Stuck with Boys: Return Prospects and Integration of Ukrainian Refugee Families

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Motivation

- Refugees' economic integration is slower than that of other migrants (Brell et al., 2020; Fasani et al., 2024)
- Return prospects and intentions may drive human capital accumulation and integration (Adda et al., 2022)
- Hard to study due to lack of exogenous variation in return prospects.

This paper:

- **How do return prospects impact integration of refugee parents and children?**
- Use Ukraine's male travel ban + the continuing war as a shock to return prospects of families with teenage boys vs. girls
- *Early leavers* are not differentially selected on teenage child sex
- Compare the return intentions and integration paths of observationally similar households with teenage boys vs. girls

Ukrainian Refugee crisis

- Russian invasion → 6 million refugees Europe
- Temporary protection: free settlement and labor market access across EU
- Most refugees are hosted in Czechia, Germany and Poland Map
- Predominantly mothers with 1 or 2 children, citing child safety as the most important motive to flee
- A considerable share already work, but mostly in (be)low-skill jobs
- Ukrainians differ in return (intentions) from other refugees in high-income countries: a large share plans to return

→ Understanding how return prospects of Ukrainian shapes their human capital and labor supply decisions could inform policy *today*

Ukraine's Male Travel Ban + Lasting War

- Ukrainian men between 18 and 60 are banned from leaving Ukraine with few exceptions
- Men are conscripted from age 25 onwards (April 24: 27→25)
- Apart from the ban on leaving, return to a country at war is plausibly less appealing for men
- Ukraine' progress on the battlefields stalled and Ukrainians have turned pessimistic about the outcome of the war

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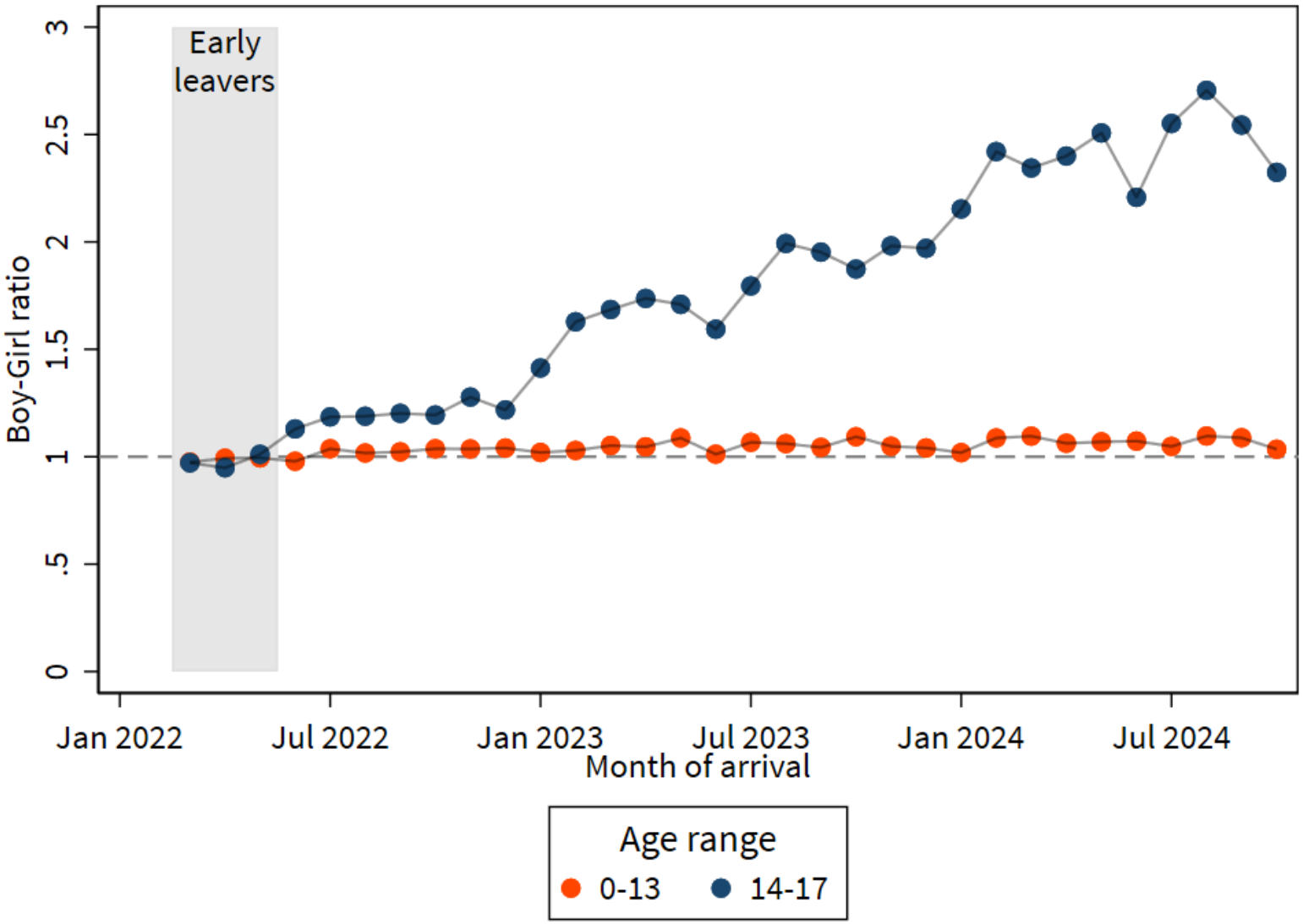
- Ukraine' progress on the battlefields stalled and Ukrainians have turned pessimistic about the outcome of the war

→ Strong incentive for parents with boys coming of age to leave Ukraine

→ Decreased return prospects of families abroad, especially for those with boys turned 18 or close to turning 18.

Boy-girl ratio among new arrivals in EU

Cumulative arrivals by age



Roadmap and findings

1. Empirical strategy
   - Do return intentions and integration depend on child sex in other settings?
   - Are early leavers with teenage boys differentially selected in observable characteristics?

2. Survey evidence on Ukrainian refugees' and their children
   - Studying parents' return (intentions), and integration outcomes
     $\rightarrow$ Having a teenage boy strongly reduces return intentions and improves economic integration, if anything
   - Studying children' return (intentions), and human capital decisions
     $\rightarrow$ More teenage boys than girls want to stay, boys are more active in clubs, no effect on participation in Ukrainian schools

3. Evidence from Ukrainian central school exams at age 16/17
   - Studying human capital investment decisions
     $\rightarrow$ Boys do relatively better since 2022
   - ...among Ukrainian boys abroad
     $\rightarrow$ More likely to take general skill subjects (sciences and English) and perform better in all subjects, suggestive of effort channel

Contribution to the literature

Home country shocks, return and immigrant integration

- Economic shocks shape return (Yang, 2006; Nekoei, 2013)
- Conflict at home reduces return and improves integration among economic migrants (Zaiour, 2024; Bassetto & Freitas-Monteiro, 2024)
- Conflict at home reduces return among refugees' return, no effect on integration (Beaman et al., 2022; Adema et al., 2023)

→ We show that also individual-specific shocks matter for return intentions.
→ Cleaner study of the effect of return prospects on integration

Role of the family in return migration and integration

- Children affect return migration and citizenship affects parents' investments in children' human capital (Dustmann, 2003; Dahl et al., 2022)
- Conflict at home may improve refugee children school outcomes (Aksoy et al., 2024)
- Policies affecting parents impact child outcomes (Amuedo-Dorantes et al., 2018)

→ Home country policies impact families' return intentions
→ Teenage children' return prospects affect parents' return intentions and human capital decisions

Empirical strategy: ideal experiment

Compare observationally similar early-leaving refugee households with a teenage boy vs. a teenage gitl

Figure: 17-year old girl

Figure: 17-year old boy

Images created with Dall-E

Empirical strategy

$$y_i = \beta boy_i^{10-17} + \gamma' \mathbf{X_i} + \psi_i^a + (\xi_i) + \epsilon_i \quad (1)$$

- y_i is the return intention or integration outcome of family i
- boy_i^{10-17} is a dummy for having at least one boy aged 10-17 at the time of leaving Ukraine
- $\mathbf{X_i}$ is a broad set of demographic controls: dummies for sex, partner, partner behind, children behind, Bsc degree, at least Msc degree, speaking English, from an urban region and employment status in Ukraine FE, survey wave FE and initial destination FEs
- ψ_i^a are fixed effects for the number of children of every age a, and (in some specifications) ξ_i for the number of boys in the household.
- Cluster SEs at the respondent level
- **For those individuals who left Ukraine in Feb-May 2022**

Identification

Counterfactual:

- If parents with teenage boys would have had girls, they would have followed the same path of return intentions and integration as those who actually have girls.

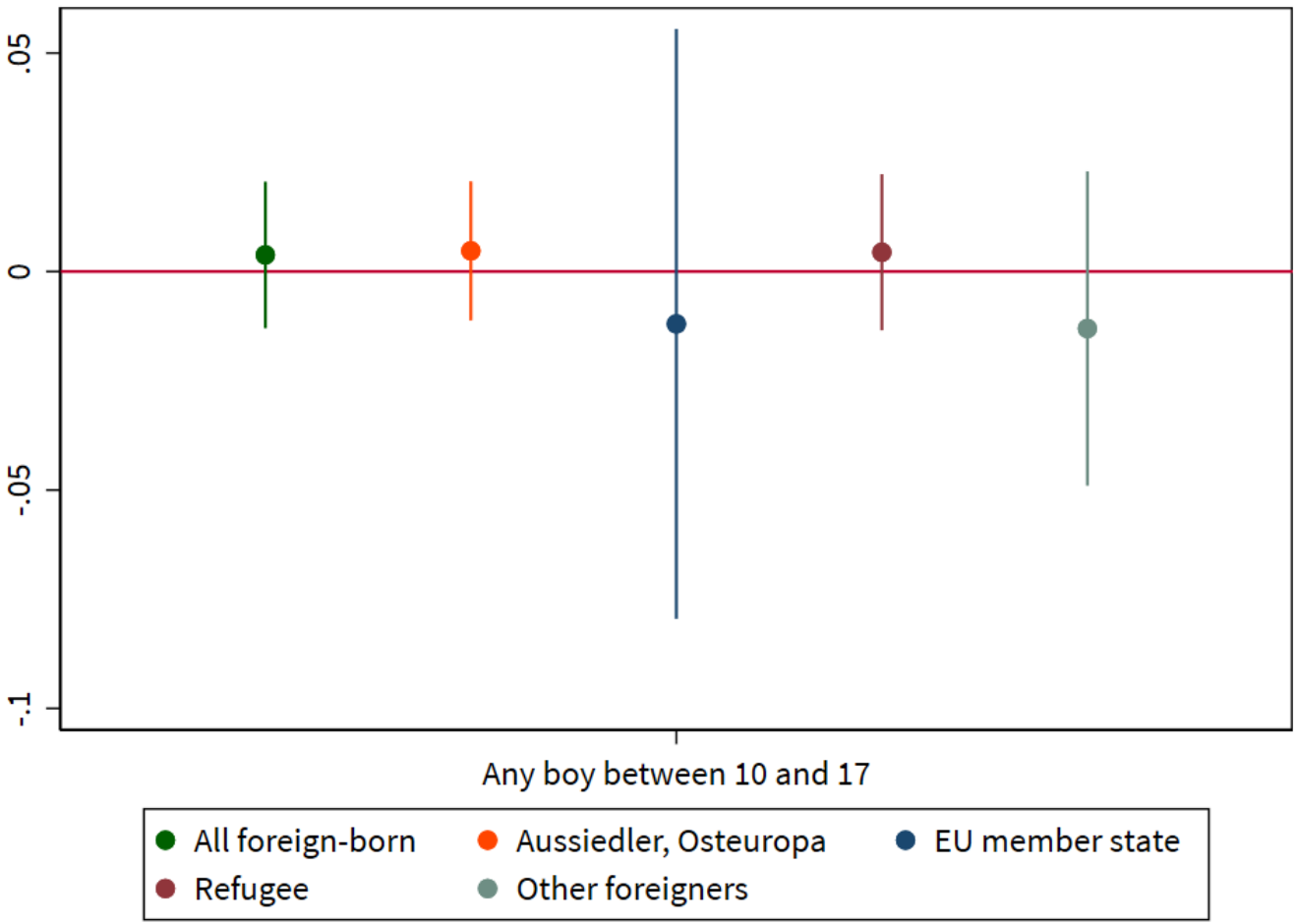
Threats to identification:

1. Absent of war, those with boys and girls could have had different return intentions and integration outcomes
   $\rightarrow$ Test whether return intentions (GSOEP) and labor market integration (ESS) among migrants/natives are similar for parents with boys and girls *from a similar cultural background*
2. Despite the 1:1 ratio, families with boys and girls may nevertheless be different
   $\rightarrow$ Test whether families with boys and girls are not differentially selected

I test those using the same empirical strategy

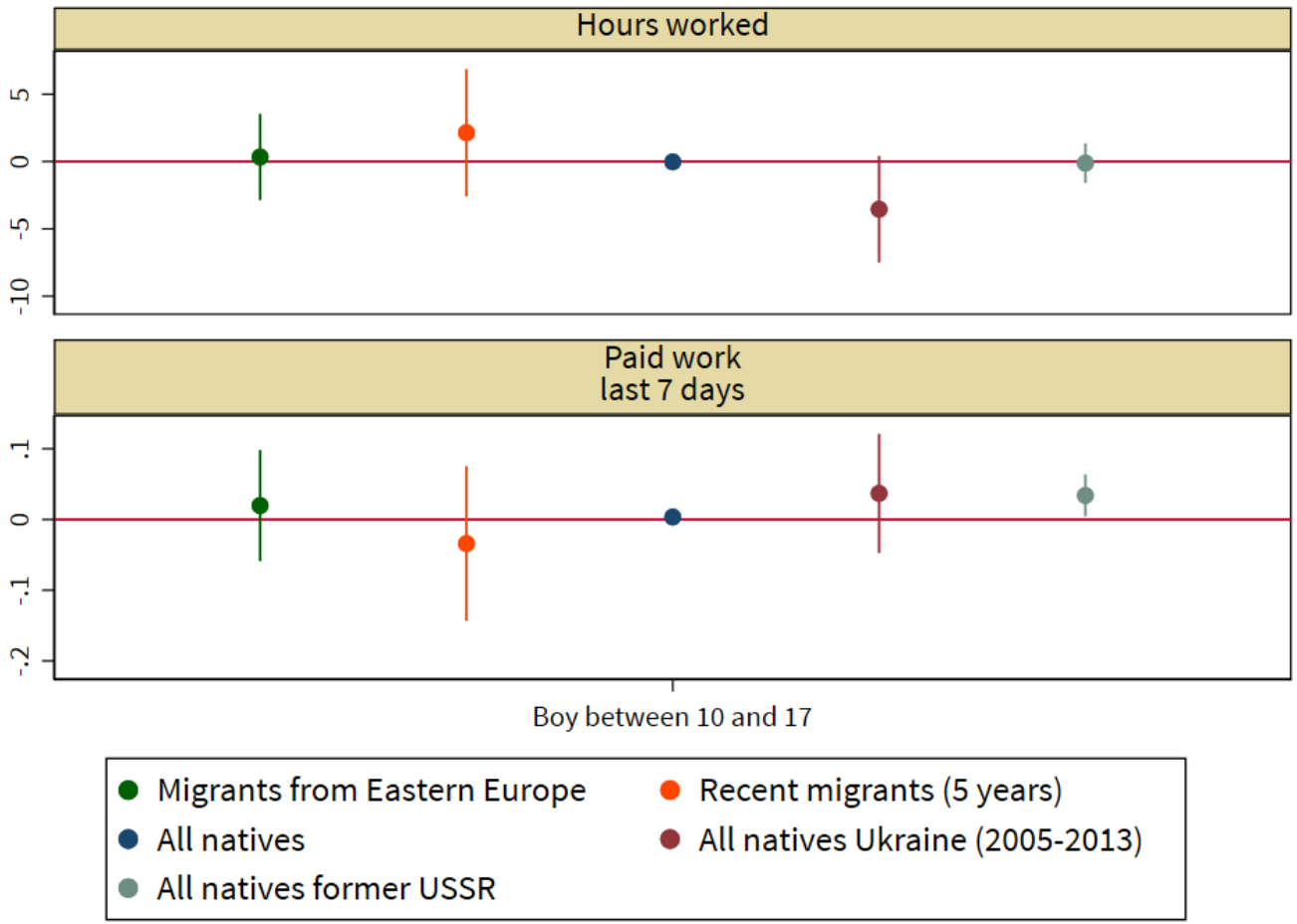
Threat 1a: general differences in return intentions

