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THREAT TO LIFE OR LIVELIHOODS - EMPLOYMENT ATTITUDES OF UKRAINIAN WAR IMMIGRANTS

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ABSTRACT. This paper presents empirical research on the employment attitudes of Ukrainian households that fled to one of the largest cities in Poland, during a mass migration at the onset of the Russia's full-scale invasion of Ukraine in 2022. It identifies the characteristics of households with adult members immediately employed and those planning for future employment in Poland. Based on socio-economic migration theories and empirical knowledge, the paper delves into the role of the economic motive for these households' migration. The study is based on household-level survey data collected in Krakow in May 2022. The Bayesian Averaging of Classical Estimates technique is employed to identify the determinants of household members' employment and their plans in this regard. The findings confirm that financial reasons partly drove Ukrainian households to migrate during the war; however, public and private assistance played distinct roles in their prompt inclusion in the labour market and their planning for employment in Poland. Additionally, the findings allow us to conclude that knowledge of the Polish language consistently played a role in their professional activation abroad.

JEL Classification: D1, J6, J21, J22, J8, C5

Keywords: households, migration reasons, public assistance, private assistance

Introduction

Russia's invasion of Ukraine on February 24, 2022, led to a mass migration of Ukrainians to Poland from regions engulfed in armed conflict and those relatively safe, characterised by varying living standards and economic opportunities (NBP, 2022). The Act of March 12 (2022) granted all migrants rights far beyond those purely humanitarian, including an 18-months stay with immediate access to work and appropriate job advice and placement services. This inclusive regulatory background may have contributed to an increase in the scale of migration by economically motivated individuals.

The focus of this paper is to provide results from empirical research on the early labour attitudes of Ukrainian households that participated in the mass migration to Krakow, Poland, during the first months of the Russian-Ukrainian war. It aims to identify the characteristics of households with adult members employed shortly after arrival and those planning for future employment in Poland. Drawing from household characteristics, existing socio-economic migration theories, and empirical studies, this paper seeks to verify the role of economic incentives for Ukrainian migration during the war. Moreover, the paper aims to evaluate the impact of both public assistance and social networks on the early and lagged inclusion of adult members of these households in Poland's labour market.

Our analysis is primarily centred on the experiences of Ukrainian migrants in Krakow, home to the third-largest population of such migrants in Poland (Unia Metropolii Polskich, 2022). This city not only provided them with the necessary infrastructure but also offered job opportunities, essential for migrants motivated by economic reason.

To clarify the research aim, a set of detailed research questions needs to be answered:

- Did Ukrainian households, whose adult members found employment shortly after arriving, exhibit characteristics commonly associated with economic migrants?
- What factors had an impact on the decisions of Ukrainian households with unemployed members to plan for future professional engagement shortly after immigrating to Poland?
- What types of assistance (public or private) significantly impacted the immediate and delayed employment of adult members of Ukrainian households in Poland?

To support the research objectives, a survey using the Pen-and-Paper Personal Interviewing (PAPI) technique was conducted among Ukrainian households residing in Krakow, during the first half of May 2022.

Based on the existing literature, we define economic migrants as individuals who primarily move to improve their living standards through labour, and humanitarian migrants as persons who feel compelled to move without the possibility of a safe return to their homeland (Richmond, 1993; UN, 1951; UNHCR, 2022). As almost all migrations involve a mix of compulsion and choice (Van Hear et al., 2009; Chugaievska & Wisła, 2023), we posit that humanitarian migrants may also be motivated, to some extent, by economic reasons. Although legal employment is crucial for the social inclusion of all migrants, the prospects for professional activation differ significantly between economic and humanitarian migrants (Baran et al., 2018; Connor, 2010; Zhuk et al., 2023).

