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Research Report

On the labour market integration of refugees from Ukraine: A simulation study

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IAB RESEARCH REPORT

Results from the project work of the IAB

9|2024en On the labour market integration of refugees from Ukraine: A simulation study

Yuliya Kosyakova, Herbert Brücker



On the labour market integration of refugees from Ukraine: A simulation study

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The IAB Research Reports (IAB-Forschungsberichte) series publishes larger-scale empirical analyses and project reports, often with heavily data- and method-related content.

In der Reihe IAB-Forschungsberichte werden empirische Analysen und Projektberichte größeren Umfangs, vielfach mit stark daten- und methodenbezogenen Inhalten, publiziert.

In brief

- The Ukrainian population in Germany has increased from 156,000 to 1,240,000 by the end of 2023 since the onset of the Russian war of aggression. Given the prolonged conflict, an increasing number of Ukrainian refugees are considering longer or permanent stays in Germany, underscoring the importance of their labour market integration.
- This research report develops scenarios based on data from refugees who moved to Germany before 2022 and other migrants from the former Soviet Union to project potential employment rate developments for Ukrainian refugees.
- In the baseline scenario, Ukrainian refugees achieve an average employment rate of 45 percent after five years of residence in Germany, and 55 percent after ten years.
- The employment rate disparity between genders is notable. Five years post-arrival, men achieve an employment rate of 58 percent, while women reach 41 percent. After ten years, these rates increase to 68 percent for men and 52 percent for women.
- The family constellations of Ukrainian refugees, particularly the high proportion of single mothers, and their comparatively poor health negatively impact employment rate development. Conversely, their high level of education, anticipated improvement in language skills, and favorable institutional conditions – especially the abolition of the asylum procedure – positively influence employment outcomes.
- Language support and completion of language courses are beneficial to employment rate development.
- As the labour market tightens, the employment rates of Ukrainian refugees significantly increase.

Contents

In brief.....	3
Contents	4
Summary	5
1 Introduction	7
2 Parallels and differences.....	10
2.1 Demographic factors.....	10
2.2 Education, training, language skills and employment status	13
2.3 Institutional and other framework conditions.....	15
3 Method.....	18
4 Simulation results	20
4.1 Baseline scenario	20
4.2 Family constellations	21
4.3 Education and training	23
4.4 German language skills and German language courses.....	24
4.5 Asylum procedure	26
4.6 Health	27
4.7 Cumulative effect of German language course participation, asylum application and health status.....	29
4.8 Role of local labour market conditions	30
5 Conclusion.....	32
References.....	35
Appendix.....	39
Figures	42
Tables	42

Summary

Since the onset of Russia's war against Ukraine, the number of Ukrainian nationals in Germany has risen from 156,000 to 1,240,000. Although many plan to return to Ukraine after the war, the duration of the conflict is leading an increasing number of them to consider staying in Germany for an extended period or permanently. Against this backdrop, this research report simulates various scenarios of labour market integration for Ukrainian refugees, based on the employment trajectories of previous refugees and migrants from the former Soviet Union. The scenarios aim to establish realistic expectations about the progress of labour market integration for Ukrainian refugees and to quantitatively assess the impact of specific factors. However, these conditional scenarios should not be misunderstood as forecasts, as they are based on strong assumptions and do not fully control for many relevant factors.

In the baseline scenario, which is based on what we believe are the most realistic assumptions regarding demographic factors, family configurations, education, language skills, and institutional and economic conditions, the average employment rate for Ukrainian refugees is projected to be 45 percent after five years and 55 percent after ten years. Gender composition and family configuration have a dampening effect on employment rates, while education level and expected language skills development have a positive impact. The comparatively poor health of Ukrainian refugees also dampens employment rates. Conversely, institutional conditions, particularly the absence of asylum procedures, have a positive impact. Economic conditions, measured by labour market tightness, also have a strong influence. The current economic downturn has a negative effect, but the picture could quickly improve with an economic recovery due to increasing labour market tension amid demographic changes, which would likely increase employment rates compared to the baseline scenario. A key finding for integration policy is that language courses not only enhance language development but also significantly boost employment rates.

Zusammenfassung

Seit Beginn des russischen Angriffskriegs auf die Ukraine ist die Anzahl ukrainischer Staatsangehörigen in Deutschland von 156.000 auf 1.240.000 angestiegen. Obwohl ein erheblicher Teil dieser Menschen nach dem Kriegsende plant, in die Ukraine zurückzukehren, zeigt sich, dass mit zunehmender Kriegsdauer immer mehr einen längeren oder dauerhaften Aufenthalt in Deutschland in Betracht ziehen. Vor diesem Hintergrund simuliert dieser Forschungsbericht verschiedene Szenarien der Arbeitsmarktintegration ukrainischer Geflüchteter. Grundlage bilden die Erwerbsverläufe früherer Geflüchteter in Deutschland sowie von Migrantinnen und Migranten aus der ehemaligen Sowjetunion. Die Szenarien zielen darauf ab, realistische Erwartungen über die Entwicklung der Arbeitsmarktintegration von Geflüchteten aus der Ukraine zu bilden, und die Einflüsse spezifischer Faktoren quantitativ zu analysieren. Diese konditionalen Szenarien sind allerdings nicht als Prognosen misszuverstehen, da sie davon

abhängig sind, ob die zugrunde gelegten Annahmen zutreffen und viele relevante Faktoren nicht vollständig berücksichtigt werden können.

In dem Basisszenario, dem nach unserer Einschätzung die realistischsten Annahmen über demografische Faktoren, Familienkonstellationen, Bildung, Sprache, institutionelle und wirtschaftliche Faktoren zu Grunde liegen, ergibt sich nach einer Aufenthaltsdauer von fünf Jahren eine durchschnittliche Erwerbstätigenquote von 45 Prozent, nach zehn Jahren von 55 Prozent. Insbesondere der hohe Anteil von Alleinerziehenden sowie der vergleichsweise schlechte Gesundheitszustand der ukrainischen Geflüchteten wirken sich dämpfend auf die Entwicklung der Erwerbstätigenquoten aus, während das relativ hohe Bildungs- und Ausbildungsniveau sowie die zu erwartende Entwicklung der Sprachkenntnisse einen positiven Einfluss haben. Dies gilt auch für die institutionellen Rahmenbedingungen, insbesondere den Verzicht auf ein Asylverfahren. Die wachsende Arbeitsmarktanspannung hat ebenfalls einen starken positiven Einfluss. Die gegenwärtige Eintrübung der Konjunktur wirkt sich deshalb nachteilig aus, allerdings kann sich das Bild bei einer konjunkturellen Erholung aufgrund der demografiebedingt steigenden Arbeitsmarktanspannung schnell verbessern. Dann dürften die Erwerbstätigenquoten im Vergleich zum Basisszenario steigen. Ein zentraler Befund für die Integrationspolitik ist, dass Sprachkurse nicht nur die Sprachentwicklung, sondern auch die Erwerbstätigenquoten signifikant steigern können.

1 Introduction

Since the onset of Russia's military aggression against Ukraine in February 2022, the population of Ukrainian nationals in Germany has surged from 156,000 to 1,240,000 by the end of 2023 (BAMF, 2024). These people are entitled to temporary protection in Germany in accordance with Section 24 of the Residence Act (AufenthG). Given the uncertain future and duration of the conflict in Ukraine, the long-term intentions and prospects of these refugees remain unclear. Nevertheless, as their duration of stay extends, an increasing number of Ukrainians in Germany are considering longer or permanent settlement (Brücker et al., 2023c; Kosyakova et al., 2023). In this context, the challenges of labour market integration and social inclusion are gaining prominence, compounded by the humanitarian obligation to offer protection. To facilitate faster integration into the labour market, the German government has launched initiatives collectively referred to as "Job Turbo."¹ Effective implementation and evaluation of these measures require realistic expectations about the potential trajectory of integration. This report contributes to forming those expectations.

Germany has extensive experience in integrating refugees into the labour market, particularly following the significant influx of refugees in 2015 and 2016, as well as migrants from Ukraine and other former Soviet states. This historical context provides valuable insights for anticipating the labour market integration of Ukrainian refugees today. However, there are notable differences and similarities between the current Ukrainian refugees and earlier groups of refugees and migrants. Like other refugees, Ukrainian refugees often arrive poorly prepared for migration and integration into the labour market, typically lacking German language skills, professional connections, and immediate job opportunities (Brücker et al., 2023a; Kosyakova and Kogan, 2022). Furthermore, many are burdened with psychological stress and health issues stemming from the war and their subsequent flight (Ambrosetti et al., 2021; Brücker et al., 2019, 2023c).

At the same time, significant differences distinguish Ukrainian refugees from other groups. Notably, a high proportion of Ukrainian refugees are women, due to bans on military-age men from leaving the country. Many arrive with children, placing additional burdens on single parents, and they tend to be older on average upon arrival compared to other refugee groups (Brücker et al., 2023a, 2016; Fendel et al., 2023). These demographic and family dynamics can complicate their integration into the labour market. However, Ukrainian refugees generally possess a higher average level of education compared to other refugee groups (Fendel et al., 2023), which can facilitate language acquisition – a crucial skill for integrating into the labour market and broader society (Kosyakova et al., 2022).

The institutional conditions for Ukrainian refugees also differ significantly: they are permitted to work immediately upon arrival, bypassing the standard asylum procedure (Fendel et al., 2023). However, their temporary protection under Section 24 of the Residence Act (AufenthG) is time-limited, impacting their legal status and planning certainty. This uncertainty can deter investments in country-specific skills and stable employment relationships. Starting in June

¹ <https://www.bmas.de/DE/Arbeit/Migration-und-Arbeit/Flucht-und-Aysl/Turbo-zur-Arbeitsmarktintegration-von-Gefluechteten/turbo-zur-arbeitsmarktintegration-von-gefluechteten.html> <https://www.bmas.de/DE/Arbeit/Migration-und-Arbeit/Flucht-und-Aysl/Turbo-zur-Arbeitsmarktintegration-von-Gefluechteten/turbo-zur-arbeitsmarktintegration-von-gefluechteten.html>

2022, Ukrainian refugees became eligible for benefits under Germany's Social Code II (Bürgergeld) where necessary, receiving slightly higher rates than those available to asylum seekers.² This early integration into the job center support structures, likely playing a key role in facilitating their entry into the labour market.

The initial conditions in their countries of origin also significantly influence refugees' chances for integration. Most refugees come from countries affected by war, civil unrest, and persecution, such as Afghanistan and Syria. These conditions drive many to seek permanent residency in Germany (Brücker et al., 2020b, 2023d). In contrast, Ukrainians are not fleeing their government but are escaping the Russian military aggression. Many plan to return to Ukraine post-conflict, while others remain undecided about whether to stay in Germany or return home (Brücker et al., 2023c). Additionally, transnational living models are becoming more prevalent, affecting their integration into the labour market and other societal areas (Kosyakova et al., 2023).

Against this backdrop, this research report develops potential scenarios for labour market integration of refugees over the coming years, drawing on data regarding refugees and populations from former Soviet states in Germany. It accounts for demographic characteristics such as gender, age, and parental status, as well as observable human capital factors including education, work experience, and German language proficiency. The simulation also considers some institutional differences, like asylum procedures and residency status, although these are subject to limitations. Further limitations arise due to significant variability among groups, influenced by unobservable factors such as values, cultural attitudes, motivation, and personal experiences, also plays a role in integration outcomes. Additionally, some institutional frameworks, such as temporary protection under Section 24 of the Residence Act and immediate inclusion in the SGB II benefits system, lack historical precedents, limiting our ability to fully gauge their impact. Moreover, the changing nature of framework conditions over time means that the influence of specific factors is not constant. The current economic landscape is less favorable than in the previous decade, and predicting future economic conditions remains challenging. Therefore, the simulations presented in this report should not be interpreted as forecasts or predictions. Instead, they are conditional scenarios based on specific, often simplified, assumptions. The purpose is not to predict future outcomes but to explore plausible developments under various assumptions about refugee characteristics and the institutional and political framework conditions.

