The Role of Firms and Job Mobility in the Assimilation of Immigrants: Former Soviet Union Jews in Israel 1990–2019

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Motivation (1/2)

Integration of immigrants: crucial topic for policy-making across the world
- ▷ Global growth in international migration
- ▷ 1970: 2.3% of world population; 2020: 3.6% (UN, 2022)

Immigrants' labor market success is a central dimension of integration
- ▷ Significance *for immigrants*
- ▷ Significance *for host country aggregate productivity, fiscal* & *social insurance* policies
- → Vast literature on the topic: (e.g., Chiswick, 1978; Lubotsky, 2007; Abramitzky et al., 2014)

Motivation (2/2)

Potentially important drivers of immigrants' prosperity remain elusive to quantify:

- ▷ Importance of **job search and job mobility**?
  - ▷ Key for young workers' progression (Topel, 1992; Bagger et al., 2014)

- ▷ Importance of **heterogeneous employers** and the **firm ladder**?
  - ▷ Identity of one's employer impacts wage determination (Abowd et al., 1999; Card et al., 2018)

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Current limitations: institutions and data

1. Regulations limiting immigrants' job mobility mask root economic forces
   ▷ E.g., unauthorized immigrants, employer-linked visas
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⇒ *How can **firms** and the **climbing of the firm ladder** shape immigrants' labor market outcomes and convergence with natives?*

This Paper (1/2)

Context: historical mass migration ∼1m. former Soviet Union Jews to Israel (1990s)

- ▷ Immigrants became Israeli citizens <u>on arrival</u>
- ▷ No differential regulatory restrictions
- ⇒ Key institutional feature: *unconstrained assimilation*
    - ▷ Identify undistorted, "deep" immigrant-native convergence parameters
    - ▷ *Other* common immigration hurdles were present (language, culture, little wealth)

Data: Israeli population employer-employee data

- ▷ Long panel (29 years) + good coverage of immigrants immediately since arrival
- ▷ Avoids common pitfalls that arise when studying immigrants in admin. data

This Paper (2/2)
A detailed view into immigrants' labor market progression over 3 decades

1. **Employment and wage outcomes under unconstrained assimilation**
   ▷ Gaps with natives and long-term convergence

2. **Estimate a group-specific AKM wage model**
   ▷ Firms pay immigrant- and native-specific pay premiums

3. **Quantify role of firm pay premiums & job mobility for immigrants' progression**
   ▷ Differential *sorting* (across high- vs. low-paying firms)
   ▷ Differential *pay setting* (for immigrants vs. natives, within firms)
   ▷ Immigrant-native differences in firm-ladder climbing behavior

4. **Beyond wages: immigrant-native convergence in employer desirability**
   ▷ Revealed-preference measure of employer desirability (Sorkin, 2018)
   ▷ Accounts for pay + non-pay amenities

Main Findings (1/2)

Gender-specific immigrant-native employment gaps

- ▷ Male immigrants employed quickly after arrival
- ▷ Female employment gap: initially 20 pp, closes after $\sim$7 years

Sizable immigrant-native pay gap closes in the long term

- ▷ On arrival: 0.64–0.85 log points ($\approx$ 47%–57%)
- ▷ Closes 27–29 years after arrival in Israel

Main Findings (2/2)

Firm Pay Premium Gap **explains 10–27% of wage gap during first 10 years**

- ▷ Differential *sorting* and differential *pay setting* both quantitatively relevant
- ▷ Assortative matching *growth*: high-skill immigrants eventually reach high-pay firms

Job Search: FSU immigrants exhibit greater job mobility than natives

- ▷ Immigrants change jobs more often, still true after three decades in Israel

Evidence of immigrant-native job utility gaps

Outline

Historical context

- **1989**: USSR relaxed emigration restrictions, Soviet Jews started leaving massively

- Israel accepted FSU Jews unconditionally, encouraged immigration

- **1989–1999**: ~840,000 FSU Jews migrate to Israel (1989 pop.=4.5m)
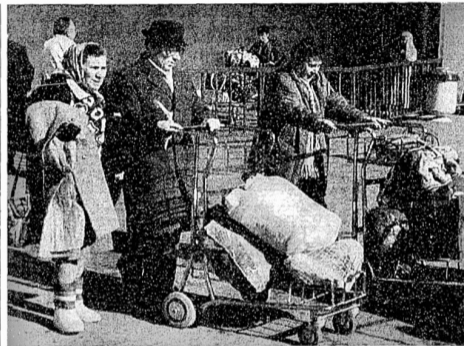
Soviet Jews, part of the largest influx of immigrants to Israel in 40 years, arriving yesterday in Lod.

Former Soviet Union Migration to Israel (Israel Central Bureau of Statistics) ▸ more
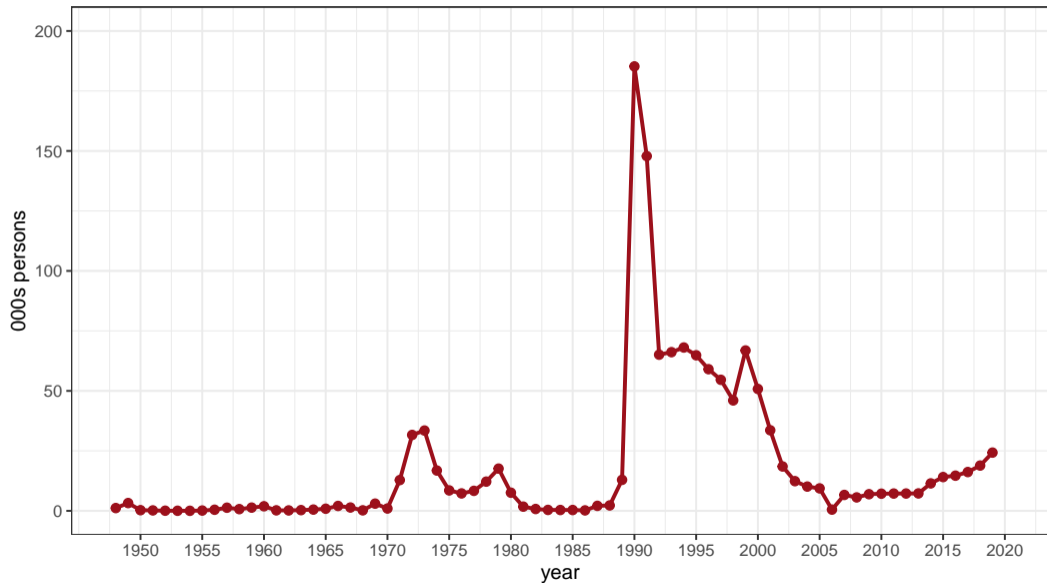
Historical context

▷ Negative effects on natives? None, or modest and short-lived

  Friedberg, 2001; Cohen-Goldner and Paserman, 2011; Cohen-Goldner et al., 2012

▷ FSU immigrants were highly educated

▷ FSU immigrants faced many barriers in Israel
  ▷ Poor portability of skills/qualifications
  ▷ Little wealth on arrival
  ▷ Did not speak Hebrew
  ▷ Did not follow Judaism cultural practices in FSU
  ▷ Many not Jewish according to Orthodox Jewish law

▷ Comprehensive but modest assistance to new arrivals
  ▷ e.g., Hebrew classes, housing subsidies
  ▷ But modest and short term financial support

Institutional Setting: *Unconstrained Assimilation*

Citizenship on arrival:

→ No differential labor market regulations wrt. natives

→ Immigrants quickly show up on administrative data
  ▷ Less worry about informality

→ Unrestricted job mobility
  ▷ We can study assimilation free of regulatory constraints
  ≠ H-1B visas in US and similar programs (e.g., Canada, Australia, Sweden)
  ≠ Undocumented immigrants

Prime Minister Yitzhak Rabin with FSU immigrants, 1994

▸ Wage setting in Israel

Outline

Data: Population administrative records from Israel

1. Matched employer-employee records (1985–2019)
   - Person and firm IDs, monthly firm-worker indicators, monthly wage, industry

2. Israeli Population Registry
   - Demographics, **country of birth**, **date of immigration to Israel**

Sample Selection: Years 1991–2019, persons of age 25–59

1. FSU immigrants who arrived in Israel between 1990–1999
2. Jewish, non-ultra-Orthodox Israeli natives (*robustness: all Israel*)

Dual Connected Sample
- 85%–88% of total employment
- 94% of total FSU employment

‣ Summary statistics, males   ‣ Summary statistics, females   ‣ Dual connected sample details   ‣ Age at arrival distribution

Key features of the data
Uniquely well suited to study immigrants' progress in the labor market since arrival

1. Long panel on all immigrants regardless of length of stay

2. Population-level coverage

3. Precise date of arrival to the country

4. Knowledge of immigration status

5. Immediately good admin. coverage of immigrants' labor market outcomes

Months since arrival in Israel to first job
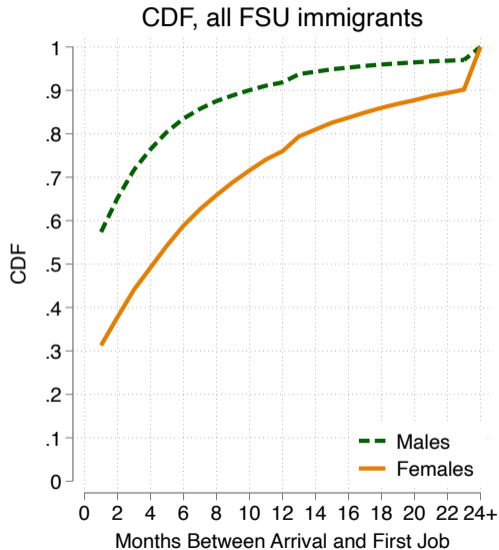
CDF, all FSU immigrants

CDF vs Months Between Arrival and First Job

Legend: Males (dashed), Females (solid)

Outline

Group-Specific Job Ladder Wage Model

AKM model, augmented with assimilation and group-specific firm pay premiums:

$$\ln w_{it} = \theta_{A_{it}} + \alpha_i + \psi_{J(i,t)}^{g(i)} + X_{it}'\beta + \varepsilon_{it}$$

- $\triangleright$ $\ln w_{it}$ = log monthly wage
- $\triangleright$ $g(i) \in \{$native N, FSU immigrant $M\}$
- $\triangleright$ $\theta_{A_{it}} \equiv f(A_{it})$ = f(years since arrival in Israel)
- $\triangleright$ α_i = person effect
- $\triangleright$ ψ_j^g = pay premium firm j pays to workers of group g
- $\triangleright$ X_{it} = time and age effects
- $\triangleright$ ε_{it} = error term

Pay premiums ψ_j^g are time-invariant, but firm entry and exit are allowed

- $\triangleright$ Evidence on persistence of firm pay premiums (Lachowska et al., 2020)
- $\triangleright$ Importance of changing composition of firms (Card et al., 2013; Sorkin and Wallskog, 2023)

What's in a firm pay premium?

