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Human Capital and the Employment Outcomes of Refugees in Austria: Evidence on Gendered Effects of Education and Source Country Characteristics

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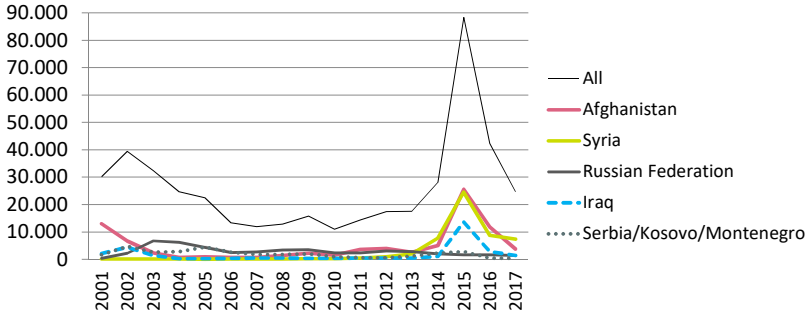
Congressi Stefano Franscini (CSF), Monte Verità, Ascona, Switzerland

Topic

- Refugees as a specific group of immigrants
- Integration of refugees into the host country labor market
  - role of education
  - role of source country characteristics
- Austria – long-standing immigration country

Asylum Applications in Austria, 2001-2017, from five most relevant source countries



Aim

- Provide longitudinal evidence on the labor market integration of recent refugees in Austria – both male and female
- Study focuses on those who obtained a positive decision on their asylum application (i.e. asylum or subsidiary protection) and with that a *work permit* in Austria.
- In the observation period 2001-2016 about 90,000 refugees were granted asylum or subsidiary protection and were hence granted access to the labor market (Vogtenhuber et al., 2018).

Questions

- Role of education
- Role of source country characteristics
- Role of gender culture in the source countries

Data

- Administrative data
  - Social security records matched with data from the public employment service, providing daily information on the labor market status of refugees who have arrived from 31 different source countries in the period 01/2001-06/2016
  - Follow-up until 08/2017
  - Focus of study: refugees of core working age, i.e. who were aged 25-54 at the time when they obtained their asylum decision and access to the Austrian labor market.

Theory I

- Human capital theory
  - Classic hypothesis in migration research: the higher the educational attainment, the easier and faster the labor market integration (Card 1999, Altonji & Blank 1999) .

    = *demand-side perspective*

Theory II

- Barriers to labor market entry
  - Lack of host country language skills, limited transferability of occupational skills and experience, discrimination, etc.
  - Counter-hypothesis: barriers less important in jobs that require only basic skills – easiest to enter labor market in such jobs – faster integration among lower educated

    = *demand-side perspective*

Theory III

- Barriers to labor market entry
  - Imperfect portability of human capital (acquired in the source country) and relevance of the origin of education.
    - Friedberg 2000: most important factor determining the gap between immigrants' and natives' earnings is the national origin of their human capital
    - Hypothesis: controlling for the source country, education shows little effect on economic success in host country

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Theory

Theory IV

- Constrained choices
  - Rational choice to delay entry when more highly educated: credentials and language proficiency
  - Hypothesis: the highly skilled take longer to enter the host country labor market to avoid occupational downgrading.

    = *supply-side perspective*

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Theory

Theory V

- Gender differences
  - Family investment model (Baker & Benjamim 1997)
  - Hypothesis: gender-specific effects of educational attainment on labor market entry pattern

    = *supply-side perspective*

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Theory

Theory VI

- Source country characteristics
  - Blau/Kahn/Papps 2011, Blau & Kahn 2015
  - Gender role culture in source countries
  - Hypothesis: Women from source countries in which (relative) female participation is low will be less likely to enter the host country LM – and this effect is long-term.

    = *supply-side perspective*

FIGURE 1.—SIMULATED PROFILES, ANNUAL WORK HOURS, MARRIED ADULT IMMIGRANT WOMEN, BY SOURCE COUNTRY RELATIVE FEMALE ACTIVITY RATE

