently not possible to determine if the fact that one
Table 6: Integration by working status

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Not looking</th>
<th>Yes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration Index</td>
<td>2.682</td>
<td>1.075</td>
<td>3.050</td>
<td>2.737</td>
</tr>
<tr>
<td></td>
<td>(1.293)</td>
<td>(0.318)</td>
<td>(0.978)</td>
<td>(1.221)</td>
</tr>
<tr>
<td>Germann friends</td>
<td>0.467</td>
<td>0</td>
<td>0.688</td>
<td>0.521</td>
</tr>
<tr>
<td></td>
<td>(0.507)</td>
<td>(0)</td>
<td>(0.479)</td>
<td>(0.505)</td>
</tr>
<tr>
<td>Feel at home</td>
<td>4.367</td>
<td>3.500</td>
<td>4</td>
<td>4.208</td>
</tr>
<tr>
<td></td>
<td>(0.718)</td>
<td>(0.707)</td>
<td>(1.095)</td>
<td>(0.874)</td>
</tr>
<tr>
<td>Invited</td>
<td>0.333</td>
<td>0</td>
<td>0.438</td>
<td>0.354</td>
</tr>
<tr>
<td></td>
<td>(0.479)</td>
<td>(0)</td>
<td>(0.512)</td>
<td>(0.483)</td>
</tr>
<tr>
<td>Active</td>
<td>2.033</td>
<td>1.500</td>
<td>1.750</td>
<td>1.917</td>
</tr>
<tr>
<td></td>
<td>(1.098)</td>
<td>(0.707)</td>
<td>(1.065)</td>
<td>(1.069)</td>
</tr>
<tr>
<td>German</td>
<td>0.500</td>
<td>0</td>
<td>0.688</td>
<td>0.542</td>
</tr>
<tr>
<td></td>
<td>(0.509)</td>
<td>(0)</td>
<td>(0.479)</td>
<td>(0.504)</td>
</tr>
<tr>
<td>Return intention</td>
<td>0.233</td>
<td>0</td>
<td>0.188</td>
<td>0.208</td>
</tr>
<tr>
<td></td>
<td>(0.430)</td>
<td>(0)</td>
<td>(0.403)</td>
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<td>Observations</td>
<td>34</td>
<td>2</td>
<td>20</td>
<td>56</td>
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</table>

Note: This table shows the integration index and the individual components by working status. The integration index is described in details in subsection 4.3. German friends indicates the percentage of people indicating that they have German friends. Feel at home is a subjective measure ranging from 1 to 5, 5 being the highest. Invited is an indicator measuring if the person has ever been invited to the house of a German. Active means that the person does at least two leisure activities and German means that the person has at least reached level A2. Additionally, return measures the desire to return to one’s country if it was safe.

found work helps the integration process or if those refugees that are better integrated are the ones that find work. Given the design of the randomised controlled trial, we will be able to disentangle this and draw causal statements once we have the follow-up result of the randomised participants. Second, the very low number of observations of the pilot makes it impossible to obtain statistically significant differences. Comparing Table 6 with Table 5, one can see that refugees that are asked six months later have a higher integration index (2.74 compared with 2.42). This is in line with the regression result that indicate that time spent in Germany has a positive effect on integration outcomes.

Figure 8 illustrates that working refugees not only have a higher average integration index but also the variance is smaller.

Figure 8: Integration by Work Status

Note: The Integration Index is measures as described in subsection 4.3. The box plot shows the mean, the 25/75 percentile and the minimum/maximum.
5.3 Next Steps

This project is ongoing and expected to last at least until the end of 2017. The CV preparation and baseline surveys are planned to run from May 2016 until May 2017 and we aim at 450 participants in total. The follow-up survey is conducted six months after the respective CV preparation session and is thus running from November 2016 until November 2017. While this paper is being written, we have just started the first follow-up surveys. This follow up survey is being conducted on the phone by our multilingual research team; in the same way as outlined for the trial survey. It is possible to conduct further waves of the follow up survey to track refugees for a longer period of time and also investigate medium and long term labour market and integration outcomes.

The analysis of the data can be divided into two parts. First, we investigate labour market outcomes and, in particular, we test the hypothesis whether participants in the treatment group have better labour market outcomes in the short term than the control group. Evidence of positive effects would suggest that matching frictions between German employers and job-seeking refugees exist. The employment of refugees thus does not only depend on the skills they possess, but also on their possibility to be considered by employers who are trying to fill a vacancy. Overcoming these frictions may then facilitate labour market integration of refugees in Germany. The main outcome variables will be employment status, duration and wages. Once the main effect is established, it is important to understand what drives the result. The treatment may modify the outcomes of participants by 1) creating awareness of job opportunities, 2) reducing search time, 3) enhancing match quality or 4) serving as a referral to the employer. Identifying the channel(s) is relevant for policy-making. Therefore, we additionally investigate a number of supplementary variables. These include: the number of applications sent, search strategies, time until the first interview, number of job interviews, job match quality and job satisfaction.

