Mating Market Competition and Gender Norms

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Historical shocks and Gender Norm development

- Alesina et al. (2013): plough based agriculture produced a gendered division of labor that associated men with fieldwork and women with domesticity
- Majlesi (2016): demand for female labor force gives women more decision power within household
- Goldin and Katz (2002): introduction of the contraceptive pill increased returns to investments in education and career

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- **Sex ratio imbalances**: Another source of inequality of relative bargaining power

Sex-ratio Imbalances

Imbalances in sex ratio give upper hand to the scarce side. The "oversupplied" sex:

- Faces more intense competition for partners and lower probability of a match
- Is often constrained to accommodate the preferences of the scarce side:
  - Scarcity of men in university colleges correlates with more casual sex and and hookup culture (Guo and Zou 2026, Uecker and Regnerus 2010, Adkins et al. 2015)
  - Post-war scarcity of men resulted in more serial monogamy and more children born outside wedlock (Charles and Luoh (2010), Brainerd 2017)
- Forced to hedge against the possibility of remaining single
  - War-related male mortality led women to join labor force and invest more in education (Fernández, Fogli & Olivetti 2004, Boehnke and Gay 2022, Abramitzky et al. 2011, Teso 2019)

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$\Rightarrow$ *Female-biased sex ratios tend to loosen traditional gender arrangements*

This Paper

- Female-biased sex-ratio do not need to lead to loosening of traditional gender norms and can instead reinforce them
- The source of sex imbalance matters:
  - **Male exit:** competition intensifies but remains within the same pool of competitors
  - **Female influx:** competition intensifies *and* a competitor outgroup joins the competition
- Claim: The presence of competitor out-group gives incumbents the opportunity (and an incentive) to strategically target the outgroup, i.e. to undermine their position in the market by stigmatizing them as undesirable partners while displaying own quality

Intra-female competition

- Recent research in evolutionary psychology and behavioral ecology: Women, like men, compete for mates, but through in less overt means (Fisher et al., *The Oxford Handbook of Women and Competition*, 2017)
- Two main competitive strategies:
  - Epigamic display i.e. beauty (Arnocky & Vaillancourt, 2017; Buss & Dedden, 1990)
  - Derogating rivals' sexual reputation and expected fidelity through gossip and rumor spreading (Vaillancourt, 2013; Buss & Dedden, 1990)

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  - Derogating rivals' sexual reputation and expected fidelity through gossip and rumor spreading (Vaillancourt, 2013; Buss & Dedden, 1990)
- In presence of competitor outgroup: Derogating both more effective *and* less risky


HAHAHA!
HA HA!
HA HA HA!
HA HA HAHA!
SINCE THE REFUGEES HAVE BEEN CENTERED ON TEHRAN, YOU CAN'T GET ANYTHING TO EAT ANYMORE!
YOU'RE RIGHT THERE.
POOPOO!
THEY TAKE EVERYTHING.
MY NEIGHBOR EVEN SAID SHE HEARD THAT THEIR WOMEN ARE PROSTITUTING THEMSELVES. NO DIGNITY AT ALL!
SOON, IT WON'T JUST BE FOOD, WITH ALL THOSE SLUTS OUT THERE, WE'RE GOING TO HAVE TO WATCH OUR HUSBANDS.
ANYWAY, AS EVERYONE KNOWS, "SOUTHERN WOMEN ARE ALL WHORES."
?
IT'S TERRIBLE, WHAT YOU'RE SAYING!
HOW HUMILIATING!
FARTS...



Reoccurring stereotype of promiscuity of immigrant women (UN Woman 2025)

- Venezuelan refugee women in Colombia, Ecuador and Peru
- Russian women in Türkiye
- Ukrainian women in Poland
- Afghani women in Pakistan

Model of investment in traditional femininity

- We derive a partial equilibrium model in which women independently choose investment in:
  - $c_i \geq 0$ - traditional femininity and
  - $a_i \geq 0$ - labour market skills
- Investment are costly with $\kappa^c(c_i)$ and $\kappa^a(a_i)$ respectively, with $\kappa^c_c, \kappa^c_{cc}, \kappa^a_a, \kappa^a_{aa} > 0$

- If she marries, a woman gets a fixed value of marriage V
- Women work only if unmarried and earn income proportional to their investment in the labor market skill: wa_i

- An investment of c_i in traditional femininity produces an effective signal of $\theta_i c_i$
- θ allowed to be group specific - if a group of women are (successfully) stigmatized, their θ decreases

Model of investment in traditional femininity

- A woman optimizes:

$$U_i \;=\; p_i \cdot V \;+\; (1 - p_i) \cdot wa_i \;-\; \kappa^c(c_i) \;-\; \kappa^a(a_i), \tag{1}$$

where $p_i = m \cdot G(\theta_i c_i - \bar{S})$ is probability of marriage and $(G' > 0,\ G'' > 0)$

  - m - relative availability of men (gender ratio)
  - $\bar{S}$ - market-average femininity signal i.e. avg. $(\theta_i c_i)$
  - Women can be of two different types: L (locals) and R (refugees)

- Equilibrium investments implicitly defined by

$$m \cdot G'(\theta_{\mathrm{i}}\, c_{\mathrm{i}} -) \cdot \theta_{\mathrm{i}} \cdot (V - wa_{\mathrm{i}}) \;=\; \kappa_c^c(c_{\mathrm{i}}), \tag{2}$$

$$(1 - m \cdot G(\theta_{\mathrm{i}}\, c_{\mathrm{i}} -)) \cdot w \;=\; \kappa_a^a(a_{\mathrm{i}}). \tag{3}$$

Model of investment in traditional femininity

We derive equilibrium investments for three scenarios

- **Baseline**: No shock, gender ratio captured by m: c_L^{baseline} and a_L^{baseline}

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- **Male mortality**: $m\downarrow$ but all women are of the same type

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- **Female influx**: $m\downarrow$ and incumbents can impose a stigma on newcomers reducing the value of their signal i.e. $\theta_L > \theta_R$. We show that for a sufficiently large stigma $(\theta_L - \theta_R)$:

$$c_L^{\text{influx}} > c_L^{\text{baseline}} \quad \text{and} \quad a_L^{\text{influx}} < a_L^{\text{baseline}},$$

while for refugee women

$$c_R^{\text{influx}} < c_L^{\text{mortality}} \quad \text{and} \quad a_R^{\text{influx}} > a_L^{\text{mortality}}.$$

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$\Rightarrow$ **In female influx case we expect cross-specialization: locals specialize in marriage-relevant trait and refugees in labor-market skills**

Setting: The 1922-1923 refugee waves

- 1919: Greek military campaign in Asia Minor starts with the landing of Greek forces to Izmir
- 1922: The campaign is halted by newly formed Turkish army and accompanied by large-scale reprisals against the Christian populations of Asia Minor
- More than a million Christians flee to Greece
- 1923: Treaty of Lausanne mandates exchange of populations between Greece and Turkey on the basis of religion. Another 200k people forcefully displaced to Greece



- $\approx$ 1.5 million Orthodox Christians transferred to Greece, 1/2 million Muslims to Turkey
- Large resettlement plan under the auspices of the League of Nations