The subsequent section leverages data from the Socio-Economic Panel (SOEP), the integrated studies of the IAB-SOEP Migration Sample and IAB-BAMF-SOEP Survey of Refugees in Germany along with the IAB-BIB/FReDA-BAMF-SOEP Survey of Refugees from Ukraine (cf. Info box 1). This section also briefly outlines parallels and differences between the populations represented in our samples and the Ukrainian refugees (Section 2). Following this, we detail the methodology and assumptions underpinning the individual simulations (Section 3). Section 4 presents the main findings from the simulations, which explore various scenarios based on the skills of the refugees and the institutional and integration policy framework. The report concludes with Section 5, where we draw key conclusions from the findings.

² Since January 1, 2024, the standard benefit rate for basic security for single or single-parent adults under SGB II has been Euro 563, compared to Euro 460 under the Asylum Seekers Benefits Act. However, the difference in benefit rates is only temporary - refugees with a recognized protection status also receive benefits under SGB II II.

Info box 1

Socio-Economic Panel (SOEP-CORE), IAB-SOEP Migration Sample (IAB-SOEP-MIG)1), IAB-BAMF-SOEP Survey of Refugees in Germany (IAB-BAMF-SOEP-REF)1)

The SOEP-CORE is a representative annual panel survey of private households in Germany, which was launched in 1984 in West Germany and was extended to East Germany after 1990 (SOEP Group, 2024). In the SOEP-CORE, immigrants of Turkish, Greek, Italian, Spanish and ex-Yugoslavian origin (1984; sample B) and immigrants who came to Germany after 1984 mainly from Eastern Europe and other third countries (1994-1995; sample D) were oversampled (SOEP Group, 2023).

The IAB-SOEP Migration Sample (IAB-SOEP-MIG) is a joint project of the Institute for Employment Research (IAB) and the SOEP, which was launched in 2013 and is conducted annually. Register data from the Federal Employment Agency (BA), the so-called Integrated Employment Biographies, were used as the sampling frame. The data is representative of the population that immigrated to Germany between 1995 and 2013 as well as second-generation immigrants born after 1976 and their household members (Brücker et al., 2014; Kroh et al., 2015). The refreshment samples in 2020 and 2021 include recent immigration from the EU in the years 2016-2018 as well as immigration of third-country nationals before and after the implementation of the Skilled Immigration Act (between 2019 and 2020) (SOEP Group, 2023).

The IAB-BAMF-SOEP Survey of Refugees (IAB-BAMF-SOEP-REF) is a joint project of the IAB, the Research Center of the Federal Office for Migration and Refugees (BAMF-FZ) and the SOEP, which was launched in 2016 and is conducted annually. The anchor persons for the survey come from the Central Register of Foreigners (AZR), the national register for all foreign nationals in Germany. The data is representative of asylum seekers and other refugees who have come to Germany since 2013 and their household members (Brücker et al., 2017; Kroh et al., 2017).

The results shown here are based on all the people surveyed in the various SOEP modules who were born abroad. It is also limited to people who were between 18 and 64 years old at the time of the survey. The data of these persons from the surveys conducted in the years 1991-2022 are analyzed. The values were extrapolated using the survey weights provided by the SOEP. The evaluations shown here are based on a total of 15,099 people who were born outside Germany.

Refugees from Ukraine in Germany (IAB-BiB/FreDA-BAMF-SOEP-UA)1)

The IAB-BiB/FreDA-BAMF-SOEP survey of refugees from Ukraine (IAB-BiB/FreDA-BAMF-SOEP-UA) is a joint project of the IAB, the Federal Institute for Population Research (BiB), the BAMF-FZ and the SOEP (Brücker et al., 2023a), which was launched in 2022 (August to October) and repeated in 2023 from January to March. It is based on a random sample of 811,000 Ukrainian nationals who sought protection in Germany between the start of the Russian war of aggression on February 24, 2022 and the beginning of June 2022 (Brücker et al., 2023a).

A total of 11,763 people took part in the first survey wave in 2022 (August to October 2022), of which 6,754 people were interviewed again in 2023 (January to March 2023). For the present analyses, refugees from Ukraine of working age between 18 and 64 who had arrived since February 24, 2022 were considered if they were still in Germany at the time of the second wave (5,850 personal observations).

1) The survey is financed by funds from the budget of the Federal Employment Agency (BA), which are allocated to the research budget of the IAB, from funds of the Federal Ministry of Labour and Social Affairs (BMAS), the Federal Ministry of the Interior and Homeland (BMI), the BiB and the BAMF. Furthermore, all four participating research institutions contribute to the survey with personnel resources.

2 Parallels and differences

This section highlights the different starting positions of refugees and other migrants for their integration into the German labour market and the various institutional and other restrictions to which they are subject. The analysis is based on a comprehensive database for which the data from the Socio-Economic Panel (SOEP-CORE), the integrated studies of the IAB-SOEP Migration Sample (IAB-SOEP-MIG) and IAB-BAMF-SOEP Survey of Refugees in Germany (IAB-BAMF-SOEP-REF) as well as the IAB-BiB/FReDA-BAMF-SOEP Survey of Refugees from Ukraine (IAB-BiB/FReDA-BAMF-SOEP-UA) were compiled (Info box 1).

The simulations for the labour market integration trajectories of refugees from Ukraine were based on the actual trajectories of two groups of immigrants to Germany:

- 1) Refugees who moved to Germany between 1945 and 2021,
- 2) other migrants from the former Soviet Union and its successor states who moved to Germany between 1956 and 2020.

The first group was selected on the basis of their experiences of flight, which show parallels to those of the Ukrainian refugees. The second group was included due to their socio-demographic structure, linguistic and cultural proximity to the Ukrainian population, although there are sometimes significant differences between the individual population groups in this region. The simulations of labour market integration consider a range of factors, including demographic characteristics, human capital attributes, and varying institutional and policy frameworks governing integration. This section outlines the main observable factors incorporated into the simulations.

2.1 Demographic factors

Table 1 provides a detailed overview of the demographic and residence-related differences between refugees who immigrated to Germany prior to 2022, immigrants from the former Soviet Union, and Ukrainian refugees. This analysis includes only individuals of working age, defined as those aged between 18 and 64.

The proportion of women among refugees who immigrated to Germany before 2022 is 40 percent, which is lower than that of immigrants from the former Soviet Union (54 percent) and Ukrainian refugees (80 percent). This significant disparity among Ukrainian refugees can be attributed to migration policy factors, specifically the restrictions preventing conscripted men from leaving Ukraine.

Table 1: Demographic composition of refugees who immigrated before 2022, immigrants from the former Soviet Union and refugees from Ukraine

	Refugees	Former Soviet Union	Ukrainian refugees
Gender			
Women	39.1	54.4	79.6
Men	60.9	45.6	20.4
Age at the time of the survey ¹⁾			
18-30	32.2	27.6	23.4
31-40	24.3	28.0	30.7
41-65	43.5	44.5	45.9
Age at arrival in Germany			
Under 18 years	28.0	35.2	0.0
18-30	43.0	31.9	25.2
31-40	21.9	19.4	32.5
41-65	7.1	13.6	42.3
Children in the household at the time of the survey			
No children under 17 years	46.9	56.7	51.1
Children between 0-6 years	43.2	31.5	34.0
Children between 7-17 years	10.0	11.8	14.9
Partner in the household at the time of the survey			
No	41.0	34.1	71.4
Yes	59.0	65.9	28.6
Length of stay at the time of the survey			
One year and less	3.1	0.9	100.0
2 to 8 years	32.2	21.3	0.0
9 to 15 years	19.9	31.7	0.0
16 to 20 years	17.2	19.8	0.0
Over 20 years	27.6	26.4	0.0
Application for asylum at arrival			
No	2.1	95.0	100.0
Yes	97.9	5.0	0.0
Intention to stay (forever in Germany)			
No	10.1	6.3	71.7
Yes	89.9	93.7	28.3
N	33,015	19,566	5,850

Notes: Only respondents aged between 18 and 64 at the time of the survey.

1) These variables are for illustrative purposes only and are not used in the multivariate models.

Source: Own calculations based on data from SOEP-CORE, IAB-SOEP-MIG, IAB-BAMF-SOEP-REF and IAB-BiB/FReDA-BAMF-SOEP-UA, weighted with cross-sectional weights.

The age distribution is similar across all three groups, with 44 to 46 percent of individuals in each group aged between 41 and 65 years. Among those who arrived before 2022, there is a higher percentage of individuals aged between 18 and 30 (32 percent), compared to migrants from the former Soviet Union (28 percent) and Ukrainian refugees (23 percent).

However, the three groups exhibit significant differences in terms of age at arrival. The majority of refugees who arrived before 2022 were either between the ages of 18 and 30 (43 percent) or minors (28 percent). Approximately 70 percent of migrants from the former Soviet Union also relocated to Germany at a relatively young age (under 30). In contrast, only 25 percent of Ukrainian refugees were aged between 18 and 30 when they migrated to Germany, with the highest proportion – 42 percent – being over 41 years old.

All three groups have a high proportion of underage children in their households. Among refugees who moved to Germany before 2022, this proportion is 53 percent, which is 4 percentage points higher than among Ukrainian refugees and 10 percentage points higher than among migrants from the former Soviet Union. Among parents, the proportion of those with young and pre-school children is highest for refugees who arrived before 2022 at 81 percent, compared to 70 percent among Ukrainian refugees and 73 percent among migrants from the former Soviet Union. These differences can be attributed to the relatively young average age of those who arrived before 2022. The majority of refugees who arrived before 2022 and migrants from the former Soviet Union live with a partner (59 percent and 66 percent respectively). In contrast, more than two-thirds of Ukrainian refugees do not have a partner in the household, indicating a high number of single parents or individuals traveling alone (see also Brücker et al., 2023a).

Given that the survey took place within the first year since the start of the Russian war of aggression against Ukraine (Brücker et al., 2023b, 2023a), all Ukrainian refugees in the sample had been in Germany for less than a year. The length of stay varies among those who arrived before 2022: around 35 percent have been in Germany for 8 years or less, a further 37 percent for 9 to 20 years, and 28 percent have lived here for 21 years or longer. A large proportion of migrants from the former Soviet Union have been in Germany for much longer: 22 percent immigrated 8 years ago or less, 52 percent between 9 and 20 years, and 26 percent for more than 21 years.

Due to Section 24 of the Residence Act, Ukrainian refugees were entitled to temporary protection in Germany without undergoing an asylum procedure. In contrast, almost all refugees who arrived before 2022 applied for asylum upon arrival (98 percent). Among migrants from the former Soviet Union, this was only a minority of 5 percent. The intention to stay among those who arrived before 2022 and those who immigrated from the former Soviet Union is very high: 90 percent and 94 percent respectively plan to stay in Germany permanently. In contrast, only 28 percent of Ukrainian refugees are considering staying in Germany permanently, reflecting the high level of uncertainty and the possibility of returning to their home country after the end of the war.

The demographic and residence-related data indicate that in terms of gender and age distribution, Ukrainian refugees are somewhat more similar to people who moved here from the former Soviet Union than to other refugees. All three groups are characterized by a high proportion of underage children in the household, but many more Ukrainian refugees live alone or are single parents. Another similarity with the migrant population from the former Soviet Union is the absence of asylum procedures for immigration to Germany. Nevertheless, Ukrainian refugees, like the refugees who arrived before 2022, arrived via forced migration and are therefore much less prepared for migration. Differences between the groups are particularly manifested in the higher age of arrival of Ukrainian refugees compared to the two comparison

groups. In addition, the proportion of Ukrainian refugees who want to stay in Germany permanently is much lower than in the other two groups.

2.2 Education, training, language skills and employment status

Table 2 provides a comparison of educational levels, work experience, language proficiency, health status, and employment rates at the time of the survey for three migrant groups in Germany.

The educational levels of refugees who arrived before 2022 are polarized: 20 percent possess no education or only primary education, 30 percent have completed secondary education, 38 percent have obtained a secondary school diploma or a post-secondary non-tertiary qualification, and 13 percent hold a tertiary or higher education qualification. In contrast, the majority of migrants from the former Soviet Union have a secondary school diploma or a post-secondary non-tertiary qualification (49 percent) or a tertiary education (22 percent). Ukrainian refugees have a notably higher proportion of tertiary education at 72 percent compared to the other groups.

Regarding employment experience, 52 percent of the refugees who arrived before 2022 and 57 percent of migrants from the former Soviet Union were employed before migrating. Among Ukrainian refugees, the proportion with prior employment is significantly higher at 86 percent, a difference that likely stems from variations in age at the time of immigration.