The research aim and questions of this paper have been formulated based on existing migration theories and results from empirical studies. For instance, economic and sociological theories, as outlined by Massey et al. (1993), have significantly contributed to the understanding of labour migration. The neoclassical approach posits that the subjective evaluation of differences in wages and unemployment rates between the destination and the place of residence is a decisive factor in the individual's decision to migrate (Massey et al., 1993; Aliyev et al., 2023). The new economics of migration (Stark & Bloom, 1985) assumes that a

household's relative deprivation, defined as their assessment of income being unjustifiably lower than that of a reference group (such as their neighbours), is sufficient motivation for its members to migrate. It also posits that relationships with and responsibility towards other household members, demonstrated by the remittances sent, play a significant role in migration. The transnational perspective (Vertovec, 1999) argues that the support mentioned above can be easily fulfilled due to new technologies. These advantages can be successfully use by intellectual migrants (Oliinyk et al., 2022). Since migration decisions are based on complex factors (Massey et al., 1993), we also refer to network theory, which emphasises the role of social networks (Gamper, 2022; Boyd, 1989) in interpersonal connections among migrants, former migrants and non-migrants in the regions of origin and destination. These networks aim to limit economic, sociological, and psychological costs and risks of migration by providing relevant information, goods, and services (Arango, 2000). Furthermore, Goss & Lindquist (1995) emphasise the significance of intermediaries, institutions, and organisations, such as employers and recruitment agencies in economic migration. According to Christinawati et al. (2013), these intermediaries, along with friends and relatives, play a decisive role in economic migration.

To recognise the situation of humanitarian migrants, we refer to existing empirical knowledge, as none of the socio-economic theories directly addresses forced migrations due to their irregularities. It should be emphasised that the immediate inclusion of humanitarian migrants in the labour market is almost impossible (OECD/EU, 2014) as they face barriers, including traumatic experiences, psychological distress, and disabilities (OECD, 2016). They are not prepared to live and work abroad, and they have weak attachments to the labour market at the destination due to insufficient professional qualifications and skills (EU et al., 2016). Therefore, their integration outcomes in the labour market are worse than those of other migrants (Bevelander, 2016; Lundborg, 2013). Other possibilities of migrants' social integration, connected with employment and labour market relations, are typically low (Roshchyk et al., 2024). Therefore, even migrants influenced not by military actions or similar extreme reasons experience severe obstacles for social integration in new places of residence (Khalid & Urbański, 2021).

It is known that public assistance in career guidance is recognised as crucial for professional activation (Udayar et al., 2020; Yakushko et al., 2008). Additionally, Joona et al. (2014) highlight the importance of professional training for sustainable employment, while De Vroome and Van Tubergen (2010), along with Udayar et al. (2020), emphasise the significance of possessing language skills and attending language courses. Hagen-Zanker et al. (2018) have shown that public assistance in cash benefits allows covering basic costs of living and reduces poverty among humanitarian immigrants. It should be noted that in the case of female migrants, their professional activation is challenging due to their often assignment to vulnerable groups and often need for adequate childcare services (OECD, 2022; Panchenko, 2022; EUAA, IOM, & OECD, 2022).

Our paper contributes to the emerging literature on the external mass migration of Ukrainians during the war. However, knowledge about their true migration reasons and the role of public and private assistance in their inclusion in the labour market is still being determined (OECD, 2023; Panchenko, 2022; Duszczyk & Kaczmarczyk, 2022; Jauhiainen & Erbsen, 2023). As far as we are aware, our study is the first to comprehensively address the mentioned issues.

We apply survey data collected during a period of mass migration, which occurred under an exceptional regulatory framework that allowed Ukrainians immediate access to legal employment under the same conditions as citizens of Poland (Directive 2001/55/EC, 2001; Act of March 12, 2022). To identify determinants of households' attitudes toward employment in

Poland, we employ the Bayesian Averaging of Classical Estimates (BACE) model selection method, which offers a model-building strategy for limited dependent variable models such as logit models (Błażejowski & Kwiatkowski, 2023). Our study confirms that, apart from the humanitarian background of mass migration, the economic motive played an important role for Ukrainian households. The two types of households analysed differed in terms of their abilities and needs regarding the inclusion of their members in the labour market in Poland. We also identify specific forms of public assistance as crucial for their immediate and planned integration into the Polish labour market. Furthermore, we found that social networks are more significant for migrants motivated by economic factors. The results we present provide insights for designing migration policies, as well as other public policies, including social, demographic, and economic policies, that are also affected by external mass migration.

The paper is structured as follows: Section 1 describes the data and methods used. Section 2 presents the results of the empirical analyses. Section 3 provides a discussion of the findings, and in the final section, we draw our conclusions.

