

# Online Appendix (not intended for publication)

## A Additional data sources

**O\*NET Database.** We collect information on the task content of occupations from O\*NET. Occupations in O\*NET are defined by the Standard Occupation Classification (SOC). The database provides a scale of importance for a set of descriptors that determine the distinguishing characteristics of each occupation, such as knowledge, skills, abilities, work activities, work context, work styles, and work values. We employ these descriptors to build a measure of task intensity which we use to classify occupations into five task categories: non-routine cognitive, non-routine interpersonal, routine cognitive, routine manual, and non-routine manual.<sup>20</sup>

**World-Bank Development Database.** We collect information on countries' GDP per capita from the World Bank Development Indicators. This dataset contains country-level information for a set of indicators of economic development. We select GDP per capita at PPP constant 2021 international US dollars to split countries into two categories: low-income (GDP pc < \$30,000) and high-income (GDP pc greater or equal than  $\geq$  \$30,000).

**FRED Database.** We collect information on the unemployment rate from 1990 to 2021 from the FRED database.

## B Variables definition

**Immigrants.** We combine the information from the variables "BPLD" and "CITIZEN" to define immigrants as foreign-born workers who are either naturalized citizens or do not have citizen status.

**Years Since Migration.** We construct immigrants' years of arrival using the variable "YRIMMIG" and compute years since migration as the difference between the year in which we observe a foreign-born worker minus and her year of arrival in the US.

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<sup>20</sup>More details can be found in Appendix B.

**Cohort Of Arrival.** Using the year of arrival in the US, we assign foreign-born workers to a cohort of arrival in the US.

**Years of Schooling.** In the ACS individuals are asked to report their educational attainment. We use the detailed version for the variable "EDUC" to impute years of schooling as follows: 4 "No schooling completed" to "Grade 4", 7 "Grade 5, 6, 7, or 8", 9 "Grade 9", 10 "Grade 10", 11 "Grade 11", 12 "Grade 12" to "Some college, but less than 1 year", 13 "1 or more years of college credit, no degree", 14 "Associate's degree, type not specified", 16 "Bachelor's degree", 18 "Master's degree" or "Professional degree beyond a bachelor's degree", 21 "Doctoral degree".

**Potential Experience.** We compute potential experience in the labor market as a worker's age minus the years of schooling minus 6.

**Hourly Earnings.** We construct hourly earnings by combining the information in the variables "INCWAGE", "WKSWORK2", and "UHRSWORK". The first variable contains information about an individual's pre-tax wage and salary income from the previous year, the second variable provides the number of weeks that an individual worked in the previous year, and the last variable is the usual hours worked by an individual in a week. Thus, we compute hourly earnings as annual pre-tax wage and salary income divided by the number of hours worked in a year. Since the weeks worked are provided in intervals, we follow Albert et al. (2021) and impute weeks worked for the available intervals as: 7.4, 21.3, 33.1, 42.4, 48.2, and 51.9. To account for inflation, we convert hourly earnings to constant 1999 dollars using the CPI-U multiplier index available in IPUMS.

**Low-Income And High-Income Countries.** We define as low-income those countries whose GDP per capita is less than \$30,000 and as high-income those countries whose GDP per capita is greater than or equal to \$30,000.

**Task Intensity Measure.** We collect data from O\*NET following the definitions in Acemoglu and Autor (2011). We define the five tasks macro-categories which are defined based on a set of descriptors:<sup>21</sup>

- Non-routine cognitive analytical:

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<sup>21</sup>Differently from Acemoglu and Autor (2011), we do not consider the task category "Offshorability".

- Analyzing data/information
- Thinking creatively
- Interpreting information for others
- Non-routine cognitive interpersonal:
  - Establishing and maintaining personal relationships
  - Guiding, directing, and motivating subordinates
  - Coaching/developing others
- Routine cognitive:
  - Importance of repeating the same tasks
  - Importance of being exact or accurate
  - Structured v. Unstructured work
- Routine manual:
  - Pace determined by speed of equipment
  - Controlling machines and processes
  - Spend time making repetitive motions
- Non-routine manual:
  - Operating vehicles, mechanized devices, or equipment
  - Spend time using hands to handle, control, or feel objects, tools, or controls
  - Manual dexterity
  - Spatial orientation

O\*NET provides an importance scale of each descriptor for each occupation defined using the Standard Occupation Classification (SOC) 2010 at 6 digits. We aggregate occupations at 3-digit SOC codes and obtain 95 groups. We create a measure for each of the 5 task categories listed above by summing the values of each constituent descriptor defined at 3-digits SOC. For each category, we then standardize the measure to have a mean of zero and a standard deviation of one.

**Occupation Dummies.** There are  $n = 1, \dots, 95$  occupations in our sample and we assign each of them to one of the following task categories: non-routine cognitive analytical (*NRA*), non-routine cognitive interpersonal (*NRI*), routine cognitive (*RC*), routine manual (*RM*), non-routine manual (*NRM*). We do so by comparing for each occupation the intensity of each task and selecting the category with the maximum intensity. Table D.8 reports how each occupation in our dataset is assigned to one task category.

**Unemployment rate.** The unemployment rate (*UNRATE*, source: FRED) refers to the number of unemployed as a percentage of the labor force. Labor force data are restricted to people 16 years of age and older, who currently reside in 1 of the 50 states or the District of Columbia, who do not reside in institutions (e.g., penal and mental facilities, homes for the aged), and who are not on active duty in the Armed Forces.

**Recession dummy.** The recession dummy takes value 1 for any period identified as a recession by the NBER's Business Cycle Dating Committee, and 0 otherwise.

## C Unemployment Shocks

Let  $u_{t+1}$  denote the unemployment rate to be forecast, and let  $X_t$  be an  $N$ -dimensional multiple time series of predictor variables, observed for  $t = 1, 2, \dots, T$ . Following Stock and Watson (2002), we assume that  $(u_{t+1}, X_t)$  admit a dynamic factor model representation with  $r$  common dynamic factors  $f_t$ , i.e.

$$\begin{aligned} u_{t+1} &= \alpha + \beta f_t + \gamma u_t + \epsilon_{t+1}, \\ X_{it} &= \lambda_i(L) f_t + v_{it} \quad \forall i = 1, \dots, N \end{aligned}$$

where  $v_t = (v_{1t}, v_{2t}, \dots, v_{Nt})'$  is the  $N \times 1$  idiosyncratic disturbance and  $\lambda_i(L)$  are lag polynomials in nonnegative powers of  $L$ . It is also assumed that:

$$\mathbf{E}[\epsilon_{t+1} | f_t, u_t, X_t, f_{t-1}, u_{t-1}, X_{t-1}, \dots] = 0$$

If we let  $\lambda_i(L)$  to have finite orders of at most  $q$ , then we can write

$$\begin{aligned} u_{t+1} &= \alpha + \beta F_t + \gamma u_t + \epsilon_{t+1}, \\ X_t &= \Lambda F_t + v_t \end{aligned}$$

where  $F_t = (f'_t, f'_{t-1}, \dots, f'_{t-q})'$  and the  $i$ -th row of  $\Lambda$  is  $(\lambda_{1t}, \lambda_{2t}, \dots, \lambda_{qt})$ . Our empirical application focuses on a 1-step ahead forecast. Because  $\alpha$ ,  $F_t$ , and  $\Gamma$  are unknown, our forecast is constructed using a two-step procedure. First, the sample data  $\{X_t\}_{t=1}^T$  are used to estimate a time series of factors (the diffusion indexes),  $\{\hat{F}_t\}_{t=1}^T$ . Second, the estimators  $\hat{\alpha}$ ,  $\hat{\beta}$  and  $\hat{\gamma}$  are obtained by regressing  $u_{t+1}$  onto a constant,  $\hat{F}_t$  and  $u_t$ . Stock and Watson (1998) developed theoretical results for this two-step procedure applied to the factor model. The factors are estimated by principal components because these estimators are readily calculated even for very large  $N$  and because of principal components can be generalized to handle data irregularities.

In practice, we use the  $N = 5$  variables to estimate the diffusion index, meaning the first difference of log real GDP (variable GDPC1), the first difference of log real GDP per capita (variable A939RX0Q048SBEA), the first difference of the logged number of hours (variable B4701C0A222NBEA), the first difference of the logged employment rate (variable EMRATIO), and the first difference of the logged industrial production index (variable INDPRO). To train this model, we use yearly time-series data from 1970 to 2021. Table C.1 reports the OLS estimate for the second-step regression of the unemployment rate at time  $t + 1$ ,  $u_{t+1}$  onto a constant, the aggregate factor at time  $t$ ,  $\hat{F}_t$  and lagged unemployment rate  $u_t$ .

**Table C.1:** Aggregate unemployment forecast model

	$u_{t+1}$
$\hat{F}_t$	-0.194 (0.081)
$u_t$	0.615 (0.109)
N. Obs.	51
Adj.R2	0.518

Source: ACS and authors' calculations.  
Notes: This table reports the OLS estimate from regressing the unemployment rate at time  $t + 1$ ,  $u_{t+1}$  onto a constant,  $\hat{F}_t$  and  $u_t$ .

Table C.2 reports the OLS estimate for the regression of the state-level unemploy-

ment rate at time  $t + 1$ ,  $u_{st+1}$  onto a constant, the aggregate unemployment forecast,  $\hat{u}_{t+1}$ , the lagged state-level unemployment rate,  $u_{st}$  and a full set of state-level fixed effects.

**Table C.2:** State-level unemployment forecast model

	$u_{st+1}$
$\hat{u}_{t+1}$	0.108 (0.043)
$u_{st}$	0.624 (0.036)
State FE	✓
N. Obs.	1581
Adj.R2	0.614

Source: ACS and authors' calculations.  
Notes: This table reports the OLS estimate from regressing the state-level unemployment rate at time  $t$ ,  $u_{st}$  onto a constant,  $\hat{u}_t$  and  $u_{st-1}$ .

## D Descriptive Statistics

Tables D.1 and D.2 report selected descriptive statistics for immigrants separately by cohort of arrival to the US.