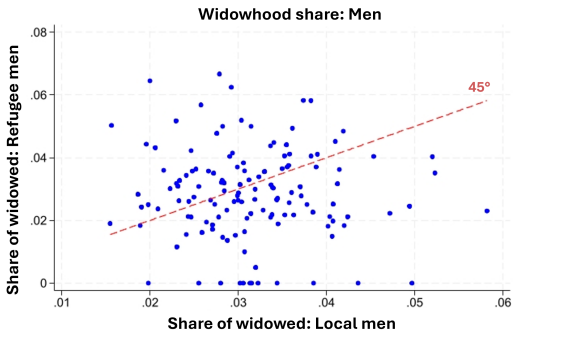
Setting: Women Refugees

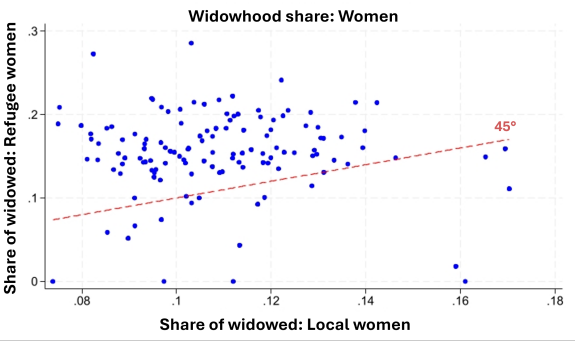
- Refugees re-settled per decision of the Refugee Settlement Commission without a possibility of choosing destination
- Roughly 50-50 distribution between urban and rural settlements
- Many men captured or executed before they could emigrate (*amele taburları*) - significant share of women arrive without partner
  - In urban ares above 16 years old - 62% female
  - Many among them widows

Setting: Widows



Setting: Widows





Share of widowed per gender and province among
local population (X-axis) and refugee population (Y-axis)

Expectations

- The inflow of refugee women created a competition shock; refugee women quickly stigmatized as morally dubious
- By stigmatizing refugee women locals were able to claim comparative advantage in signaling traditional femininity
- The advantage in turn created an incentive **for locals** to compete along this dimension and increase investment in traditional femininity
- Vertical transmission leads to persistence even when the conditions associated with those experiences have ceased to operate (Guiso, Sapienza & Zingales 2008) or the regime that produced them has changed (Luttmer & Singhal 2011)

- **Empirical expectation:** Larger shock in mating-competition (measure: higher share of women after the influx) $\rightarrow$ Stronger adherence to traditional gender norms (measure: lower female education, labor force participation, age at marriage, higher fertility etc.)

Data & variables: Treatment

- Census 1928 - Village level ($N \approx 4.700$): Local and refugee population per gender
- Census 1928 - Province level ($N = 140$): Local and refugee population per gender and marital status

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$$\text{Hist. gender ratio}_{1928} = \frac{\text{Refugee Women}_{1928} + \text{Local Women}_{1928}}{\text{Refugee Population}_{1928} + \text{Local Population}_{1928}}$$

(Grosjean & Khattar 2019)

Balance tests

Pre-treatment characteristics do not predict historical gender ratio

- **Geography & terrain**: urbanity, distance to city, ruggedness, slope — somewhat higher elevation
- **Education (1920)**: more affected localities were *more* educated before the inflow
- **Marital composition (1920)**: marginally more widowed and fewer single women
- **Infrastructure (1919)**: church, school, hospital, workshop shares
- **Disease mortality (1921)**: syphilis and tuberculosis deaths
- **Sorting into sex ratio (1928)**: share of refugee women weakly predictive of pre-existing share of local women

Balance Tables

Data & variables: Outcomes

- Municipal level census data (1991 & 2001):
  - Educational attainment
  - Labor market participation
  - Marital status
  - Fertility

$$Y_{m,t} = \delta_0 + \delta_1 \text{Hist. gender ratio}_{1928} + \delta_2 \text{Refugee Pop.}_{1928} + \delta_3 \text{Local Pop.}_{1928} + \delta_4 \text{Total Pop.}_{t} + \text{Equival. outcome in opposite sex}_{m,t} + v_j + e_m$$

- Attitudes: Survey data (2017)
- Patrilocality: IPUMS (1971-2011)
- Church density (Census: 2011)

Mechanisms

- Age at marriage: Individual marriage registry from Thessaloniki (1917-1934)
- Dowry contracts (Thessaloniki, 1918-1941)

RESULTS

Educational Attainment among Women (Census 1991, 2001)

	(1) % University	(2) % Vocational school	(3) % Primary	(4) % Illiterate
		Census year: 1991		
Hist. gender ratio	-0.0105**	-0.00439**	0.125***	0.0534***
	(0.00430)	(0.00192)	(0.0307)	(0.0191)
Baseline	1.512	0.338***	39.90***	15.63***
Observations	2751	2751	2751	2751
R-squared	0.613	0.210	0.441	0.566
		Census year: 2001		
Hist. gender ratio hratio	-0.0227***	-0.0100**	0.119***	0.0122
	(0.00746)	(0.00428)	(0.0272)	(0.0238)
Observations	3045	3045	3045	3045
R-squared	0.649	0.373	0.515	0.611
Local population$_{1928}$	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓
Equivalent male outcome	✓	✓	✓	✓
Population$_{censusyear}$	✓	✓	✓	✓
Gender ratio$_{censusyear}$	✓	✓	✓	✓
Prefecture FEs	✓	✓	✓	✓

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$; Standard errors in parentheses.

Labor Market Participation among Women (Census 1991, 2001)

	(1) % Inactive women	(2) % Employed women	(3) % Unemployed women
		Census year: 1991	
Hist. gender ratio	0.0954**	-0.0801*	-0.00240
	(0.0457)	(0.0441)	(0.00343)
Observations	2751	2751	2751
R-squared	0.232	0.251	0.304
		Census year: 2001	
Hist. gender ratio	0.0990***	-0.0682***	-0.0264**
	(0.0269)	(0.0242)	(0.0118)
Observations	3045	3045	3045
R-squared	0.448	0.508	0.535
Local population$_{1928}$	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓
Equivalent male outcome	✓	✓	✓
Population$_{censusyear}$	✓	✓	✓
Gender ratio$_{censusyear}$	✓	✓	✓
Prefecture FEs	✓	✓	✓

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$; Robust standard errors in parentheses.

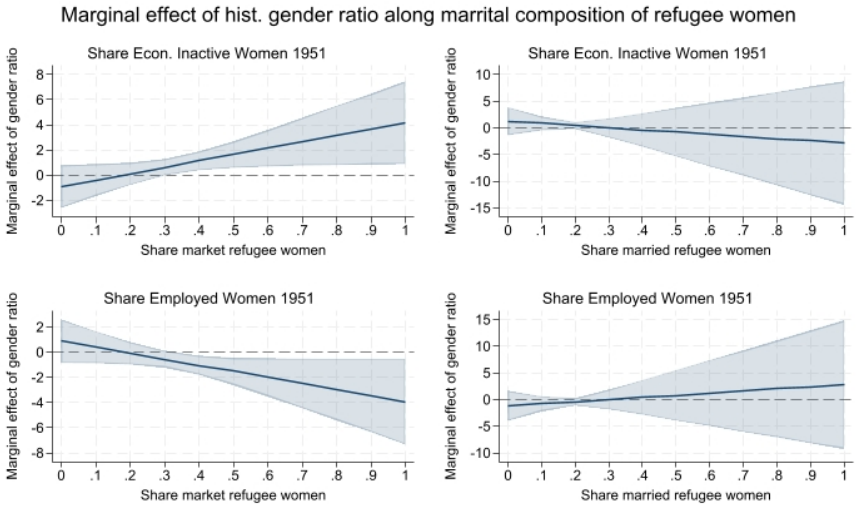
Labor Market Participation among Women (Province level, 1951)

	(1)	(2)
	Share of women:	
	Inactive	Employed
Hist. gender ratio	0.553*	-0.512
	(0.326)	(0.336)
Local population$_{1928}$	✓	✓
Refugee population$_{1928}$	✓	✓
Equivalent male outcome	✓	✓
Pop. in census yr	✓	✓
Observations	139	139
R-squared	0.132	0.112

Robust standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Marginal Effect of historical gender ratio (Province level, 1951)



Fertility among adult Women (Census 1991, 2001)