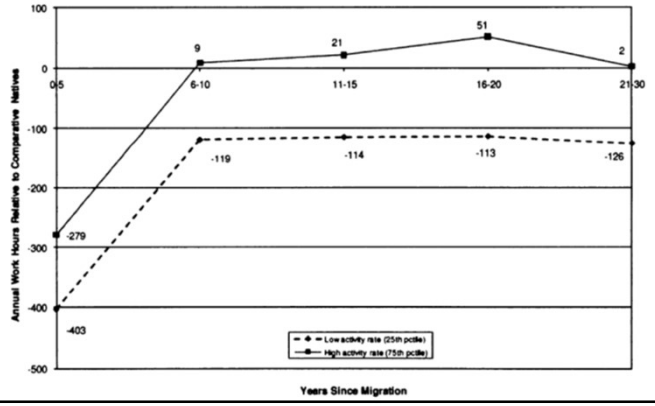
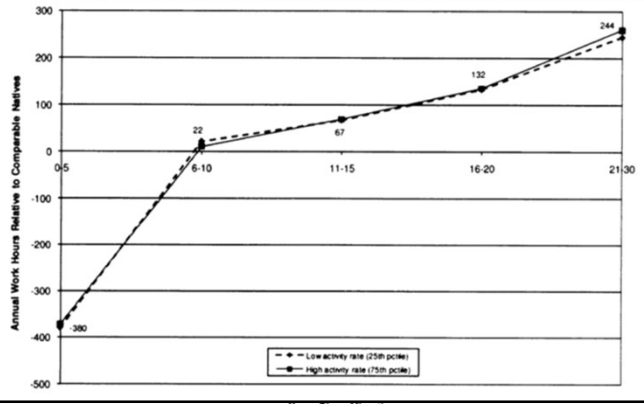


FIGURE 2.—SIMULATED ASSIMILATION PROFILES, ANNUAL WORK HOURS, MARRIED ADULT IMMIGRANT MEN, BY FEMALE RELATIVE ACTIVITY RATE



Prior studies I

- Effect of education
  - Bevelander (2011) finds that **among male and female refugees higher education is associated with higher probabilities of being employed** in the host country (Sweden).
  - *„The results of the analysis show, in line with human capital theoretical propositions, that demographic as well as human capital factors are important in explaining employment integration.* ***The younger and the better educated an individual is, the higher the probability of being employed****."*

Prior studies II

- Effect of education
  - Dumont et al. (2016) How are refugees faring on the labour market in Europe? A first evaluation based on the 2014 *EU Labour Force Survey ad hoc module*.
    - *Despite a significant gap with tertiary-educated native-born (13 %-points),* ***tertiary-educated refugees have a much higher employment rate than the low-educated*** *(+26 %-points).*

Prior studies III

- Effect of education
  - Hartog and Zorlu (2009) Using register data on **refugees** admitted to the NL in the period 1990-2001. "*The most remarkable finding is the **absence of returns to higher education***" – finding: education beyond secondary schooling does not yield any significant monetary returns within the first 5 years in the Dutch labour market.
  - Zorlu (2014): Based on Dutch LFS finds no effect of (foreign) education for **immigrants** in NL (outcome: adjustment profile).

Prior studies IV

- Effect of education
  - Rodríguez-Planas (2012) Evidence from Spanish LFS data that skilled immigrants in Spain do not assimilate as well as low skilled ones. "In Spain having a high-school degree does not give **immigrants** an advantage in terms of wage or occupational assimilation."

Prior studies V

- Problem of over-education
  - Dumont et al. (2016) 2014 *EU Labour Force Survey ad hoc module*.
  - "*Refugees are much more likely to be overqualified than other migrants.*"
  - *"In total, almost 60% of employed tertiary-educated refugees in the EU are overqualified for the jobs they occupy, more than twice the level of the native-born and also well above the levels for other migrant groups."*

Sample

- We identify about 90,000 refugees who obtained a positive decision (asylum or subsidiary protection) between 01/2001-06/2016
- We limit the sample to those **aged 25-54** at the time when they obtained the positive decision and a work permit (defined as t_0 in the analysis)
- We exclude those who have been employed at least once in Austria before or during their asylum application procedure in Austria.
- This reduces sample to **34,936 refugees from 31 countries**
- In most analysis focus is on sub-group with positive decision between 2001 and **2012** to allow for follow-up for 5 years (until t_5 or 5YSM), **N=19,662**.