Second, we are interested in integration outcomes. We aim to test, whether earlier (and/or better) employment leads to enhanced integration outcomes in the short term. The treatment status can hereby serve as an instrumental variable for employment. The key outcome variables will be the components of the integration index. Additionally, we can study their housing conditions and report stress, happiness and optimism levels. Detailed statistical model specifications can be found in the pre-analysis plan in the Appendix and has been uploaded on the American Economic Association’s registry for randomized controlled trials.

28The actual implementation of additional follow up surveys will depend on attrition and funding.
6 Limitations

6.1 Selection

The refugees that are taking part in our experiment are not representative of all refugees living in Germany for several reasons: our eligibility criteria, their motivation to come to our sessions and a focus on refugees residing in Munich. This selection has implications for external validity. An expansion of the programme or a different setting might lead to different results. However, it does not impact the internal validity of the experiment as we randomize over equally selected participants.

First, our sample is selected due to our eligibility criteria, we only work with refugees that have a work permit. This excludes all refugees from safe countries of origin. We argue that this is the relevant group to study for labour market integration. Refugees from safe countries of origin are legally excluded from the labour market and thus cannot benefit from job matching support. We had to reject around three percent of candidates due to this restriction (all coming from Senegal). For legal reasons, we also have to focus on refugees aged 18 or above.29 This is the relevant target group as refugees below the age of 18 are typically recommended to attend an educational institution and only refugees aged 18 or above are encouraged to integrate into the labour market. We had to send away around two percent of candidates due to this restriction. Our last eligibility criterion excluded participants that did not speak any of the languages our team speaks. This has excluded around four percent of participants.

The second reason why our sample is selected is that the refugees who came to us are likely to be different from those who did not, and these differences are likely to matter for most of the outcomes that we are interested in. One obvious difference is motivation. It takes extra effort to come to our CV preparation sessions and we expect our candidates to be positively selected on motivation. These highly motivated refugees are likely to be also highly motivated to learn German, search more intensively for a job and to go to other support institutions. Other reasons for a selected sample might be educational background, extroversion, foreign language ability or psychological well-being. Furthermore, in our way of reaching candidates, we are focusing on refugees living in communal accommodation. By targeting this group, we exclude those that have the means to support themselves or who have already a network of family or friends. We thus focus on the ones asking for support, which is a very policy relevant group of refugees.

We can make a rough estimation of the percentage of all refugees in Munich that take

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29 In 2015, 31 percent of arriving refugees in Germany were below 18 years old.
part in our experiment. There have been around 12,000 refugees in Munich at the end of 2015. If we restrict this to men of working age, then we have a pool of potential candidates of 6,000. Further subtracting refugees without a work permit and from safe countries of origin restricts the pool to around 5,000. We thus have a participation rate of around seven percent of relevant and eligible candidates in Munich.

6.2 Attrition

We are aware that sample attrition could be high when working with this population. We concentrate our efforts on obtaining contact details that do not change over time. Besides obtaining their e-mail address and phone number, we also ask if we can contact them via WhatsApp or Facebook. One advantage in this respect is that we provide everybody with some support (CV in German). The treatment group is rather easy to follow up with. As the NGO offers additional support activities, the control group also had an incentive to stay in touch with us. Sample attrition may thus be lower than for a simple survey, where the individuals have no gain in remaining in the sample.

6.3 Non compliance

There are two form of non compliance we need to be aware of. The first case happens if participants who have been allocated to the control group receive the treatment. This case can be excluded as the experiment design does not make it possible for the control group to be added to the database. Refugees are not aware of the internal organisation of the NGO and can not push for their CV to be included. The second case happens if the participants of the treatment group do not receive the treatment. This could happen if the NGO matches treated participants but they do not attend job interviews or accept the position. This happens, for instance, if refugees attend full time German classes or if they get an asylum rejection. Due to our follow up interview, we can identify these cases in the data (It has been the case for two candidates in the pilot follow up). This will bias our estimates downward.

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30 There are around 4,000 asylum seekers registered with the Munich branch of the Federal Employment Agency.
31 Numbers are taken from the Munich municipality. Estimations are only rough approximations.
6.4 Spillovers

Spillovers could occur if a candidate from the treatment group finds work and then recommends his friend, who is in the control group, to his employer. If this person then gets hired, he has received spillovers from the treatment group. The best we can do in this situation is to observe the spillover. These spillovers are interesting in themselves and can be analysed further. As spillovers trigger a positive effect for the control group, this would bias our effect downward.

6.5 Displacement effects

One worry in labour market experiments is that participants of the treatment group obtain jobs that might have been filled by the control group in the absence of the experiment. If there is a limited number of jobs and both control and treatment group are competing for these jobs, then this is a valid concern. Crepon et al. (2013) find that displacement effects are particularly strong in labour markets with high unemployment. We think that displacement effects are of limited importance in the context of our experiment for two reasons. First Munich has a very low unemployment rate and the 150 people in our treatment group seem small given the large number of vacancies in Munich. Second, most companies indicated that they would be willing to hire additional people if they have the required German and technical skills. So the amount of vacancies does not seem to be the limiting factor. However, if one thinks about expanding the programme in terms of size or in location, then one would need to take general equilibrium effects into consideration.