Table: Fertility

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	% Women with:						
	0 children	1 child	2 children	3 children	4+ children	Average per woman	% of girls in 0-9 yr olds
	Census year: 1991						
Hist. gender ratio	-0.00855	-0.00927	0.00601	0.0101	0.0364	0.00207*	-0.142**
	(0.0195)	(0.0147)	(0.0281)	(0.0155)	(0.0279)	(0.00119)	(0.0599)
Observations	2751	2751	2751	2751	2751	2751	2725
R-squared	0.283	0.287	0.318	0.210	0.265	0.295	0.0731
	Census year: 2001						
Hist. gender ratio	-0.0612**	-0.0000956	0.0303	0.00769	0.0234	0.00194*	-0.0172
	(0.0309)	(0.0149)	(0.0262)	(0.0184)	(0.0214)	(0.00112)	(0.0620)
Observations	3045	3045	3045	3045	3045	3045	3012
R-squared	0.283	0.295	0.327	0.269	0.263	0.297	0.0681
Refugee population 1928	✓	✓	✓	✓	✓	✓	✓
Local population 1928	✓	✓	✓	✓	✓	✓	✓
Population in census year	✓	✓	✓	✓	✓	✓	✓
Gender ratio in census year	✓	✓	✓	✓	✓	✓	✓
Prefecture fixed effects	✓	✓	✓	✓	✓	✓	✓

Marginal Effects

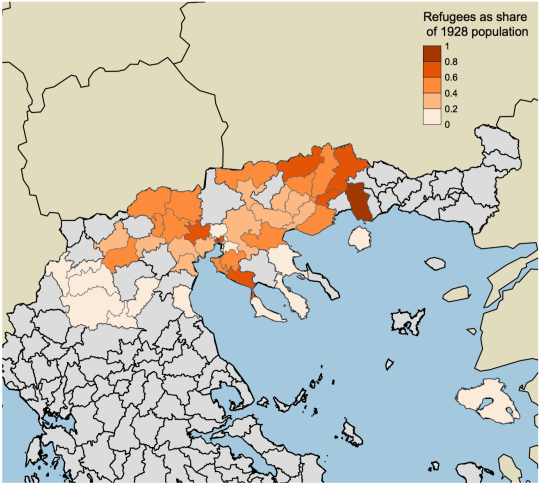
Marital Status among Adult Women (Census 1991, 2001)

	(1) % Married women	(2) % Divorced women	(3) % Single women
		Census year: 1991	
Hist. gender ratio	-0.0160	-0.00167	-0.0451**
	(0.0121)	(0.00286)	(0.0204)
Observations	2751	2751	2751
R-squared	0.790	0.139	0.645
		Census year: 2001	
Hist. gender ratio hratio	0.00159	-0.000956	-0.0313
	(0.0147)	(0.00603)	(0.0199)
Observations	3045	3045	3045
R-squared	0.715	0.226	0.594
Local population$_{1928}$	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓
Equivalent male outcome	✓	✓	✓
Population$_{cenusyear}$	✓	✓	✓
Gender ratio$_{cenusyear}$	✓	✓	✓
Prefecture FEs	✓	✓	✓

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$; Robust standard errors in parentheses.

Individual-Level Analysis (2017 survey)

- A CATI survey with $n \approx 2000$, including only respondents with age: 30 or older.
- Targetting only the regions of Macedonia and Lesvos (excl. capital municipality)
- Perfecture-quotas based on 1928 refugee rate
- Descendant: Either parent or grandparent born in Turkey
- Approximately 50% descendants
- Research design, sampling strategy, estimation strategy and outcomes pre-specified in a Pre-Analysis plan: http://egap.org/registration/2561



Results: Outgroup Preferences - **Unmarried Couples**

	(1)	(2)	(3)	(4)
	Descendants of:			
	Locals		**Refugees**	
	Women	Men	Women	Men
	Would like as neighbors: Unmarried couples			
Hist. gender ratio	-1.402*	1.223	-0.001	-0.805
	(0.806)	(1.021)	(0.638)	(1.360)
Observations	612	377	554	401
R-squared	0.021	0.004	0.011	0.015
Local population$_{1928}$	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓
Population$_{2011}$	✓	✓	✓	✓

Preferences for Other Outgroups

	(1)	(2)	(3)	(4)
	Descendants of:			
	Locals		**Refugees**	
	Women	Men	Women	Men
	Would like as neighbors: **Muslims**			
Hist. gender ratio	-2.533	1.428	-1.051	-1.467
	(1.914)	(1.350)	(2.296)	(3.138)
Observations	606	374	546	396
R-squared	0.004	0.009	0.009	0.005
	Would like as neighbors: **Alcoholics**			
Hist. gender ratio	0.249	1.542	1.394	-3.096
	(1.375)	(1.461)	(1.296)	(2.227)
Observations	610	373	548	402
R-squared	0.010	0.023	0.006	0.011
Local population$_{1928}$	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓
Population$_{2011}$	✓	✓	✓	✓

Descendants of Locals and Refugees: Education and Occupation

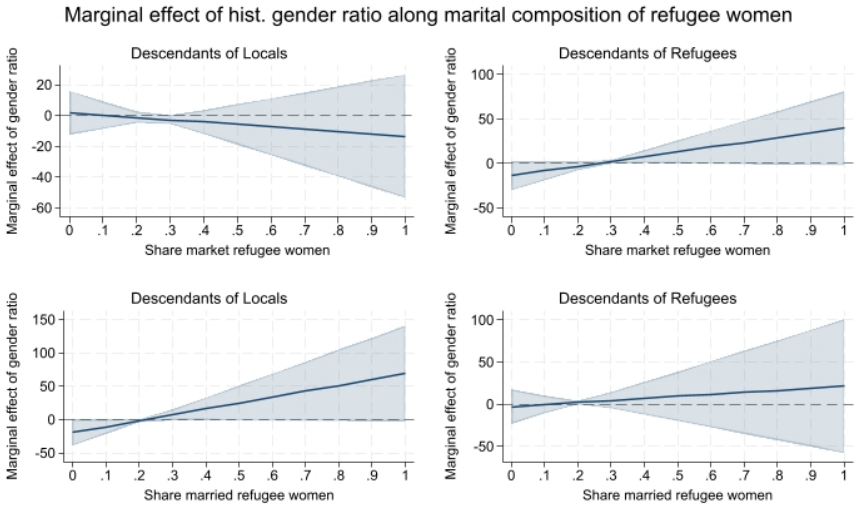
	(1)	(2)	(3)	(4)
	Descendants of:			
	Locals		**Refugees**	
	Women	Men	Women	Men
	Education level			
Hist. gender ratio hratio	-4.978	-5.195	18.074**	5.532
	(4.175)	(5.470)	(7.531)	(4.464)
Observations	619	382	556	404
R-squared	0.018	0.028	0.047	0.064
	Business owner			
Hist. gender ratio	0.363	0.280	2.881***	-0.251
	(1.549)	(1.491)	(1.059)	(1.914)
Observations	616	376	550	403
R-squared	0.005	0.002	0.017	0.008
	Farmer			
Hist. gender ratio	-0.421	-3.339**	-3.142**	-0.363
	(1.276)	(1.531)	(1.388)	(1.211)
Observations	616	376	550	403
R-squared	0.012	0.031	0.025	0.016
Local population$_{1928}$	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓
Population$_{2011}$	✓	✓	✓	✓

Unmarried Couples - Province Level

	(1)	(2)
		Descendants of:
	Locals	**Refugees**
	Would like as neighbors: Unmarried couples	
Hist. gender ratio	-2.155**	1.165
	(1.076)	(0.862)
Observations	1021	989
R-squared	0.0251	0.0154
Local population$_{1928}$	✓	✓
Refugee population$_{1928}$	✓	✓
Population$_{2011}$	✓	✓
Prefecture FEs	✓	✓

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$; Standard errors clustered at municipality level in parentheses.

