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POLICY PAPER

Location Choice and Dispersal Policies: Ukrainian War Immigrants in the Czech Republic

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The large influx of Ukrainian immigrant refugees to the Czech Republic fleeing from the war has attracted the attention of many policymakers due to their unequal geographical distribution. The high concentration of refugees in some districts has the potential to burden the school and healthcare systems, as well as the housing market. This project aims to provide an explanation for the unequal distribution of refugees by studying the determinants of refugee location choices in the Czech Republic, including ethnic networks and employment prospects. We provided evidence of a positive association between the number of Ukrainian refugees and *(i)* the stock of previous Ukrainian immigrants (our measure of ethnic networks) and *(ii)* the number of available job positions. In addition, we conducted a review of previous studies on the effectiveness of dispersal policies and determined that such policies exert ambiguous effects on refugee labor market integration. Hence, dispersal policies need to consider the integration of refugees and their intentions to remain in the country.

Contents

By means of policy papers, experts from RILSA/VÚPSV provide a thorough insight into selected social policy topics and suggest recommendations for decision-makers in the respective areas.

1. Introduction

Up to the beginning of July 2022, the Czech Republic had granted temporary protection to approximately 390,000 Ukrainian refugees[1]. The influx of refugees has become a focus of increasing political concern, the prime reason for which is that Ukrainian refugees are geographically concentrated in the main metropolitan areas. More specifically, around one-third are located in three of the largest cities in the Czech Republic. Two-thirds of Ukrainian refugees are female and of working-age (18–64), and around one-third are children up to 15 years of age. The high geographic concentration of refugees and the high number of school and kindergarten-age children has the potential to exert strong pressure on the Czech school and health care systems, as well as the housing market. In mid-May 2022, roughly 26 thousand (one-third of the total number of refugee children) and 3.8 thousand refugee children[2] were enrolled in primary schools and kindergartens in the Czech Republic, respectively (Novosák et al., 2022). The unequal distribution of refugees across districts may lead to a shortage of places in kindergartens and schools in the next academic year. PAQ Research analysis indicates that the largest shortage of places in primary schools and kindergartens will be in Prague (Prokop, 2022). In light of these potential problems, there is a need to discuss schemes for the implementation of a dispersal policy and its potential direct and unintentional impacts.

Dispersal policies aimed at distributing refugees more evenly across regions have been shown to exert mixed impacts on refugee labor market integration. A number of previous studies have shown that dispersal policies negatively influence the labor market integration of refugees (Brücker et al., 2019; Edin, 2004; Damm, 2005), while other studies have determined the minor but insignificant positive effects (Fasani, Frattini, and Minale, 2022[3]) of dispersal policies for some countries. The effectiveness of dispersal policies depends, *inter alia*, on the determinants of the location choices of refugees. The gender and age composition of refugees should also be considered when designing dispersal and labor integration policies since there is ample evidence of the double disadvantage faced by female immigrants in the labor market (Fratinni and Solmone, 2022). Furthermore, dispersal policies may have *unintended* consequences. For example, such policies may force some refugees to seek shelter in other countries, further deteriorating their living conditions and employment prospects. Firstly, this research paper explores the main determinants of the location choices of refugees, including ethnic networks and employment prospects, aimed at helping to explain the unequal distribution of refugees. Secondly, the research reviews state-of-the-art knowledge on the effectiveness of dispersal policies and provides further policy recommendations.

The findings of this research suggest a positive association between the population of Ukrainian immigrants arrived before the war (our measure of ethnic networks) and the number of Ukrainian refugees, suggesting that refugees are attracted to locations in which they have relatives or friends, or at least know someone. The effects of ethnic networks on labor market outcomes as reported in previous studies are not clear-cut and depend on the size and quality of the ethnic network (Edin et al., 2003; Schüller, 2022). We also find evidence of a positive correlation between the number of available job positions and the number of refugees across districts, thus suggesting that refugees consider the probability of employment when deciding on their location.

The evidence from our analysis of the location choices of Ukrainian refugees and the relevant empirical literature suggests that (i) The purpose of settlement policy should not be limited to the more even distribution of refugee immigrants but should also consider the issue of their labor market integration. (ii) Dispersal policy needs to target specific groups of refugees, for instance those who are unable to find accommodation, work or a school for their children unaided; otherwise, the dispersal policy is unlikely to be effective. (iii) Dispersal policy needs to be used as a pull factor rather than a push factor for refugees by providing incentives for refugees to relocate. (iv) Dispersal policy implemented

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1 By Ukrainian war immigrant refugees, the authors refer to persons fleeing from the war in Ukraine. "These are persons who have been granted a residence permit in connection with the war in Ukraine. From 24.02.2022 to 21. 03. 2022, such persons were granted long-term visas for a stay over 90 days for leave to remain in the territory with code D/VS/U. From March 22, 2022, these persons have been granted temporary protection in the form of long-term visas with codes D/DO/667, D/DO/668 and D/DO/669. Pursuant to Act No. 65/2022 Coll., on Certain Measures in Connection with the Armed Conflict in Ukraine Caused by the Invasion of the Russian Federation. All such persons, including persons with a previous D/VS/U visa, are considered to be persons with temporary protection. [...] it does not only concern persons with Ukrainian nationality." (Ministry of the Interior of the Czech Republic, 2022b)

2 The small fraction of refugee children enrolled in Czech schools may be related to the option of continuing online education in Ukrainian schools during the current academic year and the lack of the obligation to register the children of Ukrainian immigrants in the Czech school system for compulsory school attendance for three months following their arrival (Ministry of Education, Youth and Sports of the Czech Republic, 2022).

3 Fasani, Frattini, and Minale (2022) have documented that the size and direction of the effects of dispersal policies on labor market outcomes vary across countries, from major negative effects in Ireland (followed by the UK, Netherlands and Norway) to minor, insignificant positive effects (in Sweden).

previously should not restrict the right of refugees to relocate after a certain period of time or under the condition that such refugees secure accommodation and/or work in another location.

The remainder of the study is organized as follows: Section 2 provides a brief review of the relevant literature on migration determinants and dispersal policies. Section 3 provides descriptive evidence on the composition and regional distribution of Ukrainian war immigrant refugees and empirical evidence on the determinants of the location choices of Ukrainian refugees in the Czech Republic. Section 4 concludes with a number of policy recommendations.

2. Literature

2.1 The Determinants of the Location Choices of Immigrants

The concentration of a large number of refugees in a small number of locations may lead to the inefficient functioning of the local health care, education and transport infrastructures. Therefore, it is important to be aware of the factors that influence the location choices of refugees. This study focuses on two potential determinants of the location choices of refugees: (i) ethnic networks (the presence of co-nationals who lived in the region before the war) and (ii) employment prospects.