Language skills also vary significantly among the groups. Only 10 percent of the refugees who arrived before 2022 could communicate well in German upon arrival, but by the time of the survey, nearly 60 percent had developed good or very good German language skills. This improvement is attributed to high participation rates in German language courses post-immigration (Kosyakova et al., 2022; Kristen et al., 2022). Conversely, about 47 percent of immigrants from the former Soviet Union spoke good German upon arrival, and 78 percent achieved this level by the time of the survey. About three-fifths of this group participated in a German language course before or after migrating. The noticeable difference in language skills can be explained by the fact that individuals from the former Soviet Union were more likely to have prepared for their migration, unlike those displaced by war or threats.

In terms of health, those who fled to Germany before 2022 are in the best condition, with 60 percent reporting good to very good health. Just over half of the migrants from the former Soviet Union report good to very good health (53 percent), while only about 40 percent of Ukrainian refugees report similar health status. These differences are likely influenced by age and could also reflect the adverse effects of the ongoing war and the stress of having family members left behind (Brücker et al., 2023a).

Table 2: Educational level, work experience before immigration, language skills, health status and employment rate of refugees who immigrated before 2022, immigrants from the former Soviet Union and refugees from Ukraine

	Refugees	Former Soviet Union	Ukrainian refugees
Highest level of education achieved on arrival			
Less than primary level	8.1	0.2	0.2
Primary level	11.7	2.8	1.0
Lower secondary level (middle school)	29.8	26.2	0.6
Upper secondary level (high school) / post-secondary non-tertiary education	37.5	49.3	26.3
Tertiary education	12.8	21.5	71.9
<i>Percentage with missing data</i>	28.2	33.5	0.2
Employed before immigration			
No	47.7	42.6	14.3
Yes	52.3	57.4	85.7
<i>Percentage with missing data</i>	0.1	0.0	0.5
Good to very good knowledge of German upon arrival ¹⁾			
No	91.2	52.8	
Yes	8.8	47.2	
<i>Percentage with missing data</i>	52.4	64.8	100.0
Good to very good knowledge of German at the time of the survey			
No	41.2	22.0	94.7
Yes	58.8	78.0	5.3
<i>Percentage with missing data</i>	4.1	8.0	0.0
Participated in a language course before or after immigration			
No	37.4	36.9	20.6
Yes	62.6	63.1	79.4
<i>Percentage with missing data</i>	53.8	74.3	0.0
Good to very good health at the time of the survey			
No	40.0	46.7	58.3
Yes	60.0	53.3	41.7
Employed at the time of the survey ²⁾			
No	46.1	32.1	82.2
Yes	53.9	67.9	17.8
of which full-time	60.4	64.5	40.1
N	33,015	19,566	5,850

Notes: Only people aged between 18 and 64 at the time of the survey.

1) These variables are for illustrative purposes only and are not used in the multivariate models.

2) Gainfully employed persons are all persons who receive remuneration for their work (definition of the Federal Statistical Office). This also includes trainees, interns and marginally employed persons.

Source: Own calculations based on data from SOEP-CORE, IAB-SOEP-MIG, IAB-BAMF-SOEP-REF and IAB-BiB/FReDA-BAMF-SOEP-UA.

At 68 percent (with 65 percent working full-time), the average employment rate among migrants from the former Soviet Union is the highest when compared to the other two groups. Refugees who arrived before 2022 have an employment rate of just under 54 percent (with 60 percent

working full-time). However, it is important to consider their shorter duration of stay when evaluating these figures. The employment rate among Ukrainian refugees is the lowest at just 18 percent at the time of the survey, of which 40 percent were in full-time employment. This lower rate is particularly due to their very short length of stay – less than one year – compared to the other two groups.

In summary, Ukrainian refugees show similarities to migrants from the former Soviet Union in terms of their educational levels, notably with both groups having comparably high proportions of individuals with tertiary education. In terms of employment prior to immigration, Ukrainian refugees resemble refugees who came to Germany before 2022, as both groups have relatively high employment rates before arriving in Germany. Additionally, like the refugees who arrived before 2022, Ukrainian refugees typically have little knowledge of German upon arrival, a common characteristic of refugee migration processes. However, Ukrainian refugees are distinguished by poorer health compared to the other two groups.

2.3 Institutional and other framework conditions

The various groups differ not only in their initial conditions for labour market integration, influenced by family status, gender, age, education level, language proficiency, and other factors, but also in the institutional and integration policy conditions they face. As illustrated in Table 3, these conditions vary significantly between refugees, migrants from the former Soviet Union, and Ukrainian refugees. Key differences include residence status, employment restrictions, access to the labour market, residential requirements, other limitations on spatial mobility, the extent of social transfer benefits in cases of need, access to language courses and other integration measures, as well as job placement and support. These variations can significantly influence their integration into the labour market and participation in other societal areas, as will be explored in the subsequent discussion.

The asylum procedure is a critical factor for refugees who are not directly accepted by Germany. Throughout the asylum process, refugees face considerable uncertainty regarding their prospects of remaining in Germany, which can hinder investments in human capital by the individuals concerned and in their employment by companies. Thus, the duration of asylum procedures can have adverse effects on labour market integration in both the medium and long term (Åslund et al., 2024; Hainmueller et al., 2016; Hvidtfeldt et al., 2020; Kosyakova and Brenzel, 2020).

After completion of the asylum procedure, the resultant residence status varies depending on whether an individual's application for protection is approved or if they are designated as tolerated, latent, or obligated to leave the country. The duration of the right to reside also varies based on the protection status granted: those entitled to asylum and refugees recognized under the Geneva Refugee Convention are issued a residence permit for three years with the possibility of extension, while those granted subsidiary protection receive a one-year residence permit that can be renewed for two years at a time. Individuals under a national deportation ban are granted a residence right for at least one year. A permanent settlement permit, which is an unlimited right of residence, is achievable after three years for those entitled to asylum and recognized refugees under the Geneva Convention, or after five years for those with subsidiary protection and those under a national deportation ban (§ 9, § 25, paragraphs 1-3, § 26 AufenthG).

Table 3: Institutional and other framework conditions

	Refugees ¹⁾	Former Soviet Union ²⁾	Ukrainian refugees ³⁾
Asylum procedure	Yes	Usually no (depending on the legal status at arrival)	no
Residence status	depending on the outcome of the asylum procedure ⁴⁾	depending on the legal status at arrival	Temporary protection according to § 24 AufenthG ⁵⁾
Employment ban	Absolute employment ban 3 months, up to 9 months restricted access to the labour market, since 2024 6 months ⁶⁾	Usually no (depending on the legal status at arrival)	no
Residence requirements	Yes, from 2016 also for refugees with recognized protection status ⁷⁾	Usually no (depending on the legal status at arrival)	possible, is not usually applied when finding private accommodation
Access to integration courses and other BAMF language programs	since 10/2015 for asylum seekers with good prospects of staying, after the end of the asylum procedure for all	yes (depending on the legal status at arrival)	Yes
Benefit system in case of need	initially Asylum Seekers Benefits Act, with recognized protection status SGB II	usually SGB II (depending on the legal status at arrival)	SGB II
Support structure of the employment agencies	Employment agencies for asylum seekers, change of legal status to job center after asylum decision ⁸⁾	Employment agencies and job centers as required	Job center

Notes:

1) Persons who have applied for asylum in Germany or have been accepted directly by Germany on humanitarian grounds.

2) Persons who arrived as nationals of the successor states of the former Soviet Union (excluding Ukrainian nationals who arrived since 22.02.2022).

3) Ukrainian nationals who arrived since 22.02.2022.

4) The group includes persons who are still in the asylum process, who have been granted protection status and who are in Germany on a tolerated, latent or enforceable obligation to leave the country following the rejection of protection status.

5) Temporary protection under Section 24 AufenthG was initially valid until June 2023 and was extended until June 2025.

6) The absolute employment ban applies for three months after an asylum application has been submitted, after which employment during the asylum procedure can be permitted by the immigration offices with the approval of the Federal Employment Agency. This restricted access to the labour market applied for a maximum of 9 months (parents of underage children: 6 months), since 2024 for 6 months.

7) Asylum seekers are initially assigned a place of residence and are generally obliged to live in reception centers during the asylum procedure. After recognition of protection status, residence must be taken in the federal state of the place of residence; the federal states can also restrict the choice of place of residence to districts or municipalities.

8) During the asylum procedure, the employment agencies are responsible, but contact is voluntary. Only after the asylum decision has been made is there a change in legal status, at which point the job centers are responsible for granting benefits and at the same time for job placement and support.

Source: Own compilation.

Since 2013, the legal framework governing access to the labour market for refugees in Germany has undergone several changes. Initially, employment was entirely prohibited for asylum seekers for the first 12 months after their arrival, but this waiting period was reduced to three months in fall 2014 (Grote, 2018). During the asylum procedure, access to the labour market remained restricted for up to nine months, although it could be granted by immigration offices with approval from the Federal Employment Agency. This period was further reduced to six months by the end of 2023.

Requirement to reside in reception facilities or shared accommodations and specific residence requirements restrict spatial mobility, thus hindering opportunities for labour market integration (Brücker et al., 2020a; Cardozo Silva et al., 2023). Refugees are generally required to live in these

facilities for up to 18 months during their asylum process (six months for parents with underage children). From August 2015, they have also been subject to a residence obligation for an additional three years after their protection status is recognized (Section 12a Residence Act).

Proficiency in the German language is crucial for social participation and integration into the labour market (Kosyakova et al., 2022). Until October 2015, asylum seekers were excluded from participating in integration courses and other BAMF language programs. Since then, asylum seekers from countries with a high probability of remaining in Germany have been permitted to participate in these courses, a policy that has since been extended to all asylum seekers as well as those with recognized protection and tolerated status. Participation in these courses can be mandatory if they receive benefits under the Asylum Seekers Benefits Act (§ 44 AufenthG).

Asylum seekers are eligible for benefits under the Asylum Seekers Benefits Act, which are lower than those of the basic income support provided by the German Social Security Code II (Bürgergeld). If housed in reception facilities, benefits are primarily provided as in-kind services; if in private accommodation, they are mainly given as cash benefits. After recognition of their protection status, there is a change in legal status and refugees then receive benefits in accordance with SGB II if necessary.

The system of benefit provision is closely linked to job placement and support. While the employment agencies of the Federal Employment Agency are primarily responsible for asylum seekers, benefits are disbursed by local authorities. This division often means that asylum seekers are not integrated into the placement and support structures of the employment agencies and must take the initiative to visit these agencies themselves, which is a practical challenge. Once their protection status is recognized, job centers take over responsibility, thereby institutionally unifying the granting of benefits, job placement, and support under one roof. Empirical evidence indicates that placement and training services are often utilized only after the recognition of protection status (based on the IAB-BAMF-SOEP survey of refugees).

The population from the former Soviet Union and its successor states arrived in Germany through various channels, including as ethnic German repatriates, quota refugees, family reunification, and labour and educational migration, with a smaller number coming through the asylum system (Brücker, 2022; Kalter and Kogan, 2014; Liebau, 2011). These diverse routes have led to different institutional conditions for residency and labour market integration. Typically, individuals from this group received either a temporary residence permit or a permanent settlement permit, and ethnic German repatriates often obtained German citizenship directly. Unlike other refugees, they generally were not subject to employment restrictions. However, ethnic German repatriates and Jewish quota refugees sometimes faced a residence requirement. Following the labour market reforms of 2005, they were integrated into the SGB II benefits system (formerly social assistance) in the same manner as German nationals when necessary and had access to the employment agencies' and job centers' placement and support structures. Integration courses and other BAMF language programs were also made available to these groups in a manner similar to other migrant groups.

For Ukrainian refugees who have moved to Germany since February 24, 2022, the conditions differ due to the granting of temporary protection under Section 24 of the Residence Act (AufenthG). This regulation immediately grants them a right of residence without an asylum procedure, and the Dublin procedure does not apply. They are allowed to take up employment or

self-employment without restrictions. Although this protection is time-limited – initially until March 5, 2024, with an extension to March 5, 2025 – it provides greater legal and planning security than for those in the asylum procedure, though less than for recognized refugees or individuals entitled to protection under Article 16a of the Basic Law.