6.6 Ethical concerns

Doing experiments with a vulnerable group of people is a sensitive issue and we needed to ensure that we do not harm anyone participating in our experiment. It was critical to make sure that people in the control group are not put in an unfair position and we did not deprive them from finding a job. We ensured this in two ways. First, we collected many more CVs than the NGO could match to the available vacancies. The NGO is newly established, has less than 10 full-time staff and thus limited capacity. We made sure that at any time they had more suitable CVs than open positions. Thus, they were already working at full capacity with the treatment group. Second, the participants in the control group will be added to the database one year later. Through this phased-in

\[32\] We ask the name of the company in the follow up survey and we also ask how the person has found the work.
design we ensured that everyone receives the treatment in the end, timing being the only difference. Furthermore, we provided both the control and the treatment groups with a CV in German and valuable information on the job search in Munich and we made sure to communicate to the control group in a way that they did not expect a guaranteed job from the NGO. We also guaranteed compliance with the recommendations from the Ethics commission of the Faculty of Economics at the University of Munich.

To ensure that we follow data protection requirements of the Bavarian government and the university, we had a consent declaration of every participant that specified that we were allowed to use their data for research purposes (see appendix B). This form is in accordance with Bavarian Data Protection Law. We treated the data in a pseudonymised way and made sure that no confidential data is distributed to third persons. In particular, we saved the personal identification in a separate place and only merged it for follow-up purposes.

7 Conclusions and policy implications

To conclude, this paper has provided new insights into the labour market integration of recently arrived refugees in Germany. Apart from missing language skills, matching frictions seem to be a major concern, as refugees do not know where to search and only rarely use the internet in their job search. The most successful strategies to find a job were matching services provided by an NGO and a network of friends and relatives. As the majority of job-seeking refugees, however, has not found a job after six month, there seems to be scope for more support. We currently conduct the described randomized controlled trial to provide a more causal analysis and evaluation of the usefulness of matching services.

More educated refugees and refugees who have stayed in Germany for a longer time are better integrated into the society. Additionally, refugees who work are better integrated on average. The results from the experiment will show if there is a causal relationship between finding work and integration outcomes.

Beside the better support that is needed to promote the labour market integration of refugees, there are several labour market regulations that need to be removed to guarantee a free and efficient labour market entry for refugees. These labour market regulations include the residency requirement, the priority rule, the prohibition of temporary employment agencies and the prohibition of self employment during the asylum process. In the framework of the new German Integration Law (“Integrationsgesetz”), the residency
requirement was made stricter and the priority rule and the prohibition of temporary employment agencies were lifted in most German cities but kept in most Bavarian cities including Munich due to political reasons.\footnote{The priority rule and the prohibition to work for temporary employment agencies are still in place in: Bavaria (only: Aschaffenburg, Bayreuth-Hof, Bamberg-Coburg, Fuerth, Nuremberg, Schweinfurt, Weiden, Augsburg, Munich, Passau, Traunstein), in Northrhine Westphalia (only: Bochum, Dortmund, Duisburg, Essen, Gelsenkirchen, Oberhausen, Recklinghausen) and in the entire Mecklenburg-Hither Pomerania.}

First, most refugees are randomly allocated to a certain municipality and are required to live there during and also after the asylum process as long as they are receiving social benefits. Many times refugees also are reallocated to different municipalities during their asylum process. This residency requirement reduces the possibility of finding employment as the search radius is restricted. While it is theoretically possible to make a transfer request once a refugee has found work in another municipality, practically speaking this is extremely very difficult due to a long lasting process and severe bureaucratic hurdles. Godoy (2016) and Aslund and Rooth (2007) show that refugees in Sweden and Norway, who have randomly been allocated to areas with bad labour market outcomes for immigrants, experience persistent reductions in wages and employment. Dustmann et al. (2016a) shows that the acceptance of refugees by the local population is higher in urban areas.

Second, the priority rule is making it difficult for firms to hire asylum seekers. The priority rule regulates that a firm can hire asylum seekers only if they cannot find a suitable German, EU, EEA citizen or recognized refugee to fill the position. This priority review is conducted by the foreigners office before the hiring process and typically takes several weeks. This creates a burden for the firm as it increases hiring time, effort and uncertainty. A German-wide removal of the priority review would make it easier for firms to hire asylum seekers and thus increase their success on the labour market.

Third, asylum seekers are allowed to work for temporary employment agencies only 15 months after arrival in Germany. This is preventing refugees from utilising an important stepping stone into the labour market. Jahn and Rosholm (2013) and Jahn and Rosholm (2014) find that temporary employment agencies facilitate immigrants labour market entry as it reduces information asymmetries, allows a firm to screen a worker at little cost and provides the refugee with contacts, on-the-job language training and country specific human capital. The studies further confirm that immigrants benefit in the long term from their temporary employment experience as they earn higher wages and have a higher employment probability in regular employment. Temporary employment agencies thus
have the potential to ease refugees labour market integration and remaining restrictions should be lifted.

