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The role of length of asylum procedure and legal status in the labour market integration of refugees in Germany***

Abstract: This study examines the role of the length of the asylum procedure and legal status in the integration process among recently arrived refugees in Germany. In particular, we focus on the transition to the first German language course and the transition to first employment. For our empirical investigation, we rely on the newest data from the IAB-BAMF-SOEP-Refugee Sample and apply survival analyses techniques. The results show that both procedure length and legal status shape integration processes. First, lengthy asylum procedures impede investments in acquisition of the language of the host society and delay labour market entry. Second, having a decision on the asylum application (irrespective of the outcome) increases the transition rate to the first job and promotes entry into the first language course. Presumably, legal certainty and a corresponding residence permit (even with a shorter-term perspective) are more decisive for the take-up of employment or investment in host country language acquisition. Beyond the outcome and the length of the asylum procedure, the origin country matters: refugees arriving from countries whose citizens have rather high prospects of remaining are quicker to take up a language course, whereas refugees with poor staying prospects manage to enter the labour market promptly to eventually improve their prospects of staying in Germany. We conclude that policymakers should prioritize efficient asylum procedures to create timely legal certainty and to encourage refugees' integration process.

Keywords: Refugees; Asylum Procedure Length; Legal Status; IAB-BAMF-SOEP Survey Of Refugees In Germany.

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*** We would like to thank all those who commented on the earlier presentations of this work at the following events: the Spring Meeting of the ISA Research Committee on Social Stratification and Mobility (RC28) in Seoul (May 2018), the 15th IMISCOE Annual Conference in Barcelona (July 2018), XI European Conference of the Fondazione Rudolfo De Benedetti (FRDB) in Calabria (2019) and the Immigrants´ Integration: Educational Opportunities & Life Chances conference in Monte Verità (June 2019).

Die Auswirkungen der Länge von Asylverfahren und des Asylstatus auf die Arbeitsmarktintegration von Geflüchteten

Zusammenfassung: Die vorliegende Studie untersucht die Rolle der Asylverfahrensdauer und des rechtlichen Status im Integrationsprozess von kürzlich in Deutschland angekommenen Flüchtlingen. Insbesondere konzentrieren wir uns auf den Übergang in den ersten Deutschkurs und den Übergang in die erste Erwerbstätigkeit. Für unsere empirische Untersuchung stützen wir uns auf die neuesten Daten aus der IAB-BAMF-SOEP-Befragung von Geflüchteten und wenden Verweildauermodelle an. Die Ergebnisse zeigen, dass sowohl die Verfahrensdauer als auch der Rechtsstatus die Integrationsprozesse prägen. Erstens behindern langwierige Asylverfahren Investitionen in den Erwerb der deutschen Sprache und verzögern den Eintritt in den Arbeitsmarkt. Zweitens erhöht die Entscheidung über den Asylantrag (unabhängig vom Ergebnis) die Übergangsrate in die erste Erwerbstätigkeit und fördert den Einstieg in den ersten Sprachkurs. Vermutlich sind Rechtssicherheit und eine entsprechende Aufenthaltserlaubnis (auch mit kurzfristiger Perspektive) für die Aufnahme einer Erwerbstätigkeit oder Investition in den Spracherwerb im Gastland entscheidender. Über das Ergebnis und die Dauer des Asylverfahrens hinaus ist das Herkunftsland von Bedeutung: Flüchtlinge aus Ländern mit relativ hohen Aufenthaltsaussichten übergehen schneller in einen Sprachkurs, während Flüchtlinge mit schlechten Aufenthaltsaussichten schneller auf den Arbeitsmarkt drängen, eventuell um ihre Aussichten auf einen Aufenthalt in Deutschland zu verbessern. Die politischen Entscheidungsträger sollten dementsprechend effiziente Asylverfahren priorisieren, um rechtzeitige Rechtssicherheit zu schaffen und den Integrationsprozess der Flüchtlinge zu fördern.

Stichworte: Geflüchtete; Länge von Asylverfahren; Asylstatus; Arbeitsmarktintegration; IAB-BAMF-SOEP Befragung von Geflüchteten

1 Introduction

With the mass influx of refugees into Europe during recent years, the question of their economic and social integration has received growing attention all over the world. Particularly due to their insecure legal status during asylum procedures – in which refugees' access to the labour market is (usually) restricted – the successful economic and social integration of refugees is challenging. However, not only their legal status per se but also the length of the asylum procedure may be detrimental for the social and economic integration of the newly arrived due to legal insecurity and associated psychological and physical health risks (e.g., Laban et al. 2004), devaluation of human capital and potential decline in working aspirations during the waiting period (e.g., da Lomba 2010; Smyth/Kum 2010). In many destination

countries, refugees' residential allocation is subject to state dispersal policies, often putting them in areas isolated from the social networks of previously arrived migrants (Bakker/Dagevos/Engbersen 2014; Dustmann/Preston/Brell 2019). Correspondingly, longer asylum procedures suggest lasting dearth of social networks, which may be critical due to the importance of social capital for the job search process. These factors, in turn, may postpone or even impede the process of integration into the labour market and society of the host country.

To our knowledge, the role of the asylum procedure in refugees' integration process has so far been rarely empirically studied. While it has been shown that lengthy asylum procedures have a negative effect on refugees' employment probability in Switzerland (Hainmueller/Hangartner/Lawrence 2016) and in the Netherlands (Bakker et al. 2014; De Vroome/van Tubergen 2010), the knowledge on the role of asylum status change – i.e., moving from being in the asylum procedure to an approved or rejected status – is scant. Moreover, these studies focused on a rather select population of refugees who managed to stay in the destination country, i.e., those whose status was approved. This is unfortunate given that the refugees with an approved status are not randomly selected; in fact, evidence points to selection on positive characteristics of applicants (Kosyakova/Brücker 2020). Given the changes in recent years in the legislation targeted at refugees' integration in Germany (see next section) and other Western countries (Marbach/Hainmueller/Hangartner 2018), refugees may already have access to the labour market during the wait for the decision on their asylum application. In this sense, narrowing the focus to only those with an approved status would not truly give a full picture of the refugees' integration process.

We contribute to the labour market and migration literature by focusing on the economic integration of refugees who arrived in recent years in Germany, one of the main receiving countries for humanitarian migration in the European Union (EU) and the OECD. In particular, we examine whether and to what extent the length of the asylum procedure in combination with current legal status affects the transition rate to first employment both directly and indirectly through country-specific human capital investments, approached here in terms of the transition to the first German language course.[1] A successful transition to first employment in the host society is considered a stepping-stone for the successful structural integration of newcomers. A longer entry process often leads to devaluation of previous accumulated human capital, which, in turn, increases the risks of underqualified employment. Moreover, the social cost of integration (housing and care, lower tax revenues and increased social spending) can grow, refugees' social integration is slowed down, and the entire process of assimilation is extended. Thus, the need for empirical evidence on the role of legal status and the length of the asylum procedure in the

1 Some of the results were previously published in Brücker, Jaschke, and Kosyakova (2019 b:42–29) and Brenzel and Kosyakova (2019).

timing of the first employment is high, not least to make economic policy recommendations and to identify possible causes of delayed integration processes.

To appropriately address our research question, we rely on longitudinal data – the IAB-BAMF-SOEP Sample of Refugees in Germany (Brücker et al. 2019; Brücker/Rother/Schupp 2017) – in which monthly information on the asylum procedure status and the duration in months of the asylum procedure as well as dates of first employment and education histories can be calculated exactly. These retrospective data allow us to address the impact of the asylum procedure length and current legal status on the refugees' (1) transition rate to first employment and (2) enrolment in their first German language course in Germany from a longitudinal perspective, thus taking into account the timing of the events. The rich dataset also allows us to control for various pre- and postmigration characteristics, thereby alleviating the issue of unobserved heterogeneity.

2 Refugees' integration in Germany: legal framework

2.1 Types of protection and rejection

The main authority responsible for the processing of the asylum procedure in Germany is the Federal Office for Migration and Refugees (BAMF). Protection in Germany can be granted to individuals who were able to prove persecution for political, religious, ethnic and similar reasons in their countries of origin (*asylum* under German constitution; *refugee protection* under the 1951 Refugee Convention), to those who would face serious threats (e.g., due to wars, civil wars and similar forms of violence) if forced to return to their origin countries (*subsidiary protection*), or to individuals whose return to their country of origin is not possible due to concrete danger to life, limb or liberty, including life-threatening short-term situations in their countries of origin (*national ban on deportation*).[2]

Asylum application of applicants from so-called "safe countries of origin" (*sichere Herkunftsländer*)[3] are generally rejected, except when the applicants can supply facts validating persecution as outlined above (for further details, see Asylgesetz -AsylG 2015; BAMF 2016). In principle, those receiving a negative decision are granted one week to leave the country voluntarily. However, they may be eligible for a temporary suspension of deportation, i.e., a tolerated stay in Germany (*Duldung*), or a time-limited residence permit if deportation impediments exist that were not considered during the asylum process. Despite the highly uncertain legal status and risks of deportation, for many, deportation is not a realistic option due to factors

2 Individuals who arrive within the framework of resettlement and similar programs are not considered here, since they are selected in their origin or transit countries and do not have to apply for protection status.