In principle, individuals receiving temporary protection under Section 24 AufenthG are also subject to geographical restrictions when choosing their place of residence. However, in practice, there is no spatial distribution if the individuals are privately accommodated with friends or relatives or have found their own private accommodation. Consequently, less than a tenth live in shared accommodation immediately after arrival (Brücker et al., 2023a; Kosyakova et al., 2023). Access to integration courses and other BAMF language programs is open to all those with temporary protection, resulting in a higher participation rate than for other refugees (Fendel et al., 2023). Participation in language courses also depends on the availability of programs but is higher than for other refugees at the beginning of their stay (Brücker et al., 2023a; Kosyakova et al., 2023). Since June 2022, they have also received benefits under the German Social Code II (Bürgergeld), which are higher than those provided under the Asylum Seekers Benefits Act. Due to their inclusion in the SGB II system in June 2022, Ukrainian refugees are integrated into job center structures at an early stage, facilitating rapid access to placement and support service.

3 Method

The simulations draw on a comprehensive database, which includes data from the Socio-Economic Panel, the integrated studies of the IAB-SOEP Migration Sample, the IAB-BAMF-SOEP Survey of Refugees in Germany, and the IAB-BIB/FReDA-BAMF-SOEP Survey of Refugees from Ukraine (Info box 1). The core of these simulations are regression analyses that model employment as a dependent binary variable, influenced by a range of observable socio-demographic factors along with selected institutional and economic framework conditions.

Employment probability models used in this analysis are weighted and based on a probit model, with standard errors clustered at the individual level. The coefficients derived from these models (see Table 1) for various explanatory variables are utilized to construct conditional scenarios. These scenarios are built upon specific assumptions about the evolution of these factors for the Ukrainian refugee population in Germany. By altering these assumptions, the simulations not only explore the potential effects of different integration policies but also assess the robustness of the results relative to the assumptions made.

The analyses and subsequent simulations consider the following explanatory factors:

- gender (0 = man; 1 = woman),
- children in the household (0=no children under 17; 1=youngest child between 0-6; 2=youngest child between 7-17),
- partner in the household (0 = no; 1 = yes),
- age at immigration, age at immigration squared,

- highest level of education achieved (1 = less than primary level, 2 = primary level, lower secondary level (middle school), 3 = upper secondary level (high school) / post-secondary non-tertiary education, 4 = tertiary education),
- employed before immigration (0 = no; 1 = yes),
- asylum application on arrival (0 = no; 1 = yes),
- good to very good health at the time of the survey (0 = no; 1 = yes),
- language course participation before or after immigration (0 = no; 1 = yes),
- good or very good German language skills at the time of the survey (0 = no; 1 = yes)
- intention to stay in Germany forever (0 = no; 1 = yes),
- east Germany (0 = no; 1 = yes),
- regional labour market tension (ratio of vacancies to unemployed) at the time of the survey,
- nationwide unemployment rate at the time of the survey,
- duration of stay (indicator variables for 1 to 15 years and more since moving in).

Due to data limitations, it is not possible to precisely determine the current residence status of all individuals in the samples – for example, whether they are in an asylum procedure – as well as their participation in integration courses, other language courses, and qualification programs at the time of the survey. Consequently, the simulations distinguish whether a person (i) has migrated to Germany as someone seeking protection and thus has undergone an asylum procedure, or (ii) has completed an integration course, vocational language course, or other German language course before or after moving to Germany. These conditions are assumed to be constant in the simulations, while the duration of stay is treated as a variable over time.

German language proficiency is recognized as a crucial factor for successful labour market integration. Therefore, in a separate regression, the development of German language skills over time – or with an increasing length of stay – is estimated using the same explanatory variables as in the employment probability regression (see above) (see Table 2). The coefficients derived from this analysis are used to simulate the progression of Ukrainian refugees' German language skills throughout their stay in Germany. These simulated language skills are then applied to model labour market integration.

The employment rates were simulated over a 10-year period following the influx. As outlined in the introduction, the results of these simulations should not be viewed as forecasts. They are conditional scenarios based on strong assumptions. It is important to highlight that the outcomes of the simulations are highly dependent on the populations included in the samples, particularly for all non-observable factors or factors not included in the regressions. If the Ukrainian refugees differ significantly from these populations in terms of these unobservable characteristics, it could lead to divergent trends in labour market integration. Moreover, the estimated coefficients may not remain constant over time. Additionally, the institutional framework conditions differ from all prior historical experiences, which could skew the simulation results in various directions.

4 Simulation results

This section outlines different scenarios for the development of employment rates among Ukrainian refugees. Initially, a baseline scenario is presented, deemed the most realistic based on the given assumptions. This scenario posits that language skills will improve over the duration of the stay. Given that women make up a significant portion of the Ukrainian refugee population, the employment rates are further differentiated by gender and family constellation.

Additionally, various scenarios are simulated to highlight the effects of several factors on employment rates. These factors include the level of education, participation in German language courses, involvement in asylum procedures, health status, and regional labour market conditions. Each scenario is designed to provide insights into how these elements might influence the labour market integration of Ukrainian refugees under different conditions.

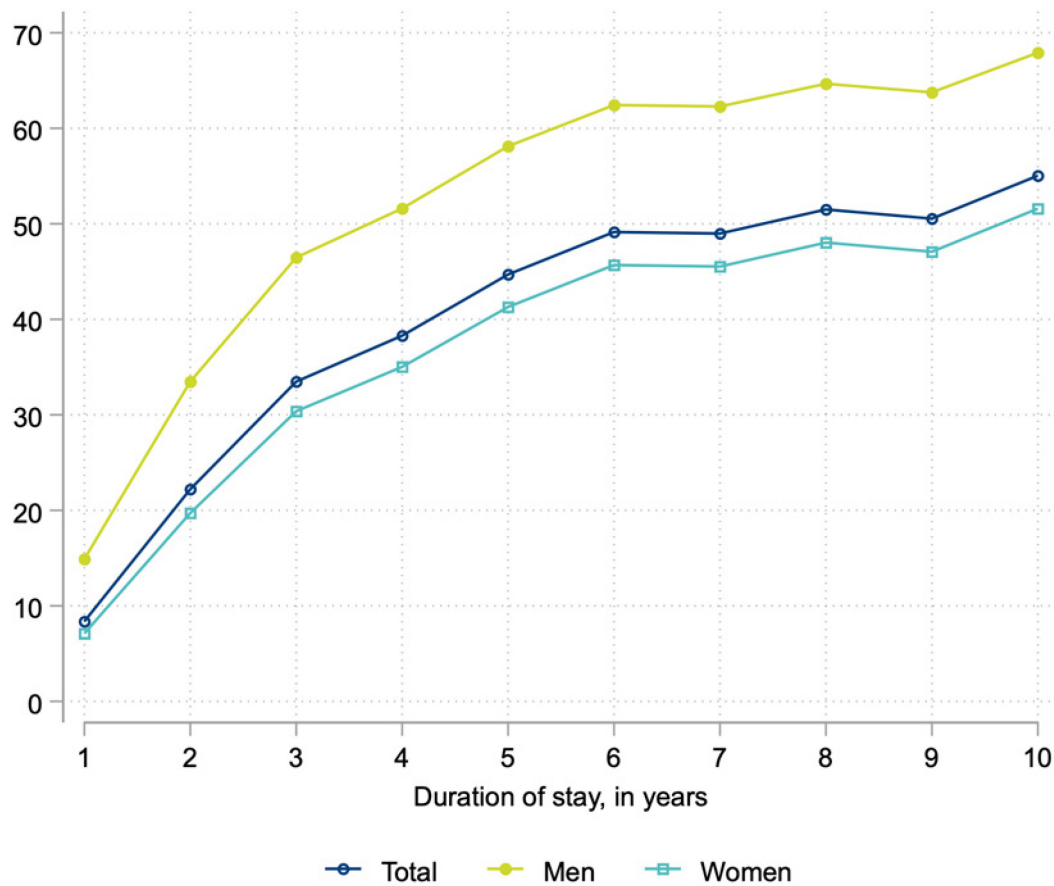
4.1 Baseline scenario

Figure 1 illustrates the simulated trend in employment rates for Ukrainian refugees since their arrival in Germany, utilizing a two-stage simulation method detailed in Chapter 4. The process begins by simulating the development of German language skills over time for Ukrainian refugees. This is based on data derived from refugees who arrived before 2022 and individuals from the former Soviet Union. Factors such as the presence of children and a partner in the household, age at arrival, socioeconomic factors (including education level and work experience before immigration), legal status at arrival (e.g., asylum application), intention to stay, health, participation in language courses, as well as the federal state of residence and the local economic situation are all considered in estimating German language proficiency. These variables reflect the average characteristics of the Ukrainian population in 2023. Subsequently, the probability of employment is calculated, leveraging the simulated German language skills by duration of stay and gender. The estimation of employment integrates the same observable demographic factors used in the language skills simulation, in addition to the newly acquired language competencies.

The results demonstrate a steady increase in employment rates for Ukrainian refugees: starting at approximately 8 percent in the first year of residence and rising to 45 percent after five years. In this conditional scenario, the employment rate reaches 55 percent a decade after immigration. The dynamics vary by gender: men begin with an employment rate of 15 percent in the first year post-immigration, which increases to 58 percent after five years and 68 percent after ten years. Women start with a lower initial employment rate of 7 percent in the first year. However, their employment rates also rise steadily over time, reaching 41 percent after five years and 52 percent ten years post-immigration. Given that nearly 80 percent of the Ukrainian adult population of working age in Germany are women, their progress significantly influences the overall average employment rate.

Figure 1: Baseline scenario: Simulation of the employment rate of Ukrainian refugees by gender and duration of stay

Percentage of people of working age (18 to 64 years)



Notes: Only people aged between 18 and 64 at the time of the survey. Gainfully employed persons are all persons who receive remuneration for their work (definition of the Federal Statistical Office). This also includes trainees, interns and marginally employed persons.

Legend: The expected employment rate of Ukrainian refugees 10 years after arrival in Germany is 55 percent if the coefficients obtained from the analysis of German language skills and employment are used.

Source: Own calculations based on data from SOEP-CORE, IAB-SOEP-MIG, IAB-BAMF-SOEP-REF and IAB-BiB/FReDA-BAMF-SOEP-UA.

4.2 Family constellations

Given that women heavily influence the average employment rate (cf. Table 1), Table 4 offers a detailed look at the simulated employment rates of Ukrainian refugees, broken down by household composition. There are noticeable differences, influenced by family circumstances and whether there is a partner or underage children in the household.

In the first year after their arrival, men without minor children living with their partner have an employment rate of 24 percent, while women in the same situation start with an employment rate of 13 percent. After a decade, these rates increase to 79 percent for men and 65 percent for women.

Table 4: Simulated employment rate of refugees from Ukraine by children and partner in the household

Percentage of people of working age (18 to 64 years)

			Length of stay									
			<= 1 year	2	3	4	5	6	7	8	9	10
Families	No children	M	24	47	60	65	71	74	74	76	76	79
	No children	F	13	30	43	48	55	59	59	61	60	65
	Children 0-6 years	M	15	33	46	51	58	62	62	65	64	68
	Children 0-6 years	F	7	20	30	35	41	45	45	48	47	51
Single parents	Children 6-17	M	23	46	59	64	70	74	73	75	75	78
	Children 6-17	F	12	29	42	47	54	58	58	60	59	64
	Children 0-6 years	M	9	23	34	39	46	50	50	53	52	56
	Children 0-6 years	F	4	12	20	24	30	34	33	36	35	39
	Children 6-17	M	15	34	47	52	58	63	62	65	64	68
	Children 6-17	F	7	20	30	35	41	46	46	48	47	52
Single person		M	16	35	48	53	59	64	63	66	65	69
Single person		F	7	21	31	36	42	47	47	49	48	53

Notes: Only people aged between 18 and 64 at the time of the survey. Gainfully employed persons are all persons who receive remuneration for their work (definition of the Federal Statistical Office). This also includes trainees, interns and marginally employed persons.

Source: Own calculations based on data from SOEP-CORE, IAB-SOEP-MIG, IAB-BAMF-SOEP-REF and IAB-BiB/FReDA-BAMF-SOEP-UA.