Sample 5YSM

Table: Description of sample: refugees with positive decisions 2001-2012

	In % ALL	In % WOMEN	In % MEN
Sex			
Female	40.2	100	0
Age			
25-34	51.9	47.5	54.9
35-44	34.0	36.5	32.3
45-54	14.1	16.0	12.7

N=19,662

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Data

Sample 5YSM

Table: Description of sample: refugees with positive decisions 2001-2012

	In % ALL	In % WOMEN	In % MEN
Education			
Less than compulsory	15.9	17.5	14.8
Compulsory	58.6	57.0	59.7
Vocational school/apprenticeship	5.8	5.0	6.4
Maturation	4.6	5.3	4.1
Tertiary degree	3.9	4.7	3.4
Education missing	11.1	10.5	11.5

N=19,662

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Sample: source countries 5YSM

	In % ALL	In % WOMEN	In % MEN
Source country (10 most important)			
Russian Federation = Chechnya	27.4	35.1	22.3
Serbia/Kosovo/Montenegro	12.4	11.3	13.2
Afghanistan	9.6	9.9	9.4
Iran (Islamic Republic of)	7.2	6.2	7.9
Turkey	5.5	4.0	6.5
Nigeria	5.4	3.1	6.9
Armenia	3.7	5.0	2.9
Iraq	3.7	3.2	4.1
Syrian Arab Republic	3.3	2.1	4.1
Georgia	2.8	3.6	2.2

N=19,662 from 10 out of 31 countries in 81.0% of cases

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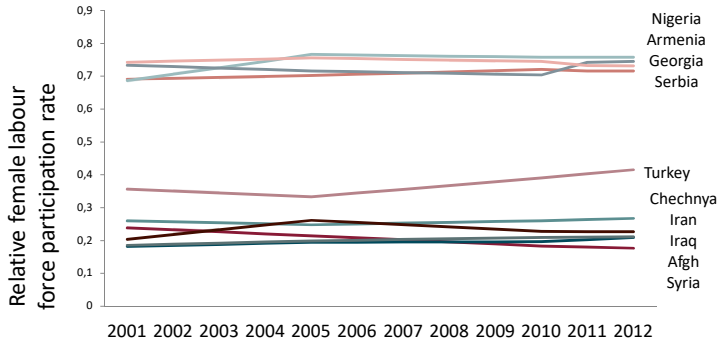
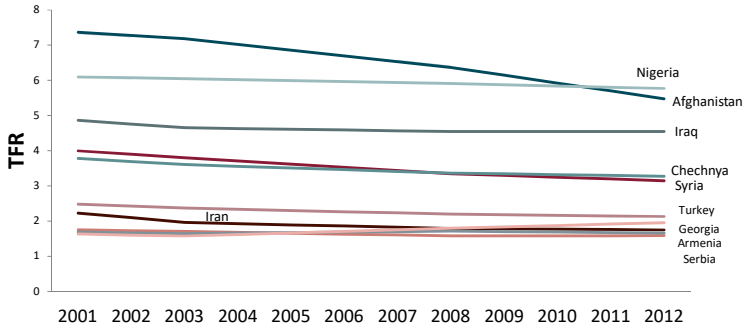
Source country characteristics

	F-LFPR (2001-12)	M-LFPR (2001-12)	F/M (2001-12)	TFR (2001-12)	Duration of asylum proc
Source country					
Chechnya	-	-	-	3.4	2.3
Serbia	44.0	62.3	0.71	1.6	2.4
Afghanistan	16.5	84.1	0.20	**6.3**	2.0
Iran	17.0	72.2	0.24	1.9	2.0
Turkey	25.9	70.7	0.37	2.2	2.8
Nigeria	47.5	63.0	0.75	**5.9**	3.0
Armenia	51.3	70.9	0.72	1.7	4.4
Iraq	14.1	69.2	0.20	**4.6**	1.6
Syrian Arab Republic	13.7	73.4	0.19	3.3	2.1
Georgia	56.1	75.3	0.74	1.8	3.8