3 Safe countries of origin comprise, in addition to EU countries, Ghana and Senegal (until November 2014); Bosnia and Herzegovina, Macedonia, and Serbia (since 6 November 2014); and Albania, Kosovo, and Montenegro (since 24 October 2015).

such as the unwillingness of the sending countries to take them back, missing papers, security conditions in their country of origin, or personal reasons (such as poor health).

In view of the expanding number of asylum applications since the fall of 2015 and the growing administrative burden, German authorities introduced the so-called integrated refugee management system, with the overarching goal of promoting refugees' integration process. To speed up the administration of the asylum procedure, applicants were clustered into four groups according to their countries of origin. The criteria for this cluster system (*Clusterverfahren*) were country of origin (Cluster A: countries of origin with a high protection rate of >50 percent; Cluster B: safe countries of origin), expected complexity (Cluster C: complex cases), and route of travel (Cluster D: assessment of whether applicants should be transferred back to other EU states in accordance with the Dublin Agreement). Cluster A applicants – refugees with good prospects to remain (*gute Bleibeperspektive*) – were treated as the highest priority. The concept of the cluster system was first introduced in late 2015, and after several pilot projects, it was implemented nationwide in March 2016; it was effective until March 2017 (for further details, see Grote 2018). However, even before implementing the cluster system, the BAMF had already begun applying measures to accelerate the processing of straightforward asylum applications, i.e., prioritization of specific countries similar to Clusters A and B (Kosyakova/Brücker 2020).

2.2 Access to the German labour market and language courses

In recent years, the legal conditions determining refugees' access to the German labour market have changed repeatedly; in principle, their labour market access is determined by their legal status and country of origin. In particular, refugees with an approved asylum application enjoy unlimited access to the labour market equal to that of German citizens. In turn, asylum seekers (i.e., those still in the asylum procedure) and those with tolerated status obtain a work permit after a blocking period of three months starting from their time of arrival in Germany (§ 61 AsylG). Following this period, both groups – unless they come from safe countries of origin and applied for asylum after 31 August 2015 – may access the labour market if certain conditions are met. These conditions include (1) approval from the relevant immigration office, (2) a comparability test regarding the conditions of work and remuneration, and (3) in certain districts, a test determining whether an alternative person with priority status (i.e., a German or privileged foreigner such as an EU migrant or refugee with an approved asylum application) is able to fill the relevant position (Brücker/Jaschke/Kosyakova 2019 a).

Refugees' access to language courses depends on the type of course chosen. Basically, we may distinguish between publicly and not publicly funded courses. The first category includes, for instance, the integration courses offered by the BAMF

(see, e.g., Brücker et al. 2019 for the description of publicly funded language courses). As with labour market access, refugees with approved status have full access to publicly funded language courses or are even obliged to participate in a BAMF integration course. Since November 2015, asylum seekers from countries with good prospects to remain[4] and those with tolerated status can apply for a BAMF integration course. Courses that are not publicly funded may include, inter alia, ones provided by volunteers or similar organizations or universities. Access to these courses or private language courses is not regulated. Consequently, there are no legal entry requirements that may exclude certain groups of people.

3 Role of legal status and length of asylum procedure for refugees' structural integration

3.1 Status of the asylum application

The labour market integration process of economic migrants and refugees is usually explained by their distinct motives for migration: typically, economic migrants base their migration and destination country decisions on economic considerations, whereas refugees are (often) forced to flee for political reasons and thus base their migration decision on considerations other than economic benefits. As a result, refugees are less positively selected on human capital endowments, such as education, age and language proficiency; physical and mental health; or social ties within the destination country – resources relevant for the social integration of immigrants in the destination country (Borjas 1989; Chiswick 1999; Dustmann et al. 2017). However, economic performance in the destination country is highly associated with refugees' legal status, since their labour market access during asylum processing is, in many cases, limited (Hainmueller et al. 2016; van Tubergen 2011).

From the demand-side perspective, legal status may also play a crucial role, since potential employers are likely to be less willing to offer jobs to or invest in vocational training of refugees with pending or rejected asylum requests due to the refugees' uncertain prospects and, hence, unclear time horizons of their potential stay in Germany. Furthermore, the surmounting of institutional and bureaucratic barriers required to hire asylum seekers or those with tolerated status (see Section 2.2) may be considered too burdensome by German employers. Anecdotal evidence by German employers and asylum seekers themselves suggests that the hiring conditions are not clearly outlined and create considerable uncertainty, such that employers may be reluctant to offer any jobs to asylum seekers and tolerated refugees (DIHK 2018). As argued above, refugees are less positively selected on various observed and unobserved characteristics that might be relevant for the labour market. If employers expect higher work motivation from economic migrants compared to refugees, they could be more reluctant to hire the latter compared to the former group.

4 These include Syria, Iraq, Iran, Eritrea (since November 2015), and Somalia (since August 2016).

Bringing these aspects together, we may expect that a positive decision on an asylum application promotes labour market entry because once refugees' status is approved, and protection granted – independent of whether the protection is temporary or permanent – legal limitations on labour market access no longer exist. Although under certain conditions German authorities have granted labour market access to refugees with pending asylum requests or to those with tolerated status, the associated bureaucratic hurdles (see Section 2.2) as well as uncertain stay prospects are likely to deter potential employers from offering jobs to refugees with pending or rejected asylum requests. In this context, we may hypothesize the following:

H1 a: The transition to first employment is accelerated for refugees with an approved status compared to those with a rejected or pending status.

Legal status can also indirectly affect labour market integration, for example, by influencing refugees' investment into country-specific human capital, here approached via German language acquisition – a fundamental basis for successful and long-term labour market integration in Germany and elsewhere (Chiswick/Miller 1995). Certain language programs, such as integration courses, are not accessible to all applicants during their asylum procedures (see Section 2.4). Accordingly, their language acquisition via publicly funded programs is limited or delayed. However, not only institutional constraints but also individual incentives to invest in country-specific human capital may play an essential role. The key element of such investment decisions is the length of the investment horizon (Cortes 2004). Overall, due to a lack of options to return home, refugees are argued to be more responsive than economic migrants to investments in country-specific human capital. However, as long as their asylum procedure is ongoing, applicants perceive their chances of being able to remain in the country as uncertain (Phillimore 2011). Refugees with a negative decision are even more likely to face uncertainty regarding their stay. Hence, any investment they make in learning German could be in vain, which may downgrade their motivation to learn the language. Thus, we forecast the following:

H2: The transition to the first language course is accelerated for refugees with an approved status compared to those with a rejected or pending status.

Refugees with an approved status may be obliged to participate in an integration course (see Section 2.4). However, due to an intensive schedule of integration courses, taking up work at the same time could be challenging. From the long-run integration perspective, granting asylum does not necessarily foster immediate labour market entry but can initially increase individual motivation to learn German or invest in formal education to attain higher wages and a better job match. At the same time, refugees with tolerated status might be motivated to seek employment in an attempt to increase their chances of gaining a residence permit in the long run – German residency regulations foresee that applicants who earn their own living may be granted a residence permit after living in Germany for eight years (§ 25 b

AufenthG).[5] Some German employers, in turn, might be prepared to utilize the precariousness of the situation that refugees with tolerated status face and offer them jobs with unattractive working conditions or lower prestige or wages. Mutual benefits for both employers and job seekers, the two sides in the matching process (cf. Kogan 2016), may ensure faster labour market entry of tolerated refugees. Against this background, the labour market integration of refugees with an approved status may take longer than that of those with tolerated status, because the former may initially prioritize investing in language skills. Hence, in contrast to *H1 a*, we may expect the following:

H1 b: The transition to first employment is accelerated for refugees with a rejected status compared to those with an approved or pending status.

