Check for updates

Unequal access to protection? Selection patterns over arrival cohorts of Syrians seeking refuge in Lebanon, Turkey, and Germany

Lidwina Gundacker[1]*, Sekou Keita[1] and Simon A. Ruhnke[2]

[1]Migration and International Labour Studies, Institute for Employment Research (IAB), Nuremberg, Germany, [2]Berlin Institute for Empirical Integration and Migration Research, Faculty of Humanities and Social Sciences, Humboldt University of Berlin, Berlin, Germany

Introduction: An ample scholarly literature on voluntary migration has shown that migration is a highly selective process, resulting in migrant populations that often differ significantly from their respective population of origin in terms of their socio-demographic characteristics. The literature attributes these differences to either migrants' active choice and agency in the migration decision (i.e., self-selection), or to selectively applied external constraints. Although the socio-demographic make-up of forced migrant populations has received significant attention in public discourses in receiving countries such as Germany and Turkey, the literature on migrant selection largely focuses on voluntary migration and self-selection mechanisms. As a result, the selection mechanisms of forcibly displaced persons are less well-understood. Particularly in the context of forced migration, the conditions for migration fluctuate heavily within a relatively short time span, e.g., regarding immigration policies and border controls. In this study we contribute to that literature by exploring the changing conditions under which Syrians sought international humanitarian protection between 2013 and 2017 and linking them to the selection outcomes in three major receiving countries: Lebanon, Turkey, and Germany.

Methods: Based on novel household survey data, we compare age, gender, socio-economic background, and family context of the Syrian populations in Lebanon, Turkey, and Germany by arrival cohort (2013–2017). In a narrative approach, we combine the cohort analysis of Syrians in Lebanon, Turkey, and Germany with contextual analyses of the (changing) frameworks governing refugee migration in transit and destination countries and descriptive analyses of changing risk levels along migration routes into Europe.

Results: Our analyses reveal that higher external barriers coincide with a stronger selection in migrants' socio-demographic make-up. In particular, riskier routes and higher entry barriers are associated with a lower share of female migrants, a lower share traveling with family members, and a higher socio-economic background.

Discussion: In this study, we describe differences in forced migrants' selection outcomes in countries of first refuge neighboring the origin country, relative to a reception country in the global north. By establishing legal and political frameworks as well as the accessibility of routes as external barriers to forced migration we expand on the existing theoretical approaches to selection effects and identify a need for policy intervention to ensure equitable access to humanitarian protection.

KEYWORDS

refugees, forced migration, selection, migration processes, mobility, individual-level data, fatality data

1 Introduction

According to the UNHCR, the number of forcibly displaced persons reached the landmark of 100 million for the first time in May 2022, including 53.2 million people displaced inside their borders. In other words, more than one percent of the global population was forced to flee war, violence, human rights violations, or persecution on political, ethnic, or religious grounds [United Nations High Commissioner of Refugees (UNHCR), 2022a]. With 149 signatory states to the 1951 Geneva Convention relating to the Status of Refugees or the related Protocol from 1967, most countries currently recognize access to peace and security as a fundamental right inherent to all human beings, regardless of race, gender, nationality, ethnicity, language, religion, or any other status. However, only a few of the 193 UN Member States bear the largest share of responsibility for refugees–either by hosting large refugee populations or by contributing financially to humanitarian efforts. Three in four refugees are hosted by low and middle-income countries such as Lebanon (UNHCR, 2022c), i.e., by countries that only have limited resources and often face internal political or economic challenges of their own. Hence, with the demand for humanitarian protection rising globally, the imbalance between the required and the available resources to provide humanitarian protection increases.

Although contexts of civil war, violence, terror, and persecution affect most societal groups simultaneously, people in vulnerable situations are equipped unequally with the resources and abilities to reach safe ground (Buber-Ennser et al., 2016; Guichard, 2020). In other words, access to peace, security, and fundamental rights depend on people's individual resource endowments to move and undertake journeys with uncertain outcomes. This concerns financial means as well as social capital (e.g., family networks abroad) and physical resources (e.g., health and fitness) required to embark on long and risky escape routes that are particularly penalizing for women, children, elderly, and disabled persons. Given the commitment of many countries to provide protection to those in need and the rising number of individuals seeking international protection (United Nations High Commissioner of Refugees (UNHCR), 2022a), it is crucial to examine the unequal selection into humanitarian protection by socio-demographic groups and its determinants. In our study, we focus on refugee migration out of Syria into neighboring countries and Europe, with the Syrian civil war representing one of the largest displacement events of the past decade (UNHCR, 2022c).

The literature on migrant selection outcomes is typically based on utility maximization frameworks in which the cost and benefit considerations of potential migrants predict their migration decisions (Roy, 1951; Borjas, 1987). This literature typically refers to voluntary migration and considers individual resources (such as human capital) and contextual factors (e.g., labor market or economic conditions in destination countries) in shaping migrant selection. While these mechanisms may apply to forced migrants as well (Guichard, 2020; Aksoy and Poutvaara, 2021; Brücker et al., 2021), the mobility of forced migrants needs further exploration for at least two reasons. Firstly, additional contextual factors apply to the mobility choices of forced migrants: border and immigration policies as well as risks and threats at home and on the route represent external constraints to the mobility of individuals seeking humanitarian refuge (Guichard, 2020; Spörlein et al., 2020). This reactive character of refugee migration derives from a lack preparation and limited legal pathways (Richmond, 1993). Secondly, these external conditions can be highly time-sensitive given the fluidity of wars and conflicts as well as the policy responses of receiving countries, particularly in times of vast international displacement. In the context of the recent refugee migration from Syria, Afghanistan and Iraq into Europe, transit and destination countries have adapted their immigration policies and border practices various times, changing the accessibility of countries and the permeability of borders within relatively short time spans. Like most refugee populations, a large share of displaced Syrians initially moved across borders without valid travel documentation such as visas. Hence, the available options to claim asylum were strongly influenced by the ability to overcome barriers to mobility.

In this paper, we investigate how the selection outcomes among Syrians seeking refuge in Lebanon, Turkey, and Germany relate to the changing conditions governing their migration during the peak of Syrian migration between 2013 and 2017. We argue that national entry regulations and policy decisions governing migration and asylum as well as the level of endangerment on travel routes substantially shape the group compositions of refugees in different destinations and at different points in time. More restrictive immigration policies and higher risk en route represent external barriers that are more permeable to men, those of higher fitness (usually younger of age), those with a higher socioeconomic background and solo travelers (in contrast to those traveling with family members). To evaluate these assumptions, we analyze historical fatality data on the main migration routes as well as contextual information on relevant policy regulations and policy changes in host and transit countries and relate the findings to the selective mobility of Syrians in the three destination countries under study.

From a quantitative perspective, studying the intertwined role of external barriers and individual factors is challenging: it requires comparable information on the characteristics of several migration cohorts displaced by the same conflict but residing in different locations. In this study, we take advantage of novel survey data on Syrian refugees collected in Lebanon, Turkey, and Germany to conduct a comparative analysis of different arrival cohorts between 2013 and 2017 in the three host countries. To assess the socio-demographic make-up of Syrians in Lebanon and Turkey, we rely on ongoing longitudinal surveys of Syrian nationals in both countries, jointly collected by the Berlin Institute for Empirical Integration and Migration Research (BIM, Humboldt University Berlin, Germany) and the Institute for Employment Research (IAB, Nuremberg, Germany). Information on Syrians in Germany stem from the longitudinal IAB-BAMF-SOEP survey of refugees. Employing a narrative approach, we furthermore describe the changing external conditions governing migration based on qualitative sources and descriptively explore changing levels of risk over time on major migration routes in the period under study (2013–2017). Our analyses show highly selective Syrian migrant cohorts in Germany compared to Turkey and Lebanon. The results suggest that immigration policy frameworks and endangerment

levels on routes represent external barriers that are more exclusive to women, family migrants and those with a lower socioeconomic status. Our analysis of cohort differences both between destination countries and over time not only contributes to the academic literature on mechanisms of forced migrant selection but also bears important policy implications.

2 Literature review: selection under constrained agency

The contemporary empirical literature on migrant selectivity, i.e., on the question whether and how migrants systematically differ from non-migrants, dates back to the seminal work of Borjas (1987). His theoretical framework is in turn based on the Roy-Model (Roy, 1951). This discourse is firmly situated in what de Haas (2021) has described as the functionalized paradigm of migration theory. Within this paradigm, the migration decision is typically modeled as a utility-maximization process such that a potential migrant only engages in migration if the expected gains from migration (e.g., higher returns on education, better living standards) outweigh the pecuniary and non-pecuniary costs of migration (travel costs, loss of social networks) (Sjaastad, 1962). While this distinctly neoclassical theory with its focus on labor market outcomes has been gradually refined to incorporate more nuanced aspects of the migration decision such as household and family decision-making (e.g., Stark, 1991), social networks (e.g., Munshi, 2020), health status (e.g., Riosmena et al., 2017), or cultural preferences (e.g., Docquier et al., 2020), the assumption that migrants represent a selective sub-sample of the population of origin has been consistently confirmed across a variety of geographic contexts. Despite this breadth in theoretical and empirical advancements on the causes and nature of migrant selection, refugees and displaced populations remained long absent from this literature.

This absence can in part be attributed to the dichotomization of forced and voluntary migration and the fact that the migration decision of refugees was long assumed to be void of agency and thus rarely conceptualized at all (Kunz, 1973). Gradually though, it was recognized that, while highly constrained by external factors (exposure to conflict, asylum and border regimes, physical accessibility and danger of flight routes), refugees do retain some level of proactive planning and decision-making capacity (Richmond, 1993; McAuliffe and Jayasuriya, 2016). Rather than aligning with a forced-voluntary dichotomy, refugees, like all migrants, find themselves somewhere along a continuum between forced and voluntary migration. Refugees often react to strong push factors that leave little choice in the timing of outmigration. Nevertheless, refugees retain agency in the choice of destination when several options are available. Consequently, the same mechanisms that have been identified as influencing the migration decision of voluntary and labor migrants may also apply to refugee populations. Within this constrained agency, the expected gains from migration may feature in the migration decision-making of refugees, including in their destination choice. Highly educated refugees may, for instance, prefer to seek asylum in a country with relatively higher returns to education, resulting in self-selection outcomes of refugee cohorts. Refugees, however,

face additional constraints, such that not all individuals are able to act on their preferences. For the majority seeking refuge, no legal pathways into sheltering countries exist. Irregular migration is costly, both in monetary and physical terms, constraining refugees' agency. It is thus plausible to expect some self-selection effects among refugees in economically relevant characteristics (such as education and age) albeit less pronounced than for other forms of migration - depending on the degree to which their agency is constrained (Chiswick, 1999; Chin and Cortes, 2015).

But external constraints may not only dampen selection effects among refugees. Since constraints and enabling factors affect different sub-groups of a heterogenous refugee population to a different degree (McAuliffe, 2017), they may also amplify selection outcomes. The often-substantial financial cost of (irregular) migration may for instance be more manageable for highly educated members of elevated social strata (Buber-Ennser et al., 2016; Guichard, 2020). Moreover, female refugees, the elderly and those traveling with families are more exposed to physical dangers during transit. They may thus have to abstain from migration or their migration attempts remain unsuccessful (Spörlein et al., 2020; Aksoy and Poutvaara, 2021). As access to asylum is considered a basic human right that is not to be applied selectively, selective refugee migration resulting from external constraints (such as deliberate policy decisions) have important normative implications. Distinguishing between selection outcomes that result from self-selection based on utility maximization motives and those resulting from external constraints is thus of importance both on theoretical as well as humanitarian grounds.

We argue that framing the migration decision of refugees as either void of agency or a result of unconstrained utility maximization bears the risk of overlooking essential political, legal, and economic conditions associated with displacement that limit access to asylum for selected sub-groups of refugees. We understand the concepts of migrant self-selection and selective external constraints as complementary rather than competing in explaining forced migrant selection patterns. Specifically, previous research mostly focused on structural factors of benefits and costs of migration that evolve slowly over time, such as income differences, cultural aspects, distance, ethnic networks, etc. In contrast, external constraints (such as border policies) can change quickly over a short time period in reaction to political or environmental factors. They determine the number of possible choices as well as the conditions and costs to reach a destination. Therefore, alongside the established expectations on costs and benefits, we investigate the role of (1) legal and political frameworks in transit and destination countries at the time of migration and (2) risk levels on main migration routes in shaping refuge migration outcomes.