Unmarried Couples - Province Level - Marginal Effects



Within Couple Outcome: Cohabitation

- IPUMS International: 10% of individual-level census data (1971, 1981, 1991, 2001)
- Allows identifying household composition
- Conditional on cohabiting with either groom's or bride's parents - observe propensity of patrilocality

Married Couples Cohabitation with Parents (IPUMS 10% Census 1971-2011)

	(1)	(2)	(3)	(4)
	Cohabiting with in-laws vs. own parents			
	Women		Men	
Hist. gender ratio	0.299***	0.188**	-0.665***	-0.561***
	(0.083)	(0.084)	(0.165)	(0.143)
Local population$_{1928}$	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓
Pop. in census yr	✓	✓	✓	✓
Prefecture FEs	✓	✓	✓	✓
Year FEs	✓	✓	✓	✓
Education		✓		✓
Occupation		✓		✓
Age		✓		✓
Observations	151048	151048	149299	149299
R-squared	0.017	0.043	0.049	0.169

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Balance: Present Infrastructure in 1919 (per municipality)

Table: Balance: Present Infrastructure in 1919 (per municipality).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Share in all buildings: Municipalities in 1919						
	Church	Residential	Hotel	Factory/ Workshop	School	Shop/ Office	Hospital
Hist. gender ratio	-0.137	0.936	0.019*	0.007	-0.287	-0.338	-0.001
	(0.509)	(0.678)	(0.010)	(0.042)	(0.367)	(0.328)	(0.002)
Local pop_{1928}	✓	✓	✓	✓	✓	✓	✓
Refugee pop_{1928}	✓	✓	✓	✓	✓	✓	✓
Regional unit FEs	✓	✓	✓	✓	✓	✓	✓
Observations	291	291	291	291	291	291	291
R-squared	0.360	0.383	0.354	0.188	0.294	0.315	0.592

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Religious Infrastructure in 2011

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Share in all buildings: Municipalities in 2011						
	Church	Residential	Hotel	Factory/ Workshop	School	Shop/ Office	Hospital
Hist. gender ratio	0.050**	-0.251**	0.028	0.022	0.002	0.059	-0.002
	(0.025)	(0.108)	(0.022)	(0.018)	(0.004)	(0.037)	(0.002)
Local pop_{1928}	✓	✓	✓	✓	✓	✓	✓
Refugee pop_{1928}	✓	✓	✓	✓	✓	✓	✓
Regional unit FEs	✓	✓	✓	✓	✓	✓	✓
Observations	293	293	293	293	293	293	293
R-squared	0.838	0.716	0.705	0.352	0.599	0.616	0.444

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

MECHANISMS

Registry data: Age at Marriage

- Collect and digitize marriage certificates of all weddings conducted in Thessaloniki 1917-1934 (still ongoing)
- Collect information on:
  - Age at marriage of groom and bride
  - Place of birth - proxy of refugee origin
  - Religion
  - Groom's profession

Age at Marriage

Table: **Effect of Refugee Arrival on Bride's Age and Age Gap.**

	(1)	(2)	(3)	(4)	(5)	(6)
		Bride Age			Age Gap	
Christian × Post	-0.469	-0.675***	-0.641**	0.914*	0.675***	0.641**
	(0.288)	(0.225)	(0.244)	(0.438)	(0.225)	(0.244)
Year FE	✓	✓	✓	✓	✓	✓
Month FE	✓	✓	✓	✓	✓	✓
Christian	✓	✓	✓	✓	✓	✓
Groom's age		✓	✓		✓	✓
HISCO FE			✓			✓
n	3365	3365	3340	3365	3365	3340

Note: Standard errors, clustered by year, in parentheses. Heteroskedasticity-robust standard errors produce substantively identifical inference. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Dowry Contracts

- Collect and digitizie dowry contracts of marriages conducted in Thessaloniki
- **Ongoing**: currently 109 contracts 1918–1930

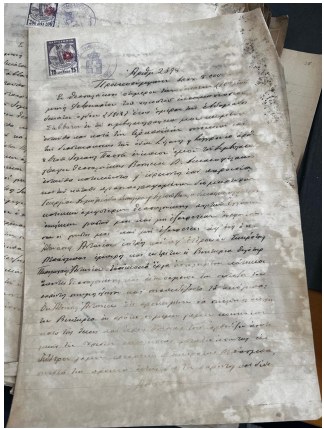
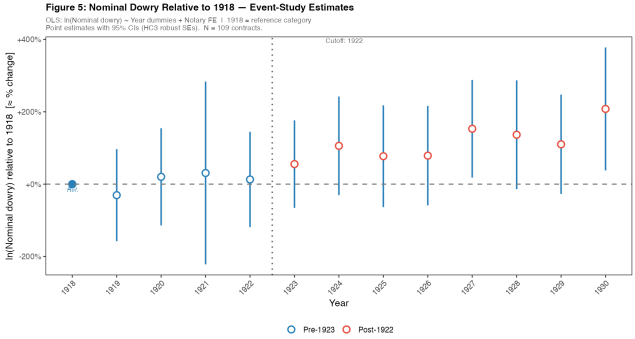
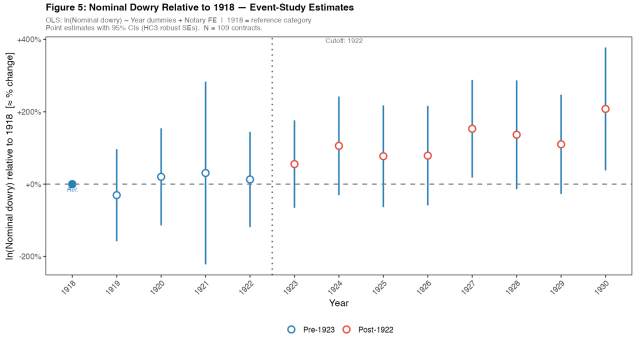


Figure: Dowry contract

Dowry Contracts: Evolution of dowry value from 1918 to 1941



Dowry Contracts: Evolution of dowry value from 1918 to 1941



- High inflation 1920s
- Examine a possible change in trend post-1923

$$y_{it} = \alpha + \beta_1 (t - 1923) + \beta_2 D_t + \beta_3 ((t - 1923) \times D_t) + \varepsilon_{it}, \tag{4}$$

Dowries: Real Values

	(1)	(2)	(3)	(4)	(5)	(6)
	Real dowry (1928 drachmas): Level			Real dowry (1928 drachmas): Logged		
Year	-139452.066**	-131458.303***	-123993.317**	-0.222**	-0.286***	-0.242**
	(63829.333)	(49123.792)	(50038.666)	(0.086)	(0.103)	(0.103)
Post-1923	-2.897e+08**	-2.914e+08**	-2.771e+08**	-422.914	-620.351**	-535.606*
	(1.332e+08)	(1.118e+08)	(1.132e+08)	(261.506)	(294.789)	(298.502)
Year × Post-1923	150683.174**	151599.527**	144138.943**	0.220	0.323**	0.278*
	(69316.884)	(58178.075)	(58905.795)	(0.136)	(0.153)	(0.155)
Notary FE	✓	✓	✓	✓	✓	✓
Dowry-type FE		✓	✓		✓	✓
Bride: Employment			✓			✓
Observations	109	109	109	109	109	109
R^2	0.250	0.309	0.311	0.337	0.421	0.432

Note: Entries are OLS coefficients, heteroskedasticity-robust standard errors in parentheses.
Dowry types: land; building; cash; furniture; cloathing. Employment: 0; housewive:1.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Discussion - Further Steps

- Previous works on gender imbalance - scarcer sex profits, i.e. they get what they value
- If men highly value traditional traits - women might provide more abiding behavior
- Michalopoulos et al. (2025) show higher education in both gender in municipalities receiving more Asia Minor refugees
- We show that this effect is conditioned by the gender composition in refugee population due to the effects it had on gender norms among local population

- Next steps - provide more (and more granular) evidence for the hypothesized mechanism
- Ongoing: Collecting and digitizing individual dowry contracts from Thessaloniki in early 1900's

Thank you!

biljana.meiske@eui.eu

Appendix

Balance Tables

Balance: Urbanity and terrain ruggedness (per settlement)

Table: Balance: Urbanity and terrain ruggedness (per settlement)

	(1) Urban locality	(2) Distance to city	(3) Terrain ruggedness	(4) Slope	(5) Elevation
Hist. gender ratio	-0.0641	2.493	0.248	0.769	239.9***
	(0.0461)	(3.524)	(0.736)	(1.602)	(40.95)
Local population$_{1928}$	✓	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓	✓
Equivalent male outcome	✓	✓	✓	✓	✓
Prefecture FEs	✓	✓	✓	✓	✓
Observations	4633	4633	4614	4604	4629
R-squared	0.0993	0.347	0.110	0.107	0.422

HC3 standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Balance: Education composition in 1920 (per province)

Table: Balance: Education composition in 1920 (per province).