3.2 Length of the asylum procedure

The length of the asylum procedure is a further factor that may delay refugees' structural integration for the following reasons. First, the skills-atrophy theory (Phelps 1972) predicts that skills lose value if they are not used for labour market activity. Hence, given that labour market access is limited or may even be restricted during the asylum process, lengthy asylum procedures may stimulate devaluation of human capital and skills atrophy (Smyth/Kum 2010). This, in turn, reduces labour market opportunities and may postpone labour market entry. Second, independent of the country from which the applicant originates, the asylum procedure implies insecure legal prospects until the legal status is clarified. Accordingly, the longer the asylum process takes, the longer one is exposed to this legal insecurity. This exposure to insecurity as well as to nonemployment may depress working aspirations (Hainmueller et al. 2016). Third, the feeling of insecurity has been found to be associated with worsened psychosocial health and increased risks of anxiety and depression (e.g., Laban et al. 2004) and may exacerbate the trauma refugees have suffered in their countries of origin or during flight (Coffey et al. 2010). Given that healthcare access is heavily restricted during the asylum process in Germany (Jaschke/Kosyakova 2019) as well as in other countries (e.g., Norredam/Mygind/Krasnik 2006), a longer asylum process is likely to result in increased health risks and consequently a slower integration process. Fourth, longer isolation from social resources from (potential) social networks due to dispersal policies may delay refugees' job search and job finding process (Bakker et al. 2014). Hence, we expect the following:

5 Note that the new draft Act for Skilled Labour Immigration of the German government also foresees offering an "employment toleration", i.e., prolongation of the time (up to 30 months) during which the individual cannot be deported (see Brücker, Jaschke, et al. 2019 a).

H3 a: The transition to first employment is postponed with the length of the asylum procedure.

Similar mechanisms of legal insecurity – and related depressed working aspirations as well as health hazards – likely reduce the incentives and motivation to invest in host country language acquisition. The unclear staying prospects in the host country during the ongoing asylum process imply unclear time horizons for immigrants, which are likely to affect their subsequent human capital investment strategy (Cortes 2004). In this regard, longer asylum procedures could reduce human capital investment incentives and postpone the transition to language courses. Consequently, our prediction is as follows:

H4: The transition to the first language course is postponed with the length of the asylum procedure.

There are, however, several arguments anticipating a positive relationship between the length of asylum procedures and employment opportunities. The so-called adaptation hypothesis asserts that immigrants need time to revive or to recoup the material, cultural and social resources necessary for successful and sustainable integration (e.g., Ryan/Dooley/Benson 2008). For refuges in particular, a protracted asylum process implies a longer duration of stay, which could be effectively used to gather relevant information about societal functioning and the labour market, to learn about job opportunities, to invest in host country language acquisition, to generate relevant social networks and contacts, or to have their qualifications from abroad recognized (see also Hvidtfeldt et al. 2018). In line with this hypothesis, some previous empirical studies point to a positive association between employment chances and waiting time in asylum processing (Hvidtfeldt et al. 2018; Steiber/Vogtenhuber 2019). The introduction of prioritization rules and the cluster system contributed to prompt asylum decisions (BAMF 2017), particularly for asylum seekers from prioritized countries: for some of them, the average waiting time was less than 4 months in 2015 (e.g., Albania, Kosovo, and Syria; see Deutscher Bundestag 2016:14). This short duration of stay might be too short for prompt labour market entry. Accordingly, the adaptation hypotheses would imply the following:

H3 b: The transition to first employment is accelerated with the length of the asylum procedure.

4 Data and method

4.1 Data and sample

This study uses the factually anonymous data of a recent longitudinal household survey conducted in Germany, the IAB-BAMF-SOEP Survey of Refugees (2019), wave 2. The data were sampled from the Central Register of Foreign Nationals (*Ausländerzentralregister*, AZR). The second wave was carried out in 2017, and the response rate amounted to 67 percent of the first-wave participants (Brücker et al.

2019). An additional sample was added in 2017 to increase the sample size and to cover more recent arrivals. Altogether, the 2017 data include 2965 first-time respondents and 2630 panel respondents and are representative of the refugee population in Germany that arrived from January 1, 2013, to December 31, 2016 (irrespective of the status of their asylum applications) and was still living in Germany at the time of the survey.

For our empirical analysis, we restrict the initial sample of the 2017 (first-time and panel) respondents as follows. We consider the individuals aged between 16 and 64 at the time of their arrival in Germany to ensure that they were (still) fully available to enter the German labour market (not applicable to 134 observations). We further excluded (1) individuals who arrived before January 2013 or whose arrival date is missing (281 observations), (2) individuals who were identified as nonrefugees (94 observations), (3) stateless individuals and those with missing information on the country of origin, because the asylum process of those individuals is likely to be different (77 observations), (4) those arriving within the resettlement and similar programs framework or for whom this information is missing (86 observation), (5) respondents for whom this asylum application was not the first (167 observations), and (6) respondents with missing or implausible data regarding dates of registration, asylum application or decision (applicable to 807 observations).[6] To address the legislation amendments in Germany, we further excluded respondents with no access to the German labour market, i.e., asylum seekers from safe countries of origin who applied for asylum after 31 August 2015 – they have been banned from work since 24 October 2015 (15 observations).

For the analysis of labour market integration, respondents with missing or inconsistent values on their first employment dates are excluded (71 observations), resulting in an analytical sample of 3863 individuals (69 percent of the original data). Likewise, for the analysis of investments in German language acquisition, respondents with missing or inconsistent values on dates of entry into their first German course[7] are excluded (213 observations), resulting in an analytical sample of 3721 individuals (67 percent of the original data).

For the following analysis, the data are organized as person-month observations to consider the dynamics of changes in asylum status and the length of individual asylum procedures. This means that each row of the dataset corresponds to a time period of one month. For each individual in the sample, the period of observation begins in the month and year of the asylum application in Germany. The endpoint

6 For some cases, missing information on the application date was replaced with the registration date in Germany or with information provided by household members. Exclusion of these cases did not change any of our conclusions.

7 Since the role of asylum process duration as well as asylum application status change cannot be estimated for cases in which the reported first course entry occurred before the asylum application, we excluded those respondents from the analyses.

of the observation period depends on the analysis we consider (we return to this below). For the analyses of labour market entry, the individual spells after a negative decision on the asylum claim and the request to leave Germany are dropped since these categories of refugees are prohibited from entering the German labour market after the decision is received (see Section 2.2).

4.2 Dependent variables and method

To analyse refugees' labour market integration, we focus on the transition rate (i.e., hazard rate) to first employment, which encompasses full- and part-time, marginal and irregular employment as well as vocational training and internships. Unfortunately, the data do not allow us to distinguish among different employment types. The period of observation begins in the month and year of application for asylum[8] and either ends in the month and year of first employment entry or is right-censored at the date of the interview (if entry into first employment has not yet occurred). This leads to a total of 92975 person-month observations. The dependent variable is whether an individual entered first employment in Germany in a given month *t*. This event occurred for 767 person-month observations and is coded 1 (whereas 0 means no first employment entry in month *t*).

We address investments into German language acquisition in terms of the transition to the first language course (either a publicly funded[9] or a private language course). Here, we apply a similar procedure as for the transition to first employment. The observation period starts in the month and year of application for asylum and ends either in the month and year of entry into the first language course or is right-censored at the interview date. Here, the data include 58617 person-month observations. For 2727 person-month observations, we observe enrolment in the first language course, coded as 1 (whereas 0 means no first language course entry in month *t*).

Not all refugees had already found their first employment. However, this does not imply they will never be employed – they might, for example, enter the labour market soon after being interviewed. Failing to account for such cases in the analysis could bias the results, because only those who entered the labour market 'in time' for the survey would be represented. The same applies for enrolment in a first language course. To prevent such distortion of the results and to consider data from all

8 In the sensitivity analysis, we consider the month when an asylum seeker is allowed to enter the labour market in Germany as individual-specific starting points according to the legal conditions of every single individual. Our results were robust to these specifications.

9 Publicly funded courses include, for example, integration courses, ESF-BAMF courses for German for work, BA introductory German language training courses (pursuant to Section 421 of the German Social Code (SGB) Book III), and the programs 'Perspectives for Refugees' (BA), 'Perspectives for Adolescent Refugees' (BA), 'Perspectives for Female Refugees' (BA) and 'KompAS' (BA and BMAS). Whether refugees voluntarily took part in these programs or were obliged to take part cannot be addressed here.

participants, we employ survival analysis techniques (Blossfeld/Golsch/Rohwer 2007). The key statistical concept within the survival analysis is the transition rate (i.e., hazard rate), which represents the probability of experiencing an event (labour market entry or enrolment into the first German language course) in month *t* given that by the beginning of *t*, no event had occurred. Accordingly, a higher transition rate implies both a faster transition and a higher (monthly) probability of transition.

