Assessing the Role of Asylum Policies in Refugees' Labor Market Integration

The Case of Protection Statuses in the German Asylum System

Maurizio Strazzeri

Department of Economics
University of Bern

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Introduction

Need to improve labor market performance of refugee migrants

- Sizable increase in number of asylum seekers in Europe between 2014-16
- Refugees perform often worse than economic migrants in the labor market in Europe
  (e.g., Bratsberg et al. 2013; Fasani et al. 2018, Brell et al. 2020)
- Low labor market attachment among refugees induce societal costs (e.g., productivity and tax losses, crime, mobilization of right-wing movements)
  (e.g., Couttenier et al. 2019; Ivarsflaten 2008)

Why do refugees often perform worse than other migrants in the labor market?

- Relocation decision not based on economic considerations $\rightarrow$ Less economically selected (skill mismatch, lower level of country-specific human capital upon arrival)
- Physical and mental health affected by persecution and/or war experiences
- More demanding institutional environment (asylum process, residential or labor market access regulations, prospects of remaining in the country)

Introduction

Can labor market outcomes be improved by a "more stable" protection status?

- Presumably yes... More stable protection status reduces uncertainty about prospects of staying in host country
- Supply side explanation
  - Refugees experience devaluations of skills $\rightarrow$ Incentive to invest in skills more valuable in host country
  - Time horizon in host country determines incentives to invest
- Demand side explanation
  - Employment requires costly on-the-job training
  - Firms are more likely to regain investment costs if refugees have better prospects of staying in host country

This paper

- Investigates effect of more stable protection status on labor market outcomes using variation in the granting of different types of protection
  - Germany: Geneva convention vs subsidiary protection (less stable)
- Exploits an unpredictable policy change in March 2016 that suddenly increased the percentage of refugees with subsidiary protection (Fuzzy RD design)
- Data: Large panel survey of refugee with detailed information on asylum process

Findings

- Subsidiary protection has substantial negative effect labor outcomes
  - Policy change reduced employment (-9 pp) and monthly earnings (-140 Euros)
  - Effect driven by reduction in full-time employment
  - Policy change targeted at young, male, unmarried refugees without children, presumably with better labor market perspectives a priori
- Subsidiary protection reduces perceived likelihood to remain in GER, but no effects on investments in country-specific human capital (i.e., contradicts supply side explanation)

Protection status, permanent residence, and labor market access

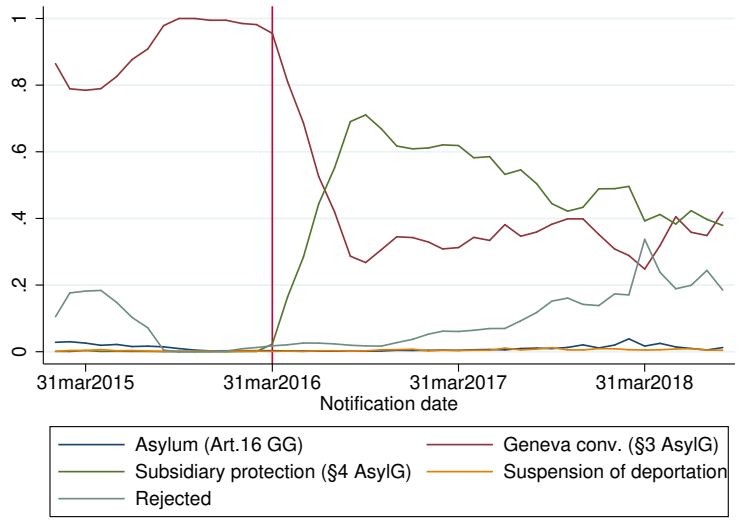
Geneva convention refugee

- Perm. residence granted after 3 years if
  - German C1-level +
    75 % cover of living costs
- Perm. residence granted after 5 years if
  - German A2-level +
    50 % cover of living costs

Subsidiary protection refugee

- Perm. residence granted after 5 years if
  - German B2-level +
    100 % cover of living costs +
    60 month social sec payments

Protection status (Syrian refugees)



Note: Plot illustrates the type of protection status received by month of notification date for Syrian asylum seekers. Source: Calculations based on monthly published data from BAMF. (More Figures)

Both status give equivalent access to the labor market and social security benefits

Data

- IAB-BAMF-SOEP panel survey of refugees (3 waves, 2016-18)
  - Population: Refugee migrants who entered Germany between 2013-2016
  - Detailed information about asylum procedure with dates (monthly aggregated)
- Sample restrictions:
  - Geneva refugees and refugees with subsidiary protection
  - working age (18 to 65) from Syria or Iraq
  - only non-married or married who entered with their spouse
- Main outcome variables:
  - Any paid employment (full-time, part-time, training)
  - full-time employment
  - Monthly labor earnings (unemployed coded with 0 earnings)

Empirical approach and estimation

Exploit change in granting subsidiary protection status in a fuzzy RD design

$$Sub_i = \alpha_0 + \alpha_1 \mathbb{1}[t_i > c] + \alpha_2 f(t_i - c) + \alpha_3 \mathbb{1}[t_i > c] f(t_i - c) + \eta_i$$
$$Y_i = \beta_0 + \beta_1 \hat{Sub}_i + \beta_2 f(t_i - c) + \beta_3 \mathbb{1}[t_i > c] f(t_i - c) + \epsilon_i$$

Sub_i :	Subsidiary protection status
Y_i :	Labor market outcome
t_i :	Months when i received decision
c :	March 2016

Identifying assumptions: Monotonicity, excludability

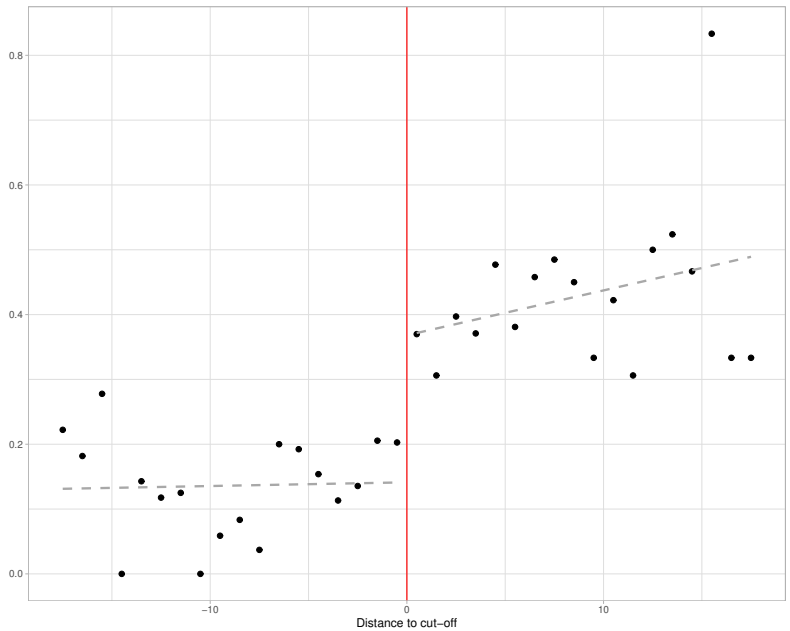
$\rightarrow \beta_1$ estimates the effect of Sub_i on Y_i for compliers

Validity of RD design: No manipulation around the cutoff

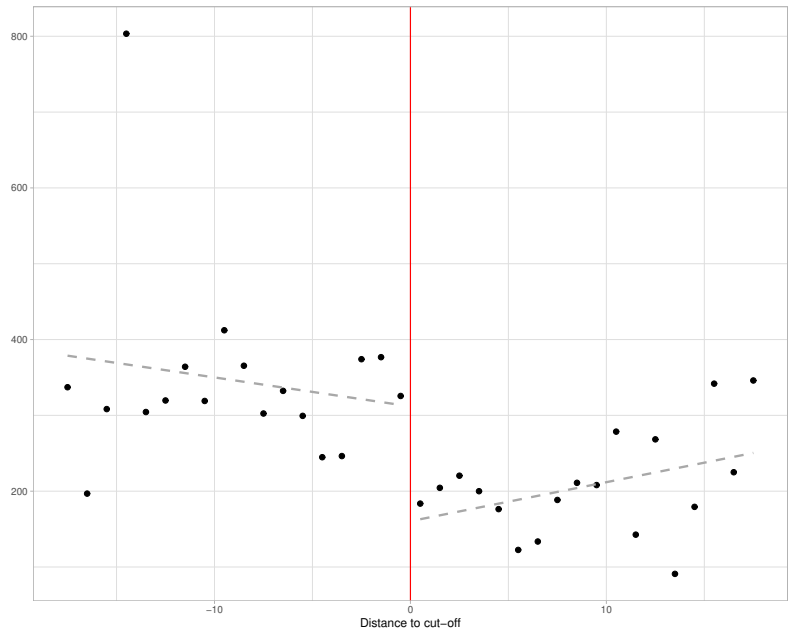
$\rightarrow$ Refugees (i) applied long before policy change and (ii) cannot influence timing

$\rightarrow$ Tests: Density of running variable, discontinuities of covariates (Test I, II, III, IV)

Discontinuities in granted protection status and labor earnings



(a) Subsidiary protection



(b) Monthly labor earnings

Note: Mean of selected variables by value of the assignment variable with fitted lines on both sides of the threshold. Selected Bandwidth: 18 months. (Other Variables)