In line with the theoretical literature described above, the otherwise broad empirical literature on selection rarely features refugees. The relatively scarce existing empirical evidence on selection outcomes among forced migrants aligns with the theoretical assumption of positive selection of refugees along economically relevant factors. Studies consistently show refugees to have higher educational attainment than the average member of their population of origin (Chin and Cortes, 2015; Buber-Ennser et al., 2016; Birgier et al., 2018; Blum and Rei, 2018; Lange and Pfeiffer, 2019; Guichard, 2020; Spörlein et al., 2020; Aksoy and

Poutvaara, 2021; Welker, 2022). Some studies suggest that this selection effect is less pronounced than among labor migrants in the same arrival context (Chin and Cortes, 2015; Blum and Rei, 2018), while others find mixed results (Spörlein et al., 2020). Spörlein et al. (2020) further provide evidence on selection on gender, with the refugee population under study (Afghans, Eritreans, Iraqis, and Syrians) being disproportionately male.

These post-migration comparisons of the composition of refugee populations relative to their respective populations of origin can provide evidence on the existence of selection effects among refugees. They are, however, limited in their ability to shed light on the underlying mechanisms at play. The selection outcomes reported in the literature are compatible with both self-selection on the basis of utility maximization and selection based on external constraints. One option to overcome this limitation is to add further variation to the analysis by comparing selection outcomes between refugees in different destination countries. Multiple studies have shown that asylum seekers in Germany are younger on average, are more likely to be male and have a higher average educational attainment than their compatriots seeking asylum in countries neighboring their country of origin (Guichard, 2020; Spörlein et al., 2020; Welker, 2022). Yet, once more the authors discuss but do not test that the more pronounced selection may be attributable not only to higher returns on education in Germany, but also to higher costs, risks and barriers associated with the long journey to Germany (Guichard, 2020; Spörlein et al., 2020; Welker, 2022).

We seek to add to this strain of literature by adding another dimension to the comparison of selection outcomes: In addition to studying three key asylum countries of the Syrian diaspora, we also compare selection outcomes over time, studying different arrival cohorts in Lebanon, Turkey, and Germany. This approach allows us to focus on the impact of short-term changes in context factors. Many of the factors that have been proposed as influencing individual migration decisions and thus potentially self-selection outcomes, such as expected return to education, social networks, welfare systems or gender and religious norms are unlikely to change significantly in relative magnitude during our relatively short observation period we study (2013 to 2017). Meanwhile, changes in the border and asylum policy framework governing the migration of Syrians changed substantially over this same time span in response to the unfolding displacement crisis. Studies have shown that such short-term policy changes can have a significant impact on the overall size of refugee arrival cohorts in a country (Hatton, 2017; Bertoli et al., 2022). Given that external constraints tend to affect members of a heterogenous refugee population differently (McAuliffe, 2017), it is plausible that such short-term shifts could also be reflected in the selection of the different arrival cohorts we study. To our knowledge, no study has investigated these external selection mechanisms empirically. By comparing selection outcomes across both country of residence and arrival cohort we address this important gap in the migrant selection literature.

Based on the framework of constrained refugee agency and the existing empirical literature we assume that less accessible escape routes induce more severe selection patterns in terms of physical and financial resources. Specifically, on routes that require higher levels of physical fitness and involve more risks, we expect to observe higher shares of young and male migrants traveling without their families. We further assume that Lebanon was the most accessible destination for Syrian refugees: entry barriers at the border were relatively low during the first 4 years of the Syrian civil war. Also, with Arabic as a common language, Syrians face no language barriers in Lebanon. Among the three destinations under study, all routes to Germany were by far the longest in distance, most expensive, and most risky, as will be discussed in more detail in section Syrian refugee migration: paths into Lebanon, Turkey and Germany.

Based on these assumptions, we thus expect

1) Syrians in Germany to be on average younger, to display a higher socioeconomic background, more likely to be males, and more likely to have arrived without their families than Syrians in Lebanon and Turkey.

With regard to the variation over arrival cohorts, we expect a more pronounced selection in terms of age, gender, socio-economic background and family context at arrival.

2) for arrival cohorts who arrived in either of the countries at times of more restrictive legal and policy frameworks, and

3) for arrival cohorts in Germany (vis-à-vis Lebanon and Turkey) whose routes into Europe were characterized by a higher risk of death.

3 Data and method

3.1 TRANSMIT Turkey and Lebanon surveys

In order to identify correlations between selectivity patterns among the displaced Syrian population and macro-structural changes in border and immigration policy as well as risk levels on migration routes, we firstly employ a descriptive analysis of individual-level demographic data by arrival cohort combined with secondary aggregated data on border crossings and migrant fatality data. Secondly, in a narrative approach, we offer a contextual analysis of the (changing) frameworks governing humanitarian migration to Lebanon, Turkey, and Germany. We focus on elusive factors that are usually overlooked in quantitative approaches due to measurement challenges, namely geographical access, border permeability, immigration regimes and policy enforcement. The strength of a narrative approach lies in its ability to consider qualitative sources (such as government statements and news articles) in an empirical framework when comprehensive quantitative indicators are not available (see Romer and Romer, 2023; for an exemplary overview on the narrative approach applied in macroeconomics). We furthermore provide a descriptive analysis of the changing levels of risk for life and health on major routes into Europe based on fatality data and data on border crossing activities. Finally, we interpret the selective mobility of Syrians in the three countries under study in the context of the (varying) legal and political frameworks as well as changing risk levels. This descriptive approach, which does not establish causality in an econometric sense, enables us to shed light on factors that are often overlooked but can induce substantial changes in selection patterns within short time frames.

For the cohort analysis of Syrians in Lebanon, Turkey, and Germany, we rely on an ongoing longitudinal survey of Syrian nationals in Turkey and Lebanon, collected by the BIM and the IAB in a joint research project on Transnational Migration and Integration (TRANSMIT). The survey targets a stratified sample of Syrian nationals and non-Syrian nationals in both Turkey and Lebanon. For our analysis, we use a subsample of Syrians in the first wave of data collection in Turkey and in the second wave of data collection in Lebanon, carried out simultaneously between September 2020 and February 2021. The computer-assisted face-to-face interviews (CAPI) were carried out in Arabic and cover a large battery of items on the respondents' migration biography, employment and education, living conditions, wellbeing and health, as well as family context and household composition. Wherever possible, the items were designed to match those in the IAB-BAMF-SOEP survey of refugees in Germany. Aiming to achieve nationally representative samples of Syrians in the absence of registry data, the surveys rely on stratified area sampling and random walk techniques. In Lebanon, the sampling frame consists of a list of regions on three levels: the 16 administrative regional units (states), divided into several Primary Sampling Units (PSUs), each again divided into several blocks. On the highest level, all administrative units were selected. From there, multi-stage proportional stratified sampling was applied. From all available PSUs, only those with an assumed Syrian presence as indicated by UNHCR data (including informal settlements) were selected.[1] Within the PSUs, the blocks were selected randomly.

Since Turkey is 75 times larger than Lebanon, the sampling frame in Turkey entails four regional levels: the administrative NUTS1 regions, the cities therein, districts within cities and neighborhoods within districts. All NUTS1 regions as well as the two biggest cities within each region are selected, because the relative regional presence of Syrians is highest in the largest cities in all regions [Directory General of Migration Management (DGMM), 2019]. Districts and neighborhoods are chosen by random draw. The number of interviews per federal state is determined by the regional share of Syrians to the overall Syrian population size in Turkey as recorded by Directory General of Migration Management (DGMM) (2019). The number of interviews per city is assigned according to the city's estimated Syrian population size. In the selected units, interviewers in both country surveys perform random walks to recruit respondents. While the representativity of samples with random walk design is discussed ambiguously in the literature (e.g., Himelein et al., 2016), random route procedures combined with area sampling still represent the second-best procedure when sampling hard-to-reach populations in the absence of accessible population registries (see e.g., Gallup, 2022; Pew Research Center, 2022; Alrababa'h et al., 2023).

To account for the higher non-response of females, we apply sampling weights. The TRANSMIT surveys collected basic demographics of all household members, which are less likely to be skewed than respondent data. From the household data, we estimate the overall gender share of Syrians in Lebanon and Turkey,

respectively, and apply them as probability weights to the individual survey interviews. In sum, TRANSMIT survey data of Syrians in Lebanon and Turkey targets representativity for Syrians living in areas for which Syrian residence is known.

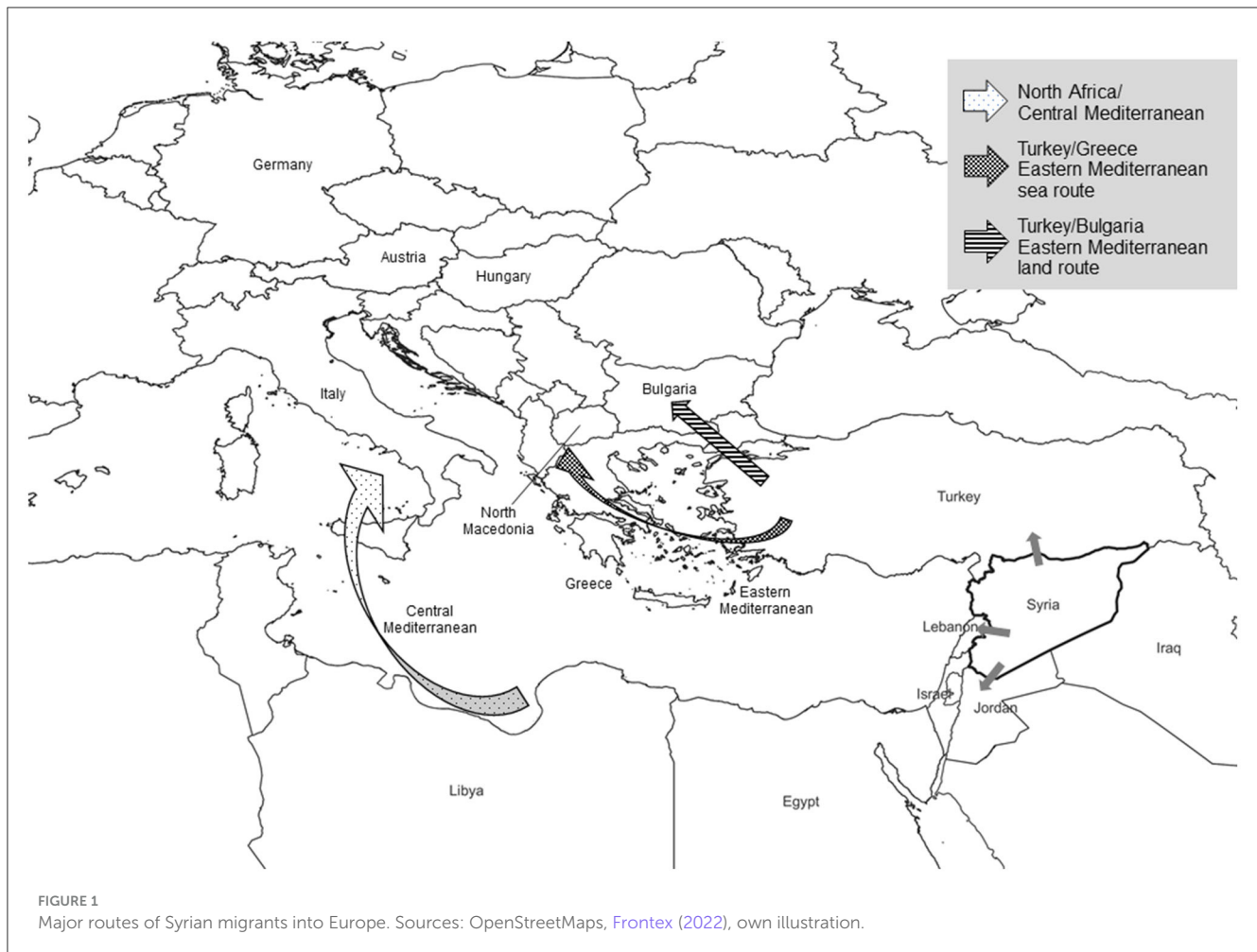## 3.2 IAB-BAMF-SOEP survey of refugees in Germany

The IAB-BAMF-SOEP survey of refugees is a longitudinal survey of refugees and asylum seekers who have recently migrated to Germany (Brücker et al., 2016). The sample was drawn from the Central Register of Foreigners (AZR) of the Federal Office for Migration and Refugees (BAMF). The target group corresponds to asylum seekers who (i) arrived in Germany between January 1, 2013, and January 31, 2016, and (ii) were registered in the AZR by June 30, 2016. Individuals coming from countries with a high prospect of staying in Germany at the time of sampling (i.e., Afghanistan, Iraq, and Syria), women, and persons aged over 30 were over-sampled. The 2017 survey included a refresher sample to account for asylum seekers who were listed in the AZR by January 1, 2017. Sampling weights provided with the survey data allow to produce statistics that are representative for asylum seekers arriving in Germany between January 1, 2013, and January 1, 2017. We use the survey wave 2019, version 37 of the SOEP dataset that includes the IAB-BAMF-SOEP survey. Given that all our outcome variables are measured at arrival and therefore do not change over time, the specific survey year we use does not have a substantial influence on results of our data analysis by arrival cohort.[2] Respondents were asked a large set of questions related to their lives in Germany, their socio-economic characteristics before migration as well as on their migration biographies. We make use of detailed survey questions on the used migration routes. Applying the definition of Frontex, the survey distinguishes between five main routes, three of which are relevant in the Syrian context: the Eastern Mediterranean sea route, the Eastern Mediterranean land route, and the Central Mediterranean route (see Figure 1).

