Fertility intentions and adoption of new family norms: a quasi-natural experiment for Ukrainian migrants in Poland

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Extended abstract

Background and objectives

After the Russian invasion of Ukraine in 2022, around 960,000 war migrants[1] from Ukraine arrived in Poland and settled temporarily or permanently in this country (as of 11th June, 2024) (UNHCR 2024). What is generally less known, however, is that already before the full-scale Russian invasion, Poland was the main destination for Ukrainian labour migrants, whose number was estimated at 1.3-1.5 million shortly before 2022 (Duszczyk & Kaczmarczyk, 2022; Duszczyk et al. 2023). This means that the country is home to one of the largest Ukrainian communities in the EU and this community is heterogeneous with regard to migration trajectories and migration histories. Without going into the details of the history of Ukrainian migration to Poland here, we can mention that migrants arriving in the 2000s were often middle-aged women who engaged in a circular or temporary mobility to find a source of income for themselves and their families left behind in Ukraine. Since 2014, migrants were slightly younger and more often male, highly entrepreneurial and economically active individuals, who originated mostly in the western regions of Ukraine (Fedyuk & Kindler, 2016; Górny et al. 2020; Tolstokorova, 2010). In turn, those who were forced to move abroad by the outbreak of war are mostly women with children. However, some of them relied on social networks among earlier migrants (also their partners) or their own previous migration experience, while others had little to no ties to Poland.

Such circumstances give us the opportunity to conduct a quasi-natural experiment study, in which the effect of the exposure to the Polish society in the case of pre-war Ukrainian migrants (those who arrived in Poland before 2022) can be separated from the influence of the background common to all Ukrainian migrants, and controlled for individual-level characteristics responsible for a potential selection to migration (Fig. 1).

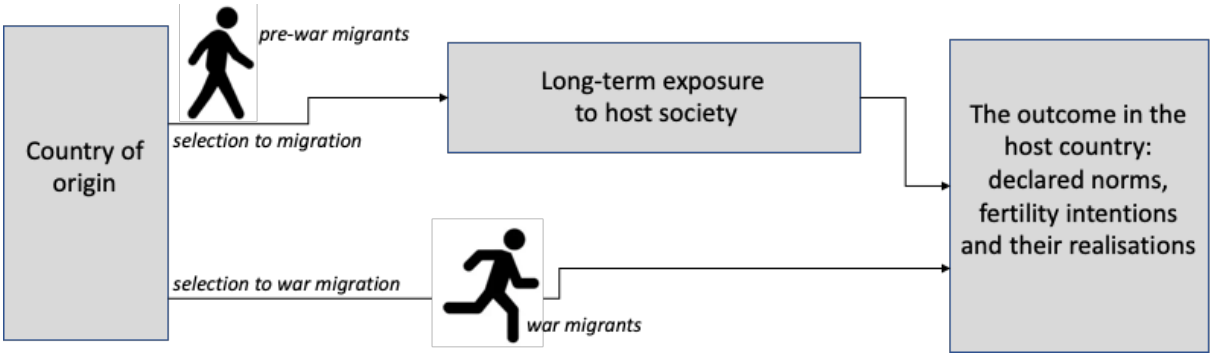

Fig. 1. Scheme of a quasi-natural experiment study
Source: own elaboration.

[1] Ukrainian migrants do not have refugee status under the Geneva Convention, but only a temporary protection. By using the term 'war migrants' instead of refugees, we emphasise this difference and express our opposition to the fact that the lack of refugee status contributes to the precarious situation of Ukrainians.

In this study, we examine how pre-war and war migrants from Ukraine living in Poland differ in terms of the accomplished fertility and childbearing intentions (in the three years' perspective) and factors driving these intentions. Our initial research question is the following:

RQ1: How do the Ukrainian pre-war and war migrants in Poland vary in terms of accomplished fertility and fertility intentions?