Results: First-stage and reduced form RD estimates

	(1)	(2)	(3)	(4)	(5)
First stage estimation					
Subsidiary protection	0.24***	0.18***	0.21***	0.19***	0.15**
	(0.04)	(0.05)	(0.04)	(0.05)	(0.06)
F-statistic	40	12	27	17	5
Reduced form estimation					
Any employment	-0.09**	-0.11**	-0.10**	-0.08*	-0.05
	(0.04)	(0.05)	(0.04)	(0.05)	(0.06)
Full-time employment	-0.09***	-0.11***	-0.10***	-0.10***	-0.13***
	(0.03)	(0.04)	(0.03)	(0.04)	(0.05)
Monthly earnings (excl 0)	-222.98**	-160.41	-214.69**	-227.33**	-248.20
	(90.95)	(127.90)	(98.82)	(115.23)	(157.01)
Monthly earnings	-142.74***	-158.98***	-148.44***	-145.30**	-152.76**
	(42.69)	(57.35)	(48.40)	(56.91)	(74.63)
Bandwidth selection	none	none	18	12	6
Polynomial order	1	2	1	1	1
Observations	1470	1470	1399	1238	782

Note: First stage and reduced form RD estimates for various polynomial orders and bandwidth selection choices. Each row shows estimation results for a separate outcome variable. Estimates for the outcome variable *Monthly earnings (exlc 0)* are based on a restricted sample of employed individuals. Huber-White standard errors are reported in parentheses.
Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Results: OLS and fuzzy RD estimates

	OLS estimate		Fuzzy RD estimate	
	estimate	rel. to control mean (%)	estimate	rel. to control mean (%)
Any employment	-0.07	-24.13	-0.37**	-57.81
	(0.05)		(0.17)	
Full-time employment	-0.09**	-48.06	-0.40***	-88.89
	(0.04)		(0.13)	
Monthly earnings (excl 0)	-250.87**	-23.58	-770.57**	-58.00
	(116.31)		(341.75)	
Monthly earnings	-137.92***	-43.06	-603.92***	-79.24
	(52.19)		(196.81)	
Observations	396		1470	

Note: OLS (column 1) and 2SLS (column 3) estimates of the effect of subsidiary protection status on various labor market outcomes. Each row reports results for a separate outcome variable. The first column reports OLS results of the effect of subsidiary protection status on labor market outcomes based on subsample of observations close to the threshold (Bandwidth: 3 month). The estimation of the corresponding mean of the control complier group follows suggestions by Cohodes (2020). Huber-White standard errors are reported in parentheses.
Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Results and Robustness

- Subsidiary protection has substantial negative effect on labor outcomes
  - Police change reduced employment (-9 pp) and monthly earnings (-140 Euros)
  - Effect on employment driven by reduction in full-time employment
  - Effect is increasing over time (Show)
- Complier analysis: policy change targeted at specific subgroup (Result I, II)
  - young, unmarried, male, no children in household (with presumably better labor market prospects)

Robustness tests

- Estimates with placebo sample (Show)
- Alternative definitions of threshold (Show)
- Donut RD design (Show)
- Add control variables (Show)
- Alternative econometric specification (Show)

Causal mechanism: Perceived duration of stay and integration efforts

	Fuzzy RD		OLS estimate	
	(1)	(2)	(3)	(4)
Outcome variable related to:				
Perceived duration of stay				
Desire to permanently settle in GER (binary)	0.13	0.23	0.01	0.01
	(0.11)	(0.13)	(0.02)	(0.06)
Concerns to be forced to leave GER (ord. 1-3)	0.59**	0.53	0.15**	0.13**
	(0.28)	(0.39)	(0.05)	(0.06)
Investments in country-specific HK				
Attended official integration class (binary)	0.60***	0.65**	-0.01	-0.06
	(0.20)	(0.28)	(0.03)	(0.04)
Hours spent learning German per day	2.50***	2.33**	0.32**	0.29*
	(0.86)	(1.16)	(0.14)	(0.16)
Actively searching for on-the-job training possibilities	0.24	0.51*	0.08***	0.07**
	(0.19)	(0.30)	(0.03)	(0.03)
Only unemployed	No	Yes	No	Yes
Observations	1470	1061	1470	1061

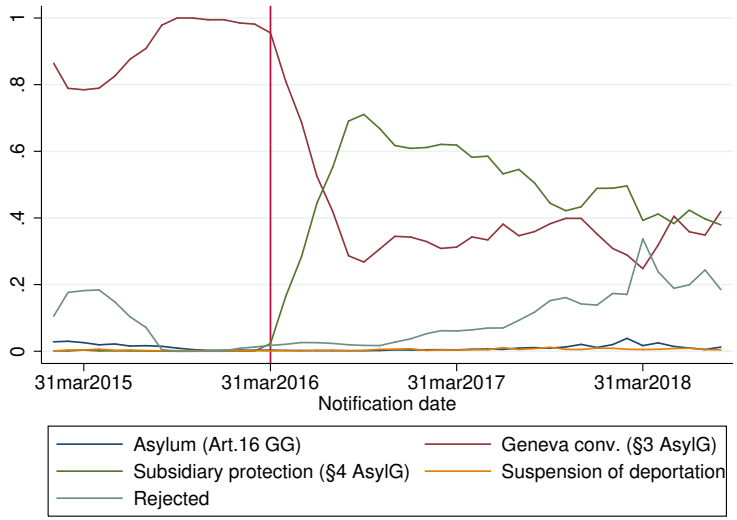
Note: Fuzzy RD design estimates (column 1 and 2) and OLS estimates (controlling for month of receiving decision on asylum application) of the effect of subsidiary protection status on various outcomes measuring perceived duration of stay or integration efforts. Huber-White standard errors are reported in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Conclusion

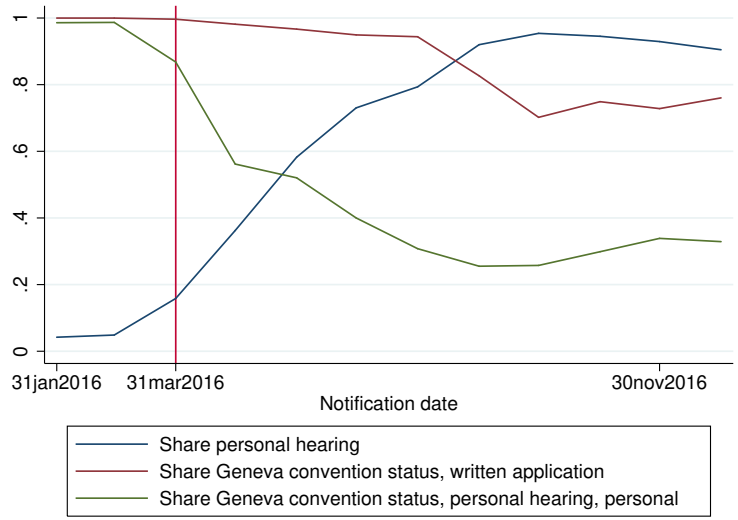
- Estimation of the effect of subsidiary protection status on labor market outcomes using variation in protection status generated by a policy change
- Subsidiary protection status has substantial negative effect on labor market outcomes
- Highlights a (potential) political trade-off between granting permanent residence and reducing unemployment among refugees
- No negative effects on investments in country-specific human capital, suggesting labor demand is explaining results

Appendix

Protection status and notification date, Syrian asylum seekers



(a) Received protection statuses



(b) Type of application

Note: Left plot illustrates the type of protection status received by month of notification date of Syrian asylum seekers. Source: Own calculations based on monthly published data from BAMF (data available upon request). Right plot shows for Syrian asylum seekers (i) the share of decisions made by month of notification date on basis of personal hearings (blue line), (ii) the share of asylum applicants that were granted Geneva convention status on basis of written applications by month of notification date (red line), and (iii) the share of asylum applicants that were granted Geneva convention status on basis of personal interviews (green line).

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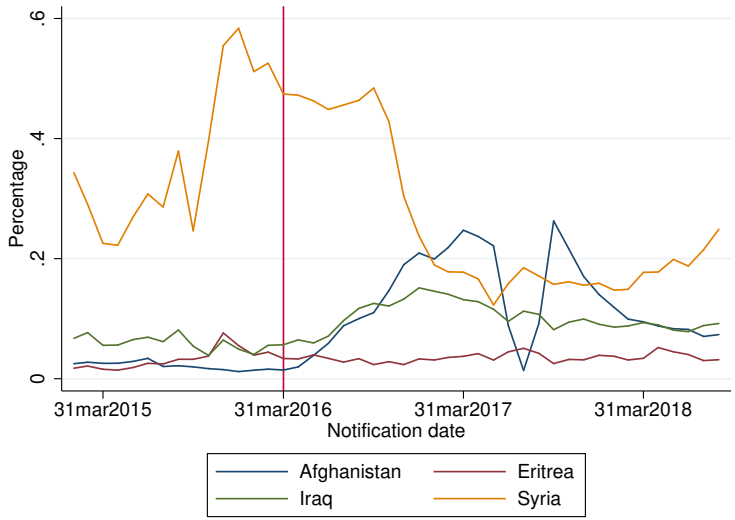
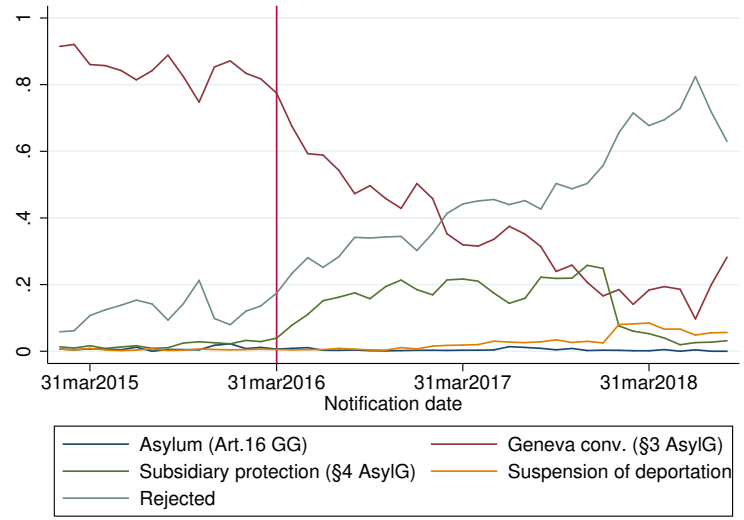
Protection status and notification date



(a) Decisions by origin country



(b) Received protection status (Iraqi)

Note: Left plot shows the share of decisions made by the BAMF for asylum seekers of the four largest groups of asylum seekers by month of notification date. Right plot illustrates the type of protection status received by month of notification date for Iraqi asylum applicants. Source: Own calculations based on monthly published data from BAMF (data available upon request).