Two different wage-setting models result in AKM specification:

- ▷ Rent sharing model (Card, Cardoso, Kline, 2016)
- ▷ Monopsonistic wage setting model (Card, Cardoso, Heining, Kline, 2018)

Drivers of heterogeneous firm pay premiums ψ_j^g:

- ▷ *Between-firm* differences in pay premiums:
  - $\rightarrow$ Related to firm productivity (average match surplus, value-added per worker)

- ▷ *Within-firm* differences in pay premiums for immigrants vs. natives:
  - $\rightarrow$ Differences in reservation wages, bargaining power, outside options, or firm-specific labor supply elasticities

Identification and normalization

$$\ln w_{it} = \theta_{A_{it}} + \alpha_i + \psi_{J(i,t)}^{g(i)} + X'_{it}\beta + \varepsilon_{it}$$

▷ Identification of firm effects thanks to firm switchers
  ▷ Large *N* for FSU immigrants + long panel

▷ OLS provides consistent estimates under exogenous mobility assumption
  ▷ ε_{it} conditionally independent of employer transitions

▷ Specification checks consistent with exogenous mobility assumption:
  ▷ Event studies of firm switchers ▸ wages, m ▸ wages, f ▸ firm FE, m ▸ firm FE, f ▸ symmetry
  ▷ Residuals ▸ average residuals

▷ Firm fixed effects across groups are not comparable without a normalization
  ▷ Assume mean pay premium in **restaurant** industry is equal to zero for all groups
  (Card et al., 2016; Gerard et al., 2021) ▸ CDF industry averages

Assimilation statistics: **Overall wage gap**

Wage model: $\ln w_{it} = \theta_{A_{it}} + \alpha_i + \psi_{J(i,t)}^{g(i)} + X_{it}'\beta + \varepsilon_{it}$

Statistic: Immigrant-native wage gap, as a function of time since arrival

$$G_A^w \equiv \mathbb{E}\left(\ln w_{it} | M_i, A_{it}, X_{it}\right) - \mathbb{E}\left(\ln w_{it} | N_i, X_{it}\right)$$

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$$G_A^w \equiv \mathbb{E}\left(\ln w_{it}|M_i, A_{it}, X_{it}\right) - \mathbb{E}\left(\ln w_{it}|N_i, X_{it}\right)$$

Interpretation:

$$G_A^w = \underbrace{\theta_{A_{it}}}_{\text{non-firm assimilation}} + \underbrace{\mathbb{E}\left(\alpha_i|M_i, A_{it}\right) - \mathbb{E}\left(\alpha_i|N_i\right)}_{\text{baseline differences}} + \underbrace{\mathbb{E}\left(\psi_{J(it)}^M|M_i, A_{it}\right) - \mathbb{E}\left(\psi_{J(it)}^N|N_i\right)}_{\text{firm assimilation: pay setting and sorting}}$$
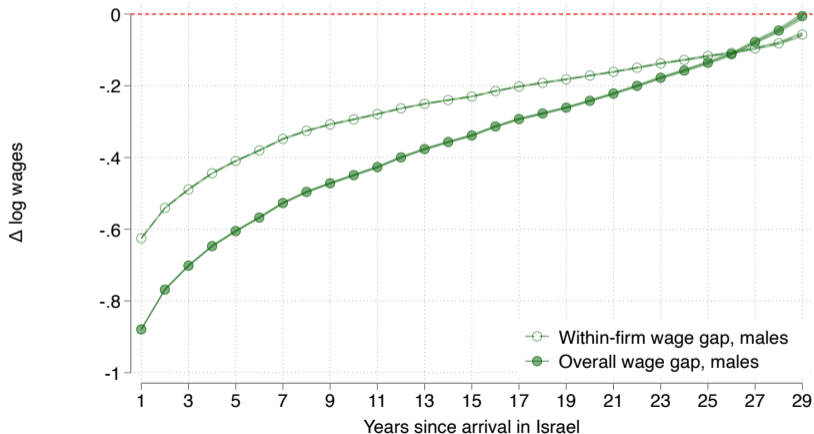
OLS estimation: $\ln w_{it} = M_i \cdot \left[\sum_{a=1}^{29} \beta_a \cdot \mathbf{1}\{A_{it} = a\}\right] + X_{it}'\gamma + \varepsilon_{it}$

▸ within-firm wage gap

Assimilation statistics: **Firm pay premium gap**

Wage model: $\ln w_{it} = \theta_{A_{it}} + \alpha_i + \psi_{J(i,t)}^{g(i)} + X_{it}'\beta + \varepsilon_{it}$

Statistic: Immigrant-native gap in pay premium, as a function of time since arrival

$$G_A^{\psi} = \mathbb{E}\left(\psi_{J(it)}^M | M_i, A_{it}\right) - \mathbb{E}\left(\psi_{J(i,t)}^N | N_i\right)$$

2-step OLS estimation: $\widehat{\psi}_{J(i,t)}^{g(i)} = M_i \cdot \left[\sum_{a=1}^{29} \beta_a \cdot \mathbf{1}\{A_{it} = a\}\right] + X_{it}'\gamma + \varepsilon_{it}$

Assimilation statistics: **Firm pay premium gap**

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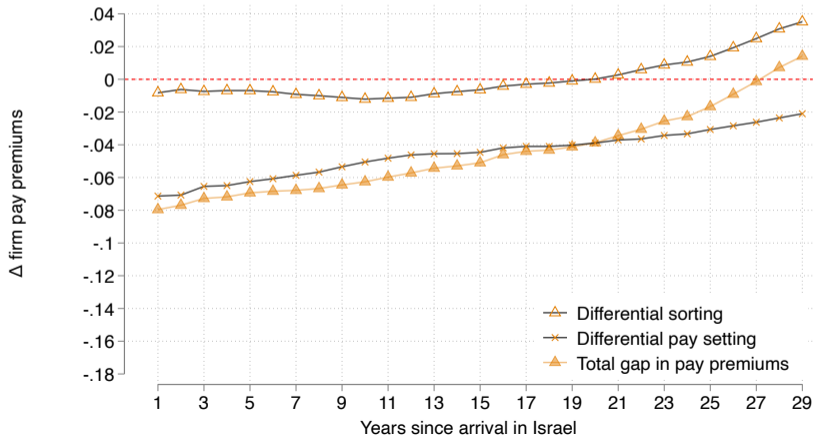
Decomposition: differential pay setting vs. differential sorting

$$\underbrace{G_A^\psi}_{\text{firm pay premium gap}} = \underbrace{\mathbb{E}(\psi_{J(i,t)}^M - \psi_{J(i,t)}^N | M_i, A_{it})}_{\text{differential pay setting (within)}} + \underbrace{\mathbb{E}(\psi_{J(i,t)}^N | M_i, A_{it}) - \mathbb{E}(\psi_{J(i,t)}^N | N_i)}_{\text{differential sorting (between)}}.$$
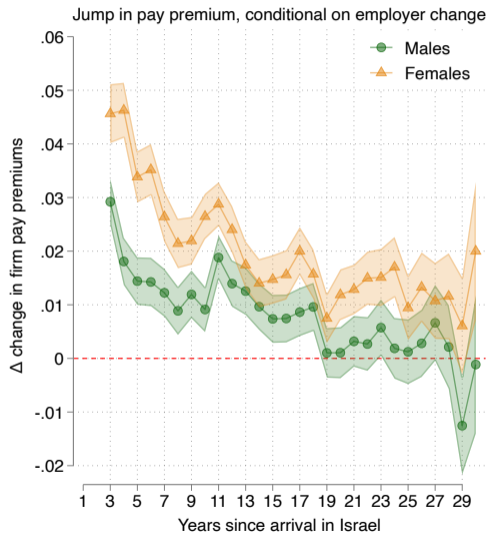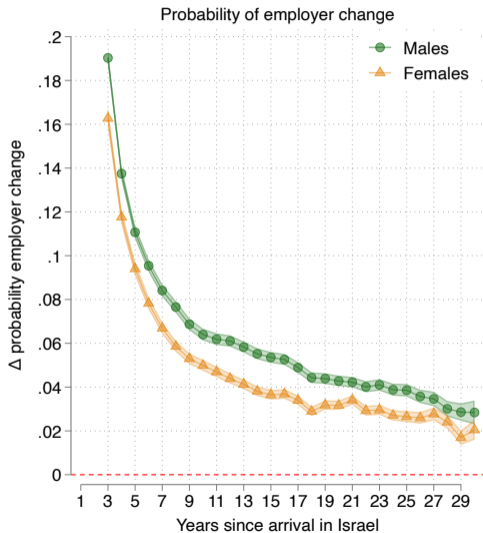
Outline

Outline

Employment assimilation

$$employed_{it} = M_i \cdot \left[\sum_{a=1}^{29} \beta_a \cdot \mathbf{1}\{A_{it} = a\} \right] + X'_{it}\gamma + \varepsilon_{it}$$
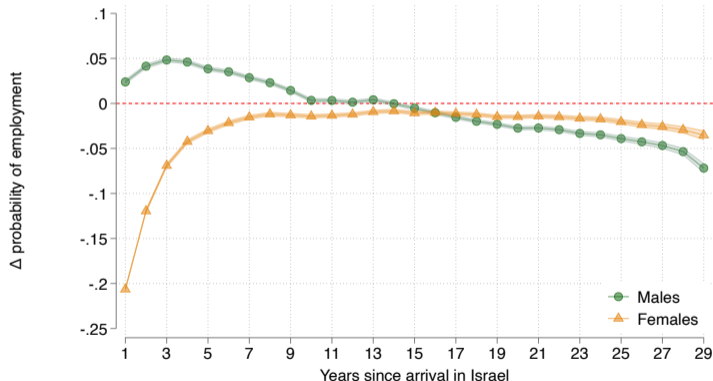
$Pr(employment = 1 | native, males) = 0.652, \quad Pr(employment = 1 | native, females) = 0.657$

Wage assimilation: **overall** and **within** firms - Males

$$\ln w_{it} = M_i \cdot \left[\sum_{a=1}^{29} \beta_a \cdot \mathbf{1}\{A_{it} = a\} \right] + \phi_{J(i,t)} + X_{it}'\gamma + \varepsilon_{it}$$

Wage assimilation: overall and within firms - Females

$$\ln w_{it} = M_i \cdot \left[\sum_{a=1}^{29} \beta_a \cdot \mathbf{1}\{A_{it} = a\} \right] + \phi_{J(i,t)} + X_{it}'\gamma + \varepsilon_{it}$$

Outline

Immigrant-specific and **native-specific** firm pay premiums

100 equally-sized bins ordered according to $\widehat{\psi}_j^N$

Males

Females

estimated slope = 0.71
(standard error = 0.02)

estimated slope = 0.70
(standard error = 0.03)

▸ IV estimates   ▸ Industry averages   ▸ Variance decomposition   ▸ FSU α_i, males   ▸ FSU α_i, females   ▸ Firm characteristics

Outline

Firm pay premium assimilation

$$\widehat{\psi}_{J(i,t)}^{g(i)} = M_i \cdot \left[\sum_{a=1}^{29} \beta_a \cdot \mathbf{1}\{A_{it} = a\} \right] + X_{it}' \gamma + \varepsilon_{it}$$
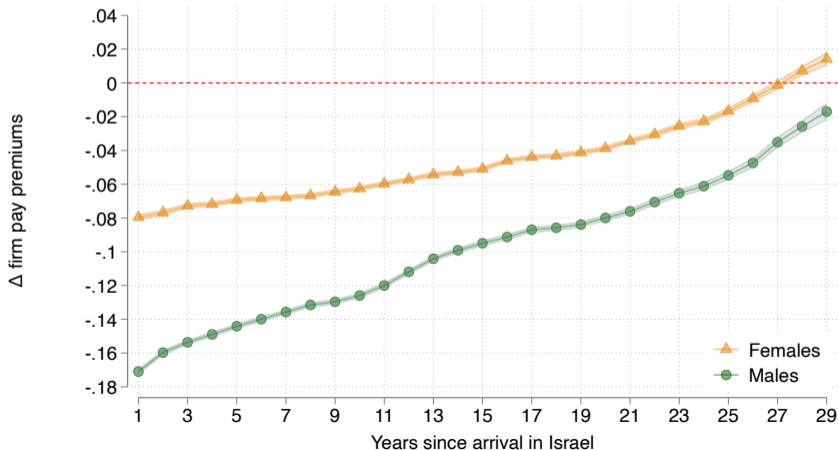
Firm pay premium gap: Dynamic decomposition - Males

$$\underbrace{\mathbb{E}\left(\psi_{J(it)}^{M}|M, A_{it}\right) - \mathbb{E}\left(\psi_{J(i,t)}^{N}|N\right)}_{\text{firm pay premium gap (total)}} = \underbrace{\mathbb{E}(\psi_{J(i,t)}^{M} - \psi_{J(i,t)}^{N}|M, A_{it})}_{\text{differential pay setting (within)}} + \underbrace{\mathbb{E}(\psi_{J(i,t)}^{N}|M, A_{it}) - \mathbb{E}(\psi_{J(i,t)}^{N}|N)}_{\text{differential sorting (between)}}$$
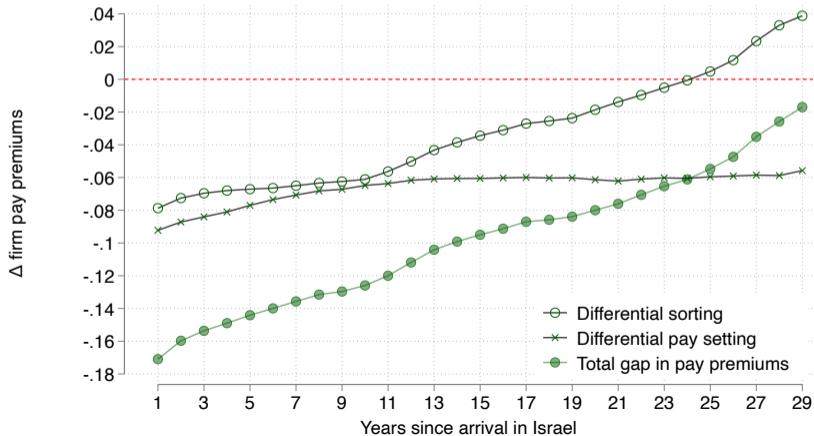
Firm pay premium gap: Dynamic decomposition - Females

$$\underbrace{\mathbb{E}\left(\psi^M_{J(it)}|M, A_{it}\right) - \mathbb{E}\left(\psi^N_{J(i,t)}|N\right)}_{\text{firm pay premium gap }(total)} = \underbrace{\mathbb{E}(\psi^M_{J(i,t)} - \psi^N_{J(i,t)}|M, A_{it})}_{\text{differential pay setting }(within)} + \underbrace{\mathbb{E}(\psi^N_{J(i,t)}|M, A_{it}) - \mathbb{E}(\psi^N_{J(i,t)}|N)}_{\text{differential sorting }(between)}$$