**Table D.1:** Descriptive statistics of immigrants by cohorts of arrival: 1990-2005

Origin	Avg. Yearly Earnings (1)	Avg. Hourly Earnings (2)	Avg. Hours Worked (3)	Avg. Years of Schooling (4)	Avg. Potential Experience (5)	English Proficiency (6)	Observations (7)
1990	43519.3 (61284.1)	20.0 (28.5)	2164.4 (505.8)	12.4 (4.0)	29.2 (6.3)	71.9 -	20873 -
1991	50399.9 (70300.3)	22.9 (35.0)	2184.5 (511.0)	13.1 (4.1)	28.0 (6.6)	75.8 -	15434 -
1992	48028.0 (66824.8)	22.3 (39.2)	2170.2 (517.7)	12.9 (4.1)	27.5 (6.8)	74.5 -	16926 -
1993	48596.6 (70917.4)	21.8 (32.5)	2192.3 (518.0)	12.7 (4.1)	26.9 (6.9)	73.5 -	16391 -
1994	47940.4 (70376.1)	21.7 (31.5)	2186.8 (514.4)	12.6 (4.1)	26.3 (7.0)	71.2 -	18371 -
1995	43512.0 (63461.0)	20.0 (30.6)	2162.1 (505.7)	12.4 (4.1)	26.0 (7.2)	69.5 -	22987 -
1996	46639.1 (66794.6)	21.8 (45.4)	2173.1 (513.3)	12.7 (4.1)	24.8 (7.5)	71.3 -	22741 -
1997	47716.3 (65989.5)	22.4 (53.9)	2172.5 (502.2)	12.8 (4.2)	24.1 (7.6)	71.5 -	23644 -
1998	44872.6 (63124.2)	20.7 (29.2)	2166.9 (498.3)	12.6 (4.2)	23.5 (7.8)	68.7 -	29739 -
1999	42358.8 (60518.9)	19.6 (29.7)	2154.2 (505.8)	12.5 (4.1)	22.9 (7.9)	67.0 -	33389 -
2000	39741.8 (57653.0)	18.6 (30.1)	2142.8 (504.3)	12.3 (4.1)	22.5 (8.1)	63.7 -	43218 -
2001	41052.7 (59203.5)	19.1 (28.3)	2150.5 (510.2)	12.7 (4.1)	21.7 (8.4)	65.9 -	32630 -
2002	38798.9 (59355.6)	18.2 (31.3)	2140.4 (507.8)	12.4 (4.1)	20.9 (8.6)	62.1 -	25134 -
2003	37482.5 (58990.4)	17.9 (55.3)	2127.3 (513.0)	12.3 (4.1)	20.2 (8.7)	60.1 -	25234 -
2004	35523.4 (55069.8)	16.8 (25.7)	2119.7 (522.4)	12.1 (4.1)	19.5 (8.7)	56.6 -	26970 -
2005	35645.1 (54294.1)	16.7 (23.8)	2109.0 (519.6)	12.1 (4.2)	18.7 (8.8)	56.6 -	29530 -

Source: ACS and authors' calculations. Notes: This table reports selected labor market outcomes and demographic characteristics of immigrants across different cohorts of entry in the US Results are based on a sample of male workers who report being currently employed.

**Table D.2:** Descriptive statistics of immigrants by cohorts of arrival: 2006-2021

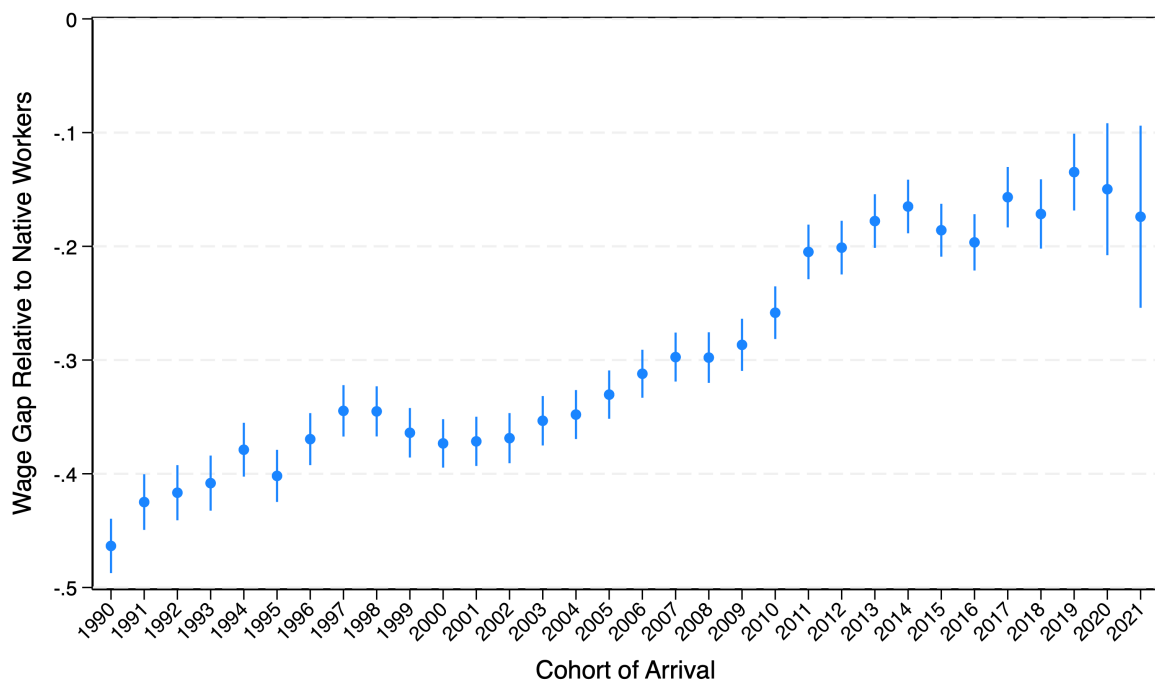
Origin	Avg. Yearly Earnings (1)	Avg. Hourly Earnings (2)	Avg. Hours Worked (3)	Avg. Years of Schooling (4)	Avg. Potential Experience (5)	English Proficiency (6)	Observations (7)
2006	38769.8 (58496.5)	18.1 (27.8)	2109.2 (530.0)	12.7 (4.2)	18.0 (8.9)	60.4 -	26588 -
2007	40827.6 (61072.1)	19.0 (36.9)	2115.4 (529.6)	13.0 (4.2)	17.6 (9.0)	63.5 -	23370 -
2008	40775.1 (61740.9)	19.1 (28.0)	2105.9 (542.8)	13.0 (4.2)	17.5 (9.2)	64.4 -	20058 -
2009	40220.1 (59818.4)	19.5 (41.1)	2106.8 (549.1)	13.1 (4.1)	17.3 (9.4)	66.4 -	16153 -
2010	43037.3 (65342.9)	20.8 (42.6)	2116.6 (542.3)	13.3 (4.0)	17.4 (9.3)	67.6 -	16860 -
2011	48590.1 (71069.1)	23.0 (42.2)	2130.7 (528.3)	13.9 (3.9)	16.5 (9.1)	72.3 -	14131 -
2012	45949.7 (67142.3)	21.5 (31.7)	2119.1 (531.9)	13.6 (4.0)	16.5 (9.3)	70.2 -	14198 -
2013	47188.7 (66738.6)	22.4 (33.9)	2115.0 (513.5)	14.0 (3.8)	15.8 (9.1)	71.9 -	14051 -
2014	46290.1 (65296.1)	21.9 (29.7)	2110.7 (529.0)	14.0 (3.9)	15.7 (9.2)	71.5 -	13714 -
2015	43956.1 (62358.2)	20.9 (30.9)	2103.2 (526.0)	13.9 (3.8)	15.8 (9.2)	69.5 -	13272 -
2016	42671.2 (60368.8)	20.5 (29.0)	2092.6 (544.3)	13.9 (3.8)	15.9 (9.3)	68.1 -	11816 -
2017	45424.6 (63484.2)	21.6 (28.1)	2098.0 (546.2)	14.2 (3.8)	15.4 (9.2)	71.1 -	8004 -
2018	44878.4 (67166.5)	22.3 (41.7)	2083.4 (574.1)	13.9 (4.0)	15.6 (9.2)	68.8 -	5980 -
2019	44750.6 (64606.9)	22.4 (34.9)	2053.4 (578.3)	13.7 (4.2)	15.8 (9.3)	65.9 -	4461 -
2020	43699.7 (59986.1)	22.6 (58.8)	2057.6 (613.6)	14.1 (4.1)	15.6 (9.6)	66.1 -	1428 -
2021	36550.6 (52956.8)	18.3 (24.5)	2005.9 (729.8)	13.0 (4.1)	15.6 (9.3)	63.2 -	757 -

Source: ACS and authors' calculations. Notes: This table reports selected labor market outcomes and demographic characteristics of immigrants across different cohorts of entry in the US Results are based on a sample of male workers who report being currently employed.



Figure D.1 displays the estimated cohort fixed effects from 1990 to 2021 obtained from regressing the (log) hourly wages on a set of dummies for the cohort of arrival, a set of dummies for the potential years of experience in the labor market, a set of dummies for the years since migration, a set of dummies for the years of education and a linear trend in time. Results are based on a sample of male workers reporting to be currently employed. Regressions are population-weighted.<sup>22</sup>

**Figure D.1: Cohort Effects: 1990-2021**



Source: ACS and authors' calculation.

The estimated cohort fixed effects can be interpreted as the average wage gap of immigrants belonging to a specific cohort of entry in the US relative to the average native workers. Figure D.1 shows that the average wage gap is lower for the more recent cohorts (about 20% for those entering in 2020, against 40% for those entering in 1990). This evidence confirms and extends the finding of Albert et al. (2021), who documents that immigrants from earlier cohorts are on average less similar to natives upon arrival than immigrants from more recent cohorts. Because our treatment varies only across cohorts, failing to control for cohort fixed effects would make the estimated treatment effects biased by its long-run trend.

<sup>22</sup>To break the collinearity between years since migration, cohort of arrival, and time of the observation, we follow Borjas (2015) and assume no differences in a linear time trend between immigrants and natives. In this specification, we also assume no differences in returns to experience and education between immigrants and natives.

Tables D.3 to D.5 compare selected descriptive statistics between natives and immigrants separately for the sample of women, non-college workers, and college workers.

**Table D.3: Descriptive statistics: Females**

Origin	Avg. Yearly Earnings (1)	Avg. Hourly Earnings (2)	Avg. Hours Worked (3)	Avg. Years of Schooling (4)	Avg. Potential Experience (5)	English Proficiency (6)	Observations (7)
Natives	31425.2 (37648.7)	15.8 (25.1)	1958.9 (554.3)	13.9 (2.3)	19.9 (11.5)	- -	5012367 -
Immigrants	29605.8 (40247.8)	15.3 (23.1)	1923.9 (563.6)	13.3 (3.7)	21.9 (9.4)	69.6 -	466082 -

Source: ACS and authors' calculations. Notes: This table compares selected labor market outcomes and demographic characteristics of female natives against female immigrants. Results are based on a sample of workers who report being currently employed.