Fourth, an additional restriction asylum applicants face is the prohibition of self employment. Once an asylum request is accepted, this prohibition is lifted but significant entry barriers such as regulations, permits and financial constraints remain. This limits the potential labour market integration of refugees as, according to our baseline survey, 49 percent have experience being self employed before arriving in Germany. 72 percent of our surveyed refugees could imagine being self employed in Germany but have not tried this step so far. Caliendo and Kuenn (2011) for example show that start-up subsidies in Germany had long-lasting positive effects on wages and employment, especially for low educated unemployed. Thus there is the possibility of improving refugees labour market integration by reducing barriers to self employment. Further research is necessary to evaluate what policies are most effective to stimulate successful self employment of refugees.
References


## Appendix

### Additional Tables

#### Table 7: Balance table

<table>
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<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Treatment = 0</td>
<td>Treatment = 1</td>
<td>Diff. T-C</td>
</tr>
<tr>
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<td>27.25</td>
<td>40.98</td>
<td>13.73</td>
</tr>
<tr>
<td></td>
<td>[7.520]</td>
<td>[149.5]</td>
<td>(12.43)</td>
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<td>(0.05)</td>
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<td>0.255</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>[0.434]</td>
<td>[0.437]</td>
<td>(0.05)</td>
</tr>
<tr>
<td>Months since arrival</td>
<td>7.281</td>
<td>7.566</td>
<td>0.28</td>
</tr>
<tr>
<td></td>
<td>[6.994]</td>
<td>[6.982]</td>
<td>(0.81)</td>
</tr>
<tr>
<td>Years of education</td>
<td>10.99</td>
<td>10.67</td>
<td>-0.32</td>
</tr>
<tr>
<td></td>
<td>[4.465]</td>
<td>[4.545]</td>
<td>(0.52)</td>
</tr>
<tr>
<td>Years of work exper.</td>
<td>6.571</td>
<td>7.349</td>
<td>0.78</td>
</tr>
<tr>
<td></td>
<td>[6.419]</td>
<td>[6.157]</td>
<td>(0.73)</td>
</tr>
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<td>Attended university</td>
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<td>0.02</td>
</tr>
<tr>
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<td>[0.451]</td>
<td>(0.05)</td>
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<td>0.0392</td>
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<tr>
<td></td>
<td>[0.213]</td>
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<td>(0.02)</td>
</tr>
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<td>0.568</td>
<td>0.510</td>
<td>-0.06</td>
</tr>
<tr>
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<td>[0.497]</td>
<td>[0.502]</td>
<td>(0.06)</td>
</tr>
<tr>
<td>Contact to employer</td>
<td>0.297</td>
<td>0.269</td>
<td>-0.03</td>
</tr>
<tr>
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<td>[0.458]</td>
<td>[0.445]</td>
<td>(0.05)</td>
</tr>
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<td>Previous offers</td>
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<td>0.145</td>
<td>-0.12***</td>
</tr>
<tr>
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<td>[0.445]</td>
<td>[0.353]</td>
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<tr>
<td>Look in Internet</td>
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<td>0.03</td>
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<td>Language difficulties</td>
<td>0.593</td>
<td>0.455</td>
<td>-0.14**</td>
</tr>
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<td>0.321</td>
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<td>[0.415]</td>
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<td>Observations</td>
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<td>289</td>
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</table>

**Note:** This table shows average values for the treatment and the control group and their differences for all relevant variables in column 3. Standard errors are reported in brackets. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. 
### Table 8: Cross-correlations

<table>
<thead>
<tr>
<th>Variables</th>
<th>Integrated</th>
<th>friends_Germany</th>
<th>feel at home</th>
<th>invited</th>
<th>active</th>
<th>Germanplus</th>
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**Note:** This table shows the cross-correlation of the components of the integration index and with the integration index itself. The integration index is described in details in part 3.3 of this paper. German friends indicates the percentage of people indicating that they have German friends. Feel at home is a subjective measure ranging from 1 to 5, 5 being the highest. Invited is an indicator measuring if the person has ever been invited to the house of a German. Active means that the person does at least two leisure activities and German means that the person has at least reached level A2.

### Table 9: Different clustering

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**Note:** This table shows different ways of clustering for OLS regressions of the integration index on years of education, months since arrival, level of English and a Syria, Afghanistan and Nigeria dummy. Additional controls are age, age squared, being married and having at least one child. * p < 0.10, ** p < 0.05, *** p < 0.01.
Questionnaire for refugees looking for work

Applicant’s ID: __________________________
Volunteer name: __________________________
Date: __________________________

Job search
1. When did you arrive in Germany?
2. When did you start to look for a job in Germany?
   After arrival □ After getting the work permit □ Not yet □
3. How do you look for work? (up to 3 answers)
   Arbeitsagentur □ Internet □ Social worker □ Teacher □ Asking employers/shops directly □ Friends/relatives □ Other □
4. Have you registered at the Arbeitsagentur as looking for a job? Yes □ No □
   4.1. When?
   4.2. How many times were you there?
5. How many hours per week do you spend searching for a job? □ 0   □ 1–4    □ 5–8    □ 9–12 □ > 12 □

6. What difficulties do you have during your job search? (up to 3 answers)
   Language □ Many rules □ Don’t know where to search □ No suitable job □ Missing skills □ Job application □ Other □
7. Have you been in contact with a German employer? Yes □ No □
   If yes, how?
   Informal meeting □ Job interview □ Job offer □ Work □ Other □
8. Have you already received one or more offers? (up to 3 answers) Yes □ No □
   8.1. From whom?
   Arbeitsagentur □ Employer directly □ From the camp/housing □ Other □
   Friends/relatives □
   8.2. For what kind of work?
   Full-time work □ Part-time work □ Internship □ Other □
9. Did you accept the offer? Yes □ No □
   If not, why?
   Low wage □ Does not match your skills: too easy □ too hard □
   Not full-time □ Too far □ Other □
10. If you already had an internship/job in Germany, what were the reasons to leave it?
    Contract is over □ Small wage □ Didn’t like it □ Moving location □ Other □
Job expectations and interests