In the next step we investigate determinants of the fertility intentions among migrants of reproductive age, depending on whether they arrived in Poland as pre-war migrants or after the beginning of the full-scale Russian invasion (war migrants). In the context of differing migration experiences of these two groups, we look into gender family-related social norms and their relationship with fertility intentions. Due to the exposure to Polish culture and society, more long-term migrants might have changed their attitudes to family life and the role of women in the family as opposed to war migrants, who have not necessarily shared the experience of settling in Poland. Therefore, we ask the question:

RQ2: How do the Ukrainian pre-war and war migrants in Poland differ in terms of acceptance of gender norms related to family life and what is the relationship between adoption of these norms and fertility intentions?

In search for determinants of migrants' fertility intentions during the war, we also test the propositions of two theories: Theory of Planned Behaviour (TPB) and Terror Management Theory (TMT). TPB, widely applied to explain fertility intentions, emphasises the importance of the attitudes, social support and perceived control over having a child (Ajzen, Klobas 2013). We expect these determinants to have different importance for involuntarily displaced war migrants and voluntary pre-war migrants, who have had more time for adjusting their family situation and plans to living in Poland. We thus ask the following research question:

RQ3: How are attitudes, social support and perceived control over having a child related to the fertility intentions of Ukrainian pre-war and war migrants in Poland?

TMT, in turn, interprets increased keenness for procreation and parenthood as humans' mechanism of overcoming death awareness (Solomon 2019). Experiencing the dangers of a full-scale war (either personally or through family members left behind) and the threat of demographic collapse of the nation makes Ukrainians a very relevant case to study this mechanism. We thus address the following research question:

RQ4: How is experiencing the death of a close person related to the fertility intentions of Ukrainian pre-war and war migrants in Poland?

Data and methods

Data analysed in the paper derive from a Poland-wide online survey of Ukrainian migrants in Poland conducted on a unique research panel of Ukrainian migrants established in Centre of Migration Research, University of Warsaw in 2022, shortly after the outburst of the full-scale war in Ukraine. Importantly, the studied group includes migrants who arrived before and after the outbreak of the war, which can be also accounted for in our analyses. Since the establishment of the panel study of Ukrainian nationals living in Poland, both pre-war and war migrants, in July 2022, already six thematic waves of the study were conducted

(https://ukraina2022.idub.uw.edu.pl). Due to the lack of sample frame (addresses of war Ukrainian migrants are not collected in the population register), the panel study is based on the non-random sampling through recruitment via Facebook ads. However, its results are adjusted according to the structure of Ukrainian citizens in the Polish population register by basic demographic characteristics. The Polish population register (PESEL) distinguishes between Ukrainian migrants who arrived before and after the outbreak of the war[2], is systematically updated and of relatively good quality (Duszczyk et al. 2023).

This study is based on one survey wave conducted in April-July 2024 (N=2,118), in which the questionnaire was based on the Generations and Gender Survey and focused on family and partnership status, fertility history, intentions and capabilities, opinions on parenthood and family roles. The share of women in our sample was 84%; the low representation of men reflects their low share among the war migrants as men of conscription age are (with some exceptions) banned from leaving Ukraine under the martial law.

We address our research questions using basic methods of demographic analysis and logistic regression models. As independent variables we use the degree of acceptance for gender and family related social norms (**RQ2**); attitudes to having a child (index of consequences), social support/pressure indicators (opinions of close persons) and perceived control over having a child (index of expectations regarding conditions needed for having a child), derived from TPB related survey items **(RQ3);** and a dummy variable on having lost a close person since the outbreak of the war referring to the TMT (**RQ4**). In the models, we control for age, partnership status, co-residence with family members, number of children (biological and adopted), self-rated health; level of education, place of origin in Ukraine, and labour market activity.

Preliminary results

Descriptive results: migration trajectories and accomplished fertility

Migration trajectories can be operationalized in many ways; the available data allow referring to the timing of first stay in Poland, the timing of current stay, or the status of a Ukrainian war migrant in Polish population register or the lack of thereof. Below we present the results for pre-war and war migrants defined according to their status in the Polish population register, but we also conduct robustness checks using the year of arrival for the current stay.

The differences in the accomplished so far fertility depend largely on the birth cohort of the migrants (Fig. 2): among Ukrainians born in the 1960s, pre-war migrants, both men and women, have on average more children than war migrants, while the relationship is reversed for the cohorts born later. For female migrants born in the 1980s and the 1990s, the differences in the average number of children between pre-war and war migrants are statistically significant.