**Table D.4: Descriptive statistics: Non-college workers**

Origin	Avg. Yearly Earnings (1)	Avg. Hourly Earnings (2)	Avg. Hours Worked (3)	Avg. Years of Schooling (4)	Avg. Potential Experience (5)	English Proficiency (6)	Observations (7)
Natives	27945.5 (26795.0)	13.6 (18.5)	2046.2 (566.0)	12.4 (1.2)	20.6 (11.4)	- -	6902560 -
Immigrants	21514.4 (22992.0)	11.1 (17.4)	2006.1 (547.6)	10.6 (2.8)	23.4 (8.8)	53.5 -	629268 -

Source: ACS and authors' calculations. Notes: This table compares selected labor market outcomes and demographic characteristics of non-college-educated natives against non-college-educated immigrants. Results are based on a sample of workers who report being currently employed.

**Table D.5: Descriptive statistics: College workers**

Origin	Avg. Yearly Earnings (1)	Avg. Hourly Earnings (2)	Avg. Hours Worked (3)	Avg. Years of Schooling (4)	Avg. Potential Experience (5)	English Proficiency (6)	Observations (7)
Natives	63493.9 (77895.5)	28.4 (46.8)	2183.8 (567.9)	16.7 (1.2)	18.5 (11.1)	- -	3670183 -
Immigrants	64237.6 (78120.9)	29.9 (42.5)	2128.1 (541.0)	17.2 (1.5)	17.9 (9.1)	92.5 -	444866 -

Source: ACS and authors' calculations. Notes: This table compares selected labor market outcomes and demographic characteristics of college-educated natives against college-educated immigrants. Results are based on a sample of workers who report being currently employed.

Tables D.6 compare selected descriptive statistics between immigrants from low-income countries, Mexicans, and high-income countries. Table D.7 reports the share of unemployed and the share of workers employed in routine-manual occupations, separately for natives and immigrants, and across demographics.

**Table D.6:** Descriptive statistics: Low-Income vs Mexicans vs High-Income Immigrant workers

Origin	Avg. Yearly Earnings (1)	Avg. Hourly Earnings (2)	Avg. Hours Worked (3)	Avg. Years of Schooling (4)	Avg. Potential Experience (5)	English Proficiency (6)	Observations (7)
Low-Income	32844.9 (45461.5)	16.2 (26.5)	2033.5 (536.7)	12.6 (4.0)	21.5 (9.3)	64.4 -	909289 -
Mexicans	20132.7 (21693.2)	10.3 (16.6)	2022.0 (527.0)	10.1 (3.3)	22.6 (8.6)	41.3 -	244097 -
High-Income	67981.0 (91952.8)	30.4 (49.2)	2173.1 (608.8)	15.6 (2.9)	20.5 (9.5)	90.9 -	164845 -

Source: ACS and authors' calculations. Notes: This table compares selected labor market outcomes and demographic characteristics of immigrants from different countries of origin. Results are based on a sample of workers who report being currently employed.

**Table D.7:** Unemployment & Employment in Routine-Manual Occupations

Group	Males (1)	Females (2)	Non-college (3)	College (4)	Low-Income (5)	Mexicans (6)	High-Income (7)
Shares of Unemployed							
Natives	2.8	2.4	3.3	1.3	-	-	-
Immigrants	1.8	2.1	2.3	1.2	2.0	2.3	1.3
Shares of Routine-Manual Employed							
Natives	20.1	12.9	23.5	3.4	-	-	-
Immigrants	26.7	34.3	42.8	7.4	32.6	49.1	10.3

Source: ACS and authors' calculations. Notes: This table compares the shares of unemployment and the share of employment in routine-manual jobs of natives against immigrants. Results are based on a sample of male workers.

**Table D.8: List of occupations by category and task intensity**

Occupation (SOC 3-dig)	Label	Task Intensity Analytical	Task Intensity Interpersonal	Task Intensity Routine Cognitive	Task Intensity Routine Manual	Task Intensity Non-Routine Manual
Architects, Surveyors, and Cartographers	NRA	1.37	0.58	0.42	-0.44	0.18
Art and Design Workers	NRA	0.54	-0.29	-0.12	-0.34	-0.21
Business Operations Specialists	NRA	0.93	0.53	0.53	-1.07	-1.16
Computer Occupations	NRA	1.50	-0.20	0.27	-0.65	-1.00
Drafters, Engineering Technicians, and Mapping Technicians	NRA	0.38	-0.77	0.37	0.09	0.15
Engineers	NRA	1.46	0.12	-0.31	-0.92	-0.98
Life Scientists	NRA	1.94	0.56	0.29	-0.66	-0.45
Mathematical Science Occupations	NRA	2.11	-0.31	0.31	-1.40	-1.77
Media and Communication Equipment Workers	NRA	0.74	0.28	-0.04	0.30	0.24
Physical Scientists	NRA	1.97	-0.02	-0.44	-1.15	-1.01
Postsecondary Teachers	NRA	1.99	1.13	-0.26	-1.28	-1.50
Social Scientists and Related Workers	NRA	2.16	0.35	-0.43	-1.69	-1.60
Advertising, Marketing, Promotions, Public Relations, and Sales Managers	NRI	1.10	1.47	-0.41	-1.57	-1.38
Baggage Porters, Bellhops, and Concierges	NRI	-0.48	0.79	-0.78	-0.58	0.04
Counselors, Social Workers, and Other Community and Social Service Specialists	NRI	0.89	1.11	-0.61	-1.31	-1.17
Entertainers and Performers, Sports and Related Workers	NRI	0.21	0.69	-0.55	-0.50	-0.62
Occupational Therapy and Physical Therapist Assistants and Aides	NRI	0.26	0.55	-0.67	-0.18	-0.23
Operations Specialties Managers	NRI	1.01	1.71	0.83	-0.61	-0.93
Other Education, Training, and Library Occupations	NRI	1.10	1.24	-1.35	-1.46	-1.10
Other Healthcare Practitioners and Technical Occupations	NRI	0.68	0.81	0.44	-1.06	-0.66
Other Management Occupations	NRI	0.95	1.50	0.25	-0.95	-0.93
Other Personal Care and Service Workers	NRI	-0.29	0.61	-1.77	-1.07	-0.64
Other Sales and Related Workers	NRI	-0.51	-0.32	-1.44	-1.17	-0.90
Other Teachers and Instructors	NRI	0.97	1.05	-1.07	-1.61	-1.27
Preschool, Primary, Secondary, and Special Education School Teachers	NRI	0.89	1.48	-1.61	-1.20	-1.12
Religious Workers	NRI	1.04	1.79	-1.70	-1.75	-1.41
Supervisors of Building and Grounds Cleaning and Maintenance Workers	NRI	0.36	1.97	-0.23	0.66	0.74
Supervisors of Construction and Extraction Workers	NRI	0.54	0.99	0.39	0.54	0.64
Supervisors of Food Preparation and Serving Workers	NRI	0.14	1.60	0.50	1.38	0.51
Supervisors of Office and Administrative Support Workers	NRI	0.87	1.29	0.58	-0.56	-1.22
Supervisors of Personal Care and Service Workers	NRI	-0.91	1.18	0.33	-0.67	-0.83
Supervisors of Production Workers	NRI	0.42	1.52	0.58	1.35	0.41
Supervisors of Protective Service Workers	NRI	0.79	2.32	0.38	-0.41	0.86
Supervisors of Sales Workers	NRI	-0.14	1.72	0.67	-0.36	-0.64
Top Executives	NRI	1.62	2.24	0.38	-1.20	-1.42
Tour and Travel Guides	NRI	-1.12	-0.17	-1.39	-1.17	-0.36
Air Transportation Workers	RC	-0.10	-0.43	1.87	0.70	1.19
Financial Clerks	RC	-0.98	-0.86	1.91	-0.25	-1.10
Financial Specialists	RC	0.91	0.15	1.20	-1.15	-1.30
Funeral Service Workers	RC	-0.07	0.39	0.88	-0.60	0.56
Health Diagnosing and Treating Practitioners	RC	1.14	1.12	1.21	-0.53	-0.41
Health Technologists and Technicians	RC	0.11	0.18	1.25	0.50	-0.10
Information and Record Clerks	RC	-0.45	-0.28	1.60	-0.33	-1.01
Law Enforcement Workers	RC	0.67	0.46	0.87	-0.33	0.62
Lawyers, Judges, and Related Workers	RC	1.06	-1.40	1.37	-1.14	-1.58
Legal Support Workers	RC	0.21	-1.35	2.34	-0.48	-1.26
Librarians, Curators, and Archivists	RC	0.46	-0.07	0.51	-0.78	-0.55
Life, Physical, and Social Science Technicians	RC	0.49	-0.78	0.50	0.04	0.16
Material Recording, Scheduling, Dispatching, and Distributing Workers	RC	-0.91	-0.89	0.75	0.58	0.27
Media and Communication Workers	RC	0.96	-0.42	0.98	-0.59	-0.98
Nursing, Psychiatric, and Home Health Aides	RC	-0.71	-0.40	0.04	-0.09	-0.09
Other Healthcare Support Occupations	RC	-0.09	0.10	0.71	0.41	-0.00
Other Office and Administrative Support Workers	RC	-0.67	-1.11	1.40	0.24	-0.76
Other Protective Service Workers	RC	-0.26	-0.16	0.15	-0.40	0.09
Retail Sales Workers	RC	-0.87	-0.15	0.47	0.15	-0.21
Sales Representatives, Services	RC	0.22	-0.33	1.21	-1.39	-1.19
Sales Representatives, Wholesale and Manufacturing	RC	-0.68	-0.91	0.68	-1.23	-0.87
Secretaries and Administrative Assistants	RC	-0.60	-0.60	1.99	-0.66	-0.95
Supervisors of Installation, Maintenance, and Repair Workers	RC	0.77	0.61	1.97	0.20	0.97
Supervisors of Transportation and Material Moving Workers	RC	0.20	1.58	1.67	0.41	0.43
Agricultural Workers	RM	-1.60	-0.76	-1.76	0.69	0.67
Assemblers and Fabricators	RM	-1.00	-1.07	-0.41	1.12	0.77
Building Cleaning and Pest Control Workers	RM	-1.75	-1.50	-0.81	0.49	0.47
Communications Equipment Operators	RM	-0.82	-0.78	0.43	0.76	-0.74
Cooks and Food Preparation Workers	RM	-1.02	-0.91	-1.29	0.56	0.06
Entertainment Attendants and Related Workers	RM	-1.92	-1.14	-1.56	0.25	-0.26
Extraction Workers	RM	-0.89	-0.60	-0.52	2.22	1.91
Food Processing Workers	RM	-0.97	-0.92	-0.72	2.05	0.52
Food and Beverage Serving Workers	RM	-1.56	-0.08	-1.34	0.61	-0.01
Material Moving Workers	RM	-0.97	-1.00	-0.12	1.56	1.36
Metal Workers and Plastic Workers	RM	-0.84	-0.94	-0.35	2.00	1.09
Other Food Preparation and Serving Related Workers	RM	-1.79	-0.58	-1.93	0.65	0.13
Other Production Occupations	RM	-0.80	-1.08	-0.32	1.69	0.79
Personal Appearance Workers	RM	-0.78	-0.75	-0.59	0.47	0.13
Plant and System Operators	RM	0.07	-0.36	0.94	1.10	0.66
Printing Workers	RM	-0.04	-0.28	0.72	1.96	0.56
Textile, Apparel, and Furnishings Workers	RM	-1.43	-1.71	-1.15	1.63	0.45
Woodworkers	RM	-0.59	-1.71	-0.24	1.29	0.97
Animal Care and Service Workers	NRM	-0.08	-0.30	-1.22	-0.71	0.20
Construction Trades Workers	NRM	-0.78	-0.62	-0.92	1.18	1.47
Electrical and Electronic Equipment Mechanics, Installers, and Repairers	NRM	-0.03	-0.69	0.66	0.35	1.14
Fire Fighting and Prevention Workers	NRM	0.22	0.97	0.79	0.16	1.26
Fishing and Hunting Workers	NRM	-1.91	-1.83	-1.70	0.44	1.66
Forest, Conservation, and Logging Workers	NRM	-1.08	-0.73	-0.21	1.46	1.65
Grounds Maintenance Workers	NRM	-1.11	-0.74	-1.46	1.13	1.55
Helpers, Construction Trades	NRM	-0.90	-1.03	-1.93	1.06	1.44
Motor Vehicle Operators	NRM	-0.76	-1.46	-0.68	0.64	1.98
Other Construction and Related Workers	NRM	-0.30	0.04	-0.62	0.72	1.22
Other Installation, Maintenance, and Repair Occupations	NRM	-0.47	-0.70	0.07	0.86	1.38
Other Transportation Workers	NRM	-1.10	-1.17	-0.19	0.15	0.63
Rail Transportation Workers	NRM	-1.08	-0.75	-0.68	1.58	1.74
Supervisors of Farming, Fishing, and Forestry Workers	NRM	-0.64	0.15	-0.53	0.58	1.01
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	NRM	-0.35	-0.89	-0.34	0.69	1.59
Water Transportation Workers	NRM	-0.70	-0.52	-0.06	0.98	1.96