3.3 Survey data harmonization

All survey data is restricted to arrival cohorts between 2013 and 2017, determined by the maximum time span available in the Germany survey, and to respondents at the age of 15 or older. The absence of registry data in Turkey and Lebanon renders it possible that (a) the surveys cover non-refugees and (b) that area sampling combined with random walk as an alternative sampling strategy did not produce a representative sample. Given the intense conflict

---

1 Given that the Lebanese government stopped the systematic refugee registration by UNHCR in 2015, data from 2015 is used.

---

2 Our results hold when using any survey wave between 2017 and 2020. Results are available upon request from the authors. Although the 2020 wave is closer to the data collection time of the TRANSMIT surveys, we prefer using the 2019 wave because the sample size is substantially higher than the sample size of the 2020 wave. The reason is that the severe lockdowns and mobility restrictions in Germany following the outbreak of the COVID-19 pandemic in 2020 seriously impacted data collection activities.

FIGURE 1

Major routes of Syrian migrants into Europe. Sources: OpenStreetMaps, Frontex (2022), own illustration.

in Syria in the period of study we assume the volume of non-refugees in the studied arrival cohorts (2013–2017) to be negligible. Regarding representativity concerns, the chosen sampling strategy is recognized as the second-best procedure to cost-effectively reach the targeted number of observations when the population of interest represents only a small fraction of the society or is hard to reach (Lynn et al., 2018; Watson and Lynn, 2021).

As the TRANSMIT surveys were designed to resemble the IAB-BAMF-SOEP survey of refugees wherever possible, harmonized items allow for comparison of the Syrian populations in the three countries under study. We restrict the analysis to variables that we are able to construct following the same definition in the three countries of destination. Specifically, gender is measured in two categories (male or female) in all surveys, and age is measured at the time of arrival in the destination country. For education, we distinguish between people who completed high school education or more, and people who did not achieve high school education. We furthermore construct a dummy for individuals who indicate to have arrived with family members at the respective destination country. This includes spouses, children, parents, and an open category for other family members.

Despite their strengths, the datasets we use in this study also come with some limitations. First, we only observe Syrian refugees

in Lebanon, Turkey, and Germany at the time of the survey. We do not observe asylum seekers who set off to these host countries but did not make it. The data at hand therefore suffers from a potential selection bias we cannot quantify. Moreover, the survey data does not include information on outward migration. The fieldwork of the TRANSMIT surveys was conducted in 2020 and 2021, 9 years after the conflict in Syria erupted. We thus do not capture those individuals who passed Lebanon and Turkey and migrated onwards, for example to continue to Europe. This introduces survival bias in the sample and limits the generalizability of our results to those refugee populations that remained in the host countries. We are therefore unable to assess any results related to short term mobility or circular migration patterns.

Second, as described above, the sampling strategy varies between surveys. This could reduce the comparability of aggregate figures obtained for the different host countries. In particular, the lack of registry data to construct sampling weights and account for varying participation probabilities in the surveys in Lebanon and Turkey could generate some uncertainty around the estimated sociodemographic characteristics. We are, however, confident that our approach of comparing cohorts over time is less prone to these weaknesses, as we

expect systematic differences due to sampling to stay constant over cohorts.

3.4 Border crossings and fatalities on migration routes

To measure border crossing activity, we use monthly cases of illegal border crossings into member states of the EU and Schengen associated countries collected by Frontex (2022). This dataset provides monthly aggregates classified for several migration routes, including the Central Mediterranean route, the Eastern Mediterranean sea route, and the Eastern Mediterranean land route. The numbers represent counts of illegal border crossings rather than the number of unique individuals who actually crossed the border in a given location. The same person may thus have crossed the border several times, which implies that we cannot establish the exact number of individuals who have illegally entered Europe at the various crossing points. As we intend to capture border crossing activities, this is not of concern in our analysis.

To assess the risks involved with specific routes, we rely on data from the Missing Migrants Project collected and published by the International Organization for Migration (IOM) since 2014 [International Organization of Migration (IOM), 2022]. The project tracks deaths of migrants, including refugees and asylum-seekers, who have died or gone missing in the process of migration toward an international destination. Information is gathered from official records, including coast guards and medical examiners, media reports, NGOs, social media, and interviews with migrants and survivors. In the Mediterranean region, data are relayed from relevant national authorities to IOM field missions. Data are also obtained by IOM and other organizations that receive survivors at landing points in Italy and Greece. Moreover, the Missing Migrants Project uses social and traditional media reports on migrant deaths which are then verified by local IOM staff whenever possible. All new entries are checked against existing records to prevent double-counting. IOM and UNHCR also regularly coordinate to validate data on missing migrants in the Mediterranean. Note that numbers are not provided separately for the Eastern Mediterranean sea and land route. Since many deaths during migration go unrecorded, the data represent minimum estimates.

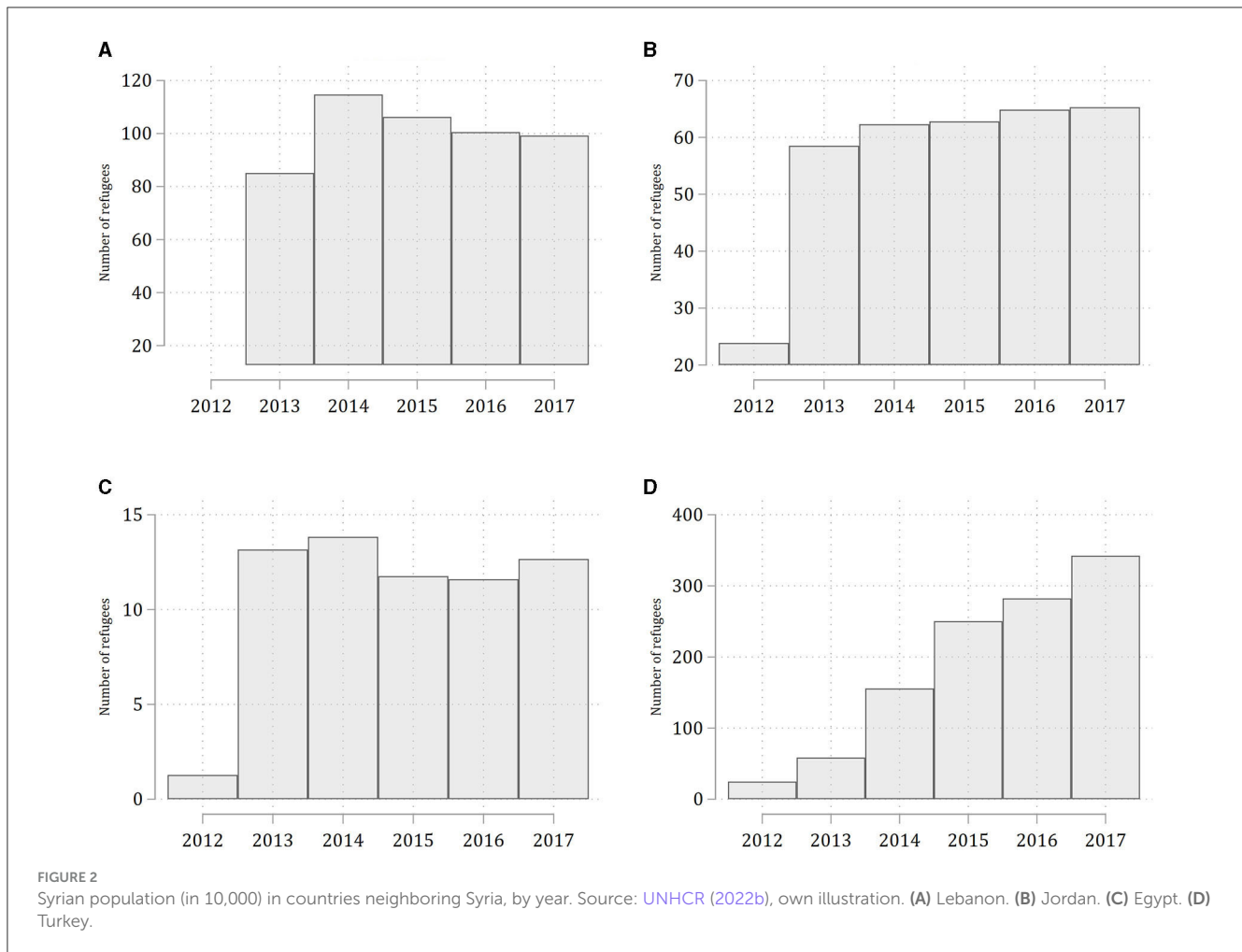## 4 Syrian refugee migration: paths into Lebanon, Turkey, and Germany

According to the latest figures, more than 6.8 million Syrians have been registered by the United Nations High Commissioner for Refugees (UNHCR) as refugees as of 2021, following the outbreak of the Syrian conflict in 2011 (UNHCR, 2022c). The vast majority of the displaced population found refuge in neighboring countries, mostly in Lebanon, Jordan and Turkey. As the Syrian conflict escalated and capacities for refuge within the region became increasingly strained, a growing number of displaced Syrians sought asylum in Europe, contributing to Germany's largest influx of refugees since World War II in 2015 and 2016 (Brücker et al., 2020).

4.1 Lebanon: location of first refuge

Located at Syria's Western border and at 30 kilometers distance to Damascus, Lebanon was among the first countries to receive significant numbers of Syrian refugees (see Figure 2). In 2022, the UNHCR counted over 800.000 officially registered refugees in Lebanon (UNHCR, 2022b). The real figure is likely much higher, rendering the small Mediterranean country the state with the highest refugee-to-population ratio in the world. Lebanon is no signatory state to the 1951 Refugee Convention and until today does not have an asylum law in place, such that Syrian entry to Lebanon is governed by the domestic regulations on the entry of foreigners. Until 2014, Syrian entry was largely unrestricted: based on the 1993 Lebanese-Syrian free movement agreement, Syrians with valid ID documents were granted legal residency for 6 months upon entry which could be renewed every 6 months without financial cost (Janmyr, 2016). Overall, Lebanon and Syria share a "long porous border history" (Carpi and Senoguz, 2018) including a common colonial past, the Syrian occupation of Lebanon until 2005, as well as a long history of labor migration and cross-border ties of families and businesses (Chatty et al., 2013; Krafft et al., 2022).