- Test whether return intentions are different for parents with teenage boys and girls among different immigrant groups in the German Socio-Economic Panel 1984-2022: dummy for intention to stay



Threat 1b: general differences in integration

- Test whether parental outcomes are different for those with teenage boys among different (immigrant) groups in the European Social Survey:



Panel survey of Ukrainian refugees across Europe

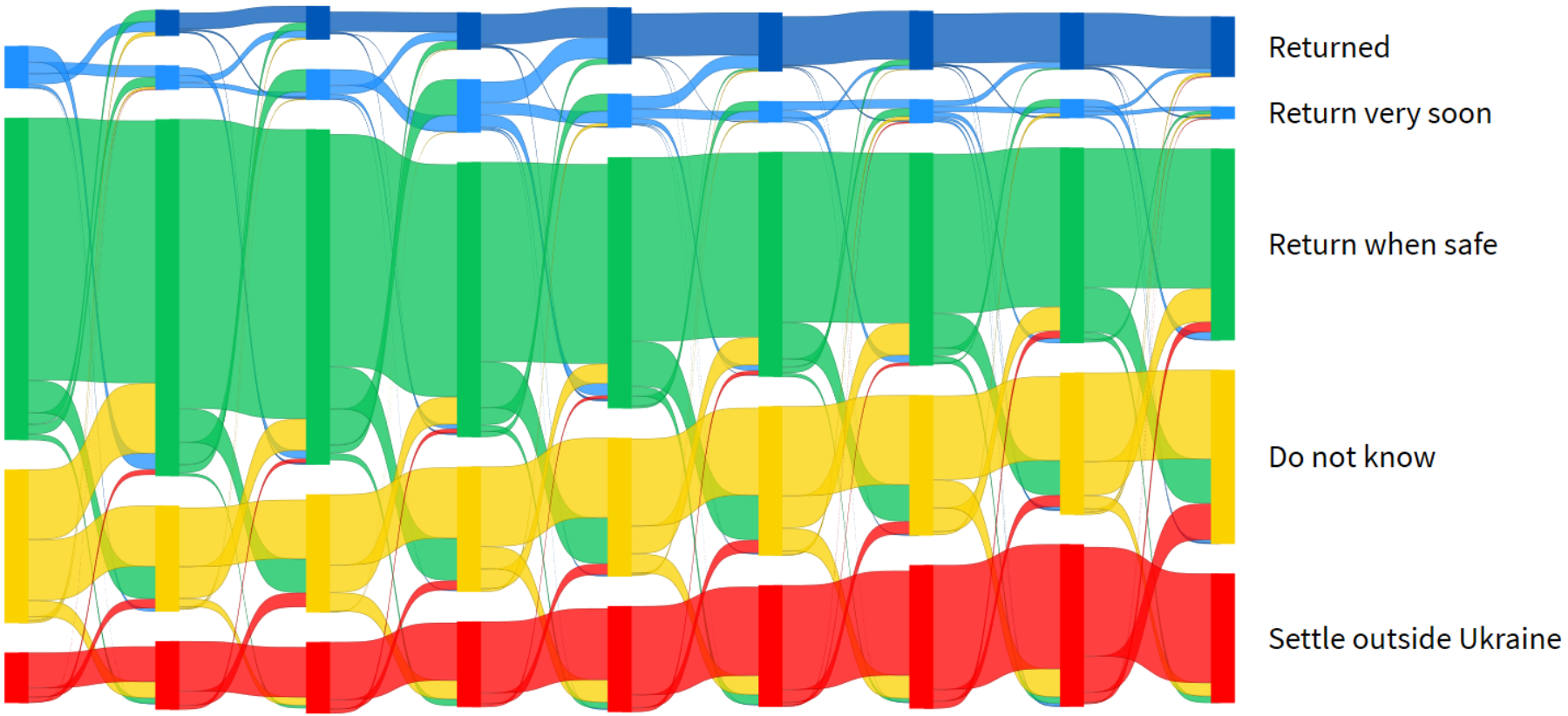
Design: short and frequent surveys (every 3 months); we follow Ukrainian refugees in Europe and after return

- Recruitment through targeted Facebook Ads across Europe
- Baseline wave June – December 2022, wave 9 in November 2024
- Includes questions on demographics, individual situation, return intentions and multi-dimensional integration
- Baseline respondents: 11,783. Agreed panelists: 6,299 (53%)
- 51% of agreed panellists answered at least one follow-up survey
- In wave 6 (Oct '23) we record age and sex of all children (N = 1,200); we focus on cohabiting children only!
- Those 18 in wave 6 were at most 17.5 years at the time of leaving.

Demographics

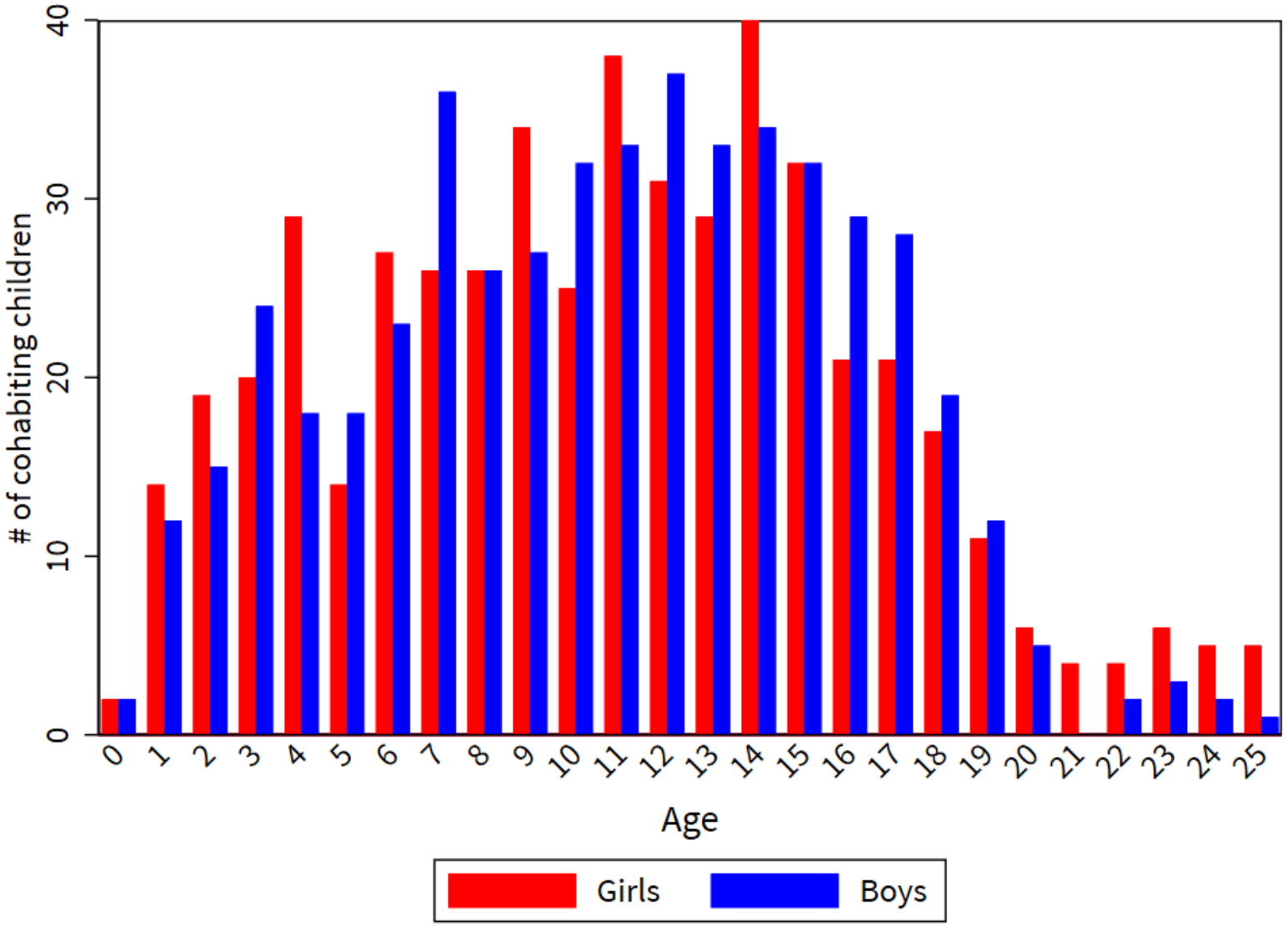
	Mean	S.D.	N
# of children	0.83	0.94	6272
Any boy 10-18	0.22	0.41	6272
Any girl 10-18	0.20	0.40	6272
Female	0.89	0.31	6272
Age	43.63	11.90	6129
Bachelor's	0.17	0.38	6272
Speaks English	0.47	0.50	6272
Urban settlement	0.75	0.43	6272
Left with: partner	0.20	0.40	6272
Left behind: partner	0.28	0.45	6272
Left behind: children	0.16	0.37	6272
Left behind: parents	0.51	0.50	6272
Returned or plans to return	0.56	0.50	6272
Return intention: don't know	0.24	0.43	6272
Settle outside Ukraine	0.18	0.39	6272
Returned	0.08	0.27	5264
Moved to another country	0.04	0.20	5264
Returned temporarily	0.30	0.46	1287

Most Ukrainians wanted to return initially



Children by age and sex (cohabiting)

non-cohabiting



Threat 2: no differential selection

Early leavers with teenage boys should not be differentially selected

	Female	Age	Tertiary	Msc	Speaks EN	Worked in UA
Any boy 10-18	0.056*	1.528**	0.008	0.006	-0.020	0.092**
	(0.029)	(0.694)	(0.041)	(0.053)	(0.052)	(0.040)
Observations	6,272	6,129	6,272	6,272	6,272	6,272
R^2	0.085	0.163	0.043	0.066	0.144	0.105
	Urban	Behind: partner	Behind: children	Behind parents	Hosted in Eastern Europe	Hosted in Southern Europe
Any boy 10-18	0.051	-0.000	0.033	0.112**	-0.051	0.008
	(0.047)	(0.055)	(0.036)	(0.054)	(0.053)	(0.042)
Observations	6,272	6,272	6,272	6,272	6,272	6,272
R^2	0.085	0.093	0.089	0.099	0.057	0.024

Balance test: p=0.012 Reason for leaving

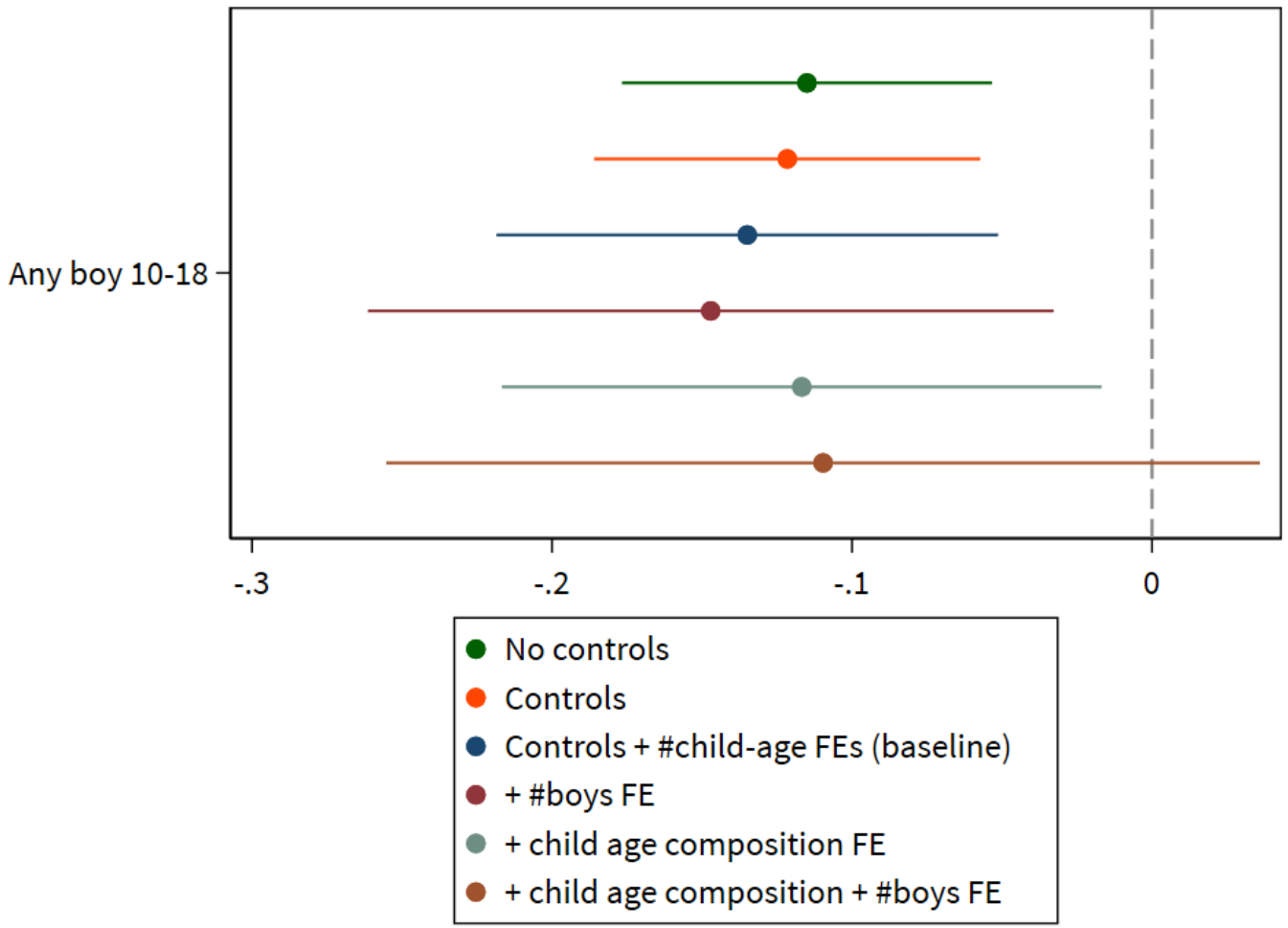
Results: return intentions

	Returned or plans to return	Does not know	Settle outside Ukraine
Any boy 10-18	-0.135***	0.055*	0.076**
	(0.043)	(0.031)	(0.033)
Observations	6,129	6,129	6,129
R^2	0.167	0.079	0.184
Mean dep. var.	0.563	0.243	0.183
Controls and #child-age FE	✓	✓	✓