Source: ACS and authors' calculations. Notes: This table reports task intensities for a list of 3-digit SOC occupations in the ACS dataset and their label following the classification proposed by Acemoglu and Autor (2011).

Table D.9 reports the average real hourly earnings for workers in routine-manual and non-routine-manual occupations, separately for natives and immigrants.

**Table D.9:** Average real hourly earnings by occupation

	Low-paying jobs (Routine-Manual) (1)	High-paying jobs (Non Routine-Manual) (2)	$\Delta$ (%) (3)
Overall	11.7 (1,292,907)	23.4 (5,004,528)	-69.1
Natives	12.0 (1,111,453)	23.3 (4,448,923)	-66.3
Immigrants	10.3 (181,454)	23.9 (555,605)	-84.0

Source: ACS and authors' calculation. Notes: This table reports the average hourly wage for workers in low-paying and high-paying jobs. The former refers to jobs in routine-manual occupations. The latter to non-routine-manual occupations. The third column reports the percent wage differences across groups of occupations. Results are based on a sample of male workers who report to be currently employed. The number of observations for each group is reported in parentheses.

## E Exclusion restrictions

Table E.1 reports the OLS estimates from regressing migrant characteristics observed at the time of migrating to the US, separately on the unemployment rate,  $u_c^0$ , and the unemployment rate forecast errors,  $\tilde{u}_c^0$  and  $\bar{u}_c^0$ , at the time of migrating to the US for both men and women.

**Table E.1:** Initial unemployment rate and immigrants characteristics

	Potential Experience <sub>ic0</sub>	Years of Scholing <sub>ic0</sub>	English Proficiency <sub>ic0</sub>	Any child <sub>ic0</sub>	Household Head <sub>ic0</sub>	White <sub>ic0</sub>	Family Migrants <sub>ic0</sub>	Labor Migrants <sub>ic0</sub>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Males</i>								
$u_c^0$	-0.077 (0.065)	0.017** (0.008)	0.004* (0.003)	0.004* (0.002)	0.007** (0.004)	0.001 (0.003)	-0.003 (0.003)	0.010*** (0.003)
$\tilde{u}_c^0$	-0.050 (0.097)	0.022* (0.012)	0.002 (0.004)	-0.000 (0.003)	0.005 (0.005)	0.011** (0.005)	-0.006 (0.004)	0.008* (0.004)
$\bar{u}_c^0$	0.011 (0.091)	0.017 (0.011)	0.002 (0.003)	-0.000 (0.003)	0.005 (0.005)	-0.000 (0.004)	-0.004 (0.004)	0.005 (0.004)
N. Obs.	12453	12453	12453	12453	12453	12453	12453	12453
<i>Females</i>								
$u_c^0$	-0.164* (0.096)	0.004 (0.005)	-0.002 (0.003)	0.004 (0.003)	0.001 (0.005)	-0.004 (0.005)	0.004 (0.004)	0.002 (0.004)
$\tilde{u}_c^0$	-0.196 (0.127)	0.002 (0.006)	-0.002 (0.004)	0.002 (0.005)	-0.007 (0.006)	0.002 (0.006)	0.007 (0.006)	-0.002 (0.006)
$\bar{u}_c^0$	-0.151 (0.116)	0.002 (0.005)	-0.002 (0.004)	0.003 (0.004)	-0.006 (0.00546)	-0.009 (0.006)	0.006 (0.005)	-0.003 (0.006)
N. Obs.	6459	6459	6459	6459	6459	6459	6459	6459

Source: ACS and authors' calculations. Notes: This table reports the OLS estimate from regressing the migrant characteristics observed at the time of migrating to the US separately on the unemployment rate,  $u_c^0$ , and the unemployment rate forecast errors,  $\tilde{u}_c^0$  and  $\bar{u}_c^0$ , at the time of migrating to the US for a sample of men. The explanatory variables are years of potential experience in the labor market, categories for years of completed schooling (less than high school, high school, some college, and college and above), a dummy variable for English proficiency, a dummy for any child below 5 years old in the household, a dummy for household heads, a dummy for white race, a dummy for being most-likely family-sponsored migrants, and a dummy for most-likely labor-sponsored migrants. Migrants are classified to be most-likely family-sponsored or most-likely labor-sponsored following Barsbai et al. (2024), Table A.2. Standard errors in parenthesis are robust. Significance level: \*p<0.10, \*\*p<0.05, \*\*\*p<0.01.

## F Non-labor migrants vs. non-family migrants

In Tables F.1 to F.3 we report the estimation outcomes excluding migrants from countries of origin with predominantly labor migration as in Barsbai et al. (2024).

**Table F.1:** Effects of unemployment at entry on earnings of non-labor migrants

Years since Migration	Annual Earnings			Hourly Earnings		
	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock
	(1)	(2)	(3)	(4)	(5)	(6)
0	-0.027 (-0.043,-0.011)	-0.049 (-0.080,-0.017)	-0.042 (-0.066,-0.018)	-0.020 (-0.031,-0.008)	-0.031 (-0.057,-0.005)	-0.027 (-0.044,-0.010)
1-4	-0.022 (-0.034,-0.010)	-0.039 (-0.063,-0.013)	-0.032 (-0.049,-0.015)	-0.018 (-0.029,-0.007)	-0.023 (-0.049, 0.003)	-0.018 (-0.035,-0.002)
5-8	-0.014 (-0.025,-0.003)	-0.025 (-0.048,-0.002)	-0.023 (-0.037,-0.008)	-0.013 (-0.023,-0.002)	-0.018 (-0.044,0.007)	-0.016 (-0.031,-0.001)
9-12	-0.004 (-0.014,0.008)	-0.007 (-0.030,0.016)	-0.007 (-0.021,0.008)	-0.001 (-0.011,0.009)	0.002 (-0.023,0.028)	0.002 (-0.014,0.018)
N.Obs.	272	272	271	272	272	271
R-sq.	0.77	0.77	0.77	0.77	0.77	0.77

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing estimated annual and hourly earnings gap between immigrants and the average US native on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Results are based on a sample of male workers reporting to be employed. We exclude migrants from countries of origin with predominantly labor migration. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table F.2:** Effects of unemployment at entry on labor supply of non-labor migrants

Years since Migration	Annual # Hours			Probability of Unemployment		
	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock
	(1)	(2)	(3)	(4)	(5)	(6)
0	-10.36 (-24.12,2.699)	-32.27 (-56.24,-5.339)	-25.51 (-45.94,-6.064)	0.002 (-0.001,0.004)	0.003 (-0.002,0.007)	0.002 (-0.001,0.005)
1-4	-7.673 (-16.81,0.834)	-24.97 (-43.68,-7.244)	-20.87 (-33.08,-8.647)	-0.002 (-0.004,-0.000)	0.002 (-0.001,0.006)	0.001 (-0.001,0.004)
5-8	-4.029 (-11.80,3.120)	-12.99 (-29.00,2.987)	-11.97 (-22.26,-1.531)	-0.002 (-0.004,-0.000)	0.001 (-0.003,0.005)	0.001 (-0.002,0.003)
9-12	-4.936 (-12.67,2.284)	-15.20 (-30.05,0.867)	-13.75 (-24.30,-3.800)	-0.001 (-0.003,0.000)	0.003 (-0.001,0.006)	0.001 (-0.001,0.004)
N.Obs.	272	272	271	272	272	271
R-sq.	0.58	0.59	0.58	0.60	0.57	0.57

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated gaps in the annual number of hours worked and in the probability of being unemployed between immigrants and the average US native on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Results in columns (1) to (3) are based on a sample of male workers reporting to be employed. Results in columns (4) and (6) are based on a full sample of male workers. We exclude migrants from countries of origin with predominantly labor migration. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table F.3:** Unemployment at entry and employment in routine-manual jobs of non-labor migrants

Years since Migration	Unemployment Rate (1)	Unemployment Shock (2)	Bartik-like Unemployment Shock (3)
0	0.022 (0.012,0.032)	0.044 (0.030,0.062)	0.036 (0.025,0.047)
1-4	0.019 (0.012,0.027)	0.028 (0.016,0.041)	0.023 (0.014,0.032)
5-8	0.010 (0.003,0.017)	0.017 (0.005,0.030)	0.012 (0.004,0.020)
9-12	0.006 (-0.001,0.013)	0.010 (-0.001,0.022)	0.007 (-0.001,0.015)
N.Obs.	272	272	271
R-sq.	0.63	0.62	0.63

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated immigrant-native gap in the probability of being employed in a low-paying job on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Results are based on a sample of male workers reporting to be currently employed. We exclude migrants from countries of origin with predominantly labor migration. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.