Starting in September 2014, a set of restrictions was gradually introduced. The changes had the explicit goal to limit the number of Syrians in Lebanon through restricted entry, new residence renewal regulations, as well as incentives to return (Janmyr, 2016, 2018). Among others, the largely unrestricted entry for Syrians was abolished and replaced with visa restrictions requiring different sets of documents and, in some cases, the proof of financial means or property [Norwegian Refugee Council and International Rescue Committee (NRC/IRC), 2015; Janmyr, 2016]. The visa category to seek protection from displacement was introduced but restricted to individuals who were accepted to international resettlement schemes as well as to unaccompanied minors and persons with medical needs, conditional on these persons having a relative already residing in Lebanon [Norwegian Refugee Council and International Rescue Committee (NRC/IRC), 2015]. The legal reforms furthermore introduced a set of new requirements for the issuance and renewal of residence permits. Syrians now require either registration with the UNHCR (which comes with an employment ban) or a sponsorship commitment by a Lebanese citizen, employer or institution, and they now need to present a housing commitment. The new framework also restricts circular migration between Lebanon and Syria, a common scheme before 2015 (Janmyr, 2016). To obtain a work permit, a Lebanese sponsor is now required (Janmyr and Stevens, 2020). In sum, the 2014/2015 reforms substantially raised the requirements and associated costs for entering Lebanon as well as for staying in the country.

At the same time, the ability and will of the Lebanese government to enforce the policy and border measures has been limited. Sanyal (2018) describes the Lebanese migration policy enforcement as *ad hoc* and arbitrary, for example regarding the carrying out of border controls, the erection of checkpoints by different public and private actors, or the introduction of mobility restrictions for Syrians in some municipalities. The large-scale involvement of local public and private actors has led to a fragmented and decentralized management of Syrian immigration

FIGURE 2
Syrian population (in 10,000) in countries neighboring Syria, by year. Source: UNHCR (2022b), own illustration. **(A)** Lebanon. **(B)** Jordan. **(C)** Egypt. **(D)** Turkey.

(Carpi and Senoguz, 2018). This is partly due to the complex sectarian political setup and the political uncertainty the country has been facing for several years, and in parts stems from Lebanon's continued "policy of no-policy" toward refugees (Geha and Talhouk, 2018, p. 651). The arbitrary policy enforcement is particularly burdensome to the more vulnerable and those with little resources (Sanyal, 2018). In line with this argument, from 2014 onwards, we expect stronger selection effects for Syrians migrating to Lebanon: most importantly, we hypothesize that in the context of the novel restrictions, migrant cohorts show on average higher educational attainment, signaling a higher socioeconomic status (cf. hypothesis 2, Section Literature review: selection under constrained agency). Given the fragmented and arbitrary enforcement of the policies, we expect the selection effects to be low in magnitude.

4.2 Turkey as the second major destination

The 2014/15 legal reforms in Lebanon coincided with the rise of the Islamic State in 2014, an escalation of the civil conflict in Syria and an intensification of violence in Iraq, such that the number of individuals seeking humanitarian refuge remained at historically high levels. With Egypt, Jordan, and Lebanon becoming more hesitant to accept Syrian refugees, Turkey increasingly became a major destination: the number of registered Syrian refugees increased from 500,000 in 2013 to 1,5 million in 2014 and 2,8 million in 2016 (UNHCR, 2022b).

With 3.3 million today, Turkey is currently host to the largest population of displaced Syrians (UNHCR, 2023). The 2009 visa-free travel agreement with Syria was officially upheld until 2016 and was widely lauded as an open-door policy for Syrians fleeing the conflict. As early as 2014, however, partial border closures and denied entrances for Syrians were reported (Amnesty International, 2014). By 2019, despite opposite public claims, the Turkish government had shifted to a closed-door policy, cemented by the construction of an 899-kilometer wall along the Turkish-Syrian border (Gokalp Aras and Sahin Mencutek, 2019).

The legal residency of Syrians in Turkey and their prospects in the country were characterized by legal uncertainty from the start. Although a signatory state to the 1951 Geneva Convention of Refugees, Turkey only recognizes those individuals as refugees who flee from Europe. In 2014, the Turkish government introduced the legal category of Temporary Protected Status (TPS) designed exclusively for displaced Syrians (Yildirim et al., 2019). While TPS grants Syrians access to healthcare, education and other social services (Yildirim et al., 2019), it does not represent a permanent
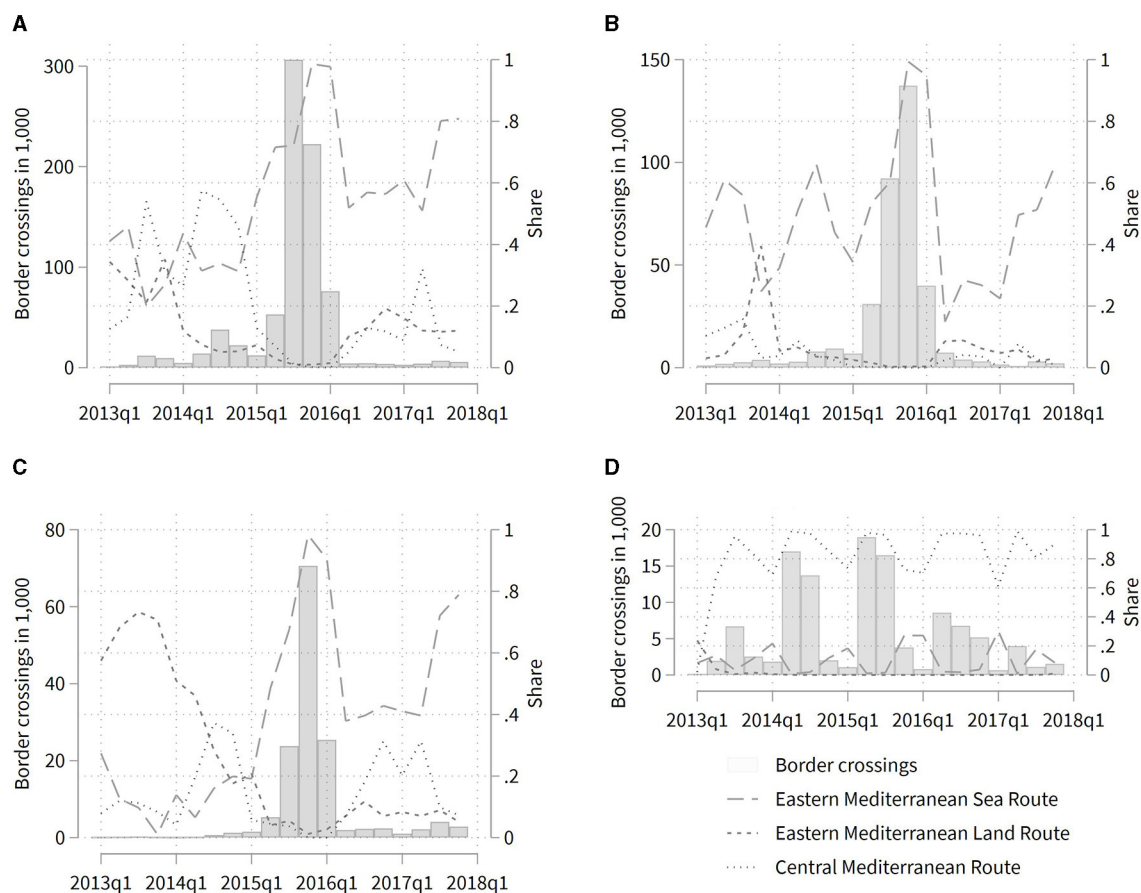
FIGURE 3
Undocumented border crossings by year and routes of Syrians, Afghans, Iraqis and Eritreans. Source: Frontex (2022), own illustration. **(A)** Share of Syrians. **(B)** Share of Afghans. **(C)** Share of Iraqis. **(D)** Share of Eritreans.

residence permit and offers no path into regular citizenship (Kutlu-Tonak, 2016). At the same time, public and political opposition to the presence of Syrians and other refugees increased over time (Erdogan, 2020). A range of studies attribute the onward migration of Syrians toward Europe to the conditions and policies governing their lives in Turkey, including the lack of a long-term perspective and the perceived hostility (e.g., Hudson, 2018; Ilcan et al., 2018).

Several effects are therefore simultaneously at play: Lebanon and Turkey both tightened entry and residency for Syrians at a point in time when the conflict in Syria escalated into a war with several international actors involved. This resulted in increased internal displacement within Syria, but potentially also motivated migration attempts toward Europe. These were demotivated by the EU-Turkey deal aimed at reducing irregular migration from Turkey to Europe (Haferlach and Kurban, 2017). While border enforcement and return measures outlined in the deal decreased incentives to enter Turkey with hopes of onward migration to Europe, the 6 billion Euros in refugee support promised by the EU in the agreement may have rendered Turkey a more attractive destination for vulnerable groups. Our expectation for the net-effect of the EU-Turkey deal on the selectivity of Syrian migration into Turkey is therefore ambivalent.

In sum, due to its geographical location, Turkey finds itself in the complex situation of being a destination country as well as a transit country to Europe while serving as a buffer state to

prevent irregular migration to Europe, in a period of skyrocketing displacement from Syria. The newly restricted policy framework presumably led to a stronger migrant selection in terms of their sociodemographic characteristics, but the rising displacement pressure from Syria (including migrants with intentions to migrate onwards) may have counteracted this effect. Overall, migration pressure on Turkey increased but entry conditions tightened. Hence, in line with hypothesis 2, we expect some selection in terms of gender, age, socioeconomic status and family context compared to Syrians in Lebanon, but small in magnitude.

4.3 Risky routes into Germany

Between 2013 and 2017, Syrian refugee migration to Germany surged. The peak of arrivals was reached in 2015 with 327,000 Syrian entries [(Bundesamt für Migration und Flüchtlinge (BAMF), 2016)]. While both Lebanon and Turkey border Syria, migration to Europe is more complex, both in terms of geography and immigration policies. Entering EU countries with valid travel documentation was not a viable option to most refugees and many relied on smuggling services to bypass border controls. The uncertain access to asylum in Western Europe resulted in substantial costs, both financially and in terms of health and
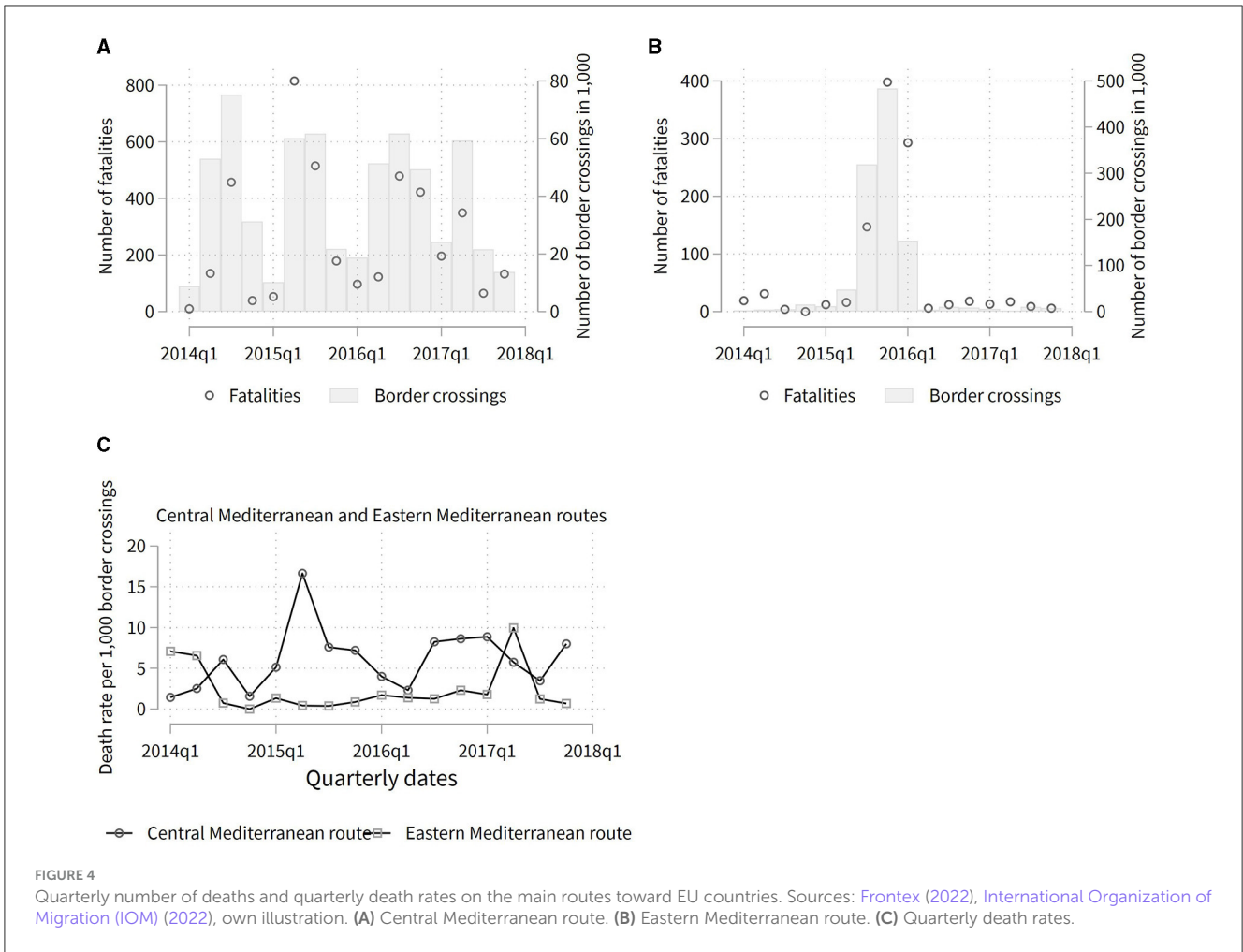
FIGURE 4
Quarterly number of deaths and quarterly death rates on the main routes toward EU countries. Sources: Frontex (2022), International Organization of Migration (IOM) (2022), own illustration. **(A)** Central Mediterranean route. **(B)** Eastern Mediterranean route. **(C)** Quarterly death rates.

