

PROVIDING ASYLUM – SPATIAL DISTRIBUTION OF ACCOMMODATION FACILITIES FOR UKRAINIAN REFUGEES AGAINST THE BACKGROUND OF LOCAL CONDITIONS IN A LESS DEVELOPED POLISH REGION

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ABSTRACT

Motives: The war in Ukraine has led to the need to help millions of refugees. Poland has issued the highest number of first residence permits to Ukrainian refugees, and it is the second most popular destination country for the Ukrainians taking long-term refuge. Polish society has shown commendable solidarity – individuals have hosted Ukrainian refugees in their homes, businesses provided shelter in tourist sites, and other organizations – in their facilities. This study highlights an important issue that is usually overlooked in academic studies. Many refugees benefited from the assistance of reception points for accommodation and were directed to places where accommodation was arranged. As a result, thousands of refugees were directed to less developed regions with higher unemployment rates and lower income levels.

Aim: The study aimed to present the spatial distribution of the currently used accommodation financed by the Polish state in a less developed region against its socio-economic characteristics. The study focused on powiats (counties), the second-level unit of administration in Poland.

Results: The spatial distribution of accommodation facilities was not based on the favorable socio-economic attributes of the area but solely on the availability of premises that could be promptly adapted for shelter purposes.

Keywords: refugees, migration, spatial distribution, local communities

INTRODUCTION

War always means geopolitical, economic, and social change. It generates groups of winners as well as whole swathes of the disadvantaged. War produces large death tolls, disrupts human and physical capital accumulation, and uproots entire populations from

their lands. As a result, millions of people are displaced from their homes (Almasri, 2023; Baez, 2011; Davies & Isakjee, 2019; Dustman et al., 2017; Tefera, 2021; Zhou et al., 2023). War produces a new social group called refugees. They arrive in large numbers and in vulnerable conditions, traumatized by war, without almost any assets, as they cannot transfer them to the host country (Altındağ et al., 2020).

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On February 24, 2022, Ukraine experienced a full-scale invasion from Russia, which is believed to be a continuation of Russia's preparation in October 2021 (Esonye et al., 2023). Ukrainian civilians in the cities and villages have faced bombardment and artillery fire, and as a result – lack of security, food, water, and shelter. They experienced forced separation from family members (Karatzias et al., 2023). They lost their lives, their relatives, their health, and their homes, i.e., in December 2022, the Russian army launched 52 attacks on Kyiv, and 120 Kyiv citizens died, 495 were injured, more than 600 buildings were damaged, and critical infrastructure was destroyed (Lotzin et al., 2023). The Russian aggression against Ukraine violated international law and the basic principles and norms of international relations developed after the Second World War (Bajor, 2023).

The attacked country, Ukraine, is the second largest country in Europe, with an area of over 600,000 km² and a population of 45.5 million. The recent war has disrupted the daily lives of a significant number of people (Artzi-Medvedik et al., 2024). Refugees fleeing this war represent Europe's most significant wave of migration since World War II – the number of international and internal migrants likely exceeds 12–14 million (United Nations High Commissioner on Human Rights, 2022). This is over a quarter of the country's population (Andrews et al., 2023). Poland, as a country directly neighboring Ukraine, naturally became a place of refuge. Already since the beginning of the Russian aggression, EU countries neighboring Ukraine have widely opened their borders to refugees, setting up reception points offering the necessary legal and logistical information in the Ukrainian language (Szymańska, 2022). In a short period of time, several million refugees of different ages and with different health needs have arrived in Poland (Biesiada et al., 2023; Żróbek-Róžańska et al., 2023).