1. Methodology

1.1. Data collection and the sample

In this study, a household of Ukrainian migrants in Krakow was defined as a group of related or unrelated persons who arrived after February 23, 2022, received identification numbers (PESEL), lived together, and supported themselves (a multi-person household), or as a person who arrived after February 23, 2022, received an identification number (PESEL), and supported himself/herself, regardless of whether lived alone or with others (a single-person household). The definition above refers to the one adopted by Statistics Poland for household surveys (Statistics Poland, 2011). It should be clarified that the possession of identification numbers (PESEL) confirmed their status as migrants under temporary protection (Act of March 12, 2022).

The survey research employed the Pen-and-Paper Personal Interviewing (PAPI) technique and was conducted among households of Ukrainian war migrants in the first half of May 2022, with the consent of the Ethics Committee for Research (no. KEBN/71/0044/D9/2022).

The surveying was performed by a research team (carrying out the project titled “The Financial Situation and Long-Term Plans of Ukrainian Households Staying in Krakow Due to the Armed Conflict in Their Country” as part of the Inter-University Agreement dated June 28, 2022, between the Cracow University of Economics, Nicolaus Copernicus University in Toruń, Maria Curie-Skłodowska University in Lublin, and Gdańsk University of Technology) as well as employees of the Krakow City Office.

It should be noted that the population of Ukrainian households was in the early stages of migration, and thus exhibited instability over time in terms of its size and structure. This fact significantly limits the possibility of obtaining a sample that fully meets the criteria of representativeness. However, to ensure the quality of the survey data, a random selection of households was achieved by choosing an appropriate survey location. It was the main registration desk of the City Hall of Krakow, where PESEL numbers were assigned, and near the assistance desk of the United Nations High Commissioner for Refugees (UNHCR). It should be noted that both these locations employed 'ticketing systems' at that time, which automatically assigned dates and times for the migrants' appointments in advance, independently of their preferences. The adopted approach is encountered in migration studies

that focus on populations in motion, arising from a lack of knowledge about the distribution of their characteristics (Jaźwińska, 2000).

All respondents participating in the survey were informed that their contribution was anonymous and voluntary, and the information provided would be used only for scientific purposes. Thus, their participation was a conscious decision, and they were made aware that they could withdraw from the survey at any time during the process.

The research sample included 349 Ukrainian households that met the following criteria:

- Immigrated to Poland after February 23, 2022,
- All members possessed PESEL number.

The first criterion allowed us to limit the sample to households that fled to Poland during the war, while the latter to those with access to public assistance (Act of March 12, 2022).

The survey questionnaire included questions related to the economic and socio-demographic characteristics of households describing their past living in Ukraine and current situation in Poland. They covered real and financial assets, incomes, and debts. Additionally, separate questions were included concerning the households' reliance on social networks and their need for public assistance in Poland.

1.2. Variables used in the study

The study consisted of two parts, based on the existing knowledge of labour and humanitarian migrants provided by socio-economic theories and the empirical research.

The first part of the study utilised the entire sample of Ukrainian households ($N = 349$), focusing on those with at least one member employed in Krakow, as prompt employment is considered characteristic of economic migration according to theories. The corresponding dependent variable (y_1) is described in *Table 1*. In this case, the aim was to identify the economic and socio-demographic characteristics distinguishing the households of interest; thus, to recognise the specific conditions for their immediate inclusion in the labour market (*Tables 2-5*).

In the second part of the study, only those households from the research sample were included whose adult members were not employed at the time of the survey ($N = 233$); thus, based on empirical studies, their primary motive for migration was expected to be humanitarian. However, since economic aspects might be supplementary to their migration decisions, the study aimed to examine their attitudes towards future inclusion in the labour market. The respective dependent variable (y_2) is presented in *Table 1*. In this part of the study, our focus was on identifying the characteristics of households where at least one member has employment plans. Thus, the goal was to recognize the factors influencing their planning for professional activation in the host country (*Tables 2-5*).

