

Mother's employment during war: the role of marital status, household structure, and internal displacement in Ukraine during Russia's invasion

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Abstract

Prior studies have compared the employment status of married and single women with children, finding steep penalties for mothers who are separated from their partners. The majority of these studies have been conducted in Western countries during peacetime. Using the Ukrainian Household Economic Status Survey (HSESS), this study examines women's employment in Ukraine two years after Russia's invasion (2023-24), when the economic and security situation in the country was precarious, and the end of the war was nowhere in sight. Russia's invasion led millions of individuals to flee, both internally and abroad, separating families and promoting intergenerational living arrangements. Constant shelling and attacks, military enlistment, and the reorientation of the labor market have resulted in labour market shortages and general economic strain. These conditions place extreme pressure on families, raising questions about whether mothers could work and whether living with husbands, parents, or other family members facilitate mothers' employment. Analyses by displacement status and across regions differentially exposed to violence shed further light on mothers' employment conditions during war. Preliminary results indicate that mothers who were internally displaced after Russia's invasion are significantly less likely to be employed, as are less educated women from rural areas, single mothers and widows. Women less welfare benefits or income from other family members are more likely to be employed. Next steps will investigate whether the mothers of children who attend nursery or school, including online school, are more or less likely to work.

Russia's invasion of Ukraine in 2022 not only led to one of the largest displacement crises in the world, it also had a profound impact on Ukraine's economy. Recruitment into the army, refugee flows abroad, and the strain of constant attack has led to acute labour shortages (Institute for Economic Research 2025). Even before the war, Ukraine had a shrinking labour force due to low fertility rates, high mortality rates, and substantial emigration. At that time, Ukraine's labour force was not as fully activated compared to OECD averages, particularly among women aged 25-39 (Kupets et al 2023). Data collected after Russia's invasion suggests that women's labour force participation has declined to even lower rates, with around 53% of women in the labour force (HSESS 2025). This initial data warrants further investigation to better understand the factors associated with women's (un)employment, particularly among mothers who are even less likely to be in the labour market.

Prior research on maternal employment, the majority of which has taken place during peacetime, often focuses on marital status, because married, intact families are less likely to experience poverty (Bernardi et al 2018). Studies show that single mothers are more likely to work, but this depends on country context. For example, in the US and Germany, lone mothers have higher rates of employment than married mothers, controlling for other factors (Drobnic 2000). Divorced or single mothers may be compelled to work if child benefits are too low, but they may also face constraints due to lack of childcare or support when they are at work.

It is also important to examine household structure and take into account other household members who could help care for children. In Ukraine, especially during wartime, married fathers may not live in the household because they are engaged in the military or war-related employment. Ukraine is also unique because of high levels of inter-generational co-residence, especially among single mothers, which is more common in Eastern Europe (Hogendoorn and Harkonen 2023). Grandparents often care for grandchildren, which can release women for employment.

According to the IOM, in October 2024, nearly 3.7 million people remained internally displaced in Ukraine (IOM 2024). Internal displacement disrupts employment, often leading to spells out of the labour market, and difficulties with re-entry. Studies in Ukraine indicate that Internally Displaced Persons have higher unemployment rates than those who never moved (IOM 2024); however, these studies usually do not control for factors such as education, multigenerational co-residence, and income, which provide insights into why internally displaced individuals are less likely to work.

In sum, this study has important implications for Ukraine's labor market and economy. Understanding how women's employment differs by household structure and displacement status can improve strategies aimed at bolstering Ukraine's female labour force participation, particularly important given labour shortages brought about by (mostly male) military conscription.

Research Questions

1. Marital status

- a. Are single mothers more or less likely to work than married mothers?

- b. Are married mothers who live without their husbands more or less likely to work?

2. **Household help**

- a. Do grandparents in the household facilitate mothers' employment? Does it matter whether it is her own parents or her partners'?
- b. What about other people in the household who could potentially provide childcare?

3. **Displacement and impact of war**

- a. Are displaced women less likely to work?
- b. Does mother's employment and household structure differ by region of the country, i.e., are women less likely to be employed in regions which are more impacted by regular attacks?