The first refugees resided in villages near the Polish-Ukrainian border or headed to the west of Poland (as far from the border as possible) and the big cities (Górny & Kaczmarczyk, 2022; Wojdat & Cywiński, 2022). The rapid urban population growth (by 15% in Warsaw and 23% in Krakow)

in a short period led to a housing market shock. Polish cities' housing market could not have absorbed the mass inflow of Ukrainian refugees over one month (Trojanek & Głuszak, 2022). Therefore, many refugees found temporary rent-free accommodation in the homes of Polish citizens and shelters prepared by central and local governments. However, their location was not inconsiderate of the refugees. Refugees have been most likely to settle in Poland's largest cities. However, among the refugees, people without family or friends in the cities agree to go to the accommodation indicated at the reception points. In turn, the reception points can only offer currently available places. Thus, refugees also arrived at accommodation located in a less developed region – the Warmian-Masurian Voivodeship. It is worth noting that the region has a geographical disadvantage, as it is directly adjacent to the Königsberg region (Russia).

The study aimed to present the spatial arrangement of actually used accommodation financed by the Polish state in a less developed region against its socio-economic characteristics. The research aims to fill a gap in the current level of knowledge. Most studies and reports focus on the national scale – statistics on refugees in the countries concerned are given (i.e., UNHCR or Eurostat websites) or concern major cities. In contrast, this study takes a different approach. The focus is on examining accommodation sites and the number of people using them, which are located in a region that is simultaneously:

1. “undesirable”;
2. less economically developed;
3. less developed in terms of communication.

In the study presented here, most data concerns the powiat level. The accommodation is located in particular villages, but the primary consideration was ensuring security through maintaining anonymity about the location of places of collective accommodation. Data on the number of people staying in places of collective accommodation organized in individual powiats of the Warminsko-Mazurskie voivodeship was collated with data on the individual characteristics of these units.

DATA AND METHODS

Some of the refugees have come to relatives working and living in Poland, while others seek accommodation in Warmia and Mazury because they have no one and need help. Accommodation bases prepared by the voivode are dedicated to them. These are contracted subsidized accommodation. There, they are provided shelter, food, all necessary personal hygiene items, and access to a doctor, if required. Data on the location and number of people using this type of shelter was obtained from the voivodship office. The governor enters into term contracts. To date, three agreements have been concluded for specific funding periods. Accordingly, data are presented in three time frames: the first round of contracts related to the first wave of refugee influx (accommodation launched during March-May 2022), the second round of contracts (accommodation launched or continued from March 2023 to 24 August 2023) and the third round of contracts (from 25 August 2023). Unit data for particular collective accommodation was cumulated to the district level. Data were collected on the labor market condition, average gross wages, and business entities for these districts. Data on communication were presented on a regional basis. These data were obtained from Statistics Poland and related to the investigated terms. This study opted for a data visualization method. The data are presented in cartograms, where a gradation of the color of the contour filling of each powiat represents the intensity of a given phenomenon.

RESULTS

Warmian-Masurian Voivodeship is situated in the north-east of Poland. Due to its natural beauty, it is considered one of Poland's most beautiful regions. The voivodeship is the fourth largest region in Poland, with an area of over 24,000 square kilometers. More than 1.4 million people inhabit the region; most live in the Olsztyn, Ostróda, and Iława powiats. The population density is the lowest in Poland – 59 people per square km. The voivodeship is adjacent to the Königsberg region of the Russian Federation. This over

200 km long section of the Polish-Russian border is the external border of the European Union. The unemployment rate in the voivodeship is relatively high: in October 2023, it was 7.9%. On the other hand, the average gross monthly salary in the enterprise sector was PLN 6,174.36 (EUR 1,425). The voivodeship is dominated by powiat and municipal roads. Poorer quality road connections, therefore, hamper accessibility. Comparing hard-surfaced roads per 100 km², the indicator for the region was 60.4 in 2022 and 101.5 in Poland.

Based on this data, it is possible to confirm the assumptions that the region from the point of view of refugees was:

1. undesirable – geographical location directly at the border with the Königsberg region;
2. less developed economically – the high unemployment rate is indicative of a shortage of labor demand, which, as a derived demand, implies a shortage of production relative to available labor resources and lower wages;
3. less developed in terms of care – fewer physicians, smaller hospitals, and less developed daycare for small children.

However, people needing shelter aid chose to migrate to this destination (Fig. 1).

The geographic location, highlighted in the cartogram (Fig. 1), argues why the region can be called 'undesirable'. The refugees, who live in the western, southern or central part of Ukraine, coming to Warmia and Mazury, found themselves closer to the border with Russia than previously.