	(1)	(2)	(3)	(4)
	Educated		Illiterate	
	men	women	men	women
Hist. gender ratio	0.712**	0.789**	-0.612*	-0.636*
	(0.356)	(0.377)	(0.347)	(0.355)
Local population$_{1928}$	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓
Prefecture FEs	✓	✓	✓	✓
Observations	138	138	138	138
R-squared	0.718	0.721	0.710	0.701

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Balance: Marital composition in 1920 (per province)

Table: Balance: Marital composition in 1920 (per province).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Single		Married		Widowed		Divorced	
	men	women	men	women	men	women	men	women
Hist. gender ratio	-0.034	-0.151*	0.033	0.035	0.002	0.120**	-0.001	-0.000
	(0.089)	(0.077)	(0.086)	(0.050)	(0.021)	(0.059)	(0.002)	(0.003)
Local population$_{1928}$	✓	✓	✓	✓	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓	✓	✓	✓	✓
Prefecture FEs	✓	✓	✓	✓	✓	✓	✓	✓
Observations	138	138	138	138	138	138	138	138
R-squared	0.560	0.795	0.512	0.744	0.633	0.708	0.411	0.363

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

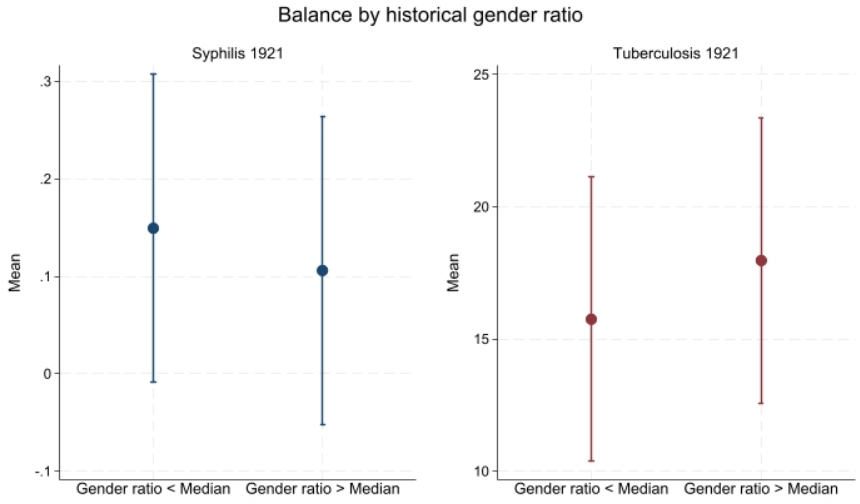
Balance: Present Infrastructure in 1919 (per municipality)

Table: Balance: Present Infrastructure in 1919 (per municipality).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Share in all buildings: Municipalities in 1919						
	Church	Residential	Hotel	Factory/ Workshop	School	Shop/ Office	Hospital
Hist. gender ratio	-0.137	0.936	0.019*	0.007	-0.287	-0.338	-0.001
	(0.509)	(0.678)	(0.010)	(0.042)	(0.367)	(0.328)	(0.002)
Local pop_{1928}	✓	✓	✓	✓	✓	✓	✓
Refugee pop_{1928}	✓	✓	✓	✓	✓	✓	✓
Regional unit FEs	✓	✓	✓	✓	✓	✓	✓
Observations	291	291	291	291	291	291	291
R-squared	0.360	0.383	0.354	0.188	0.294	0.315	0.592

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Balance: Deaths of Disease in 1921 (per 1921 municipality)



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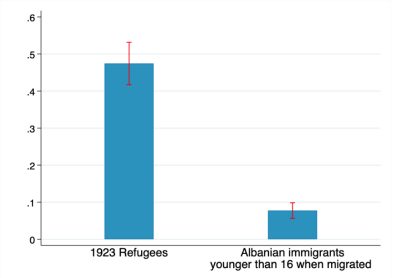
Intermarriage Rates

Figure 3: Intermarriage with Greek natives



Notes. This figure shows the share of refugee women (born in 1908-1922, i.e., 0-15 years old in 1923) who are married with a husband born in Greece (Greek native). The sample consist of 293 refugee women who report to be married with a currently co-residing husband. The figure also shows the share of Albanian immigrant women married to a Greek native. The sample consist of 452 Albanian immigrant women who arrived in Greece at an age younger than 15 and who report to be married with a currently co-residing husband.
Source: Author's elaboration on the 2001 Greek census.

Source: Murard 2022

Competition for Men

"When in 1922 the ladle of History emptied, throughout all of Greece, all the Asia Minor refugees (and the women of Smyrna), a voice rang out piercingly: 'They're taking our men!'–as if the country were a canteen obliged to dish out men exclusively to the local women."

Asimakis Panselinos,
When We lived, 1974

Competition for Men

"When we arrived [in Kokkinia], we were astonished. [...] It didn't look anything like Athens or Piraeus. It was as if a festival were taking place. [...]
Crowds of cheerful people were out and about. Taverns and cafés were packed. Oriental orchestras played, with girls singing in a row, seated beside the musicians. [...] The aromas of ouzo, kebabs, tzatziki, pastirma, and saganaki filled the air. It was like a proper bridal parade. The atmosphere of Smyrna was everywhere. [...] I look around me. Truly beautiful girls are strolling about in groups, arm in arm or hand in hand. They tease and get teased, all smiles and playful airs. [...] Men and women sit on their doorsteps eating sunflower seeds, and phonographs play a variety of songs from Asia Minor..."
"All the young men of Athens and Piraeus come here for fun. They've gone mad over the refugee girls—find them more beautiful, more modern. At first, it was just for amusement, maybe a flirt. But soon enough, one of them wraps a boy around her finger and they end up married. The locals are alarmed for their children, watching them drift away from their own circle. Every parent fears their son might marry a refugee girl—especially one without a dowry."

The Notebooks of Anzel Kourtian: Memories from Asia Minor 1915–1924, 1974

Stereotyping

"These women are either insipidly sentimental or intensely sensual. They lack grace, instinctive refinement–no air of being 'ladies,' only that of being female. The Eastern climate made them soft, fleshy, and desirous; from Europe, they borrowed only moral freedom. They relish bawdy jokes, wordplay, and flirtation.

They dress in bright yellows, purples, and pinks. Many have discarded petticoats, and under the sun, their bodies' curves show clearly through thin dresses. With bare necks, bare arms, full Rubens-like figures, and thick black lashes under which desire seems to doze, they attract open stares and stir sudden urges.

These are the women who dominate modern Athens. The type that sets the tone is now the woman of the East. The other figure—the young Athenian woman once shaped by the Attic light—has been pushed aside. Occasionally one might spot a woman of discreet elegance, proud poise, and graceful restraint: an Athenian. But she is the exception. The Eastern women rule the streets, imposing their vivid colors, dewy skin, seductive curves, and syrupy charm—the kind that makes the tongue click, like at the sight of a sweet you crave or just devoured."