Migrant Networks

There is consensus in the migration literature that the presence of migrant networks plays an important role in the location choices of immigrants (Maani, 2016; Munshi, 2003; Munshi, 2020; Pedersen, Pytlikova, and Smith, 2008). The presence of such networks decreases the costs of acquiring information on the relevant policies and institutions in the destination country and may help in terms of securing employment (Munshi, 2003). Pedersen, Pytlikova, and Smith (2008) provide empirical evidence of strong network effects as measured in terms of the impact of the stock of immigrants of one's own nationality on immigrant flows in OECD countries in the period 1990–2000. However, the authors found that network effects vary with the type of welfare system and the immigration policies of the destination country.

The effects of ethnic networks on the integration of immigrants are, *a priori*, ambiguous. While ethnic networks may be helpful in terms of the labor market integration of newly-arrived immigrants, they may constitute a mobility trap (particularly in the extreme case of ethnic enclaves) from the general assimilation perspective (Kalter and Kogan, 2014). On the one hand, immigrants may benefit from living in a location with a high proportion of co-nationals through obtaining information on the local labor market, greater opportunities for trading in the local goods and labor markets (Lazear, 1999), and a lower level of exposure to discrimination. On the other hand, ethnic networks may negatively impact the labor market integration of newly-arrived immigrants under conditions of the negative selection of previous migrants, e.g. they have low levels of education or work in low-skilled positions. (Borjas, 1998).

Some studies that have considered location characteristics to be exogenous provided evidence of a negative association between the labor market outcomes of immigrants and immigrant networks (Kain, 1992; Ihlanfeldt and Sjoquist, 1998). However, those papers that have taken account of the sorting bias found evidence of the positive impacts of ethnic networks on labor market outcomes. For instance, Edin, Fredriksson, and Åslund (2003) showed that less-skilled immigrants gain from living in ethnic enclaves in terms of earnings. The quality of ethnic networks also matters for the labor market integration. In particular, members of high-income ethnic groups gain more than those from low-income ethnic groups (Edin et al., 2003). In addition, the average skill levels of non-Western immigrants living in the neighborhood enhance the probability of employment (Damm, 2014).

The findings of previous papers on the effects of the size of ethnic networks (measured by the number or concentration of co-nationals in a location) differ in terms of both labor market outcomes and countries. For example, an increase in the size of local ethnic networks has been shown to increase the earnings of immigrants in Denmark (Damm, 2009b). However, Gërxhani and Kosyakova (2020) found no evidence that the size or use of ethnic networks influences the wages of immigrants in Germany. Similarly, the evidence of the impact of the number of co-nationals in the neighborhood on the probability of employment is mixed. For instance, Patacchini and Zenou (2012) found that the greater the concentration of ethnic networks, the higher the probability of immigrants finding a job. However, Damm and Rosholm (2010) concluded that the impact of the number of co-nationals in the neighborhood on the probability of employment is positive but insignificant. Furthermore, Gërxhani and Kosyakova (2020) discovered that the size of the ethnic network per se does not accelerate the entry of immigrants to the labor market unless migrants make use of the ethnic network to find employment.

Evidence is also available of the positive effect of self-employed co-nationals on the probability of self-employment. Exploiting the variation in locations due to the Swedish spatial dispersal policy, Andersson (2021) found that refugees who were settled in municipalities with a higher share of self-employed co-ethnics had a higher probability of entering self-employment in subsequent years. However, living in a municipality with a large number of co-ethnics, regardless of their characteristics, had no, or even negative, effects on the probability of self-employment.

Unemployment Rates and the Availability of Job Places

Previous studies have shown that local unemployment rates negatively influence the labor market integration of refugees (Aksoy, Poutvaara, and Schikora, 2020; Azlor, Damm, and Schultz-Nielsen, 2020). For instance, Azlor et al. (2020) documented that refugees assigned to a municipality with a one percentage point higher unemployment rate are less likely to be employed (a decrease in probability of 0.9-0.17 pp.) within two to four years of being granted asylum. The effect of being placed in a municipality with a one percentage point higher employment on the probability of finding employment is positive but less considerable (0.5-0.6 pp.) than the placement to municipality with higher unemployment.

Evidence, albeit limited and ambiguous, is also available of the long-lasting effects of the initial labor market conditions on the labor market integration of refugees (Åslund and Rooth, 2007). For instance, Åslund and Rooth (2007) by comparing refugees who arrived just before and after the 1990 crisis in Sweden found that exposure to high local levels of unemployment decrease the earnings of refugees and the probability of their employment even ten years after their arrival in the host country. In contrast, Chiswick et al. (1997) showed that entering the U.S. during a recession may even be associated with a higher probability of employment for immigrants. The high local level of unemployment may also serve as a push factor for refugees. Damm (2009a) provides evidence that refugees who were placed in regions with relatively high unemployment levels changed their initial locations.

2.2 Settlement Policies: Previous Experience and Empirical Evidence

Dispersal policies[4] are usually aimed at the even distribution of newly-arriving immigrants across regions. The two main arguments used by policymakers in favor of the implementation of dispersal policies are as follows. Firstly, the residential concentration and segregation of immigrants may act to retard the immigrant integration process (e.g., the learning of the local language and knowledge of the host country). Secondly, locations that receive a substantial proportion of immigrants generally consider it to be a financial and social burden since new immigrants initially tend to have a low degree of attachment to the labor market (Damm, 2005).

A range of countries including Italy, Denmark, Germany, the Netherlands, Norway, Sweden, the US and the UK, have implemented spatial dispersal policies[5]. According to the UK Asylum and Immigration Bill, refugee immigrants should be placed outside London and Southeast England, i.e. the regions with the highest concentrations of earlier migrants. Germany imposes severe restrictions on where refugee immigrants are allowed to settle; unless they have secured paid employment, they are required to stay in a part of the country assigned to them by the government. In Denmark and the Netherlands, the authorities disperse immigrants via a policy that obliges all municipalities to provide housing for a certain number of refugees. The section below continues with a discussion on the empirical evidence for the effectiveness of immigrant settlement policies in selected EU countries.

Danish Spatial Dispersal Policy

In response to a large inflow of refugees in the early 1980s, the Danish government introduced a policy in 1986 aimed at ensuring both the equal distribution of refugees according to pre-existing populations across counties and municipalities and the provision of those facilities that are essential for integration such as housing, educational institutions and employment opportunities. The Danish allocation scheme consists of two stages. In the first stage, individuals with “refugee status“ who have been recognized as “refugees” were allocated to one of the fifteen counties of Denmark proportional to their respective populations. In the second stage, refugees were allocated to municipalities within these counties, again relative to the size of the population in the municipality. The aim was to attain the equal

[4] Dispersal policies are also referred to as settlement or placement policies.