In Tables F.4 to F.6 we report the estimation outcomes excluding migrants from countries of origin with predominantly family migration as in Barsbai et al. (2024).

**Table F.4:** Effects of unemployment at entry on earnings of non-family migrants

Years since Migration	Annual Earnings			Hourly Earnings		
	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock
	(1)	(2)	(3)	(4)	(5)	(6)
0	-0.016 (-0.032,-0.001)	-0.040 (-0.070,-0.011)	-0.032 (-0.055,-0.010)	-0.021 (-0.034,-0.009)	-0.040 (-0.066,-0.014)	-0.031 (-0.050,-0.011)
1-4	-0.007 (-0.019,0.006)	-0.030 (-0.054,-0.007)	-0.025 (-0.042,-0.010)	-0.010 (-0.022,0.002)	-0.029 (-0.055,-0.005)	-0.022 (-0.040,-0.005)
5-8	-0.010 (-0.020,0.002)	-0.022 (-0.043,-0.002)	-0.021 (-0.036,-0.007)	-0.012 (-0.023,-0.000)	-0.026 (-0.050,-0.002)	-0.021 (-0.038,-0.004)
9-12	-0.003 (-0.015,0.008)	-0.02 (-0.038,0.004)	-0.017 (-0.031,-0.003)	-0.004 (-0.016,0.008)	-0.015 (-0.039,0.009)	-0.012 (-0.029,0.005)
N.Obs.	272	272	271	272	272	271
R-sq.	0.830	0.831	0.830	0.864	0.862	0.862

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing estimated annual and hourly earnings gap between immigrants and the average US native on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Results are based on a sample of male workers reporting to be employed. We exclude migrants from countries of origin with predominantly family migration. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table F.5:** Effects of unemployment at entry on labor supply of non-family migrants

Years since Migration	Annual # Hours			Probability of Unemployment		
	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock
	(1)	(2)	(3)	(4)	(5)	(6)
0	8.937 (-2.303, 18.79)	-0.596 (-22.98,20.20)	-3.386 (-20.06,11.55)	0.001 (-0.001,0.003)	0.005 (0.001,0.009)	0.004 (0.001,0.007)
1-4	5.096 (-3.419,13.55)	1.227 (-18.44,21.00)	-2.424 (-16.40,11.21)	-0.001 (-0.003,0.001)	0.003 (-0.001,0.006)	0.002 (-0.000,0.004)
5-8	4.760 (-3.007,12.03)	6.414 (-12.81,24.39)	0.321 (-12.87,12.96)	-0.001 (-0.000,0.000)	0.002 (-0.001,0.006)	0.001 (-0.001,0.004)
9-12	1.733 (-5.878,8.749)	-0.915 (-20.04,17.26)	-6.000 (-19.40,6.527)	-0.001 (-0.003,0.000)	0.003 (-0.001,0.006)	0.001 (-0.001,0.004)
N.Obs.	272	272	271	272	272	271
R-sq.	0.574	0.572	0.571	0.569	0.557	0.561

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated gaps in the annual number of hours worked and in the probability of being unemployed between immigrants and the average US native on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Results in columns (1) to (3) are based on a sample of male workers reporting to be employed. Results in columns (4) and (6) are based on a full sample of male workers. We exclude migrants from countries of origin with predominantly family migration. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table F.6:** Unemployment at entry and employment in routine-manual jobs of non-family migrants

Years since Migration	Unemployment Rate (1)	Unemployment Shock (2)	Bartik-like Unemployment Shock (3)
0	0.019 (0.011,0.026)	0.039 (0.013,0.049)	0.031 (0.022,0.039)
1-4	0.014 (0.007,0.021)	0.025 (0.012,0.037)	0.020 (0.012,0.029)
5-8	0.008 (0.002,0.014)	0.016 (0.005,0.028)	0.013 (0.005,0.020)
9-12	0.007 (0.001,0.013)	0.015 (0.003,0.026)	0.011 (0.004,0.018)
N.Obs.	272	272	271
R-sq.	0.700	0.702	0.708

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated immigrant-native gap in the probability of being employed in a low-paying job on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Results are based on a sample of male workers reporting to be currently employed. We exclude migrants from countries of origin with predominantly family migration. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

## G Selective out-migration

In Tables G.1 to G.3 we report the estimation outcomes obtained using weights in the first-stage regression that are corrected for the probability of return migration across migrants (Borjas and Bratsberg, 1996) and over the unemployment cycle (Bazillier et al., 2017).

**Table G.1:** Effects of unemployment at entry on earnings of immigrants with re-balanced weights I

Years since Migration	Annual Earnings			Hourly Earnings		
	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock
	(1)	(2)	(3)	(4)	(5)	(6)
0	-0.021 (-0.034,-0.009)	-0.045 (-0.066,-0.025)	-0.037 (-0.052,-0.023)	-0.019 (-0.032,-0.007)	-0.038 (-0.060,-0.016)	-0.031 (-0.046,-0.016)
1-4	-0.016 (-0.028,-0.004)	-0.030 (-0.051,-0.010)	-0.024 (-0.039,-0.010)	-0.013 (-0.026,-0.002)	-0.025 (-0.048,-0.004)	-0.019 (-0.035,-0.004)
5-8	-0.016 (-0.027,-0.005)	-0.027 (-0.048,-0.008)	-0.024 (-0.039,-0.011)	-0.014 (-0.026,-0.003)	-0.024 (-0.047,-0.003)	-0.020 (-0.036,-0.005)
9-12	-0.006 (-0.017,0.005)	-0.012 (-0.032,0.008)	-0.010 (-0.025,0.004)	-0.003 (-0.016,0.008)	-0.008 (-0.030,0.014)	-0.006 (-0.022,0.009)
N.Obs.	272	272	271	272	272	271
R-sq.	0.82	0.82	0.82	0.83	0.83	0.83

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing estimated the annual and hourly earnings gap between immigrants and the average US native on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Results are based on a sample of male workers. First-step regressions are population-weighted. Immigrants' weights are corrected to account for selective out-migration using Borjas and Bratsberg (1996) country-specific outmigration rates and Bazillier et al. (2017) estimates of return migration over the business cycle. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table G.2:** Effects of unemployment at entry on labor supply of immigrants with re-balanced weights I

Years since Migration	Annual # Hours			Probability of Unemployment		
	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock
	(1)	(2)	(3)	(4)	(5)	(6)
0	-3.784 (-12.63,3.833)	-15.67 (-31.46,-0.688)	-13.79 (-25.04,-3.727)	0.002 (0.001,0.004)	0.006 (0.002,0.009)	0.004 (0.002,0.007)
1-4	-4.988 (-12.36,2.335)	-9.114 (-23.80,6.493)	-8.877 (-18.89,1.387)	-0.000 (-0.002,0.001)	0.005 (0.002,0.008)	0.003 (0.001,0.009)
5-8	-3.745 (-11.09,3.258)	-7.742 (-22.49,6.456)	-8.788 (-18.50,0.867)	-0.000 (-0.002,0.001)	0.004 (0.001,0.007)	0.002 (0.000,0.004)
9-12	-5.085 (-12.55,1.821)	-7.147 (-22.12,7.244)	-9.004 (-19.12,0.498)	0.000 (-0.001,0.002)	0.005 (0.001,0.008)	0.003 (0.001,0.005)
N.Obs.	272	272	271	272	272	271
R-sq.	0.27	0.28	0.28	0.57	0.54	0.55

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated from regressing the estimated gaps in the annual number of hours worked and in the probability of being unemployed between immigrants and the average US native on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Results are based on a sample of male workers. First-step regressions are population-weighted. Immigrants' weights are corrected to account for selective out-migration using Borjas and Bratsberg (1996) country-specific outmigration rates and Bazillier et al. (2017) estimates of return migration over the business cycle. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table G.3:** Unemployment at entry and employment in routine-manual jobs with re-balanced weights I

Years since Migration	Unemployment Rate (1)	Unemployment Shock (2)	Bartik-like Unemployment Shock (3)
0	0.013 (0.010,0.021)	0.030 (0.018,0.042)	0.024 (0.016,0.033)
1-4	0.013 (0.010,0.019)	0.022 (0.011,0.032)	0.017 (0.010,0.025)
5-8	0.007 (0.001,0.013)	0.013 (0.002,0.023)	0.010 (0.003,0.017)
9-12	0.005 (-0.000,0.011)	0.010 (0.000,0.020)	0.010 (0.000,0.014)
N.Obs.	272	272	271
R-sq.	0.72	0.73	0.73

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated from regressing the estimated immigrant-native gap in the probability of being employed in a low-paying job on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Results are based on a sample of male workers. First-step regressions are population-weighted. Immigrants' weights are corrected to account for selective out-migration using Borjas and Bratsberg (1996) country-specific outmigration rates and Bazillier et al. (2017) estimates of return migration over the business cycle. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table G.4:** Effects of unemployment at entry on earnings of non-labor immigrants with re-balanced weights I

Years since Migration	Annual Earnings			Probability of Routine-Manual Jobs		
	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock
	(1)	(2)	(3)	(4)	(5)	(6)
0	-0.018 (-0.031,-0.005)	-0.039 (-0.066,-0.011)	-0.032 (-0.050,-0.016)	0.018 (0.009,0.028)	0.041 (0.025,0.056)	0.032 (0.021,0.043)
1-4	-0.017 (-0.030,-0.005)	-0.028 (-0.055,-0.002)	-0.023 (-0.040,-0.006)	0.018 (0.010,0.025)	0.029 (0.017,0.042)	0.023 (0.014,0.033)
5-8	-0.011 (-0.024,0.000)	-0.021 (-0.046,0.004)	-0.019 (-0.035,-0.005)	0.009 (0.001,0.016)	0.017 (0.005,0.030)	0.012 (0.004,0.021)
9-12	0.001 (-0.011,0.012)	-0.001 (-0.026,0.024)	-0.001 (-0.016,0.015)	0.005 (-0.002,0.012)	0.011 (-0.000,0.024)	0.007 (-0.001,0.016)
N.Obs.	272	272	271	272	272	271
R-sq.	0.760	0.757	0.758	0.662	0.659	0.665