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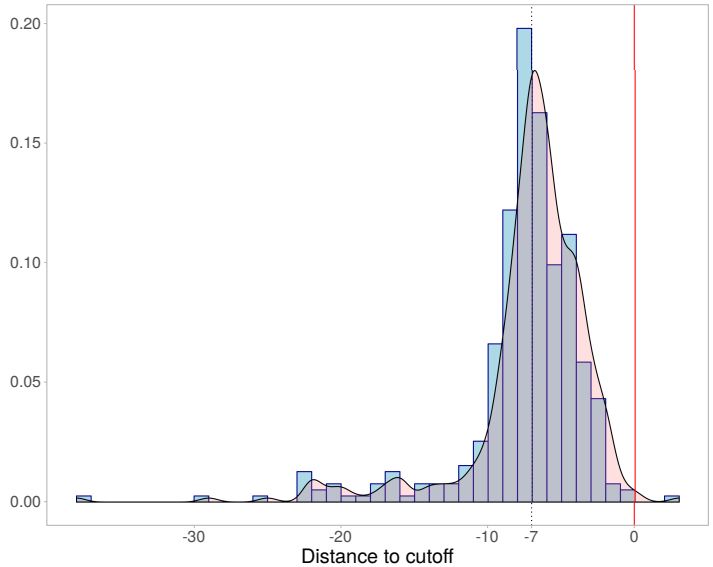
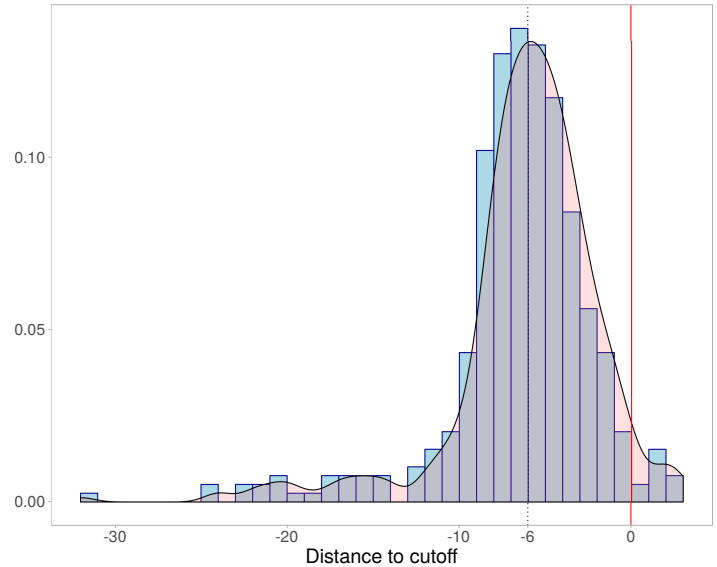
Validity of RD design: arrival and application dates



(a) Arrival month

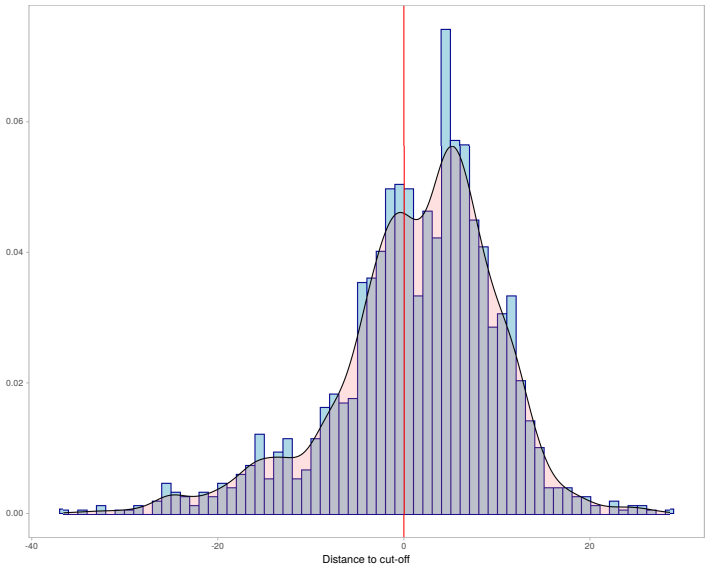


(b) Application month

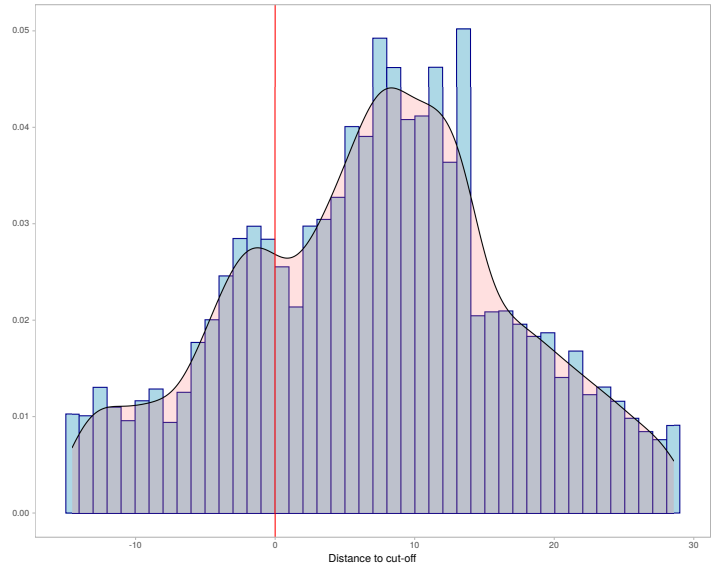
Note: Normalized histogram and Gaussian kernel density estimate of the month of arrival (left) and application for asylum (right) - both relative to the time of the policy change (between March and April 2016) - for refugee migrants who received notification within a 3 month corridor before and after the policy change. Number of observations: 396. The dashed vertical lines indicate the (rounded) mean value of each plotted variable and the red vertical lines indicate the change in BAMF's decision making policy.

go back

Validity of RD design: density of assignment variable



(a) SOEP Sample



(b) Official asylum statistic

Note: Normalized histogram and Gaussian kernel density estimate of assignment variable month of notification about decision of asylum application (relative to cutoff). The red vertical lines indicate the change in BAMF's decision making policy. The graph on the left uses data from the SOEP. The graph on the right uses data from the official record of the BAMF.

go back

Validity of RD design: mean differences, covariates and outcome

	BW: 18 month			BW: 3 month		
	$t < c$	$t > c$	t-val	$t < c$	$t > c$	t-val
Female	34	41	-2.6	35	36	-0.1
Age between						
18 and 35	54	61	-2.8	59	58	0.2
36 and 55	43	36	2.4	39	39	-0.1
55 and 65	4	3	1.2	2	2	-0.1
Married	64	67	-1.1	66	68	-0.6
No children in household	34	30	1.5	29	28	0.2
Age of youngest child in household between						
0 and 4	38	43	-1.8	43	42	0.2
5 and 10	18	18	-0.0	19	19	-0.0
11 and 15	10	8	0.8	9	11	-0.6
College graduate	23	20	1.2	22	23	-0.2
No work experience prior migration	33	39	-2.1	34	31	0.7
Work experience prior migration						
Self-employed or blue-collar worker	35	34	0.3	34	41	-1.3
White-collar worker	32	27	1.9	32	28	0.7
Located in East Germany	17	13	1.9	22	18	1.2
Years since migrating						
0 to 1	0	1	-1.6	0	0	1.0
2 to 3	76	97	-12.6	96	95	0.4
4 to 5	24	3	13.5	4	5	-0.7
Labor market outcomes						
Any employment	35	22	5.1	33	24	1.9
Full-time employment	17	9	4.6	21	10	3.0
Subsidiary protection	15	42	-10.6	18	36	-4.1
Observations	525	874		206	190	

Note: Mean values of covariates (in percent) and t-values of mean-comparison test by value of the instrument for varying time spans around the cut-off.