[2] Registered in the Polish population register PESEL UKR denoting Ukrainian nationals who arrived after the outbreak of the war and are covered by the special law implementing the EU temporary protection directive.

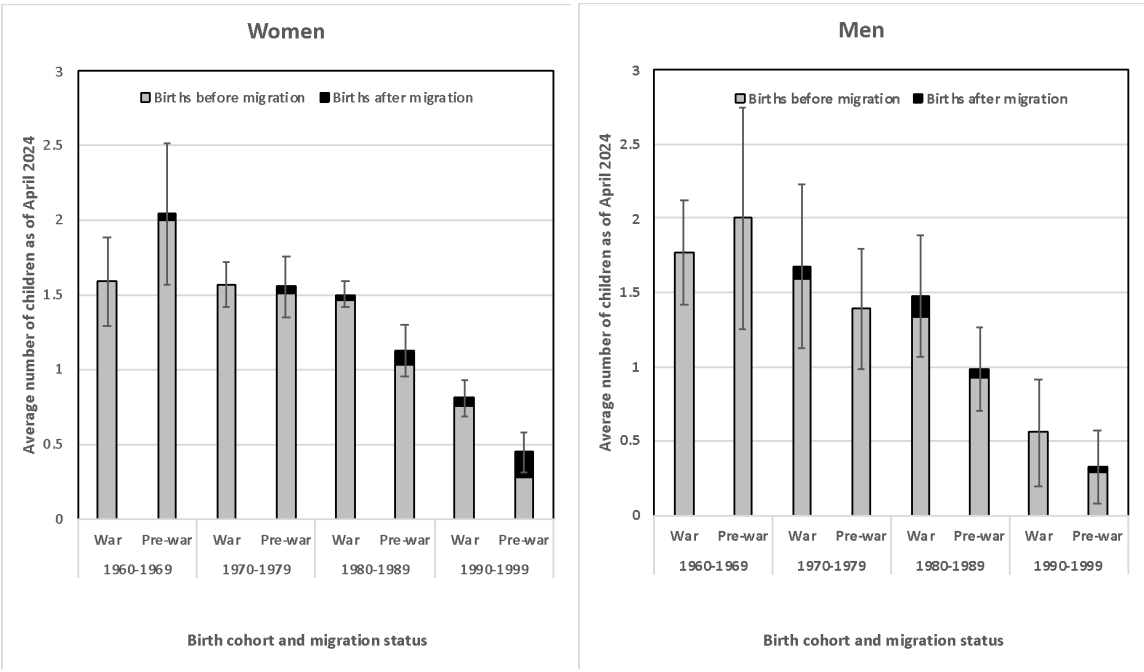

Fig. 2. Average number of children (as of April 2024), by sex, birth cohort and migration status of respondents, and by average number of births before and after migration to Poland
Note: Error bars for 95% CI

Fertility intentions

Ukrainian pre-war and war migrants vary significantly in terms of fertility intentions in the three years' timeframe. This difference is driven by women among whom 31% of pre-war migrants but only 14% of war-migrants express a positive intention (Probably or Definitely Yes), compared to 22% and 21%, respectively, among men. In the next steps we analyse separate models for women and men, as we argue the determinants of fertility intentions operate differently for each gender. We also distinguish between the childless respondents (intentions to have the first child) and parents (intentions to have another child), noting that the number of male parents in our sample was too small to calculate a reliable model.

The results of the logit regression for a positive intention to have a biological child within the next three years (**Appendix Tables 1-3**) prove that, controlling for age, origin in Ukraine, self-rated health, partnership and co-residence, employment and level of education, being a war migrant (PESEL UKR status) has a statistically significant and negative coefficient[3] for fertility intentions of both childless women and mothers, but not for childless men (**RQ2**). There is hardly any statistically significant relationship between the acceptance of value statements on gender and family life related norms. Childless men who accept unmarried cohabitation have a positive coefficient for fertility intentions, compared to more conservative ones. Mothers who support the norm that a child needs both a father and a mother have negative coefficient for intentions to have another child in three years, yet none of the value statements makes a difference for childless women's intentions. Household situation appears significant in certain situations: co-residing with one's partner and with the mother or mother-in-law is strongly positive for fertility intentions of childless women (potentially as a guarantee of help with childcare). The number of people in the household has a positive relationship with the

[3] In Tables 1 and 2, this result is represented by the coefficient on the dummy war_migrant which equals 1 for war migrants and 0 for pre-war migrants. This means that the interpretation for pre-war migrants should be read with the opposite sign to that of the coefficient.

intentions to have the first child in three years declared by men, but negative – in case of childless women.