[5] See the overview of spatial dispersal policies in Dahlberg and Valeyatheepillay (2019).

allocation of immigrants to counties and, subsequently, to municipalities over a period of 3–5 years, for the purpose of which regional offices were established in each of the counties to ensure that the locations were changed regularly so as to ensure the equal distribution of refugees across municipalities over the longer term. Damm (2005) demonstrated that the Danish dispersal policy of 1986–1998 was successful in its aim of distributing newly-arrived refugees equally across locations relative to the number of inhabitants per location. Furthermore, Damm and Rosholm (2010) showed that the presence of immigrants and the size of the local population had significant negative effects, while the presence of the co-nationals had insignificant positive impacts on the hazard rate in the first job position. This finding is in line with the argument in favor of dispersal policies that spatially dispersing refugees away from immigrant-dense cities promotes their economic assimilation.

Swedish Dispersal Policy

Sweden introduced a settlement policy in 1985 aimed at decreasing the high concentrations of immigrants in large cities. The settlement policy targeted all refugee immigrants except for family reunification cases. The main criterion in the allocation of refugee immigrants to specific locations comprised the availability of housing; the labor market integration of refugees was not seen as a priority. The Swedish Immigration Board proposed a two-period integration program. In the first introductory period of 18 months, refugees attended language courses and received welfare benefits, with refugees subsequently joining the labor market. The refugee immigrants were required to remain in their assigned locations for the duration of the introductory period. However, they were allowed to move if they were able to secure accommodation in other locations. From 1994, immigrants enjoyed the right to choose their initial residence location under the condition that they secured accommodation themselves.

The Swedish dispersal policy was effective in terms of achieving the more even reallocation of refugees across districts (Dahlberg and Valeyatheepillay, 2019); however, it negatively affected their labor market integration. Edin et al. (2004) found that the dispersal policy led to a 25 percent decrease in refugee earnings eight years following their arrival. Furthermore, the authors documented that the degree of inactivity of immigrants increased by around seven percentage points, accompanied by a ten-percentage-point increase in welfare benefits claims. Therefore, with respect to Sweden, the dispersion of refugee immigrants across the country came at the expense of successful labor market outcomes.

German Settlement Policy

The placement of refugees in Germany is regulated by the so-called Königstein Key allocation scheme, according to which the annual revenue (2/3 of the quota) and population size (1/3 of the quota) of German states determine the share of asylum seekers assigned to each state. The allocation scheme thus ensures proportional distribution across the country's states. Exceptions to the allocation policy are allowed for refugees who have health-related issues and for family reunification purposes (Thym, Beverungen, and Gies, 2013). Following the introduction of stricter legislation (the Integration Act) in 2016, refugees are not allowed to move from the state of allocation for at least three years after their arrival and, moreover, are obliged to remain in the initial county of residence. Exploiting the exogenous variation in the first locations of refugees as required by the dispersal policy, Aksoy et al. (2020) found that being assigned to a location with high local unemployment and negative attitudes toward migrants negatively affected their economic and social integration. Similarly, Brücker et al. (2019) found evidence that dispersal policies in Germany negatively influence the labor market outcomes of dispersed refugees. In addition, such effects were most detrimental for those refugees who were assigned to communities with low population densities and high unemployment rates.

3. Descriptive Evidence

3.1 The Composition and Regional Distribution of Ukrainian War Immigrant Refugees

From the outbreak of the Russian war in Ukraine to June 16, 2022, 367,687 persons[6] were granted war-related residence permits for temporary protection. The majority of Ukrainian war immigrants (80 percent) arrived in the Czech Republic before April 15, while the largest number (more than 93 thousand) arrived during the second half of March (Figure A1

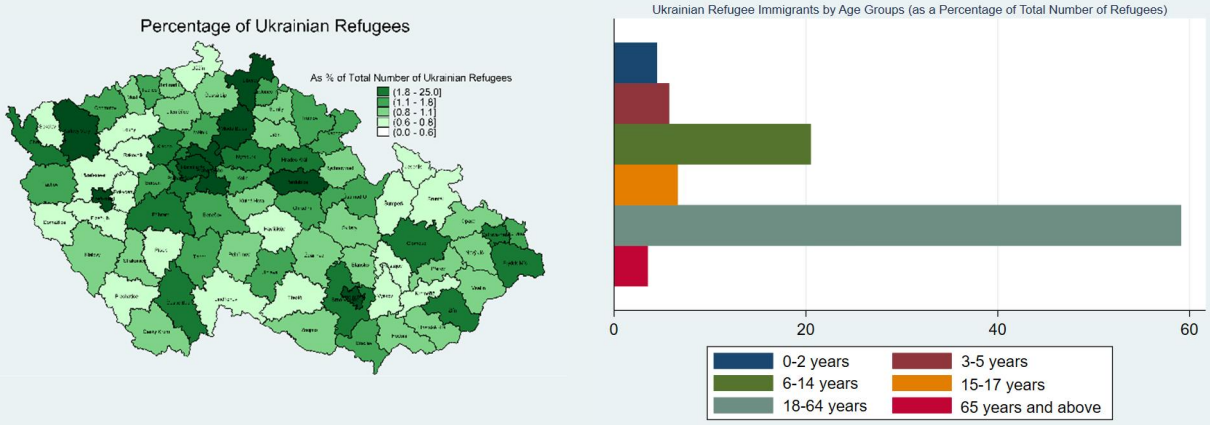
[6] However, the rest of the analysis is based on data from May 11 when the number of resident permits granted to Ukrainians fleeing from the Russian war in Ukraine stood at more than 333 thousand, which increased by approximately 35 thousand in June.

in the Appendix). The intensity of the arrival of refugees at the beginning of June was significantly lower than at the beginning of March, when an average of approximately 16 thousand refugees arrived daily.

The distribution of Ukrainian refugees across the districts of the Czech Republic is uneven (the left side of Figure 1 and Figure A2 in the Appendix), with the largest number of refugees being located in just three administrative districts (so-called "okresy"), i.e. Prague (Hlavní město Praha) – 78,454 (23.5 percent of all Ukrainian refugees), Brno-město – 16,557 (4.9 percent), and Plzeň (Plzeň-město) – 12,702 (3.8 percent) (Ministry of the Interior of the Czech Republic, 2022a). This is consistent with standard international experience, i.e. that immigrants tend to concentrate geographically, particularly in large cities (Damm, 2005; Damm, 2009).

In terms of gender, around two-thirds of Ukrainian refugees are female (64 percent), which is closely tied to restrictions on the departure of males from Ukraine during wartime, as set out in martial law. As for the age composition of the Ukrainian refugees (Figure 1), the majority (59.1 percent) are of working age, 6.6 percent are teenagers up to 18 years[7], 20.5 percent are children up to 15 years, 5.7 percent are aged 3 to 5 years, 4.4 percent are aged 0 to 2 years, and 3.5 percent are of retirement age.

Figure 1 **Regional Distribution[8] and Age Composition of Ukrainian Refugee Immigrants**



Source: The visualization is based on data as of May 11, 2022, obtained from the Ministry of the Interior of the Czech Republic (2022b).