The presence of children aged 0 to 6 significantly alters employment dynamics. Men in households with young children have a first-year employment rate of 15 percent, which increases to 68 percent after ten years. For women in similar family situations, the employment rate starts at 7 percent, rising to 51 percent after a decade. If the children are aged 6 to 17, initial employment rates are higher for both genders. In this family setup, after ten years, rates reach 78 percent for men and 64 percent for women. Single-parent men with children aged 0 to 6 and 6 to 17 begin with employment rates of 9 percent and 15 percent, respectively, which increase to 56 percent and 68 percent after ten years. Single-parent women in these categories start with lower rates of 4 percent and 7 percent, respectively, achieving 39 percent and 52 percent after a decade.

For single individuals without minor children, the employment rate for men is 16 percent in the first year, rising to 69 percent after ten years. Women start at 7 percent and reach 53 percent by the end of the simulation period.

These scenarios highlight the crucial influence of family constellations on labour market integration, especially pertinent for Ukrainian refugees, among whom the proportion of single mothers in Germany is notably high at 36 percent (Brücker et al., 2023a). They begin with comparatively low employment rates upon arrival and consistently lag behind the rates of men throughout the simulation. This disparity underscores the importance of targeted support measures to enhance labour market opportunities for single mothers, such as childcare services, flexible working hours, and vocational training. These interventions would help promote economic independence and stability for this vulnerable group.

4.3 Education and training

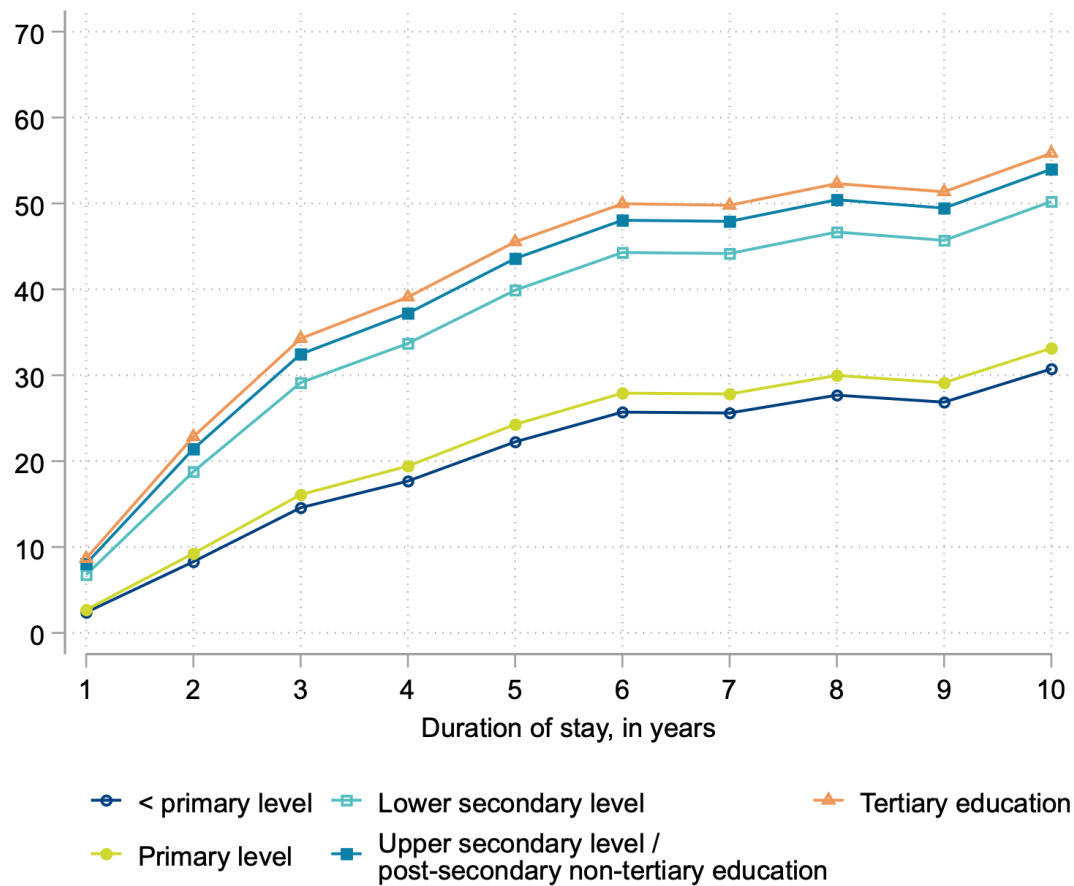
Access to the German labour market is significantly influenced by educational and vocational qualifications (Müller and Shavit, 1998). In this context, Figure 2 demonstrates how labour market participation for Ukrainian refugees evolves based on their education level. It is evident that higher educational qualifications are crucial for labour market integration: Individuals with tertiary education qualifications consistently exhibit higher employment rates, reaching nearly 60 percent after a decade. Conversely, Ukrainian refugees with only elementary schooling or no formal education at all have employment rates slightly over 30 percent ten years after their arrival.

The high average level of education among Ukrainian refugees provides a strong foundation for successful integration into the German labour market (Brücker et al., 2023a), as further illustrated by other scenarios. For instance, a hypothetical scenario that assumes an educational structure similar to that of refugees who immigrated before 2022 – while maintaining the same conditions for Ukrainian refugees in terms of gender, family status, age, etc. – shows that the employment rates would be only 38 percent five years after immigration and 49 percent after ten years (cf. Figure 1).

The possession of a professional qualification from abroad is often insufficient in Germany, particularly in regulated professions where recognition of foreign qualifications is critical for securing appropriate employment. The recognition of professional qualifications is key to bridging information gaps in the labour market, thus enhancing labour market integration (Brücker et al., 2021; Damelang and Kosyakova, 2021). Empirical studies indicate that recognition of professional qualifications can boost the employment chances of migrants by up to 25 percentage points and increase their income by 20 percent over the long term (Brücker et al., 2021). The scenarios presented here suggest that targeted educational and training measures, which facilitate the recognition of foreign qualifications and enhance educational skills, can play a decisive role in accelerating labour market integration.

Figure 2: Simulated employment rate of refugees from Ukraine according to the highest level of education attained before immigration

Percentage of people of working age (18 to 64 years)



Notes: Only people aged between 18 and 64 at the time of the survey. Gainfully employed persons are all persons who receive remuneration for their work (definition of the Federal Statistical Office). This also includes trainees, interns and marginally employed persons.

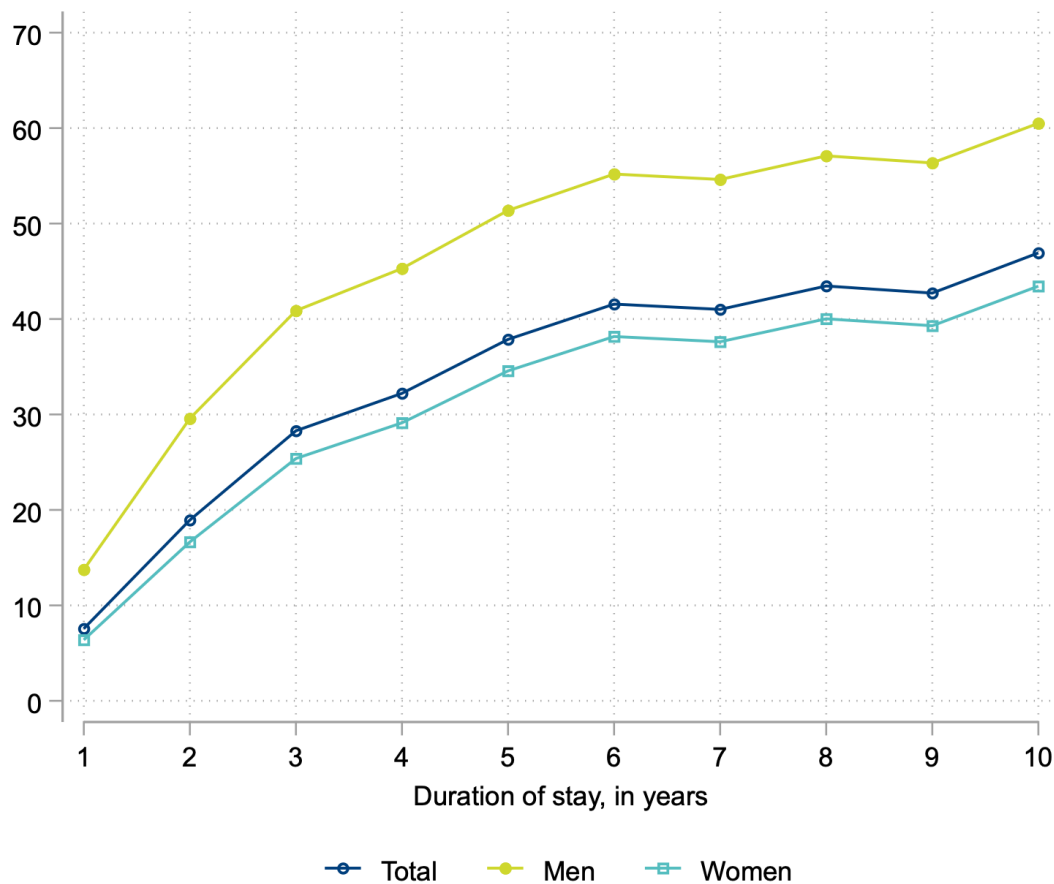
Source: Own calculations based on data from SOEP-CORE, IAB-SOEP-MIG, IAB-BAMF-SOEP-REF and IAB-BiB/FReDA-BAMF-SOEP-UA.

4.4 German language skills and German language courses

German language skills are crucial to improving employment rates. This importance is highlighted in a counterfactual scenario where language skills remain constant at the level they were upon arrival. Under this assumption, while the employment rate still rises over time, it only reaches about 38 percent after five years and approximately 45 percent after ten years. This is 7 percentage points lower after five years and 10 percentage points lower after ten years compared to the baseline scenario, which assumes increasing German language proficiency (cf. Figure 3).

Figure 3: Simulation of the employment rate of Ukrainian refugees by gender and duration of stay, if German language skills are kept constant at the level on arrival

Percentage of people of working age (18 to 64 years)



Notes: Only people aged between 18 and 64 at the time of the survey. Gainfully employed persons are all persons who receive remuneration for their work (definition of the Federal Statistical Office). This also includes trainees, interns and marginally employed persons.

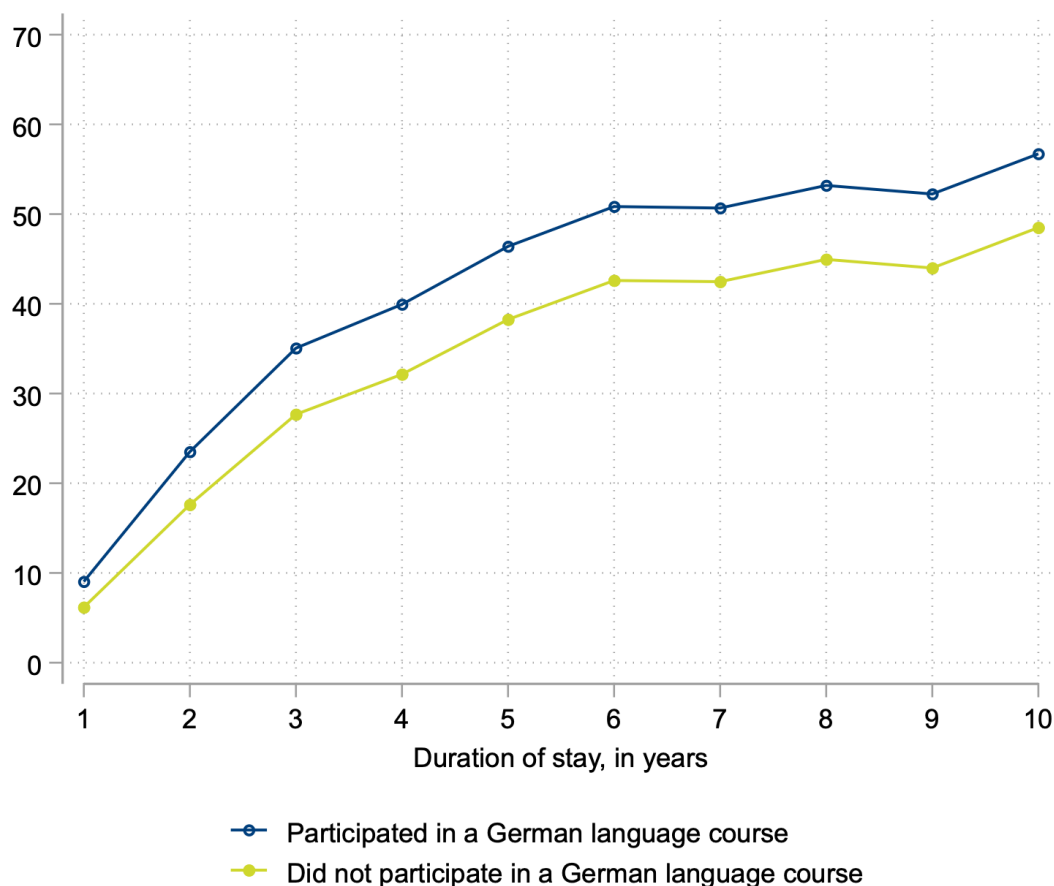
Source: Own calculations based on data from SOEP-CORE, IAB-SOEP-MIG, IAB-BAMF-SOEP-REF and IAB-BiB/FReDA-BAMF-SOEP-UA.