"The Women of Athens" by Kostas Ouranis, July 10, 1923

Stereotyping

"In February 1928, Police Captain Rizopoulos , expressing the stereotypes of the locals against the newcomers, terrorized the refugees of Makedonia Street by breaking into the houses of the inhabitants of the neighborhood with his gendarmes. He threatened to round up the "obscene" daughters and lock them up in brothels, where they belonged."

Alexandros Dagkas, [Notes on Social History] (Thessaloniki: Epikentro, 2011), 345-6

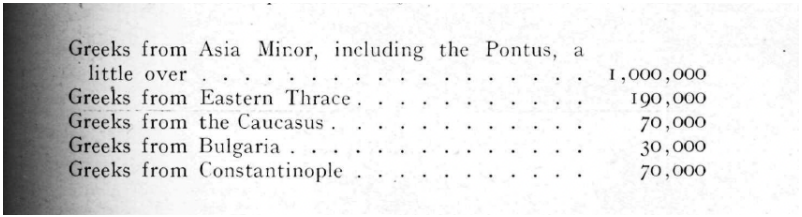
Stereotyping

"In his famous book "Orientalism", Edward Said argued that the West uses the East as an inverted mirror, imagining them to be everything the West is not. [...] particularly women are presented as alien, exotic, and subversive.

Within Greece, [...] considering that the country occupies a liminal sphere between East and West and it is fascinating how mainland Greeks, who in no way would be considered as Western by the "West," entered into the paradigm, imagining the female refugees from Asia Minor and especially from Smyrna as coming from a foreign land of sex, excess and exciting exotic experiences

Complicating the paradigm is the fact that Smyrna in Asia Minor was perhaps the most European of the cities inhabited by Greeks. In that polity, Greeks rubbed shoulders with the French, English and other European traders, espoused modern European modes of dress and engaged in European cultural pastimes such as the Opera, Theatres and Classical Music concerts."

Dean Kalimniou
(Neos Kosmos, 15 March 2022)



Greeks from Asia Minor, including the Pontus, a little over	1,000,000
Greeks from Eastern Thrace	190,000
Greeks from the Caucasus	70,000
Greeks from Bulgaria	30,000
Greeks from Constantinople	70,000

Figure: League of Nations, Greek Refugee Settlement Report, 1926

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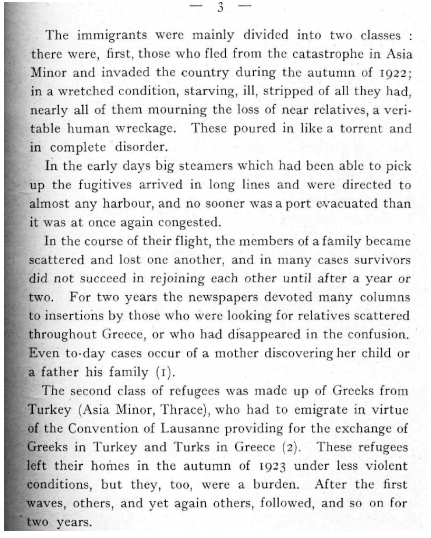

The immigrants were mainly divided into two classes : there were, first, those who fled from the catastrophe in Asia Minor and invaded the country during the autumn of 1922; in a wretched condition, starving, ill, stripped of all they had, nearly all of them mourning the loss of near relatives, a veritable human wreckage. These poured in like a torrent and in complete disorder.

In the early days big steamers which had been able to pick up the fugitives arrived in long lines and were directed to almost any harbour, and no sooner was a port evacuated than it was at once again congested.

In the course of their flight, the members of a family became scattered and lost one another, and in many cases survivors did not succeed in rejoining each other until after a year or two. For two years the newspapers devoted many columns to insertions by those who were looking for relatives scattered throughout Greece, or who had disappeared in the confusion. Even to-day cases occur of a mother discovering her child or a father his family (1).

The second class of refugees was made up of Greeks from Turkey (Asia Minor, Thrace), who had to emigrate in virtue of the Convention of Lausanne providing for the exchange of Greeks in Turkey and Turks in Greece (2). These refugees left their homes in the autumn of 1923 under less violent conditions, but they, too, were a burden. After the first waves, others, and yet again others, followed, and so on for two years.

Figure: League of Nations, Greek Refugee Settlement Report, 1926

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Table 5.5. Marriages and births in Macedonia from June to December 1924

Month	Refugees settled	Marriages	Per 1,000	Births	Per 1,000	Deaths	Per 1,000
June	302,398	480	1.55	447	1.48	393	1.30
July	310,792	390	1.23	441	1.41	438	1.41
Aug.	320,499	298	1.00	491	1.53	772	2.4
Sept.	345,281	367	1.00	475	1.37	1,080	3.12

Source: LN, Fourth Quarterly Report on the Operations of the RSC, Athens, 25 November 1924, 4.

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Table 5.2. Surveyed and distributed lands in Macedonia up to 1931

Districts	Surveyed lands		Distributed lands	
	Villages	Extent (str.)	Villages	Extent (str.)
Kavala	82	619,000	35	352,200
Drama	125	1,296,000	54	722,100
Serres	70	970,000	43	373,000
Sidirokastro	61	734,000	17	162,700
Kilkis	104	1,114,000	59	374,900
Lagadas	58	868,000	19	291,700
Salonica	58	861,600	15	217,000
Chalkidiki	27	375,200	13	178,400
Yianitsa		1,074,000	57	480,600
Veroia	59	681,600	23	369,000
Pieria	18	427,000	5	43,000
Florina	52	888,000	6	71,000
Kozani	95	1,036,000	73	505,400
Kastoria	33	259,000	29	113,000
TOTAL	933	11,207,400	448	4,254,000

Source: GAK, TYYG, F80, Lists of surveyed and distributed lands, Cadastral Service (Ktimatographiki Ypiresia), C. Papastratos, Thessaloniki 18 February 1931. In the whole region of Macedonia, 3 million more stremmata were surveyed additionally by military surveying teams.

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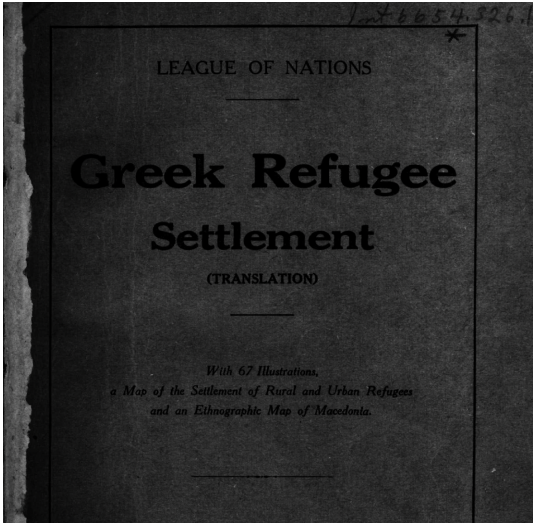
LEAGUE OF NATIONS
Greek Refugee
Settlement
(TRANSLATION)
With 67 Illustrations,
a Map of the Settlement of Rural and Urban Refugees
and an Ethnographic Map of Macedonia.

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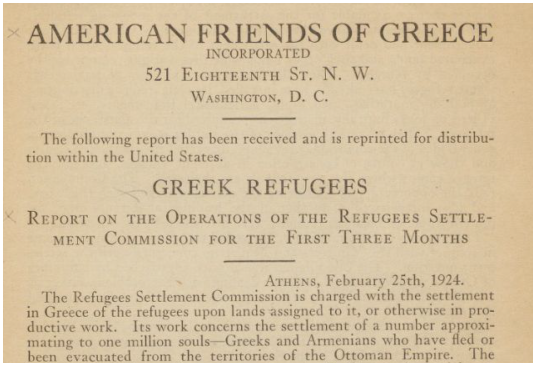

AMERICAN FRIENDS OF GREECE

INCORPORATED

521 EIGHTEENTH ST. N. W.

WASHINGTON, D. C.