TABLE 1 Death rates per 1,000 border crossings by route and year.

	Central Mediterranean	Eastern Mediterranean
2014	3.0	3.5
2015	9.1	0.7
2016	5.8	1.7
2017	6.5	2.4
Total	6.2	2.0

Sources: Frontex (2022), International Organization of Migration (IOM) (2022), own illustration.

safety risks. We argue that, overall, costly and risky migration routes led to unequal opportunities to claim asylum for different groups in need of humanitarian protection: the more vulnerable and those with fewer resources at hand were underrepresented. In line with hypothesis 1, we expect that, overall, the dangerous routes into Europe led to an overrepresentation of young men, solo travelers and those with a higher socioeconomic status among Syrian migrants in Germany.

However, health and safety risks as well as accessibility of the major travel routes toward Germany changed over

time. From the Middle East, two main routes into Europe were available for refugees: either via North Africa and the Central Mediterranean or via Turkey. Syrians intensively used the Central Mediterranean route until 2014, embarking boats in Libya or Egypt directed to Italy or Greece. When Egypt introduced visa requirements in July 2013, crossing the Mediterranean Sea from Libya became the main migration option.

Toward the end of 2014, the routes via Turkey gained in relevance: from Turkey, borders into the European Union could be crossed either by land to Bulgaria or by crossing the Eastern Mediterranean to the Greek islands near the Turkish coastline (see Figure 1). Both routes then crossed the Western Balkans to reach Germany. In May 2014, the Bulgarian government started erecting a barrier covering more than half of the Bulgarian-Turkish border.[3] In June 2015, North Macedonia as a transit country to Western Europe for migrants arriving from Greece or Bulgaria introduced a paper entitling asylum seekers to legally transit the country. In September 2015, Austrian Chancellor Faymann and German Chancellor Merkel allowed migrants to cross the border

---

3 The Greek-Turkish border was fenced as early as 2012.

TABLE 2 Age, gender, education and family context at arrival of Syrian migrants in Germany, Lebanon, and Turkey (2013–2017).

	Share with high school education or higher	Mean age at arrival	Female share	Share arriving with family
Germany				
2013	34.0	33.1	42.2	56.2
2014	62.7	29.8	21.3	45.1
2015	46.6	29.5	24.4	58.7
2016	33.8	29.5	42.1	70.8
2017	39.4	35.2	67.1	66.0
Total	43.3	31.4	39.4	59.4
Lebanon				
2013	10.5	26	52.5	89.9
2014	10.6	27.4	44.0	81.8
2015	17.1	26.7	62.8	83.3
2016	17.7	26.7	60.9	81.3
2017	13.3	25.7	51.5	77.3
Total	13.8	26.5	54.4	82.7
Turkey				
2013	34.9	25.7	51.8	92.5
2014	23.1	29.0	53.9	91.8
2015	29.8	26.9	54.6	89.6
2016	25.6	28.0	49.3	92.0
2017	28.2	28.1	43.7	83.9
Total	28.3	27.5	50.7	90.0
Total				
2013	26.5	28.3	48.9	79.5
2014	32.1	28.7	39.7	72.9
2015	31.2	27.7	47.3	77.2
2016	25.7	28.1	50.8	81.4
2017	27.0	29.6	54.1	75.7
Total	28.5	28.5	48.1	77.3

Sources: TRANSMIT survey (2020/2021) and IAB-BAMF-SOEP survey of refugees (SOEP, v37, 2020), own illustration.

from Hungary into Austria and onward to Germany, and buses with migrants began crossing the Austro-Hungarian border.[4]

The sum of these changes substantially reduced the need for smuggler services and the risks and costs of reaching Western Europe via Greece and the Western Balkans, largely redirecting migrants to the Eastern Mediterranean Sea route in 2015 (Zaragoza-Cristiani, 2017). Figure 3 depicts this route shift of Syrian migrants.[5] This coincided with a rapid increase in the total number of illegal border crossings, peaking in the second half

of 2015.[6] Importantly, this development also represented a shift toward a much less risky route: throughout the observation period, the Eastern Mediterranean routes were commonly associated with lower risks of death compared to the Central Mediterranean route (Figure 4). In 2015, when migration attempts peaked, one death per 1,000 border crossings was registered on the Eastern Mediterranean route, compared to a ratio of 9 to 1,000 on the Central Mediterranean route (Table 1).

In line with hypotheses 2 and 3 presented in Section Literature review: selection under constrained agency, we expect the 2015 shift toward a less dangerous route as well as the less restrictive
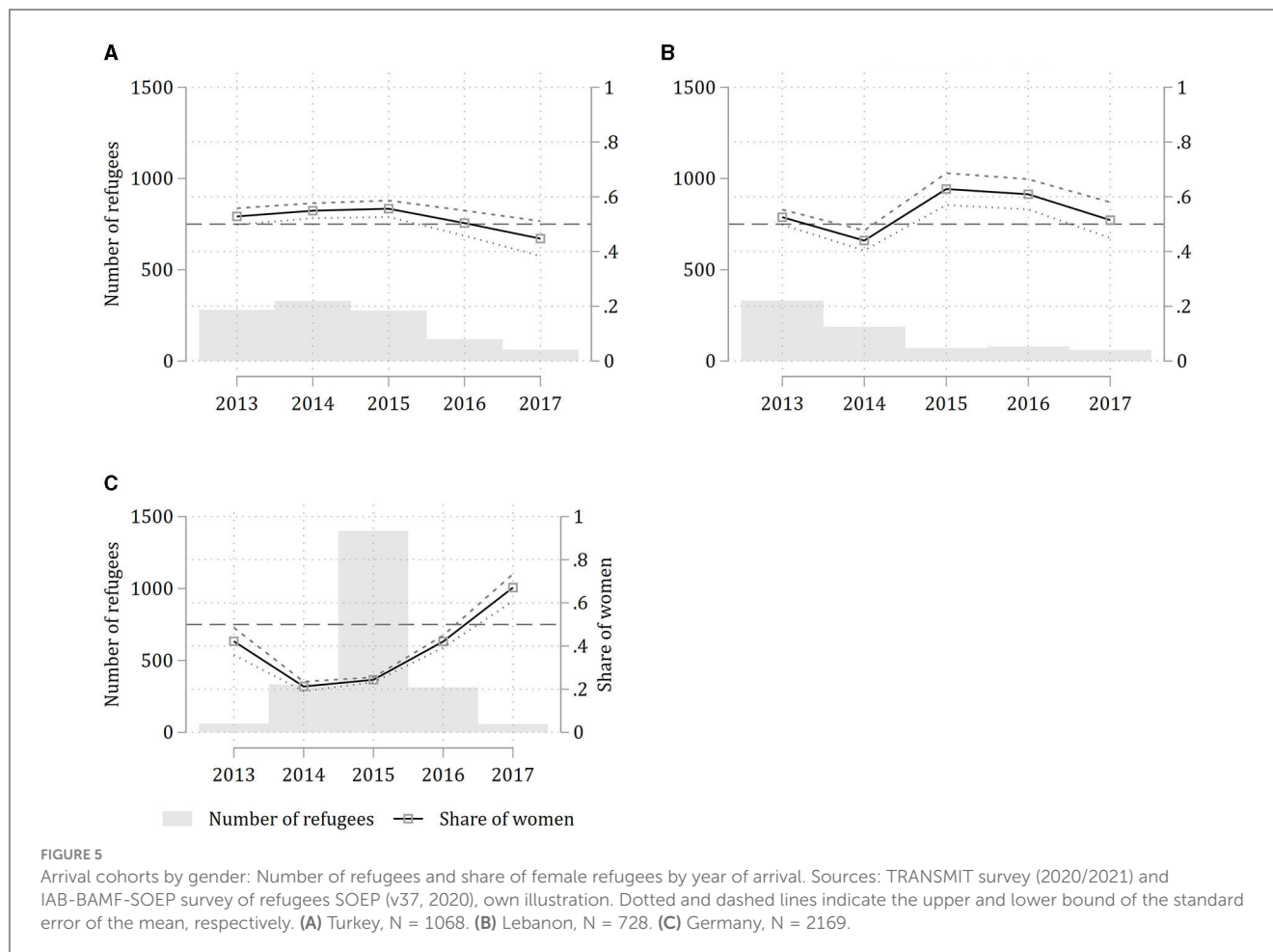
---

4   For an analysis of the effect of Merkel's announcement on migratory developments toward Germany (see Jasper Tjaden and Heidland, 2021). They could not confirm a measurable effect.

5   Note that this shift is also observable for migrants from Afghanistan and Iraq, but not for migrants from Eritrea (Figure 3).

6   Interestingly, a similar peak is visible for migrants from Iraq and Afghanistan, who also used the Eastern Mediterranean route, but not for Eritreans.