go back

Validity of RD design: RD estimates, covariates

	$E[X]$	RD estimates				
	(1)	(2)	(3)	(4)	(5)	(6)
Outcome:						
Age (in years)	34.37	-0.15	2.19*	0.39	2.12**	1.66
Female	0.38	0.05	0.02	0.04	0.04	-0.03
Married	0.66	0.06	0.04	0.04	0.06	0.01
No children in household (below 16)	0.32	-0.08*	-0.02	-0.05	-0.04	0.06
Youngest child in household: 0-4	0.41	0.06	-0.00	0.06	0.01	-0.04
Youngest child in household: 5-10	0.18	0.02	-0.03	-0.02	-0.00	-0.03
Youngest child in household: 11-15	0.09	-0.01	0.04	0.02	0.03	0.02
College graduate	0.21	-0.00	0.00	-0.00	-0.02	0.03
No work experience prior migration	0.37	0.04	-0.01	0.03	-0.01	-0.00
Self-employed or blue-collar worker	0.35	0.05	0.06	0.05	0.08	0.04
White-collar worker	0.29	-0.09**	-0.06	-0.08*	-0.07	-0.04
Located in East Germany	0.14	-0.03	-0.04	-0.05	-0.06	-0.07
Months since migrating	39.49	0.92**	0.88*	0.83*	1.69***	0.79
Bandwidth selection	none	none	none	18	12	6
Polynomial order		1	2	1	1	1
Observations	1470	1470	1470	1399	1238	782

Note: Mean value of covariates and corresponding RD estimates. Significant estimates are indicated with stars based on Huber-White standard errors. See RD plots of covariates and predicted outcome variables in the Appendix.
Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

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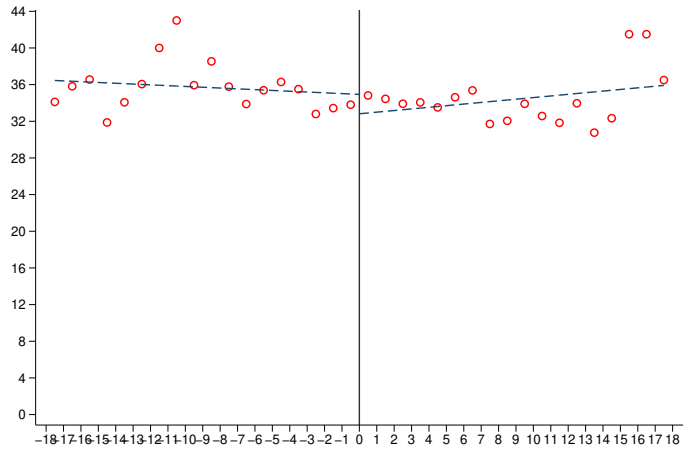
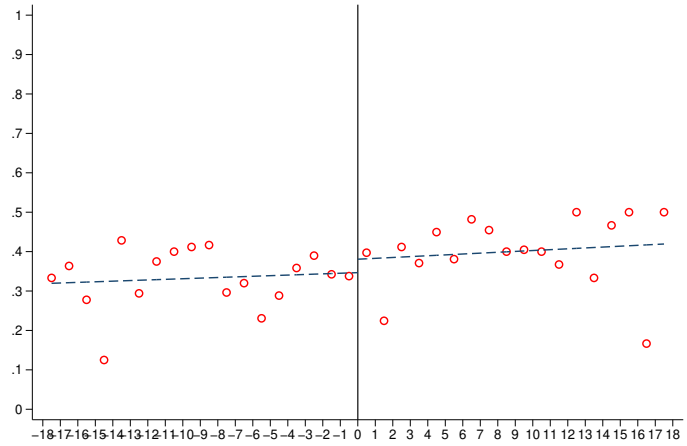
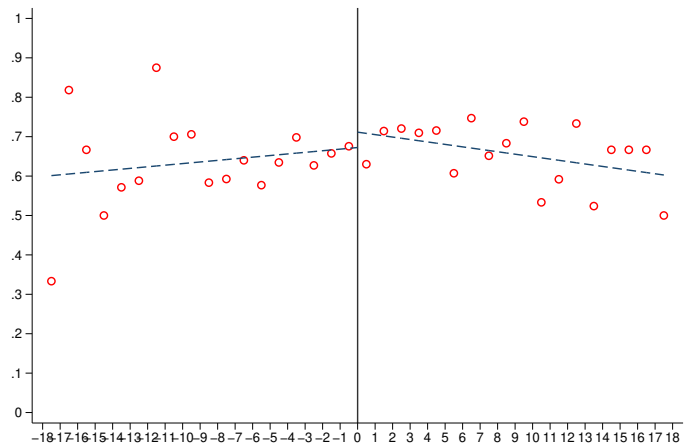
Validity of RD design: RD plots, covariates and predicted outcomes



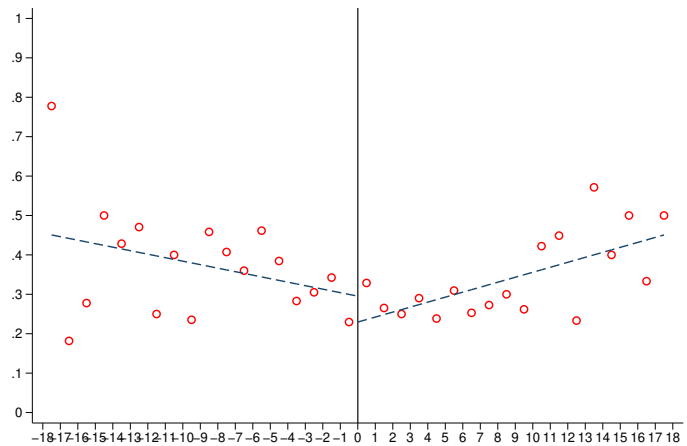
(a) Age



(b) Female



(c) Married



(d) No children in household

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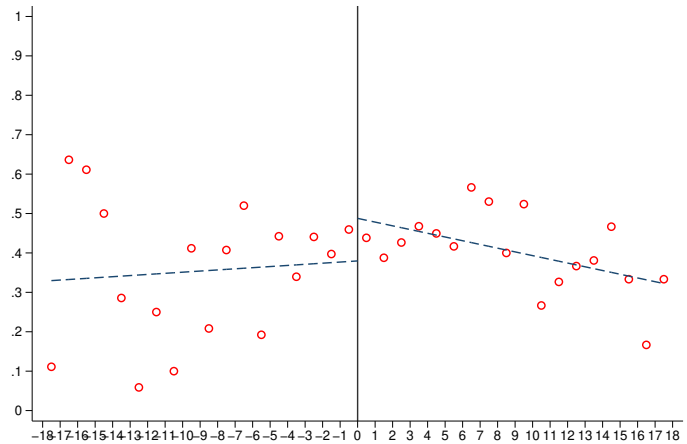
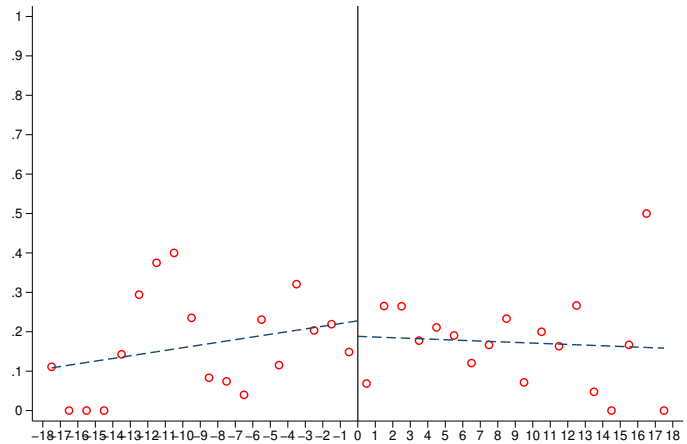
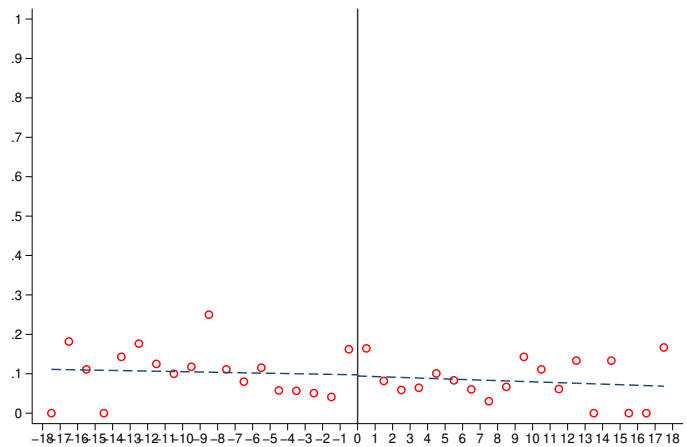
Validity of RD design: RD plots, covariates and predicted outcomes