Assimilation in **job mobility** and **firm-ladder climbing**

Probability of employer change

Jump in pay premium, conditional on employer change

▸ Baseline magnitudes ▸ Assortative matching ▸ Unconditional

Outline

Immigrant-native gap in employer desirability

Employer desirability assimilation: Revealed preference index (Sorkin, 2018)
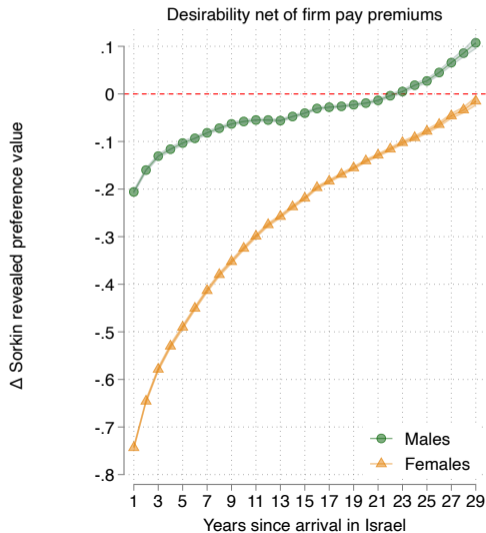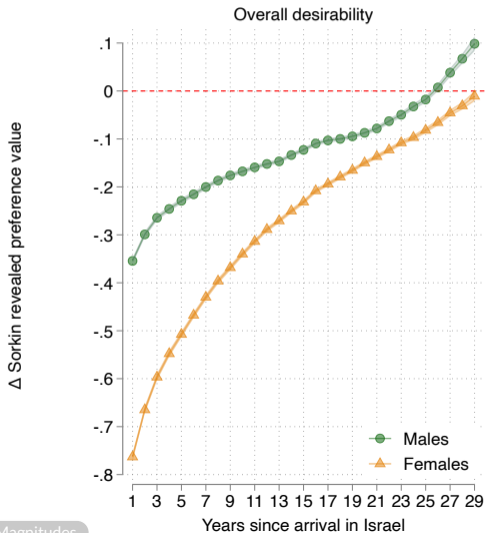
Additional Findings

- ▷ Firm size ▸ go

- ▷ Firm age ▸ go

- ▷ Distance to Tel Aviv ▸ go

- ▷ Segregation ▸ go

- ▷ Wage asimilation, arrival age and year FE ▸ go

- ▷ Firm pay premiums asimilation, arrival age and year FE ▸ go

Conclusion

A new and detailed view into immigrants' labor market progress:

- ▷ Historical mass migration episode, citizenship on arrival
- ▷ Lack of regulatory barriers → *"unconstrained assimilation"* & root economic forces
- ▷ Uniquely well-suited data

Firm-to-firm job mobility can be valuable path for immigrants' integration

- ▷ Firm Pay Premium Gap explains **12–28%** of wage gap during first 10 years
- ▷ Differential *sorting* and differential *pay setting* both quantitatively relevant
- ▷ FSU immigrants persistently change jobs more often than natives
- ▷ Immigrant-native gap in job utility

Food for thought

- ▷ Aggregate implications: Mass labor reallocation towards more productive firms
- ▷ Policy: Employer-linked visa programs; regulations limiting job mobility

APPENDIX SLIDES

FSU and Total Migration to Israel (Israel Central Bureau of Statistics) ▸ back
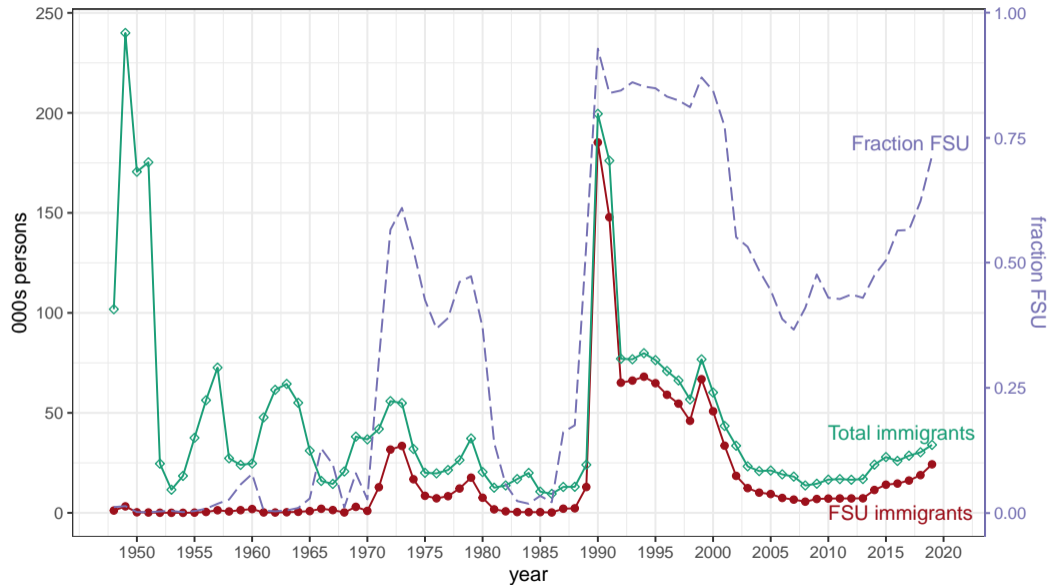
Months since arrival in Israel to first job
Age and cohort effects

CDF, all FSU immigrants

Average by age at arrival

Legend for right chart:
- males arrived 1990-94
- males arrived in 1995-99
- females arrived in 1990-94
- females arrived in 1995-99

Left chart legend:
- - - Males
— Females

Left chart axes: CDF (y-axis), Months Between Arrival and First Job (x-axis)

Right chart axes: Average Months Between Arrival and First Job (y-axis), Age at Arrival in Israel (x-axis)

◂ back

3 / 50

Age at arrival for FSU immigrants in our sample
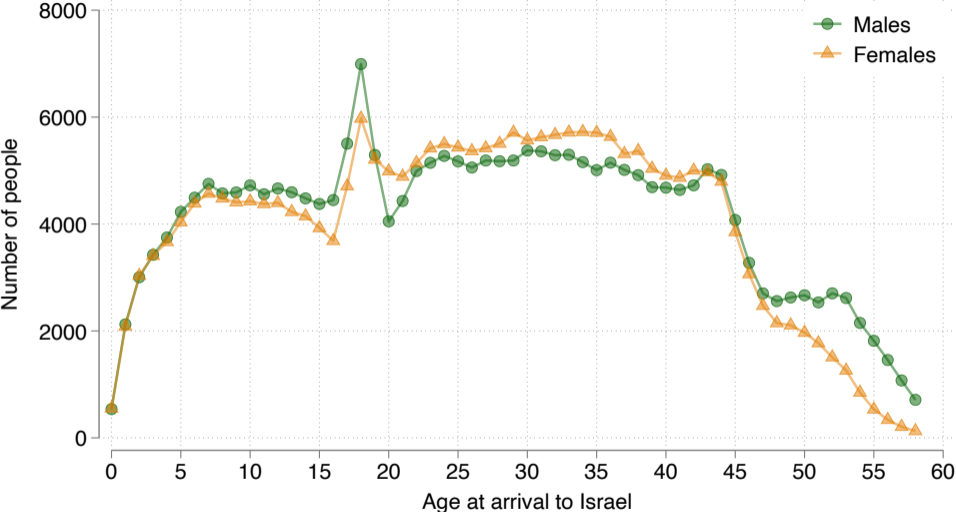
Summary statistics: Males

	Full Sample			Separate Connected Sample			Dual Connected Sample		
	All	Natives	Immigrants	All	Natives	Immigrants	All	Natives	Immigrants
Worker-years									
N	14,184,464	11,473,932	2,710,532	14,049,132	11,357,729	2,691,403	12,004,116	9,450,027	2,554,089
Salary (2019 Shekels)	15,425	16,464	11,026	15,468	16,515	11,048	15,943	17,217	11,229
Age	39.41	38.96	41.29	39.40	38.94	41.31	39.43	38.93	41.30
Years since arrival	-	-	13.77	-	-	13.76	-	-	13.72
Immigration year	-	-	1993.08	-	-	1993.08	-	-	1993.06
Birth year	1968.02	1968.60	1965.56	1968.03	1968.62	1965.54	1967.82	1968.45	1965.48
Firm: Size	3110.48	3346.94	2109.51	3140.40	3381.15	2124.44	3673.36	4061.23	2238.26
Firm: Age	13.31	13.38	13.02	13.35	13.42	13.05	14.31	14.53	13.47
Firm: Immigrant share	0.13	0.09	0.29	0.13	0.10	0.29	0.14	0.11	0.26
Workers									
N	1,248,506	1,005,521	242,985	1,225,820	987,031	238,789	1,144,119	909,032	235,087
Years observed	11.36	11.41	11.16	11.46	11.51	11.27	10.49	10.40	10.86
Immigration year	-	-	1993.27	-	-	1993.27	-	-	1993.26
Birth year	1971.13	1972.32	1966.21	1971.11	1972.31	1966.11	1970.96	1972.21	1966.12
Firms									
N	335,945	-	-	317,220	-	-	78,597	-	-
Years observed	6.40	-	-	6.43	-	-	10.95	-	-
Immigrant share	0.13	-	-	0.13	-	-	0.21	-	-
Avge. salary (2019 Shekels)	10,280	-	-	10,347	-	-	11,427	-	-
Firm size	14.33	-	-	15.01	-	-	44.89	-	-
Firm age	5.28	-	-	5.26	-	-	7.39	-	-

▸ back

Summary statistics: Females

	Full Sample			Separate Connected Sample			Dual Connected Sample		
	All	Natives	Immigrants	All	Natives	Immigrants	All	Natives	Immigrants
Worker-years									
N	14,126,360	11,469,601	2,656,759	14,032,200	11,399,939	2,632,261	12,493,944	9,993,273	2,500,671
Salary (2019 Shekels)	9,600	9,969	8,004	9,619	9,988	8,022	9,859	10,288	8,146
Age	39.61	39.14	41.61	39.59	39.12	41.63	39.71	39.23	41.63
Years since arrival	-	-	14.37	-	-	14.36	-	-	14.36
Immigration year	-	-	1993.07	-	-	1993.07	-	-	1993.04
Birth year	1967.96	1968.46	1965.83	1967.97	1968.47	1965.80	1967.77	1968.27	1965.77
Firm: Size	12190.00	13657.58	5854.24	12271.76	13741.01	5908.65	13781.09	15673.36	6219.13
Firm: Age	15.13	15.36	14.15	15.17	15.39	14.19	15.99	16.34	14.60
Firm: Immigrant share	0.11	0.08	0.26	0.11	0.08	0.26	0.12	0.09	0.23
Workers									
N	1,233,509	998,316	235,193	1,215,521	985,208	230,313	1,163,015	936,391	226,624
Years observed	11.45	11.49	11.30	11.54	11.57	11.43	10.74	10.67	11.03
Immigration year	-	-	1993.33	-	-	1993.32	-	-	1993.32
Birth year	1971.41	1972.44	1967.03	1971.40	1972.44	1966.93	1971.32	1972.37	1967.00
Firms									
N	278,889	-	-	263,988	-	-	68,221	-	-
Years observed	6.39	-	-	6.45	-	-	11.24	-	-
Immigrant share	0.14	-	-	0.14	-	-	0.19	-	-
Avge. salary (2019 Shekels)	6,844	-	-	6,891	-	-	7,590	-	-
Firm size	16.87	-	-	17.59	-	-	50.63	-	-
Firm age	5.83	-	-	5.83	-	-	8.18	-	-