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing estimated the annual and hourly earnings gap between immigrants and the average US native on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Results are based on a sample of male workers reporting to be employed. We exclude migrants from countries of origin with predominantly labor migration. First-step regressions are population-weighted. Immigrants' weights are corrected to account for selective out-migration using Borjas and Bratsberg (1996) country-specific outmigration rates and Bazillier et al. (2017) estimates of return migration over the business cycle. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table G.5:** Effects of unemployment at entry on labor supply of non-family immigrants with re-balanced weights I

Years since Migration	Annual Earnings			Probability of Routine-Manual Jobs		
	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock
	(1)	(2)	(3)	(4)	(5)	(6)
0	-0.017 (-0.032,-0.004)	-0.042 (-0.067,-0.018)	-0.034 (-0.052,-0.017)	0.013 (0.006,0.020)	0.030 (0.018,0.041)	0.025 (0.017,0.032)
1-4	-0.008 (-0.022,0.005)	-0.027 (-0.051,-0.005)	-0.022 (-0.039,-0.006)	0.010 (0.003,0.016)	0.021 (0.009,0.032)	0.017 (0.010,0.025)
5-8	-0.011 (-0.024,0.002)	-0.024 (-0.047,-0.001)	-0.021 (-0.038,-0.006)	0.005 (-0.001,0.011)	0.013 (0.002,0.024)	0.010 (0.003,0.017)
9-12	-0.004 (-0.017,0.008)	-0.017 (-0.040,0.007)	-0.015 (-0.032,0.001)	0.005 (-0.001,0.011)	0.012 (0.002,0.023)	0.010 (0.003,0.017)
N.Obs.	272	272	271	272	272	271
R-sq.	0.841	0.841	0.841	0.708	0.713	0.717

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated from regressing the estimated gaps in the annual number of hours worked and in the probability of being unemployed between immigrants and the average US native on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Results are based on a sample of male workers reporting to be employed. We exclude migrants from countries of origin with predominantly family migration. First-step regressions are population-weighted. Immigrants' weights are corrected to account for selective out-migration using Borjas and Bratsberg (1996) country-specific outmigration rates and Bazillier et al. (2017) estimates of return migration over the business cycle. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

As a complementary approach, we re-weight immigrants' observations by 1 minus the probability that they are not in the ACS sample a year after they were initially observed, compounded for every year since migration. To do so, we follow Rho and

**Table G.6:** Probabilities of outmigration by education and skill percentiles

Education	Skill percentiles									
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
< 16 years	0	1	0	1	5	6	7	10	11	19
16 years	16	9	10	12	14	13	13	19	22	43
> 16 years	18	14	15	14	12	12	15	21	23	35

Source: Rho and Sanders (2021). Notes: Each entry represents the percentage point difference between immigrants and natives in the probability of not being found in the 2010 Census, conditional on being observed in the 2000 Census, separately by education and decile of the self-reported 1999 earnings distribution.

Sanders (2021) and use the percentage point difference between immigrants and natives in the probability of not being found in the 2010 Census, conditional on being observed in the 2000 Census, separately for three education groups (less than, exactly equal to, and more than 16 years of education) and for 10 deciles of the self-reported 1999 earnings distribution. We report these probabilities in Table G.6. Similar to the first robustness check, we convert the decennial probabilities into annual ones and compound them for every year since migration, separately by education level and by deciles in the residual wage distribution. We retrieve residualized wages for immigrants by constructing residuals from the following regression:

$$\log w_{it} = \alpha + \delta_{\text{educ}_{it}} + \delta_{\text{exp}_{it}} + \delta_{\text{cohort}_{it}} + \delta_t + \epsilon_{it}$$

where  $w_{it}$  denotes hourly wages of immigrant  $i$  at time  $t$ ,  $\delta_{\text{educ}_{it}}$  are dummies for years of education,  $\delta_{\text{exp}_{it}}$  are dummies for years of overall experience,  $\delta_{\text{cohort}_{it}}$  are dummies for cohort of entry in the US and  $\delta_t$  are time dummies.

As a final step, we adjust the weights by the excess return migration rates over the business cycle and multiply them by 1 minus  $0.347 \times \log u_t$ . In Tables G.7 to G.9 we report the estimation outcomes from this exercise.

**Table G.7: Effects of unemployment at entry on earnings of immigrants with re-balanced weights II**

Years since Migration	Annual Earnings			Hourly Earnings		
	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock
	(1)	(2)	(3)	(4)	(5)	(6)
0	-0.024 (-0.035,-0.014)	-0.049 (-0.067,-0.031)	-0.040 (-0.052,-0.028)	-0.022 (-0.032,-0.012)	-0.040 (-0.060,-0.021)	-0.033 (-0.046,-0.020)
1-4	-0.019 (-0.029,-0.010)	-0.033 (-0.051,-0.016)	-0.027 (-0.038,-0.015)	-0.016 (-0.026,-0.007)	-0.027 (-0.047,-0.008)	-0.021 (-0.034,-0.008)
5-8	-0.019 (-0.028,-0.011)	-0.031 (-0.048,-0.014)	-0.026 (-0.037,-0.016)	-0.017 (-0.027,-0.008)	-0.027 (-0.046,-0.008)	-0.022 (-0.034,-0.009)
9-12	-0.010 (-0.019,-0.002)	-0.017 (-0.035,-0.000)	-0.015 (-0.025,-0.004)	-0.007 (-0.016,0.002)	-0.012 (-0.032,0.007)	-0.010 (-0.022,0.003)
N.Obs.	272	272	271	272	272	271
R-sq.	0.85	0.85	0.85	0.87	0.86	0.87

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing estimated the annual and hourly earnings gap between immigrants and the average US native on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Results are based on a sample of male workers. First-step regressions are population-weighted. Immigrants' weights are corrected to account for selective out-migration using Rho and Sanders (2021) skill-specific outmigration rates and Bazillier et al. (2017) estimates of return migration over the business cycle. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table G.8: Effects of unemployment at entry on labor supply of immigrants with re-balanced weights II**

Years since Migration	Annual # Hours			Probability of Unemployment		
	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock	Unemployment Rate	Unemployment Shock	Bartik-like Unemployment Shock
	(1)	(2)	(3)	(4)	(5)	(6)
0	-5.061 (-13.86,2.935)	-17.44 (-32.89,-2.810)	-15.16 (-25.91,-4.779)	-0.001 (-0.003,0.001)	-0.005 (-0.007,-0.003)	-0.004 (-0.006,-0.003)
1-4	-6.389 (-14.06,1.425)	-11.08 (-25.59,4.225)	-10.43 (-20.55,-0.377)	0.001 (-0.001,0.002)	-0.003 (-0.005,-0.000)	-0.002 (-0.003,-0.000)
5-8	-5.166 (-12.60,1.916)	-9.801 (-24.21,4.238)	-10.49 (-20.16,-0.881)	0.001 (0.001,0.002)	-0.001 (-0.003,0.001)	-0.001 (-0.002,0.001)
9-12	-6.472 (-13.97,0.838)	-10.47 (-25.44, 3.771)	-11.54 (-21.91,-2.239)	0.001 (-0.001,0.002)	-0.002 (-0.004,0.000)	-0.002 (-0.003,-0.000)
N.Obs.	272	272	271	272	272	271
R-sq.	0.24	0.24	0.25	0.63	0.63	0.63

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated from regressing the estimated gaps in the annual number of hours worked and in the probability of being unemployed between immigrants and the average US native on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Results are based on a sample of male workers. First-step regressions are population-weighted. Immigrants' weights are corrected to account for selective out-migration using Rho and Sanders (2021) skill-specific outmigration rates and Bazillier et al. (2017) estimates of return migration over the business cycle. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table G.9:** Unemployment at entry and employment in routine-manual jobs with re-balanced weights II

Years since Migration	Unemployment Rate (1)	Unemployment Shock (2)	Bartik-like Unemployment Shock (3)
0	0.016 (0.008,0.024)	0.032 (0.019,0.045)	0.026 (0.017,0.035)
1-4	0.016 (0.009,0.022)	0.023 (0.011,0.035)	0.019 (0.010,0.027)
5-8	0.010 (0.003,0.016)	0.014 (0.003,0.026)	0.011 (0.004,0.019)
9-12	0.007 (0.001,0.014)	0.011 (0.000,0.022)	0.008 (0.001,0.015)
N.Obs.	272	272	271
R-sq.	0.73	0.73	0.73

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated from regressing the estimated immigrant-native gap in the probability of being employed in a low-paying job on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Results are based on a sample of male workers. First-step regressions are population-weighted. Immigrants' weights are corrected to account for selective out-migration using Rho and Sanders (2021) skill-specific outmigration rates and Bazillier et al. (2017) estimates of return migration over the business cycle. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.



## H Robustness checks

**Table H.1:** Alternative model specifications: Annual Earnings

Years Since Migration	Alternative models		
	(1)	(2)	(3)
0	-0.024 (-0.038,-0.011)	-0.023 (-0.037,-0.010)	-0.055 (-0.073,-0.039)
1-4	-0.018 (-0.029,-0.006)	-0.016 (-0.027,-0.005)	-0.053 (-0.071,-0.036)
5-8	-0.016 (-0.026,-0.006)	-0.011 (-0.022,-0.002)	-0.034 (-0.052,-0.019)
9-12	-0.007 (-0.017,0.004)	-0.003 (-0.013,0.007)	-0.019 (-0.036,-0.004)
N. Obs	272	272	272
Adj.R2	0.77	0.71	0.57
Experience	Cubic	Cubic	Cubic
Schooling	FE	Linear	Linear
Year	FE	FE	Linear

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated annual earnings gap between immigrants and natives on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Annual earnings gaps are estimated using three alternative models: column (1) refers to a model that includes a third-order polynomial for potential experience, controlling for years of schooling fixed effects and time-fixed effects; column (2) refers to a model that controls for a cubic polynomial in potential experience and time dummies while imposing linearity in the returns from schooling; column (3) refers to a model with a linear time trend while controlling for schooling and experience using a linear and a cubic polynomial, respectively. Results are based on a sample of male workers who report being currently employed. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table H.2:** Alternative model specifications: Hourly Earnings

Years Since Migration	Alternative models		
	(1)	(2)	(3)
0	-0.023 (-0.035,-0.012)	-0.022 (-0.032,-0.011)	-0.047 (-0.064,-0.031)
1-4	-0.016 (-0.026,-0.005)	-0.014 (-0.024,-0.004)	-0.047 (-0.064,-0.032)
5-8	-0.015 (-0.025,-0.005)	-0.011 (-0.021,-0.001)	-0.033 (-0.048,-0.0181)
9-12	-0.005 (-0.015,0.005)	-0.001 (-0.011,0.009)	-0.014 (-0.030,0.000)
N. Obs	272	272	272
Adj.R2	0.81	0.72	0.53
Experience	Cubic	Cubic	Cubic
Schooling	FE	Linear	Linear
Year	FE	FE	Linear