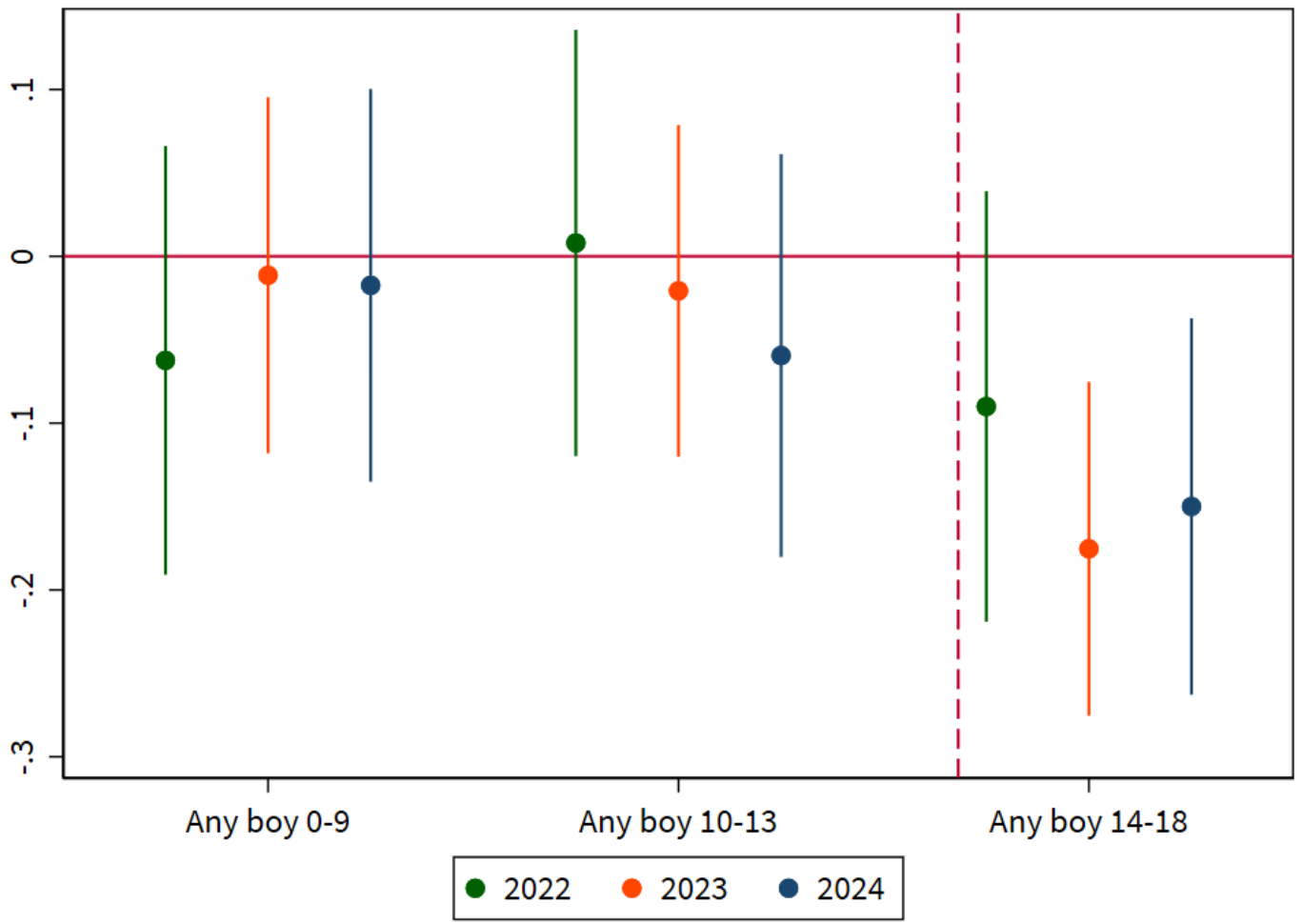
Long-run return intentions

Sensitivity to structure of FEs

Outcome: Returned or plans to return



Effects on (plans to) return over time and age group



Robustness on (plans to) return

Alternative early-leaver definition (months)	Left F/M	Left F/M/A	Arrive F/M/A	Arrive F/M/A/M
Any boy 10-18	-0.142***	-0.130***	-0.126***	-0.122***
	(0.047)	(0.043)	(0.044)	(0.043)
Observations	5,127	5,911	5,530	5,928
R^2	0.175	0.170	0.179	0.171
Alternative choices:	Oblast FE	Raion FE	At least 1 child	At least one child 10-18
Any boy 10-18	-0.124***	-0.124***	-0.128***	-0.127***
	(0.042)	(0.044)	(0.043)	(0.048)
Observations	6,129	5,693	3,450	2,326
R^2	0.188	0.220	0.203	0.223

Results: Actual mobility

	Returned to Ukraine	Moved to third country	Went back to Ukraine temporarily (early 2023)
Any boy 10-18	-0.044*	0.043**	
	(0.026)	(0.021)	
Any boy 10-17			-0.146**
			(0.058)
Observations	5,143	5,143	1,255
R^2	0.142	0.160	0.183
Mean dep. var.	0.082	0.043	0.302

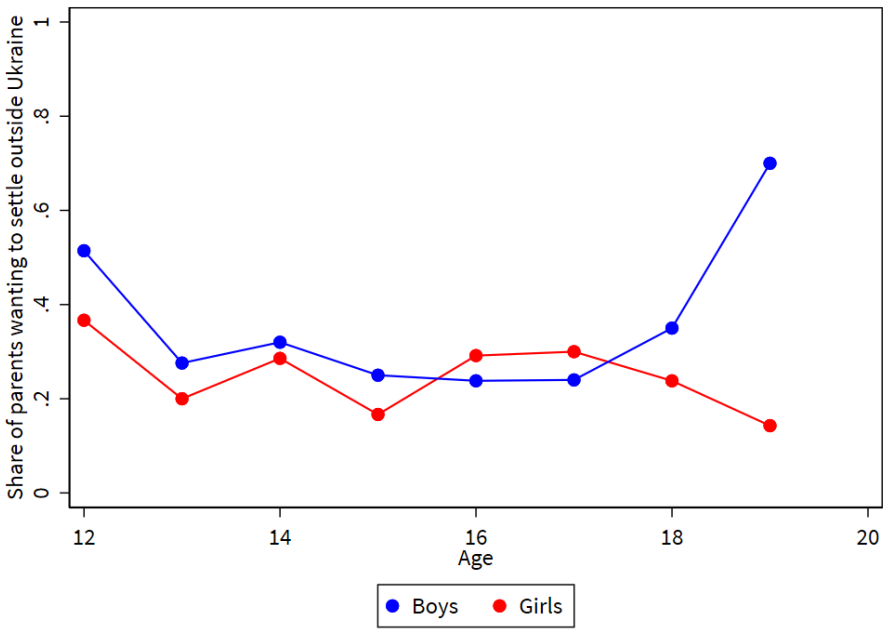
Integration outcomes (fall 2024)

	Working	Works at least 25 hours	Monthly labor income (€)	Monthly benefits (€)	Work corresponds to qualifications
Panel A: Baseline model					
Any boy 10-18	0.109**	0.174***	174.391	-49.209	-0.009
	(0.056)	(0.062)	(142.443)	(58.919)	(0.063)
Observations	873	873	409	555	710
R^2	0.293	0.300	0.514	0.403	0.287
Mean dep. var.	0.719	0.487	1074.382	238.007	0.411
Panel B: + current host country FE					
Any boy 10-18	0.103*	0.169***	184.416	-64.180	-0.004
	(0.058)	(0.064)	(149.234)	(62.333)	(0.065)
Observations	871	871	409	555	708
R^2	0.334	0.337	0.530	0.439	0.316
Mean dep. var.	0.721	0.488	1074.382	238.007	0.412

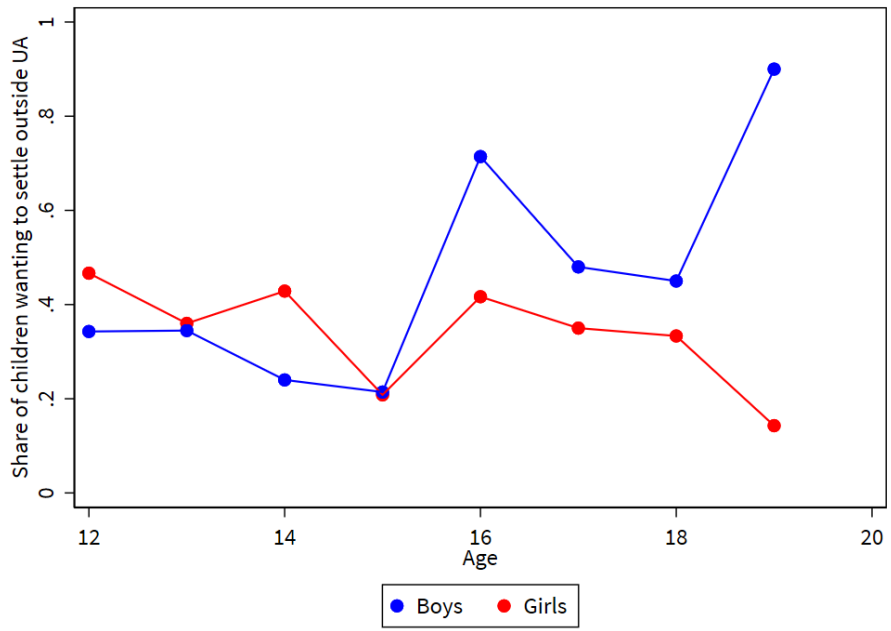
Integration outcomes

	Reading (1-5)	Speaking (1-5)	Started a language course (0-1)	Feel integrated (1-5)
Panel A: Baseline model				
Any boy 10-18	0.001	0.021	0.014	0.051
	(0.101)	(0.103)	(0.038)	(0.084)
Observations	2,147	2,150	1,633	2,145
R^2	0.310	0.262	0.201	0.123
Mean dep. var.	1.761	1.459	0.747	2.924
Any boy 10-18	0.040	0.038	0.011	0.065
	(0.102)	(0.105)	(0.038)	(0.085)
Observations	2,146	2,149	1,632	2,144
R^2	0.349	0.292	0.227	0.147
Mean dep. var.	1.761	1.460	0.748	2.925