1. In which jobs would you like to work? (up to 3 answers)
   IT/Software Developer □  Engineer □  Construction worker □  Cleaning services worker □  Security □  Bar/restaurant □  Manufacturing □  Administrative work □  Personal care □  Car mechanic □  Sales person □  Other __________________________

2. Are there any jobs you would never do? (up to 3 answers)
   IT/Software Developer □  Engineer □  Construction worker □  Cleaning services worker □  Security □  Bar/restaurant □  Manufacturing □  Administrative work □  Personal care □  Car mechanic □  Sales person □  Other __________________________

3. What is the minimum monthly wage for you to accept a full time job offer?

4. The minimum monthly wage in Germany is about netto 1000 Euro per month. If it were dropped to 700 Euro, would you work for this wage?
   Yes □  No □

5. Do you wish to get education or continue your education?
   University □  School □  Berufsausbildung (job training) □  No □

6. Do you have experience being self-employed before arrival to Germany?
   Yes □  No □

7. Do you think you will be self-employed in Germany?
   Yes □  No □
Integration

1. Do you have family in Germany? Yes □ No □

2. Are you married? Yes □ No □

3. Is your husband/wife here in Germany? Yes □ No □
3.1. Is he/she working in your home country? Yes □ No □
3.2. Is he/she looking for a job in Germany? Yes □ No □

4. Can we contact him/her regarding job assistance? Yes, at: ____________________ No □

5. In your family, who do you think should look for a job here in Germany in the future?
   You only □ Your partner only □ You and your partner □

6. Do you have children? Yes □ No □
   How many? ____________________
   How old are they? ____________________ years

7. Are you planning for your wife and/or children to join you in Germany? Yes □ No □

8. What is the highest education of your father?
   No school □ Primary School □ Secondary School □ University □

9. Do you want to stay in Munich? Yes, forever □
   Yes, a few years □ No □
   Don’t know □

10. Would you move for work? Yes, within Germany □
    Yes, within Europe □ No □
    Don’t know □

10.1. Do you want to return to your country once it is safe? Yes □ No □
    Don’t know □

11. What was the main reason for choosing Germany as your destination as opposed to Italy, France or the UK? (up to 3 answers)
    Relatives/friends □ Jobs □ Safety □ Good reputation □
    Asylum possibilities □ Other ____________________

12. Did you make new friends in Germany? Yes □ No □

12.1. Where are these people from?
   Your country □ Yes □ No □
   Germany □ Yes □ No □
   Other country □ Yes □ No □

13. You already feel at home in Germany
   1 (Not at all) □ 2 □ 3 □ 4 □ 5 (Completely) □
   Yes □ No □

14. Have you ever been invited to the house of a German? Yes □ No □

15. What activities do you do outside of the GU?
    Study/German □ Sport □ Shopping □ Meeting with people □ None □ Other ____________________
    □
16. Since coming to Germany, have you ever felt treated with less courtesy or respect because you are a refugee?
Never □ Sometimes □ Often □ All the time □

Organisational details
1. For how long have you learned German (in months)?
2. Are you currently in a class?
2.1. If yes, where? Language school □ Courses by volunteers □ Other
3. At what day and time is your class?
4. How many hours per week do you learn German on your own?
5. Do you have the certificate of your highest degree?
   Yes, original □ Yes, copy □ No □
6. Do you have a bank account set-up?
7. How did you hear about this session?
   Internet □ Flyer □ Social worker □ Friends □ Teacher □ Other
8. We would like to stay in touch and see how we can best support you in your job search. How can we best reach you?
   Phone
   What’s app
   E-Mail
   Facebook
   Phone number/E-mail address of friend or family member
Follow-up questionnaire for refugees looking for work

Applicant’s Name: 
Applicant’s ID: 
Volunteer name: 
Gender: 
Date: 

Job search 
1. Are you currently working? 
   Yes □  No □  Not looking □ 
   Job search - not found 
   If no, continue here 
2. Would you like to work? 
   Yes □  No □ 
3. How do you look for work? (up to 3 answers) 
   Arbeitsagentur (employment office/job center) □  Internet □  Social worker □  Teacher □  Asking employers/shops directly □  Friends/relatives □  Other 
4. Have you registered at the Arbeitsagentur (employment office/job center) as looking for work? 
   Yes □  No □ 
4.1. When? 
4.2. How many times were you there? 
5. How many hours per week do you spend searching for work? 
   0 □  1 – 4 □  5 – 8 □  9 – 12 □  > 12 □ 
6. What difficulties do you have during your job search? (up to 3 answers) 
   Language □  Many rules □  Don’t know where to search □  No suitable job □  Missing skills □  Job application □  Other 
7. Have you been in contact with a German employer? 
   Yes □  No □ 
   If yes, how? 
   Informal meeting □  Job interview □  Job offer □  Work □  Other 
7. How many times did you send or give your CV to an employer? 
   0 □  1 – 4 □  5 – 8 □  9 – 12 □  > 12 □ 
8. Have you already received one or more offers? (up to 3 answers) 
   8.1. From whom? 
   Arbeitsagentur □  Employer directly □  From the camp/housing □  Friends/relatives □  Other 
   8.2. For what kind of work? 
   Full-time work □  Part-time work □  Internship □  Ausbildung/job training □  Other 
9. Did you accept the offer? 
   Yes □  No □ 
   If not, why? 
   Low wage □  Does not match your skills: too easy □  too hard □  Not full-time □  Too far □  Other
Job search - found