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated hourly earnings gap between immigrants and natives on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Hourly earnings gaps are estimated using three alternative models: column (1) refers to a model that includes a third-order polynomial for potential experience, controlling for years of schooling fixed effects and time-fixed effects; column (2) refers to a model that controls for a cubic polynomial in potential experience and time dummies while imposing linearity in the returns from schooling; column (3) refers to a model with a linear time trend while controlling for schooling and experience using a linear and a cubic polynomial, respectively. Results are based on a sample of male workers who report being currently employed. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table H.3:** Alternative model specifications: Annual # Hours

Years Since Migration	Alternative models		
	(1)	(2)	(3)
0	-2.871 (-13.15,6.998)	-3.041 (-13.61,7.318)	-12.73 (-24.95,-0.280)
1-4	-4.398 (-12.12,3.607)	-4.251 (-12.22,4.248)	-7.750 (-18.42,3.39)
5-8	-2.770 (-9.410,3.816)	-2.069 (-9.235,4.406)	-1.759 (-11.84,8.313)
9-12	-4.689 (-11.23,1.856)	-4.140 (-11.11,2.604)	-6.468 (-16.23,3.717)
N. Obs	272	272	272
Adj.R2	0.50	0.51	0.38
Experience	Cubic	Cubic	Cubic
Schooling	FE	Linear	Linear
Year	FE	FE	Linear

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated gap in the annual # of hours worked between immigrants and natives on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Gaps in annual # of hours worked are estimated using three alternative models: column (1) refers to a model that includes a third-order polynomial for potential experience, controlling for years of schooling fixed effects and time-fixed effects; column (2) refers to a model that controls for a cubic polynomial in potential experience and time dummies while imposing linearity in the returns from schooling; column (3) refers to a model with a linear time trend while controlling for schooling and experience using a linear and a cubic polynomial, respectively. Results are based on a sample of male workers who report being currently employed. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table H.4:** Alternative model specifications: Probability of Unemployment

Years Since Migration	Alternative models		
	(1)	(2)	(3)
0	0.001 (-0.001,0.003)	0.001 (-0.001,0.003)	0.003 (0.000,0.006)
1-4	-0.001 (-0.003,0.000)	-0.001 (-0.003,0.000)	-0.002 (-0.005,0.001)
5-8	-0.001 (-0.003,0.000)	-0.001 (-0.003,-0.000)	-0.002 (-0.005,0.000)
9-12	-0.001 (-0.002,0.001)	-0.001 (-0.002,0.000)	-0.002 (-0.004,0.001)
N. Obs	272	272	272
Adj.R2	0.58	0.61	0.30
Experience	Cubic	Cubic	Cubic
Schooling	FE	Linear	Linear
Year	FE	FE	Linear

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated gap in the probability of being unemployed between immigrants and natives on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Gaps in the probability of being unemployed are estimated using three alternative models: column (1) refers to a model that includes a third-order polynomial for potential experience, controlling for years of schooling fixed effects and time-fixed effects; column (2) refers to a model that controls for a cubic polynomial in potential experience and time dummies while imposing linearity in the returns from schooling; column (3) refers to a model with a linear time trend while controlling for schooling and experience using a linear and a cubic polynomial, respectively. Results are based on the full sample of male workers. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table H.5: Heterogeneous Returns to Education and Experience**

Years Since Migration	Annual Earnings (1)	Hourly Earnings (2)	Annual # Hours (3)	Probability of Unemployment (4)	Probability of low-paying jobs (5)
0	-0.023 (-0.042,-0.006)	-0.023 (-0.037,-0.009)	-3.219 (-14.11,7.705)	0.000 (-0.001,0.002)	0.0167 (0.009,0.0245)
1-4	-0.016 (-0.031,-0.006)	-0.014 (-0.027,-0.001)	-5.642 (-14.41,3.102)	-0.002 (-0.003,-0.000)	0.014 (0.008,0.021)
5-8	-0.014 (-0.028,-0.006)	-0.011 (-0.024,0.001)	-4.577 (-11.65,2.584)	-0.001 (-0.003,-0.000)	0.007 (0.001,0.014)
9-12	-0.009 (-0.023,-0.006)	-0.006 (-0.019,0.007)	-7.519 (-14.43,-0.566)	-0.001 (-0.002,0.000)	0.007 (0.000,0.013)
N. Obs	272	272	272	272	272
Adj.R2	0.99	0.99	0.95	0.92	0.95

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated gaps in annual wages (column 1), hourly wages (column 2), annual hours (column 3), and probability of being unemployed (column 4) between immigrants and natives on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Immigrant-native gaps are estimated controlling for immigrant-specific returns in years of schooling and overall experience in the labor market. Results are based on a sample of male workers. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table H.6: Sample of prime-age male workers (25-54 y.o.)**

Years Since Migration	Annual Earnings (1)	Hourly Earnings (2)	Annual # Hours (3)	Probability of Unemployment (4)	Probability of low-paying jobs (5)
0	-0.028 (-0.044,-0.014)	-0.026 (-0.039,-0.014)	-3.654 (-13.32,6.093)	0.001 (-0.001,0.003)	0.019 (0.011,0.027)
1-4	-0.020 (-0.033,-0.014)	-0.018 (-0.030,-0.007)	-6.035 (-14.22,2.178)	-0.001 (-0.003,0.001)	0.016 (0.010,0.022)
5-8	-0.018 (-0.030,-0.014)	-0.017 (-0.028,-0.006)	-2.975 (-9.941,4.088)	-0.001 (-0.002,0.000)	.010328 (0.004,0.016)
9-12	-0.009 (-0.020,-0.014)	-0.007 (-0.018,0.004)	-5.210 (-12.10,1.840)	-0.001 (-0.002,0.001)	0.008 (0.002,0.014)
N. Obs	272	272	272	272	272
Adj.R2	0.79	0.82	0.65	0.60	0.65

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated gaps in annual wages (column 1), hourly wages (column 2), annual hours (column 3), and probability of being unemployed (column 4) between immigrants and natives on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Immigrant-native gaps are estimated using our baseline specification. Results are based on a sample of male workers in their prime working age (25-54 y.o.). First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table H.7: Sample of immigrants with no US college**

Years Since Migration	Annual Earnings (1)	Hourly Earnings (2)	Annual # Hours (3)	Probability of Unemployment (4)	Probability of low-paying jobs (5)
0	-0.023 (-0.037,-0.008)	-0.022 (-0.033,-0.011)	-1.598 (-12.07,9.075)	0.000 (-0.001,0.002)	0.018 (0.010,0.025)
1-4	-0.017 (-0.028,-0.006)	-0.015 (-0.025,-0.005)	-3.543 (-12.09,4.821)	-0.002 (-0.003,0.000)	0.016 (0.010,0.023)
5-8	-0.016 (-0.026,-0.005)	-0.015 (-0.025,-0.005)	-2.031 (-9.370,5.241)	-0.001 (-0.003,0.000)	0.010 (0.003,0.016)
9-12	-0.009 (-0.019,0.002)	-0.007 (-0.016,0.003)	-3.455 (-10.71,3.719)	-0.001 (-0.003,0.001)	0.007 (0.001,0.014)
N. Obs	272	272	272	272	272
Adj.R2	0.80	0.76	0.52	0.64	0.64

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated gaps in annual wages (column 1), hourly wages (column 2), annual hours (column 3), and probability of being unemployed (column 4) between immigrants and natives on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Immigrant-native gaps are estimated using our baseline specification. Results are based on a sample of male natives and immigrants who arrived in the US when they were at least 25 years old. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table H.8: Illegal migrants weights**

Years Since Migration	Annual Earnings (1)	Hourly Earnings (2)	Annual # Hours (3)	Probability of Unemployment (4)	Probability of low-paying jobs (5)
0	-0.037 (-0.054,-0.020)	-0.037 (-0.051,-0.023)	0.956 (-11.04,12.50)	0.001 (-0.001,0.003)	0.025 (0.018,0.033)
1-4	-0.027 (-0.041,-0.014)	-0.027 (-0.041,-0.014)	-0.201 (-10.24,9.211)	-0.002 (-0.003,-0.000)	0.022 (0.015,0.029)
5-8	-0.023 (-0.036,-0.010)	-0.023 (-0.037,-0.010)	0.953 (-7.862,9.776)	-0.001 (-0.003,-0.000)	0.015 (0.008,0.022)
9-12	-0.010 (-0.023,0.002)	-0.009 (-0.022,0.003)	-2.883 (-11.63,5.664)	-0.001 (-0.003,-0.000)	0.011 (0.004,0.017)
N. Obs	272	272	272	272	272
Adj.R2	0.78	0.81	0.53	0.53	0.63

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the annual number of hours worked and a dummy indicator for current unemployment on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Results are based on a sample of male workers. Immigrants' weights are corrected to account for the presence of undocumented workers using Van Hook et al. (2014) and Passel and Cohn (2018) undercount rates. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table H.9: One-regression model**

Years Since Migration	Annual Earnings (1)	Hourly Earnings (2)	Annual # Hours (3)	Probability of Unemployment (4)	Probability of low-paying jobs (5)
0	-0.024** (0.010)	-0.023*** (0.006)	-2.377 (8.363)	0.000 (0.001)	0.017*** (0.006)
1-4	-0.017** (0.006)	-0.016*** (0.005)	-3.535 (6.080)	-0.002* (0.001)	0.015*** (0.004)
5-8	-0.015** (0.006)	-0.014*** (0.005)	-2.522 (5.816)	-0.002* (0.001)	0.009* (0.004)
9-12	-0.007 (0.006)	-0.005 (0.005)	-3.714 (5.943)	-0.001 (0.001)	0.005 (0.004)
N. Obs	6,017,868	6,017,868	6,018,533	6,305,963	6,016,605
Adj.R2	0.33	0.32	0.06	0.01	0.11

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing annual wages (column 1), hourly wages (column 2), annual hours (column 3), and probability of being unemployed (column 4) on the unemployment rate in the year of entering the U.S. labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Results are based on a pooled sample of male natives and immigrants. Standard errors (in parenthesis) are clustered by cohort of arrival and years spent in the US. Significance level: \*p<0.10, \*\*p<0.05, \*\*\*p<0.01

**Table H.10:** Sample including workers observed in years 2006-2019 (no COVID-19 years)

Years Since Migration	Annual Earnings (1)	Hourly Earnings (2)	Annual # Hours (3)	Probability of Unemployment (4)	Probability of low-paying jobs (5)
0	-0.025 (-0.040,-0.010)	-0.026 (-0.037,-0.015)	-1.144 (-11.60,8.966)	0.001 (-0.001,0.002)	0.017 (0.010,0.025)
1-4	-0.017 (-0.029,-0.006)	-0.015 (-0.025,-0.005)	-4.121 (-12.51,4.621)	-0.002 (-0.003,-0.001)	0.016 (0.009,0.022)
5-8	-0.016 (-0.026,-0.006)	-0.015 (-0.025,-0.005)	-2.952 (-9.671,4.195)	-0.002 (-0.002,-0.000)	0.008 (0.002,0.015)
9-12	-0.008 (-0.018,0.002)	-0.008 (-0.018,0.002)	-2.515 (-9.089,4.234)	-0.001 (-0.002,-0.000)	0.005 (-0.002,0.010)
N. Obs	238	238	238	238	238
Adj.R2	0.78	0.80	0.61	0.68	0.67

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated gaps in annual wages (column 1), hourly wages (column 2), annual hours (column 3), and probability of being unemployed (column 4) between immigrants and natives on the unemployment rate in the year of entering the U.S. labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Immigrant-native gaps are estimated controlling for immigrant-specific returns in years of schooling and overall experience in the labor market. Results are based on a sample of male workers for the years 2006-2019. 90% confidence intervals (in parenthesis) are bootstrapped using 1000 Rademacher draws clustered by cohort of arrival and years spent in the US.