Source country characteristics: LFPR f/m

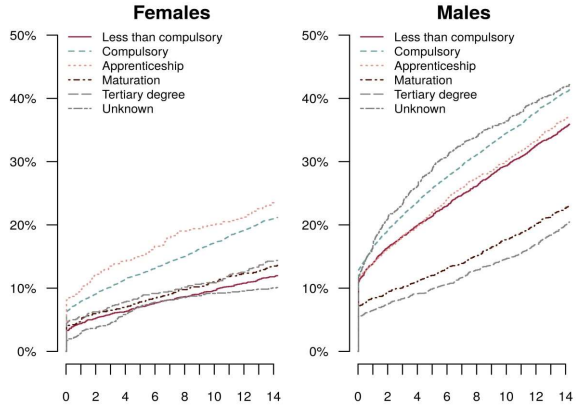


Source country characteristics: TFR

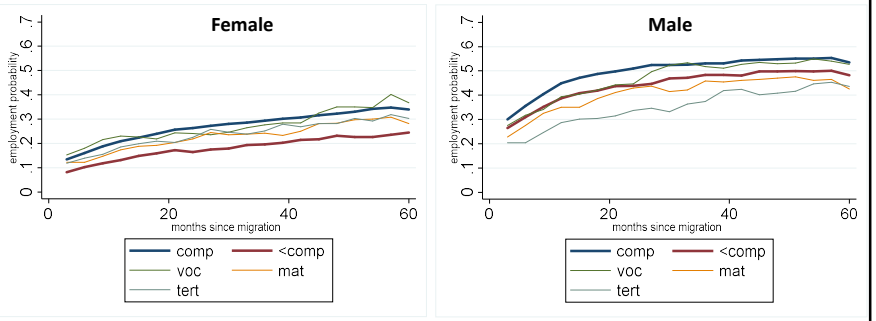


Methods: Description

- Kaplan-Meier estimates, by sex and education
  - The outcome of interest is the time it takes refugees from the day they are granted access to the labor market (t_0) to take up 1st employment (counting only spells of employment that lasted at least 91 days, including dependent employment, self-employment, and apprenticeship training, but excluding mini jobs).
- Probability of employment (in %) depending on YSM (years since migration or in our case years since legal labor market access at t_0)



% employed by time since t_0



Methods: Modelling

- **Regression (logistic and linear)**
  - Outcomes of interest: probability of employment 5 years after LM access (t_5), days in employment within the first 5 years after LM access.
  - The core predictor is **education** (covariates: age and marital status)
  - **Year and country fixed effects** (to account for time-invariant differences across source countries and for time trends that were shared by all refugees).

  Multilevel model (3-level, countries observed over 12 years)
  - In line with the literature (Blau et al., 2011; Blau and Kahn, 2015), the labor force participation rate (LFPR) of females relative to that of males in the source country is used as an indicator of **gender role culture**.
  - Covariates: labor market tightness at the regional level, TFR at macro level.

Logistic regression employment probability at t_5 (5 YSM)

	Female Model 1			Female Model 2 (FE)		
	Coef	SE	p-value	Coef	SE	p-value
Education (ref: Compulsory)						
Less than compulsory	**-0.40**	**0.08**	**0.000**	**-0.25**	**0.08**	**0.002**
Vocational school/ apprenticeship	0.08	0.13	0.539	0.16	0.13	0.213
Maturation	**-0.27**	**0.13**	**0.034**	-0.19	0.13	0.142
Tertiary degree	-0.15	0.13	0.269	-0.12	0.14	0.408
Education missing	**-0.67**	**0.27**	**0.014**	**-0.86**	**0.27**	**0.002**

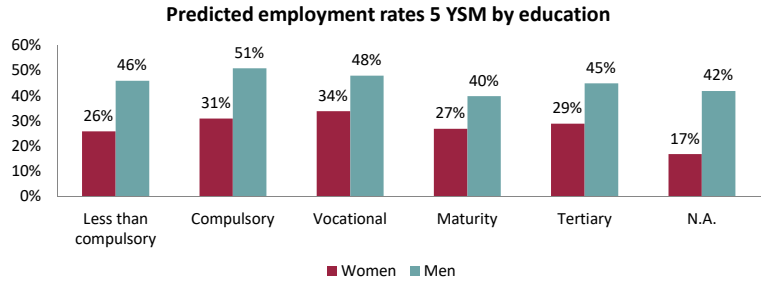
Covariates: Model 1: age in 6 groups and marital status (married, cohabiting, divorced, windowed)
Model 2 as in Model 2 but including country fixed effects and time fixed effects

Logistic regression employment probability at t_5 (5 YSM)

	Male Model 1			Male Model 2 (FE)		
	Coef	SE	p-value	Coef	SE	p-value
Education (ref: Compulsory)						
Less than compulsory	**-0.25**	**0.06**	**0.000**	**-0.23**	**0.06**	**0.000**
Vocational school/ apprenticeship	-0.12	0.08	0.153	-0.17	0.09	0.060
Maturation	**-0.50**	**0.11**	**0.000**	**-0.51**	**0.11**	**0.000**
Tertiary degree	**-0.34**	**0.12**	**0.004**	**-0.27**	**0.12**	**0.026**
Education missing	-0.26	0.16	0.103	**-0.43**	**0.16**	**0.009**

Covariates: Model 1: age in 6 groups and marital status (married, cohabiting, divorced, windowed)
Model 2 as in Model 2 but including country fixed effects and time fixed effects.