The gender and age composition of refugee immigrants should be considered in the design of allocation and labor integration policies. Previous studies (Fratinni and Solmone, 2022; Lee, Peri, and Viarengo, 2022) have provided descriptive evidence that female immigrants face a double disadvantage due to the combination of their gender and their immigrant status. Female immigrants are, on average, less likely to be employed than native females and male immigrants. While the convergence rate of female immigrants is higher than that of their male counterparts, it takes over ten years for female immigrants to converge to the labor market outcomes of similar native females (Lee et al., 2022). Furthermore, employed female immigrants are more likely to be in the lower part of the wage distribution than are native female and male immigrants. In addition, female refugees also often serve as the main carers for children and the elderly, thus further strengthening their need for protection and support.

3.2 Determinants of the Location Choice of Immigrant Refugees in the Czech Republic

Ethnic Networks

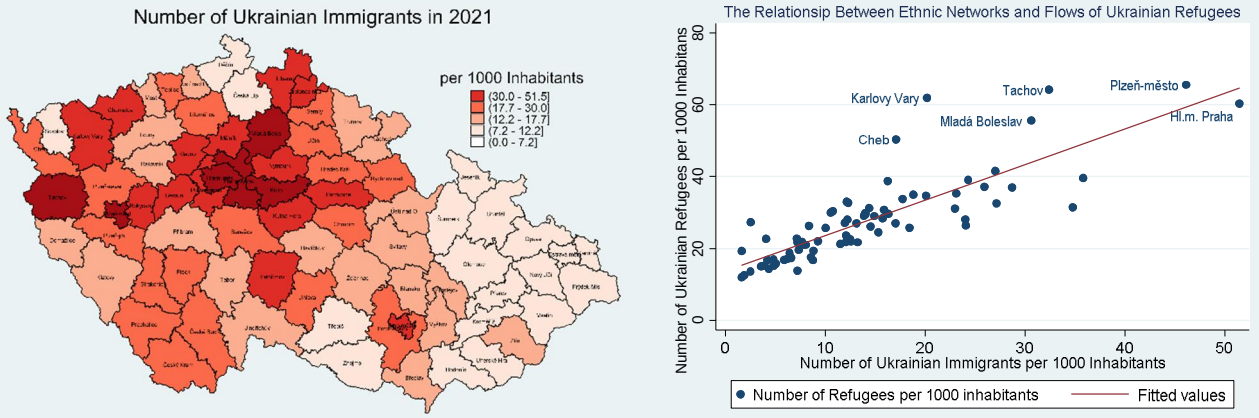
Aimed at analyzing the extent to which ethnic networks influence the location choices of Ukrainian war refugees, we studied the distribution of immigrants across districts of the Czech Republic prior to the outbreak of the war. The total

[7] The age groups of immigrants are defined by the Ministry of the Interior of the Czech Republic (2022b). For instance, children up to 18 years comprise those aged from 15-17 years; once children reach their 18th birthday, they are included in the next age group.

[8] See the application of Münich and Hrendash (2022) on the dynamics of the regional distribution of Ukrainian war refugees.

number of Ukrainian immigrants[9] as of 31.12.2021 in the Czech Republic stood at 196,875. The largest number of Ukrainian immigrants resided in Prague (66,971), Brno (10,764), Plzeň (8,935), Liberec (4,999), and Pardubice (4,490)[10]. The locations[11] with the highest concentration of immigrants (measured as the number of Ukrainian immigrants per 1000 Czech citizens) at the end of 2021 comprised Prague, Plzeň, Kolín, Tachov, and Mladá Boleslav (the left side of Figure 2), which mostly coincide with the locations with the highest concentrations of refugees. The graph on the right in Figure 2 illustrates the positive correlation between the stock of Ukrainian immigrants at the end of 2021 and the stock of war refugees from Ukraine, which is in line with the notion that ethnic networks play the role of a pull factor for immigration. However, it is important to note that this is a mere correlation. Identifying the causal effect of ethnic networks on the location choice of refugees is beyond the scope of this paper, and would require addressing the issue of the non-random sorting of immigrants into different locations.

Figure 2 **Stocks of Previous Ukrainian Immigrants by District** (as of 31.12.2021)



Source: The visualization is based on data from the Ministry of the Interior of the Czech Republic (2022b).

The demographic composition of the Ukrainian diaspora in the Czech Republic has changed significantly over time. Prior to 2010, the majority of the Ukrainian immigrant network comprised those aged 25–40. However, the share of this age group decreased from 57 to 46 percent in the period 2010-2020, while the share of children and persons of retirement age increased (Mikula, 2022). In terms of the gender composition, male immigrants were over-represented in 2005 (61 percent); however, the proportion of male immigrants declined over time (Figure A4 in the Appendix). Conversely, the proportion of female immigrants increased in the period 2005-2020 reaching 43.8 percent in 2020. As a result, the Ukrainian diaspora has clearly become more balanced in terms of gender.

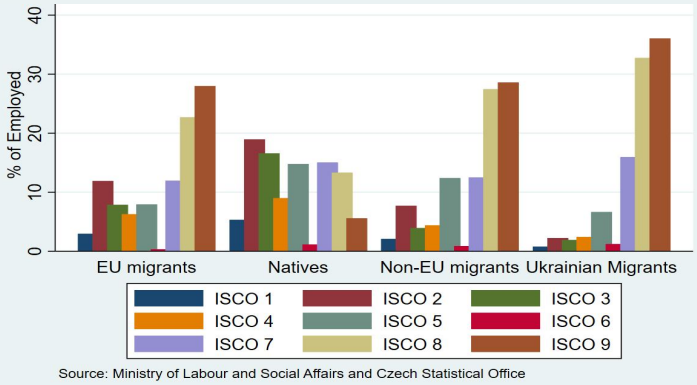
Approximately 85 percent of employed Ukrainian immigrants work in the least qualified positions (ISCO 6–9) compared to just 35 percent of the native population. The concentration of Ukrainian immigrants in the least qualified positions is higher than the percentages of non-EU and EU migrants in such positions by 22 and 16 percent, respectively (Figure 3).

[9] We included Ukrainians with the two main types of residence permits: temporary (53.9 percent of the total number of Ukrainian immigrants) and permanent (46.1 percent of the total number of Ukrainian immigrants).

[10] See Figure A3 in the Appendix.

[11] We measured the network of Ukrainian immigrants at the district level (in Czech 'okresy'). The Czech Republic is split into 77 districts.

Figure 3 **Employment of Immigrants and the Native Population by ISCO Job Types** (2021)



Source: Based on data from the Ministry of Labour and Social Affairs (2022b) and the Czech Statistical Office (2022)

The high concentration of Ukrainian immigrants in low-qualified positions may partly explain the difference in average gross wages between Ukrainian immigrants and the native population, i.e. approximately CZK 9,000 in 2020 (Czech Statistical Office, 2020). However, we are unable to provide evidence of the quality of job-employee matching for Ukrainian immigrants (in order to determine e.g. whether Ukrainian immigrants are overqualified for the positions they hold).