FIGURE 5
Arrival cohorts by gender: Number of refugees and share of female refugees by year of arrival. Sources: TRANSMIT survey (2020/2021) and IAB-BAMF-SOEP survey of refugees SOEP (v37, 2020), own illustration. Dotted and dashed lines indicate the upper and lower bound of the standard error of the mean, respectively. **(A)** Turkey, N = 1068. **(B)** Lebanon, N = 728. **(C)** Germany, N = 2169.

policy and legal frameworks on the Eastern Mediterranean route to be associated with less severe selection patterns for Syrians in Germany, i.e., we expect a higher number of females and family migrants, a higher average age and a lower average socioeconomic background from 2015 onwards as compared to earlier cohorts.
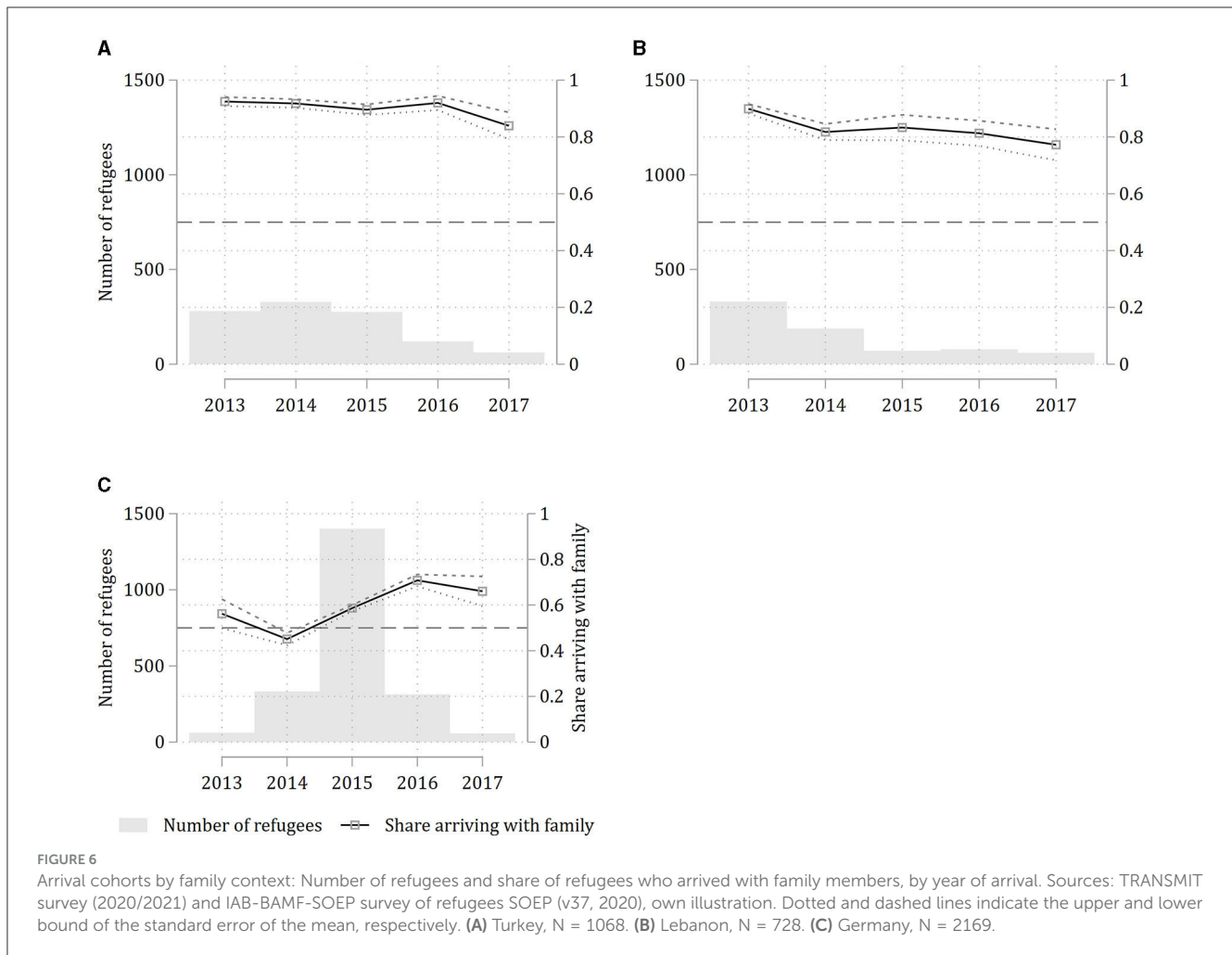
5 Selection patterns of refugees in Lebanon, Turkey, and Germany

We first focus on the gender composition of different arrival cohorts. In Lebanon, where most Syrians arrived in 2012 and 2013 shortly after the onset of the civil war in Syria, women constitute the majority share of the Syrian population (54 women vs. 46%men, see Table 2, also see Figure 5). Neighboring Syria, migration to Lebanon was relatively straightforward, with lower risks, lower financial costs, and relatively little entry restrictions until 2014, such that Lebanon represented a relatively accessible destination (compared to Turkey and especially Germany). Refugee arrivals in Turkey follow slightly different patterns. On average, displaced Syrians arrived in Turkey later than in Lebanon (Figure 2). The largest cohorts arrived in 2013, 2014, and 2015 (see Figures 1, 5). The Syrian population in Turkey is close to gender parity in the observation period (51 percent females), but the time trend is

reversed: women constitute the majority of arrivals in until 2015, then the female share decreases.

Refugee migration to Germany took off much later than in Turkey and Lebanon (Figure 5). The overall share of female migrants arriving in Germany amounted to 39% between 2013 and 2017 (Table 2) and thus was considerably smaller than for the arrival cohorts in Lebanon and Turkey. This likely reflects the fact that migration routes to Germany were much costlier and associated with higher risks. The yearly figures show, however, a substantial increase in the female share of Syrians reaching Germany, from <25 % in 2014 and 2015 to 42 and 67 per cent in 2016 and 2017, respectively (Table 2).[7] This period is characterized by a major shift toward a less risky migratory route leading to Germany as well as eased travel conditions on the Eastern Mediterranean routes (see Section Syrian refugee migration: paths into Lebanon, Turkey, and Germany). It can be assumed that

---

7　By design, the IAB-BAMF-SOEP survey data includes mostly refugees who arrived between 2014 and 2016. To confirm the gender composition of refugees in Germany over a longer period of time, we resort to the corresponding administrative data from the German federal statistical office (Destatis, 2021). Figure A1 in the Appendix shows a pronounced drop in the female share for the 2015 arrival cohort and a drastic increase to 45 and 50% in 2016 and 2017, respectively, confirming our main findings.

FIGURE 6
Arrival cohorts by family context: Number of refugees and share of refugees who arrived with family members, by year of arrival. Sources: TRANSMIT survey (2020/2021) and IAB-BAMF-SOEP survey of refugees SOEP (v37, 2020), own illustration. Dotted and dashed lines indicate the upper and lower bound of the standard error of the mean, respectively. **(A)** Turkey, N = 1068. **(B)** Lebanon, N = 728. **(C)** Germany, N = 2169.

the overall less risky and less costly travel conditions from 2015 onwards could have encouraged more women to undertake the journey to seek protection in Germany.

A closer look at the family composition of arrival cohorts supports this interpretation. Figure 6 shows the share of refugees arriving with their family members by destination and year. Consistent with lower barriers to entry, the share of refugees arriving with their family members is higher in Turkey and in Lebanon compared to Germany. The share in Lebanon and Turkey on average equals 83 and 90%, respectively, and is relatively stable over time (Table 2). In contrast, the share of refugees arriving with their family members in Germany was considerably lower, ranging at 45% in the 2014 cohort. This coincides with the timing when the riskier and more demanding Central Mediterranean route was the main corridor of access. In 2015, when the less dangerous Eastern Mediterranean route established, the share of refugees arriving with family in Germany increased to 59% and reached 71% in 2016 (Table 2).

Figure 7 compares the mean ages of different migration cohorts across the three destination countries under study. On average, Syrians in Lebanon and Turkey are slightly younger than in Germany (with mean ages of 27, 28 and 31 years, respectively), with little variation over time (Table 2). We thus find moderate

selection patterns by age. Considering age percentiles 25, 50, and 75 instead of mean values, which are more sensitive to outliers, Figure A2 confirms this observation. Overall, the distribution in terms of age at arrival seems to be similar across destination countries. This figure also confirms the limited variation in the distribution over time.

Concerning socioeconomic background, Figure 8 shows the share of Syrian refugees having completed high school or having entered higher education, which we employ as an indicator of socioeconomic background. Syrians in Lebanon have the lowest high school completion rate with 14 percent, followed by Turkey with 28 percent (see Table 2). In Germany, 43 percent of all Syrian refugees in the observation period hold a high school degree or higher. In line with hypothesis 1, Syrians in Germany thus show the highest socioeconomic background on average, followed by Turkey. The share of Syrians in Lebanon and Turkey with a higher socioeconomic background seems to slightly increase for the cohorts arriving after 2014 when immigration conditions became less favorable in both countries, corroborating hypothesis 2. The opposite is the case for Germany: the educational level is highest among the 2014 cohort when Syrian migrants still used the risky Central Mediterranean route. Educational attainment drops for later cohorts, possibly reflecting eased immigration conditions,
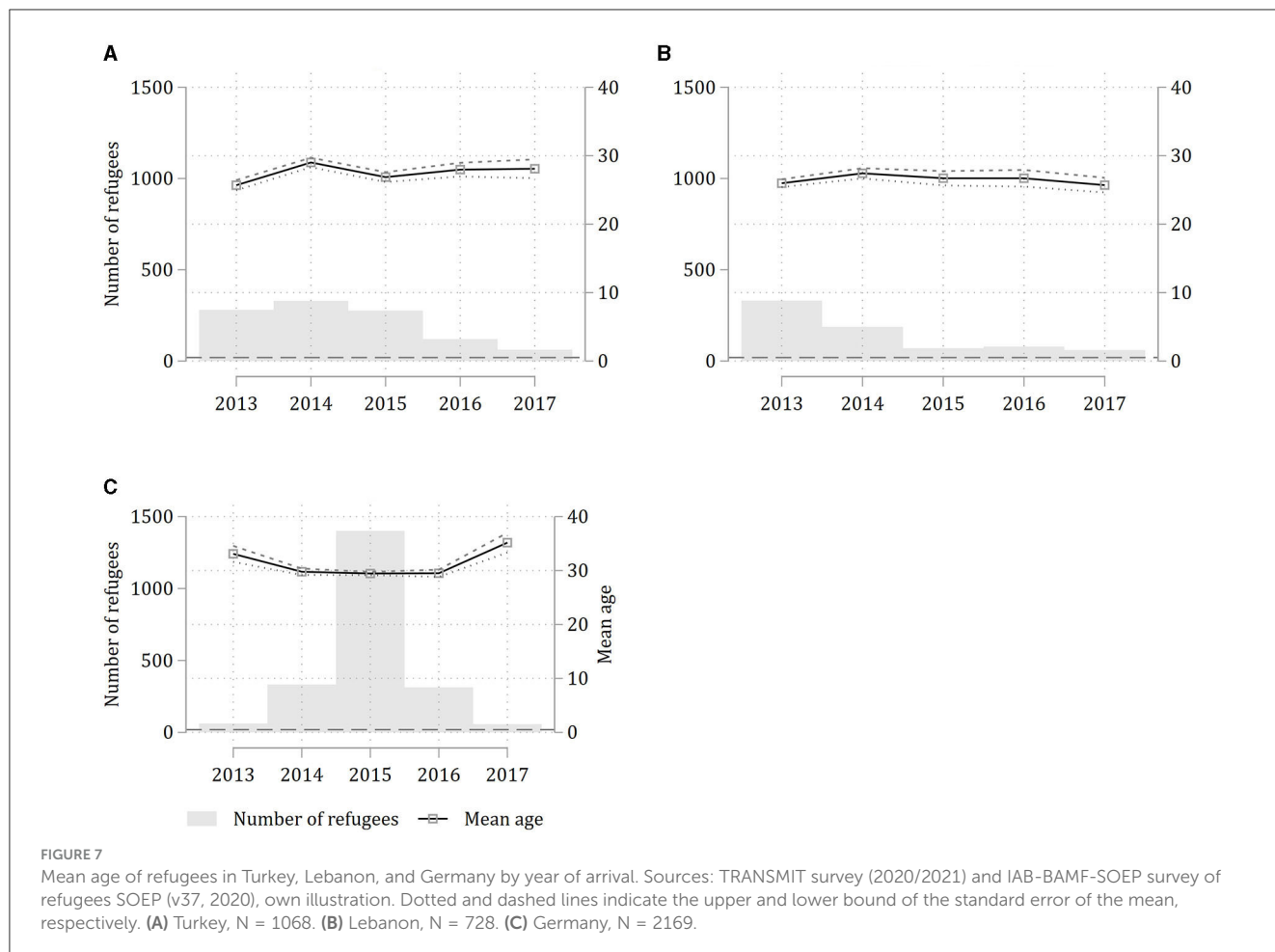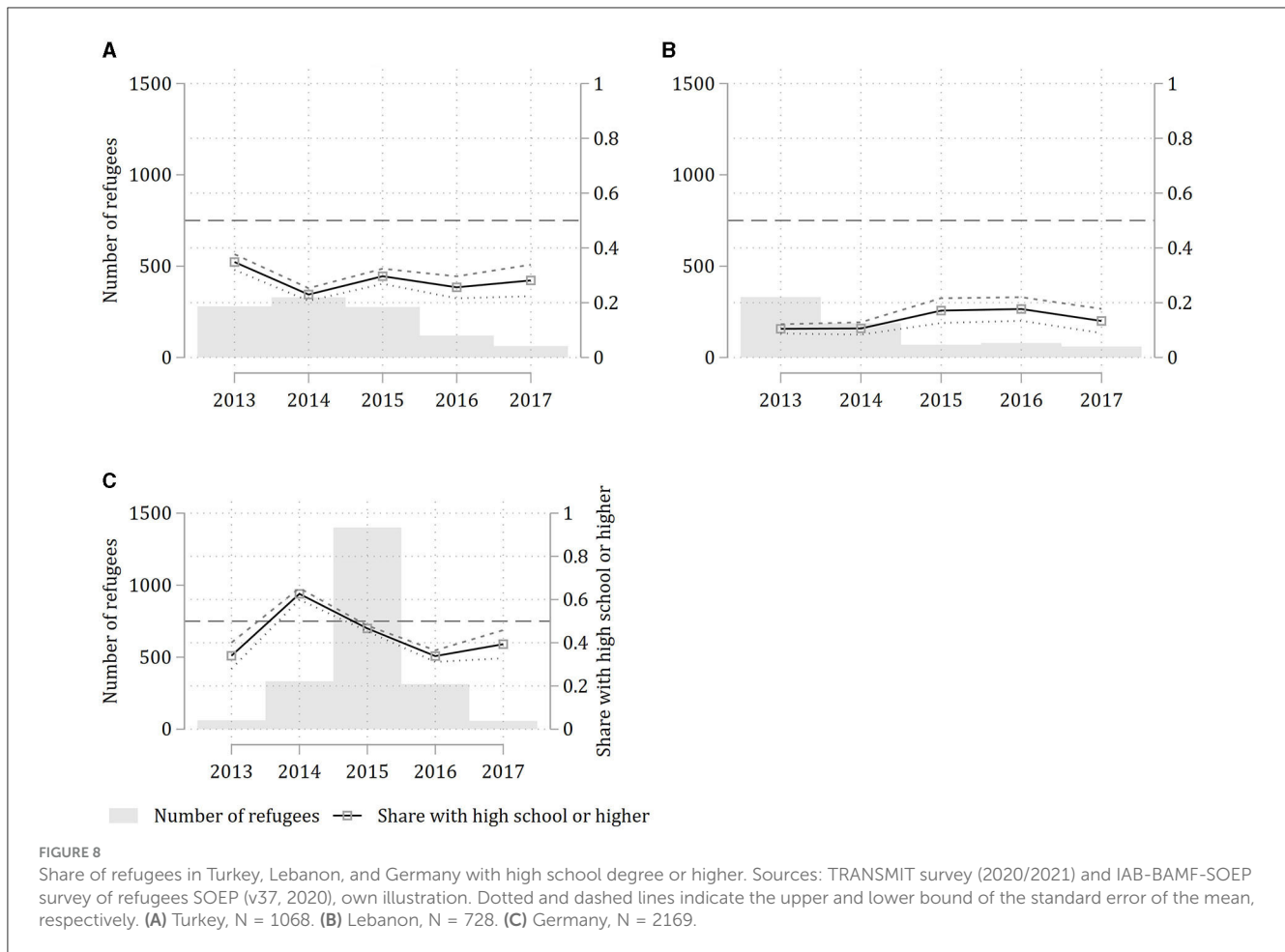
including enhanced access to information, and lower risks of death on the routes toward Western Europe. This finding is in line with hypotheses 2 and 3. Note that this cannot be attributed to changes in the gender composition: the educational levels of males only, as shown in Figure A3 in the Appendix, confirm similar patterns to the overall samples. It should be noted that the lower average educational attainment of Syrians arriving in Lebanon could also reflect the geographic variation of educational attainment within Syria prior to the conflict, as the Syrian population in areas closer to the Lebanese border historically displayed lower education levels (Krafft et al., 2022).