Logistic regression employment probability at t_5 (5 YSM) Marginal effects

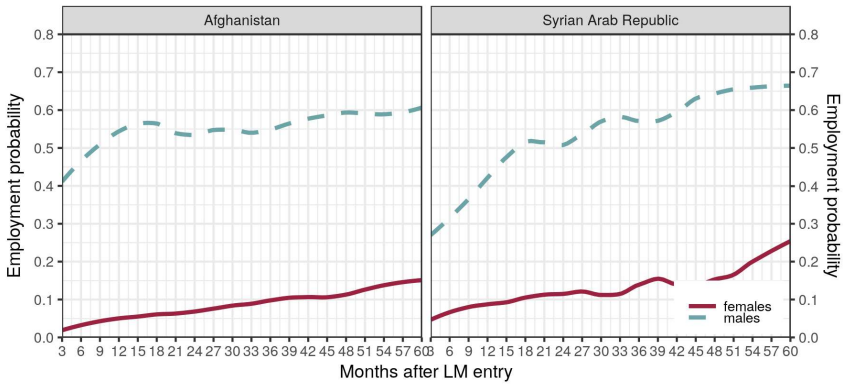


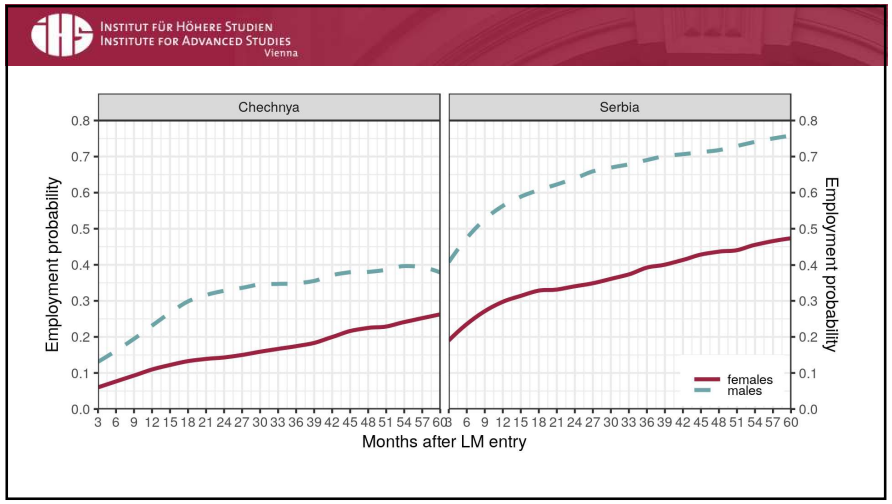
Linear regression sum of days in employment t_0-t_5

	Male			Female		
	Coef	SE	p-value	Coef	SE	p-value
Education (ref: Compulsory)						
Less than compulsory	**-94.6**	**15.3**	**0.000**	**-81.3**	**15.0**	**0.000**
Vocational school/ apprenticeship	**-82.0**	**21.5**	**0.000**	-16.1	26.1	0.538
Maturation	**-136.3**	**26.7**	**0.000**	-37.8	24.8	0.127
Tertiary degree	**-211.8**	**29.6**	**0.000**	-43.0	26.6	0.106
Education missing	**-107.7**	**40.8**	**0.008**	**-173.6**	**49.8**	**0.000**