Table 1. Dependent variables adopted in parts 1-2 of the study

	Description	Model 1		Model 2	
		N	%	*N*	%
y_1	At least one household member is immediately employed				
	1 – yes	116	33.2		
	0 – no	233	66.8		
y_2	At least one household member plans to take up work in the future				
	1 – yes			118	49.4
	0 – no			115	50.6

Source: *own compilation*

Table 2. Independent variables - respondent's characteristics - adopted in parts 1-2 of the study

	Description	Model 1		Model 2	
		N	%	*N*	%
	Gender				
x_1	1 – female	302	86.5	199	85.4
	0 – male	47	13.5	34	14.6
	Level of education completed				
x_2	1– high	203	58.2	144	61.8
	0 – below	146	41.8	89	38.2
	Region of residence in Ukraine				
x_3	1 – affected by direct hostilities	194	55.6	138	59.2
	0 – others	155	44.4	95	40.8
	Knowledge of Polish				
x_4	1 – yes	237	67.9	142	60.9
	0 – no	112	32.1	91	39.1
	Knowledge of English				
x_5	1 – yes	274	78.5	182	78.1
	0 – no	75	21.5	51	21.9

Source: *own compilation*

Table 3. Independent variables - household's financial position in Ukraine prior to the war - adopted in parts 1-2 of the study

	Description	Model 1		Model 2	
		N	%	*N*	%
	Savings accumulated in Ukraine				
x_6	1 – yes	157	45.0	107	45.7
	0 – no	192	55.0	126	54.1
	Assessed value of total assets				
	5 – very large	6	1.7	4	1.7
	4 – large	37	10.7	21	9.0
x_7	3 – average	219	63.0	151	64.8
	2 – low	59	16.8	38	16.3
	1 – very low	27	9.8	19	8.4
	Having regular income sources before the war				
x_8	1 – yes	258	73.9	176	75.5
	0 – no	91	26.1	57	24.5

Source: *own compilation*

Table 4. Independent variables - household's situation in Poland - adopted in parts 1-2 of the study.

	Description	Model 1		Model 2	
		N	%	*N*	%
x_9	Duration of stay in Poland (in days)				
	Household's composition same as in Ukraine (regarding the presence of spouse /partner and dependent child/children)				
x_{10}	1 – yes	154	44.1	94	40.3
	0 – no	195	55.9	139	59.7
	Having relatives/friends residing in Poland				
x_{11}	1 – yes	140	40.1	74	31.8
	0 – no	209	59.9	159	68.2
x_{12}	Hosted in private homes				

	1 – yes	137	39.3	84	63.9
	0 – no	212	60.7	149	36.1
x_{13}	Costs of living covered by savings possessed (in %)				
x_{14}	Costs of living covered by incomes from Ukraine (in %)				
	Repaying debts in Ukraine				
x_{15}	1 – yes	125	35.8	73	68.7
	0 – no	224	64.2	160	31.3
	Financially supporting relatives in Ukraine				
x_{16}	1 – yes	120	34.4	66	28.3
	0 – no	229	65.4	167	71.7
	Assessed own financial situation				
x_{17}	1 – very good and good	43	12.3	84	36.1
	0 – average	192	55.0	119	51.1
	-1 – bad and very bad	114	32.7	30	12.9
	Period of possible self-reliance				
	0 – unable to self-support	41	11.7	34	14.6
	1 – up to 1 month	100	28.7	68	29.2
x_{18}	2 – 1-3 months	112	32.1	74	31.8
	3 – 3-6 months	43	12.3	34	14.6
	4 – 6-12 months	23	6.6	9	3.9
	5 – over one year	30	8.6	14	6.0
	Planning permanent stay in Poland				
x_{19}	1 – yes	51	14.6	25	10.7
	0 – no	298	85.4	208	89.3

Source: *own compilation*

Table 5. Independent variables - expectations toward public assistance in Poland - adopted in parts 1-2 of the study

	Description	Model 1		Model 2	
		N	%	*N*	%
	In need of care and educational services (nursery, kindergarten, school)				
x_{20}	1 – yes	192	55.0	131	56.2
	0 – no	157	45.0	102	43.8
	In need of specialist medical care				
x_{21}	1 – yes	137	60.7	99	42.5
	0 – no	212	39.3	134	57.5
	In need of career guidance				
x_{22}	1 – yes	108	30.9	83	35.6
	0 – no	241	69.1	150	64.4
	In need of Polish language courses				
x_{23}	1 – yes	225	64.5	154	66.1
	0 – no	124	35.5	79	33.9
	In need of one-time monetary aid for migrants				
x_{24}	1 – yes	316	90.5	210	90.1
	0 – no	33	9.5	23	9.9
	In need of regular monetary aid for child/children				
x_{25}	1 – yes	209	40.1	147	63.1
	0 – no	140	59.9	86	36.9

Source: *own compilation*

It is important to note that all variables presented in *Tables 2-5* were selected through a preliminary assessment of a comprehensive set of potential explanatory variables, with a focus on their strong correlation with the dependent variables. Furthermore, the set was adjusted to avoid instances of high correlation between explanatory variables.