Our time metric is the number of months since respondents' application for asylum. For transition to the first job, we specify the duration dependence of the baseline hazard as a Gompertz function, which assumes a monotonically decreasing transition rate to first employment. The Gompertz function proved optimal in preliminary tests of functional forms. For transition to the first language course, the Weibull function showed superior goodness of model fit and is, hence, implemented there.[10]

4.3 Explanatory and control variables

The IAB-BAMF-SOEP Survey of Refugees includes detailed information on the most recent asylum application in Germany, application date, current status and type and date of decision obtained. This enables us to calculate the duration of the asylum procedure and its outcome precisely for each person-month observation. Accordingly, the *length of the asylum procedure* is a time-dependent variable calculated for each person-month observation. This procedure length increases by one month for each person-month observation that follows and is fixed at the month and year of the decision date. It continues to grow for those with no decision by the censoring time-point. Likewise, *asylum application status* is a time-dependent variable capturing the status of the asylum application for each person-month observation. It is coded as (1) pending, as long as the decision has not (yet) been made, and changes to (2) approved or (3) rejected in the month of the application decision.

In our multivariate analysis, we control for an array of potential confounders that may distort the relationship between our explanatory variables and integration outcomes (details on the variables' construction can be found in Table A1 in the Appendix). First, to absorb any systematic differences in any characteristic across countries of origin, we account for (time-constant) *country (group) of origin* fixed effects, aggregated into 11 groups: Syria, Afghanistan, Iraq, Eritrea, Iran, the remaining MENA countries, Russia, the remaining successor states of the former USSR, the West Balkans, the remaining countries in Africa, and the rest of the world. The inclusion of the origin country (group) fixed effects, together with a time-varying

10 We used the Akaike information criterion (AIC), Bayesian information criterion (BIC), and chi-square tests to determine which of seven specifications of the duration dependence in the baseline hazards (exponential, piecewise constant, Weibull, Gompertz, log-normal, log-logistic, or generalized gamma) best fit the data in our models for each outcome.

indicator for origin countries *prioritized in the asylum procedure*, allows us to account for the legislation amendments concerned with the country group of origin (see also Kosyakova/Brücker 2020).

As for further demographic characteristics, we include an indicator for *female* (time-constant), *having children under 6 living in the household* (time-dependent), an interaction effect between gender and children under 6 living in the household (time-dependent), *number of children under 18 living in the household* (time-dependent), *age upon arrival* (time-constant), time in *months between arrival and asylum application* (time-constant) and *arrival cohort* (time-constant). For refugees with longer travel routes from their origin to destination countries – particularly for those entering transition countries – deprecation of their human capital could have been started long before the asylum process, while the process itself would only marginally prolong such depreciation in the destination country. Hence, we control for *years between leaving the country of origin and arriving to Germany* (time-constant).

We proxy premigration human capital via *years of education*, *German language proficiency* and *working experience* – all of them are measured at the time of arrival (time-constant). Premigration social networks are addressed with an indicator for having *support from relatives or acquaintances living in Germany* before arrival (time-constant). Previous research has shown that human and social capital characteristics positively affect refugees' integration process, on the one hand (Lamba 2003; van Tubergen 2011), and the asylum process, on the other hand (Keith/Holmes 2009; Kosyakova/Brücker 2020). Refugees living in a private apartment or home enjoy a greater number of new contacts with Germans and more intense contacts with Germans compared to refugees living in accommodation centres (Brücker/Rother/Schupp 2016). To proxy this, we account for respondents' initial living arrangements and include an indicator for *living in a private apartment at arrival* (time-constant). To account for motivational aspects, we include an indicator for *economic reasons for migration* (time-constant), an indicator for having *chosen Germany as a destination country because of Germany's asylum procedure* (time-constant) and an indicator for having *no intentions to work* in the future (at the time of the survey; time-constant).

We further include fixed effects for the *federal state of first arrival* (to absorb time-invariant or long-lasting differences across regions), fixed effects for the *survey sample* or a *panel respondent* (to absorb systematic differences related to the survey design). In the analysis of labour market entry, we proxy local economic conditions at arrival via *unemployment rate in the district and year of arrival* (time-constant). For language course entry, we consider a logarithmic function of the *share of foreigners in the district and year of arrival*. We assume that a greater share of foreigners correlates positively with a local supply of language courses. For both analyses, we fix the local conditions to the district and year of arrival because the factual place of resi-

dence where the respondents entered their first job or language course is not available. We account for enrolment and graduation *status* into and from *language courses* (time-dependent) in the analysis on labour market entry. Participation in a language course is likely to be a competing event for labour market entry, whereas finishing a language course may promote it. For similar reasons, we control for *labour market entry* (time-dependent) in the analysis on language acquisition. In all analyses, missing values are controlled for via the inclusion of dummy variables that indicates whether data for any specific control variable were missing.

Table A2 in the Appendix provides core descriptive statistics on the explanatory and control variables used in the analysis. For these purposes, the time-dependent variables are captured in the month of the corresponding transition or in the month when the data are right-censored (interview date). For the descriptive analyses, the data were weighted using the standard weight variable provided with the IAB-BAMF-SOEP Survey of Refugees (2019).

5 Results

5.1 Asylum procedure duration and asylum status

In 2017, approximately 90 percent of the asylum applications of the population of interest had been decided. The largest group – 78 percent – had received a positive decision on their asylum applications. In 12 percent of cases, the applications had been rejected, and an additional 10 percent had not yet received a decision on their application. Refugees had to wait approximately six months for a positive decision and nearly twice as long (11 months) for a negative decision (see Figure A1 in the Appendix).[11] The average length of the asylum procedure for asylum seekers with pending applications at the time of the survey amounted to 21 months. Refugees whose asylum applications had been rejected or were still pending therefore faced a significantly longer period of legal uncertainty than those whose asylum applications had been approved.

Taking up gainful employment is one of the fundamental aspects of sustainable structural integration that enables active participation in society. Investing into host country language competency facilitates integration into the labour market and is accordingly promoted by policy programs. Hence, participation in language courses may be expected to precede integration into the labour market. As Table 1 indicates, over two-thirds of refugees had taken up a language course before entering their first employment,[12] and 28 percent of them had already managed to find employ-

11 Refugees whose applications were rejected were less likely to participate in the second wave of the survey. Hence, it cannot be ruled out that those with a rapid rejection already left or had to leave Germany by the interview time point. Accordingly, the length of asylum procedures might be overestimated in the sample.

12 Half of the refugees who had enrolled in a German course began with an integration course, followed by 37 percent who had enrolled in unspecified language courses.

ment afterwards. A nonnegligible share of nine percent found employment before enrolling in a language course, with approximately 40 percent of this group subsequently taking a language course. The temporal course of language acquisition and employment uptake, thus, generally conforms to the pattern predicted by theoretical models of the labour market and is also promoted by publicly funded programs. On the other hand, finding employment before enrolling in a language course does not necessarily mean that refugees fail or neglect to learn the language of the host society; in many cases, language acquisition is simply postponed.

Table 1: Enrolment into language courses and first employment entry: trajectory types

Order of action taken	Share in percent
Enrolment into the first language course before entry into first employment	**69.59**
of which: subsequent entry in first employment	25.15
Entry into first employment before enrolment into the first language course	**9.19**
of which: subsequent enrolment in the first language course	39.18
Simultaneous enrolment in the first language course and entry into first employment	**0.49**
Neither enrolment in the first language course nor entry into first employment	**18.65**
Other/unclear	**2.08**
Total	100
Total observations	3932

Source: IAB-BAMF-SOEP Survey of Refugees in Germany 2017, own calculations. Design weights are used.

How does employment entry probability correlate with the status of the asylum application? Panel A in Table 2 addresses this question and presents the share of refugees with first employment entry by the status of their asylum application at the date of interview and the timing of first employment entry. In total, 26 percent of refugees had already entered first employment. This is particularly pronounced among refugees with an approved or pending application. In turn, only 22 percent of those with rejected applications entered their first employment. Of the approved refugees who managed their first employment entry, approximately 89 percent entered after and 11 percent before their asylum applications were decided. By contrast, slightly more than half of those with rejected applications had already taken up their first employment while their asylum procedure was still ongoing. Nevertheless, this does not necessarily indicate that those with rejected application take up employment faster than those with approved application, since the latter generally receive their decisions sooner (cf. Figure A1 in the Appendix).

Table 2: Transition into the first job and into the first language courses by status of asylum application, in percent

		Status of asylum application at the interview time		
	Total	Approved	Rejected [1)]	Pending
Panel A: Transition to first employment				
Entered	25.99	25.03	21.62	29.03
of which: entry took place				
before asylum decision	28.33	11.19	50.76	100
after asylum decision	71.67	88.81	49.24	-
Observations	3863	3003	477	383
Panel B: Transition to first language course				
Entered	75.35	82.95	53.36	56.94
of which: entry took place				
before asylum decision	39.67	29.63	62.53	100
after asylum decision	60.33	70.37	37.47	-
Observations	3721	2901	451	369

Note: 1) For the transition into the first job, only applicants with a tolerated status were considered. For the transition into the first language course, applicants with a tolerated status and those requested to leave Germany immediately were considered.
Source: IAB-BAMF-SOEP Survey of Refugees in Germany 2017, own calculations. Design weights are used.