▸ back

Dual Connected Sample Statistics

Percent of all worker-years in the Dual Connected Sample

- ▷ Men = 85%
    - ▷ Men, FSU = 94%
    - ▷ Men, natives = 82%

- ▷ Women = 88%
    - ▷ Women, FSU = 94%
    - ▷ Women, natives = 87%

Percent of all firms in the Dual Connected Sample= 23%

▸ back

CDF of industry averages of firm fixed effects - Native males
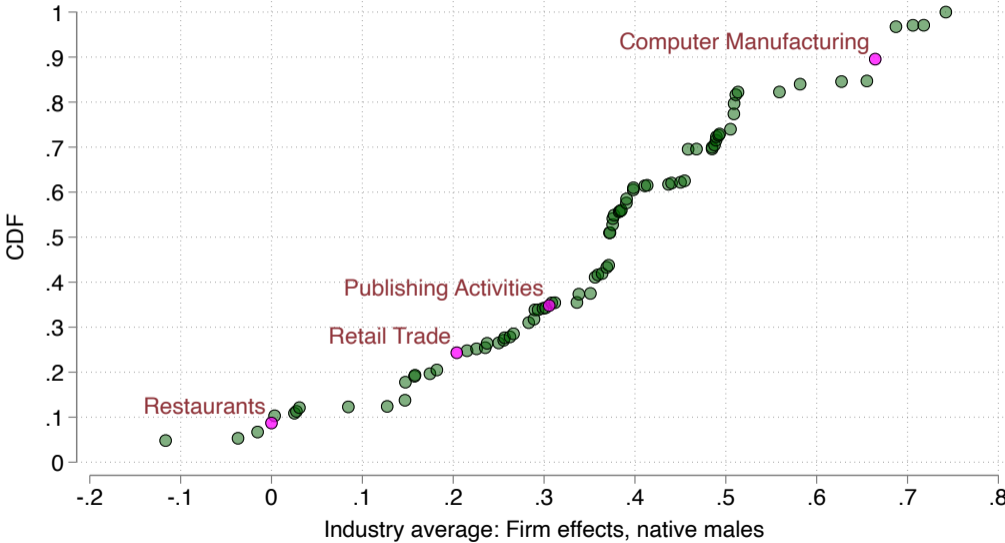
CDF of industry averages of firm fixed effects - Native females ▸ back
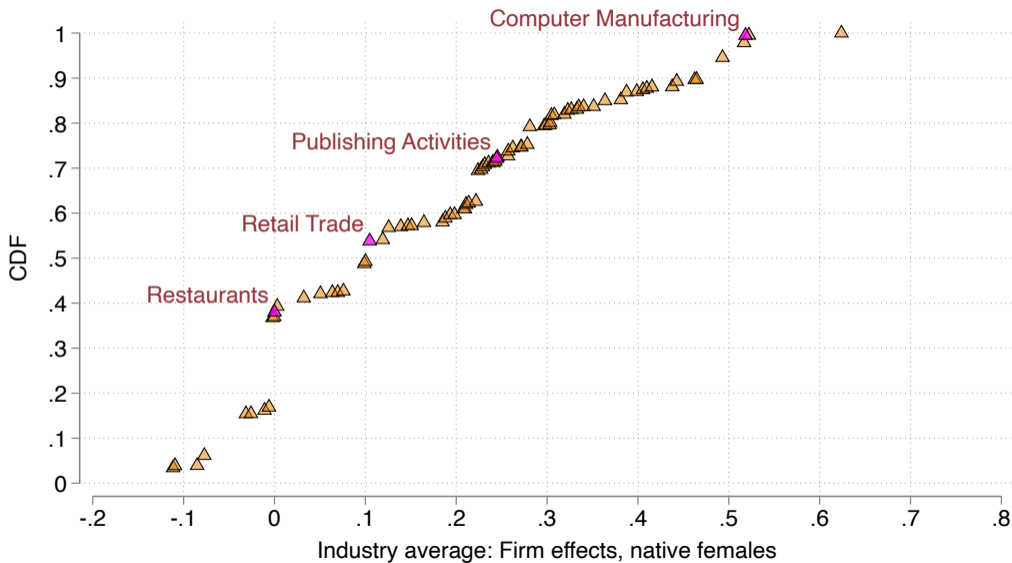
Assimilation statistics: **Within-firm wage gap**

Wage model: $\ln w_{it} = \theta_{A_{it}} + \alpha_i + \psi^{g(i)}_{J(i,t)} + X'_{it}\beta + \varepsilon_{it}$

Statistic: Immigrant-native wage gap, controlling for employer identity

$$G^w_{A|J} \equiv \mathbb{E}\left(\ln w_{it} | M_i, A_{it}, J(i,t)\right) - \mathbb{E}\left(\ln w_{it} | N_i, J(i,t)\right)$$

Interpretation:

$$G^w_{A|J} = \underbrace{\theta_{A_{it}}}_{\text{non-firm assimilation}} + \underbrace{\mathbb{E}\left(\alpha_i | M_i, A_{it}, J(i,t)\right) - \mathbb{E}\left(\alpha_i | N_i, J(i,t)\right)}_{\text{within-firm baseline differences}}$$

$$+ \underbrace{\mathbb{E}\left(\psi^M_{J(i,t)} | M_i, A_{it}, J(i,t)\right) - \mathbb{E}\left(\psi^N_{J(i,t)} | N_i, J(i,t)\right)}_{\text{firm assimilation: pay setting only}}$$

OLS estimation: $\ln w_{it} = M_i \cdot \left[\sum_{a=1}^{29} \beta_a \cdot \mathbf{1}\{A_{it} = a\}\right] + X'_{it}\gamma + \phi_{J(i,t)} + \varepsilon_{it}$

▸ back

Mean Wages of Job Switchers, By Coworkers' Average Wage Quartile - Males
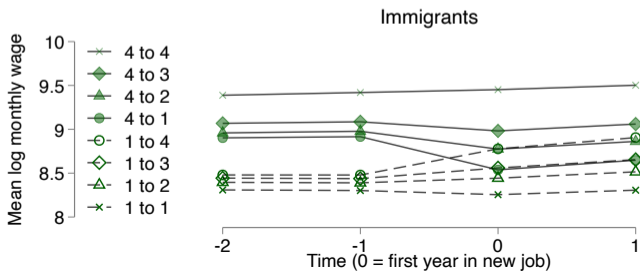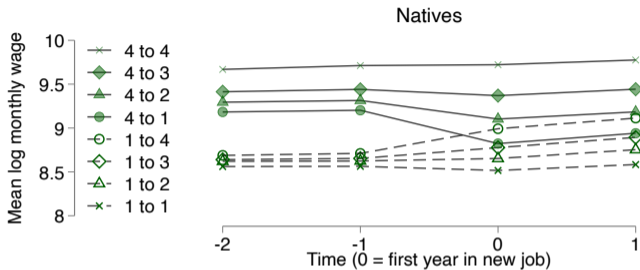
Mean Wages of Job Switchers, By Coworkers' Average Wage Quartile - Females
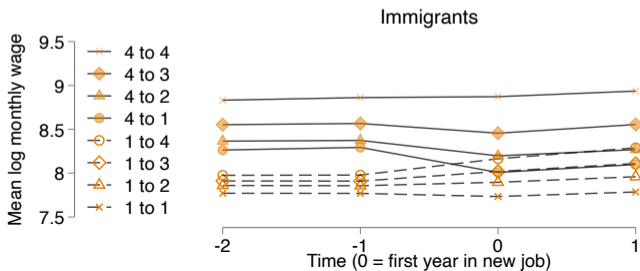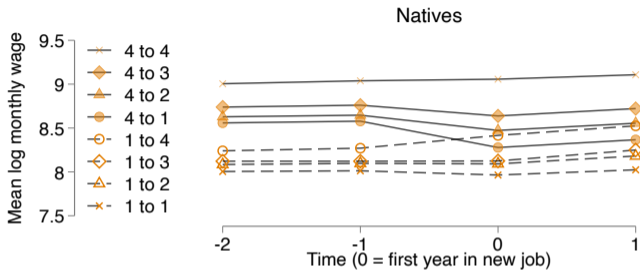
Mean Wages of Job Switchers, By Firm Pay Premium Quartile - Males
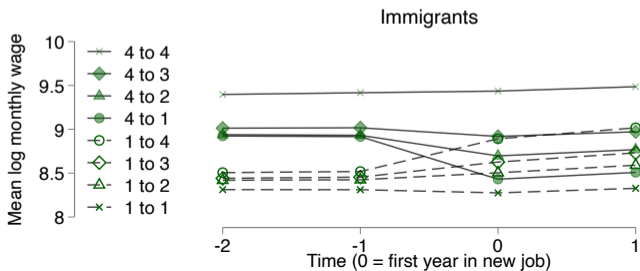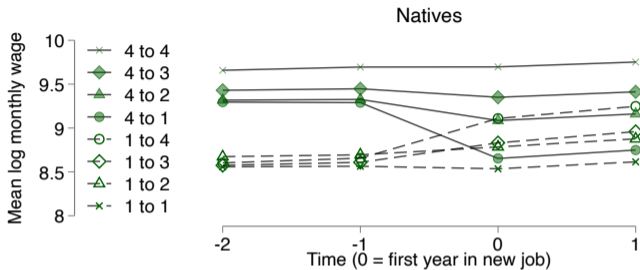
Mean Wages of Job Switchers, By Firm Pay Premium Quartile - Females
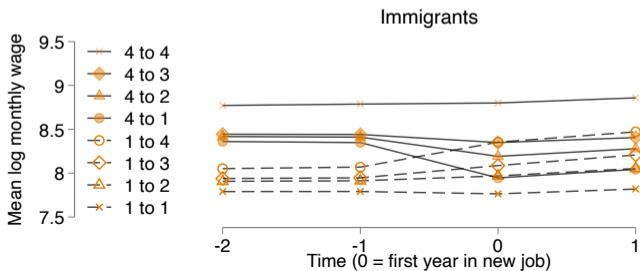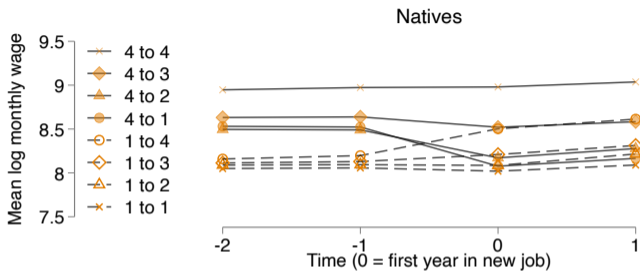
Symmetry of Wage Changes for Job Movers
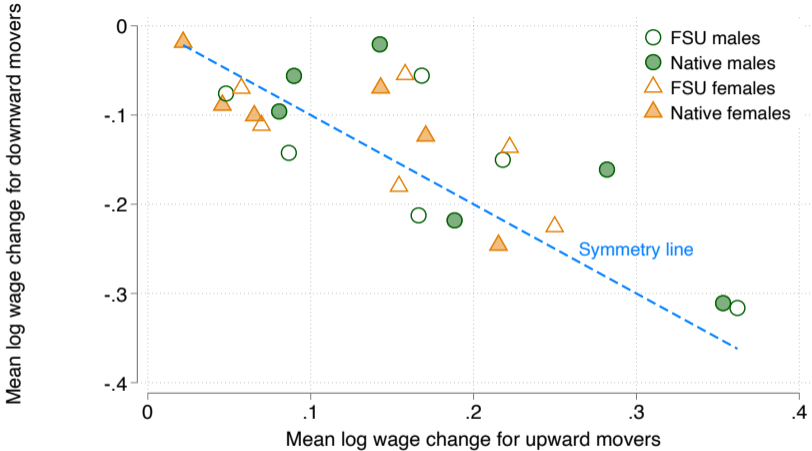
Group-Specific AKM Residuals Plot • back
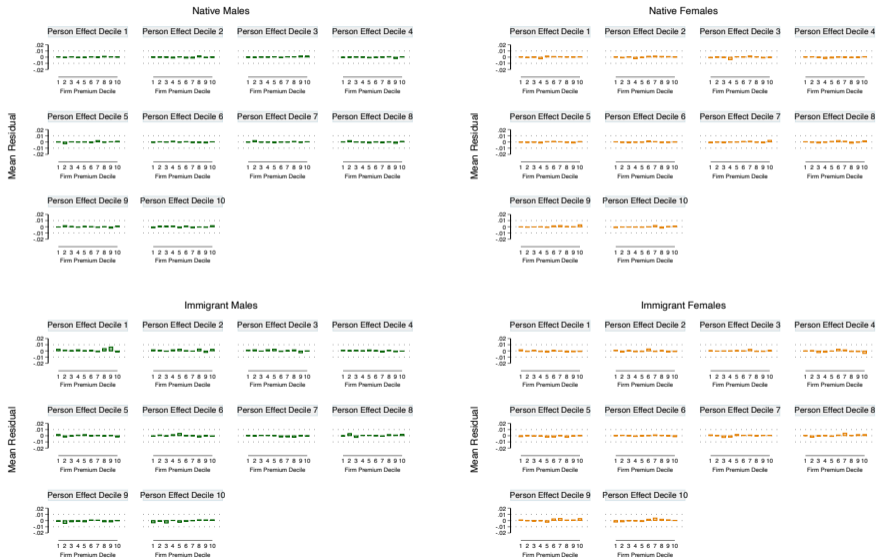
Immigrant-specific and native-specific firm pay premiums
Industry averages