Based on the information provided in *Tables 1-5*, it can be concluded that the entire group of respondents who participated in the survey was predominantly composed of women (86.5%) with completed higher education (58.2%). Most of them knew Polish (67.9%) and English (78.5%). A majority (55.6%) came from regions affected by direct hostilities. Their financial situation in Ukraine before the war was generally good. Prior to the war, 73.9% of the surveyed households had regular incomes, and 45% were able to accumulate savings. In most cases (55.9%), the composition of these households in Poland differed from their composition prior to the war, as primarily women with children fled during the mass migration. Approximately 40% of households had relatives or friends in Poland and could benefit from private accommodation support. Moreover, 34% provided financial support to relatives who remained in their country of origin. Although the average duration of stay in Poland for the surveyed households was 74 days, 33% had at least one working member there.

1.3. Method applied

Due to the binary nature of the dependent variables (y_1 and y_2), as indicated in *Table 1*, we employed logit models in the following form (Koop et al., 2007):

$$y_i = \begin{cases} 1 & \text{if } z_i > 0 \\ 0 & \text{if } z_i \leq 0, \end{cases} \tag{1}$$

and

$$z_i = \sum_{j=1}^{k_r} x_{ij}\,\beta_j + \epsilon_i, \epsilon \sim Logistic(0,1) \tag{2}$$

where z_i, $i = 1, \ldots, N$ is an unobserved variable, while y_i is binary, observed data. x_{ij} and β_j are explanatory variables and regression coefficients in model M_r for $j = 1, \ldots, k_r$, where k_r is the number of estimated parameters within the model M_r, and N is the number of observations.

For the study, we used the BACE method by employing statistical approach and machine learning, offers improved identification of factors influencing the dependent variable compared to the direct use of single logit models. It allows for the verification of the significance of variables across the entire model space, i.e., 2^K possible competing specifications, where *K* is the number of independent variables. It serves as an alternative to the more computationally intensive and time-consuming Bayesian Model Averaging (BMA) method for which marginal likelihood is not typically available in closed form.

We use standard model averaging techniques to identify the significance of determinants and estimate parameters (Koop et al, 2007). To obtain the parameter estimates of the logit model β across the entire model space, we calculate their mean and variance using the following method:

$$E(\beta \mid y) \approx \sum_{r=1}^{2^K} \Pr(M_r \mid y) E(\beta_r \mid y, M_r), \tag{3}$$

$$Var(\beta \mid y) \approx \sum_{r=1}^{2^K} \Pr(M_r \mid y) Var(\beta_r \mid y, M_r) + \sum_{r=1}^{2^K} \Pr(M_r \mid y) \left(E(\beta_r \mid y, M_r) - E(\beta \mid y)\right)^2, \quad (4)$$

where $E(\beta_r \mid y, M_r)$ and $Var(\beta_r \mid y, M_r)$ are MLE estimates of the vector of parameters β_r from model M_r and 2^K denotes model space for K number of possible explanatory variables, $\Pr(M_r \mid y)$ denotes the posterior probability of logit model r.

The Posterior Inclusion Probability (PIP), a key element in factor identification, is defined as the probability that a given variable, x_i, is relevant in explaining the dependent variable, y. This measure allows for drawing conclusions about the significance of each independent variable. Specifically, variables with a PIP value lower than 0.5 are generally considered to be statistically insignificant[1].

Our study uses the latest package designed for this type of analysis (Błażejowski & Kwiatkowski, 2023). Computations were carried out with the following assumptions: 1,000,000 Monte Carlo iterations for the first and second parts of the study, including 10% burn-in draws and a uniform model prior indicating that all potential specifications are equally likely (without preferences in their regard). To compare the explanatory power of competing models, we used HBIC measure (Haughton, 1988), which is an augmented version of the Bayesian information criterion. More information about BACE can be found in Sala-i-Martin (1997), Sala-i-Martin et al. (2004), and Raftery et al. (2022). The odds ratio denoted as e^{β_j}, indicates the multiplicative change in odds if the variable x_j increases by one unit while keeping the other variables fixed (Hosmer et al., 2013).