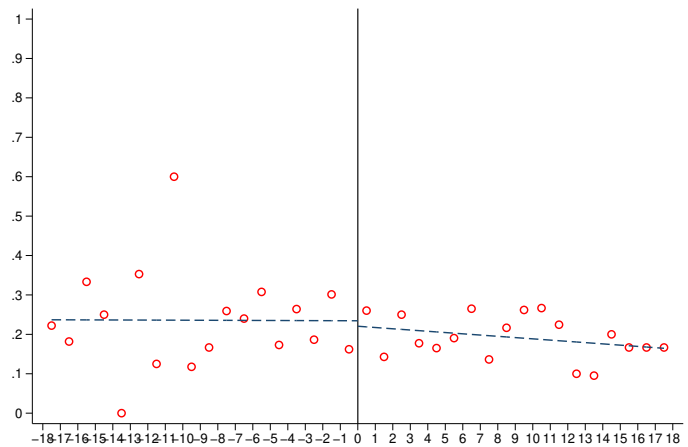
(a) Youngest child in household: 0 to 4



(b) Youngest child in household: 5 to 10



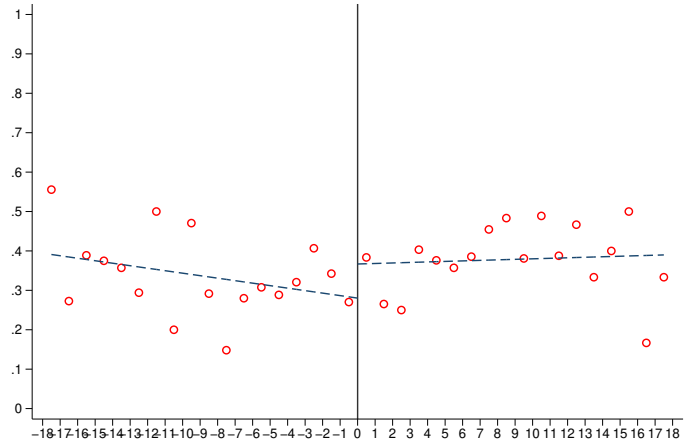
(c) Youngest child in household: 11 to 15



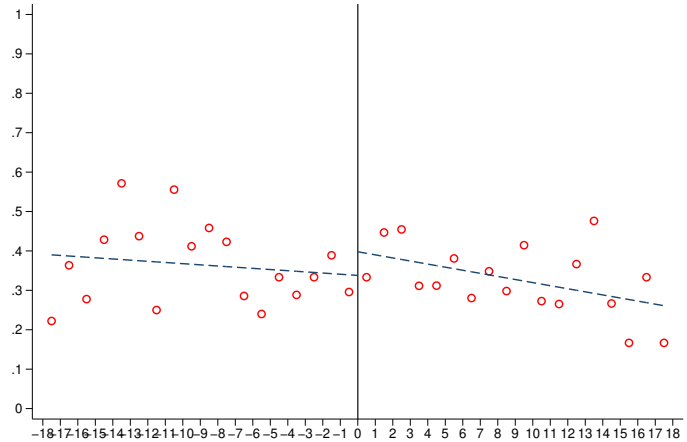
(d) College graduate

go back

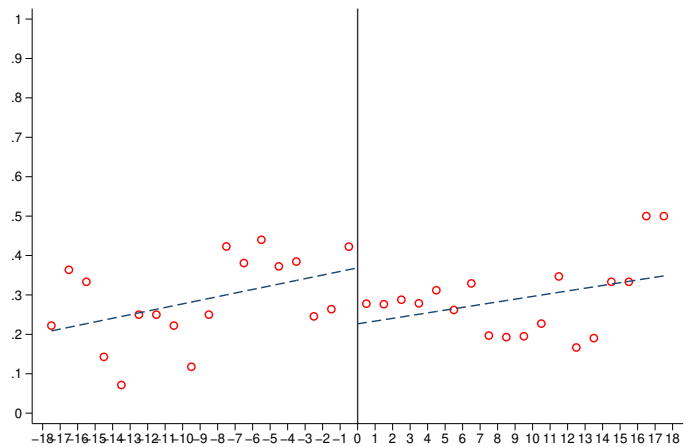
Validity of RD design: RD plots, covariates and predicted outcomes



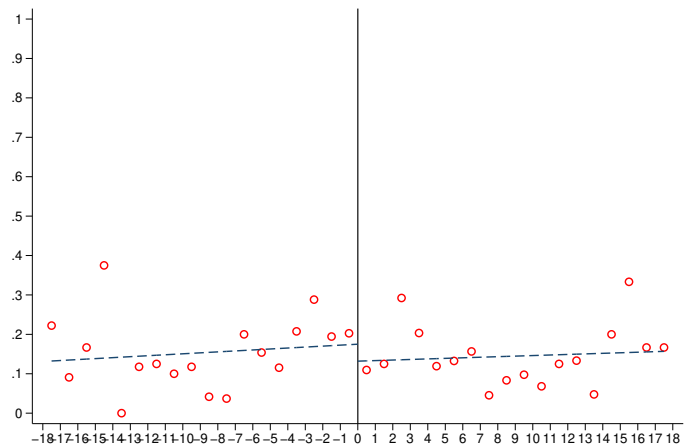
(a) No work experience prior migration



(b) Self-employed or blue-collar worker



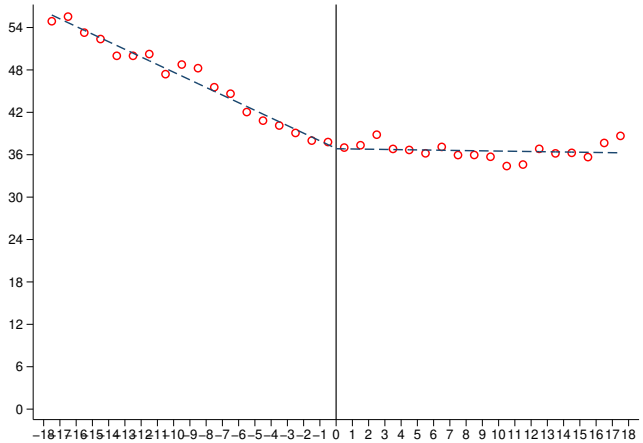
(c) White-collar worker



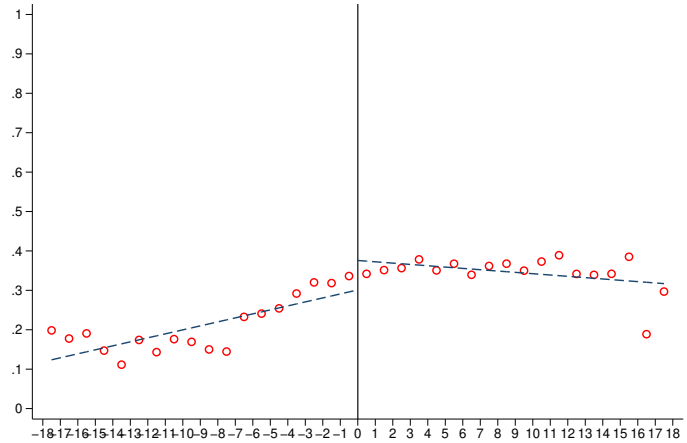
(d) Located in East Germany

go back

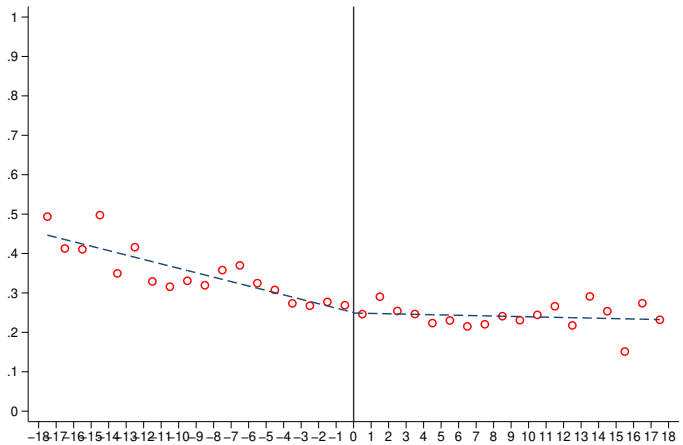
Validity of RD design: RD plots, covariates and predicted outcomes



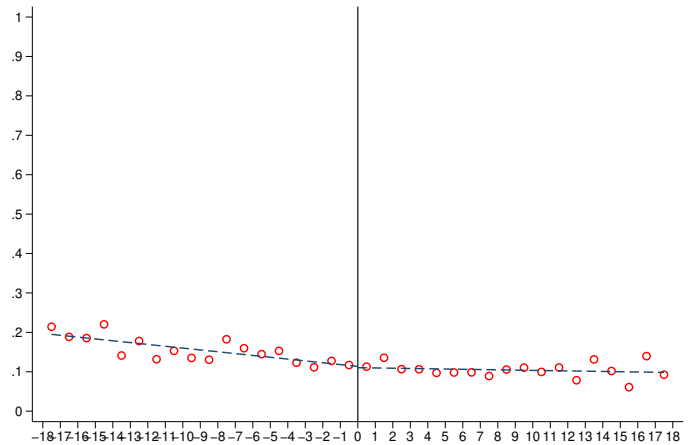
(a) Time spent in Germany



(b) Predicted subsidiary protection



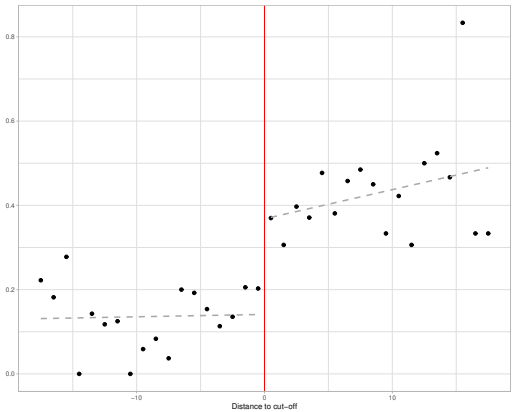
(c) Predicted employment (any)