Covariates: age in 6 groups and marital status, country and time fixed effects

- Differences across source countries

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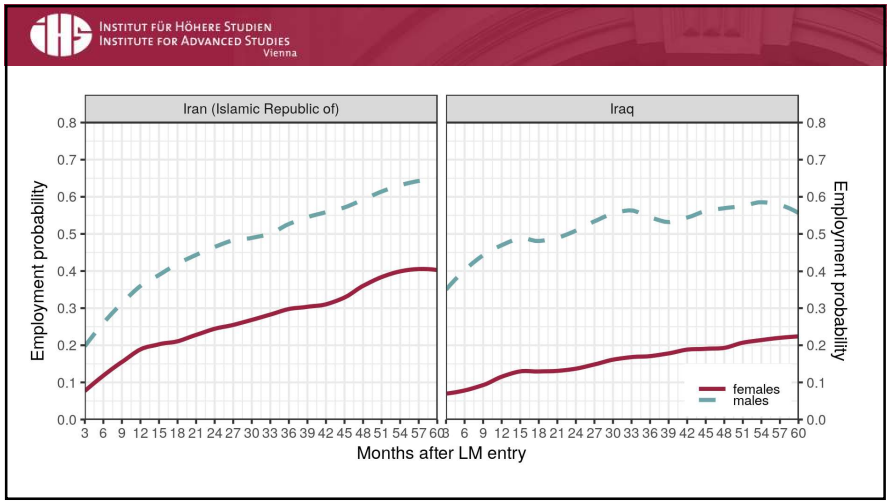
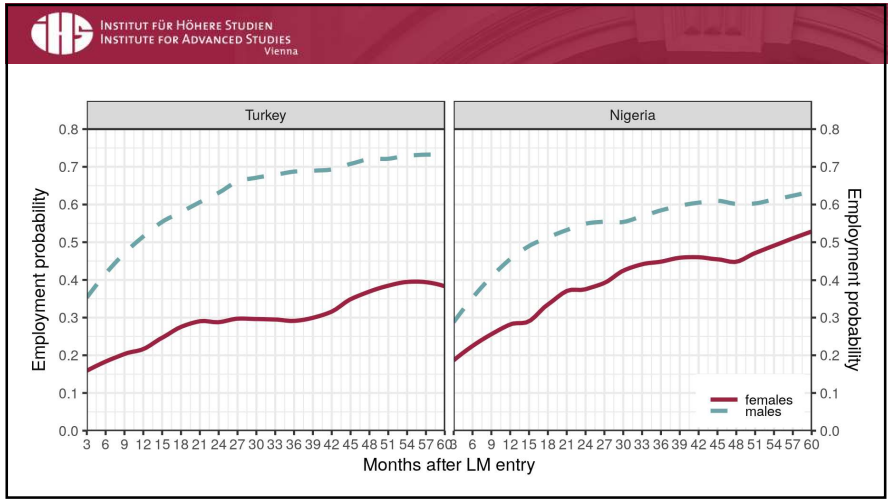
Chechnya
Serbia
Employment probability
Months after LM entry
females
males


Institut für Höhere Studien
Institute for Advanced Studies
Vienna
Iran (Islamic Republic of)
Iraq
Employment probability
Months after LM entry
females
males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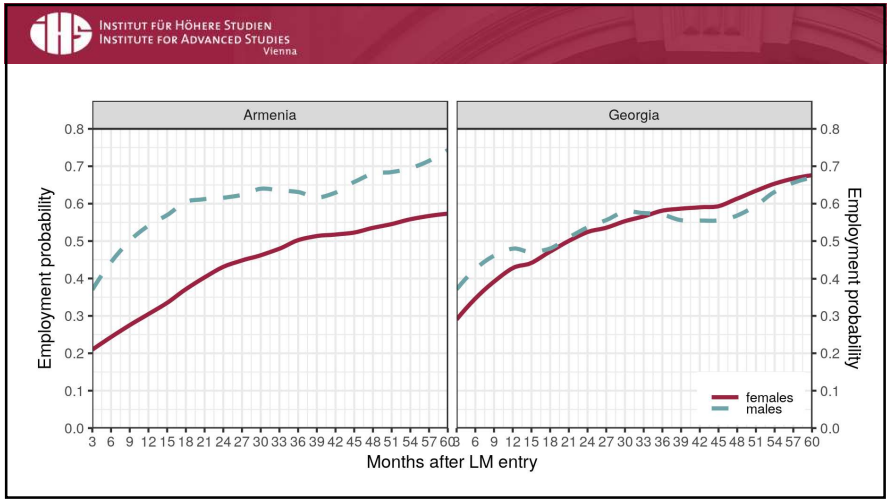
Institute for Advanced Studies
Vienna
Turkey
Nigeria
Employment probability
Months after LM entry
females
males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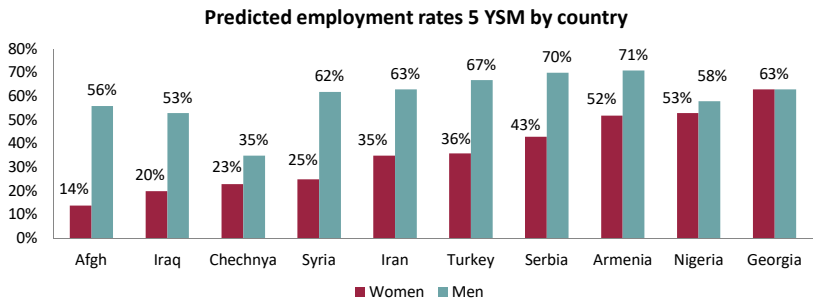
Institute for Advanced Studies
Vienna
Armenia
Georgia
Employment probability
Months after LM entry
females
males