Due to its unfavorable characteristics, the first influx of refugees into the region started in March 2022 and continued with high intensity until May 2022, after which it relatively stabilized. In the entire voivodeship, places were made available in:

- boarding schools and dormitories;
- educational and sports centers;
- senior citizens' homes;
- holiday centers belonging to Christian foundations;
- holiday centers belonging to secular foundations;
- private hotels and resorts;
- seminaries;
- government resorts.



Fig. 1. Ukrainian refugees' escape route to the Warmia and Mazury region

Most people used the accommodation prepared in the olsztyński, ostródzki, and mławowski powiats (Fig. 2, the darkest shading).

the darkest shading). It is worth mentioning, however, that in the olsztyński and ostródzki powiats, some people continued to live in their initial accommodation.

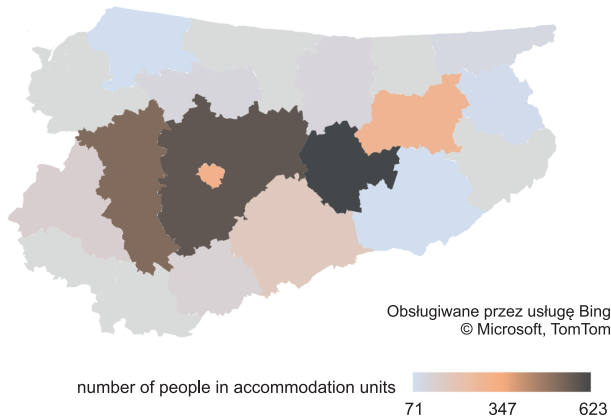


Fig. 2. Visualization of the spatial distribution of refugees after the outbreak of war (Warmia and Mazury region)

In March 2023, the Warmińsko-Mazurskie Voivode signed a second round of agreements to subsidize accommodation for war refugees. The agreements were valid until 25 August 2023. In this round, the most significant number of people were accommodated in the powiats of Olecko and Mragowo (Fig. 3,

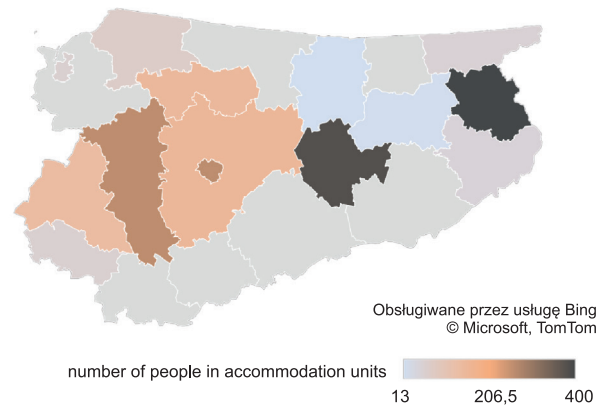


Fig. 3. Visualization of the spatial distribution of refugees according to contracts concluded from March to August 2023

August 2023 was uncertain for refugees using contracted accommodation and for the owners of these facilities. Contracts were running out this month, and information was awaited on whether they would be renewed. This was because the demand for

accommodation was changing – some refugees had rented accommodation on the private market, some had returned to Ukraine, and some had left for other regions or abroad. On the other hand, some landlords decided to end the provision of premises for refugee assistance. At the end of August, new contracts were contracted. This time, most people used the sites in olecki powiat (Fig. 4, the darkest shading).

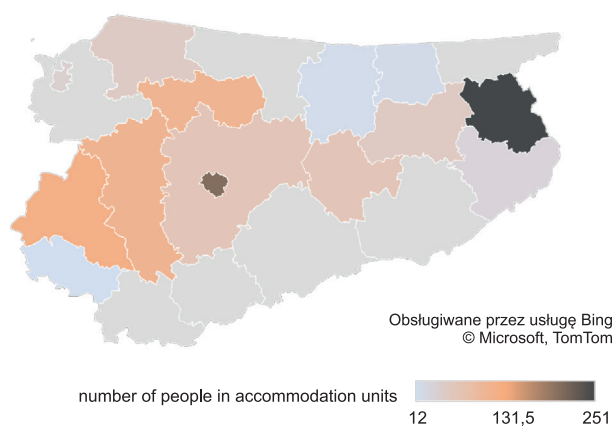


Fig. 4. Visualization of the spatial distribution of refugees according to contracts concluded in August 2023