6 Discussion and outlook

Global asylum policy, as outlined in the Global Compact on Refugees, formally aims to offer protection to the most vulnerable populations and the victims of conflict and violence. With the resurgence of armed conflicts and violence against civilians as well as the eruption of environmental disasters the question of access to security is becoming increasingly urgent. In general, most countries subscribe to the goals of the 1951 Refugee convention and the Global Compact on Refugees. However, safe territories are often only accessible via risky and costly routes, and the lack of formal options to seek refuge

from abroad introduces the risks and barriers associated with irregular migration.

In this study, we show that refugee migration is a selective process and the composition of refugee cohorts is not independent of the individual resource endowment. We compare socio-demographic characteristics of different arrival-cohorts of Syrian refugees living in Lebanon, Turkey, and Germany. In combination with contextual information on changing border policies, asylum policies, and route characteristics, we outline the varying socio-demographic characteristics of refugee cohorts across destinations and over time within the framework of theories on migrant selection. We find that riskier routes and higher entry barriers are associated with a lower share of female and family migrants, a higher mean age and a higher socio-economic background. Consistent with the outlined theoretical considerations and existing empirical literature, selection patterns were strongest among the Syrian refugee population in Germany. Our narrative approach suggests that less accessible and more dangerous routes imply more severe selection outcomes in terms of migrants' socio-demographic make-up. This holds for cohort differences both between destination countries and over time. The findings from our analysis can be integrated within a theoretical framework of constraint choice predicting that higher external barriers increase migration costs and lead to a stronger refugee selection.

FIGURE 8

Share of refugees in Turkey, Lebanon, and Germany with high school degree or higher. Sources: TRANSMIT survey (2020/2021) and IAB–BAMF–SOEP survey of refugees SOEP (v37, 2020), own illustration. Dotted and dashed lines indicate the upper and lower bound of the standard error of the mean, respectively. **(A)** Turkey, N = 1068. **(B)** Lebanon, N = 728. **(C)** Germany, N = 2169.

We conclude that, firstly, the theoretical frameworks on migrant selection which were designed to explain voluntary migrant selection patterns are also helpful in explaining sorting in forced migration. Our empirical analysis shows, however, that external barriers are particularly crucial in determining forced migration patterns and that the observed selection outcomes are thus unlikely to be a result of utility-maximizing self-selection alone. We thus secondly conclude that the literature on forced migrant selection would strongly benefit from exploring and establishing selectively applied external constraints as a major potential mechanism in forced migrant selection. This refers in particular (but is not limited to) to the (varying) legal and geographical accessibility of countries. Thirdly, a growing body of research shows that both individual and structural characteristics including institutional regulations determine the integration prospects of refugees (Kosyakova and Kogan, 2022). By shaping the characteristics of migration cohorts, external barriers to migration could therefore lay the foundations of medium and long-term integration prospects of refugees in host countries. However, the exact mechanisms through which selection patterns influence the integration of refugees are not yet sufficiently understood. Importantly, the consequences of external barriers on integration prospects depend on how they shape selection patterns both on observable and on unobservable characteristics. Theoretical models applicable to voluntary migration have shown

that migration conditions such as uncertainty about one's prospects or selective policies induce significant self-selection among migrants on unobservable criteria, well beyond the selection on observable criteria (Bertoli, 2010; Bertoli et al., 2016). To what extent such findings are applicable to forced migration remains a promising avenue of future research that can build on the evidence on observable characteristics we present in this study.

The results from our analysis also bear significant implications for policy. Given the cohort differences we found, access to peace and security is not equally distributed. Rather, only a selected set of people in vulnerable situations equipped with the necessary resources are capable of reaching safe places. Our results thus, firstly, highlight the need for improved possibilities to claim asylum in a given country without having to enter it illegally, e.g., through offering valid travel documents to this country tied to the purpose to claim asylum, in order to meet the objective of a needs-based asylum policy. Our results indicate that the ability to embark on risky routes without formal visa and to fund expensive travel arrangements substantially contribute to shaping the composition of cohorts in different countries. As a consequence, the probability of obtaining asylum in Western European countries is not need-based but rather shaped by the ability to overcome long distances and the obstacles involved with irregular migration.

The study results, secondly, call for a coordinated asylum policy between host countries at the global level. Since the countries neighboring conflict areas often represent the first points of refuge due to short distances and more permeable borders, they bear the main burden of accommodating refugees. Given limited resources and greater displacement pressure in these countries, the distribution of resources available for protection and integration of refugees is currently not optimal: comparatively little resources are devoted to vulnerable population groups who are unable to escape over long distances to wealthier countries.

Thirdly, improving family reunification options for refugees who made it to a safe country could be a possible avenue to mitigate the selection effects of restricted access to escape routes and to prevent the death of irregular migrants en route. Expanded family reunification procedures would particularly improve access to security to spouses and children whose family members reached a safe country. In Germany, family reunification for accepted asylum seekers involves lengthy procedures and high requirements. As a consequence, spouses (mostly women), elderly, and disabled persons in protracted situations may remain in danger longer than necessary.

Data availability statement

The data analyzed in this study is subject to the following licenses/restrictions: This study uses the factually anonymous data of wave 2019 of the IAB-BAMF-SOEP Survey of Refugees version 37. Access to this data can be requested at: SOEP Research Data Center: https://www.diw.de/en/diw_01.c.601584.en/data_access.html. The study furthermore uses wave 2 of the TRANSMIT survey in Lebanon and wave 1 of the TRANSMIT survey in Turkey. For data protection reasons in this ongoing longitudinal data collection, these data are currently not public but will be available once the data collection is finalized and the data fully anonymized in 2025. Requests to access these datasets should be directed to LG, lidwina.gundacker@iab.de. Border crossings data from Frontex are available at: http://frontex.europa.eu/we-know/migratory-map/. Data from the missing migrants project on fatalities are available at: http://missingmigrants.iom.int.

Ethics statement

Ethics approval for the TRANSMIT surveys was not required by the funders nor by the hosting institution. However, for the follow-up data collections in the longitudinal study this data is drawn from in 2022, ethics approval was sought voluntarily. Operating with the same procedure, similar questionnaires and equivalent data protection and consent measures, the research was approved by the Ethics Commission of Faculty of Humanities and Social Sciences at Humboldt Universität zu Berlin (HU-KSBF-EK_2022_0023). Informed consent for participation in this study was provided by particpants or their legal guardian/next of kin.

Author contributions

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

Funding

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

Supplementary material

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fhumd.2023.1171885/full#supplementary-material

References

Aksoy, C. G., and Poutvaara, P. (2021). Refugees' and irregular migrants' self-selection into Europe. *J. Dev. Econ.* 152, 1–18. doi: 10.1016/j.jdeveco.2021.102681

Alrababa'h, A., Masterson, D., Casalis, M., Hangartner, D., and Weinstein, J. (2023). The dynamics of refugee return: Syrian refugees and their migration intentions. *Br. J. Polit. Sci.* 53, 1108–1131. doi: 10.1017/S0007123422000667

Amnesty International (2014). *Struggling to Survive: Refugees From Syria in Turkey (EUR 44/017/2014).* Amnesty International Ltd. Available online at: https://www.amnesty.org/en/documents/eur44/017/2014/en/ (accessed December 01, 2022).

Bertoli, S. (2010). The informational structure of migration decision and migrants self-selection. *Econ. Lett.* 108, 89–92. doi: 10.1016/j.econlet.2010.04.024

Bertoli, S., Brücker, H., and Moraga, J. F. H. (2022). Do applications respond to changes in asylum policies in European countries? *Reg. Sci. Urban Econ.* 93:103771. doi: 10.1016/j.regsciurbeco.2022.103771

Bertoli, S., Dequiedt, V., and Zenou, Y. (2016). Can selective immigration policies reduce migrants' quality? *J. Dev. Econ.* 119, 100–109. doi: 10.1016/j.jdeveco.2015.11.002

Birgier, D. P., Lundh, C., Haberfeld, Y., and Elldér, E. (2018). Self-selection and host country context in the economic assimilation of political refugees in the United States, Sweden, and Israel. *Int. Migr. Rev.* 52, 524–558. doi: 10.1111/imre.12309

Blum, M., and Rei, C. (2018). Escaping Europe: health and human capital of Holocaust refugees. *Eur. Rev. Econ. Hist.* 22, 1–27. doi: 10.1093/ereh/hex014

Borjas, G. J. (1987). Self-selection and the earnings of immigrants. *Am. Econ. Rev.* 77, 531–553. doi: 10.3386/w2248

Brücker, H., Fendel, T., Guichard, L., Gundacker, L., Jaschke, P., Keita, S., et al. (2020). *Fünf Jahre "Wir schaffen das"—Eine Bilanz aus der Perspektive des Arbeitsmarktes* (Research Report 11/2020). IAB-Forschungsbericht. Available online at: https://www.econstor.eu/handle/10419/234267

Brücker, H., Kosyakova, Y., and Vallizadeh, E. (2021). Has there been a "refugee crisis"? New insights on the recent refugee arrivals in Germany and their integration prospects. *Soziale Welt* 73, 24–53. doi: 10.5771/0038-6073-2020-1-2-24

Brücker, H., Rother, N., Schupp, J., Babka von Gostomski, C., Böhm, A., Fendel, T., et al. (2016). *IAB-BAMF-SOEP-Befragung von Geflüchteten: Flucht, Ankunft und erste Schritte der Integration. IAB Kurzbericht* 24/2016.