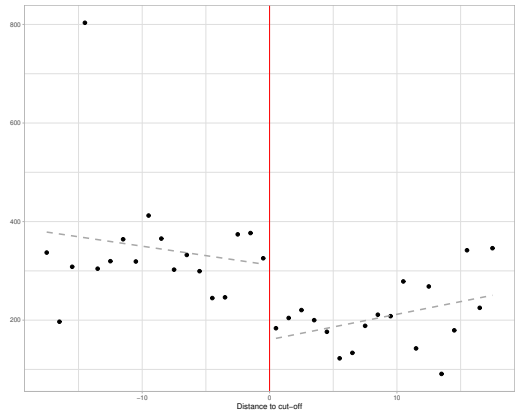
(d) Predicted employment (full-time)

go back

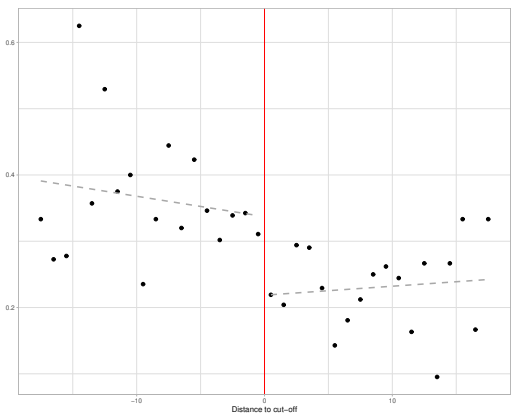
Results: RD plots, first-stage and outcome variables



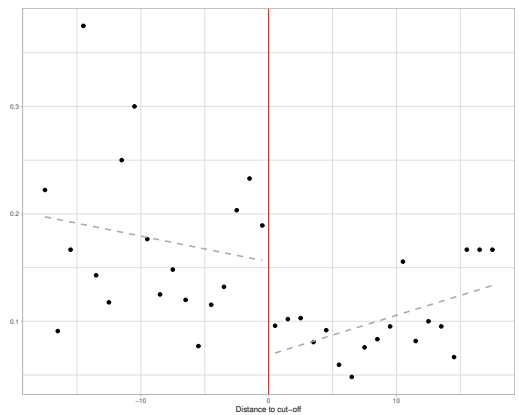
(a) Subsidiary protection



(b) Monthly labor earnings



(c) Any employment

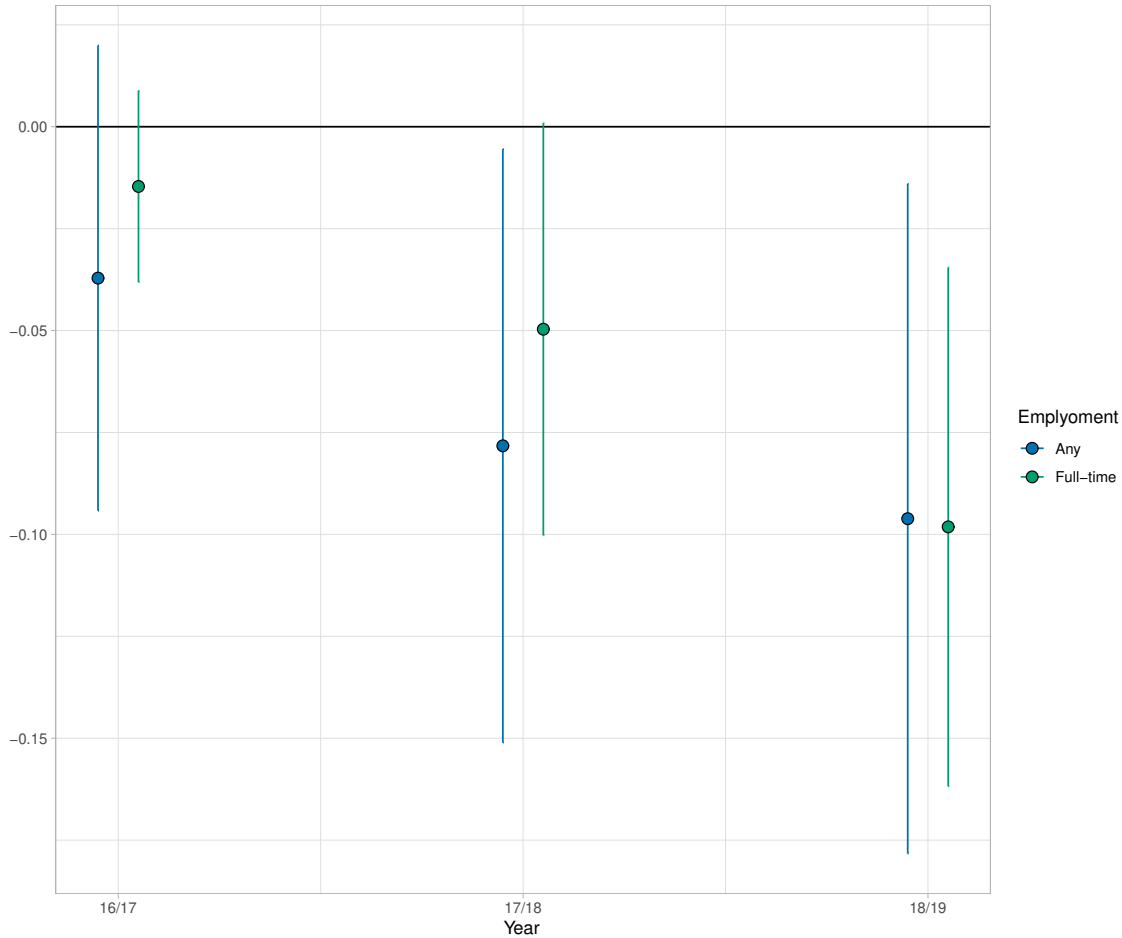


(d) Full-time employment

Note: Mean of selected variables by value of the assignment variable with fitted lines on both sides of the threshold. Selected Bandwidth: 18 months.

go back

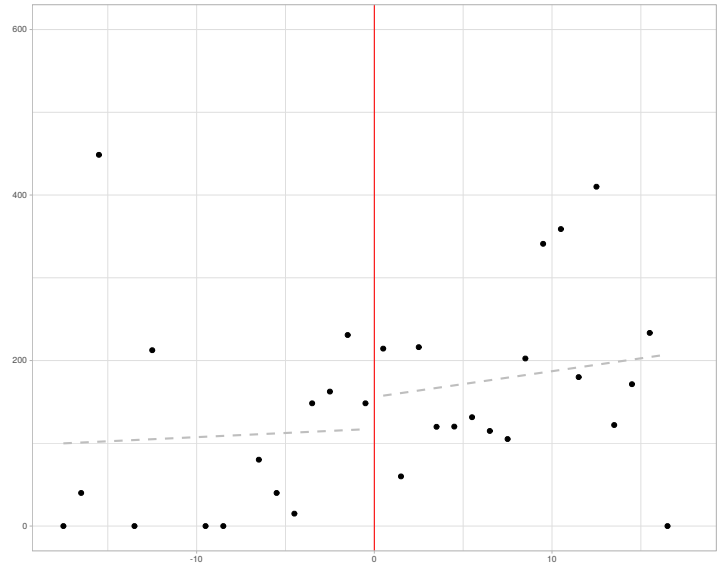
Results: Employment effects over time



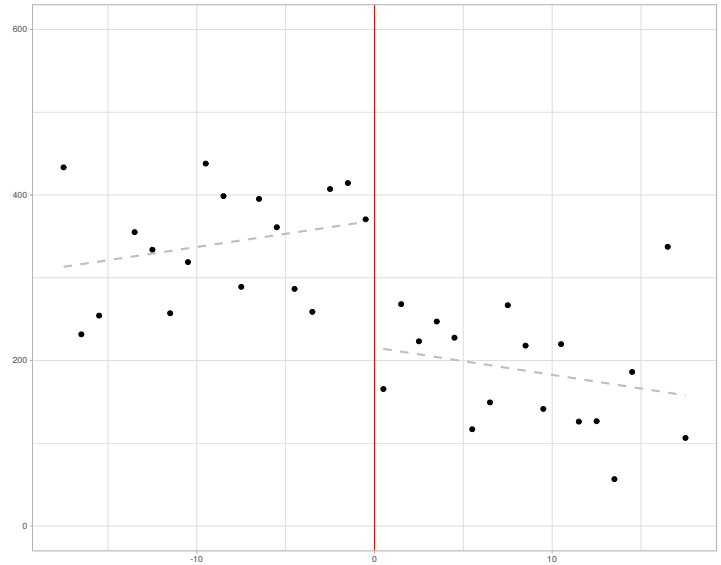
Note: Plot of reduced form estimates for outcome variables by wave. 95 % confidence interval shown.

go back

Results: Testing external validity of fuzzy RD design



(a) Subsidiary protection refugees



(b) Geneva convention refugees

Note: Mean of monthly labor income by value of the assignment variable with fitted lines on both sides of the threshold conditional on protection status. Figure on the left (right) includes only refugee migrants who reported to have subsidiary protection status (protection status in accordance with the Geneva Convention). Selected bandwidth: 18 month.

go back

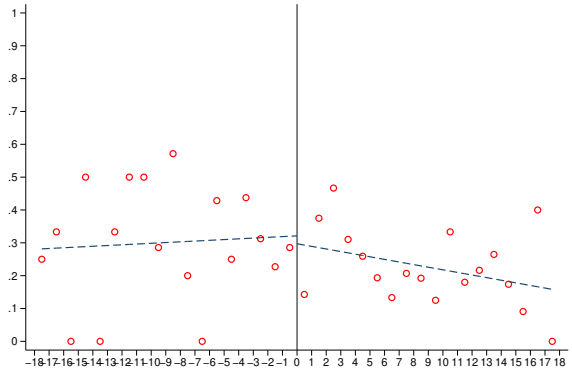
Results: Complier characteristics

	No	Yes
Sample restricted to:		
Female	0.26***	0.13*
	(0.05)	(0.07)
Age 30 or older	0.25***	0.19***
	(0.07)	(0.05)
Married	0.37***	0.14***
	(0.07)	(0.05)
Children in household	0.37***	0.12**
	(0.07)	(0.06)
Located in West Germany	0.28**	0.20***
	(0.11)	(0.04)
College graduate	0.21***	0.21**
	(0.05)	(0.09)
Without prior work experience	0.24***	0.18**
	(0.05)	(0.07)