Data and Analysis

To examine mother's employment, we use the nationally representative Household Economic Status Survey (HSESS), conducted by the Mykhailo Ptukha Institute for Demography and Life Quality Research in December 2023-February 2024 in all regions of Ukraine controlled by the Ukrainian government (UNICEF 2024). The survey was conducted face-to-face with 8023 households (18,837 individuals). The household head was asked to complete a household survey and fill out information on each household member. Household weights are based on UNFPA estimates of the post-war population of Ukraine. Our sample includes all mothers identified in the household living with their own children under the age of 18 (N=2354). Other living arrangements with children that do not include mothers, for example, grandparents or aunts looking after children, are not included.

Our preliminary analyses employ logistic regression models to examine which mothers are employed and which are not. Because our initial focus is on respondents' economic status, we combine all other economic status categories (e.g. working at home on own land and temporarily not working) into the no employment category, which also includes pensioners and students. Table 1 shows the distribution of all variables in the model by whether the mother is employed.

Marital living arrangement is a composite variable of marital status and household structure. We first collapse marital status to combine married and cohabiting; divorced and separated; and widowed and single (due to small numbers). We then distinguish whether married and cohabiting women are currently living with their husbands. Husbands not living in the household could be working elsewhere, for example on the frontline. Nearly two-thirds of mothers are married living with their partners; 13% are married but do not live with their partner; 15% are divorced, and only 7% report being widowed or single.

Displacement status is measured through a series of questions asking whether each individual in the household moved after Russia's invasion in February 2022. Those who moved and then returned home are included in the stayer category. Note that the number who reported moving after the full-scale war is small, only 125 individuals (5.4% of all mothers). These numbers may underestimate total displacement (Torrise et al 2025) and a substantial number of mothers with children may have moved abroad.

Living arrangements includes three variables derived from the household grid, which independently mark whether a woman's parents, parents-in-law, or other members of the household. Other members includes own children over the age of 18, other relatives, and non-related individuals. Additional control variables include a quadratic for woman's age, education, region, settlement type, and age of youngest child. Household income is a composite variable which subtracts woman's own earnings (if she has any), taken from the individual-level file, from the derived household income variable reported in the household questionnaire and divided by household size. We include cases in which the woman's income is the only income in the household in Q1. Cases with missing data are included in a category called Problematic cases.

Preliminary results

Table 2 shows the likelihood of employment, controlling for other confounders, including total household income minus the woman's own income. We find few differences by marital status and whether the husband lives in the household; however, women who do not have a partner or whose partner has died are about half as likely to work, possibly because of receipt of benefits and the difficulty of working without support.

Mothers who were internally displaced after Russia's invasion are 29% less likely to be employed ($p < .001$) than mothers who did not move. Interactions with other variables were not significant.

As expected, women are more likely to work if they have older children, live in Kyiv or other urban areas, and have a university degree. Mothers with fewer resources in the household, including income from other household members are significantly more likely to work. Note that cases with missing income information were more than five times as likely to work.

Next steps

Next, we will continue to explore the implications of different types of household income (welfare benefits versus the income of other household benefits) on mother's employment. Using multinomial logit models and more detailed employment status variables, we will expand the dependent variable to compare those who are inactive (retired, receiving maternity leave benefits) and actively seeking work, as well as reasons for unemployment (e.g. enterprise shut-down because of war). The HSESS also includes additional information about whether children attend nursery or school. It has a battery of questions about online schooling; around one million out of four million children in Ukraine attend school fully online, with another 1.8 million partially attending online (Beketova and Beck 2025). Thus, we will explore to what extent women are unable to work because their children must stay at home to attend online school.

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Table 1. Descriptives of variables by mother's employment status

	Overall N = 2,354 ¹	not employed N = 958 ¹	employed N = 1,396 ¹
Marital status			
married/coh. with_partner	1,553 (66%)	649 (68%)	904 (65%)
married/coh. without_partner	295 (13%)	124 (13%)	171 (12%)
separated_divorced_no_partner	350 (15%)	102 (11%)	248 (18%)
widowed_or_single_no_partner	156 (6.6%)	83 (8.7%)	73 (5.2%)
Displacement status			
Stayer	2,211 (95%)	866 (91%)	1,345 (97%)
Moved	125 (5.4%)	83 (8.7%)	42 (3.0%)
Unknown	18	9	9
Education			
Tertiary	1,007 (43%)	286 (30%)	721 (52%)
Post-secondary non-tertiary	847 (36%)	389 (41%)	458 (33%)
Upper secondary and below	500 (21%)	283 (30%)	217 (16%)
Region			
West	717 (30%)	298 (31%)	419 (30%)
North	350 (15%)	169 (18%)	181 (13%)
East	288 (12%)	110 (11%)	178 (13%)
Central	483 (21%)	224 (23%)	259 (19%)
South	307 (13%)	122 (13%)	185 (13%)
Kyiv	209 (8.9%)	35 (3.7%)	174 (12%)
Settlement type			
urban	1,424 (60%)	525 (55%)	899 (64%)
rural	930 (40%)	433 (45%)	497 (36%)
Household income per capita excluding woman's earnings, quartiles			
Q1	735 (31.2%)	241 (25.2%)	494 (35.4)
Q2	548 (23.3%)	266 (27.8%)	282 (20.2%)
Q3	470 (20.0%)	227 (23.7%)	243 (17.4%)
Q4	460 (19.5%)	216 (22.5%)	244 (17.5%)