2. Results

In each part of the study, we examined 23 independent variables, resulting in a total of 8,388,608 possible competing logit models (2^{23}). Using the BACE method, we were able to select the most important models and categorize the independent variables based on their PIP values. In particular, we identified statistically significant variables by selecting those with PIP values exceeding 0.5. Additionally, in this context, we calculated the odds ratios from the logit regressions.

In the first part of the study, the following variables are identified as statistically significant (*Table 6):*

- Having relatives/friends residing in Poland ($\boldsymbol{x_{11}}$).
- Respondent's knowledge of Polish ($\boldsymbol{x_4}$).
- Costs of living in Poland covered by incomes from Ukraine ($\boldsymbol{x_{14}}$)
- Need for career guidance ($\boldsymbol{x_{22}}$).
- Period of possible self-reliance in Poland ($\boldsymbol{x_{18}}$)
- Financially supporting relatives in Ukraine ($\boldsymbol{x_{16}}$).
- Repaying debts in Ukraine ($\boldsymbol{x_{15}}$).

[1] A value of 0.5 is the lowest criterion when considering the relevance of variables. Values above 0.5 suggest that a variable is more likely to be significant than insignificant. Notably, values close to 1 possess greater explanatory power and are, therefore, much more significant.

Table 6. BACE Posterior Inclusion Probabilities (PIP) and estimates of logit model coefficients in the first part of the study ($N = 349$). Dependent variable: At least one household member is immediately employed (y_1)

Variable	PIP	Mean	Std. Dev.	Odds Ratio
Const.	1.0000	-2.3261	0.7445	
Having relatives/friends residing in Poland (x_{11})	**0.9999**	1.3140	0.2748	3.7210
Respondent's knowledge of Polish (x_4)	**0.9771**	0.9855	0.3401	2.6792
Costs of living covered by incomes from Ukraine (x_{14})	**0.9497**	-0.0125	0.0052	0.9876
Need for career guidance (x_{22})	**0.9080**	-0.8006	0.3913	0.4491
Period of possible self-reliance in Poland (x_{18})	**0.8482**	0.2250	0.1315	1.2523
Financially supporting relatives in Ukraine (x_{16})	**0.7953**	0.5899	0.3934	1.8038
Repaying debts in Ukraine (x_{15})	**0.5572**	0.3319	0.3642	1.3936
Respondent's level of education completed (x_2)	0.4411	-0.2274	0.3143	0.7966
Household's composition as in Ukraine (x_{10})	0.3290	0.1386	0.2495	1.1487
Costs of living covered by savings (x_{13})	0.2630	-0.0015	0.0033	0.9985
Need for one-time monetary aid for migrants (x_{24})	0.2561	0.1681	0.3820	1.1831
Need for specialist medical care (x_{21})	0.2526	-0.0933	0.2119	0.9109
Gender of responding person (x_1)	0.2221	0.1097	0.2845	1.1159
Assessed value of total assets in Ukraine (x_7)	0.1991	0.0339	0.0980	1.0345
Region of residence in Ukraine (x_3)	0.1817	-0.0467	0.1493	0.9544
Having regular incomes before the war (x_8)	0.1788	-0.0536	0.1780	0.9478
Hosted private homes in Poland (x_{12})	0.1661	0.0394	0.1412	1.0402
Respondent's knowledge of English (x_5)	0.1572	-0.0409	0.1685	0.9599
Need for Polish language courses (x_{23})	0.1524	-0.0345	0.1444	0.9661
Period of stay in Poland (x_9)	0.1499	-0.0007	0.0034	0.9993
Need for care and educational services (x_{20})	0.1440	-0.0252	0.1191	0.9751
Assessed own financial situation in Poland (x_{17})	0.1341	-0.0133	0.0878	0.9868
Savings accumulated in Ukraine before the war (x_6)	0.1225	0.0038	0.0979	1.0038

Note: *Mean* and *Std. Dev.* denote BACE posterior mean and standard deviation of each coefficient β_j in the logit model. Bold font denotes variables with the PIP greater than 0.5.
Source: *own compilation*

In the second part of the study, with the sample of households limited to those without immediately employed members ($N = 233$), only three variables were identified as statistically significant, with PIP values of 0.5 or higher (*Table 7*). These variables were:

- Need for career guidance (x_{22}).
- Need for Polish language courses (x_{23}).
- Knowledge of the Polish language (x_4).