Panel B in Table 2 presents similar analyses for entry into the first German language course. By the date of the interview, approximately 75 percent of refugees had already enrolled in a language course. The proportion was higher for those with approved applications than for those with pending or rejected applications. Approximately two-thirds of approved refugees enrolled in their first German language course after receiving their asylum decision, and approximately one-third had already done so before it. In turn, refugees with rejected asylum applications were more likely to enter their first language course while their asylum procedure was still ongoing.

Regardless of asylum status, the average time between asylum application and transition to the first language course was approximately 12 months; the average time until first employment was approximately 20 months (results are available upon request). The average length of the asylum procedure of refugees who had already taken up a language course was eight months, whereas refugees who had not (yet) enrolled in a language course by the date of the interview waited approximately 12 months for their asylum decision (see Table A2 in the Appendix). In turn, the

asylum procedures were only negligibly shorter for refugees who had managed to enter first employment than for those who had not yet entered employment by the date of the interview.

5.2 Multivariate analysis on the transition to first employment

Table 3 presents the results from the parametric survival model with a Gompertz distribution on the transition to first employment. Model 1.1 estimates the correlation between the length of the asylum procedure and the timing of first employment entry without controlling for differences in group composition. The model shows that, e.g., a six-month-longer asylum procedure duration produces an 11 percent lower transition rate to first employment (=0.98^6-1). Given that the length of the asylum procedure is, on average, shortest for the refugees whose asylum applications were approved (Figure A1 in Appendix), Model 1.2 further accounts for the status of the asylum application. The results imply that those whose asylum applications were decided (independent of the outcome of this decision) seem to enter their first employment faster than those whose requests were still pending. The inclusion of the country group of origin (Model 1.3), further sociodemographic, human and social capital characteristics (Model 1.4) and status of language course participation (Model 1.5) seems to mediate the correlation between asylum status and the transition to first employment: Refugees with an approved status have 30 percent (=1.30-1) higher rates of transition to first employment than those whose applications were still pending. The difference from those whose asylum application was rejected still lacks statistical significance. Stratified analyses imply that protracted asylum procedures delay the employment entry of mainly male refugees (Model 1.6) while having no effect for women (Model 1.7) and applicants from countries with good prospects to remain (Model 1.8).

Table 3: Gompertz regression models predicting transition into first employment, relative hazard ratio

	Model 1.1	Model 1.2	Model 1.3	Model 1.4	Model 1.5	Model 1.6 – only men–	Model 1.7 – only women–	Model 1.8 – cluster A [2)]–
Duration (in months) of asylum procedure	0.98***	0.99*	0.99**	0.99**	0.99**	0.98**	1.01	1.00
Asylum status (ref.: Pending)								
Approved		1.48***	1.53***	1.28**	1.30**	1.24*	1.56	1.57***
Rejected [1)]		1.41*	1.45*	1.10	1.07	1.06	1.66	1.14
Country group of origin (ref.: Syria)								
Afghanistan			0.95	1.12	1.13	1.22	0.78	
Iraq			0.85	0.92	0.94	0.94	0.90	0.97
Eritrea			1.29*	0.94	0.98	0.98	0.75	0.93
Iran			1.13	1.07	1.08	1.08	1.16	1.19
Rest of MENA			1.04	1.24	1.22	1.50	0.63	
Russia			0.46**	0.80	0.77	0.50	1.06	
Rest of former USSR			2.08**	2.31***	2.41***	1.53	4.22***	
West Balkans			1.03	2.78***	2.97***	2.22**	7.32***	
Rest of Africa			1.42*	1.27	1.32	1.22	3.12**	1.03
Rest			2.10***	2.15***	2.33***	2.52***	1.14	
Prioritized country of origin				1.18	1.21	1.23	1.15	1.28
Language course (ref.: Not (yet) participated)								
Enrolled					0.90	0.82	1.37	0.87
Finished at least one course					1.81***	1.75***	1.82**	1.87***
Female				0.38***	0.39***			0.37***
Number of children in the household				0.85***	0.87***	0.90**	0.73***	0.84***
Children in the household aged below 6 years				0.83	0.85	0.85	0.49**	0.90
x Female				0.56**	0.57**			0.43***

	Model 1.1	Model 1.2	Model 1.3	Model 1.4	Model 1.5	Model 1.6 – only men–	Model 1.7 – only women–	Model 1.8 – cluster A [2)]–
Age upon arrival to Germany				1.06**	1.06**	1.06*	1.10	1.06*
Age upon arrival to Germany, squared				1.00***	1.00***	1.00***	1.00	1.00***
Months between arrival and application				1.09***	1.07***	1.08***	1.06	1.07***
Arrival cohort (ref.: 2013)				1.00	1.00	1.00	1.00	1.00
2014				2.43***	2.18***	2.70***	1.06	1.97***
2015				3.40***	2.90***	3.44***	2.07*	2.50***
2016 and later				4.72***	4.07***	4.92***	3.25*	2.98***
Years between leaving origin and arrival to Germany				0.97*	0.96*	0.95***	1.12*	0.94**
Years between leaving origin and arrival to Germany, squared				1.00***	1.00***	1.00***	1.00*	1.00***
Economic reasons for immigration				1.31**	1.34***	1.43***	0.66	1.44***
Choice of Germany as a destination country because of Germany's asylum procedure				0.99	0.99	0.99	1.26	1.02
Pre-migration years of education				1.03***	1.02***	1.02***	1.00	1.02**
Pre-migration. German language proficiency				1.27***	1.28***	1.29***	1.94***	1.36***
With pre-migration work experience				1.77***	1.82***	1.71***	2.11***	1.72***
Support from family/acquaintance living in Germany before arrival				1.06	1.07	1.06	0.93	1.12
Initially private residence place				1.33***	1.32***	1.25**	1.61*	1.30**
Unemployment rate in the district of arrival				0.94***	0.93***	0.94***	0.85***	0.94***
Constant	0.00***	0.00***	0.00***	0.00***	0.00***	0.00***	0.00***	0.00***
Gamma	1.06***	1.06***	1.06***	1.10***	1.09***	1.09***	1.08***	1.09***

	Model 1.1	Model 1.2	Model 1.3	Model 1.4	Model 1.5	Model 1.6 – only men–	Model 1.7 – only women–	Model 1.8 – cluster A [2)]–
Model Fit								
Degrees of Freedom	1	3	13	62	65	63	63	59
Akaike Information Criterion	4044	4034	4020	3426	3369	2711	681	2513
Bayesian Information Criterion	4072	4081	4161	4030	4002	3291	1235	3074

Note: Significance level *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ (two-tailed test). Models 1.4-1.8 further control for the survey sample, being a panel respondent, reported intentions to work at the interview time point, Federals state fixed effect and indicators for missing values in control variables. 1) Only applicants with a tolerated status were considered. 2) Only applicants from Eritrea, Iran, Iraq, Somalia and Syria were considered.
Source: IAB-BAMF-SOEP Survey of Refugees in Germany 2017, own calculations.

Refugees from the West Balkan countries, the rest of the former USSR (Ukraine, Georgia and Armenia compose 77 percent of this group) and the rest of the world (Pakistan makes up 80 percent of this group) enter their first employment more than two times faster compared to refugees from Syria (the reference category) or from other war and conflict countries. We further observe that the typical characteristics predicting the structural integration process of migrants are also applicable for refugees. Compared to men, women – and particularly those with children of preschool age – enter their first job in Germany significantly more slowly (Models 1.5-1.7). Age upon arrival, premigration human capital (years of education, German language proficiency, working experience), economic migration motives and the local labour market situation are also significant predictors of structural integration. We further find the so-called lock-in effects of language course participation: language course enrolment is initially negatively correlated with integration into the labour market. However, the rate of transition to employment becomes almost twice as high once refugees have completed a language course. Although premigration social ties do not significantly contribute to job entry, we observe a positive impact of initially having a private residence place – this might proxy for more contacts with the native population. The waiting time between arrival and asylum application also has a positive impact on the job entry rate, presumably because of the accumulation of resources and information relevant to labour market integration. We further find that later arrival cohorts enter their first job faster, probably owing to the legal changes oriented at accelerating labour market integration in recent years. The models stratified by gender (Models 1.6 and 1.7) generally follow similar patterns; however, for women, we lack statistical power, presumably due to the lower sample size of women with job entry (only 6 percent of refugee women entered their first job in Germany).