Among women, the most important predictors of a positive fertility intentions are the factors postulated by the TPB (**RQ3**): positive attitude to the consequences of having a child for respondent's life satisfaction, financial situation, labour market opportunities, and realization of life goals (an index variable), support of the partner, friends (for having the first child) or parents (for having another child), and control over the conditions to have and raise a child, such as expected future financial situation, housing conditions, health, reconciliation of family life and work or the access to childcare (index variable). On the other hand, the variable we used to measure exposure to death (**RQ4** - experiencing a loss of a close person in the past two years, i.e. since 2022) shows a statistically significant coefficient only for fertility intentions of childless men and as it is negative, it contradicts the stipulations of the TMT.

Preliminary conclusions

Although pre-war migrants have on average less children than war migrants (Fig. 1), they declare more often the intention of having a child within the next three years. This means that either pre-war migrants are postponing the realisation of their higher (compared to war migrants) fertility intentions, or there is a contradiction between intentions and the realisation of family plans. This result leads us to a preliminary conclusion that Ukrainians' intentions to have a(nother) child correlate mostly with demographic characteristics (age, parity) migrant's status (pre-war / war) and the factors postulated by the TPB, but not with different gender and family-related social norms or psychological reaction to the exposure to war's terror.

Contribution

The paper addresses interrelations between migratory trajectories (focusing on differentiation into forced, war-induced, and voluntary, pre-full scale war migration) and fertility intentions as an understudied topic. Ukrainian migration to Europe (Poland) constitutes a powerful case to study these links given the large scale of predominantly temporary Ukrainian migration to Poland before the full-scale war in Ukraine. Ukrainian migration to Poland is an interesting case as its heterogeneity has been shaped by varied mechanisms (labour market, education and last but not least, security concerns) which are gendered and characteristic for different stages of the life course. The novelty of the study also lies in investigating the effect of the exposure to Polish society from the influence of the origin common to all Ukrainian migrants, and controlled for individual-level characteristics responsible for a potential selection to migration, such as education.

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Appendix with logistic regression tables – see next pages

Appendix

	Coefficient	Robust std. err.	z	P>|z|	[95% conf.	interv.]
intention_3years_binary						
War migrant - with PESEL UKR	-0.899	0.368	-2.450	0.014	-1.619	-0.178
Index: positive attitude to consequences of a child	0.122	0.044	2.770	0.006	0.036	0.208
Support of friends	0.739	0.164	4.510	0.000	0.417	1.060
Support of parents	-0.004	0.145	-0.030	0.976	-0.289	0.281
Support of partner	0.534	0.164	3.250	0.001	0.212	0.856
Index: expects having conditions for a child	0.104	0.036	2.910	0.004	0.034	0.174
N1_1 Values: Unmarried cohabitation	-0.215	0.353	-0.610	0.542	-0.907	0.477
N1_2 Values: Divorce is permissible	-0.862	0.517	-1.670	0.095	-1.875	0.151
N1_3 Values: Women need children	0.282	0.511	0.550	0.581	-0.719	1.283
N1_4 Values: Child needs a father and mother	-0.103	0.325	-0.320	0.752	-0.740	0.535
N1_5 Values: Men need children	-0.787	0.654	-1.200	0.229	-2.068	0.494
Partner's nationality (ref: no partner)						
Polish	0.288	0.598	0.480	0.630	-0.884	1.460
Ukrainian	-0.004	0.581	-0.010	0.995	-1.142	1.134
other	0.979	0.952	1.030	0.304	-0.887	2.845
Co-residing with the partner	1.173	0.506	2.320	0.020	0.181	2.164
In stable employment	-0.039	0.483	-0.080	0.936	-0.985	0.907
Education level (ref: Less than secondary						
secondary	-0.254	0.775	-0.330	0.742	-1.772	1.264
tertiary	0.777	0.698	1.110	0.266	-0.592	2.145
Size of locality of origin in UA (ref: village)						
up to 50 thousand inhabitants	-0.155	0.816	-0.190	0.850	-1.755	1.445
50-500 thousand	-0.083	0.795	-0.100	0.917	-1.641	1.475
large city (over 500 thousand)	0.794	0.770	1.030	0.302	-0.714	2.303
Age at survey	-0.055	0.026	-2.070	0.038	-0.107	-0.003
Self-rated health	0.298	0.223	1.340	0.181	-0.139	0.736
Experienced a loss of close person in 2 yrs	-0.111	0.371	-0.300	0.764	-0.838	0.615
Plans to adopt a child	-0.080	0.347	-0.230	0.817	-0.760	0.599
Co-resides with mother (in-law)	1.312	0.617	2.130	0.033	0.103	2.521
Number of coresiding persons	-0.696	0.347	-2.010	0.045	-1.377	-0.016
_cons	-6.103	1.564	-3.900	0.000	-9.168	-3.038