It is noticeable that the most intensively used accommodation units are located in the relatively unfavored powiats from the side of adaptation of refugees. One of the essential factors facilitating adaptation to a new environment is economic independence. The possibility of taking up temporary work allows for obtaining current income, which can be spent following individual preferences (in accommodation centers, refugees most often receive meals in the form of collective meals prepared for everyone by employed cooks). Table 1 shows the unemployment rate, the number of employees per 1,000 working-age people, and the number of job offers. The data concerns the year 2022 and the following powiats: the city of Olsztyn, olsztyński, ostródzki, olecki, and mrągowski. For comparison, data on the most attractive migration cities with powiat rights were added: Warsaw, Kraków and Wrocław.

Table 1. Chosen labor market characteristics in selected powiats (2022)

Powiat	Unemployment rate	Working per 1000 working-age people	Work offers in the year
Warszawa	1.4	904	40948
Wrocław	1.6	706	22258
Olsztyn	2.0	641	5316
Kraków	2.3	771	35243
Olsztyński	7.2	290	3256
Ostródzki	9.1	335	4428
Mrągowski	9.3	307	1757
Olecki	10.9	351	1523

Source: own elaboration based on data from Statistics Poland.

Comparing the extremes, it can be noted that the unemployment rate in the Olecko powiat was ten times higher than in Warsaw, where there were three times fewer professionally active people and twenty-seven times fewer job offers.

Analyzing the data in Table 2, it can be noted that the population living in the powiats located in the Warmian-Masurian Voivodeship receives, on average, a lower salary than in large Polish cities.

Table 2. Average monthly gross salary and business entities in selected powiats (2022)

Powiat	Average monthly gross salary (EUR*)	Average monthly gross salary to the national average (%)	Business entities (medium and large) per 1k residents
Warszawa	1984	127	5.4
Kraków	1895	122	6.4
Wrocław	1717	110	8.5
Olsztyn	1511	97	3.9
Olsztyński	1362	88	3.6
Ostródzki	1255	81	3.7
Olecki	1254	81	3.3
Mrągowski	1231	79	5.2

* According to exchange rate announced by National Bank of Poland in 15th December 2023.

Source: own elaboration based on data from Statistics Poland.

These counties are also characterized by a lower rate of business entities related to fewer job offers or a higher unemployment rate.

It should be taken into account that refugees are mainly mothers with children (including small children) who have traveled from Ukraine in adverse climatic conditions. They have come with their children to places of collective accommodation, where they are housed in rooms with strangers – other mothers and children – including a cafeteria. The timing of their arrival coincided with the end of the Covid-19 pandemic. In this situation, all refugees have been exposed to health problems, especially children and seniors. Therefore, access to health care is very important. Comparing powiats with extreme rates - the number of doctors per 10,000 people is ten times higher in Warsaw than in olecki powiat. The second issue is care for young children. In order for mothers to work, they must have safe care for their children. Table 3 shows the availability of care places for young children. In contrast, our own research shows that municipalities have risen to the challenge and organized additional places in kindergartens and elementary schools. On the other hand, traumatized mothers who were eyewitnesses to the murders of children in their localities were unwilling and unable to put their surviving children in care.

Table 3. Healthcare and childcare in selected powiats

Powiat	Physicians per 10k population (2021)	Beds in general hospitals (2021)	Places in childcare centers per 1k children under 3 years of age (2022)
Warszawa	112.7	12956	352
Kraków	106.1	5648	436
Wrocław	103.8	4646	427
Olsztyn	87.5	1907	313
Olsztyński	20.6	438	135
Mrągowski	14.1	113	145
Ostródzki	12.6	264	135
Olecki	11.4	96	105

Source: own elaboration based on data from Statistics Poland.