	Overall N = 2,354 ¹	not employed N = 958 ¹	employed N = 1,396 ¹
Problematic*	141 (5.99%)	8 (0.84%)	133 (9.53%)
Age of youngest child			
<3	348 (15%)	283 (30%)	65 (4.7%)
3–5	531 (23%)	269 (28%)	262 (19%)
6–17	1,475 (63%)	406 (42%)	1,069 (77%)
Multigenerational co-residence			
Lives with own parents (yes)	412 (18%)	180 (19%)	232 (17%)
Lives with parents-in-law (yes)	143 (6.1%)	62 (6.5%)	81 (5.8%)
Lives with others (yes)	186 (7.9%)	84 (8.8%)	102 (7.3%)
Age (cont.)	37 (7)	35 (8)	38 (6)

¹n (%); Mean (SD)

Table 2. Odds-Ratios from Logistic Regression models of whether mothers living with children under 18 are employed

Variable	(1)	(2)	(3)	(4)
(Intercept)	0.022***	0.021***	0.017***	0.015***
Marital status (ref: married/coh. with_partner)				
<i>married/coh. without_partner</i>	0.960	0.979	1.063	1.070
<i>separated_divorced_no_partner</i>	1.071	1.129	1.233	1.247
<i>widowed_or_single_no_partner</i>	0.592*	0.618*	0.689+	0.695+
Age	1.224***	1.227***	1.244***	1.247***
Age^2	0.997***	0.997***	0.997***	0.997***
Age of youngest child (ref: <3)				
<i>3–5</i>	4.212***	4.210***	4.166***	4.185***
<i>6–17</i>	10.424***	10.442***	10.544***	10.608***
Region (ref: West)				
<i>North</i>	0.662**	0.659**	0.641**	0.634**
<i>East</i>	1.048	1.045	1.058	1.051
<i>Central</i>	0.702*	0.700*	0.734*	0.732*
<i>South</i>	0.920	0.915	0.948	0.939
<i>Kyiv</i>	2.808***	2.806***	2.877***	2.879***
Education (ref: tertiary)				
<i>Secondary non-tertiary</i>	0.401***	0.400***	0.388***	0.386***
<i>Secondary and below</i>	0.281***	0.280***	0.277***	0.276***
Settlement type (ref: urban)				
<i>Rural</i>	0.799*	0.804*	0.783*	0.794*
Household income per capita excluding woman's earnings, quartiles (ref: Q1)				
<i>Q2</i>	0.495***	0.497***	0.536***	0.578***
<i>Q3</i>	0.427***	0.428***	0.442***	0.477***
<i>Q4</i>	0.316***	0.314***	0.319***	0.337***
<i>Problematic/missing data</i>	5.304***	5.331***	5.337***	8.914***
Multigenerational co-residence				
<i>lives_with_own_parents (yes/no)</i>		0.823	0.824	1.039
<i>lives_with_parents_in_law (yes/no)</i>		1.095	1.098	1.086
<i>lives_with_others (yes/no)</i>		1.093	1.086	1.093
Displacement status (ref: stayer)				
<i>Moved</i>			0.285***	0.287***
Quartile × Lives with own parents (interaction)				

Variable	(1)	(2)	(3)	(4)
<i>Q2 × lives_with_own_parents</i>				0.706
<i>Q3 × lives_with_own_parents</i>				0.693
<i>Q4 × lives_with_own_parents</i>				0.836
<i>Problematic × lives_with_own_parents</i>				0.213+
N	2336	2336	2336	2336
Log Likelihood	-1227.98	-1226.76	-1210.69	-1208.57