Table 7. BACE Posterior Inclusion Probabilities (PIP) and estimates of logit model coefficients in the second part of the study ($N = 233$). Dependent variable: At least one household member plans to take up work in the future (y_2)

Variable	PIP	Mean	Std. Dev.	Odds Ratio
Const.	1.0000	-1.4245	0.7494	
Need for career guidance (x_{22})	**0.8463**	0.6973	0.4163	2.0083
Need for Polish language courses (x_{23})	**0.8176**	0.6660	0.4287	1.9464
Respondent's knowledge of Polish (x_4)	**0.5540**	0.3240	0.3635	1.3826
Financially supporting relatives in Ukraine (x_{16})	0.4310	0.2410	0.3502	1.2725
Need for one-time monetary aid for migrants (x_{24})	0.3339	0.2432	0.4502	1.2753
Assessed value of total assets in Ukraine (x_7)	0.2855	0.0637	0.1358	1.0658
Need for specialist medical care (x_{21})	0.2739	0.1033	0.2289	1.1088
Period of possible self-reliance in Poland (x_{18})	0.2678	-0.0383	0.0869	0.9624
Respondent's knowledge of English (x_5)	0.2507	0.1058	0.2579	1.1116
Region of residence in Ukraine (x_3)	0.2493	0.0836	0.2045	1.0872
Costs of living covered by savings (x_{13})	0.2215	-0.0010	0.0027	0.9990
Need for care and educational services (x_{20})	0.2159	0.0635	0.1835	1.0656
Hosted in private homes in Poland (x_{12})	0.2004	0.0547	0.1738	1.0562
Gender of responding person (x_1)	0.1935	-0.0674	0.2271	0.9348
Assessed own financial situation in Poland (x_{17})	0.1754	-0.0265	0.1109	0.9738
Repaying debts in Ukraine (x_{15})	0.1737	0.0353	0.1529	1.0359
Respondent's level of education completed (x_2)	0.1615	-0.0249	0.1357	0.9754
Period of stay in Poland (x_9)	0.1545	0.0003	0.0032	1.0003
Savings accumulated in Ukraine before the war (x_6)	0.1526	0.0145	0.1199	1.0146
Costs of living covered by incomes from Ukraine (x_{14})	0.1507	-0.0001	0.0017	0.9999
Having relatives/friends residing in Poland (x_{11})	0.1471	0.0090	0.1215	1.0090
Having regular incomes before the war (x_8)	0.1464	0.0101	0.1374	1.0102
Household's composition as in Ukraine (x_{10})	0.1448	-0.0091	0.1142	0.9909

Note: *Mean* and *Std. Dev.* denote BACE posterior mean and standard deviation of each coefficient β_j in the logit model. Bold font denotes variables with the PIP greater than 0.5.
Source: *own compilation*

3. Discussion

In the first part of our study, we identified the determinants of the immediate employment of Ukrainian household members. Our findings highlight the importance of the households' economic situation in this context. Specifically, they lacked income sources in Ukraine to cover their living expenses in Poland (x_{14}), they also had debts to repay in Ukraine (x_{15}) and financial responsibilities for relatives remaining there (x_{16}). However, despite their complex financial situation, they maintained optimism regarding their future self-reliance in Poland (x_{18}). In relation to the above, it is important to note certain theories related to economic migrants, such as those that connect migration with perceived wage differences between the places of origin and destination (Massey et al., 1993), and the responsibility for household members residing in the home country (Stark & Bloom, 1985), as evidenced by remittances sent (Vertovec, 1999).

The economic motive of migration could also be deduced from their less frequent need for public assistance in the form of career guidance (x_{22}), which, according to empirical knowledge, is primarily necessary for humanitarian migrants (e.g., De Vroome & Van Tubergen, 2010; Joona et al., 2014; Udayar et al., 2020; Yakushko et al., 2008).