If yes, continue here

1. **How did you find your work?** (up to 3 answers)
   - Arbeitsagentur
   - Internet
   - Social worker
   - Teacher/School
   - Asking employers/shops directly
   - SIR
   - Friends/relatives
   - Previous employer
   - Other

2. **When did you start working?**

3. **What is the name of the company?**

4. **In which sector is the work?**
   - IT/Software Developer
   - Engineer
   - Construction worker
   - Cleaning services worker
   - Security
   - Bar/restaurant
   - Manufacturing
   - Administrative work
   - Personal care
   - Car mechanic
   - Sales person
   - Other

5. **What type of work is it?**
   - Normal job
   - Mini-job (part-time, 1 E job)
   - Internship
   - Ausbildung
   - Other

6. **What is the net salary?** (What you receive every months on your bank account)

7. **What is the gross salary?** (Before tax and other deductions)

8. **For how long is the contract?** (in months)

9. **How many hours do you work per week?** (Full time is 40)

10. **Is the job too easy for you?**
    - Yes
    - No

11. **Which languages do you speak at work?**
    - German
    - English
    - Arabic
    - Other

12. **Are you the only refugee in your work place?**
    - Yes, the only one
    - No, one more
    - No, several
    - Don’t know

13. **How happy are you with your colleagues?**
    - 1 (Not at all)
    - 2
    - 3
    - 4
    - 5 (Completely)
14. How happy are you with the salary?
1 (Not at all) □  2 □  3 □  4 □  5 (Completely) □

15. How happy are you with the tasks at work?
1 (Not at all) □  2 □  3 □  4 □  5 (Completely) □

16. How long does it take you to arrive at work (in minutes)?

17. Are you looking for better work?

18. Why did the work end?
I quit □  fired □  contract ended □  legal issues □  other □

_______________

Not looking

If not looking, continue here

1. Why are you not looking for work? (up to 3 answers)
Studying German □  In School □  At university □  Taking care of family □  Medical reasons □  net salary not high enough □  Enough money □  Uncertainty about asylum process □  no work permit □  Other □

2. Will you look for work in the future?

2.1. If yes, when (date)
Integration

1. Did someone from your family join you in Germany in the last six months?  
   Yes □ No □

2. Do you want to stay in Munich?  
   Yes, forever □
   Yes, a few years □ No □
   Don’t know □

2.1. Would you move for work?  
   Yes, within Germany □
   Yes, within Europe □ No □
   Don’t know □

2.2. Do you want to return to your country once it is safe?  
   Yes □ No □
   Don’t know □

3. Did you make new friends in Germany?  
   Yes □ No □

3.1. Where are these people from?  
   Your country Yes □ No □
   Germany Yes □ No □
   Other country Yes □ No □

4. Did the refugees you are in contact with find work  
   Yes, many □ A few □ One □ No one □

5. Do you feel at home in Germany  
   1 (Not at all) □ 2 □ 3 □ 4 □ 5 (Completely) □

6. How is your life now compared to 6 months ago?  
   Better □ Worse □ Same □

6. How will your life be in six months?  
   Better □ Worse □ Same □

7. Have you ever been invited to the house of a German?  
   Yes □ No □

8. Do you still live at *address from CV*?  
   Yes □ No □

8.1 If no, where do you live now?  
   apartment alone or with own family □ apartment with flatmates □
   another GU/camp □

8.2 What is your new address?

9. What activities do you do outside of your house?  
   Study/German □ Sport □ Shopping □ Meeting with people □ None □ Other □

10. Since coming to Germany, have you ever felt treated with less courtesy or respect because you are a refugee?  
    Never □ Sometimes □ Often □ All the time □
Organisational details

1. For how long have you learned German (in months)? ________________
   Yes □ No □

2. In Deutsch: Bist du gerade im Kurs?

   2.1. Welches Niveau? (A1, A2, B1, B2, C1) ________________
   Yes □ No □

   2.2. Wann und wieviel? ________________

   2.1. Interviewer estimate (A1, A2, B1, B2, C1) ________________

3. How many hours per week do you learn German on your own? ________________
   Yes □ No □

4. Did you already get your asylum decision?
   4.1. If yes, what is the outcome?
   accepted for 3 years □ accepted for 1 year □ rejected but can stay □
   rejected and have to leave □