Table 1. Logistic regression for the intention of having a child within the next three years (1 – Probably/Definitely yes, 0 – Probably/Definitely no, Maybe), ***childless female*** *migrants from Ukraine living in Poland, 2024 (N=392)*

Number of obs = 392
Wald chi2(27) = 116.06
Prob > chi2 = 0.0000
Log pseudolikelihood = -87.558771
Pseudo R2 = 0.4700

Notes: The coefficient on the dummy war_migrant equals to 1 for war migrants (with PESEL UKR) and 0 for pre-war migrants.

	Coefficient	Robust std. err.	z	P>|z|	[95% conf.	interval]
intention_3years_binary						
War migrant - with PESEL UKR	-0.908	0.454	-2.000	0.045	-1.797	-0.019
Index: positive attitude to consequences of a child	0.130	0.066	1.980	0.048	0.001	0.260
Support of friends	-0.078	0.208	-0.370	0.708	-0.486	0.331
Support of parents	1.057	0.203	5.200	0.000	0.658	1.455
Support of partner	0.901	0.190	4.730	0.000	0.528	1.275
Index: expects having conditions for a child	0.146	0.041	3.550	0.000	0.065	0.226
N1_1 Values: Unmarried cohabitation	0.043	0.379	0.110	0.909	-0.700	0.786
N1_2 Values: Divorce is permissible	0.262	0.532	0.490	0.622	-0.781	1.304
N1_3 Values: Women need children	0.060	0.612	0.100	0.922	-1.140	1.260
N1_4 Values: Child needs a father and mother	-1.110	0.460	-2.420	0.016	-2.010	-0.209
N1_5 Values: Men need children	0.932	0.664	1.400	0.161	-0.371	2.234
Partner's nationality (ref: no partner)						
Polish	-0.770	0.895	-0.860	0.390	-2.525	0.984
Ukrainian	-0.560	0.619	-0.900	0.366	-1.773	0.653
other	-0.052	0.791	-0.070	0.947	-1.602	1.498
Co-residing with the partner	0.339	0.579	0.590	0.558	-0.795	1.473
In stable employment	0.252	0.409	0.620	0.537	-0.549	1.053
Education level (ref: Less than secondary						
secondary	-0.940	0.870	-1.080	0.280	-2.645	0.764
tertiary	-0.653	0.816	-0.800	0.424	-2.251	0.946
Size of locality of origin in UA (ref: village)						
up to 50 thousand inhabitants	0.424	0.872	0.490	0.627	-1.286	2.134
50-500 thousand	1.373	0.708	1.940	0.052	-0.015	2.760
large city (over 500 thousand)	1.451	0.679	2.140	0.033	0.120	2.781
Age at survey	-0.107	0.030	-3.620	0.000	-0.165	-0.049
Self-rated health	-0.192	0.293	-0.660	0.511	-0.766	0.381
Experienced a loss of close person in 2 yrs	0.050	0.392	0.130	0.899	-0.718	0.818
Plans to adopt a child	0.224	0.433	0.520	0.605	-0.625	1.073
Co-resides with mother (in-law)	0.643	0.658	0.980	0.329	-0.647	1.932
Number of coresiding persons	-0.677	0.369	-1.830	0.067	-1.401	0.047
cons	-6.450	2.297	-2.810	0.005	-10.953	-1.948