Logistic regression employment probability at t_5 (5 YSM) Marginal effects



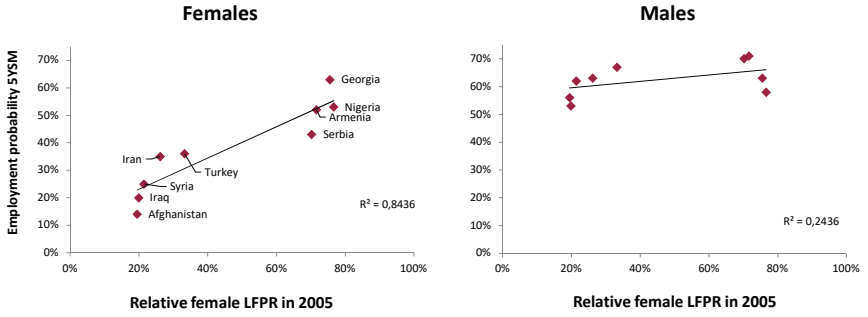
- Role of source country characteristics?

Multilevel model: employment probability at t_5 (5 YSM)

	Male			Female		
	Coef	SE	p-value	Coef	SE	p-value
Source country characteristics						
Relative female LFPR	0.017	0.058	0.773	**0.420**	**0.064**	**0.000**
TFR	**-0.017**	**0.007**	**0.023**	-0.012	0.008	0.144
Covariates						
Regional labour market pressure	**-0.005**	**0.001**	**0.000**	-0.001	0.001	0.199
Duration asylum proc (in yrs)	**0.012**	**0.003**	**0.000**	**0.015**	**0.004**	**0.000**

Controls: age in 6 groups, education, and marital status at the individual level
Sample: Nine countries measured over 12 years -> 3-level random intercept model (linear model)

Source country characteristics



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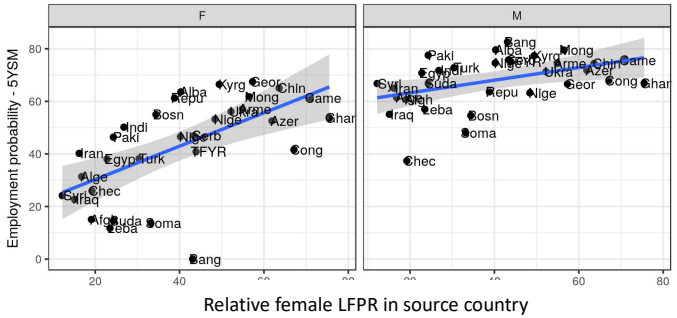
Source country characteristics



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Conclusions

- Higher education does not help – highly educated male refugees are less successful on the AT labor market than lower skilled ones (within the first 5 years since legal labour market access).
  - Further analysis: wages/earnings as outcome
  - Further analysis: does this concusion hold within source countries?
  - Further analysis: effect of age
- In some countries huge gender gap in labour market participation – similar to the gender pattern in the source countries – impact of gender culture?

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Policy lessions?

- Many countries favor skill-based immigration based on the assumption that highly skilled immigrants are mostly likely to assimilate and to be productive on the LM, but in economies with segmented labour markets, it may be easier for low skilled immigrants to enter the LM.
- Need for certification, i.e., most occupations that require higher levels of education also require certification in Austria (e.g. physicians, architechts, lawyers but also electricians, plumbers, etc.)
  - Assist immigrants/refugees to interpret their foreign credentials for employers
  - Facilitate the aquisition of Austrian credentials (e.g., also converting foreign certificates into Austrian ones)

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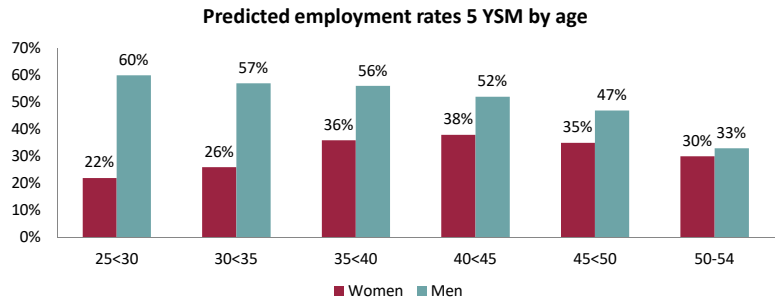
Thank you for your attention!