Males

Females

▸ back
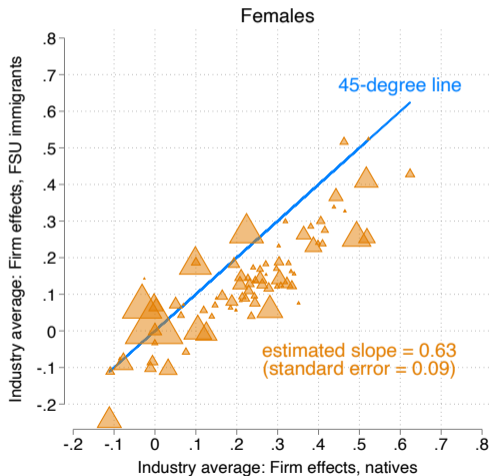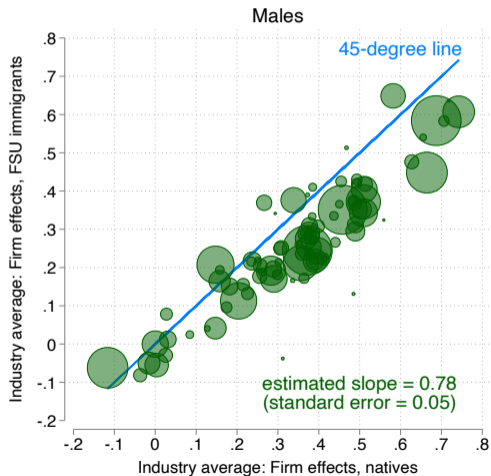
Summary of Estimated Group-Specific AKM Models

	FSU Males	FSU Females	Native Males	Native Females
	(1)	(2)	(3)	(4)
SD of log wages	0.586	0.567	0.707	0.608
SD of person effects	0.358	0.376	0.533	0.475
SD of firm effects	0.265	0.236	0.304	0.243
SD of covariates	0.242	0.250	0.265	0.282
Correlation of person/firm effects	0.220	0.217	0.090	0.090
Percentage of log wages variance due to:				
Person effect	37.3	43.9	56.9	61.1
Firm effect	20.5	17.4	18.5	16.0
Covariance person/firm effect	12.1	12.0	5.8	5.6
Firm effect + cov. person/firm	32.6	29.4	24.3	21.6
N person-year observations	2.6m	2.5m	9.5m	9.9m

Employer size assimilation
(Log) Number of Employees
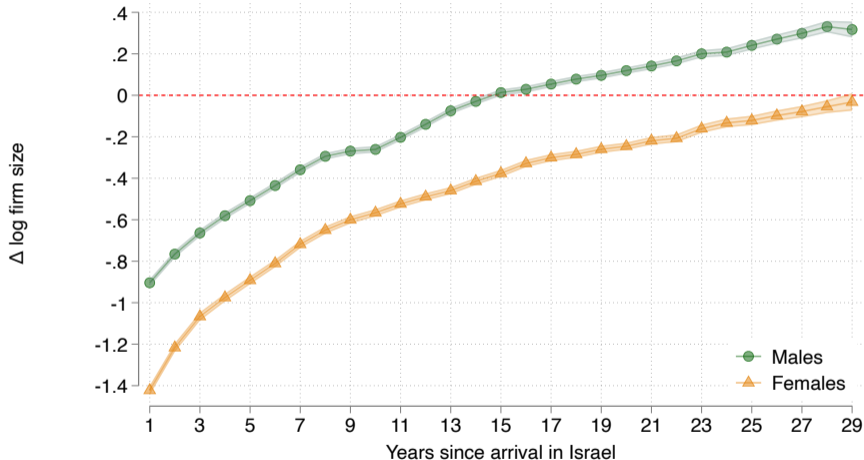
Employer age assimilation

Dummy = 1 if employer age < 5 years old
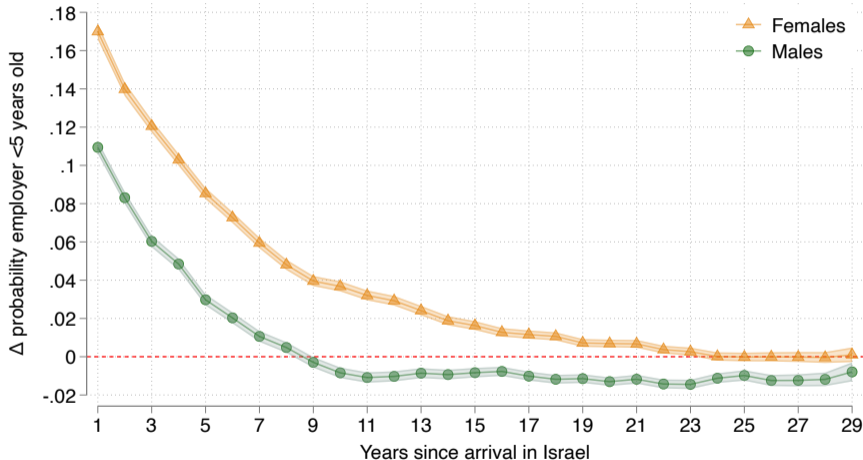
Note: $Pr(YoungEmployer = 1 | native, males) = 0.22$, $Pr(YoungEmployer = 1 | native, females) = 0.16$ ▸ back

Employment segregation assimilation

Dummy=1 if employer is > 50% FSU employees

back
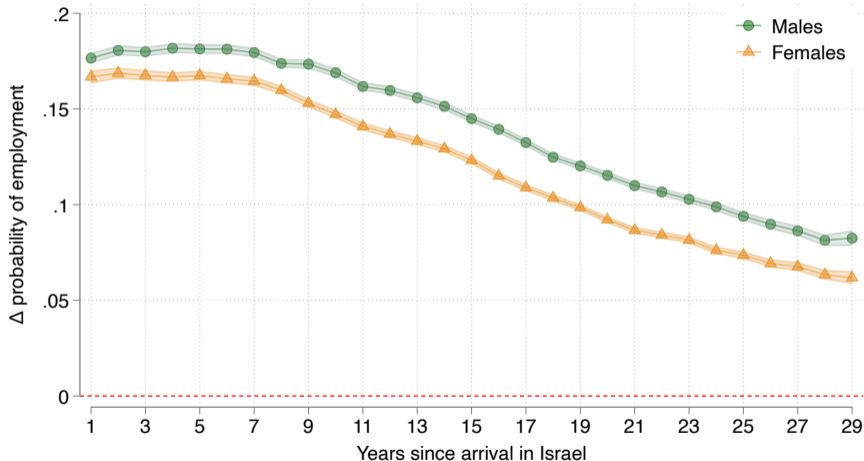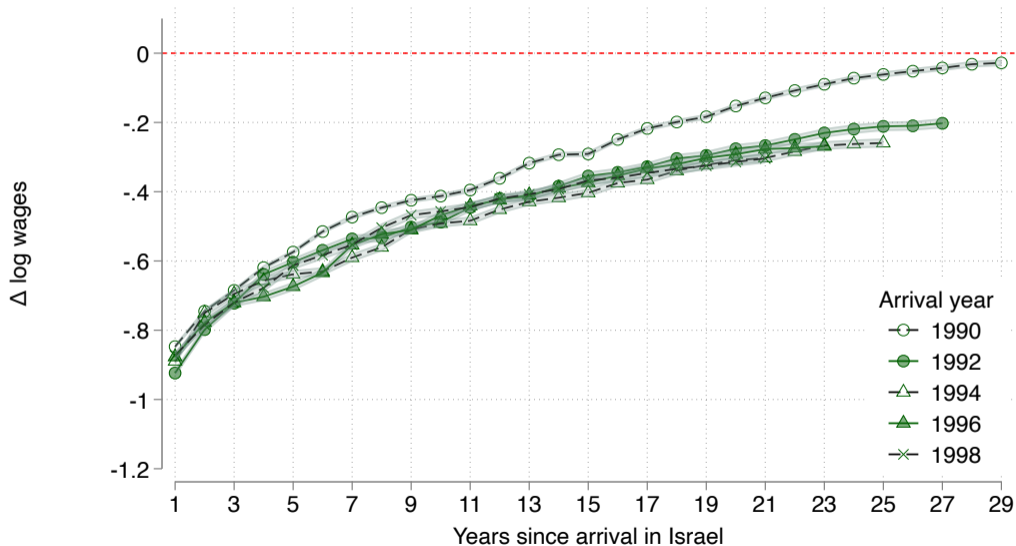
Year-of-arrival effects: Wage assimilation - Males

Year-of-arrival effects: Firm pay premium assimilation - Males
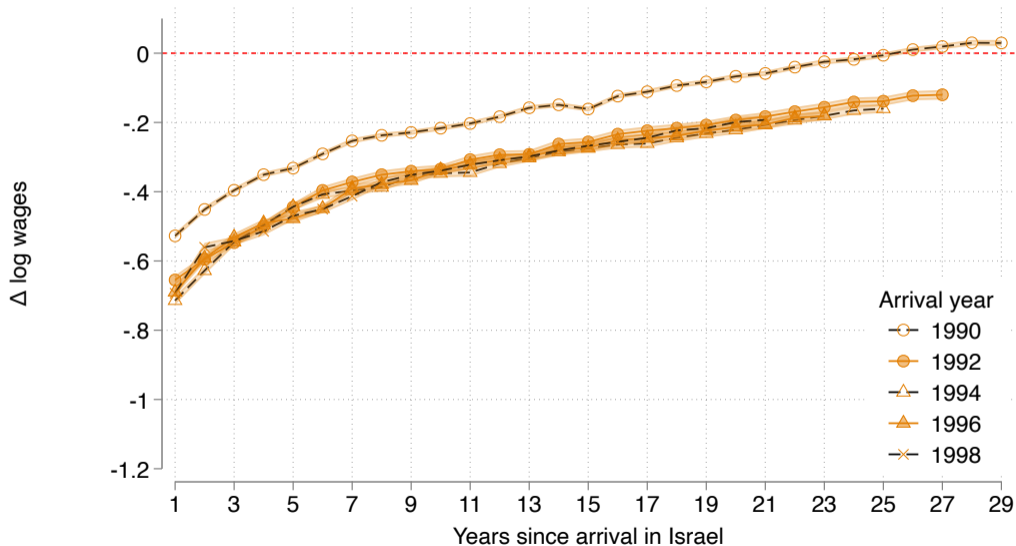
‣ back