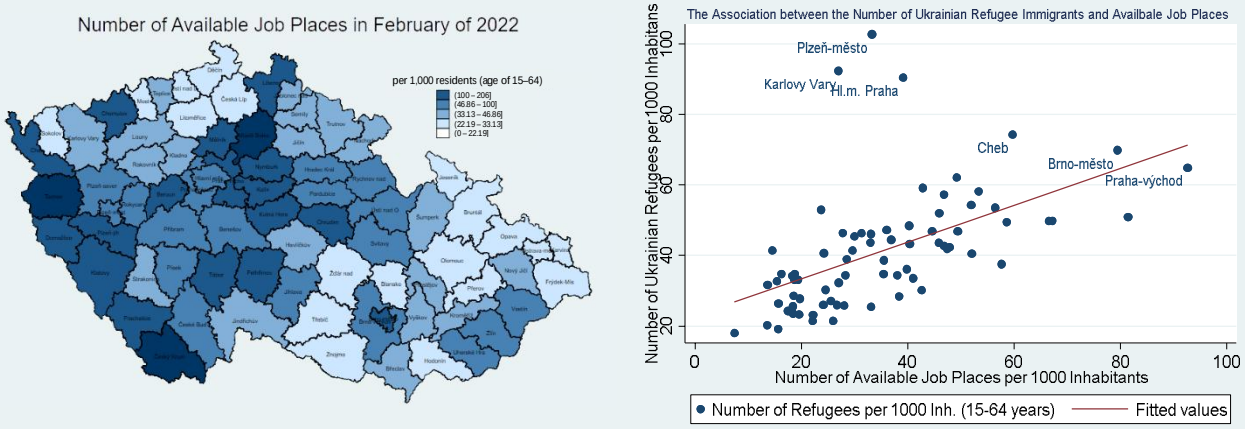
Due to the limitations of the data, we were unable to assess the importance of ethnic networks in terms of the labor market outcomes of Ukrainian refugees in the Czech Republic. However, causal evidence obtained from other European countries suggests that ethnic networks act to enhance the quality of job-employee matching and, consequently, wages (Damm, 2009b). Therefore, dispersal policies may negatively affect the labor market outcomes of refugees unless the potentially positive effects of ethnic networks are considered. It is recommended that future research should study the extent to which the composition of Ukrainian ethnic networks affects the integration of refugees in the Czech labor market. For this purpose, researchers will need to collect more detailed data on Ukrainian ethnic networks (e.g. on the education levels of immigrants) and the employment conditions of refugees in the Czech Republic.

Availability of Job Places

We present the correlation between employment prospects measured as the number of available job positions and the number of Ukrainian refugee immigrants by district. The data on the number of available job places was obtained from the Czech Labor Office. Since the requirement to report the availability of job positions is not mandatory, the data is likely to be affected by measurement errors. However, under the standard assumption that measurement errors in the independent variable do not affect the sign[12] of the relationship, it is of limited concern with respect to our analysis. The map on the left of Figure 4 illustrates the number of available job places per 1000 residents of working age across regions of the Czech Republic, with the largest numbers being in Tachov, Mladá Boleslav, Český Krumlov, Praha-východ, and Mělník. The worst situations in terms of the number of available job positions refer to Karviná, Bruntál, Most, and Frýdek-Místek (less than 15 available job places per 1,000 inhabitants aged 15–64 years). The figure on the right highlights a positive correlation between the number of Ukrainian refugee immigrants and available job positions in February per 1,000 inhabitants of working age (aged 15–64). Despite the fact that this represents a mere correlation, the direction of the correlation is consistent with previous evidence on the impact of employment prospects on the choice of location.

[12] Classical measurement error creates attenuation bias.

Figure 4 **The Distribution of Available Job Positions across Districts**



Source: Based on data from the Ministry of Labour and Social Affairs (2022a) and the Ministry of the Interior of the Czech Republic (2022b). Each point on the graph on the right corresponds to a district. We excluded the three districts with the largest numbers of available job positions per 1,000 inhabitants (15–64 years), i.e. Tachov, Mladá Boleslav and Český Krumlov from the right-hand figure.

According to Klimešová, Šatava, and Vondruška (2022), as of June 13, 2022, around 70 thousand Ukrainian refugees had secured employment positions, of which 97 percent were low- or middle-skilled positions. The concentration of refugees in low- and middle-skilled positions roughly corresponds to the percentage of the Ukrainian diaspora in such positions, while only 58 percent of the native population works in low- and middle-skilled positions. Figure A7 in the Appendix illustrates the geographical distribution of employed Ukrainian immigrants in April 2022. The largest total number of employed Ukrainian immigrants (including those who need or do not need a work permit, holders of Blue cards, and holders of employee cards) reside in Prague, Brno, Plzeň, Tachov, and Pardubice.

4. Policy Recommendations

In conclusion, the findings of this research suggest that there is a positive correlation between the number of available job positions and the number of refugees across districts, which suggests that refugees consider the probability of employment when deciding on their choice of location. A positive association is also evident between ethnic Ukrainian networks and the number of Ukrainian refugees, thus suggesting that refugees choose locations in which they have relatives, friends or at least someone they know.

The evidence from our analysis of the location choices of Ukrainian refugees and the relevant empirical literature on international experience of immigrant resettlement policies suggest that:

(i) From the policy perspective, it is essential that dispersal policies be effective and result in the higher economic integration of refugees. Therefore, the focus of the settlement policy should not only be on the more even geographical distribution of refugee immigrants but should also consider the issue of the labor market integration of refugees. Previous papers (e.g. Aksoy et al., 2020) suggest placing more of an emphasis on the integration capacity of the assigned regions rather than on an even allocation across regions so as to avoid the negative consequences of such policies.

(ii) The gender and age composition of refugee immigrant stocks should be considered in terms of the design of dispersal and labor market integration policies. Previous studies (Fratinni and Solmone, 2022) have provided descriptive evidence that female immigrants face a double disadvantage as a consequence of their gender and immigrant status. Furthermore, female refugees also often serve as the main carers for children and the elderly, further strengthening their need for protection and support.

(iii) Ethnic networks may foster the labor market integration of refugees (Edin et al., 2003) and to enhance the quality of job-worker matching and, consequently, the level of wages via the facilitation of the dissemination of information on employment (Damm, 2009b). Therefore, moving refugees away from ethnic networks may decrease the probability of their finding a job, especially for low-skilled refugees.

(iv) Dispersal policy needs to target specific groups of refugees, for instance those who are unable to secure their own accommodation, employment or schools for their children; otherwise, the dispersal policy may be rendered ineffective.

(v) Dispersal policy should be used as a pull factor rather than a push factor for refugees by proposing incentives for refugees to relocate. For instance, in Denmark around 90 percent of refugees who arrived in the period 1986–1994 were provided with, or were provided with assistance to secure permanent housing under the terms of the dispersal policy. Furthermore, during the 18-month introductory period refugees were provided with language courses while receiving social benefits.