   4.1. When? ________________

   5. How much do you agree or disagree with the following statements?

   5.1. I am happy that I came to Germany.
   1 (Not at all) □ 2 □ 3 □ 4 □ 5 (Completely) □

   5.3. I will (still) be working in the next 6 months.
   1 (Not at all) □ 2 □ 3 □ 4 □ 5 (Completely) □

   5.3. Compared to what you expected, is your life better, worse or as expected?
   Worse □ equal □ better □

   5.3. What did you know about the life of a refugee in Germany before you came?
   Worse information □ exact information □ better information □

   5.6. I need to focus on studying German before finding a job.
   Yes □ No □

   5.7. I had wrong information about Germany before I came.
   Yes □ No □

   5.10. What is the most important thing the German government could do to improve your situation?
   Facilitate family reunification □ Faster asylum decision □ Job finding support □ Better German courses □ Better housing □ free movement □ Other ________________
Excerpt of the Pre-analysis plan

A Analysis

The analysis is divided into two parts, one focusing on labour market outcomes and one on further integration and self-reported satisfaction outcomes. Below, we focus on each of the parts separately, emphasizing the effects where our treatment could have an impact. As very effectively discussed in Olken (2015) that is intrinsic in projects like ours.

A.1 Labour Market Outcomes

The hypothesis we would like to test here is simply whether participants in the treatment group have better labour market outcomes in the short (6 months) and medium (12-24 months) term compared to those in the control group. Evidence of positive effects would suggest that matching frictions between German employers and job-seeking refugees exist, and that the employment of refugees does not only depend on the skills they possess, but also on their possibility to be considered by employers who are trying to fill a vacancy. Overcoming these frictions may then facilitate labour market integration of refugees in Germany.

We consider two sets of variables. First, we look at a series of standard labour market outcomes, which can provide experimental evidence of a treatment effect. Second, we investigate a series of ancillary variables, which are useful to provide some (non-experimental) way of learning about the relative importance of different underlying mechanisms.

Main variables:

- Employed (at the point of the follow-up survey)
- Duration of employment (in months from the randomization day to the day of the follow-up survey)
- Wage (monthly (gross and net) wage at the point of the follow-up survey or in the last employment)

We define ”employment” broadly as being in a paid job, internship, or vocational training. We might also consider each of the outcomes separately.

Once the main effect is established, it is important to understand what drives the result. The treatment may modify the outcomes of the participants by 1) creating awareness of the job opportunity, 2) reducing the search time, 3) enhancing the quality of the match or 4) serving as a referral to the employer. Identifying the channel(s) is relevant for policy-making. We would also like to check for alternative mechanisms, i.e. whether the treatment (rather than or together with removing matching friction) modified the skills of participants, their knowledge of the local labour market, or job-search behaviour. This might happen through job interviews, for instance.

Supplementary variables

- Time until the first interview/trial/employment offer
- Number of job interviews for the first job (invited, happened)
- Number of job trials for the first job (invited, happened)

34Olken (2015), Promises and Perils of Pre-Analysis Plans, Journal of Economic Perspectives, Volume 29, Number 3, Pages 6180
• Number of applications for the first job
• Where searched for vacancies (indicator variable as in the baseline survey)
• Job/skill match (an indicator variable: overqualified/ok/underqualified, based on observables, can measure for jobs they apply to and for the job they actually get)
• Self reported job satisfaction, self reported match quality
• Reservation wage (at the point of the follow-up)
• Difficulty in the job search (indicator variable as in the baseline survey)
• (Ask employers to see if they consider our treatment as a referral, if refugees contacted them directly)

A.2 Integration Outcomes

The hypothesis we would like to test is whether earlier (better) employment leads to better integration outcomes in the short- and medium-term. The treatment will serve as an instrumental variable for employment.

Main variables (measures of integration):

• Intention to stay (dummy variable)
• Knowledge of German language (indicator variable)
• Local acquaintances (dummy)
• Activities: study, sport, shopping, meeting with friends (total number)
• Feel at home (indicator on Likert scale)
• Integration index: \[ \geq A2 \text{German} + \text{German friends} + \text{Invited} + \text{Activities} + \text{Feel home} \]
• Any other investment in human capital (as driving license)?
• Housing conditions
• Stress, happiness and optimism levels

These outcomes directly correspond to questions in the follow-up survey. Because many of these questions are included in the initial (pre-treatment) survey as well, these variable can be analysed both in levels and in changes.\(^{35}\)

A.3 Network Effects

Two measures of network: 1) proxy - address (camp) and nationality, 2) directly ask in the follow-up survey, if their friends participated in the NGO’s CV sessions and if, yes, ask for the names.

Possible outcomes: spillovers within the network, sharing information about vacancies and referrals. This would allow us to evaluate the extent to which results depend on whether contacts/friends of the focal individual have been treated as well. In addition, this also allows us to evaluate the extent to which knowledge of a friend being treated has any effect.

\(^{35}\)Clearly, because of the randomisation the two results should be identical, but adding pre-treatment levels as controls might lead to more precise estimates, which could be important given our limited sample size.
A.4 Inclusion Rules

All observations, for which we have CV information, pre- and post-treatment survey, will be included in the analysis. Participants who are not eligible for the experiment (see eligibility rules in Section 3.2) will be excluded from the analysis.

A.5 Statistical Model Specifications

We will start by comparing the means between the treatment and the control group as the treatment should be orthogonal to the covariates.