Year-of-arrival effects: Wage assimilation - Females

Year-of-arrival effects: Firm pay premium assimilation - Females
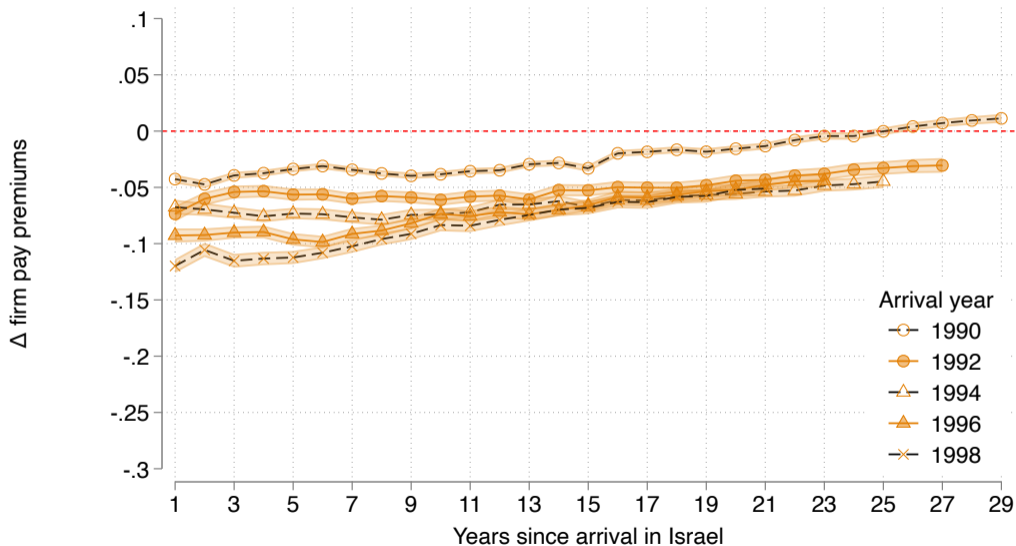
Age-at-arrival effects: Wage assimilation - Males
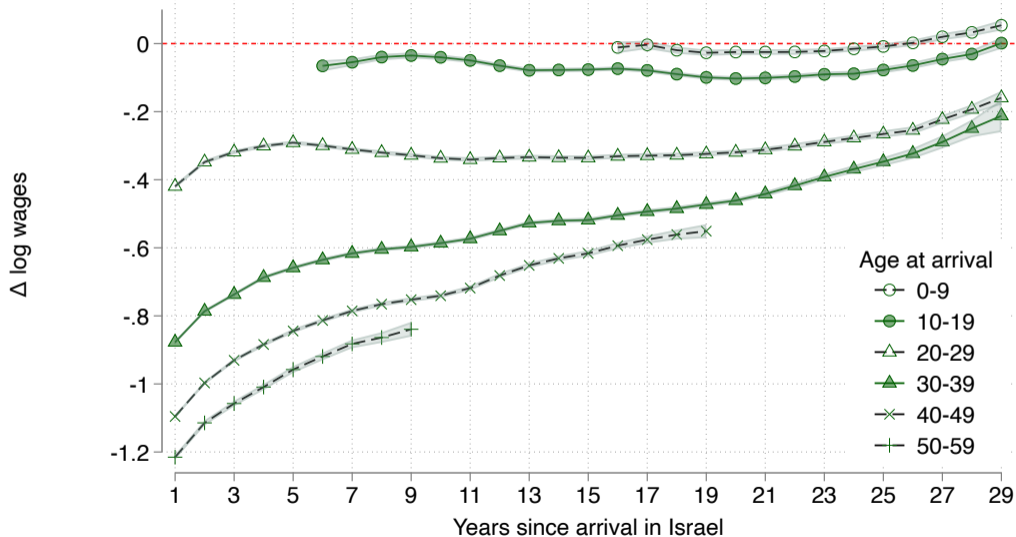
Age-at-arrival effects: Firm pay premium assimilation - Males
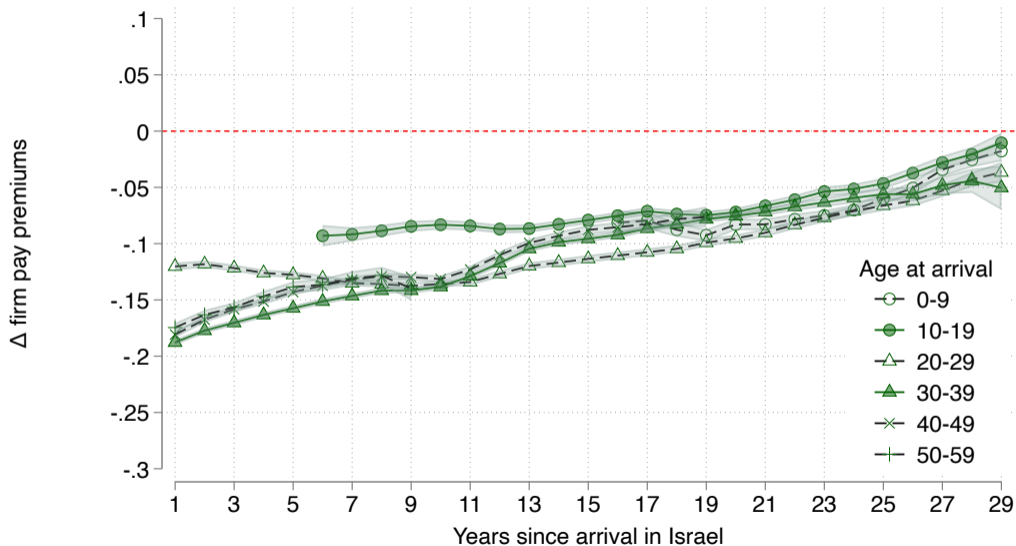
Age-at-arrival effects: Wage assimilation - Females
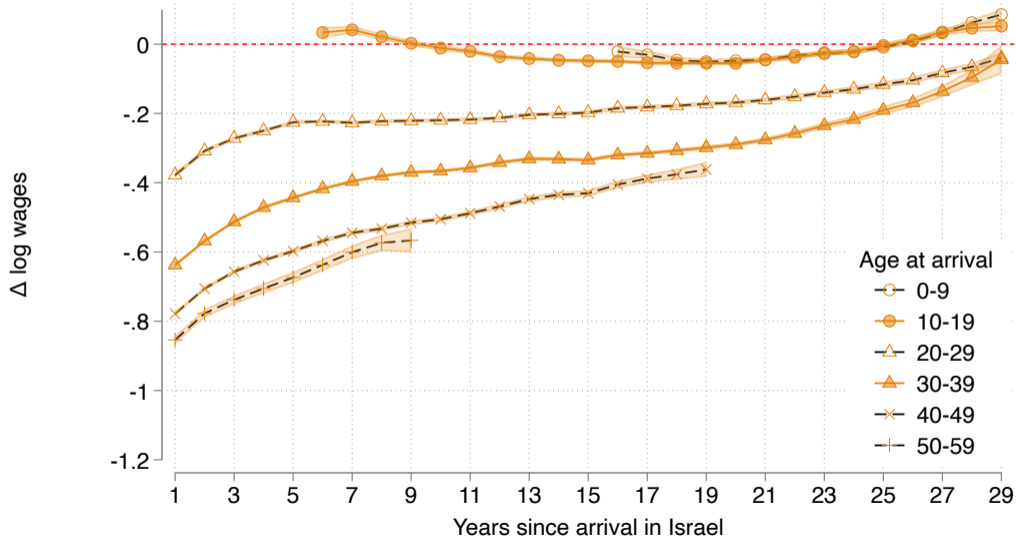
Age-at-arrival effects: Firm pay premium assimilation - Females
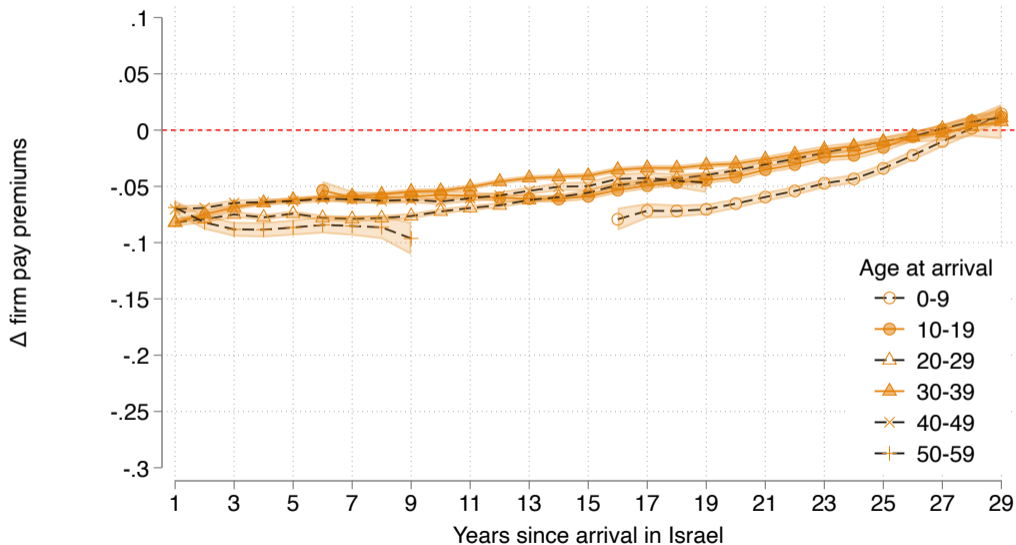
Correlation: $\widehat{\psi}_j^N$, $\widehat{\psi}_J^M$, and time since arrival _{▸ back}

$$\hat{\psi}_{j(i,t)}^M = \pi \cdot \hat{\psi}_{j(i,t)}^N + X_{it}'\beta + \nu_{it}$$

▷ Measurement error: split-sample IV for $\hat{\psi}_j^N$
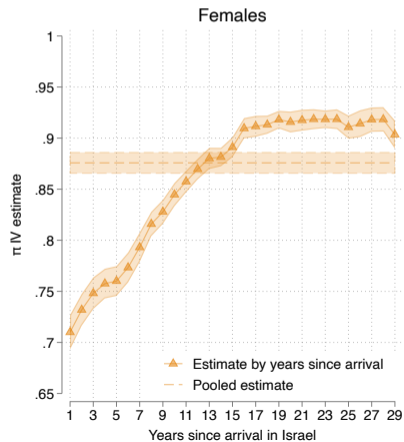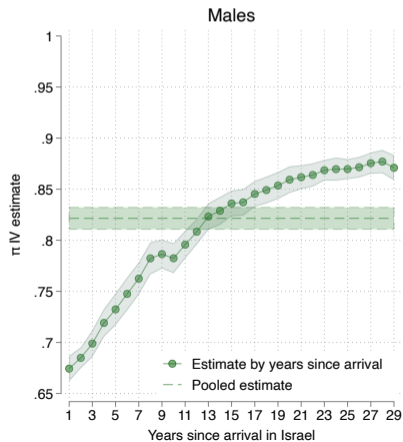
Worker-firm assortative matching ▸ back

$$\hat{\alpha}_i = \theta \cdot \hat{\psi}_{j(i,t)}^{g(i)} + X_{it}'\gamma + \eta_{it}$$

▷ Estimated separately by natives/immigrants and by years since arrival
▷ Measurement error: use IV (firm premium of other group) (Gerard et al. 2021)
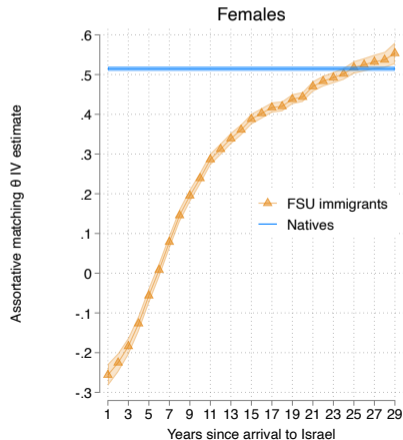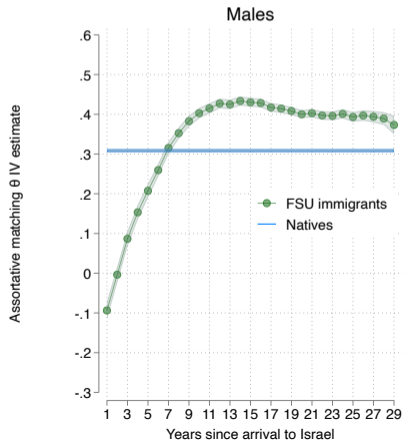
Wage assimilation: All-Israel Comparison Group
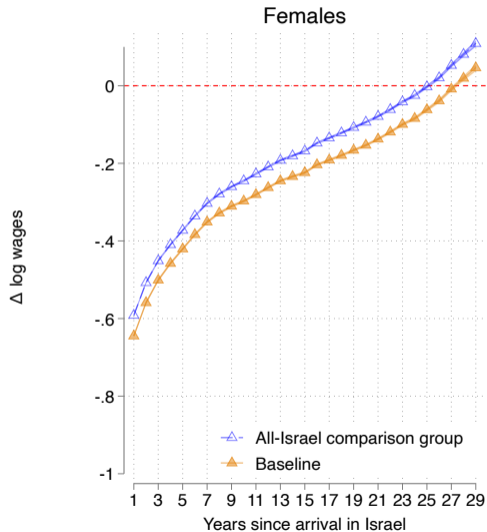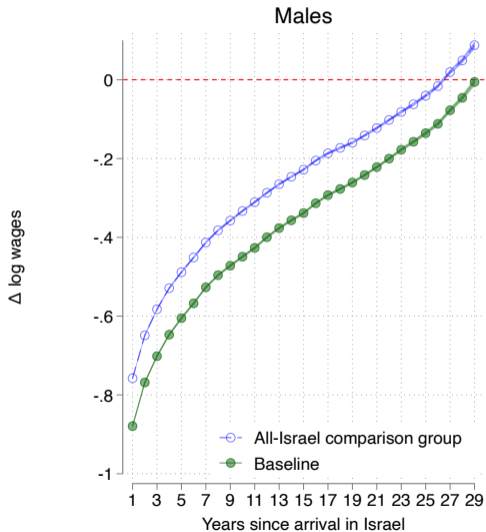
Wage assimilation: All-Israel Comparison Group