Children: staying intentions

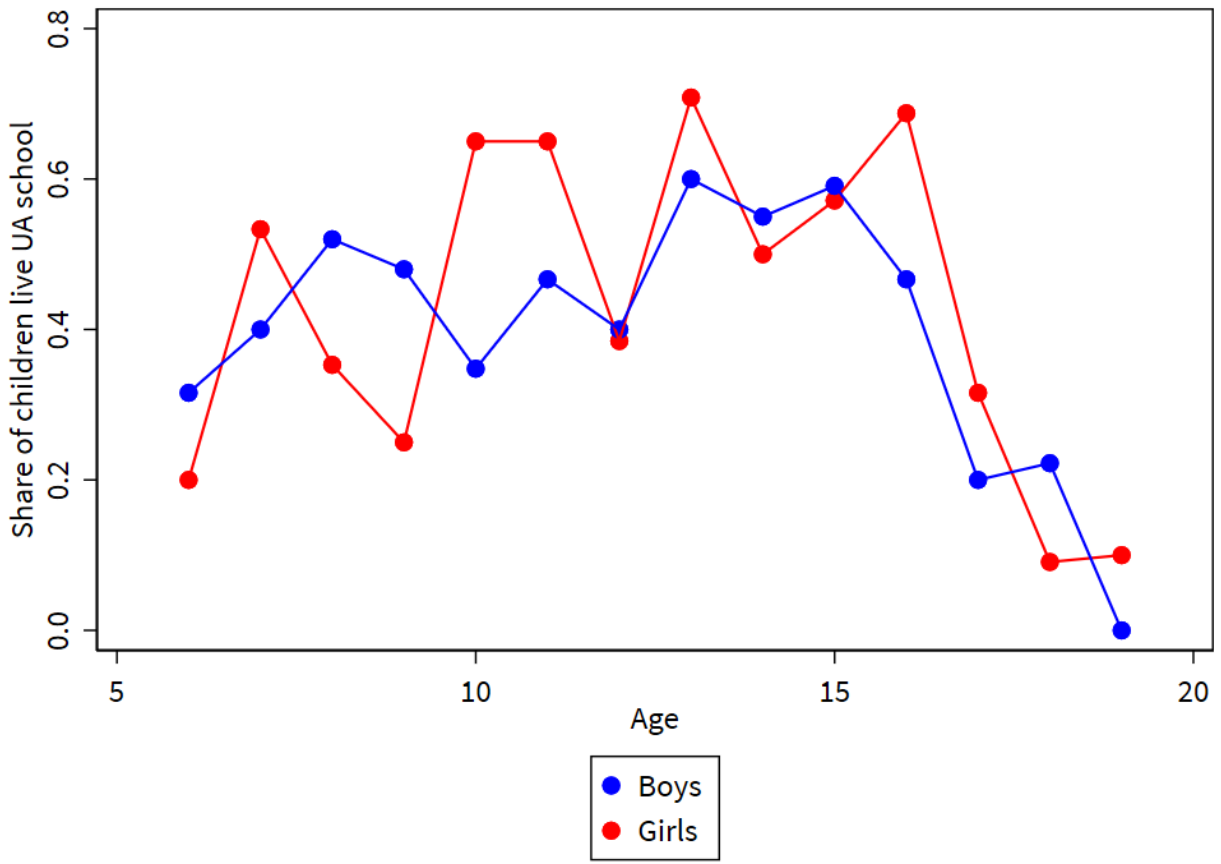


Parents

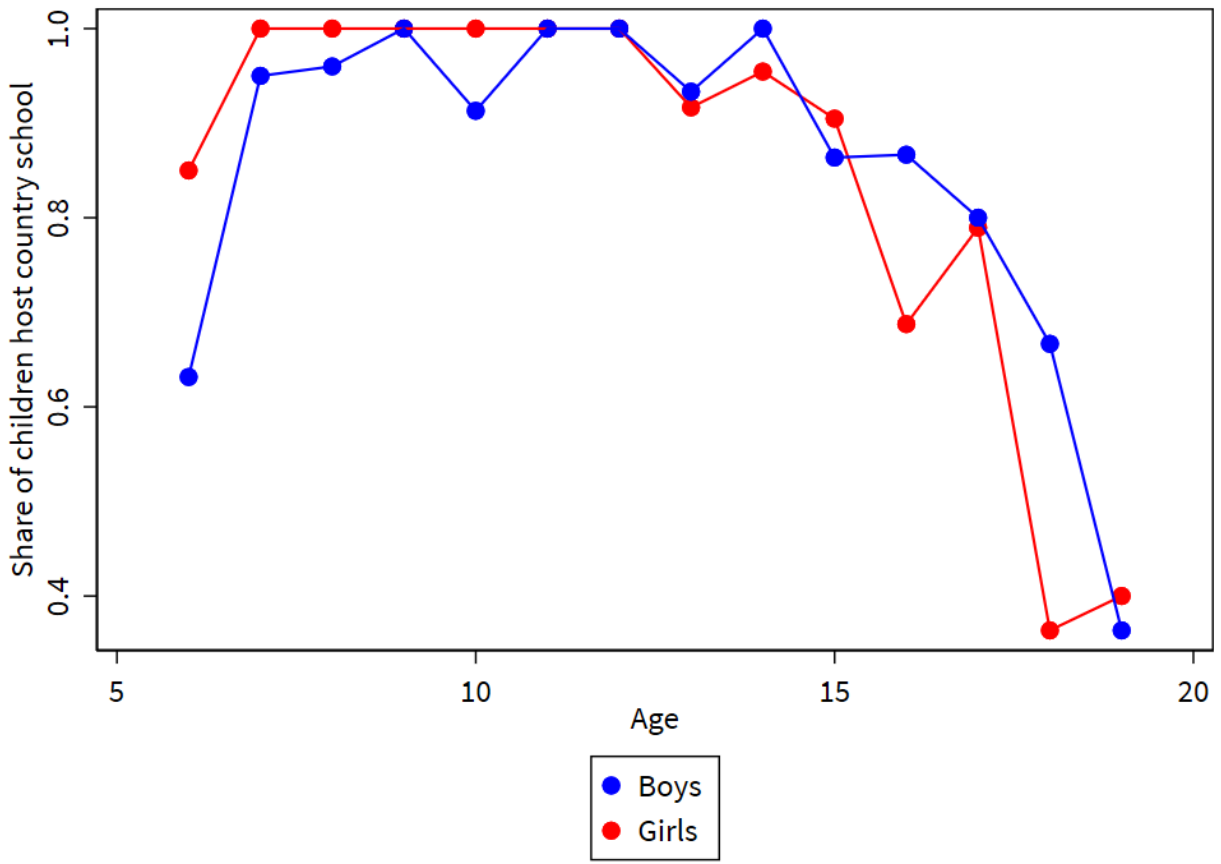


Children

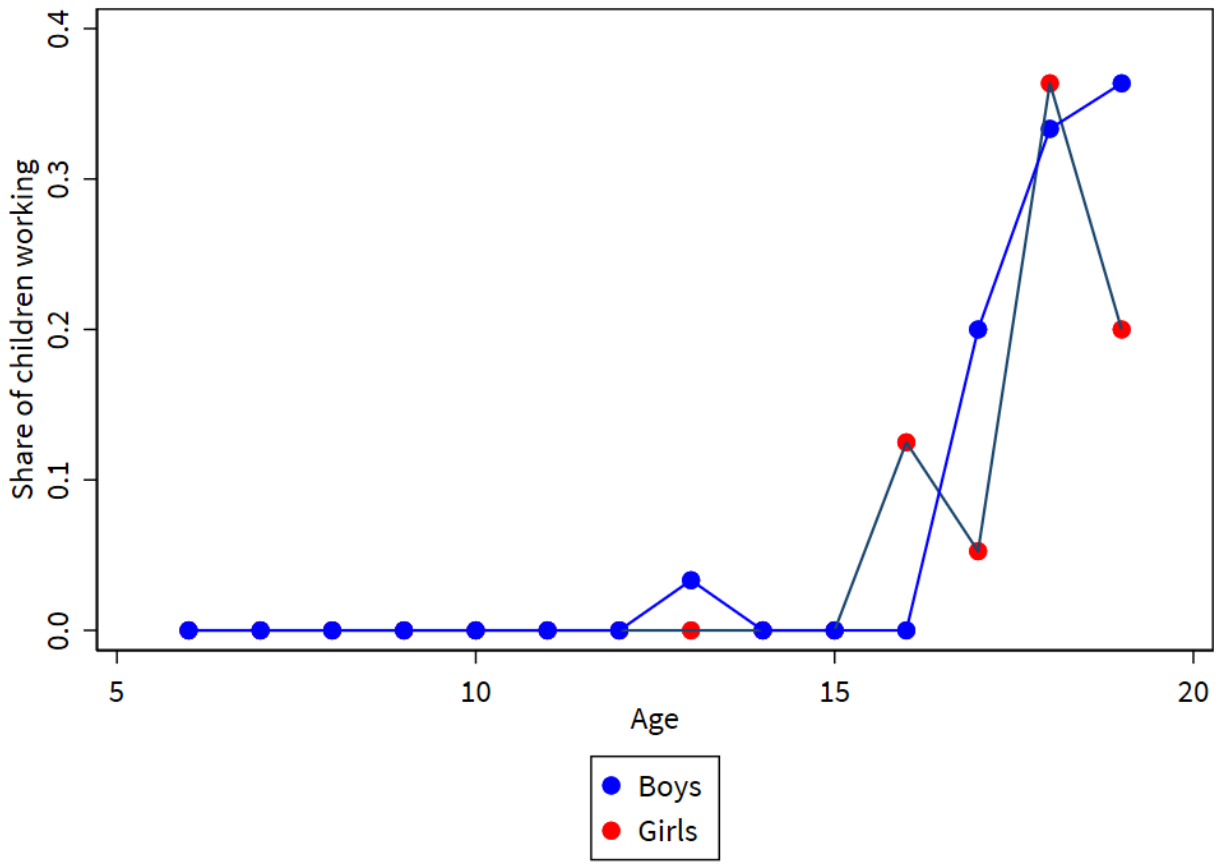
Children: in any form of Ukrainian school (in-person or online)



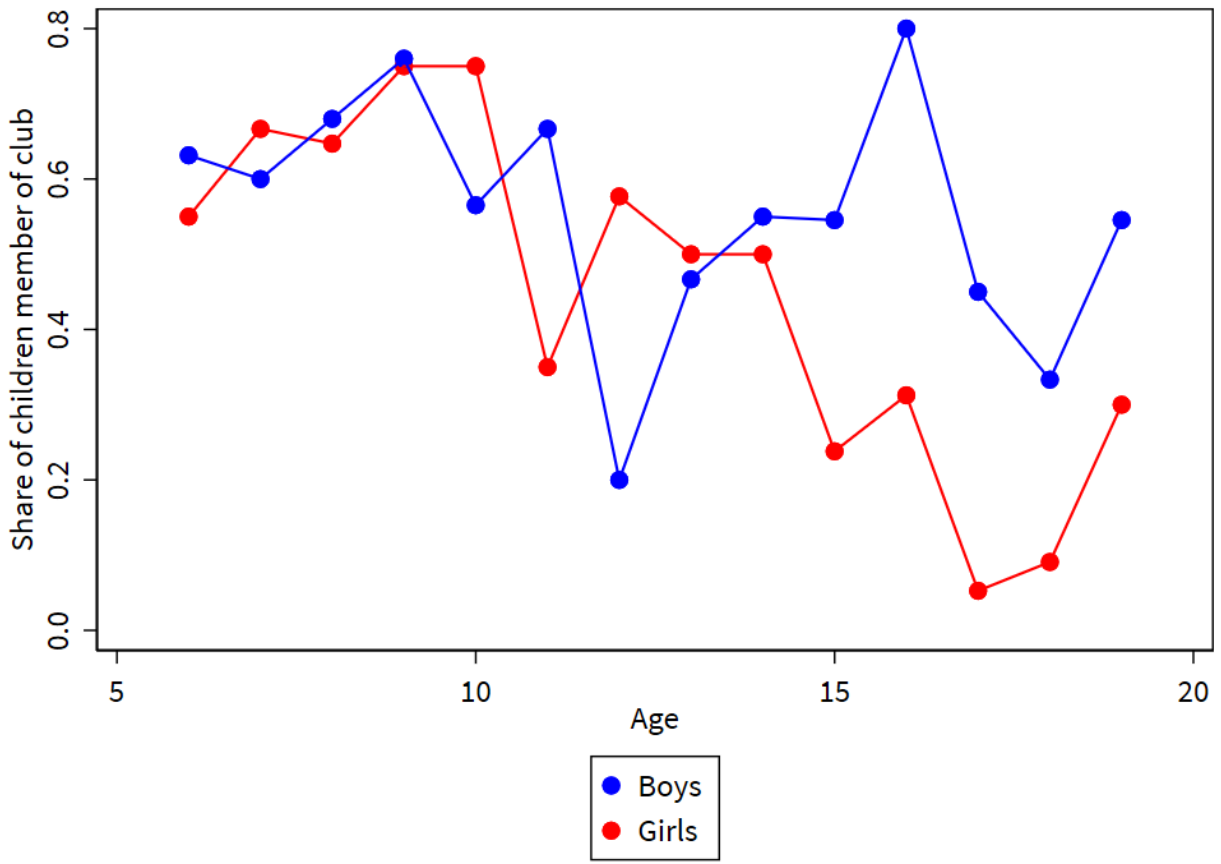
Children: Host country schools



Children: Working



Children part of a non-school club



To be done: compare to other migrant groups in Europe

Human capital investments among Ukrainian adolescents

The war can affect schooling decisions in several ways:

- Boys relative to girls
  $\rightarrow$ Boys have an incentive to invest in education and perform better to prevent conscription
- abroad relative to in Ukraine
  $\rightarrow$ Those abroad have an incentive to invest in more general skills
- boys abroad face the uncertainty of not being able to return
  $\rightarrow$ More investments in general skills

Ukrainian school exams

- Every year about 300,000 test takers ($\approx$ 60% of a cohort).
- Exams typically in June, in 2022 in July-August. Hence, 2022 captures mostly early leavers.
- Cohort cutoff is September 1; the vast majority of text takers is 17, some 16
- Since 2022 exam centers abroad: 9% of all test takers

Data from UA Center for Evaluation of the Quality of Education:

- Anonymized microdata contains sex, year of birth, school (including regional identifier), and temporary test center in and out of Ukraine.
- I restrict the analysis to those taking the test in the year of graduation and omit those 18 and older, dropping 20% of the sample.

Available subjects

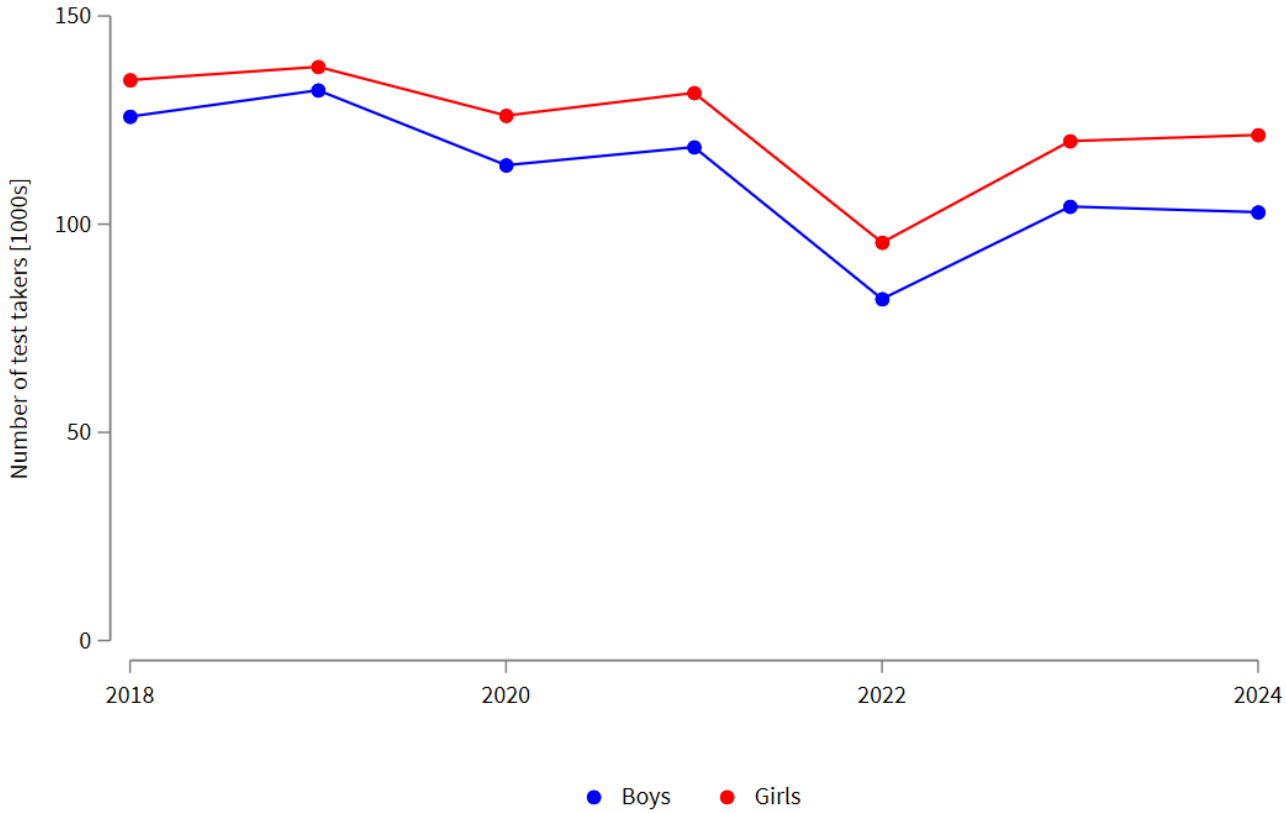
Subjects:

- Ukraine-specific: Ukrainian language, Ukrainian history and Ukrainian literature
- Internationally applicable: English, Maths, Physics, Chemistry, and Biology
- Foreign-country-specific: German, French, and Spanish

Subject requirements:

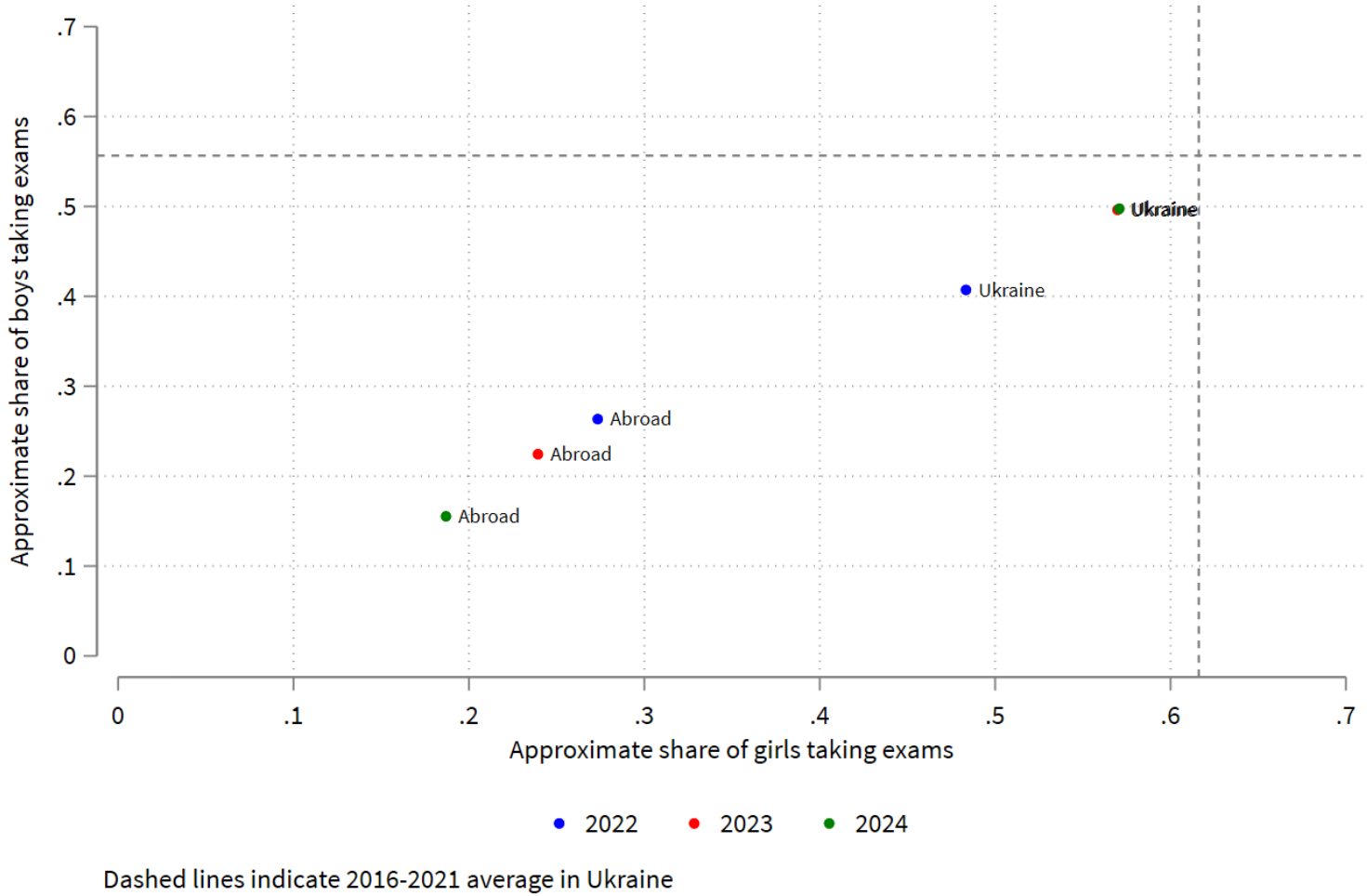
- before 2022: mostly 3 or 4 courses
- 2022: just 3 courses, Ukrainian language, History and Maths
- 2023: just 3 courses, Ukrainian language, Maths, and one choice
- 2024: at least Ukrainian language, History and Maths, up to one choice