The differences between scenarios with constant and increasing language skills are also influenced by participation in language courses. In another scenario, we explored how participation in German language courses could affect the employment rates of Ukrainian refugees (Figure 4). In the first year after arrival, the employment rates for participants and non-participants in language courses are relatively close, at 9 percent and 6 percent, respectively. However, this initial gap of three percentage points doubles by the second year and widens to nine percentage points by the tenth year after arrival. The marked divergence between the two curves emphasizes the significance of language courses for labour market integration. These simulation results align with numerous studies indicating that successful participation in language courses is significantly associated with improved language proficiency (Kosyakova et al., 2022; van Tubergen, 2010) and better labour market integration (Clausen et al., 2009; De Vroome and van Tubergen, 2010; Fossati and Liechti, 2020; Kanas and Kosyakova, 2023;

Lochmann et al., 2019). Therefore, investments in German language skills can significantly enhance employment rates and reduce the rates of benefit receipt among Ukrainian refugees.

Figure 4: Simulated employment rate of refugees from Ukraine after participation in German language courses

Percentage of people of working age (18 to 64 years)



Notes: Only people aged between 18 and 64 at the time of the survey. Gainfully employed persons are all persons who receive remuneration for their work (definition of the Federal Statistical Office). This also includes trainees, interns and marginally employed persons.

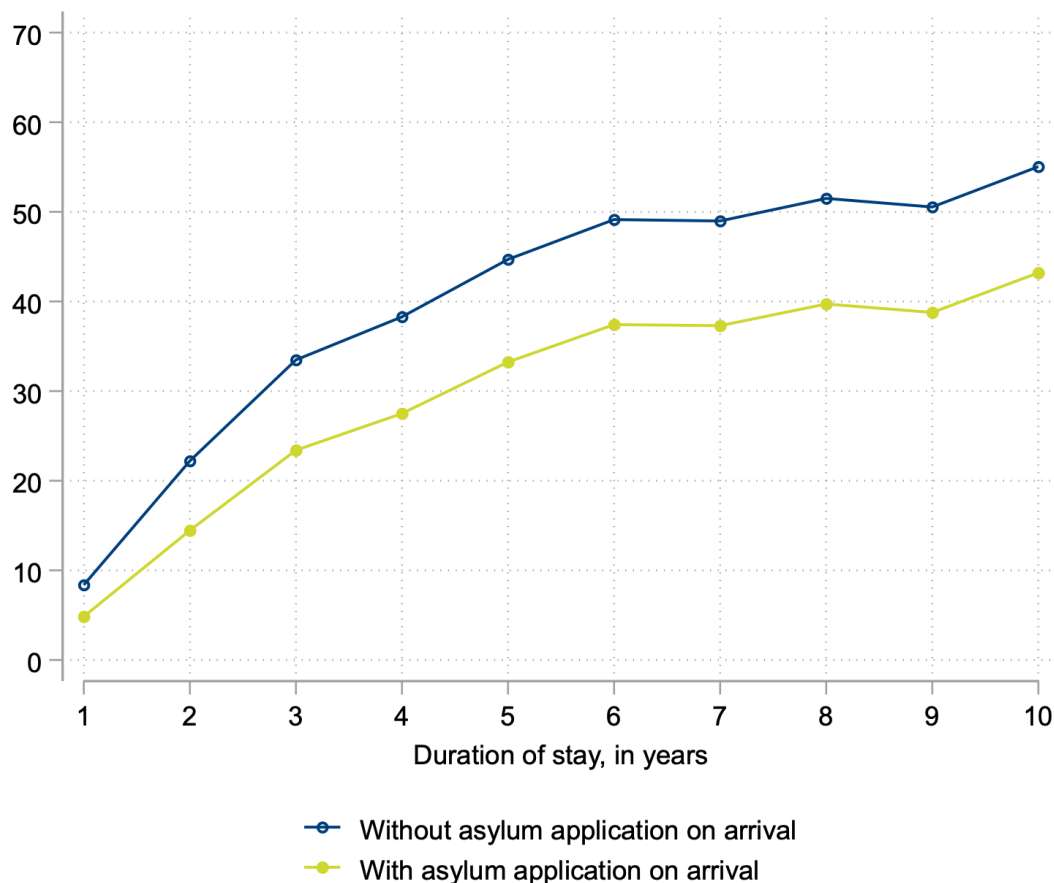
Source: Own calculations based on data from SOEP-CORE, IAB-SOEP-MIG, IAB-BAMF-SOEP-REF and IAB-BiB/FReDA-BAMF-SOEP-UA.

4.5 Asylum procedure

Figure 5 illustrates the impact of asylum procedures on the evolution of employment rates. The figure distinguishes between individuals who applied for asylum upon arrival and those who did not seek protection. According to the baseline scenario's other assumptions, the employment rates of Ukrainian refugees would decrease from eight to four percent in the first year after immigration if they had applied for asylum and undergone an asylum procedure. Ten years after immigration, the gap in employment rates between those with and without an asylum application expands to 12 percentage points. These results underscore that undergoing an asylum procedure can significantly hinder labour market integration, a finding supported by

earlier research (Åslund et al., 2024; Hainmueller et al., 2016; Hvidtfeldt et al., 2020; Kosyakova and Brenzel, 2020)

Figure 5: Simulated employment rate of refugees from Ukraine by asylum application
Percentage of people of working age (18 to 64 years)



Notes: Only people aged between 18 and 64 at the time of the survey. Gainfully employed persons are all persons who receive remuneration for their work (definition of the Federal Statistical Office). This also includes trainees, interns and marginally employed persons.

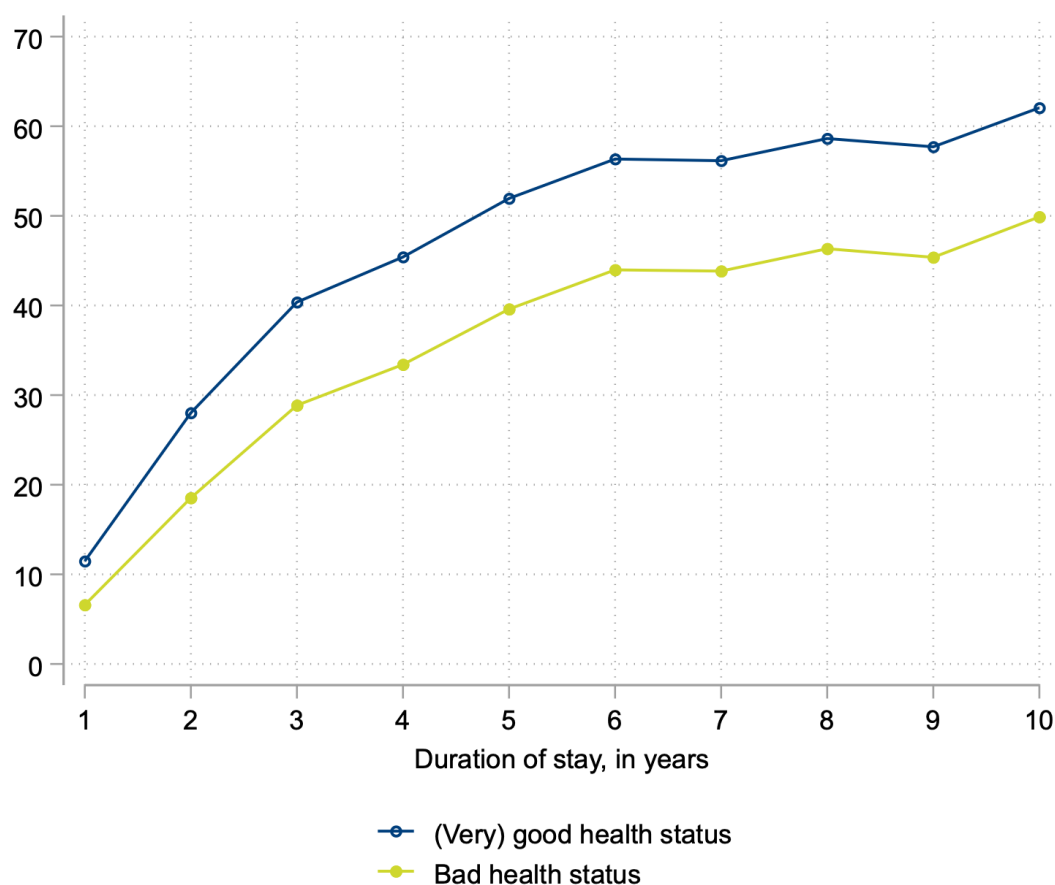
Source: Own calculations based on data from SOEP-CORE, IAB-SOEP-MIG, IAB-BAMF-SOEP-REF and IAB-BiB/FReDA-BAMF-SOEP-UA.

4.6 Health

One notable difference between people seeking protection and other migrant groups is the often poorer health condition of refugees (Brücker et al., 2019; Chiswick et al., 2008). Refugees frequently face traumatic experiences either in their countries of origin or during their flight (Ambrosetti et al., 2021; Bogic et al., 2015; Brücker et al., 2016; Hunkler and Khoureshed, 2020; Porter and Haslam, 2005). The psychological strain is further heightened by family members left behind in their home country or in transit countries (Löbel and Jacobsen, 2021; Nickerson et al., 2010). Additional stressors in the host country, such as lengthy asylum procedures, residence restrictions, and discrimination, exacerbate the risk of mental and other health issues (Ambrosetti et al., 2021; Jaschke and Kosyakova, 2021; Laban et al., 2004; Silove et al., 2007).

Furthermore, limited access to health services in the host country compounds these challenges (Jaschke and Kosyakova, 2021; Norredam et al., 2006).

Figure 6: Simulated employment rate of refugees from Ukraine by health status
Percentage of people of working age (18 to 64 years)



Notes: Only people aged between 18 and 64 at the time of the survey. Gainfully employed persons are all persons who receive remuneration for their work (definition of the Federal Statistical Office). This also includes trainees, interns and marginally employed persons.

Source: Own calculations based on data from SOEP-CORE, IAB-SOEP-MIG, IAB-BAMF-SOEP-REF and IAB-BiB/FReDA-BAMF-SOEP-UA.

Health is a crucial factor for success in the labour market. Research indicates that good health not only facilitates access to the labour market but also aids in sustaining employment (Chatterji et al., 2011; Frijters et al., 2014; Pelkowski and Berger, 2004). In Figure 6 the employment rates of Ukrainian refugees are simulated under various assumptions about their health, based on the baseline scenario. Individuals in good or very good health have an employment rate of 11 percent in the first year after immigration, compared to 7 percent for those in poor health. A decade after immigration, this disparity in employment rates widens to ten percentage points. The pronounced discrepancy between different health statuses emphasizes the importance of investing in health prevention and support for refugees to help them fully realize their potential

in the labour market. This is particularly pertinent for services aimed at treating mental health issues.