CONCLUSIONS

War uproots entire populations from their lands and displaces people from their homes. War refugees arrive in host countries in large numbers and vulnerable conditions, without almost any assets, and in massive need of shelter and care. The outbreak of the Russian invasion of Ukraine caused a mass emigration of civilians. Some refugees had a specific destination. These individuals were fleeing to family, friends, and acquaintances. Another group used contacts established earlier – asking for help from foundations and associations that had organized trips and summer camps for their children in the pre-war years, for example. Furthermore, among the refugees, it is possible to distinguish a large group of people who had never been to Poland before and have no relatives or acquaintances in this country. These people used the accommodation offered at the reception points.

Over time, with the next wave of refugees, places in the large cities in the south and west of Poland have been depleted. Refugees were offered shelter in facilities located in the Warmian-Masurian Voivodeship. Geographically, these places were not desirable – due to their proximity to the Russian border (Königsberg region), these places appeared dangerous. In addition, it is worth noting that the region is less attractive regarding economic development and care. Despite the disadvantages, refugees have settled in centers located in the powiats of Warmia and Mazury. Most people found shelter in the olsztyński, ostródzki, mrągowski and olecki powiats. They took advantage of these places despite relatively high unemployment rates, low labor force participation, and fewer job opportunities. In addition, earnings are statistically lower, and there are fewer employers even after taking up a job. Furthermore, health care is more difficult to access (fewer doctors and hospital beds), as is care for young children. Despite all these characteristics, refugees chose to take refuge in the region, and some stayed from March 2022 until the date of this research (August 2023).

The research carried out led to the following conclusions: war produces refugees from all social groups, regardless of their social networks. There are groups of refugees who need assistance in obtaining shelter in the form of accommodation. These people, in the absence of better offers, use accommodation in the regions regardless of their geographical or socio-economic characteristics. As a result, clusters of refugees are also formed in local environments characterized by low labor market absorption and poorer access to health care.

However, the limitations of the study must be taken into account: the number of people using shelter in an area is constantly changing – many people leave, some return and new refugees arrive. There is a lack of data on people who stay in these places throughout their stay in Poland. It would therefore be recommended to monitor migration trends at the local level in order to adapt the amount of public services to realistic demand forecasts.

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REFERENCES

- Almasri, S. (2023). Why is Syria a War but Not Afghanistan? Nationality-based Aid and Protection in Turkey's Syria Refugee Response. *Refugee Survey Quarterly*, 42(1), 29–54. <https://doi.org/10.1093/rsq/hdac028>
- Altındağ, O., Bakış, O., & Rozo, S. V. (2020). Blessing or burden? Impacts of refugees on businesses and the informal economy. *Journal of Development Economics*, 146, 102490. <https://doi.org/10.1016/j.jdeveco.2020.102490>
- Andrews, J., Isański, J., Nowak, M., Sereda, V., Vacroux, A., & Vakhitova, H. (2023). Feminized forced migration: Ukrainian war refugees. *Women's Studies International Forum*, 99, 102756. <https://doi.org/10.1016/j.wsif.2023.102756>
- Artzi-Medvedik, R., Tsikholska, L., & Chertok, I. A. (2024). A Qualitative Exploration of the Experience of Child Feeding Among Ukrainian Refugee and Immigrant Mothers During Escape and Relocation. *Journal of Pediatric Health Care*, 38(1), 21–29. <https://doi.org/10.1016/j.pedhc.2023.08.004>
- Baez, J. E. (2011). Civil wars beyond their borders: The human capital and health consequences of hosting refugees. *Journal of Development Economics*, 96(2), 391–408. <https://doi.org/10.1016/j.jdeveco.2010.08.011>
- Bajor, P. (2023). Ukraina w obliczu rosyjskiej agresji – polityka i strategia [Ukraine against Russian aggression – policy and strategy]. In A. Głuszczyk (Ed.), *The war must go on: Dynamika wojny w Ukrainie i jej reperkusje dla bezpieczeństwa Polski* [The war must go on: War in Ukraine dynamics and its repercussion for the safety of Poland] (pp. 65–74). Księgarnia Akademicka. <https://doi.org/10.12797/9788381388801>
- Biesiada, A., Mastalerz-Migas, A., & Babicki, M. (2023). Response to provide key health services to Ukrainian refugees: The overview and implementation studies. *Social Science & Medicine*, 334, 116221. <https://doi.org/10.1016/j.socscimed.2023.116221>
- Davies, T., & Isakjee, A. (2019). Ruins of Empire: Refugees, race and the postcolonial geographies of European migrant camps. *Geoforum*, 102, 214–217. <https://doi.org/10.1016/j.geoforum.2018.09.031>
- Dustmann, Ch., Fasani, F., Frattini, T., Minale, L., & Schönberg, U. (2017). On the economics and politics of refugee migration. *Economic Policy*, 32(91), 497–550. <https://doi.org/10.1093/epolic/eix008>