Test takers over time



- Drop of 28% in 2022, 10% in 2023 and 2024.
- Sex-specific selection small (1-2 percentage points)

Exam taking among boys and girls in UA and abroad



→ Boys abroad are relatively more likely to take the test

Empirical strategy

Design I: compare boys and girls before and during the war

$$grade_i^s = \beta boy_i + year_i + \epsilon_i \tag{2}$$

- y_i is the grade or integration outcome of student i in subject s
- boy_i is a dummy for boys; $year_i$ are year FE
- Sample: '21-'24, among those 17 or below in Ukraine and abroad
- Caveat: subject requirements changed a lot in 2022 and after

Design II: compare boys and girls in Ukraine and abroad

$$y_i^s = \beta boy_i + \gamma abroad_i + \delta boy_i \times abroad_i + year_i + \epsilon_i \tag{3}$$

- y_i^s is a dummy for participation or the grade in subject s
- Sample: '22-'24, among those 17 or below in Ukraine and abroad

Boys do better during the war (effect sizes in s.d.)

	Ukrainian	Ukrainian history	Math	Sciences	English	French, German, Spanish
Male	-0.454***	-0.210***	0.022***	-0.131***	-0.134***	-0.085*
	(0.004)	(0.006)	(0.006)	(0.007)	(0.007)	(0.050)
Male × 2022	0.177***	0.116***	0.030***			
	(0.006)	(0.007)	(0.007)			
Male × 2023 and 2024	0.189***	0.118***	0.005	-0.009	0.053***	-0.021
	(0.005)	(0.007)	(0.006)	(0.008)	(0.008)	(0.054)
Observations	858,022	659,402	741,677	169,080	271,752	6,660
R^2	0.068	0.085	0.069	0.012	0.009	0.006
Year FE	✓	✓	✓	✓	✓	✓

Exam participation by subject

- Those abroad take host-country specific skills
- Boys take more general skills (English and Sciences)

	Ukrainian history	Sciences	English	French, German, Spanish
2023 × Abroad	-0.295***	-0.045***	0.272***	0.068***
	(0.005)	(0.004)	(0.005)	(0.003)
2023 × Abroad × Male	-0.008	0.023***	-0.006	-0.008**
	(0.007)	(0.005)	(0.007)	(0.004)
2024 × Abroad		-0.109***	0.165***	0.147***
		(0.004)	(0.006)	(0.004)
2024 × Abroad × Male		0.011**	0.022***	-0.045***
		(0.005)	(0.008)	(0.005)
Observations	224,190	448,508	448,508	448,508
R^2	0.029	0.013	0.035	0.065
Mean dep. var.	0.523	0.184	0.378	0.011
Sex-year FE	✓	✓	✓	✓

Exam grades by subject (effect size in s.d.)

Those abroad do better in UA and Math

Those abroad do worse in UA history and literature

worse (better) in UA (foreign) languages over time

Boys abroad do relatively better in almost every subject, suggesting they exert more effort

	Ukrainian	Ukrainian history	Math	Sciences	English	Foreign languages	Ukrainian Literature
2022 × Abroad	0.087***	-0.049***	0.173***				
	(0.007)	(0.007)	(0.008)				
2023 × Abroad	0.051***	-0.075***	0.146***	0.031	0.113***	0.068	
	(0.007)	(0.013)	(0.009)	(0.019)	(0.011)	(0.042)	
2024 × Abroad	-0.045***	-0.055***	0.095***	0.026	0.181***	0.142***	-0.309***
	(0.007)	(0.008)	(0.010)	(0.023)	(0.012)	(0.036)	(0.041)
2022 × Abroad × Male	0.058***	0.078***	0.095***				
	(0.010)	(0.010)	(0.011)				
2023 × Abroad × Male	0.052***	0.086***	0.065***	0.026	0.042***	-0.039	
	(0.009)	(0.018)	(0.012)	(0.029)	(0.015)	(0.071)	
2024 × Abroad × Male	0.056***	0.051***	0.053***	0.112***	0.025	-0.036	0.104
	(0.010)	(0.011)	(0.014)	(0.035)	(0.017)	(0.066)	(0.065)
Observations	625,003	518,713	590,860	81,566	167,495	4,783	32,484
R^2	0.072	0.075	0.101	0.011	0.016	0.012	0.045
Sex-year and male FE	✓	✓	✓	✓	✓	✓	✓

Languages by location

- Lower foreign language skills are driven by host-country languages: Men invest in more general skills (English)
- Stronger English skills are driven by both English- and non-English speaking destinations, but FR/DE/ES skills are driven by those in countries where it is spoken.

	Taken		Grade	
	English	FR/DE/ES	English	FR/DE/ES
In other country	0.201***	0.006***	0.130***	-0.002
	(0.004)	(0.001)	(0.008)	(0.072)
In ... -speaking country	0.516***	0.247***	0.314***	0.118***
	(0.010)	(0.005)	(0.021)	(0.027)
In other country × Male	0.010*	-0.000	0.025**	-0.029
	(0.006)	(0.001)	(0.012)	(0.107)
In ... -speaking country × Male	-0.039***	-0.040***	0.027	-0.040
	(0.014)	(0.007)	(0.030)	(0.049)
Observations	448,508	448,508	167,495	4,783
R^2	0.036	0.144	0.015	0.012
Mean dep. var.	0.378	0.011		

Conclusion

Findings:

- Having a teenage boy in the family strongly reduces parents' return (plans), seems to improve economic but not linguistic integration
- Boys do better in school; boys abroad more likely to want to stay, invest more in general skills and are more likely to participate in host-country clubs

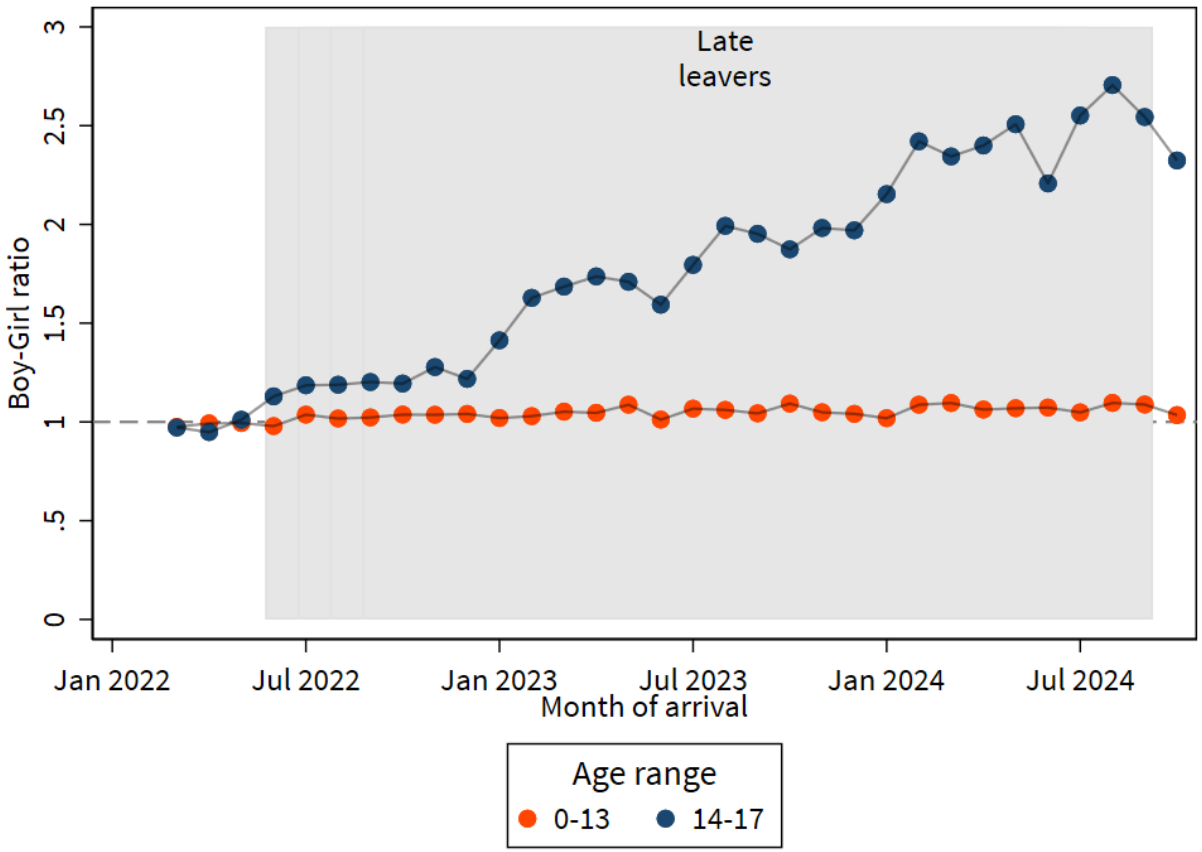
To be done:

- Further study parents' economic integration using register data and investments in children' education

Policy:

- The male travel ban at 18 likely reduced the boys' acquisition of Ukraine-specific human capital
- Considering *late leavers* to study how Ukraine's policy affected selection and how to integrate them

Late Leavers



These are families that despite the violence would not have moved if they would have only had girls

→ less prepared for host country

→ 17-year old boys who need to make important decisions about future

Thank you for your attention!

Joop Adema

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Data: BAMF survey of refugees in DE

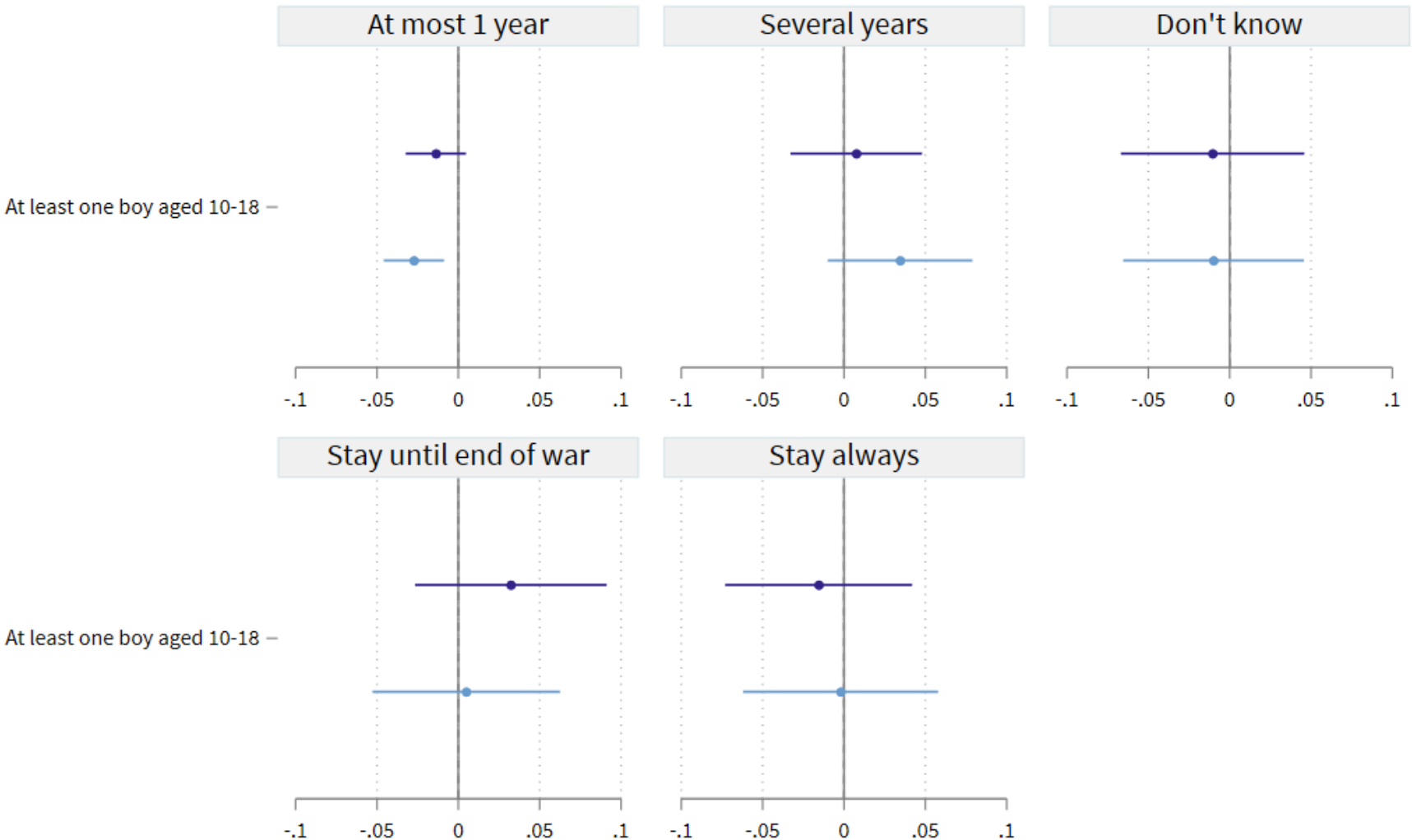
Has differently worded questions:

- "Wie lange würden Sie gerne in Deutschland bleiben?" Till end of war/at most 1 year/ several years/for ever/don't know
- Beabsichtigen Sie in die Ukraine zurückzukehren oder in ein anderes Land umzuziehen? (If not don't know of for ever in previous Q) Return to UA/live in both (only asked in 2023)/other country/don't know

Survey waves were relatively early, so effects are likely not so strong:

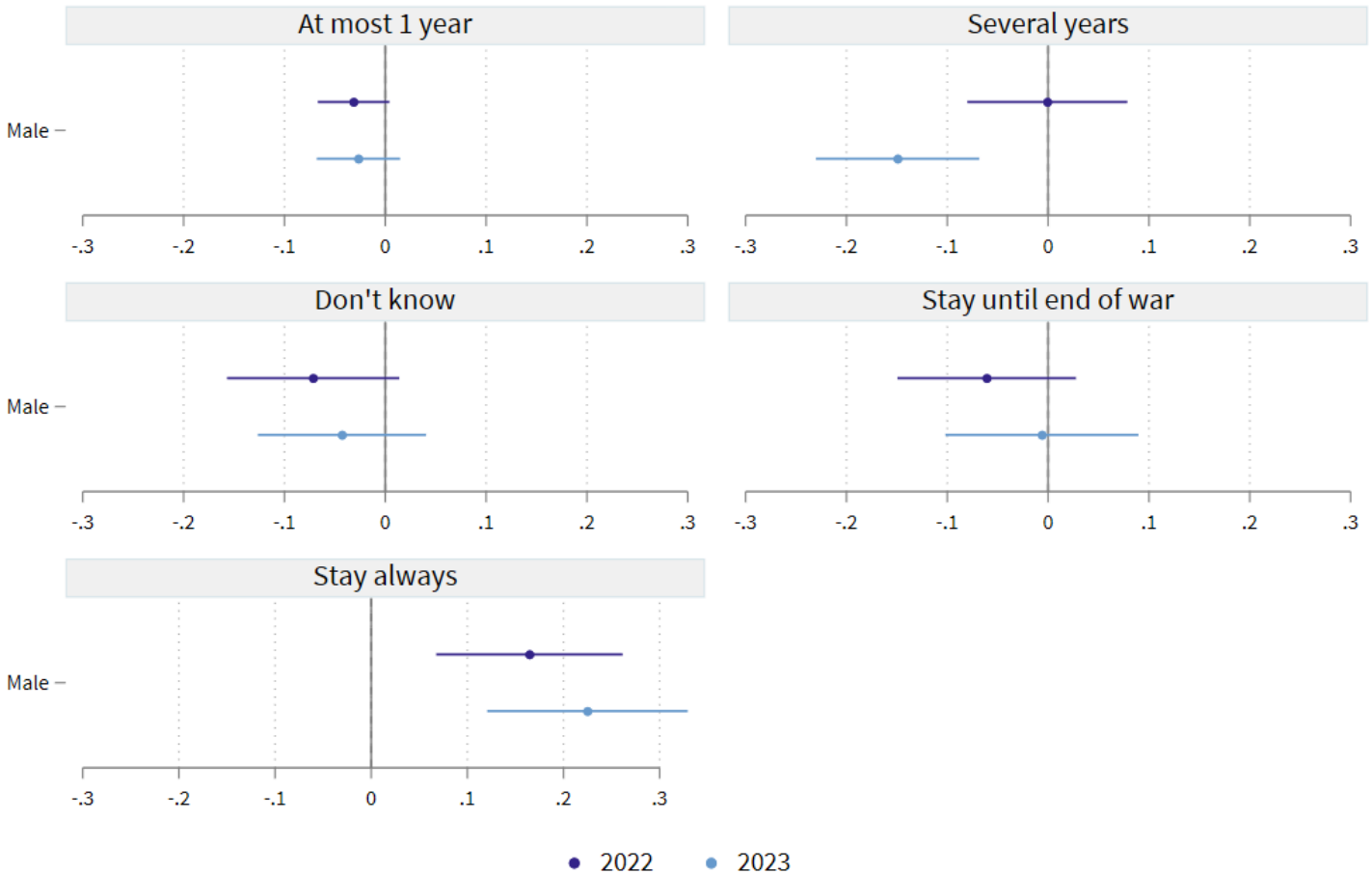
- Wave 1: 11k, fielded in August/September 2022
- Wave 2: 6.5k, fielded in January/March 2023

Return prospects of people with children



Return prospects of young people

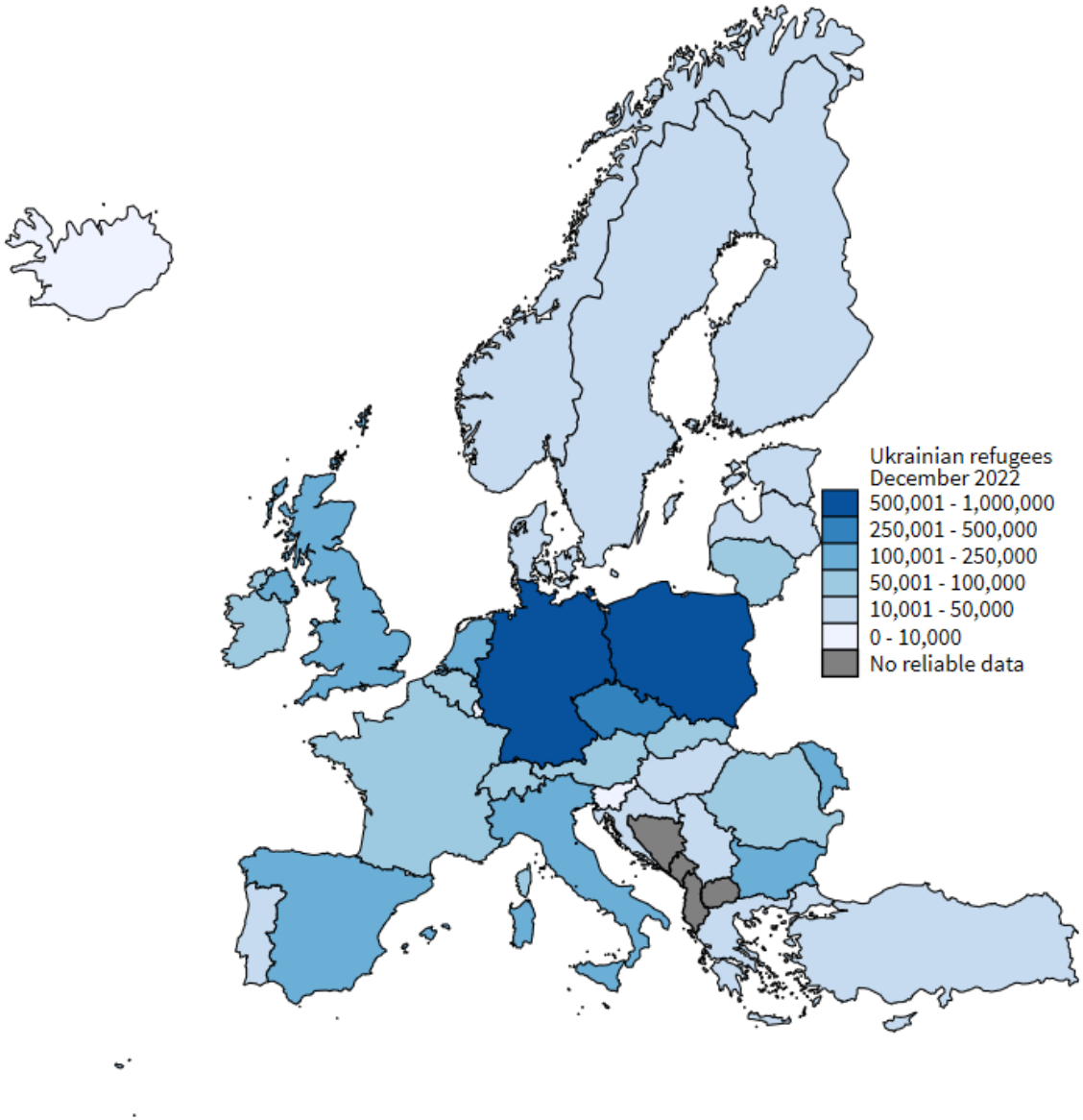
Among all respondents in the survey themselves aged 18-24 during the first survey



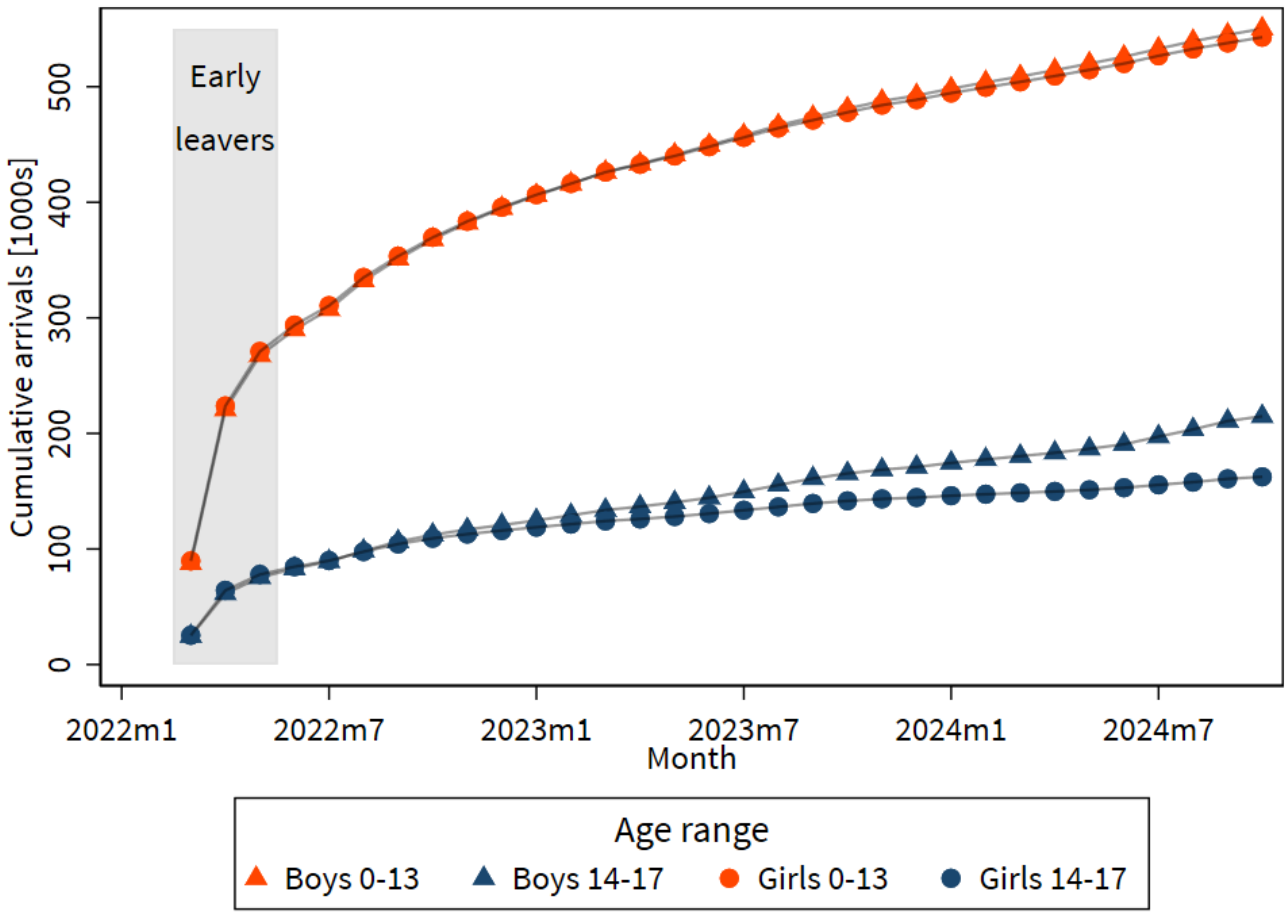
BAMF

Study integration? choice of occupation?

Ukrainian Refugee crisis

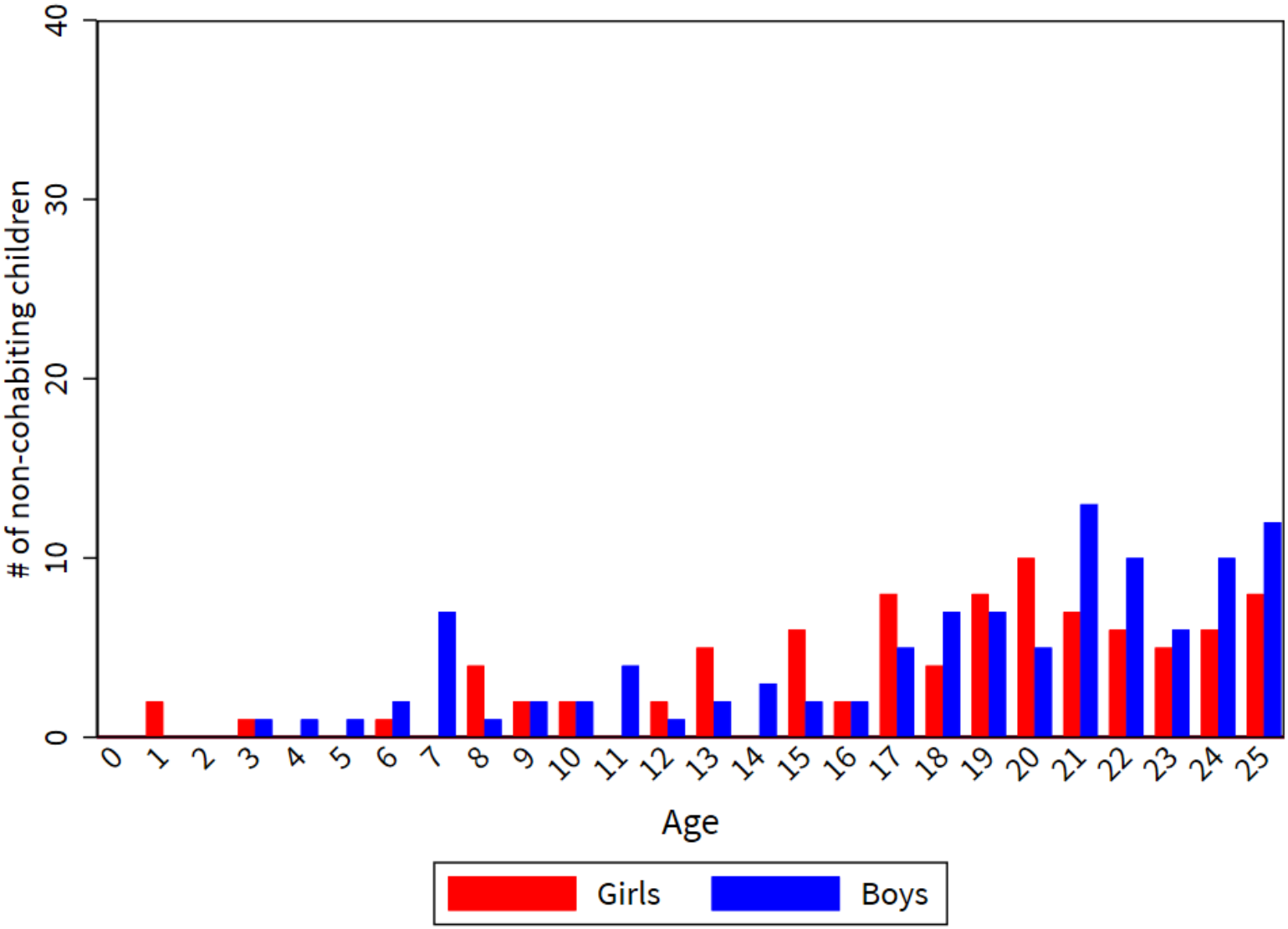


Most refugees left early



Back

Children by age and sex (non-cohabiting)