(vi) Settlement policies implemented previously should not restrict the right of refugees to relocate after a certain period of time or under the condition that refugee immigrants should find accommodation or employment in other locations. Furthermore, previous papers, e.g. Damm and Rosholm (2010), suggest that voluntary dispersal policies may be more beneficial for the labor market integration of refugees than mandatory dispersal policies.

(vii) The design of dispersal policies should consider the intention of refugees to remain in the Czech Republic over the long term. It is unlikely that those refugees who plan to return to their home country or move to another country will comply with dispersal policies. Further research and the collection of data on the intentions of refugees to remain in the Czech Republic are required in order to form an understanding of whether the high concentration of refugees in large cities will lead to pressure on the school and health care systems and the labor and housing markets.

(viii) For the purposes of the design of an evidence-based policy, it is necessary to collect data on the socioeconomic characteristics of refugees, i.e. their housing, education, and work capacity and to both interconnect and continuously analyze such data. This should be followed by the implementation of policy evaluation mechanisms.

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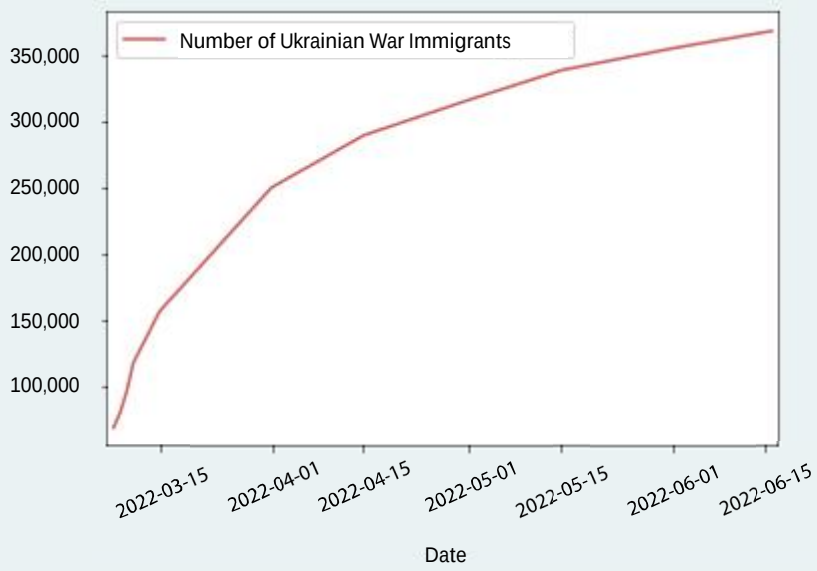
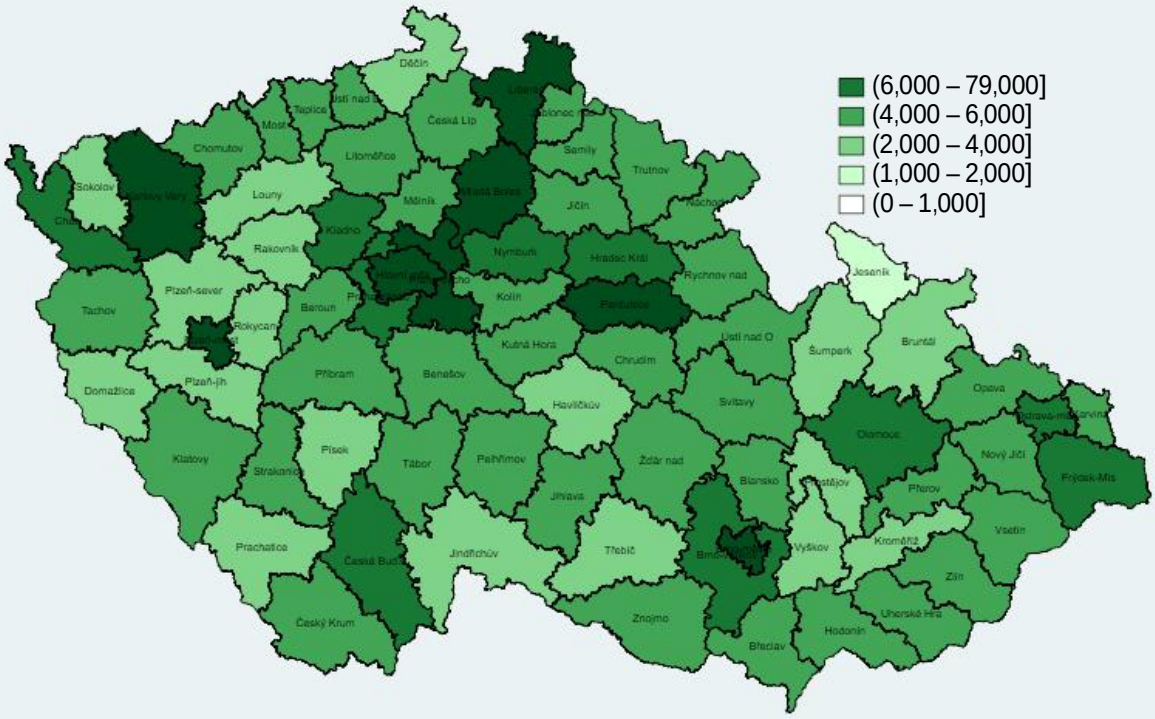
Appendix

Figure A1 **Number of Ukrainian War Immigrants in the Czech Republic** (March 15 to June 15, 2022)