- Esonye, Ch., Esonye, C. O., Agha, E. O., Ume, C. S., Njemanze, Ch. V., Eyisi, Ch. E., & Adepoju, T. F. (2023). The 2022 Russia invasion on Ukraine: The biofuel energy security challenge on Ukraine and some related countries. *Heliyon*, 9(11). <https://doi.org/10.1016/j.heliyon.2023.e21483>
- Górny, A., & Kaczmarczyk, P. (2022). *Miejska gošcinnošć: wielki wzrost, wyzwania i szanse. Raport o uchodźcach z Ukrainy w największych polskich miastach [Urban hospitality: huge growth, challenges and chances. Report on Ukrainian refugees in the biggest Polish cities]*. Unia Metropolii Polskich. <https://www.unhcr.org/pl/>
- Karatzias, T., Shevlin, M., Ben-Ezra, M., McElroy, E., Redican, E., Vang, M. L., Cloitre, M., Ho, G. W. K., Lorberg, B., Martsenkovskiy, D., & Hyland, P. (2023). War exposure, posttraumatic stress disorder, and complex posttraumatic stress disorder among parents living in Ukraine during the Russian war. *Acta Psychiatr. Scand.*, 147(3), 276-285. <https://doi.org/10.1111/acps.13529>
- Lotzin, A., Morozova-Larina, O., Paschenko, S., Paetow, A., Schratz, L., Keller, V., & Krupelnytska, L. (2023). War-related stressors and ICD-11 (complex) post-traumatic stress disorders in Ukrainian students living in Kyiv during the Russian-Ukrainian war. *Psychiatry Research*, 330, 115561. <https://doi.org/10.1016/j.psychres.2023.115561>
- Szymańska, J. (2022). Exodus uchodźców z Ukrainy jako wyzwanie dla Unii Europejskiej [Ukrainian refugees exodus as a challenge for the European Union]. *Biuletyn Polskiego Instytutu Spraw Międzynarodowych*, 42(2461).
- Tefera, G. W. (2021). Time and refugee migration in human geographical research: A critical review. *Geoforum*, 127, 116–119. <https://doi.org/10.1016/j.geoforum.2021.10.005>
- Trojanek, R., & Głuszak, M. (2022). Short-run impact of the Ukrainian refugee crisis on the housing market in Poland. *Finance Research Letters*, 50, 103236. <https://doi.org/10.1016/j.frl.2022.103236>
- Wojdat, M., & Cywiński, P. (2022). *Urban hospitality: unprecedented growth, challenges and opportunities. A report on Ukrainian refugees in the largest Polish cities*. Union of Polish Metropolises. https://metropolie.pl/fileadmin/user_upload/UMP_raport_Ukraina_ANG_20220429_final.pdf
- Zhou, Y., Grossman, G., & Ge, S. (2023). Inclusive refugee-hosting can improve local development and prevent public backlash. *World Development*, 166, 106203. <https://doi.org/10.1016/j.worlddev.2023.106203>
- Źróbek-Róžańska, A., Zysk, E., Pawlewicz, K., & Źróbek-Sokolnik, A. (2023). Facing the challenge of hospitality: Ukrainian refugees and local policy in a less developed region. *Ekonomia i Prawo [Economics and Law]*, 23(1), online, 15 June 2023 (Forthcoming).