Buber-Ennser, I., Kohlenberger, J., Rengs, B., Zalak, Z. A., Goujon, A., Striessnig, E., et al. (2016). Human capital, values, and attitudes of persons seeking refuge in Austria in 2015. *PLoS ONE* 11:e0163481. doi: 10.1371/journal.pone.0163481

Bundesamt für Migration und Flüchtlinge (BAMF) (2016). *Migrationsbericht 2015.* Nürnberg: BAMF.

Carpi, E., and Senoguz, H. P. (2018). Refugee hospitality in Lebanon and turkey: on making 'the other.' *Int. Migr.* 57, 127–142. doi: 10.1111/imig.12471

Chatty, D., Mansour, N., and Yassin, N. (2013). Statelessness and Tribal identity on Lebanon's Eastern borders. *Mediterr. Politics* 18, 411–426. doi: 10.1080/13629395.2013.834566

Chin, A., and Cortes, K. E. (2015). "Chapter 12—the refugee/asylum seeker," In *Handbook of the Economics of International Migration (Bd. 1, S. 585–658),* eds B. R. Chiswick and P. W. Miller (Hrsg.) (North-Holland). doi: 10.1016/B978-0-444-53764-5.00012-8

Chiswick, B. R. (1999). Are immigrants favorably self-selected? *Am. Econ. Rev.* 89, 181–185. doi: 10.1257/aer.89.2.181

de Haas, H. (2021). A theory of migration: the aspirations-capabilities framework. *Comp. Migrat. Stud.* 9:8. doi: 10.1186/s40878-020-00210-4

Destatis (2021). *Federal Statistical Office, Genesis-Online Database.* Table 12531–0025.

Directory General of Migration Management (DGMM) (2019). *Temporary Protection.* Available online at: https://en.goc.gov.tr/temporary-protection27 (accessed 2020).

Docquier, F., Tansel, A., and Turati, R. (2020). Do emigrants self-select along cultural traits? Evidence from the MENA countries. *Int. Migrat. Rev.* 54, 388–422. doi: 10.1177/0197918319849011

Erdogan, D. M. M. (2020). *Syrians Barometer 2019: A Framework For Achieving Social Cohesion With Syrians In Turkey.* UNHCR. doi: 10.4000/anatoli.652

Frontex (2022). *Detections of Illegal Border-Crossings, FRAN and JORA Data.* Available online at: https://frontex.europa.eu/we-know/migratory-map/ (accessed December 01, 2022).

Gallup (2022). *World Poll Methodology.* Available online at: https://news.gallup.com/poll/105226/world-poll-methodology.aspx (accessed November 3, 2022).

Geha, C., and Talhouk, J. (2018). From recipients of aid to shapers of policies: conceptualizing government – United Nations relations during the Syrian refugee crisis in Lebanon. *J. Refug. Stud.* 32, 645–663. doi: 10.1093/jrs/fey052

Gokalp Aras, N. E., and Sahin Mencutek, Z. (2019). *Border Management and Migration Controls - Turkey Report.* Uppsala, Sweden.

Guichard, L. (2020). Self-selection of asylum seekers: evidence from Germany. *Demography* 57, 1089–1116. doi: 10.1007/s13524-020-00873-9

Haferlach, L., and Kurban, D. (2017). Lessons learnt from the EU-turkey refugee agreement in guiding EU migration partnerships with origin and transit countries. *Glob. Policy* 8, 85–93. doi: 10.1111/1758-5899.12432

Hatton, T. J. (2017). Refugees and asylum seekers, the crisis in Europe and the future of policy. *Econ. Policy* 32, 447–496. doi: 10.1093/epolic/eix009

Himelein, K., Eckman, S., Murray, S., and Bauer, J. (2016). *Second-Stage Sampling for Conflict Areas: Methods and Implications (SSRN Scholarly Paper 2756265).* Available online at: https://papers.ssrn.com/abstract=2756265

Hudson, L. (2018). Syrian refugees in Europe: migration dynamics and political challenges. *N. Eng. J. Public Policy* 30, 1–9.

Ilcan, S., Rygiel, K., and Baban, F. (2018). The ambiguous architecture of precarity: temporary protection, everyday living and migrant journeys of Syrian refugees. *Int. J. Migr. Border Stud.* 4, 51–70. doi: 10.1504/IJMBS.2018.091226

International Organization of Migration (IOM) (2022). *Missing Migrants' Project: Latest Global Figures - Migrant Fatalities Worldwide.* Available online at: http://missingmigrants.iom.int (accessed December 01, 2022).

Janmyr, M. (2016). Precarity in exile: the legal status of Syrian refugees in Lebanon. *Refug. Surv. Q.* 35, 58–78. doi: 10.1093/rsq/hdw016

Janmyr, M. (2018). UNHCR and the Syrian refugee response: negotiating status and registration in Lebanon. *Int. J. Hum. Rights* 22, 393–419. doi: 10.1080/13642987.2017.1371140

Janmyr, M., and Stevens, D. (2020). "Regional refugee regimes: middle east," in *Oxford Handbook of International Refugee Law,* eds C. Costello, M. Foster, and J. McAdam (Oxford: Oxford University Press). doi: 10.1093/law/9780198848639.003.0019

Jasper Tjaden, J., and Heidland, T. (2021). *Does welcoming refugees attract more migrants? The myth of the 'Merkel effect'.* Kiel Institute for the World Economy Working Paper. Kiel, 2194.

Kosyakova, Y., and Kogan, I. (2022). Labour market situation of refugees in Europe: the role of individual and contextual factors. *Front. Polit. Sci.* 4, 1–14. doi: 10.3389/fpos.2022.977764

Krafft, C., Malaeb, B., and Al Zoubi, S. (2022). How do policy approaches affect refugee economic outcomes? insights from studies of Syrian refugees in Jordan and Lebanon. *Oxf. Rev. Econ. Policy* 38, 654–677. doi: 10.1093/oxrep/grac019

Kunz, E. F. (1973). The refugee in flight: kinetic models and forms of displacement. *Int. Migr. Rev.* 7, 125–146. doi: 10.1177/019791837300700201

Kutlu-Tonak, Z. (2016). Endless escape: from Syria to Turkey, then to Europe. *Stud. Ethn. Natl.* 16, 121–134. doi: 10.1111/sena.12167

Lange, M., and Pfeiffer, F. (2019). The human capital selection of young males seeking asylum in Germany. *J. Labour Mark. Res.* 53, 8. doi: 10.1186/s12651-019-0259-y

Lynn, P., Nandi, A., Parutis, V., and Platt, L. (2018). Design and implementation of a high quality probability sample of immigrants and ethnic minorities: lessons learnt. *Demogr. Res.* 18, 513–548. doi: 10.4054/DemRes.2018.38.21

McAuliffe, M. (2017). "Seeking the views of irregular migrants: decision-making, drivers and migration journeys," in *A Long Way to Go*, eds M. Mcauliffe and K. Koser (ANU Press), 103–140. Available online at: https://www.jstor.org/stable/j.ctt20krxxh.13

McAuliffe, M., and Jayasuriya, D. (2016). Do asylum seekers and refugees choose destination countries? evidence from large-scale surveys in Australia, Afghanistan, Bangladesh, Pakistan and Sri Lanka. *Int. Migr.* 54, 44–59. doi: 10.1111/imig.12240

Munshi, K. (2020). Social networks and migration. *Annu. Rev. Econ.* 12, 503–524. doi: 10.1146/annurev-economics-082019-031419

Norwegian Refugee Council and International Rescue Committee (NRC/IRC) (2015). *Legal Status of Refugees from Syria: Challenges and Consequences of Maintaining Legal Stay in Beirut and Mount Lebanon.* Norwegian Refugee Council/Internal Displacement Monitoring Centre.

Pew Research Center (2022). *International Surveys: Survey Mode and Sample Design.* Available online at: https://www.pewresearch.org/our-methods/international-surveys/survey-mode-and-sample-design/ (accessed November 3, 2022).

Richmond, A. (1993). Reactive migration: sociological perspectives on refugee movements*. *J. Refug. Stud.* 6, 7–24. doi: 10.1093/jrs/6.1.7

Riosmena, F., Kuhn, R., and Jochem, W. C. (2017). Explaining the immigrant health advantage: self-selection and protection in health-related factors among five major national-origin immigrant groups in the United States. *Demography* 54, 175–200. doi: 10.1007/s13524-016-0542-2

Romer, C. D., and Romer, D. H. (2023). *Does Monetary Policy Matter? The Narrative Approach After 35 Years.* NBER Working Paper Series *31170.* doi: 10.3386/w31170

Roy, A. D. (1951). Some thoughts on the distribution of earnings. *Oxf. Econ. Pap.* 3, 135–146. doi: 10.1093/oxfordjournals.oep.a041827

Sanyal, R. (2018). Managing through ad hoc measures: Syrian refugees and the politics of waiting in Lebanon. *Polit. Geogr.* 66, 67–75. doi: 10.1016/j.polgeo.2018.08.015

Sjaastad, L. A. (1962). The costs and returns of human migration. *J. Politic. Econ.* 70 (5 Part 2), 80–93. doi: 10.1086/258726

Spörlein, C., Kristen, C., Schmidt, R., and Welker, J. (2020). Selectivity profiles of recently arrived refugees and labour migrants in Germany. *Soz. Welt.* 71, 54–89. doi: 10.5771/0038-6073-2020-1-2-54

Stark, O. (1991). *The Migration of Labor.* Wiley Blackwell. Available online at: https://econpapers.repec.org/bookchap/blablaboo/1557860300.htm

United Nations High Commissioner of Refugees (UNHCR) (2022a). *UNHCR: A Record 100 Million People Forcibly Displaced Worldwide.* Available online at: https://news.un.org/en/story/2022/05/1118772 (accessed December 8, 2022).

UNHCR (2022b). *UNHCR Refugee Data Finder.* Available online at: https://www.unhcr.org/refugee-statistics/download/?url=6Cntyg (accessed November 22, 2023).

UNHCR (2022c). *UNHCR Refugee Data Finder Key Indicators.* Available online at: https://www.unhcr.org/refugee-statistics/ (accessed November 4, 2022).

UNHCR (2023). *Syria Regional Refugee Response Türkiye, UNHCR Operational Data Portal Refugee Situations.* Available online at: https://data.unhcr.org/en/situations/syria/location/113 (accessed November 22, 2023).

Watson, N., and Lynn, P. (2021). "Refreshment sampling for longitudinal surveys," in *Advances in Longitudinal Survey Methodology,* ed Peter Lynn. Hoboken, NJ: John Wiley and Sons Ltd. doi: 10.1002/9781119376965.ch1

Welker, J. (2022). Relative education of recent refugees in Germany and the Middle East: Is selectivity reflected in migration and destination decisions? *Int. Migrat.* 60, 65–80. doi: 10.1111/imig.12853

Yildirim, C. A., Komsuoglu, A., and Özekmekçi, I. (2019). The transformation of the primary health care system for Syrian refugees in Turkey. *Asian Pac. Migr. J.* 28, 75–96. doi: 10.1177/0117196819832721

Zaragoza-Cristiani, J. (2017). Containing the refugee crisis: how the EU Turned the Balkans and Turkey into an EU Borderland. *Int. Spect.* 52, 59–75. doi: 10.1080/03932729.2017.1375727