4.7 Cumulative effect of German language course participation, asylum application and health status

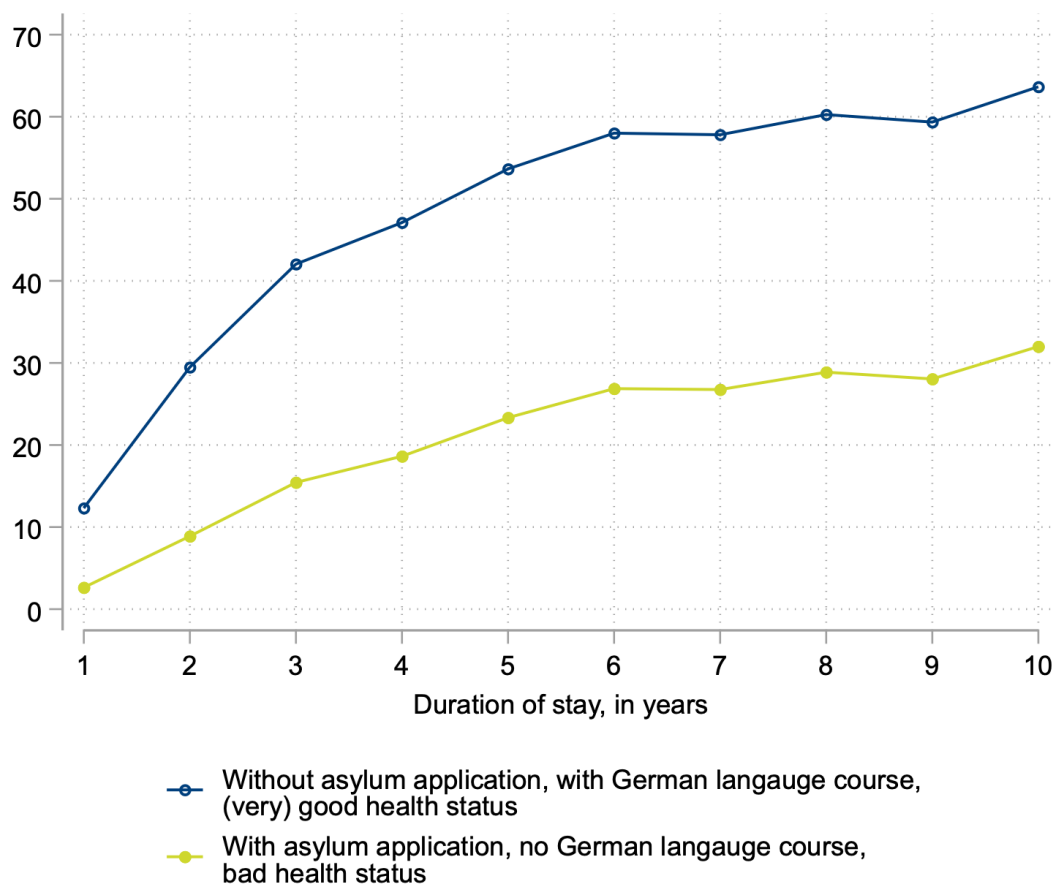
To illustrate the complex interaction between health status, participation in integration measures like language courses, and legal status on the labour market integration of refugees, Figure 7 simulates employment rates for Ukrainian refugees based on these factors. Two contrasting scenarios are considered: In the more positive scenario, the refugees entered the country without applying for asylum, participated in German language courses, and are in good or very good health. In the more negative scenario, the refugees underwent an asylum procedure, had no access to language courses, and were in poor health.

The data reveal significant differences in employment rates, attributable to the combination of these factors. Refugees under favorable conditions regarding language course participation, legal status, and health status achieve an employment rate of 13 percent in the first year after immigration, which increases to almost two-thirds ten years after immigration. Conversely, under unfavorable conditions, the employment rate in the first year after immigration is only 3 percent, rising to almost 50 percent ten years after immigration.

These results underscore the importance of comprehensive support for labour market integration through secure residence status, promotion of German language skills, and access to quality healthcare. Such measures, which also necessitate public investment in legal advice, language support, and healthcare, can yield substantial medium and long-term benefits in the form of higher employment rates and reduced benefit receipt.

Figure 7: Simulated employment rate of refugees from Ukraine, by asylum application, German course participation, health status

Percentage of people of working age (18 to 64 years)



Notes: Only people aged between 18 and 64 at the time of the survey. Gainfully employed persons are all persons who receive remuneration for their work (definition of the Federal Statistical Office). This also includes trainees, interns and marginally employed persons.

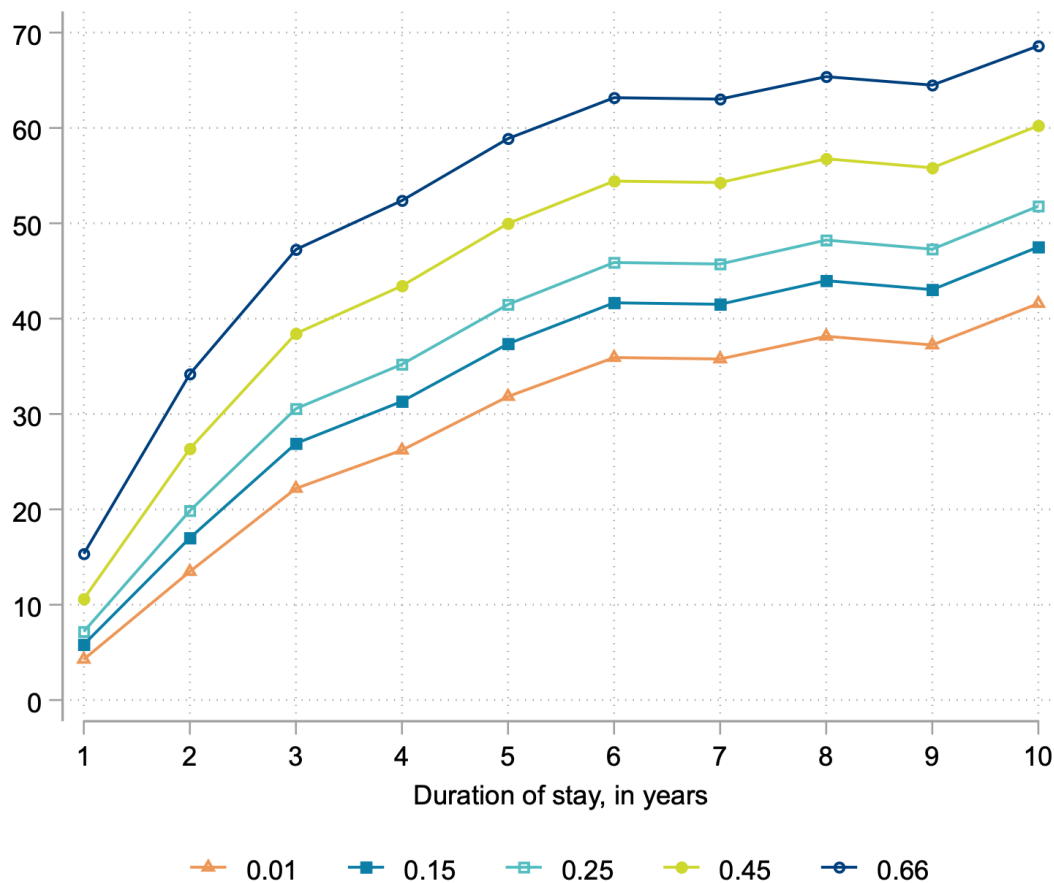
Source: Own calculations based on data from SOEP-CORE, IAB-SOEP-MIG, IAB-BAMF-SOEP-REF and IAB-BiB/FReDA-BAMF-SOEP-UA.

4.8 Role of local labour market conditions

In addition to individual characteristics and integration policy factors, local labour market conditions significantly influence the labour market integration of refugees (Aksoy et al., 2023; Åslund and Rooth, 2007; Brücker et al., 2020a; Godøy, 2017; Kanas and Kosyakova, 2023; Kristiansen et al., 2021). Figure 8 simulates the development of country-specific employment rates for Ukrainian refugees under various assumptions about labour market tension. This is measured here as the ratio of vacancies to jobseekers and reflects the intensity of labour market competition faced by the refugees. For instance, a value of 0.25 indicates that there is one vacancy for every four jobseekers. The higher the value of the labour market tension indicator, the greater the shortage of workers for companies, and consequently, the lower the competition for jobseekers. Labour market tension decreased from 0.21 to 0.06 between 1990 and 2005 but has improved steadily since then. In 2022, it reached an average value of 0.36 in Germany,

although it dropped to 0.30 in 2023. Notably, labour market tension varies considerably between the federal states; for example, in 2022, it was 0.1 in Berlin and 0.57 in Bavaria.³

Figure 8: Simulated employment rate of refugees from Ukraine according to labour market tension
Percentage of people of working age (18 to 64 years)



Notes: Only people aged between 18 and 64 at the time of the survey. Gainfully employed persons are all persons who receive remuneration for their work (definition of the Federal Statistical Office). This also includes trainees, interns and marginally employed persons.

Source: Own calculations based on data from SOEP-CORE, IAB-SOEP-MIG, IAB-BAMF-SOEP-REF and IAB-BiB/FReDA-BAMF-SOEP-UA.

The simulation results demonstrate a distinct increase in the employment rate over the duration of stay across all levels of labour market tension, with lower tension values generally correlating with a slower increase in the employment rate. With a high labour market tension (0.66), the employment rate in the first year after immigration is just under 15 percent and continuously rises to around 70 percent after ten years. In contrast, with a low labour market tension (0.01), the employment rate starts at only 4 percent and reaches about 40 percent ten years after immigration.

³ The federal state-specific labour market tension was calculated using data from DESTATIS, GENESIS table: 13211-0007 (<https://www-genesis.destatis.de/genesis/online?operation=table&code=13211-0007&bypass=true&levelindex=0&levelid=1715610929324#abreadcrumb>).

Two key conclusions regarding the labour market integration of Ukrainian refugees can be drawn from these simulations: First, the general economic situation in Germany significantly influences labour market integration. The increase in labour market tension over the past decade has likely been beneficial for the labour market integration of refugees. Although the current economic situation remains more favorable than in the 2000s, the recent economic slowdown has decreased labour market tension, which is likely to negatively affect the labour market integration of Ukrainian refugees. Second, regional differences are crucial. Labour market tension varies significantly across regions in Germany, which substantially impacts integration opportunities. Unlike other refugee groups, many Ukrainian refugees were able to freely choose their place of residence in Germany (section 2.3). This likely resulted in a higher proportion of Ukrainian refugees settling in prosperous regions with high labour market tension, thus facilitating their labour market integration. However, a third of Ukrainian refugees reside in federal states such as Berlin, Bremen, Hamburg, North Rhine-Westphalia, and Saxony-Anhalt (Mediendienst-integration, 2024), where labour market tension is significantly lower than the national average (between 0.10-0.25), and significant regional differences in employment rates can be expected depending on the local labour market situation.

5 Conclusion

Against the backdrop of the ongoing Russian war of aggression against Ukraine and the resultant significant influx of Ukrainian refugees into Germany, this research report has simulated various scenarios for the labour market integration of this group. These simulations leverage a comprehensive database of refugees who moved to Germany under different historical conditions and migrants from the former Soviet Union. The experiences of these groups provide a foundation for creating conditional scenarios for the future labour market integration of Ukrainian refugees. This serves two purposes: firstly, to form expectations about the future trajectory of labour market integration for Ukrainian refugees based on past refugee and migration episodes; and secondly, to demonstrate how various factors such as family constellations, German language skills, education, health, institutional framework conditions, integration policy measures, and labour market conditions can shape the course of integration. It should be emphasized that these conditional scenarios are contingent on specific assumptions and should not be misconstrued as forecasts. The population of Ukrainian refugees is markedly different from other groups due to observable factors like gender, education, training, institutional, and economic conditions. Furthermore, numerous unobservable factors or factors such as the Russian war of aggression or temporary protection in Germany influence the integration process but have no historical precedent. As a result, these factors cannot be fully captured in the scenarios, or only imperfectly.

In our baseline scenario, which is considered the most likely development, Ukrainian refugees achieve an employment rate of around 45 percent with a duration of stay of five years, increasing to about 55 percent after ten years. The gender composition along with family constellations, particularly the high proportion of single mothers in Germany, negatively impacts the employment rates compared to other refugee and migrant groups in the sample, while the higher

levels of education and training have beneficial effects. The poorer health of this group compared to other refugee groups also adversely affects labour market integration. The results are also dependent on labour market developments. Although the current labour market situation is much more favorable than the average over the sample period, the economic slowdown has reduced labour market tension, which is likely to negatively impact labour market integration in the short term. In the medium to long term, this situation may quickly improve, particularly against the backdrop of increasing labour market bottlenecks caused by demographic changes. This would result in higher employment rates for Ukrainian refugees compared to our baseline scenario.