Firm pay premium assimilation: All-Israel Comparison Group
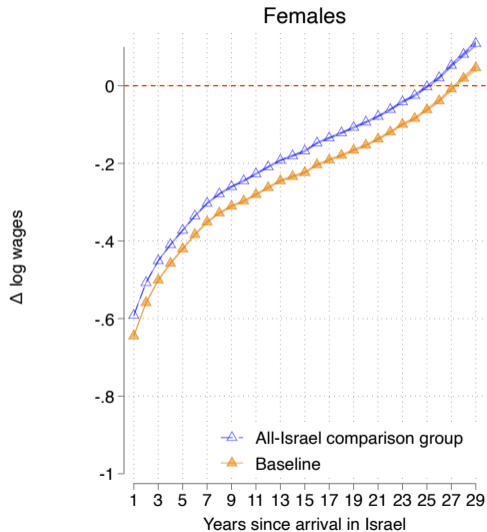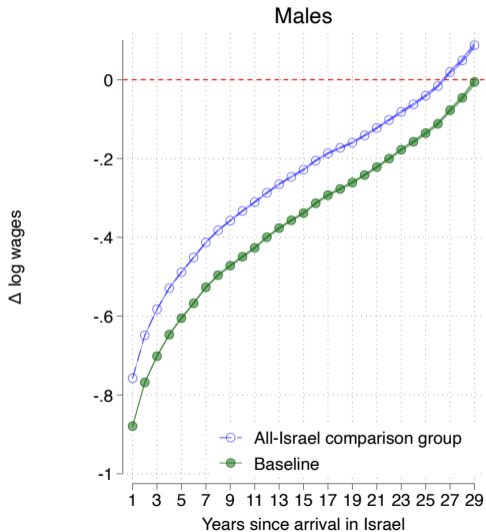
Firm pay premium assimilation: Time-Varying Pay Premiums ▸ back
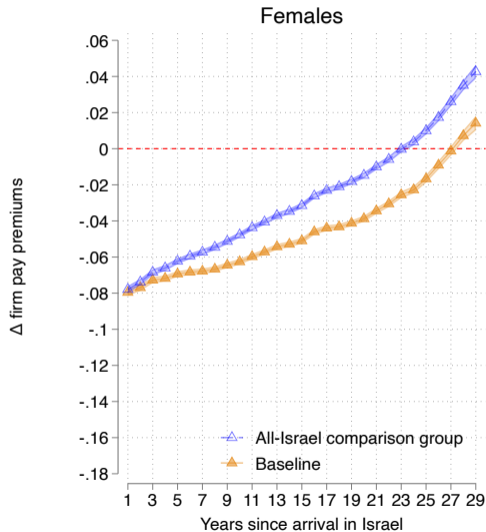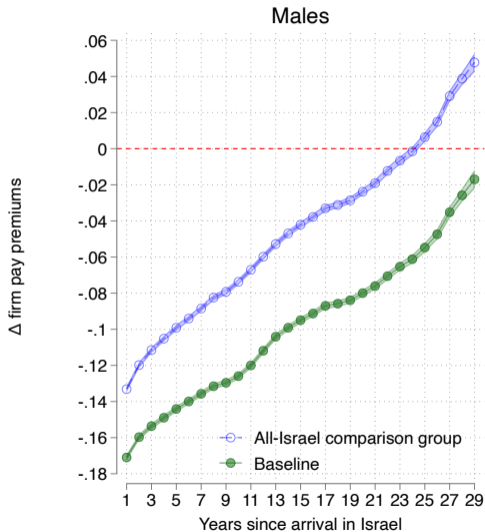
Decade-specific firm effects

▹ Estimate separate firm effects $\psi_{J(i,t)}^{g(i),d(t)}$ for five overlapping decades
  ▹ $d \in \{91-00, 96-05, 01-10, 06-15, 11-19\}$
▹ Assign each worker-year the weighted average of adjacent decades
  ▹ E.g., FSU worker, firm J, year 2002 = $\frac{2}{3} \cdot \hat{\psi}_J^{M,96-05} + \frac{1}{3} \cdot \hat{\psi}_J^{M,01-10}$
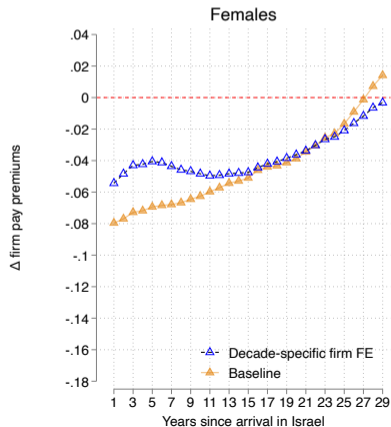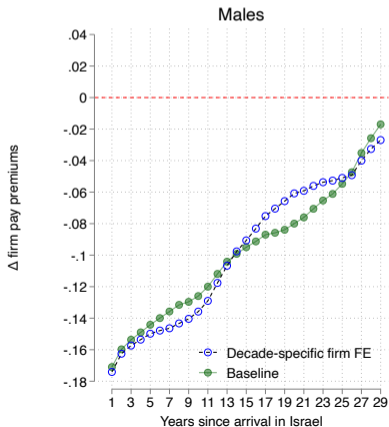
Firm pay premium assimilation - Out-Migration Robustness, males
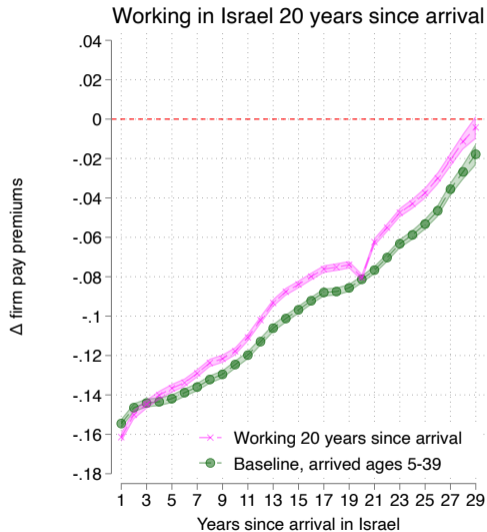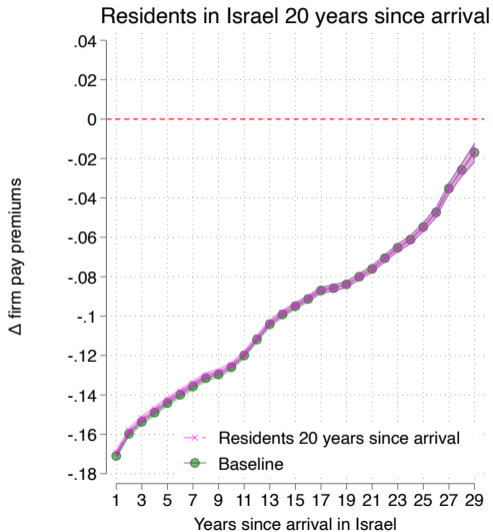
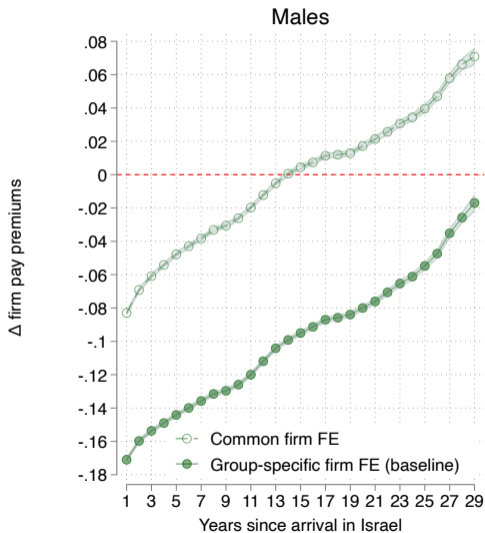# **Firm pay premium assimilation** - Out-Migration Robustness, females
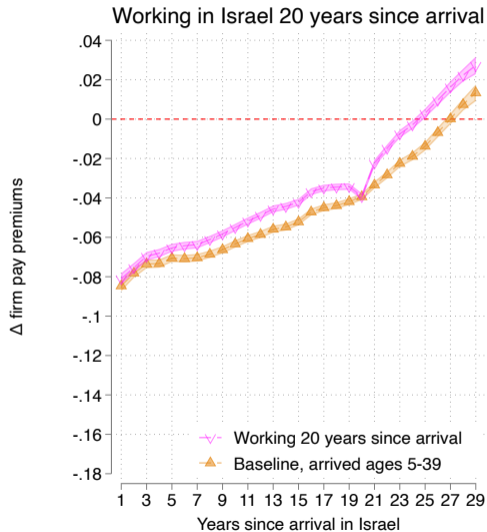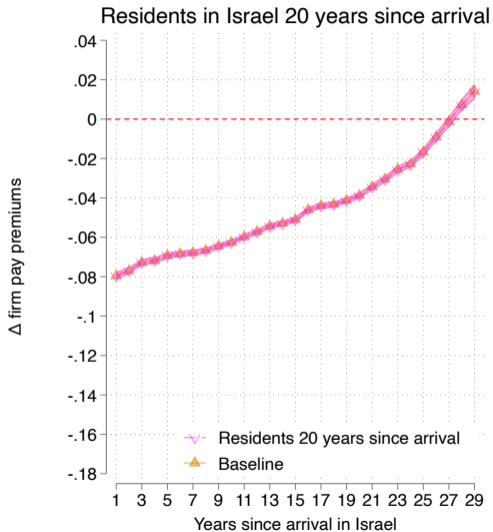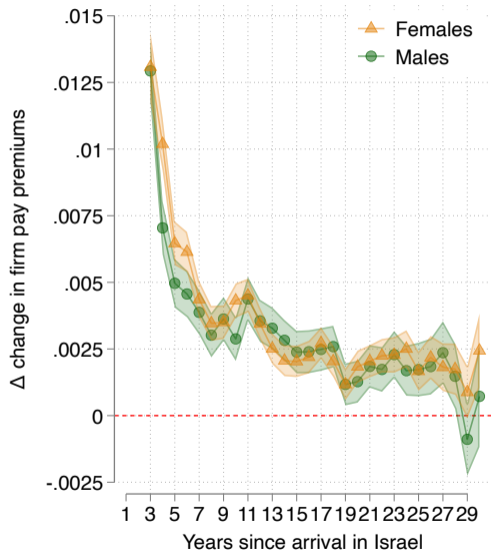
Distance to Tel Aviv
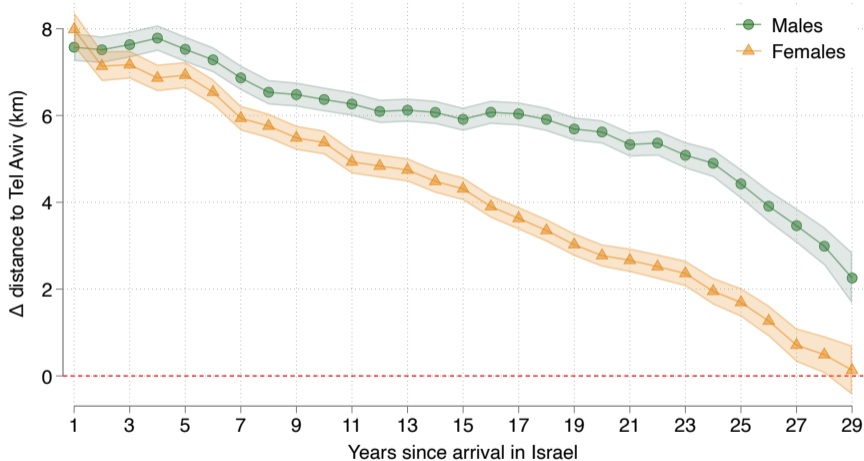
$\mathbb{E}(\text{distance to Tel Aviv}|native, males) = 32km, \quad \mathbb{E}(\text{distance to Tel Aviv}|native, females) = 29km$ ▸ back

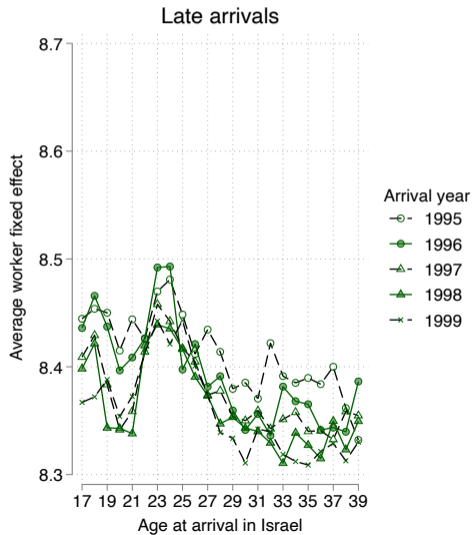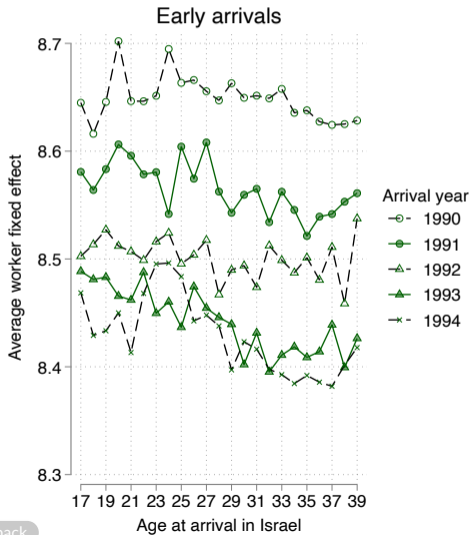# Firm pay premium assimilation: Comparison to Common Premiums
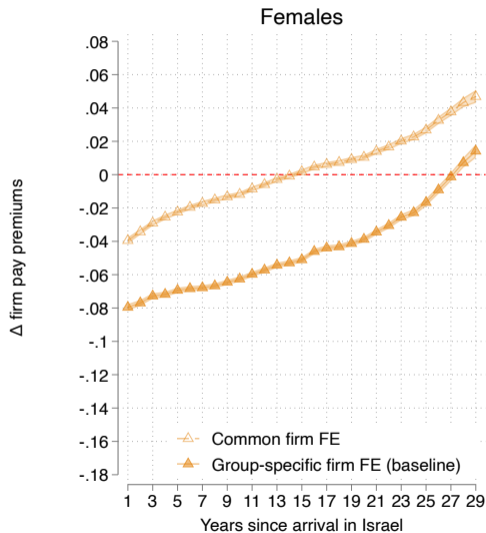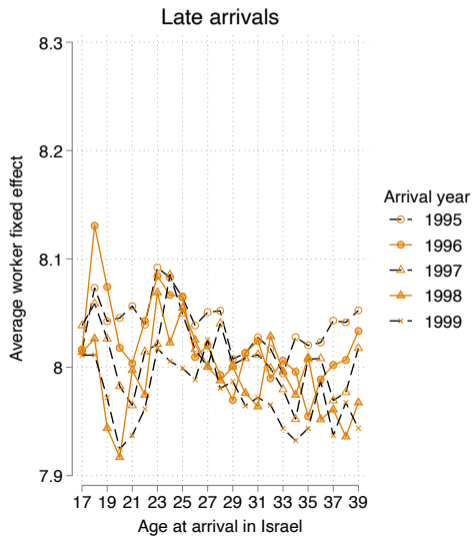