Identification assumption II: reasons for leaving

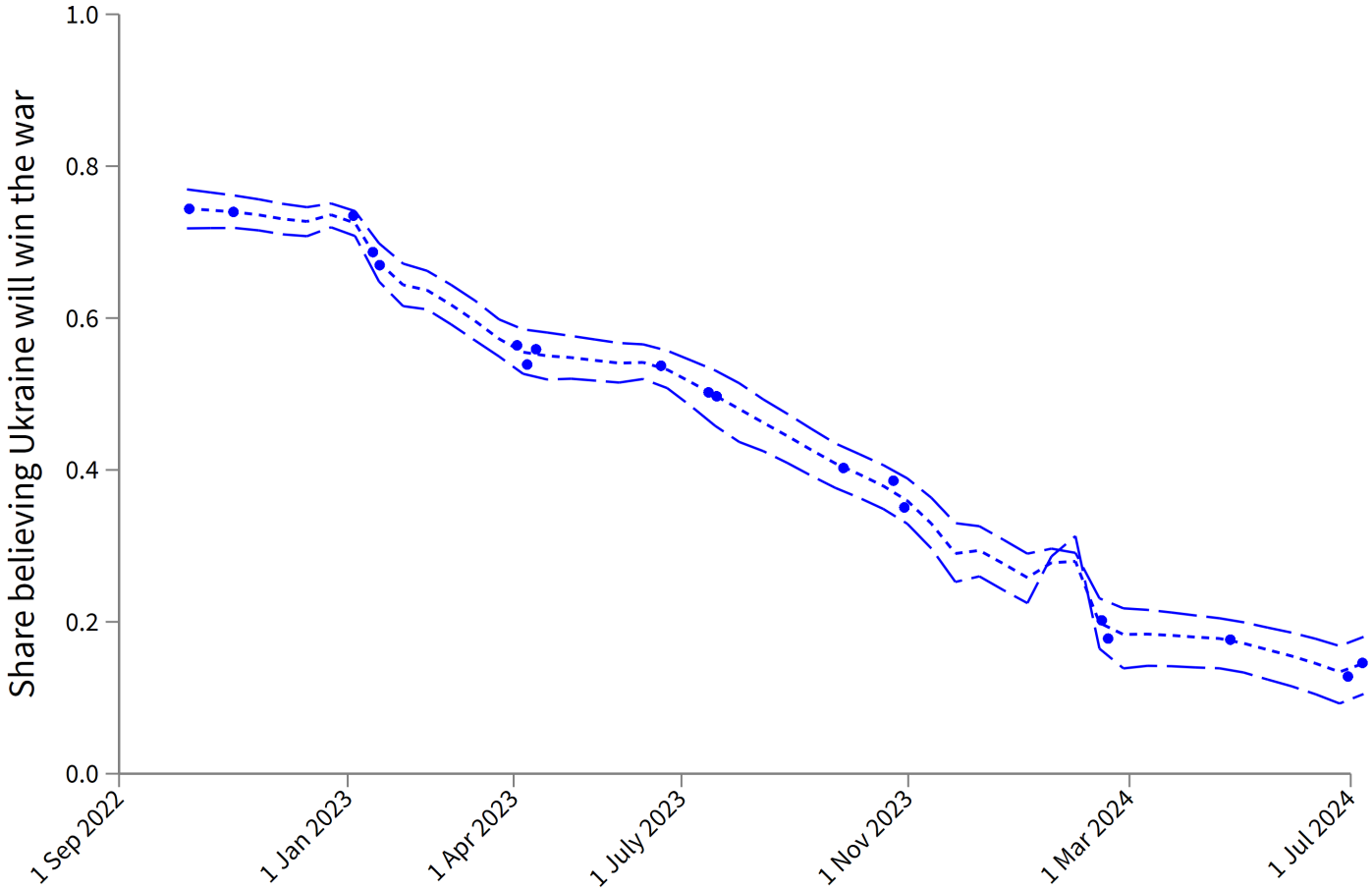
	Direct attack	Fear (own)	Fear (family)	Life not as usual	Fear of fighting
Any boy 10-18	0.035	0.051	-0.047	0.025	-0.004
	(0.048)	(0.039)	(0.034)	(0.040)	(0.005)
Observations	6,129	6,129	6,129	6,129	6,129
R^2	0.167	0.306	0.589	0.202	0.210
Mean dep. var.	0.263	0.285	0.626	0.189	0.003
	Chemical/ nuclear	Uncertain future	For op-portunity	other	
Any boy 10-18	-0.010	-0.014	-0.006	-0.013	
	(0.030)	(0.027)	(0.004)	(0.011)	
Observations	6,129	6,129	6,129	6,129	
R^2	0.143	0.178	0.255	0.160	
Mean dep. var.	0.088	0.072	0.009	0.012	

Balance test: p=0.59 back

Joint child composition of households

	# of girls				
# of boys	*0*	*1*	*2*	*3*	*Total*
	%	%	%	%	%
0	44	17	4	0	65
1	18	7	2	0	27
2	4	2	1	0	7
3	0	0	0	0	0
6	0	0	0	0	0
Total	67	27	6	1	100

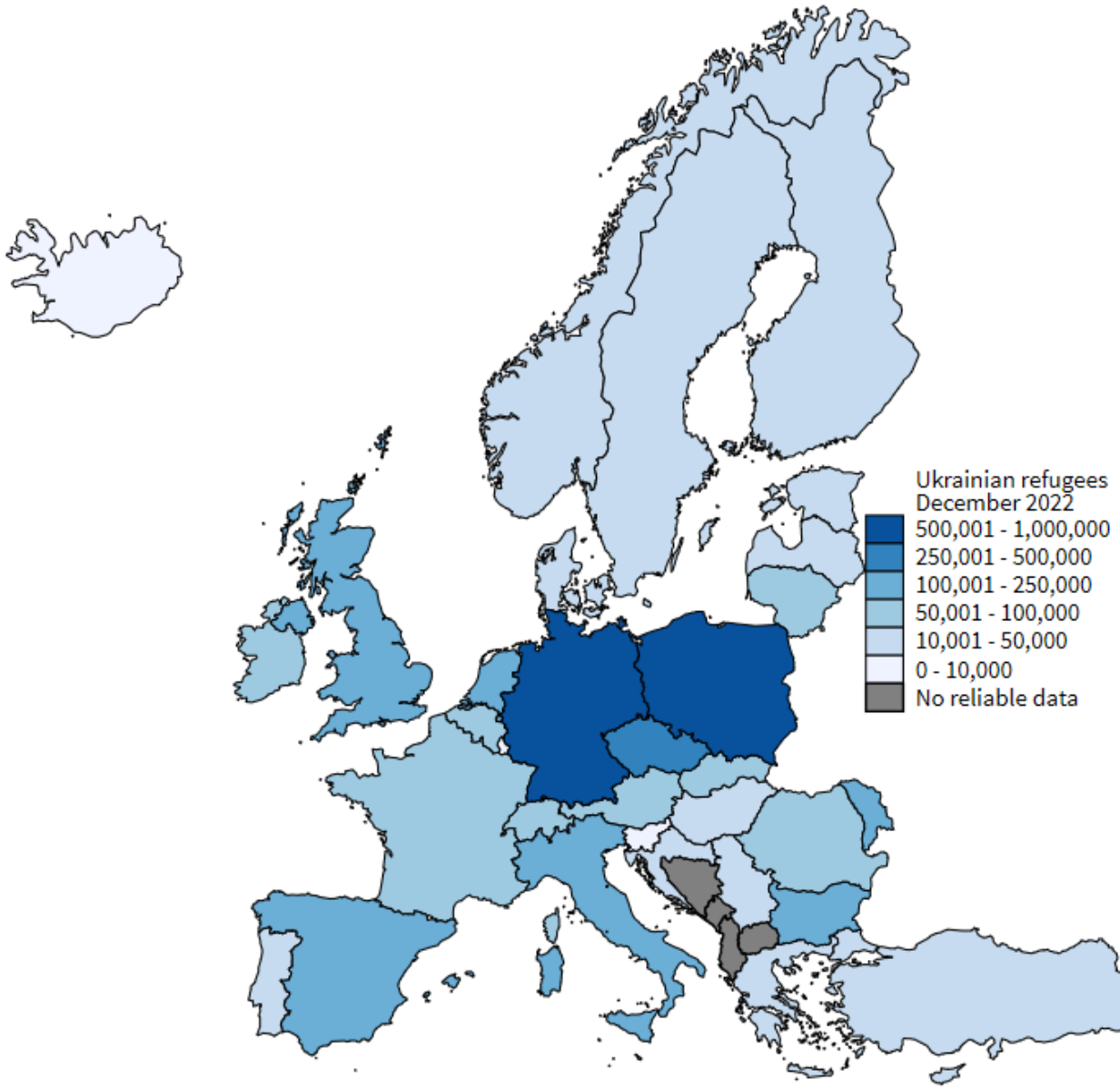
Shifted expectations



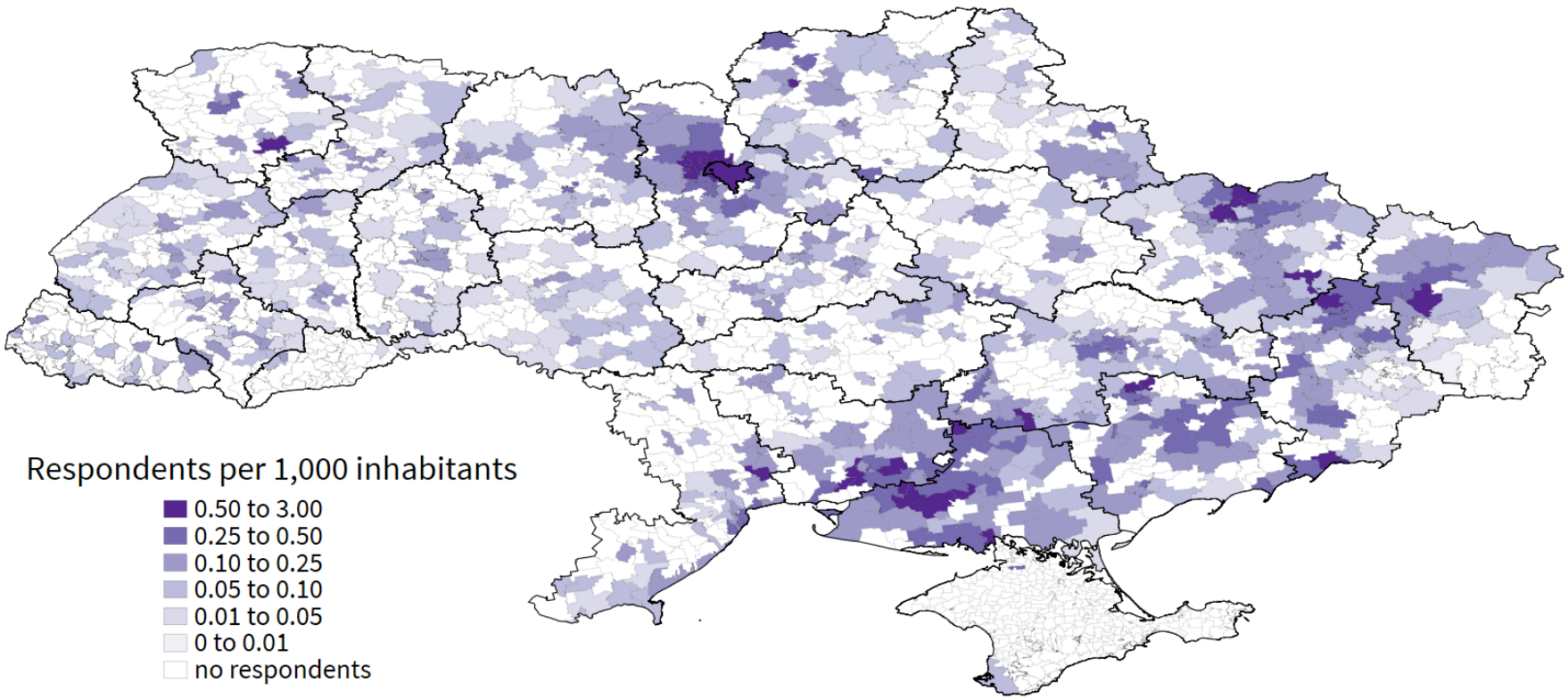
+in December 2022 (2023), 72% (44%) thought war would end <2 years