The potential effects of the ongoing war in Ukraine were not factored into the baseline scenario. Compared to other refugee and migrant groups, a high proportion of Ukrainian refugees in Germany plan to return to Ukraine after the war ends. Even though this proportion decreases with increasing length of stay, it has significant implications for investments in country-specific human capital – such as German language skills, education and further training, and recognition of professional qualifications – and employment relationships in Germany. Those granted temporary protection under Section 24 of the Residence Act have been treated on par with those who have not applied for protection in Germany.⁴ However, the legal prospects for Ukrainian refugees are more uncertain than for other migrant groups with longer or permanent residence rights, which can also negatively impact integration.

The various other scenarios in this study not only illuminate the connections between different factors and labour market integration, but also allow several conclusions to be drawn for integration policy. One central finding is that family constellation has a considerable influence on labour market integration, especially given the high proportion of single mothers in Germany compared to other refugee and migrant groups. Effective childcare support and seamless integration of Ukrainian refugees' children into the German education system are thus crucial factors that not only promote the individual labour market integration of mothers but also contribute to the long-term social integration of the entire family.

Important insights can also be gleaned with respect to language support. The data available did not make it possible to identify temporary lock-in effects resulting from participation in language courses. However, key findings provide clear indications of the long-term positive influence of language support on labour market integration. It is evident that employment rates significantly increase as German language proficiency improves. Additionally, completing German language courses is not only associated with improved language skills but also significantly enhances opportunities in the labour market. These results confirm that targeted language support measures not only improve language skills in the short term but can also contribute to increasing employment rates in the medium to long term, thereby reducing the receipt of social benefits.

Ukrainian refugees have a high level of education and training, at least formally, which generally facilitates labour market integration. However, it should be noted that the education systems are different, and many qualifications obtained in the dual training system in Germany were obtained at universities or comparable educational institutions in Ukraine. Therefore, the educational content often differs, and human capital acquired in Ukraine is often difficult to

⁴ This was not possible in the scenarios because §24 AufenthG was applied to Ukrainian refugees for the first time and therefore there is no historical precedent.

transfer to the German labour market. Adaptation qualifications, other further training measures, or the acquisition of educational and training qualifications in Germany are therefore often necessary to enable employment with appropriate qualifications. In view of the high level of formal education, the recognition of these foreign qualifications is also crucial to reduce uncertainty in the labour market about the qualifications acquired in Ukraine.

The state of health also plays an important role in labour market integration. Compared to other refugee and migrant groups, Ukrainian refugees report a poorer state of health, which is closely linked to the separation from partners, children, and other members of the nuclear family. Even if these war-related circumstances cannot be influenced by integration policy, good healthcare is likely to have a positive impact on the labour market integration of Ukrainian refugees.

The simulation results also show that filing an asylum application and the associated asylum procedures are negatively related to labour market integration. In this respect, the granting of temporary protection and the associated facilitation of access to the labour market is likely to have significantly improved the integration opportunities of Ukrainian refugees.

Finally, the economic framework conditions, measured in the simulations by the labour market tension, play a decisive role in the integration of Ukrainian refugees. This applies both nationally and locally. These macroeconomic developments can only be influenced by policy measures to a limited extent in the short term. However, the findings also suggest that regional differences in labour market tension can have a considerable influence. Promoting regional mobility through labour market policy could therefore have a positive impact on the labour market integration of Ukrainian refugees.

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Appendix

Table A1: Determinants of the probability of employment

Dependent variable: paid employment (employed = 1, not employed = 0)

	Average marginal effect in percentage points
Woman	-14.0***
Children in the household at the time of the survey (reference: no children under 17)	
Children between 0-6 years	-10.1***
Children between 7-17 years	-0.5
Partner in the household	10.1***
Age at immigration	0.5
Age at immigration squared	-0.0***
Highest level of education achieved (reference: less than primary level)	
Primary level	1.6
Lower secondary level (middle school)	15.3***
Upper secondary level (high school) / post-secondary non-tertiary education	18.2***
Tertiary education	18.6***
Employed before immigration	10.6***
Asylum application on arrival	-8.0***
Good to very good health	9.1***
Participated in a language course before or after immigration	6.0**
Good or very good German language skills	10.6***
Intention to stay (forever in Germany)	0.3
Labour market tension	35.1***
Unemployment rate	0.2
East Germany	-2.1
Duration of stay (reference: 1 year or less)	
2 years	16.6***
3 years	27.3***
4 years	31.3***
5 years	36.7***
6 years	40.1***
7 years	39.6***
8 years	41.8***
9 years	41.1***
10 years	44.7***
N	51,037

Notes: ***, **, * significant at the 1-, 5- and 10-percent level. Standard errors grouped at person level. The table shows the average marginal effects in percentage points of a multivariate regression analysis using the probit method. The dependent variable is an indicator variable that has a value of 1 if the person is employed and a value of 0 if the person is not employed. All persons who receive remuneration for their work are employed (definition of the Federal Statistical Office). This also includes trainees, interns and marginally employed persons. Regressions also control for regression constant, missing values in the control variables, and for further indicator variables for duration of stay (one indicator each for the 11th to 30th year since arrival). Only people who were between 18 and 64 years old at the time of the survey.

Source: Own calculations based on data from SOEP-CORE, IAB-SOEP-MIG, IAB-BAMF-SOEP-REF and IAB-BiB/FReDA-BAMF-SOEP-UA.

Table A2: Determinants of the probability of having good to very good German language skills

Dependent variable: good to very good German language skills (good to very good German language skills = 1, poor to no German language skills = 0)

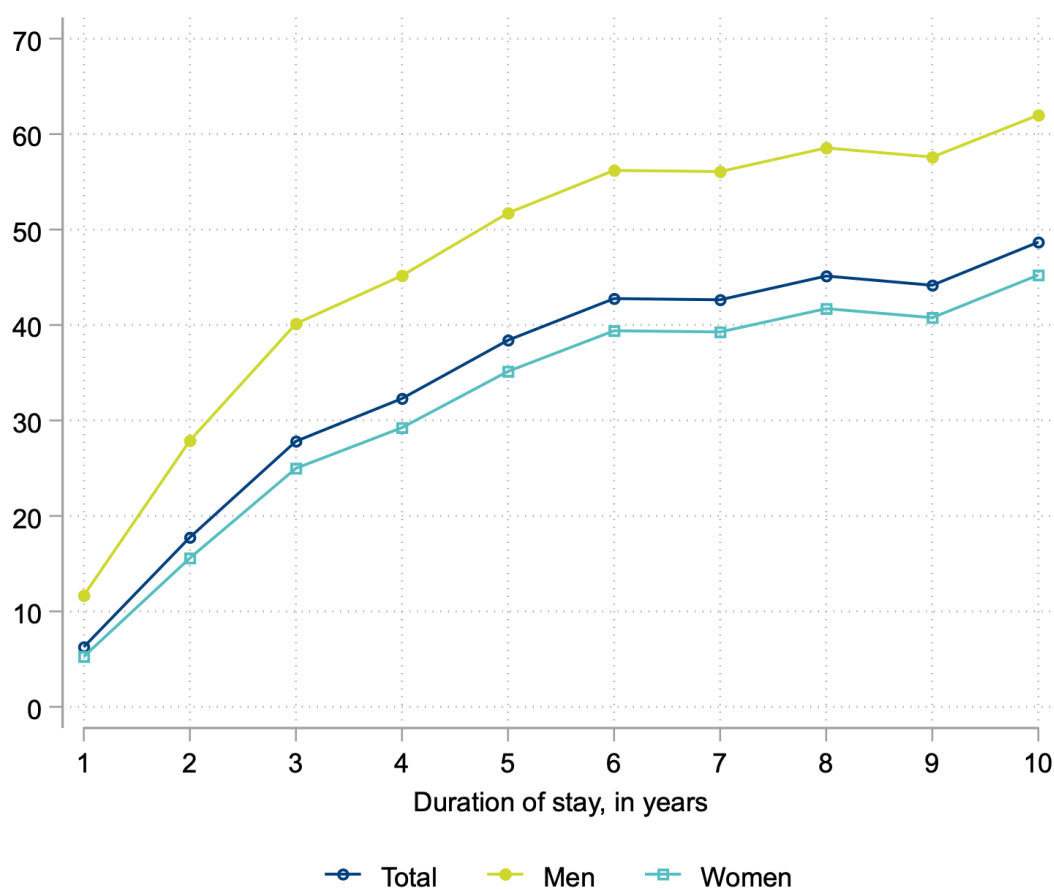
	Average marginal effect in percentage points
Woman	1.3
Children in the household at the time of the survey (reference: no children under 17)	
Children between 0-6 years	-6.5***
Children between 7-17 years	-2.2
Partner in the household	-0.0
Age at immigration	-3.8***
Age at immigration squared	0.0***
Highest level of education achieved (reference: less than primary level)	
Primary level	6.1*
Lower secondary level (middle school)	9.5***
Upper secondary level (high school) / post-secondary non-tertiary education	10.7***
Tertiary education	18.0***
Employed before immigration	3.4
Asylum application on arrival	-10.7***
Good to very good health	6.9***
Participated in a language course before or after immigration	4.9**
Intention to stay (forever in Germany)	1.1
Labour market tension	-1.5
Unemployment rate	-0.8
East Germany	6.5***
Duration of stay (reference: 1 year or less)	
2 years	14.9***
3 years	22.5***
4 years	26.2***
5 years	29.0***
6 years	32.7***
7 years	35.2***
8 years	35.3***
9 years	34.1***
10 years	35.7***
N	49,425

Notes: ***, **, * significant at the 1-, 5- and 10-percent level. Standard errors grouped at person level. The table shows the average marginal effects in percentage points of a multivariate regression analysis using the probit method. The dependent variable is an indicator variable that has a value of 1 if the person has very good or good German language skills and a value of 0 if the person has poor to no German language skills. Regressions additionally control for further indicator variables for duration of stay (one indicator each for the 11th to 30th year since moving in), regression constant, and missing values in the control variables. Only people who were between 18 and 64 years old at the time of the survey.

Source: Own calculations based on data from SOEP-CORE, IAB-SOEP-MIG, IAB-BAMF-SOEP-REF and IAB-BiB/FReDA-BAMF-SOEP-UA.

Figure A1: Simulated employment rate of refugees from Ukraine with the same level of qualification as other refugees by gender and duration of stay

Percentage of people of working age (18 to 64 years)



Notes: Only people aged between 18 and 64 at the time of the survey. Gainfully employed persons are all persons who receive remuneration for their work (definition of the Federal Statistical Office). This also includes trainees, interns and marginally employed persons.

Source: Own calculations based on data from SOEP-CORE, IAB-SOEP-MIG, IAB-BAMF-SOEP-REF and IAB-BiB/FReDA-BAMF-SOEP-UA.

Figures

Figure 1:	Baseline scenario: Simulation of the employment rate of Ukrainian refugees by gender and duration of stay.....	21
Figure 2:	Simulated employment rate of refugees from Ukraine according to the highest level of education attained before immigration	24
Figure 3:	Simulation of the employment rate of Ukrainian refugees by gender and duration of stay, if German language skills are kept constant at the level on arrival	25
Figure 4:	Simulated employment rate of refugees from Ukraine after participation in German language courses.....	26
Figure 5:	Simulated employment rate of refugees from Ukraine by asylum application	27
Figure 6:	Simulated employment rate of refugees from Ukraine by health status	28
Figure 7:	Simulated employment rate of refugees from Ukraine, by asylum application, German course participation, health status.....	30
Figure 8:	Simulated employment rate of refugees from Ukraine according to labour market tension	31
Figure A1:	Simulated employment rate of refugees from Ukraine with the same level of qualification as other refugees by gender and duration of stay	41

Tables

Table 1:	Demographic composition of refugees who immigrated before 2022, immigrants from the former Soviet Union and refugees from Ukraine	11
Table 2:	Educational level, work experience before immigration, language skills, health status and employment rate of refugees who immigrated before 2022, immigrants from the former Soviet Union and refugees from Ukraine.....	14
Table 3:	Institutional and other framework conditions	16
Table 4:	Simulated employment rate of refugees from Ukraine by children and partner in the household.....	22
Table A1:	Determinants of the probability of employment	39
Table A2:	Determinants of the probability of having good to very good German language skills	40

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