5.3 Multivariate analysis on the transition to the first language course

As with the transition to first employment, we introduce our analysis in a stepwise fashion. These results are depicted in Table 4. Model 2.5 turns out to be our preferred specification: inclusion of the model covariates provides the best model fit. Similar to the results on the transition to first employment, Model 2.5 predicts a negative relationship between the length of the asylum procedure and enrolment in the first language course, although not for women (Model 2.7). Both approval and rejection of the asylum application result in earlier enrolment rates into the first language course – indicating that the most important factor here is not the outcome of the asylum procedure but the fact that a decision is made.[13]

13 The transition rate to the first language course does not differ significantly between refugees with approved and rejected asylum applications in either specification.

Table 4: Weibull regression models predicting transition into the first language course, relative hazard ratio

	Model 2.1	Model 2.2	Model 2.3	Model 2.4	Model 2.5	Model 2.6 – only men–	Model 2.7 – only women–	Model 2.8 – cluster A[1)]–
Duration (in months) of asylum procedure	0.96***	0.97***	0.97***	0.98***	0.98***	0.97***	0.99	0.98***
Asylum status (ref.: Pending)								
Approved		1.46***	1.42***	1.38***	1.39***	1.46***	1.16	1.33***
Rejected		1.43***	1.46***	1.37***	1.39***	1.36**	1.22	1.20
Country group of origin (ref.: Syria)								
Afghanistan			1.02	1.15**	1.14*	1.07	1.42***	
Iraq			1.04	1.04	1.04	1.04	1.07	1.03
Eritrea			1.12	1.42***	1.40***	1.36***	1.50**	1.46***
Iran			1.47***	1.30*	1.30*	1.13	1.53*	1.27*
Rest of MENA			1.08	1.07	1.08	0.98	1.40	
Russia			0.66**	1.15	1.13	1.04	1.03	
Rest of former USSR			0.80	0.74	0.76	0.65	0.90	
West Balkans			0.31***	0.56**	0.56**	0.65	0.38**	
Rest of Africa			0.98	1.10	1.11	1.14	1.06	1.21
Rest			0.64***	0.65**	0.67**	0.65**	0.88	
Prioritized country of origin				1.20***	1.19***	1.22***	1.20	1.18**
Entered first employment					0.73***	0.71***	0.82	0.71***
Female				0.78***	0.77***			0.75***
Number of children in the household				0.92***	0.92***	0.91***	0.93**	0.93***
Children in the household aged below 6 years				0.95	0.95	1.03	0.54***	0.88
x Female				0.61***	0.61***			0.52***
Age upon arrival to Germany				1.02*	1.02*	1.02	1.05*	1.02*
Age upon arrival to Germany, squared				1.00*	1.00**	1.00	1.00*	1.00*

	Model 2.1	Model 2.2	Model 2.3	Model 2.4	Model 2.5	Model 2.6 – only men–	Model 2.7 – only women–	Model 2.8 – cluster A[1)]–
Months between arrival and application				1.07***	1.07***	1.08***	1.05***	1.07***
Arrival cohort (ref.: 2013)								
2014				1.55***	1.55***	1.67***	1.31	1.37**
2015				2.95***	2.95***	3.23***	2.71***	2.90***
2016 and later				4.29***	4.31***	4.89***	3.87***	4.23***
Years between leaving origin and arrival to Germany				1.00	0.99	1.00	0.98	0.98*
Years between leaving origin and arrival to Germany, squared				1.00	1.00	1.00	1.00*	1.00*
Economic reasons for immigration				0.99	0.99	0.99	1.03	0.98
Choice of Germany as a destination country because of Germany's asylum procedure				1.07	1.07	1.07	1.10	1.05
Pre-migration years of education				1.05***	1.05***	1.04***	1.05***	1.05***
Pre-migration. German language proficiency				0.94	0.95	0.91	1.23**	0.99
With pre-migration work experience				1.11*	1.11*	1.04	1.14	1.09
Support from family/acquaintance living in Germany before arrival				1.06	1.06	1.06	1.11	1.08
Initially private residence place				0.96	0.96	0.98	0.98	0.97
Logarithm of the share of foreigners				1.10**	1.09**	1.10*	1.08	1.05
Constant	0.01***	0.01***	0.01***	0.00***	0.00***	0.00***	0.00***	0.00***
Gamma	1.55***	1.40***	1.41***	1.66***	1.68***	1.77***	1.61***	1.72***

	Model 2.1	Model 2.2	Model 2.3	Model 2.4	Model 2.5	Model 2.6 – only men–	Model 2.7 – only women–	Model 2.8 – cluster A[1)]–
Model Fit								
Degrees of Freedom	1	3	13	62	63	61	61	57
Akaike Information Criterion	8948	8899	8853	8045	8035	4934	3118	6216
Bayesian Information Criterion	8975	8944	8988	8620	8618	5464	3631	6729

Note: Significance level *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ (two-tailed test). Models 1.4-1.8 further control for the survey sample, being a panel respondent, reported intentions to work at the interview time point, Federals state fixed effect and indicators for missing values in control variables. 1) Only applicants from Eritrea, Iran, Iraq, Somalia and Syria were considered.
Source: IAB-BAMF-SOEP Survey of Refugees in Germany 2017, own calculations.

We further observe that applicants from the West Balkan and rest of world category countries – who have higher labour market entry rates – indicate slower transition rates to their first language course. In turn, applicants from Eritrea, Iran and Afghanistan seem to be faster in entering language courses than applicants from Syria. Beyond the country of origin impact, we find that applicants from origin countries prioritized in the asylum procedure entered their first language course earlier. Similar to the labour market entry analyses, we observe a female disadvantage that is even stronger for women with childcare responsibilities. Likewise, age upon arrival, months between arrival and asylum application, arrival cohort, and premigration human capital (though statistically significant only for years of education, German language proficiency, and working experience) appear to correlate positively with the transition rate to the first language course. A greater share of foreigners in the local population also accelerates entry into the language course, probably because of a greater supply of German language courses. Finally, labour market entry significantly delays transition to the first language course (not statistically significant for women, Model 2.7), probably due to potential opportunity costs.

6 Discussion

In light of the various accompanying legal restrictions, the outcome of the asylum procedure may have significant consequences not only for refugees' staying prospects in the host society but also for their social and economic integration. Public and academic debate further emphasizes the negative consequences of protracted asylum procedures. It has been argued that refugees are kept in a kind of legal and social limbo, isolated and segregated from the native population during the processing of their asylum application (e.g., Hainmueller et al. 2016; Jackson/Bauder 2014; Taylor/Rafferty-Brown 2010). We contribute to the existing migration literature by examining the role of the *reception context* (cf. Kalter/Kogan this volume), i.e., the impact of the length of the asylum procedure and the outcome of this procedure on the structural integration of refugees and on their host country language acquisition.

Relying on the newest data from the IAB-BAMF-SOEP Survey on Refugees and advanced survival analysis methods, we find that approval of the asylum application accelerates entry into the labour market compared to still pending decisions. However, our results lack sufficient statistical certainty for us to conclude that refugees with approved applications enter the labour market faster than those with a negative decision. Hence, no empirical support was found for hypothesis *H1 a*, i.e., that approval of the asylum application is associated with the certainty of staying prospects for both jobseekers and (potential) employers. Likewise, our results do not confirm hypothesis *H1 b*, which predicted faster job entry for those with a rejected status as a result of their motivation to raise money before being deported or to increase their chances of receiving a residence permit. Our results are also in con-

trast with hypothesis *H2* forecasting faster language course entry for approved refugees due to certain and long-term staying prospects. It seems that just having clear perspectives of one's own legal status and the corresponding residence permit (even with a shorter-run perspective) is more decisive for the decision to take up employment or to invest in host country language acquisition.

Our results further imply a statistically significant negative relationship between the length of the asylum procedure and labour market integration, in line with hypothesis *H3 a*. This hypothesis predicted a negative impact of protracted asylum procedures as a result of factors such as devaluation of human capital and skills atrophy, legal insecurity and associated depressed working aspirations or increased health risks, as well as isolation from social resources. Which factors in particular drive the negative relationship is beyond the scope of this study and should be addressed by future research. Hypothesis *H3 b,* suggesting a positive impact of asylum procedures due to the time necessary for refugees' social and structural adaptation and resource recovery, is, hence, not supported. Nevertheless, the negative relationship could only be found for male refugees. Since only a negligible share of female refugees managed to enter the labour market by the second half of 2017, we might not yet be able to observe an effect. Note that other empirical studies also point to a lesser negative effect of longer asylum procedures for female refugees (Hainmueller et al. 2016; Steiber/Vogtenhuber 2019). Furthermore, we find no such negative impact for refugees from countries with rather good prospects to remain. On the one hand, their generally greater certainty of staying prospects might dampen the deleterious impact of asylum procedure length on job entry rate. On the other hand, this group faced rather swift asylum processing (Kosyakova/Brücker 2020) – presumably, the consequences of waiting in limbo were only marginal. The incentives to invest in country-specific human capital via entering German language courses are also shaped by longer asylum procedures, as was maintained by hypothesis *H4*. This relationship is observed for all groups under scrutiny, although it is statistically insignificant for women.