As we discussed, the first part of our study was focused on identifying the determinants that contributed to the immediate professional activation of Ukrainian households' members. The odds ratio results, included in *Table 6*, show the two main factors that significantly increase the chances of taking an immediate job, i.e.: having relatives/friends residing in Poland (x_{11}) and having knowledge of the Polish language (x_4). In these cases, we have odds ratios of 3.72 and 2.68, respectively. Our findings also revealed that individuals who financially support relatives in Ukraine have 0.8 times higher odds of having at least one household member immediately employed, while those repaying debts in Ukraine experience 0.39 times higher. These findings suggest that both forms of financial involvement in Ukraine are positively associated with increased employment outcomes in the household. Regarding the above, it is important to recall theories related to economic migrants, specifically those addressing the responsibility for household members in the home county (Stark & Bloom, 1985). This responsibility is further confirmed by the remittances sent, as highlighted by Vertovec (1999).

The significance of the economic motive for migration among the analysed households is evident from their less frequent need for public assistance in the form of career guidance (x_{22}). According to empirical knowledge, this type of assistance is typically required by humanitarian migrants (e.g., De Vroome & Van Tubergen, 2010; Joona et al., 2014; Udayar et al., 2020; Yakushko et al., 2008). It should be noted that this form of assistance was crucial for Ukrainian economic migrants in Poland before the war (Kindler & Wójcikowska-Baniak, 2018). Comparing the significance of public assistance and social networks for employment in the households analysed, the latter should be assessed as more relevant.

In the second part of the study, we specifically focused on Ukrainian households without employed adult members, suggesting humanitarian motives as their main reason for migration. Our objective was to identify the determinants of their future employment planning, considering that economic aspects might also be relevant in their case (Van Hear et al., 2009).

Significantly, the presence of employment plans was primarily influenced by access to specific forms of public assistance, which are recognized in the literature as essential for humanitarian immigrants. These forms of assistance included career guidance (x_{22}) and Polish language courses (x_{23}). Variables related to these forms of assistance have a strong explanatory power concerning immigrants' later participation in the labor market, as confirmed by Pachenko (2022), Joona, Gupta, and Wadensjo (2014). Since knowledge of the Polish language was rather common among those who had employment plans for the future (x_4), the willingness to participate in language courses can be explained as an effort to enhance their language competencies.

The results of our study also revealed that the immigration of the households analysed was not incidental, as 60% of them knew Polish (x_4) and have relatives or friends residing in Poland (x_{11}). The knowledge of Polish might be associated with their prior preparation, as often observed among economic migrants (EU et al., 2016; OECD, 2016), or their living in Poland before the war, as economic immigration of Ukrainians was common at that time (Jaroszewicz, 2018).

Conclusion

The study aimed to verify the significance of economic motive for migration of households that fled from Ukraine to Krakow, Poland, in the first three months of the Russia's invasion. Based on the early survey data and BACE analysis, the results confirmed the economic importance for households where their members are immediately employed in Poland. In turn, households that were preparing for future professional activation were

identified as having migrated for humanitarian reasons, rather than for clear economic incentives.

Despite the differences between households with employed members and those preparing for employment, they shared one key characteristic: the importance of Polish language proficiency for their job readiness, regardless of the timing. The study's findings confirmed this as a critical factor for their professional engagement. Notably, the roles of public assistance and social networks in their integration into the labour market varied significantly based on their employment status. Households with members who found immediate employment tended to rely less on public aid and more on established social networks, including relatives and friends already in Poland. Conversely, households with members anticipating future employment were more dependent on public support, such as career guidance and language courses, which literature acknowledges as vital for the integration of humanitarian migrants into the labour market.

The study's results have deepened our understanding of the migration motives of Ukrainian households and their labour market outcomes during the early months of the war. These findings have also yielded insightful implications for public authorities. From the data, it can be deduced that Ukrainian households were compelled to migrate to Poland for both humanitarian and economic reasons. However, those with economic motivations primarily sought support within their social networks at the destination, rather than depending on targeted public assistance. Consequently, the impact of their presence in Poland should be assessed more in terms of their contribution to the domestic labour market and specific economic sectors, rather than the strain on public finances. In contrast, households without employed members were able to plan for future professional engagement shortly after arrival, thanks to the swift and unusual measures adopted by public authorities to facilitate the labour market inclusion of immigrants.

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