The following report has been received and is reprinted for distribution within the United States.

GREEK REFUGEES

REPORT ON THE OPERATIONS OF THE REFUGEES SETTLEMENT COMMISSION FOR THE FIRST THREE MONTHS

ATHENS, February 25th, 1924.

The Refugees Settlement Commission is charged with the settlement in Greece of the refugees upon lands assigned to it, or otherwise in productive work. Its work concerns the settlement of a number approximating to one million souls—Greeks and Armenians who have fled or been evacuated from the territories of the Ottoman Empire. The

Figure: Caption

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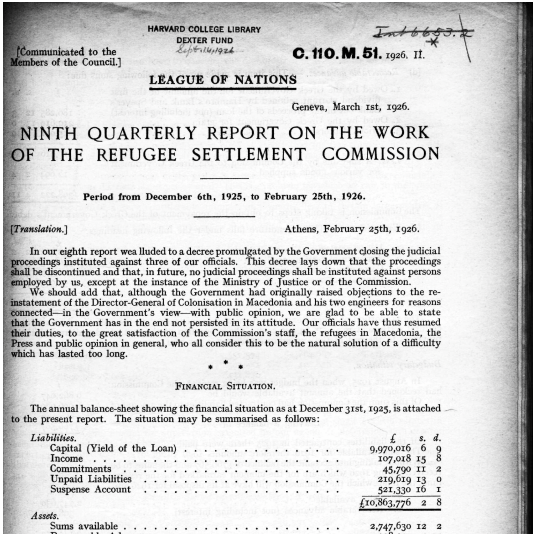

HARVARD COLLEGE LIBRARY
DEXTER FUND
Sept 14, 1926

[Communicated to the Members of the Council.]

C. 110. M. 51. 1926. II.

LEAGUE OF NATIONS

Geneva, March 1st, 1926.

NINTH QUARTERLY REPORT ON THE WORK OF THE REFUGEE SETTLEMENT COMMISSION

Period from December 6th, 1925, to February 25th, 1926.

[*Translation.*] Athens, February 25th, 1926.

In our eighth report wea lluded to a decree promulgated by the Government closing the judicial proceedings instituted against three of our officials. This decree lays down that the proceedings shall be discontinued and that, in future, no judicial proceedings shall be instituted against persons employed by us, except at the instance of the Ministry of Justice or of the Commission.

We should add that, although the Government had originally raised objections to the re-instatement of the Director-General of Colonisation in Macedonia and his two engineers for reasons connected—in the Government's view—with public opinion, we are glad to be able to state that the Government has in the end not persisted in its attitude. Our officials have thus resumed their duties, to the great satisfaction of the Commission's staff, the refugees in Macedonia, the Press and public opinion in general, who all consider this to be the natural solution of a difficulty which has lasted too long.

* * *

FINANCIAL SITUATION.

The annual balance-sheet showing the financial situation as at December 31st, 1925, is attached to the present report. The situation may be summarised as follows:

	£	s.	d.
Liabilities.			
Capital (Yield of the Loan)	9,970,016	6	9
Income	107,018	15	8
Commitments	45,790	11	2
Unpaid Liabilities	219,619	13	0
Suspense Account	521,330	16	1
	£10,863,776	2	8
Assets.			
Sums available	2,747,630	12	2

Figure: Caption

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Alternative Specifications

Alternative Specification: Educational Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	% University		% Vocational school		% Primary		% Below primary	
Census year: 1991								
Hist. gender	-0.0105**	-0.00529	-0.00439**	-0.00394*	0.125***	0.135***	0.0534***	0.0335
	(0.00430)	(0.00630)	(0.00192)	(0.00218)	(0.0307)	(0.0400)	(0.0191)	(0.0268)
Observations	2751	2751	2751	2751	2751	2751	2751	2751
R-squared	0.613	0.170	0.210	0.0910	0.441	0.181	0.566	0.227
Census year: 2001								
Hist. gender ratio	-0.0227***	-0.0144	-0.0100**	-0.0127**	0.119***	0.132***	0.0122	-0.00586
	(0.00746)	(0.0105)	(0.00428)	(0.00521)	(0.0272)	(0.0383)	(0.0238)	(0.0342)
Observations	3045	3045	3045	3045	3045	3045	3045	3045
R-squared	0.649	0.262	0.373	0.166	0.515	0.197	0.611	0.231
Local population$_{1928}$	✓	✓	✓	✓	✓	✓	✓	✓
Refugee population$_{1928}$	✓		✓		✓		✓	✓
Equivalent male outcome	✓		✓		✓		✓	
Population$_{censusyear}$	✓	✓	✓	✓	✓	✓	✓	✓
Gender ratio$_{censusyear}$	✓		✓		✓		✓	
Prefecture FEs	✓	✓	✓	✓	✓	✓	✓	✓

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$; Standard errors in parentheses.

OLS regression of the percentage of women in a given municipality who completed (respectively) - university education, post-secondary education, no formal education and are illiterate - in two census waves conducted in 1991 and 2001.

Alternative Specification: Employment

	(1)	(2)	(3)	(4)	(5)	(6)
	% Inactive women		% Employed women		% Unemployed women	
			Census year: 1991			
Hist. gender ratio hratio	0.0954**	0.172***	-0.0801*	-0.156***	-0.00240	-0.00625
	(0.0457)	(0.0519)	(0.0441)	(0.0509)	(0.00343)	(0.00398)
Observations	2751	2751	2751	2751	2751	2751
R-squared	0.232	0.185	0.251	0.193	0.304	0.0685
			Census year: 2001			
Hist. gender ratio	0.0990***	0.183***	-0.0682***	-0.159***	-0.0264**	-0.0196
	(0.0269)	(0.0400)	(0.0242)	(0.0379)	(0.0118)	(0.0133)
Observations	3045	3045	3045	3045	3045	3045
R-squared	0.448	0.220	0.508	0.243	0.535	0.132
Local population$_{1928}$	✓	✓	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓	✓	✓
Equivalent male outcome	✓		✓		✓	
Population$_{cenusyear}$	✓	✓	✓	✓	✓	✓
Gender ratio$_{cenusyear}$	✓		✓		✓	
Prefecture FEs	✓	✓	✓	✓	✓	✓

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$; Robust standard errors in parentheses.
OLS regression of the percentage of women in a given municipality who are economically inactive (1), employed (2), and unemployed and seeking employment.

Alternative Specification: Marital Status

	(1)	(2)	(3)	(4)	(5)	(6)
	% Married women		% Divorced women		% Single women	
			Census year: 1991			
Hist. gender ratio	-0.0160	0.0271	-0.00167	-0.00210	-0.0451**	-0.107***
	(0.0121)	(0.0233)	(0.00286)	(0.00289)	(0.0204)	(0.0343)
Observations	2751	2751	2751	2751	2751	2751
R-squared	0.790	0.270	0.139	0.125	0.645	0.252
			Census year: 2001			
Hist. gender ratio	0.00159	0.0412**	-0.000956	-0.000199	-0.0313	-0.0784***
	(0.0147)	(0.0200)	(0.00603)	(0.00597)	(0.0199)	(0.0273)
Observations	3045	3045	3045	3045	3045	3045
R-squared	0.715	0.283	0.226	0.185	0.594	0.256
Local population$_{1928}$	✓	✓	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓	✓	✓
Equivalent male outcome	✓		✓		✓	
Population$_{censusyear}$	✓	✓	✓	✓	✓	✓
Gender ratio$_{censusyear}$	✓		✓		✓	
Prefecture FEs	✓	✓	✓	✓	✓	✓