In results beyond the main interest of the study but nevertheless empirically notable, we further observe that refugees from rather safe countries of origin enter their first employment sooner than refugees from countries subject to war and conflict – the latter group seems to enter the labour market generally later and prioritize learning the German language first. Eventually, refugees who lack or have only slim staying prospects are more motivated to take up work, either to improve their chances of staying in Germany or to use the time they have left to earn money. In turn, refugees who prioritize investing in host country language learning – despite delaying their labour market entry at the first glance – factually improve their chances for successful and sustainable economic integration, since completion of a German course doubles the transition rate into employment.

Altogether, our results reveal that clear staying prospects, i.e., clarification of legal status, are highly important for refugees' structural integration. Note, however, that the duration of the asylum procedure is strongly related to its outcome, with the shortest duration in the case of a successful application. Refugees with negative decisions and particularly pending applications were kept in a state of legal limbo for far longer. Hence, the "lack of legal status" effect might be mediated by the duration of the asylum procedure, which turns out to delay refugees' integration process significantly. This negative impact of asylum processing length for refugees' integration in Germany is in line with previous studies on refugees in Switzerland (Hainmueller et al. 2016) and the Netherlands (Bakker et al. 2014; De Vroome/van Tubergen 2010). Hence, efforts that ensure that asylum procedures are efficient and fast should be continued and should be extended so that applicants can gain legal certainty as soon as possible.

Faced with 1.6 million asylum applications, Germany established asylum policies that prioritized the acceleration of asylum procedures. This acceleration was achieved, beyond the increase in staff and higher efficiency of the decision-making authority (BAMF), by the clustering and processing of asylum seekers with respect to their staying prospects. The overall length of asylum procedures has been substantially reduced by these policies. However, this has been achieved at the expense of nonprioritized groups, who suffered not only from prolonged procedures and higher legal uncertainty but also from de facto exclusion from integration measures such as language courses. This exclusion may be associated with high economic and social costs, including the devaluation of human capital or being pushed into the informal economy. While the clustering of refugees was unavoidable to accelerate the overall decision-making process, the economic and social costs for those with longer-lasting asylum procedures could have been mitigated by the supply of language courses, labour market programs and other integration measures, which would have increased the refugees' chances of successful and sustainable social and economic integration in the host society. Should refugees return to their countries of origin, their newly won qualifications would facilitate their reintegration into their home societies and most likely positively influence and support the social and economic development of their home countries.

Finally, turning to the key question of the present special issue – whether integration of refugee migrants is an exceptional or a special case of the general immigrant integration process – our study implies that patterns of refugees' integration follow empirical regularities that apply to various types of immigrant groups. We find that the labour market integration of refugees is faster for those who arrived at a young age, received more schooling prior to migration, have learned German prior to or after migration, have premigration working experience and economic migration motives, or have resided for a longer time period in Germany and in economically prosperous regions. Likewise, investments in host country language proficiency are facilitated by a younger arrival age, stay duration in Germany, and premigration

human capital. In turn, women and particularly those with family responsibilities face challenges to accessing German language courses and integrating into German labour markets. These results on refugees in Germany are in line with previous studies on refugees in Denmark (Hvidtfeldt et al. 2018), the Netherlands (van Tubergen 2010; De Vroome/van Tubergen 2010), and the US (e.g., Potocky-Tripodi 2003). Overall, our findings suggest that, despite different migration motives and histories of refugees and despite different societal and legal circumstances surrounding their postmigration experiences, the factors relevant for the integration of migrants are also confirmed when applied to refugees.

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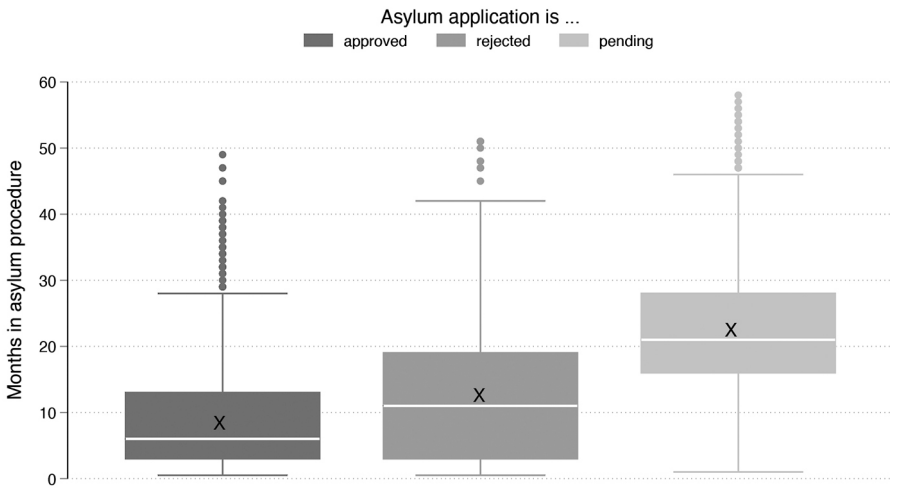
Appendix

Figure A1: Months in asylum procedure by asylum procedure status at time of survey interview



Note: Boxes indicate the spread of the median 50 percent of all observed values for months in asylum procedure. Their length is determined by the variance in lengths of asylum procedures between the lower and upper 25 percent of observed values. The continuous lines within the boxes divide the observations into two parts, which each account for 50 percent of refugees. Boxes with whiskers indicate the spread of asylum procedure lengths of the majority of refugees. A cross marks the average value. Circles mark outlier values.
Source: IAB-BAMF-SOEP Survey of Refugees in Germany 2017, own calculations. Design weights are used.

Table A1: Information about the coding of time-constant (TC) and time-dependent (TD) control variables

Variable	Coding
Age upon arrival (TC)	Derived based on the birth year of the respondent and self-reported date of arrival to Germany
Arrival cohort (TC)	Based on self-reported year of arrival to Germany.
= 1	2013
= 2	2014
= 3	2015
= 4	2016 and later
Children under 6 living in the household (TD)	Based on the household questions regarding (i) existence of children in household and (ii) their birth year. The variable is calculated for each person-month observation.
= 0	No, no children live in the household or all children are older than 6 years
= 1	Yes, children under 6 years living in the household
Country group of origin (TC)	Based on self-reported country of citizenship.
= 1	Syria
= 2	Afghanistan
= 3	Iraq
= 4	Eritrea
= 5	Iran
= 6	Rest of MENA (Algeria, Egypt, Jordan, Lebanon, Libya, Morocco, State of Palestine, Saudi Arabia, Tunisia, and Yemen)
= 7	Russia (The Russian Federation)
= 8	Rest of former USSR (Armenia, Azerbaijan, Georgia, the Republic of Moldova, Tajikistan, and Ukraine)
= 9	West Balkans (Albania, Kosovo, Macedonia, Montenegro, and Serbia)
= 10	Rest of Africa (Angola, Burkina Faso, Cameroon, the Congo, Côte d'Ivoire, Ethiopia, the Gambia, Ghana, Guinea, Mali, the Niger, Nigeria, Senegal Somalia, the Sudan, and Uganda)
= 11	Rest (Bangladesh, India, Pakistan, Sri Lanka, and Turkey)
Destination because of German asylum procedure (TC)	Based on the self-reported reason for specifically moving to Germany and not to another country (note that multiple answers possible); missing values are set to 0 and controlled for.
= 1	Moved to Germany because of asylum procedure.
= 0	Otherwise

Variable	Coding
Economic reasons for immigration (TC)	Based on questions regarding reasons to leave home country and reasons to choose Germany. Economic reasons for leaving home country include (i) because of own bad economic situation, or (ii) because of bad economic situation in the home country. Economic reasons for choosing Germany as a destination country include (i) because of Germany's economic situation, or (ii) because of Germany's social support. We deem respondents to have economic reasons for immigration if they reported to have both economic reasons for leaving home country and economic reasons for choosing Germany as a destination country (and 0, otherwise).
= 0	No
= 1	Yes
Entered first job (TD)	Based on the self-reported month and year of the first job in Germany. The variable is calculated for each person-month observation. It equals zero when the respondents have not (yet) entered their first job; it equals one as soon as the respondents have entered their first job.
= 0	No
= 1	Yes
Female (TC)	Self-reported gender.
= 0	Male
= 1	Female
Federal State of the first arrival (TC)	Based on self-reported information on the 1st (if moved only once) or the longest (if moved more than once) residence place in Germany. We assume that the respondent applied for asylum in this place. For those still living in the 1st residence place, current federal state was considered.
1	= Schleswig-Holstein
2	= Hamburg
3	= Lower Saxony
4	= Bremen
5	= North Rhine-Westphalia
6	= Hesse
7	= Rhineland Palatinate
8	= Baden-Wuerttemberg
9	= Bavaria
10	= Saarland
11	= Berlin
12	= Brandenburg
13	= Mecklenburg Western Pomerania
14	= Saxony
15	= Saxony-Anhalt
16	= Thuringia