Back

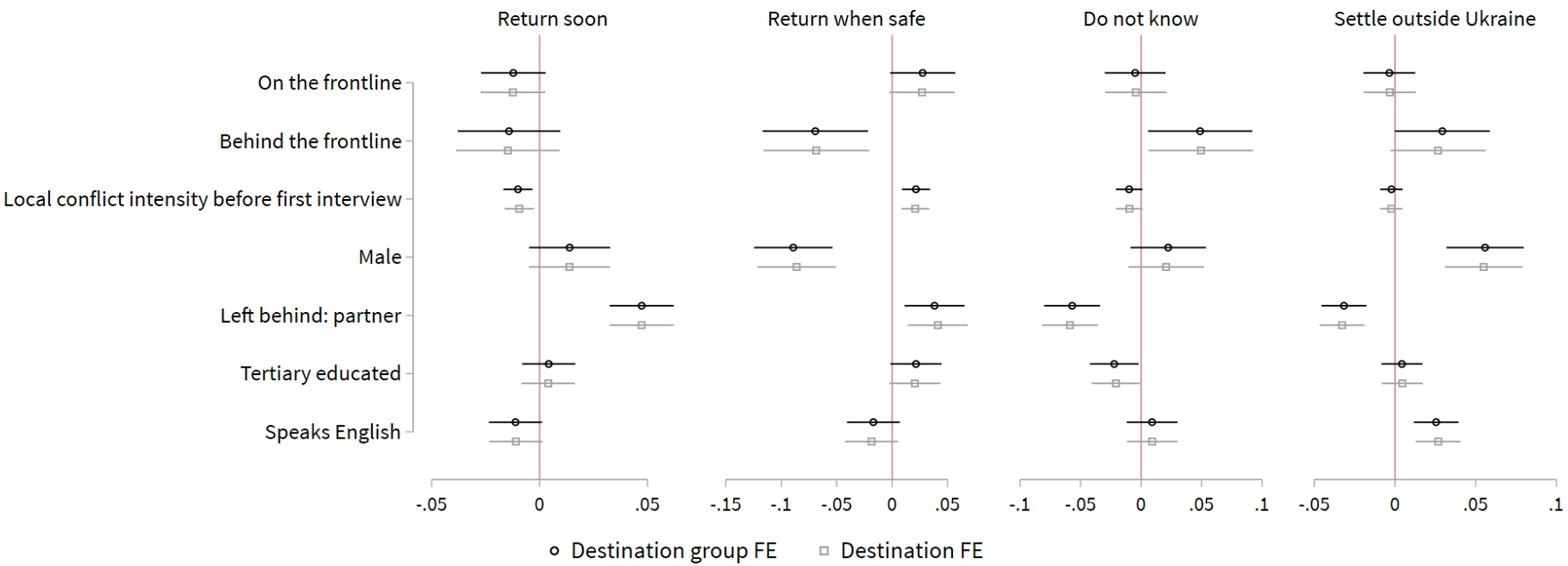
Ukrainian refugees across Europe



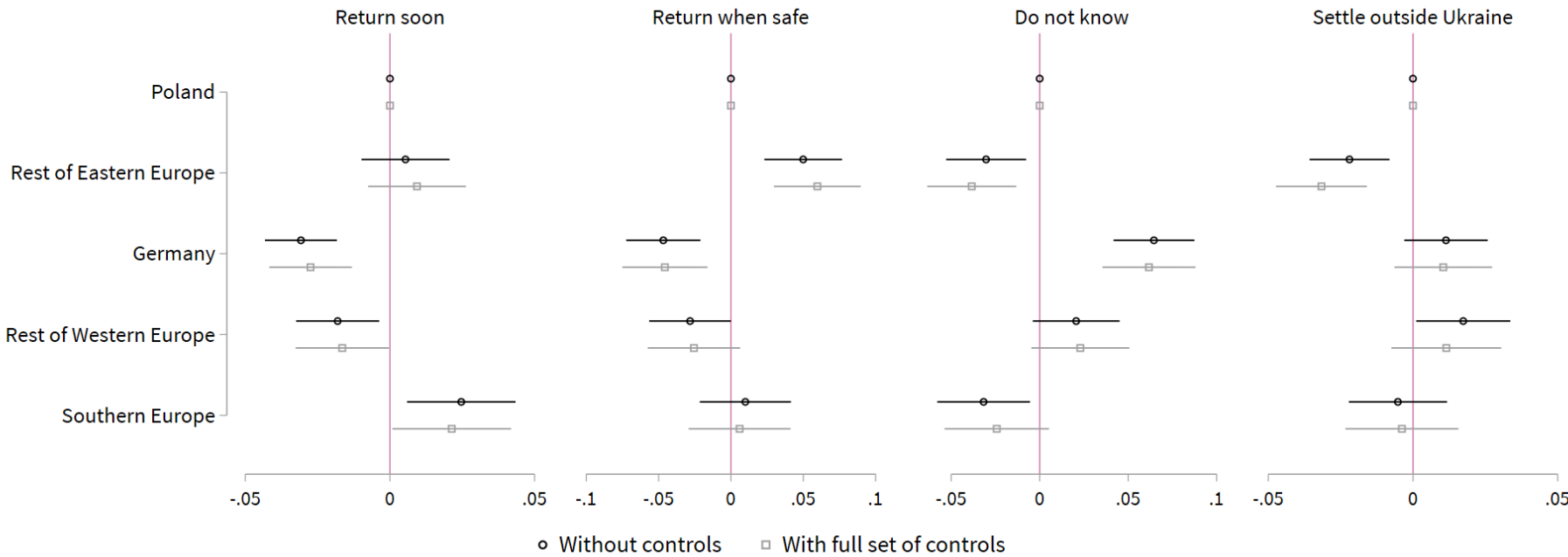
Ukrainian refugees' municipality of origin



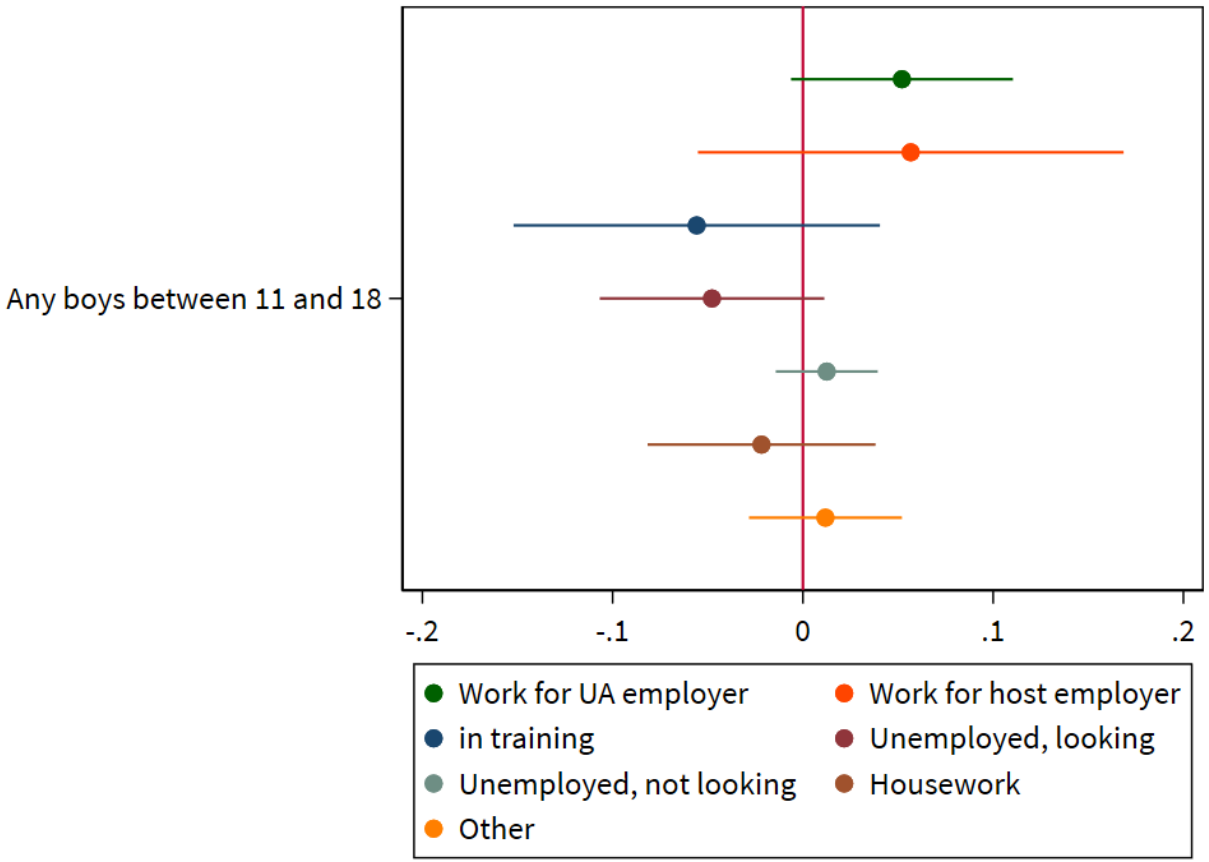
Initial return intentions by characteristics



Initial return intentions by country



Main activity (wave 7-8)



Return over time and age group

	Plan to return	Does not know	Settle outside Ukraine
Any boy 0-9	-0.018	0.007	-0.005
	(0.052)	(0.036)	(0.043)
Any boy 10-13	-0.033	-0.001	0.027
	(0.057)	(0.038)	(0.044)
Any boy 14-18	-0.148***	0.077*	0.067
	(0.054)	(0.042)	(0.043)
Observations	6,129	6,129	6,129
R^2	0.165	0.079	0.183
Mean dep. var.	0.563	0.243	0.183

Return intentions strongly predict subsequent return

Share returned to Ukraine after 250 days		
	Unweighted	Inverse Probability Weighting
Baseline return intention		
Return soon	33.1	30.9
Return when safe	9.2	8.5
Do not know	2.7	2.6
Settle outside Ukraine	0	0
Prefer not to answer	3.8	2.2

Other return intentions

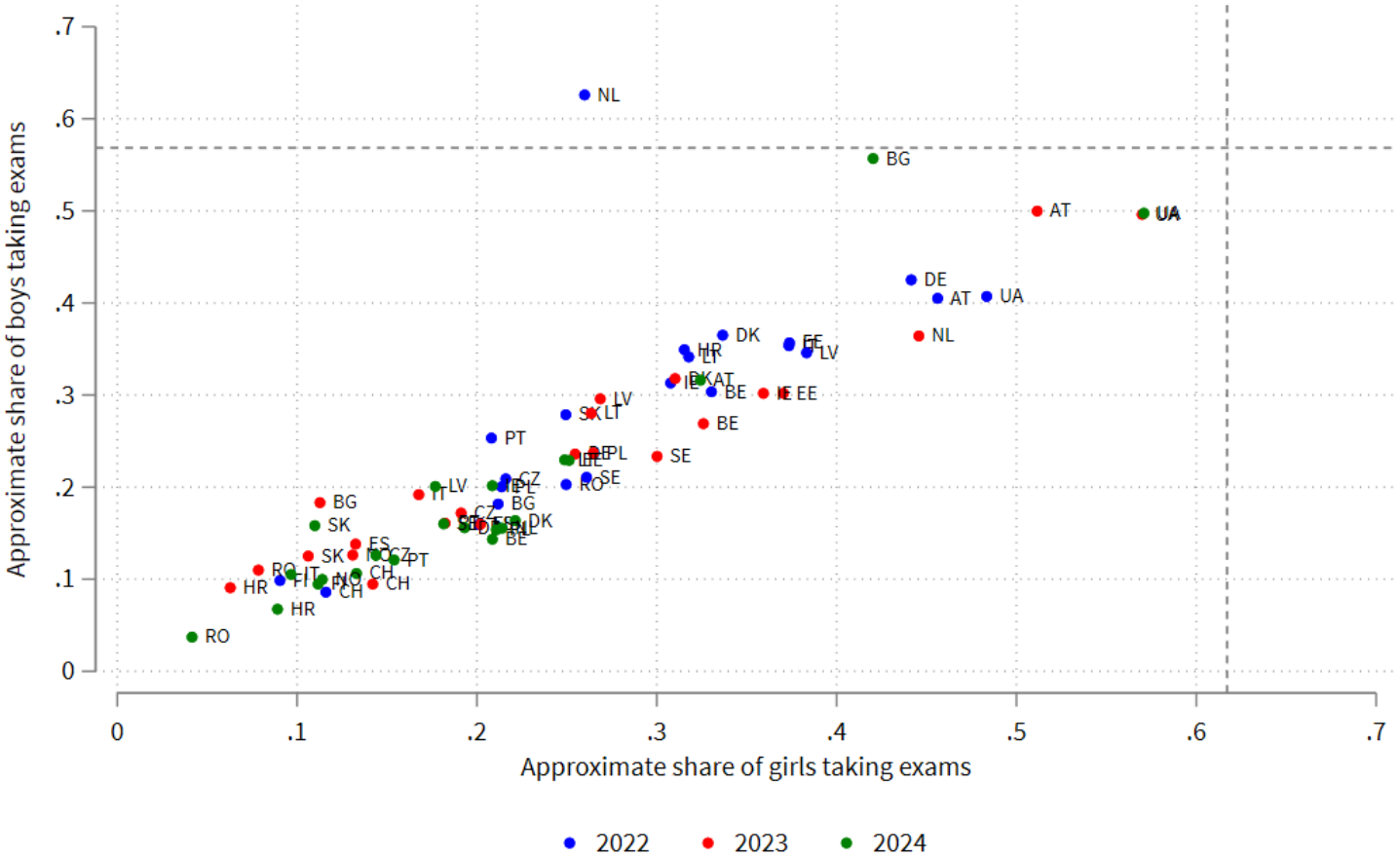
	Don't plan to return after war	Don't plan to build a future in Ukraine
Any boy 10-18	0.064	0.094*
	(0.041)	(0.049)
Observations	1,485	666
R^2	0.194	0.239
Mean dep. var.	0.192	0.162

Back

Robustness II

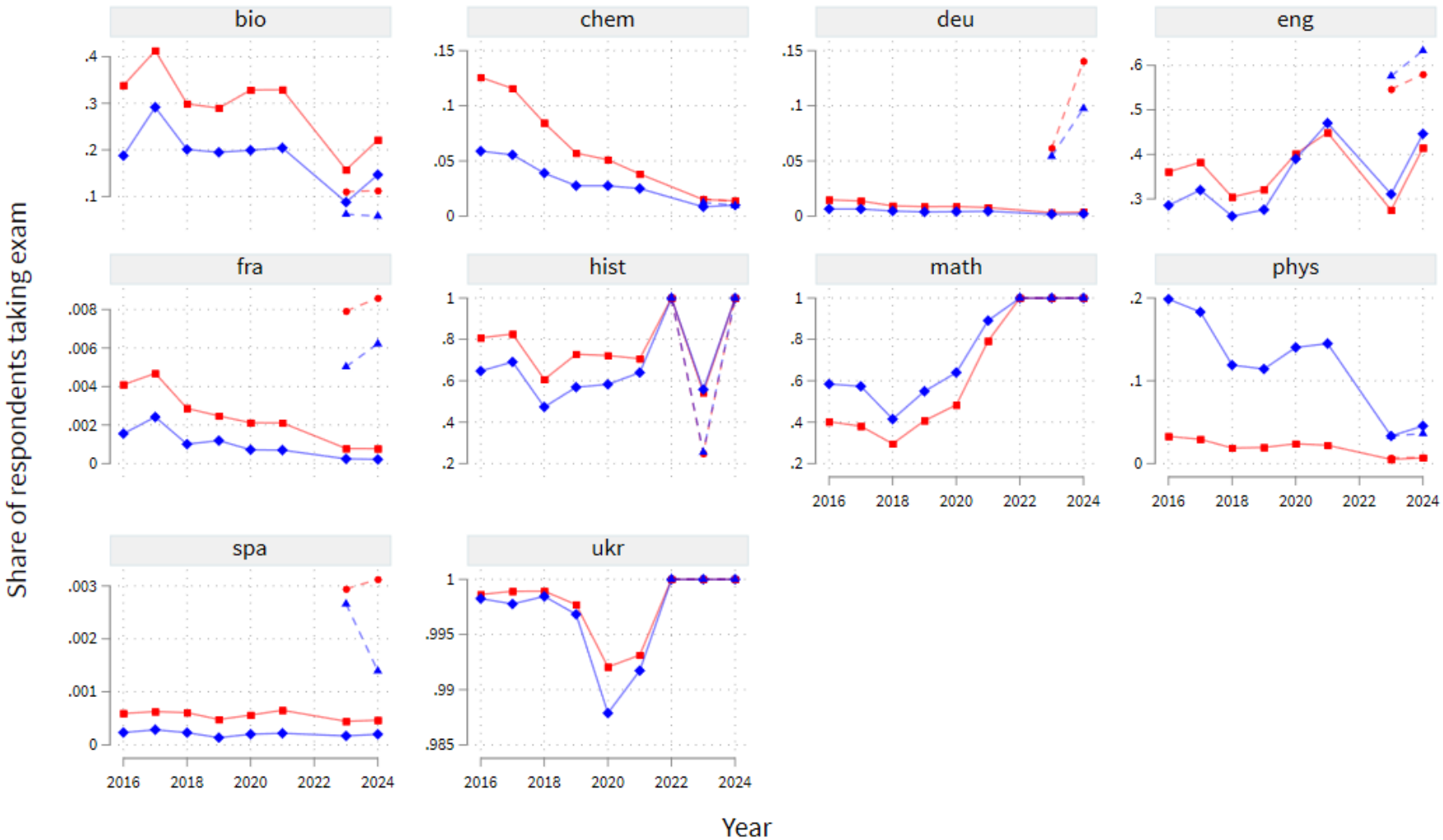
	Returned or plans to return		
Any boy 10-16	-0.089*		
	(0.047)		
Any boy 10-17		-0.111**	
		(0.044)	
Any boy 10-18			-0.137***
			(0.043)
Any boys 10-18 non-cohabiting			0.097
			(0.081)
Observations	6,129	6,129	6,129
R^2	0.163	0.165	0.168

Exam taker share by year, sex and country exam taken



Using cohort size from Ukrstat and Eurostat for outside of UA.

Takers by course over time



Grades by course over time