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$; Robust standard errors in parentheses.
OLS regression of the percentage of women in a given municipality in the indicated marital status category. The two panels of the table show results in two census waves conducted in 1991 and 2001. Treatment variable (Historical gender ratio) captures the share of women in total population in a given municipality after the refugee inflow, as reported in 1928 census. Controls include percentage of men in equivalent marital status category (in odd columns), size of refugee and local population in 1928, size

Census Results without Male Controls

Female Educational Attainment - Excluding Male Controls (Census 2001)

	(1)	(2)	(3)	(4)	(5)
	Share of women with (highest education):				
	Masters degree	University degree	TEI degree	Primary school	Below primary
Hist. gender ratio	-0.002	-0.019	-0.021***	0.135***	-0.011
	(0.001)	(0.012)	(0.007)	(0.040)	(0.037)
Local population$_{1928}$	✓	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓	✓
Prefecture FEs	✓	✓	✓	✓	✓
Observations	3045	3045	3045	3045	3045
R-squared	0.227	0.265	0.143	0.208	0.228

Robust standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

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Female Labor Market Participation - Exclud. Male Controls (Census 2001)

	(1)	(2)	(3)	(4)	(5)
	Share of women:				
	Active	Employed	Unemployed	Inactive	Seeking 1st job
Hist. gender ratio	-0.185***	-0.161***	-0.024	0.185***	-0.003
	(0.041)	(0.039)	(0.015)	(0.041)	(0.007)
Local population$_{1928}$	✓	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓	✓
Prefecture FEs	✓	✓	✓	✓	✓
Observations	3045	3045	3045	3045	3045
R-squared	0.227	0.248	0.135	0.227	0.112

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, ***

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Female Marital status - Excluding Male Controls (Census 2001)

	(1) Married	(2) Single	(3) Divorced	(4) Separated
Hist. gender ratio	0.001	-0.047**	-0.000	-0.004
	(0.022)	(0.020)	(0.007)	(0.004)
Local population$_{1928}$	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓
Prefecture FEs	✓	✓	✓	✓
Observations	3045	3045	3045	3045
R-squared	0.192	0.245	0.191	0.106

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

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Placebo Male Outcomes

Male Educational Attainment (Census 2001)

	(1)	(2)	(3)	(4)	(5)
	Share of women with (highest education):				
	Masters degree	University degree	TEI degree	Primary school	Below primary
Hist. gender ratio	0.001	0.025***	0.020***	-0.041	-0.012
	(0.002)	(0.009)	(0.007)	(0.030)	(0.016)
Local population$_{1928}$	✓	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓	✓
Equivalent female outcome	✓	✓	✓	✓	✓
Population$_{2001}$	✓	✓	✓	✓	✓
Prefecture FEs	✓	✓	✓	✓	✓
Observations	3045	3045	3045	3045	3045
R-squared	0.388	0.669	0.313	0.508	0.594

Robust standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

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Male Labor Market Participation (Census 2001)

	(1)	(2)	(3)	(4)	(5)
			Share of women:		
	Active	Employed	Unemployed	Inactive	Seeking 1st job
Hist. gender ratio	-0.044	-0.052	0.021	0.044	-0.009
	(0.037)	(0.035)	(0.013)	(0.037)	(0.007)
Local population$_{1928}$	✓	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓	✓
Equivalent female outcome	✓	✓	✓	✓	✓
Population$_{2001}$	✓	✓	✓	✓	✓
Prefecture FEs	✓	✓	✓	✓	✓
Observations	3045	3045	3045	3045	3045
R-squared	0.487	0.525	0.458	0.487	0.315

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, ***

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Male Marital status (Census 2001)

	(1) Married	(2) Single	(3) Divorced	(4) Separated
Hist. gender ratio	0.097***	-0.092***	0.004	0.002
	(0.024)	(0.025)	(0.005)	(0.002)
Local population$_{1928}$	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓
Equivalent male outcome	✓	✓	✓	✓
Population$_{2001}$	✓	✓	✓	✓
Prefecture FEs	✓	✓	✓	✓
Observations	3045	3045	3045	3045
R-squared	0.261	0.240	0.194	0.083

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

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Educational Attainment among Women (Census 2001)

	(1)	(2)	(3)	(4)	(5)
	Share of women with (highest education):				
	Masters degree	University degree	Vocational Higher degree	Primary school	Below primary
$\Delta_{ratio} \times$%*Refugees*	0.029	-0.123**	0.008	-0.004	
	(0.042)	(0.052)	(0.018)	(0.007)	
Δ_{ratio}	-0.040	0.075**	0.000	0.008	
	(0.030)	(0.036)	(0.010)	(0.006)	
% Refugees	-0.010**	0.009**	0.007***	0.001**	
	(0.004)	(0.004)	(0.001)	(0.001)	
Local population$_{1928}$	✓	✓	✓	✓	✓
Population$_{2001}$	✓	✓	✓	✓	✓
Prefecture FEs	✓	✓	✓	✓	✓
Observations	3045	3045	3045	3045	
R-squared	0.193	0.244	0.202	0.108	

Robust standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Labor Market Participation among Women (Census 2001)

	(1)	(2)	(3)	(4)	(5)
	Share of women:				
	Active	Employed	Unemployed	Inactive	Seeking 1st job
$\Delta_{ratio} \times$%*Refugees*	-0.155*	-0.105	-0.050*	0.155*	-0.030*
	(0.091)	(0.079)	(0.029)	(0.091)	(0.017)
Δ_{ratio}	0.095	0.078	0.018	-0.095	0.013
	(0.066)	(0.056)	(0.021)	(0.066)	(0.012)
% Refugees	0.011*	0.005	0.006**	-0.011*	0.007***
	(0.006)	(0.006)	(0.002)	(0.006)	(0.001)
Local population$_{1928}$	✓	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓	✓
Prefecture FEs	✓	✓	✓	✓	✓
Observations	3045	3045	3045	3045	3045
R-squared	0.227	0.248	0.135	0.227	0.112

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, ***

Marital Behavior Participation among Women (Census 2001)

	(1) Married	(2) Single	(3) Divorced	(4) Separated
$\Delta_{ratio} \times \%Refugees$	0.029	-0.123**	0.008	-0.004
	(0.042)	(0.052)	(0.018)	(0.007)
Δ_{ratio}	-0.040	0.075**	0.000	0.008
	(0.030)	(0.036)	(0.010)	(0.006)
% Refugees	-0.010**	0.009**	0.007***	0.001**
	(0.004)	(0.004)	(0.001)	(0.001)
Local population$_{1928}$	✓	✓	✓	✓
Refugee population$_{1928}$	✓	✓	✓	✓
Prefecture FEs	✓	✓	✓	✓
Observations	3045	3045	3045	3045
R-squared	0.192	0.245	0.191	0.106

Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Dowries: Real Values

	(1)	(2)	(3)	(4)	(5)	(6)
	Real dowry (1928 drachmas): Level			Real dowry (1928 drachmas): Logged		
Year	-139452.066**	-131458.303***	-123993.317**	-0.222**	-0.286***	-0.242**
	(63829.333)	(49123.792)	(50038.666)	(0.086)	(0.103)	(0.103)
Post-1923	-2.897e+08**	-2.914e+08**	-2.771e+08**	-422.914	-620.351**	-535.606*
	(1.332e+08)	(1.118e+08)	(1.132e+08)	(261.506)	(294.789)	(298.502)
Year × Post-1923	150683.174**	151599.527**	144138.943**	0.220	0.323**	0.278*
	(69316.884)	(58178.075)	(58905.795)	(0.136)	(0.153)	(0.155)
Notary FE	✓	✓	✓	✓	✓	✓
Dowry-type FE		✓	✓		✓	✓
Bride: Employment			✓			✓
Observations	109	109	109	109	109	109
R^2	0.250	0.309	0.311	0.337	0.421	0.432

Note: Entries are OLS coefficients, heteroskedasticity-robust standard errors in parentheses.
Dowry types: land; building; cash; furniture; cloathing. Employment: 0; housewive:1.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.