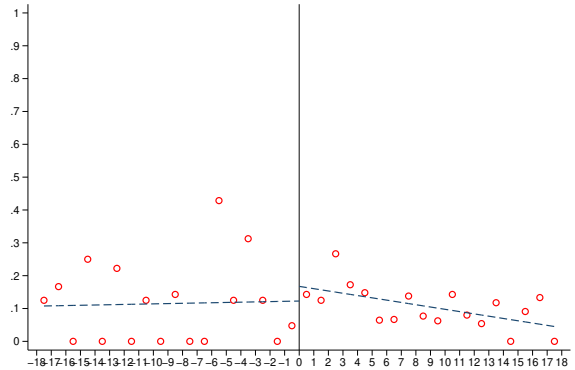
Note: Split sample estimates of first-stage equation by subgroup. Estimates correspond to specification (1) above (no bw selection and first polynomial order). Huber-White standard errors are reported in parentheses. Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

go back

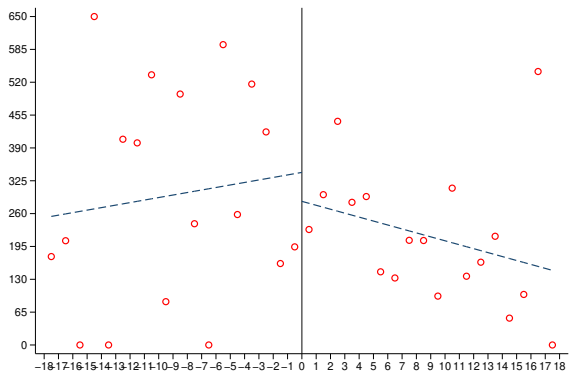
Robustness: RD plots, placebo sample



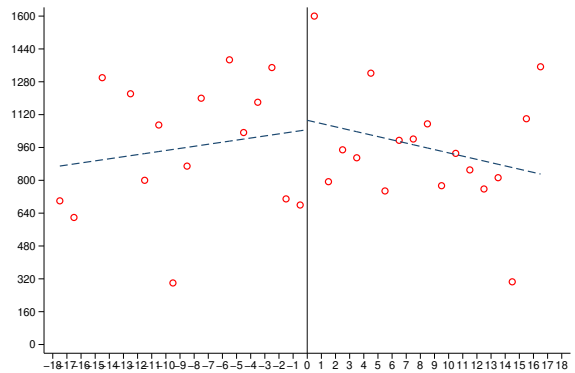
(a) Any employment



(b) Full-time employment



(c) Monthly earnings



(d) Monthly earnings (excl 0)

Note: Sample includes refugees who do not have an international protection status.

go back

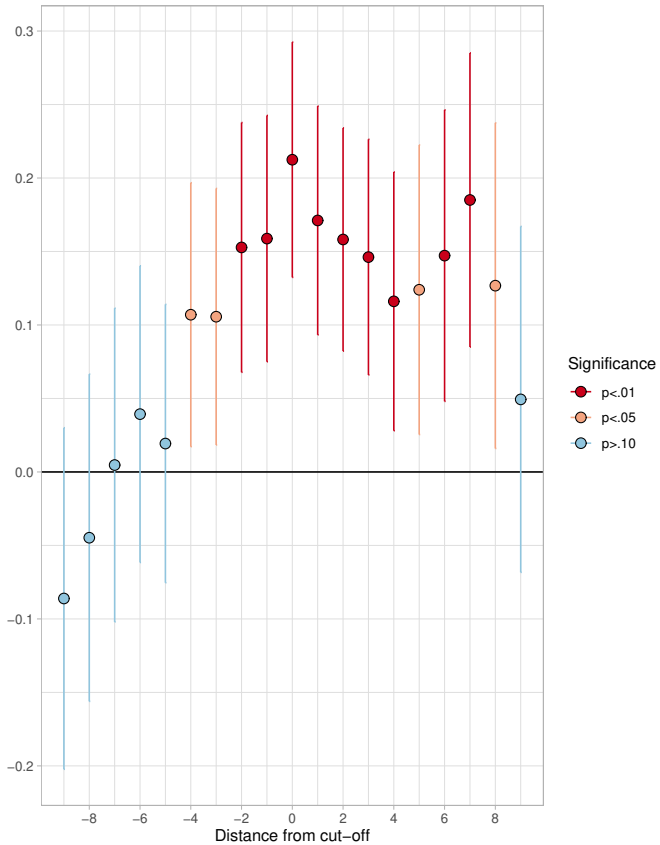
Robustness: Placebo RD estimates, reduced form

	(1)	(2)	(3)	(4)	(5)
Any employment	-0.05	0.04	-0.03	0.06	0.15
	(0.06)	(0.09)	(0.07)	(0.09)	(0.15)
Full-time employment	0.04	0.09	0.06	0.07	0.27**
	(0.05)	(0.07)	(0.05)	(0.06)	(0.11)
Net earnings (excl 0)	24.29	-24.33	-2.02	37.62	377.88
	(157.88)	(227.40)	(205.06)	(231.09)	(300.99)
Net earnings	-46.85	21.76	-35.96	60.10	252.93
	(77.84)	(109.63)	(91.61)	(106.60)	(159.45)
Bandwidth selection	none	none	18	12	6
Polynomial order	1	2	1	1	1
Observations	722	722	634	471	215

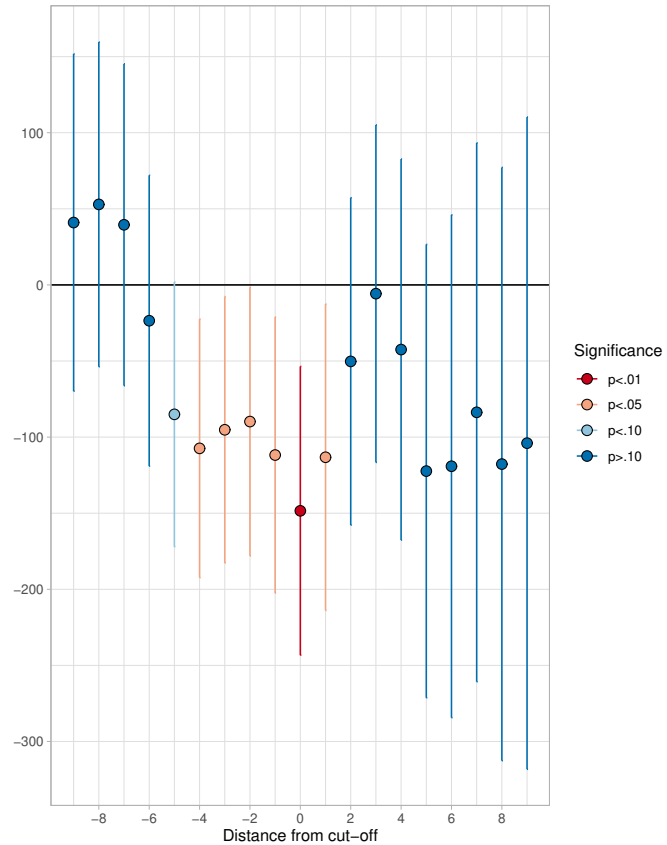
Note: Reduced form RD estimates for placebo sample. Huber-White standard errors are reported in parentheses.
Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