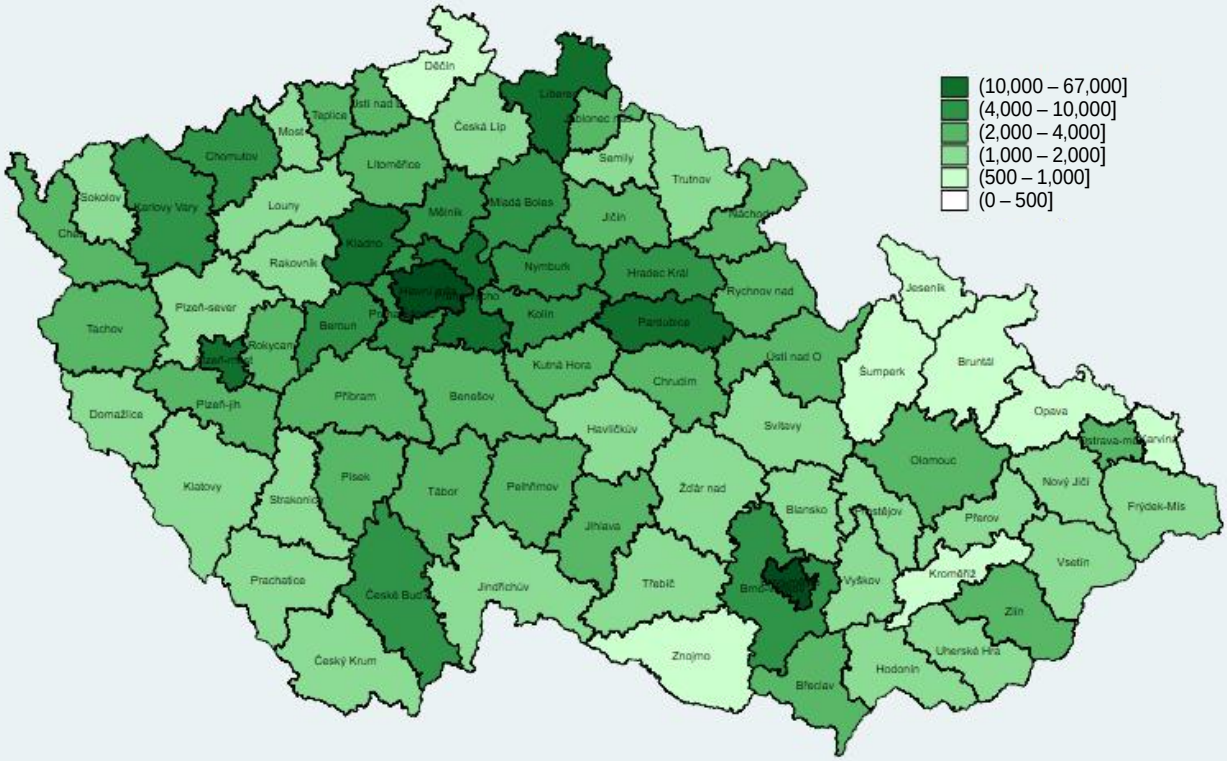
Source: Based on data from the Ministry of the Interior of the Czech Republic (2022b).

Figure A2 **Regional Distribution of Ukrainian War Immigrants in the Czech Republic** (as of May 11, 2022)



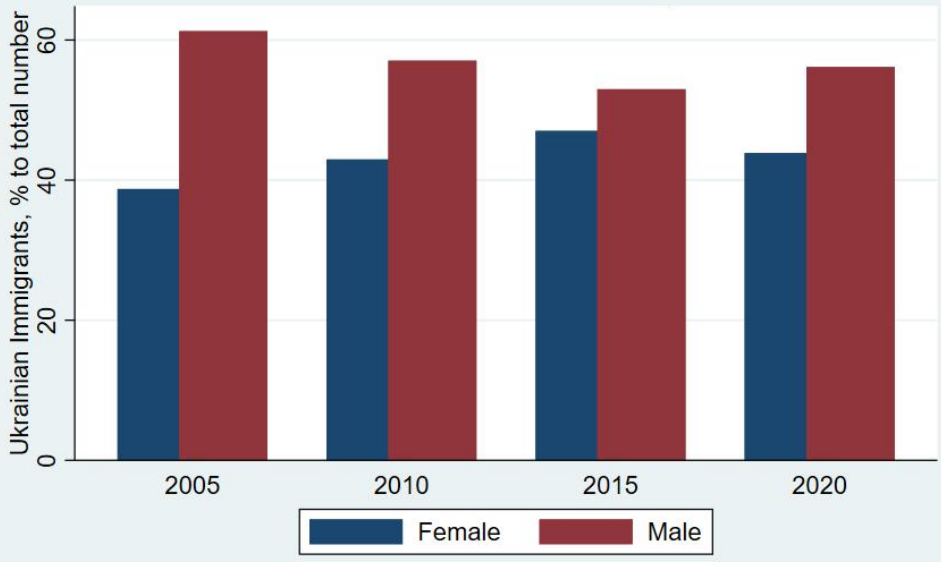
Source: The visualization was compiled by the authors using data from the Ministry of the Interior of the Czech Republic (2022b).

Figure A3 **Regional Distribution of Ukrainian Immigrants** (as of 31.12.2021)



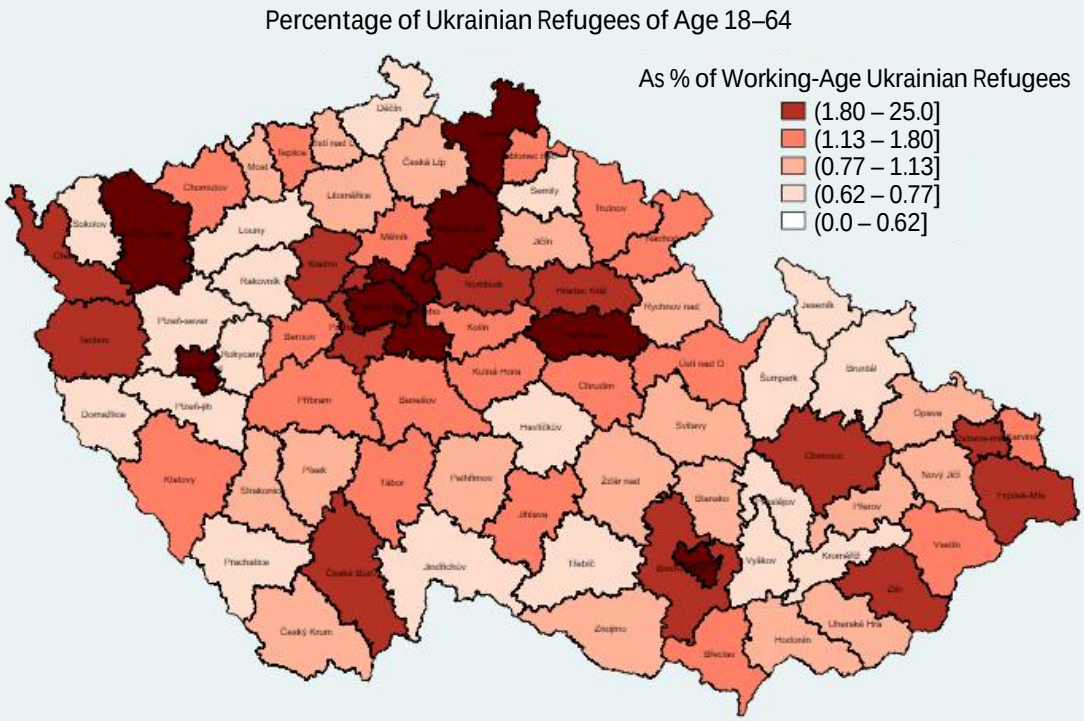
Source: Based on data from the Ministry of the Interior of the Czech Republic (2022b).