Table 2. Logistic regression for the intention of having a child within the next three years (1 – Probably/Definitely yes, 0 – Probably/Definitely no, Maybe), ***female migrants from Ukraine with at least 1 child*** *living in Poland, 2024 (N=695)*

Number of obs = 695
Wald chi2(27) = 148.55
Prob > chi2 = 0.0000
Log pseudolikelihood = -84.114319
Pseudo R2 = 0.5260
Notes: The coefficient on the dummy war_migrant equals to 1 for war migrants (with PESEL UKR) and 0 for pre-war migrants.

	Coefficient	Robust std. err.	z	P>|z|	[95% conf.	interval]
intention_3years_binary						
War migrant - with PESEL UKR	0.488	0.709	0.690	0.491	-0.902	1.878
Index: positive attitude to consequences of a child	0.118	0.077	1.540	0.124	-0.032	0.268
Support of friends	0.365	0.379	0.960	0.336	-0.378	1.108
Support of parents	-0.201	0.287	-0.700	0.483	-0.764	0.361
Support of partner	0.466	0.265	1.760	0.078	-0.052	0.985
Index: expects having conditions for a child	0.129	0.066	1.940	0.052	-0.001	0.259
N1_1 Values: Unmarried cohabitation	3.113	1.270	2.450	0.014	0.623	5.603
N1_2 Values: Divorce is permissible	-0.412	0.908	-0.450	0.650	-2.191	1.367
N1_3 Values: Women need children	0.646	0.907	0.710	0.476	-1.131	2.424
N1_4 Values: Child needs a father and mother	1.465	0.770	1.900	0.057	-0.043	2.974
N1_5 Values: Men need children	0.621	0.711	0.870	0.382	-0.772	2.014
Partner's nationality (ref: no partner)						
Polish	-1.197	1.349	-0.890	0.375	-3.840	1.447
Ukrainian	-1.155	0.838	-1.380	0.168	-2.797	0.487
other	-2.992	1.691	-1.770	0.077	-6.307	0.322
Co-residing with the partner	0.188	0.943	0.200	0.842	-1.659	2.036
In stable employment	-0.131	0.873	-0.150	0.881	-1.843	1.580
Education level (ref: Less than secondary						
secondary	-1.802	0.971	-1.860	0.064	-3.705	0.102
tertiary	0.097	0.863	0.110	0.910	-1.594	1.788
Size of locality of origin in UA (ref: village)						
up to 50 thousand inhabitants	0.639	1.326	0.480	0.630	-1.960	3.237
50-500 thousand	-0.620	1.196	-0.520	0.604	-2.965	1.725
large city (over 500 thousand)	-0.806	1.067	-0.760	0.450	-2.897	1.285
Age at survey	0.012	0.044	0.270	0.787	-0.074	0.098
Self-rated health	0.250	0.548	0.460	0.649	-0.824	1.323
Experienced a loss of close person in 2 yrs	-1.673	0.647	-2.590	0.010	-2.941	-0.405
Plans to adopt a child	1.503	0.644	2.330	0.020	0.241	2.765
Co-resides with mother (in-law)	-2.261	1.460	-1.550	0.122	-5.123	0.602
Number of coresiding persons	1.149	0.578	1.990	0.047	0.016	2.282
cons	-11.927	3.181	-3.750	0.000	-18.161	-5.693

Table 3. Logistic regression for the intention of having a child within the next three years (1 – Probably/Definitely yes, 0 – Probably/Definitely no, Maybe), ***childless male*** *migrants from Ukraine living in Poland, 2024 (N=123)*

Number of obs = 123
Wald chi2(27) = 44.91
Prob > chi2 = 0.0166
Log pseudolikelihood = -93.29517
Pseudo R2 = 0.4474
Notes: The coefficient on the dummy war_migrant equals to 1 for war migrants (with PESEL UKR) and 0 for pre-war migrants.