Variable	Coding
German language proficiency (TC)	The survey question asked is the following: "How well did you know German before moving to Germany?". The respondent reported his or her language skills in speaking, writing, and reading on a scale from 1 "Not at all" to 5 "Very well". For language proficiency, we used the mean across three variables.
Initially private residence place (TC)	Based on the question regarding the accommodation type in which the respondent was housed the longest in Germany before current accommodation or the current accommodation type if this is the first accommodation in Germany.
= 1	A house/ apartment away from shared accommodation with or without other refugees
= 0	Otherwise
Language course status (TD)	Based on self-reported dates (month and year) of starting and ending language courses. These may include integration courses of BAMF, ESF-BAMF courses for German for work, BA introductory German language training courses (pursuant to Section 421 German Social Code (SGB) Book III), and the programmes 'Perspectives for Refugees' (BA), 'Perspectives for Adolescent Refugees' (BA), 'Perspectives for Female Refugees' (BA) or 'KompAS' (BA and BMAS), as well as other non-specified courses for learning German. The variable is calculated for each person-month observation.
= 1	Not yet participated
= 2	Enrolled
= 3	Finished at least one course
Months between arrival and asylum application (TC)	Refers to a difference between on self-reported month and year of arrival to Germany and month and year of asylum application.
No intentions to work in the future (TC)	Whether the respondent is planning to work (again) in the future. Only those non-working at the time of the survey were asked.
= 1	No, definitely not
= 0	Otherwise
Number of children under 18 living in the household (TD)	Based on the household questions regarding (i) existence of children in household and (ii) their birth year. The variable is calculated for each person-month observation.
Panel respondent (TC)	Respondents who participated in wave 1 (survey year 2016) and wave 2 (survey year 2017)
= 1	Participated in both waves
= 0	Otherwise
Prioritized country of origin (TD)	Based on self-reported country of citizenship and the asylum date. For Iraq, religion is also considered. In some cases, information on whether the application is the first one was also considered. For a breakdown of prioritized countries over time, see Kosyakova and Brücker (2019).

Variable	Coding
Share of foreigners in the district and year of arrival (TC)	To derive the district of arrival we rely on self-reported information on the 1st (if moved only once) or the longest (if moved more than once) residence place in Germany. We assume that the respondent applied for asylum in this place. For those still living in the 1st residence place, current district was considered. We consider the local share of foreigners in the arrival year. The data on population size and number of foreigners is based on the yearly data from the DESTATIS and AZR.
Support from relatives or acquaintances (TC)	Whether received assistance to move to Germany from any acquaintances, friends or relatives who already lived in Germany
= 1	Had support from acquaintances, friends or relatives
= 0	Otherwise
*Survey sample (*TC)	Indicator of the respondents' belonging to the specific sample.
= 1	M3, registered adults as of January 2016, and newly registered adults between February and April 2016; first surveyed in 2016.
= 2	M4, registered adults as of April 2016, registered underage persons as of June 2016; first surveyed in 2016.
= 3	M5, adults that arrived between 2015 and December 2016 (not registered when the first wave was drawn from the AZR); first surveyed in 2017.
Work experience (TC)	Based on the question regarding whether the respondent had ever worked before migration to Germany and calendar information on job episodes. Missing values are set to zero and are controlled for.
= 0	No, never worked before migration to Germany
= 1	Yes, worked before migration to Germany
Unemployment rate in the district and year of arrival (TC)	To derive the district of arrival we rely on self-reported information on the 1st (if moved only once) or the longest (if moved more than once) residence place in Germany. We assume that the respondent applied for asylum in this place. For those still living in the 1st residence place, current district was considered. We consider the local unemployment rate in the arrival month and year. The data on unemployment rate is based on the monthly data from the Federal Employment Agency.
Years between leaving the country of origin and arriving to Germany TC)	Constructed based on self-reported year of leaving home country and self-reported year of arriving to Germany.
Years of education (TC)	Constructed based on the self-reported years of school, professional and higher education attended before migration to Germany.

Table A2: Descriptives on model covariates

	Entry into first employment			Entry into first language course		
	No	Yes	N	No	Yes	N
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)	
Months in asylum procedure	10.47 (9.00)	9.81 (8.49)	3863	12.22 (10.42)	7.55 (6.51)	3721
Asylum status:						
approved	0.73	0.65	3863	0.50	0.56	3721
rejected	0.06	0.06	3863	0.07	0.04	3721
pending	0.20	0.28	3863	0.43	0.40	3721
Country of origin:						
Syria	0.45	0.55	3863	0.30	0.51	3721
Afghanistan	0.17	0.09	3863	0.23	0.14	3721
Iraq	0.15	0.07	3863	0.14	0.14	3721
Eritrea	0.04	0.08	3863	0.02	0.06	3721
Iran	0.03	0.02	3863	0.02	0.03	3721
Rest of MENA	0.02	0.02	3863	0.04	0.02	3721
Russia	0.01	0.00	3863	0.01	0.01	3721
Rest of former USSR	0.01	0.02	3863	0.03	0.01	3721
West Balkans	0.01	0.01	3863	0.02	0.01	3721
Rest of Africa	0.08	0.10	3863	0.12	0.07	3721
Rest	0.02	0.05	3863	0.05	0.02	3721
Prioritized country of origin	0.00	0.06	3863	0.01	0.17	3721
Language course:						
not yet participated	0.24	0.23	3815	–	–	–
enrolled	0.33	0.20	3815	–	–	–
finished at least one course	0.44	0.57	3815	–	–	–
Entered first employment	–	–	–	0.20	0.04	3721
Female	0.73	0.65	3863	0.42	0.20	3721
Number of children in the household	0.99 (1.38)	0.42 (0.90)	3863	0.89 (1.39)	0.81 (1.24)	3721
Children in the household aged below 6 years	0.28	0.11	3863	0.27	0.23	3721
Age upon arrival to Germany	29.95 (9.58)	26.52 (7.32)	3863	28.75 (9.19)	29.17 (9.03)	3721
Months between arrival and application	1.91 (3.52)	1.60 (3.36)	3863	1.87	1.45	3721
Arrival cohort:						
2013	0.02	0.05	3863	0.03	0.03	3721
2014	0.09	0.26	3863	0.08	0.16	3721

	Entry into first employment			Entry into first language course		
	No	Yes	N	No	Yes	N
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)	
2015	0.67	0.59	3863	0.60	0.64	3721
2016 and later	0.22	0.10	3863	0.29	0.17	3721
Years between leaving origin and arrival to Germany	1.62 (4.45)	1.45 (3.39)	3695	2.14 (5.74)	1.35 (3.63)	3561
Economic reasons for immigration	0.07	0.19	3843	0.09	0.10	3705
Choice of Germany as a destination country because of Germany's asylum procedure	0.27	0.30	3843	0.26	0.28	3705
No intentions to work in future	0.06	0.01	3863	0.14	0.02	3721
Pre-migration years of education	9.04 (5.47)	11.02 (5.12)	3855	8.03 (5.07)	9.97 (5.48)	3714
Pre-migration. German language proficiency	1.06 (0.30)	1.09 (0.40)	3858	1.06 (0.37)	1.07 (0.32)	3716
With pre-migration work experience	0.68	0.77	3708	0.57	0.75	3572
Support from family/ acquaintance living in Germany before arrival	0.18	0.15	3849	0.18	0.17	3707
Initially private residence place	0.16	0.18	3806	0.14	0.18	3670
Unemployment rate in the district and year of arrival	7.25 (3.35)	7.33 (4.41)	3651	–	–	–
Share of foreigners in the district and year of arrival	–	–	–	12.27 (7.39)	12.36 (7.01)	3514

Note: SD = standard deviation. Time-dependent variables are captured in the last observed month. Variation in the sample size (columns 4 and 7) is due to differences in missing data across variables. In the multivariate model, we control for missing values in the variables of interest.
Source: IAB-BAMF-SOEP Survey of Refugees in Germany 2017, own calculations. Design weights are used.