Work on this project has been supported by the Jubilee Fund of the Austrian National Bank

Appendix…

Logistic regression employment 5YSM (0/1)
Marginal effects



Conclusions about education effects valid for all countries?
Coefficients from linear models, males

	Afgh	Chechn	Serbia	Turkey	Syria	Iraq	Nigeria	Iran
< comp	**-0.12****	-0.02	-0.03	-0.01	-0.07	-0.08	-0.04	-0.04
Comp	*ref*	*ref*	*ref*	*ref*	*ref*	*ref*	*ref*	*ref*
Higher	-0.07	**-0.05***	**-0.10****	**-0.21****	**-0.13***	-0.04	-0.01	-0.05
	1,075	2,595	1,658	806	476	468	821	915

Dep: Probability of employed at 5YSM. Controls: age, and year of entry

Conclusions about education effects valid for all countries?
Coefficients from linear models, females

	Afgh	Chechn	Serbia	Turkey	Syria	Iraq	Nigeria	Iran
< comp	**-0.08****	**-0.05***	**-0.08+**	-0.03	-	-0.04	-	0.05
Comp	*ref*	*ref*	*ref*	*ref*	*ref*	*ref*	*ref*	*ref*
Higher	-0.03	0.01	-	-	-	-	-	0.03
	802	2,768	905	324	146	253	254	490

Dep: Probability of employed at 5YSM. Controls: age, and year of entry. Coefs only reported when n>50

Linear regression annual income in t_5 (5 YSM)

	Male			Female		
	Coef	SE	p-value	Coef	SE	p-value
Education (ref: Compulsory)						
Less than compulsory	**-585**	**292**	**0.045**	-99	333	0.767
Vocational school/ apprenticeship	56	394	0.888	-134	521	0.796
Maturation	**-2,547**	**490**	**0.000**	-224	492	0.649
Tertiary degree	**-1,815**	**547**	**0.001**	428	531	0.420
Education missing	**1,855**	**908**	**0.041**	**3,022**	**1302**	**0.020**
Const	16,091	804	0.000	10,133	1204	0.000

Covariates: age in 6 groups and marital status, country and time fixed effects
Annual income 5 years after entry: up to EUR 50,000, median is 15,000
Sample: those employed at least one day in the corresponding year t5, N=8,066 male and 4,279 female refugees

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Linear regression annual income in t_{10} (10 YSM)

	Male			Female		
	Coef	SE	p-value	Coef	SE	p-value
Education (ref: Compulsory)						
Less than compulsory	775	478	0.105	-169	442	0.702
Vocational school/ apprenticeship	387	575	0.501	187	666	0.779
Maturation	**-3,540**	**776**	**0.000**	23	678	0.973
Tertiary degree	-290	856	0.735	1,380	753	0.067
Education missing	1,687	1,365	0.217	404	2,404	0.866
Const	20,658	1,423	0.000	11,956	1,992	0.000

Covariates: age in 6 groups and marital status, country and time fixed effects
Annual income 5 years after entry ranges from zero up to EUR 60,000, median is 16,000
Sample: those employed at least one day in the corresponding year t5, N=4,296 male and 2,250 female refugees

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Statistical analysis of the determinants of the duration of the asylum procedure (linear regression)

- **Year of entry**: Increased from about half a year in 2001/02 to about 1 year in 2003/04, to 4 years in 2011, then drop to 3.4 in 2012
- Shortest in Syria and Iraq (1-1.5 yrs), medium in Chechnya, Afghanistan, Serbia, Iran, Turkey (2-2.5), longest in Nigeria, Armenia, Georgia (> 3 yrs)
- Duration is **shorter for more highly educated refugees** (2.5 yrs on average among those without compulsory education versus 2.0 for those with university degrees) – but control for duration does not alter the general conclusions about education effects reported earlier
- It **takes longer for older refugees** (from about 2 yrs to about 3 yrs)
- No sex differences – either in level or determinants

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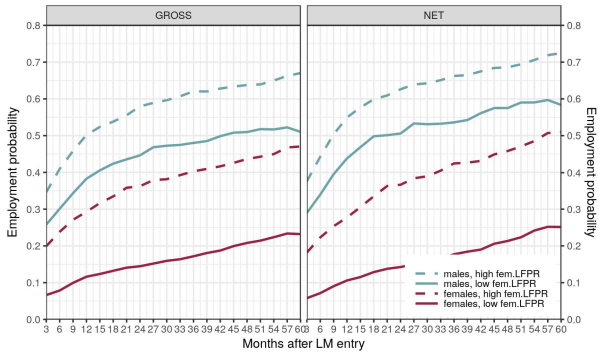
% employed by time since arrival

Depending on relative rate of female LF participation (high vs low)

Right: net of age, education, marital status