We will complement the analysis with OLS regressions with treatment as the main independent variable. Although these may be too demanding given our sample size, we will include some specifications in which we add location and time fixed effects to our regressions: as the entry into the experiment spans over several months and locations, we expect significant differences between the locations over time, which will lower precision of the unconditional estimates. The coefficient of the treatment variable will, hence, measure the "intention-to-treat" effect within a given location for a given time.

For medium-term labour market outcomes and integration results, we will estimate both "intention-to-treat" effects and LATE using the treatment variable as an instrument for (earlier) employment.

We then will perform heterogeneity analysis and robustness checks with covariates (education, years of work experience, region of origin), for which the balance tests indicates significant differences.

There might be an opportunity to merge our data with some data from the lab, where some of our Arab speaking candidates have participated in an experiment. We could potentially get measures of risk taking and time preferences. However it is not yet clear if enough people will be part of both studies so that a meaningful analysis is feasible.

We intend to cluster observations at the location and time level. We have conducted CV preparation sessions around five different locations: EWH, Kammerspiele, Gruenwald, Caritas, Bayernkaserne.

A.6 Balance Tables

We will present balance Tables for the following variables: Country of origin (largest countries of origin), months in Germany, family in Germany, years of education, years of work experience, date of job search start, previous contact with employer, received job offer previously, uses Internet in job search, has language difficulties in job search process, does not know where to search, level of German, currently in German class, integration index, return intention. These all correspond to questions in the pre-treatment survey.

A.7 Heterogeneity

For both labour market and integration outcomes, there are several interesting dimensions of heterogeneity, which we intend to analyse. First, by nationality or by nationality group.\footnote{Given our sample size, it is unlikely that we will be able to get meaningful results if we analyse each individual country of origin separately.} We might be able to analyse the countries with many refugees (Syria, Afghanistan and Nigeria) separately, while the rest of
the countries can be grouped as other Arab countries, other Asian countries, other Subsaharan African Countries.

Another dimension of heterogeneity will be the level of education. Here, we can group people according to the highest school level completed (no school, primary completed and some secondary, secondary completed and some university, university completed).

Other interesting dimensions of heterogeneity will be age group, single refugees versus refugees that came with their family, asylum opportunities, and duration of stay in Germany.
**Consent form**

**Consent form: University of Munich**

Researchers at the University of Munich (Giesing Yvonne, Nadzeya Laurentsyeva) and the Ifo Institute (Michele Battisti) are planning a research project to study the integration of job-searching refugees in the German labour market. The purpose is to find out how refugees can be integrated into the labor market, which characteristics are especially important and how this impacts further integration.

The datasets that contain information about your CV and questions about integration in Germany are analysed in Munich in a pseudonymous form and information that allows personal reference will be stored separately for data security reasons. Only employees of the research team of the University of Munich and the Ifo Institute will have access to the data. The data will be saved on local files on computers of the LMU and the Ifo.

Your personal data is used only for this research project. It will not be passed to third parties for other purposes. As soon as the research purpose permits, the information that creates a personal reference will be anonymised or destroyed for data security reasons. The data is processed pseudonymously, so that no identification of individuals is possible. Anonymised and aggregated results will be published.

Your consent is voluntary. By withholding your consent you incur no disadvantages. You can revoke your consent for the future at any time and request deletion or destruction of your data.

I have received the information about the research project. I agree with the intended use of my data and currently have no further questions. For questions I can write to yvonne.giesing@econ.lmu.de

________________________________________

Date, Place, Signature
Dear NAME,

Kindly find your German CV attached to this email. There is a chance that we match you with a possible employer from our database. If we find an employer that is looking for someone with your qualifications, we will send your CV and they will contact you directly. While we do our best to support you in the job search, we cannot guarantee that we can find you a suitable employer, this is why we highly encourage you to keep searching for a job on your own.

Here are some job-search tips for you:

- Register at the Agentur für Arbeit
  The Agentur für Arbeit helps job-seekers by providing advice and finding job vacancies.
- To register, you need to go there in person, once you have your work permit, and fill a form. Do not forget to take your ID (Ausweiss) and certificates if available!
- To get the address of the Agentur für Arbeit in your area, visit this link https://www.muenchen.de/rathaus/dienstleistungsfinder.html, search for “Arbeitsvermittlung” and then give in your address.
- Please, visit their website for further information: www.arbeitsagentur.de
- Use job-search websites Many people in Germany find jobs online, so you can additionally look for jobs using websites like:
  - http://www.monster.de
  - http://www.stepstone.de
  - http://www.jobpilot.de
  - http://www.jobboerse.de

- Continue to learn German, as this will greatly improve your chances of finding a job

If you find an employer through your own search and need support in preparing for the interview or in understanding the contract, please, contact us at this email address (e-mail address) and we would be happy to assist you.

In order to be able to contact you regarding possible job vacancies and other activities, it is extremely important for us to have your updated contact details (e-mail, phone, and whatsapp number). Please, let us know as soon as you change any of your contact details.

Please also like our Facebook Page to stay updated about new events:

Link to Facebook page

If your friends are also looking for a job, please recommend them to meet us every Thursday 3-5pm at address.

We wish you good luck and best regards,

Your NGO Team