Males

Females

Unconditional Job Search Assimilation

FSU immigrants' worker fixed effects α_i - Males
Selection, cohort effects

FSU immigrants' worker fixed effects α_i - Females
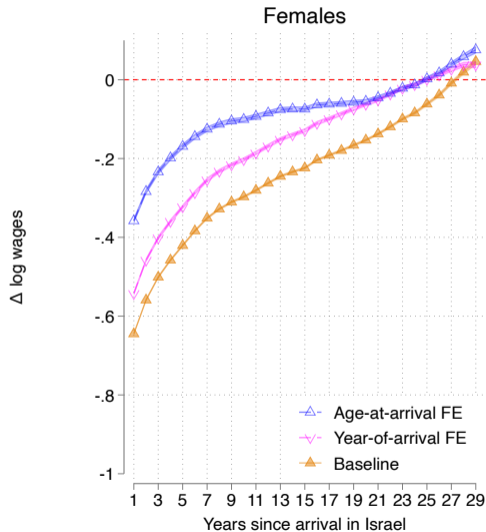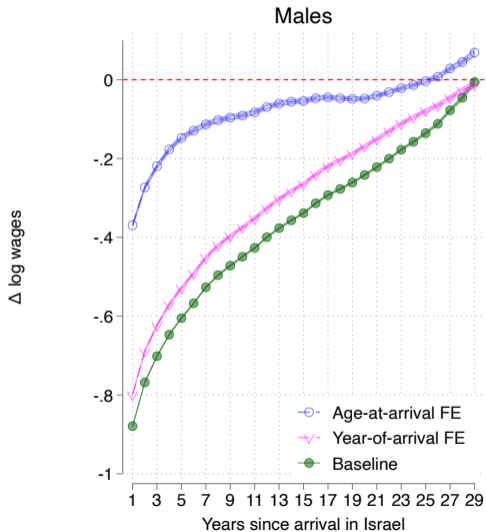## Selection, cohort effects

Early arrivals

Late arrivals
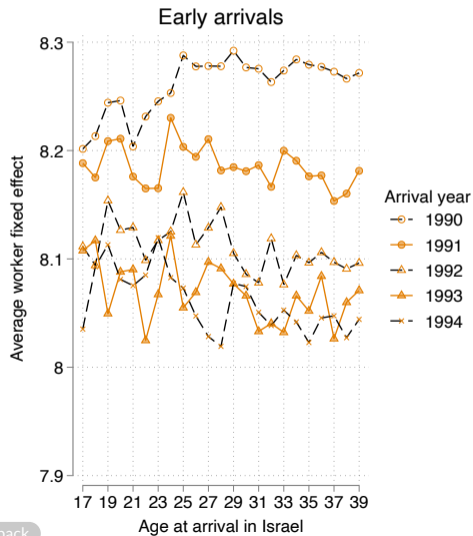
‣ back

Sorkin index magnitudes

- $SD(\text{Overall Sorkin Index}|native, males) = 0.84$

- $SD(\text{Overall Sorkin Index}|native, females) = 0.76$

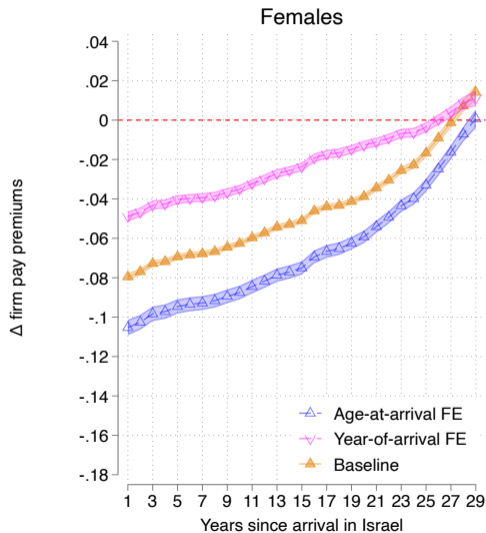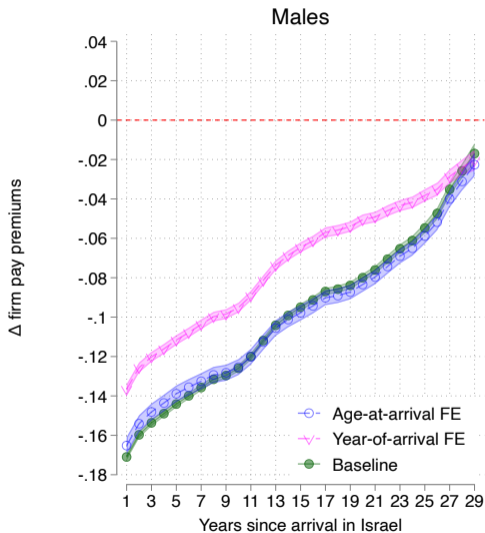- $SD(\text{Residual Sorkin Index}|native, males) = 0.81$

- $SD(\text{Residual Sorkin Index}|native, females) = 0.76$

▸ back

Wage assimilation: Arrival Age and Arrival Year FE

Males

Females

Firm Pay Premiums assimilation Arrival Age and Arrival Year FE

Firm Characteristics and Group-Specific Pay Premiums ◦ back

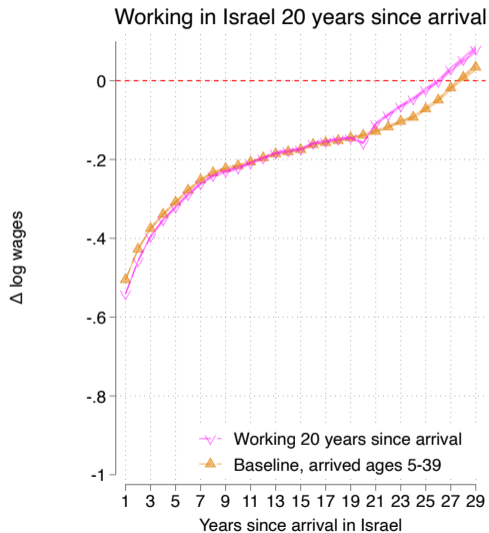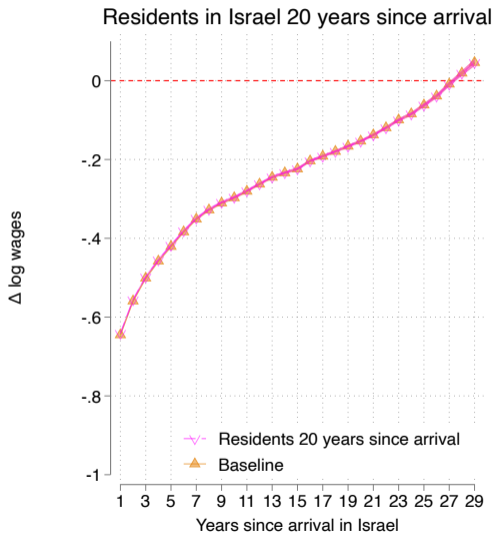|	Males		Females	
	ψ_j^N	$\psi_j^N - \psi_j^M$	ψ_j^N	$\psi_j^N - \psi_j^M$
	(1)	(2)	(3)	(4)
=1 if firm birth year $> 1989_j$	-0.021	0.001	0.009	-0.012
	(0.015)	(0.007)	(0.015)	(0.019)
Log firm size$_{jt}$	0.004	-0.007**	-0.001	-0.010*
	(0.006)	(0.003)	(0.006)	(0.006)
Distance to Tel Aviv$_j$	-0.000*	-0.000	-0.001***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
=1 if FSU worker share $> 0.5_{jt}$	-0.001	0.018***	0.102***	0.015
	(0.009)	(0.007)	(0.021)	(0.009)
Desirability index$_j$	0.158***	-0.009**	0.029***	-0.056***
	(0.009)	(0.004)	(0.009)	(0.006)
Adj. R^2	0.152	0.015	0.032	0.093
N person-year observations	9,086,605	9,086,605	8,752,016	8,752,016

Wage Setting in Israel

- ▷ Historical tradition of collectivism and centrality of the labor movement

- ▷ Yet, steep declines in collective bargaining and union density

- ▷ Starting in 1990s:
  - ▷ Rise in agreements signed by narrower bases of unionization (occupational and local unions)
  - ▷ Decline in industry-level agreements

- ▷ Bargaining agreements have become more liberalized
  - ▷ Employer flexibility to set wages
  - ▷ Within-firm and occupation differences in pay
  - ▷ Employer flexibility to transfer workers across jobs

▸ back

Wage Assimilation: Robustness to Out-Migration - Males
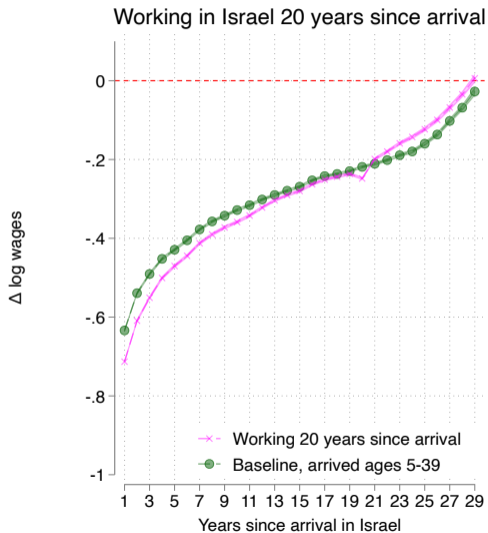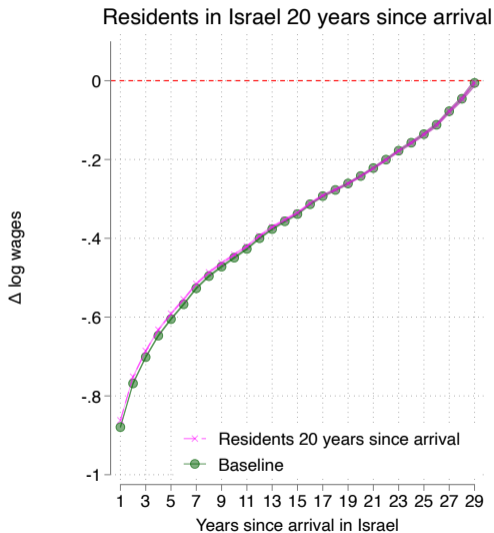
Wage Assimilation: Robustness to Out-Migration - Females

Baseline employer change probabilities and average jump

Baseline employer change probabilities:

  ▷ $Pr(\text{change} = 1|\text{ native males}) = 0.13$
  ▷ $Pr(\text{change} = 1|\text{ native females}) = 0.10$

Baseline average firm ladder jump:

  ▷ $\mathbb{E}\left(\widehat{\psi}_{J(i,t)}^{g(i)} - \widehat{\psi}_{J(i,t-1)}^{g(i)}|\text{ native male switchers}\right) = 0.04$
  ▷ $\mathbb{E}\left(\widehat{\psi}_{J(i,t)}^{g(i)} - \widehat{\psi}_{J(i,t-1)}^{g(i)}|\text{ native female switchers}\right) = 0.02$