go back

Robustness: RD estimates, varying cut-off



(a) Subsidiary protection

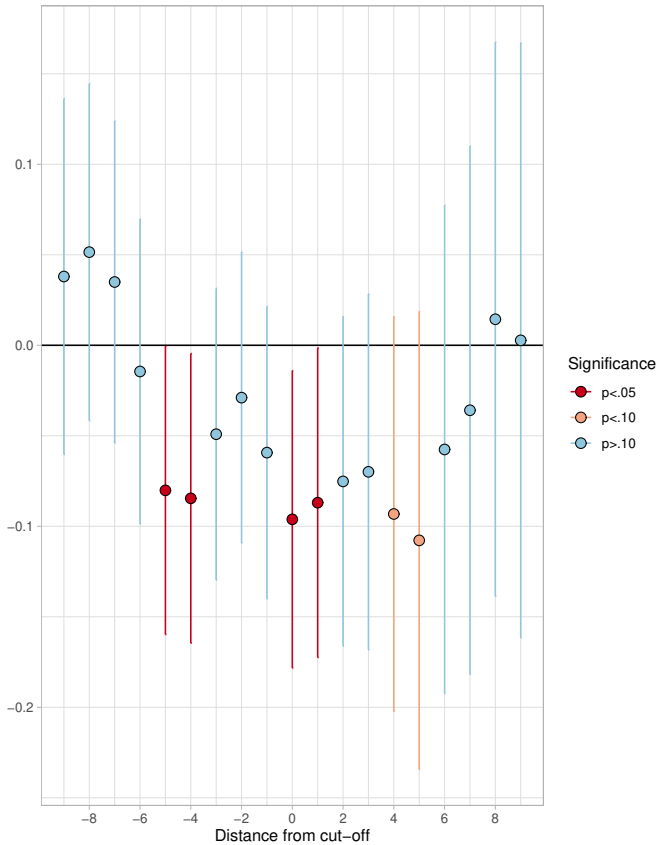


(b) Monthly earnings

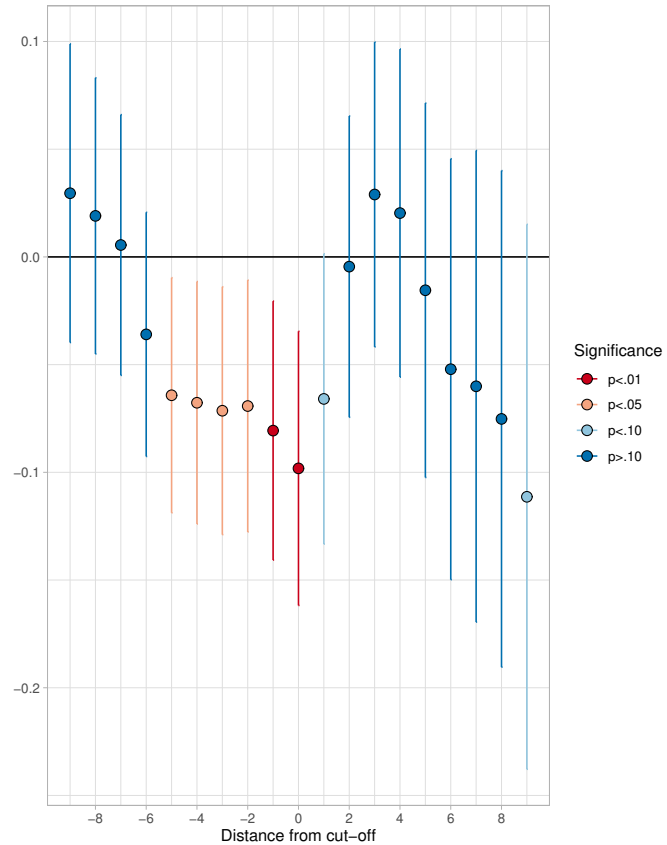
Note: Plot of RD estimates and 95 % confidence interval for various cut-off based on baseline specification with first order polynomial and a selected bandwidth of 18 month.

go back

Robustness: RD estimates, varying cut-off



(a) Any employment



(b) Full-time employment

Note: Plot of RD estimates and 95 % confidence interval for various cut-off based on baseline specification with first order polynomial and a selected bandwidth of 18 month.

go back

Robustness: Donut RD estimates, 2SLS

	Donut IV estimate	IV estimate
Any employment	-0.33*	-0.37**
	(0.17)	(0.17)
Full-time employment	-0.36***	-0.40***
	(0.13)	(0.13)
Net earnings (excl 0)	-790.38**	-770.57**
	(360.38)	(341.75)
Net earnings	-549.66***	-603.92***
	(200.08)	(196.81)
Observations	1323	1470

Note: 2SLS estimates of the effect of subsidiary protection status on various labor market outcomes. Donut RD estimate is based on a sample that excludes observations one month before and after the cut-off (March and April 2016). Huber-White standard errors are reported in parentheses.
Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

go back

Robustness: RD estimates, reduced form, covariates included

	(1)	(2)	(3)	(4)	(5)
First stage estimation					
Subsidiary protection	0.19***	0.16***	0.19***	0.19***	0.16**
	(0.04)	(0.05)	(0.04)	(0.05)	(0.06)
F-statistic	24	11	21	17	6
Reduced form estimation					
Any employment	-0.07**	-0.11**	-0.09**	-0.07	-0.04
	(0.04)	(0.05)	(0.04)	(0.05)	(0.06)
Full-time employment	-0.09***	-0.11***	-0.10***	-0.11***	-0.15***
	(0.03)	(0.04)	(0.03)	(0.04)	(0.05)
Monthly earnings (excl 0)	-236.62**	-196.18	-247.44**	-231.92**	-209.28
	(101.23)	(130.18)	(101.93)	(117.77)	(156.41)
Monthly earnings	-136.25***	-174.74***	-152.21***	-145.32***	-167.70**
	(43.20)	(54.82)	(46.28)	(53.59)	(71.13)
Bandwidth selection	none	none	18	12	6
Polynomial order	1	2	1	1	1
Observations	1470	1470	1399	1238	782

Note: 2SLS estimates of the effect of subsidiary protection status on various labor market outcomes. Huber-White standard errors are reported in parentheses.
Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

go back

Robustness: Fixed effect specification

Approach

- Instrumental variable estimation with month of application FE

$$Sub_{ima} = \delta_{ma} + \alpha_1 \mathbb{1}\left[t_i > c\right] + \alpha_2' X_i + \eta_i$$

$$Y_{ima} = \gamma_{ma} + \beta_1 \hat{Sub}_i + \beta_2' X_i + \epsilon_i$$

Sub_{ima} :	Subsidiary protection status of i, arrival in month m and applied for asylum in month a
Y_{ima} :	Labor market outcome of i
δ_{ma}, γ_{ma} :	Month of arrival FE x month of application FE
t_i :	Months when i received decision
c :	March 2016
X_i:	Vector of covariates

Identifying assumption: Monotonicity, excludability

$\rightarrow \beta_1$ estimates the effect of Sub_i on Y_i for compliers (LATE)

go back

Robustness: Reduced form estimates, fixed effect specification

	Baseline sample			Placebo sample	
	(1)	(2)	(3)	(4)	(5)
First-stage					
Subsidiary protection	0.23***	0.23***	0.24***		
	(0.03)	(0.04)	(0.04)		
F statistic	62.40	39.58	42.31		
Reduced-form estimates					
Any employment	-0.09***	-0.08**	-0.07**	0.06	0.00
	(0.03)	(0.03)	(0.03)	(0.07)	(0.07)
Full-time employment	-0.06***	-0.07***	-0.07**	0.01	-0.05
	(0.02)	(0.02)	(0.03)	(0.05)	(0.05)
Monthly earnings	-116.75***	-108.31**	-102.66**	39.71	-31.63
	(35.66)	(43.71)	(40.51)	(77.67)	(77.35)
Application FE	Yes	No	No	No	No
Arrival x application FE	No	Yes	Yes	Yes	Yes
Control variables	No	No	Yes	No	Yes
Observations	1470	1470	1470	722	722

Note: Regression of subsidiary protection status (column 1) or labor market outcome on a binary variable indicating if an refugee migrant received notification of the asylum application after March 2016. Placebo sample consists of refugees who did not receive either Geneva protection status or subsidiary protection status. Cluster robust standard errors at the level of the arrival month time application month are reported in parentheses. Number of cluster: 371 (316, placebo sample).
Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

go back

Robustness: OLS and IV estimates, fixed effect specification

	OLS estimate	IV estimate	Fuzzy RD estimate
Any employment	-0.03	-0.30**	-0.37**
	(0.03)	(0.13)	(0.17)
Full-time employment	-0.05**	-0.28***	-0.40***
	(0.02)	(0.10)	(0.13)
Monthly earnings	-81.30**	-427.39***	-603.92***
	(31.91)	(150.24)	(196.81)
Month of arrival FE	No	No	
Month of application FE	No	No	
Arrival x application FE	Yes	Yes	
Control variables	Yes	Yes	
Observations	1470	1470	1470

Note: OLS and IV estimates of the effect of subsidiary protection status on various labor market outcomes. Excluded instrument in the IV estimation: binary variable indicating if refugee was notified about the decision of the asylum application after March 2016. The third column reports the fuzzy RD design estimates. Cluster robust standard errors at the level of the arrival month time application month are reported in parentheses. Number of cluster: 371.
Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

go back

Robustness: IV estimates, fixed effect specification

	(1)	(2)	(3)	(4)
Any employment	-0.30**	-0.42	-0.38	-0.43
	(0.13)	(0.28)	(0.27)	(0.28)
Full-time employment	-0.28***	-0.52**	-0.51**	-0.52**
	(0.10)	(0.23)	(0.23)	(0.23)
Monthly earnings	-427.39***	-559.63	-510.49	-570.83*
	(150.24)	(341.78)	(332.91)	(340.60)
F statistic	42.31	11.26	11.22	11.53
Month of arrival FE	No	No	No	No
Month of application FE	No	No	No	No
Arrival x application FE	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes
Application to decision (month)	No	Yes	No	Yes
Notfication to interview (month)	No	No	Yes	Yes
Observations	1470	1470	1470	1470

Note: IV estimates of the effect of subsidiary protection status on various labor market outcomes. Excluded instrument: binary variable indicating if refugee was notified about the decision of the asylum application after March 2016. Cluster robust standard errors at the level of the arrival month time application month are reported in parentheses. Number of cluster: 371.
Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

go back

Literature

- Important factors for refugees' labor market integration
  - Institutional environment
    Protection status (Fasani et al. 2018), dispersal policies (Fasani et al. 2018), residence requirements (Brücker at al. 2020), asylum application duration (Hainmueller et al. 2016), welfare benefits (Rosholm and Vejlin 2010)
  - Specific integration policies
    Language training (Lochmann et al. 2019; Arendt et al. 2020), job search assistance programs (Battisti et al. 2019), wage subsidies (Clausen et al. 2009)
- Labor market integration of economic immigrants
  - Expected duration of stay (Dustmann 1993; 1999; 2000; Cortes 2004; Dustmann and Görlach 2016; Adda et al. 2020)
  - Citizenship/legal status (Gathmann and Keller 2018; Devillanova et al. 2018)