Figure A4 **The Gender Composition of the Ukrainian Diaspora in the Czech Republic** (2005–2020)



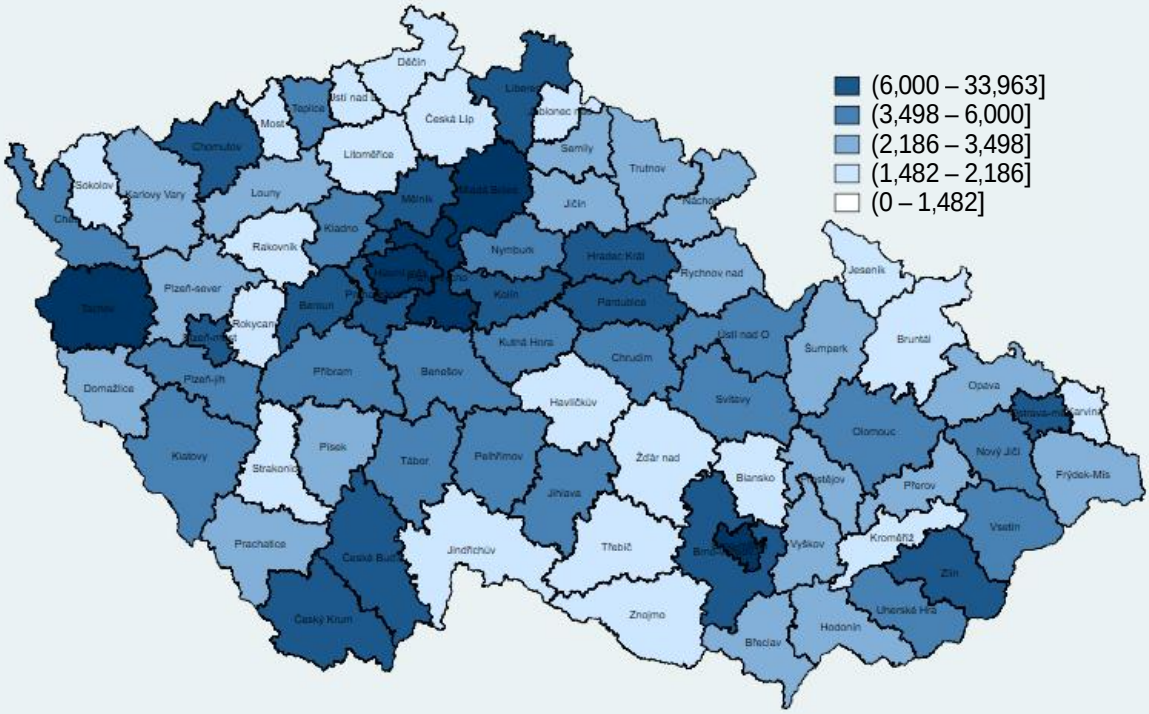
Source: Based on data from the Czech Statistical Office (2021).

Figure A5 **Regional Distribution of Working-Age Ukrainian War Immigrants**



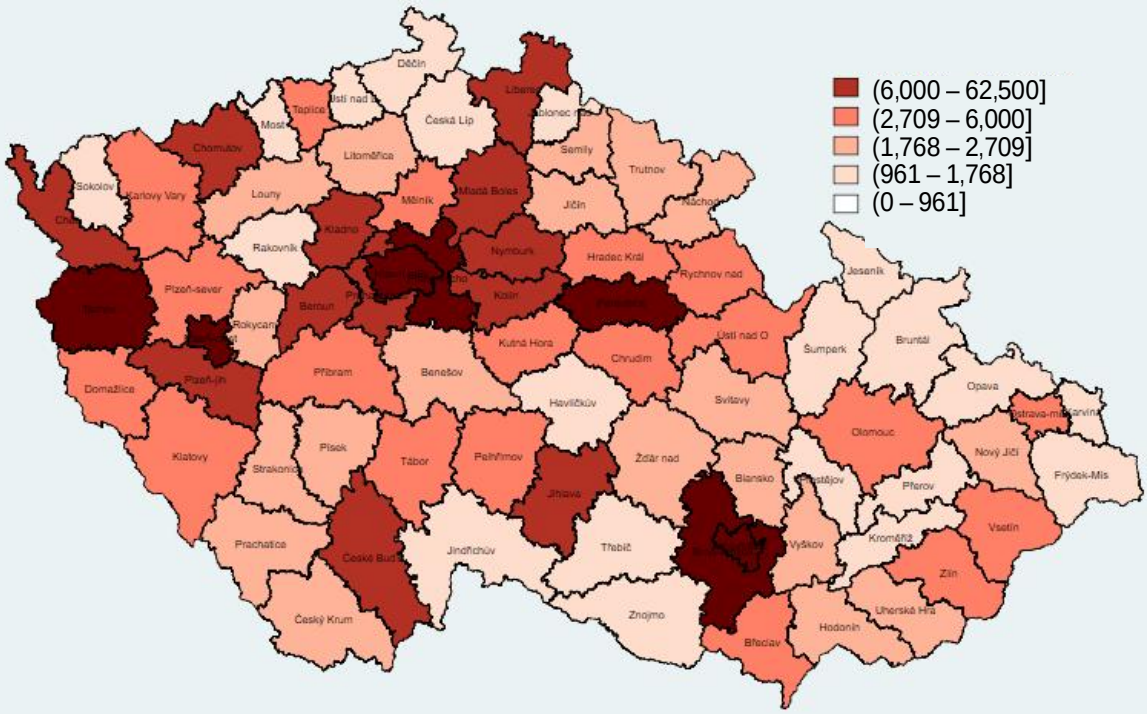
Source: Based on data as of May 11, 2022 from the Ministry of the Interior of the Czech Republic (2022b).

Figure A6 **Total Number of Available Job Positions by District** (in February 2022)



Source: The visualization was compiled using data from the Ministry of Labour and Social Affairs (2022a).

Figure A7 **Total Number of Employed Ukrainian Immigrants** (in April 2022)



Source: The visualization was created using data from the Ministry of Labour and Social Affairs (2022b).

Abstract in Czech

Volba místa k pobytu a přesídlovací politika: Ukrajinští váleční uprchlíci v České republice

Masivní příliv ukrajinských migrantů do České republiky utíkajících před válkou přitáhl politickou pozornost mimo jiné i kvůli jejich nerovnoměrnému geografickému rozložení. Vysoká koncentrace uprchlíků v určitých okresech zatěžuje školský a zdravotnický systém a také trh s bydlením. Předkládaná studie si klade za cíl vysvětlit nerovnoměrné rozdělení uprchlíků analýzou determinantů volby místa k jejich pobytu v České republice, jako jsou etnické sítě a vyhlídky na zaměstnání. Nacházíme důkazy o pozitivní korelaci mezi počtem ukrajinských uprchlíků a (i) počtem předchozích ukrajinských přistěhovalců (naše měřítko etnických sítí) a (ii) počtem dostupných pracovních pozic. Kromě toho provádíme rešerši předchozích studií o účinnosti politik relokace a zjišťujeme, že relokační politiky mají nejednoznačné dopady na integraci uprchlíků na trhu práce. Relokační politika by měla zohledňovat integraci uprchlíků a záměry zůstat v zemi.

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