**Table H.11:** Sample including workers in group quarters, self-employed, and military

Years Since Migration	Annual Earnings (1)	Hourly Earnings (2)	Annual # Hours (3)	Probability of Unemployment (4)	Probability of low-paying jobs (5)
0	-0.029 (-0.039,-0.019)	-0.031 (-0.044,-0.019)	-2.744 (-12.45,6.894)	0.000 (-0.002,0.002)	0.015 (0.008,0.023)
1-4	-0.020 (-0.030,-0.010)	-0.022 (-0.034,-0.012)	-5.242 (-12.74,2.253)	-0.002 (-0.004,-0.001)	0.015 (0.009,0.021)
5-8	-0.019 (-0.029,-0.010)	-0.021 (-0.031,-0.011)	-3.856 (-10.55,2.564)	-0.002 (-0.004,-0.001)	0.008 (0.003,0.014)
9-12	-0.011 (-0.020,-0.001)	-0.030 (-0.023,-0.003)	-4.583 (-11.44,1.888)	-0.002 (-0.003,-0.000)	0.007 (0.002,0.012)
N. Obs	272	272	272	272	272
Adj.R2	0.81	0.79	0.54	0.57	0.68

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated gaps in annual wages (column 1), hourly wages (column 2), annual hours (column 3), and probability of being unemployed (column 4) between immigrants and natives on the unemployment rate in the year of entering the U.S. labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Immigrant-native gaps are estimated controlling for immigrant-specific returns in years of schooling and overall experience in the labor market. Results are based on a sample of male workers including also workers in group quarters, self-employed, and military. 90% confidence intervals (in parenthesis) are bootstrapped using 1000 Rademacher draws clustered by cohort of arrival and years spent in the US.



**Table H.12:** Standard errors clustered at cohort of arrival in the US

Years Since Migration	Annual Earnings (1)	Hourly Earnings (2)	Annual # Hours (3)	Probability of Unemployment (4)	Probability of low-paying jobs (5)
0	-0.024 (-0.039,-0.008)	-0.023 (-0.034,-0.011)	-2.636 (-14.05,7.874)	0.001 (-0.001,0.003)	0.017 (0.011,0.024)
1-4	-0.018 (-0.029,-0.006)	-0.016 (-0.025,-0.005)	-4.370 (-12.85, 3.767)	-0.001 (-0.003,0.001)	0.015 (0.010,0.021)
5-8	-0.016 (-0.025,-0.007)	-0.015 (-0.023,-0.006)	-2.836 (-10.31,4.227)	-0.001 (-0.003,0.001)	0.009 (0.004,0.014)
9-12	-0.007 (-0.016, 0.001)	-0.005 (-0.013,0.003)	-5.015 (-13.44,3.229)	-0.001 (-0.0024,0.001)	0.007 (0.002,0.011)
N. Obs	272	272	272	272	272
Adj.R2	0.807	0.839	0.586	0.640	0.702

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated gaps in annual wages (column 1), hourly wages (column 2), annual hours (column 3), and probability of being unemployed (column 4) between immigrants and natives on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Immigrant-native gaps are estimated using our baseline specification. Results are based on a sample of male workers. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival in the US.

# I Non-linearity

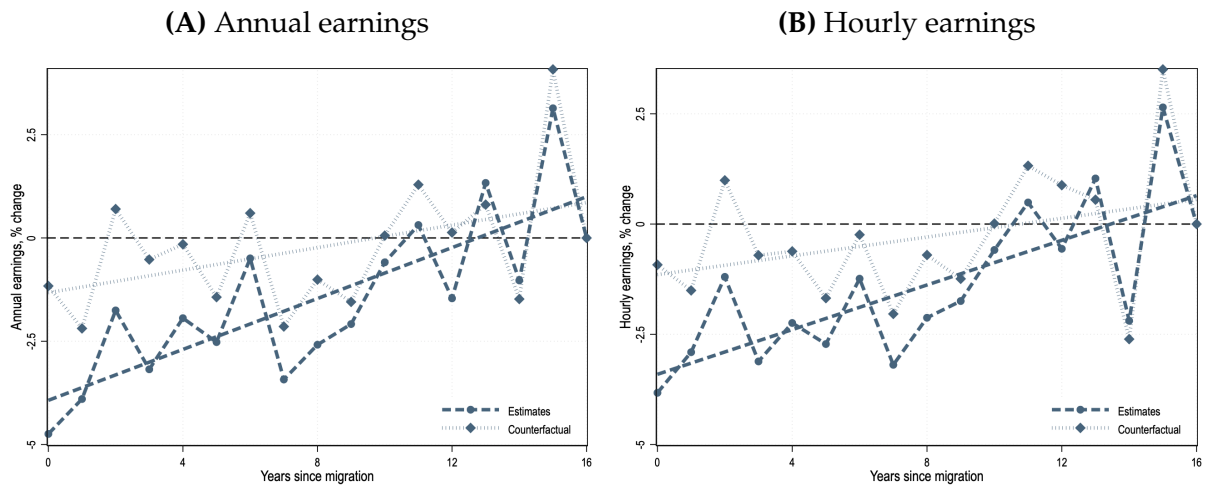
**Table I.1:** Non-linear effects of unemployment at entry on the labor supply of immigrants

Years Since Migration	Annual # Hours			Probability of Unemployment		
	Expansion (1)	Recession (2)	p-value (3)	Expansion (4)	Recession (5)	p-value (6)
0	0.300 (-8.680,8.818)	-5.439 (-16.75,5.027)	0.083	0.001 (-0.001,0.003)	0.001 (-0.001,0.002)	0.644
1-4	-3.485 (-11.80,4.819)	-4.498 (-13.55, 4.672)	0.707	-0.001 (-0.003,0.000)	-0.001 (-0.002,0.000)	0.988
5-8	-2.179 (-8.922,4.576)	-0.912 (-8.282, 6.681)	0.497	-0.001 (-0.003,0.000)	-0.001 (-0.003,0.000)	0.553
9-12	-5.024 (-11.64,1.658)	-3.326 (-10.58,4.084)	0.346	-0.001 (-0.003,0.000)	-0.001 (-0.002,0.001)	0.938
N.Obs.	272			272		
R-sq.	0.600			0.642		

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the annual number of hours worked and a dummy indicator for current unemployment on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. Results in columns (1) and (2) are based on a sample of male workers who report being currently employed. Results in columns (4) and (5) are based on the full sample of male workers. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

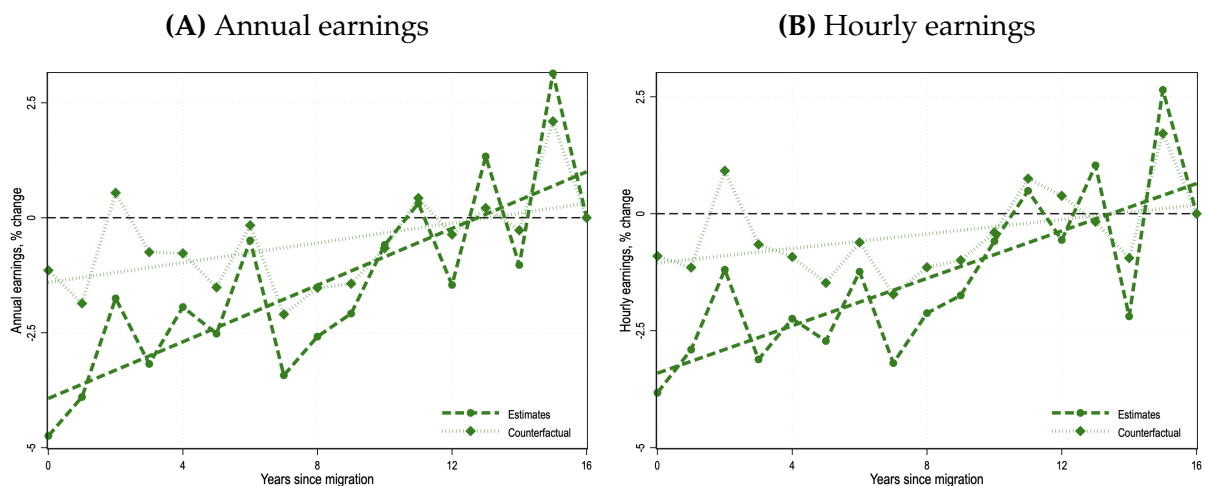
# J Counterfactuals

**Figure J.1:** Estimated VS counterfactual earnings - Unemployment shock



Source: ACS, FRED and authors' calculation. Notes: The figures show the percent coefficients from regressing estimated annual and earnings gaps between immigrants and the average US native on the unemployment rate in the year of entering the US labor market interacted with dummies for the first 16 years since migration, controlling for cohorts of entry and years since migration fixed-effects. Both panels are based on a sample of male workers who report to be currently employed. Panel A shows the percent change in the estimated annual earnings gap. Panel B shows the percent change in the estimated hourly earnings gap. In each panel, the dashed lines are constructed using estimates from equation (5), while the shaded lines are constructed using the counterfactual estimates as in equation (10).

**Figure J.2:** Estimated VS counterfactual earnings - Bartik-like Unemployment shock



Source: ACS, FRED and authors' calculation. Notes: The figures show the percent coefficients from regressing estimated annual and earnings gaps between immigrants and the average US native on the aggregate unemployment forecast error in the year of entering the US labor market interacted with dummies for the first 16 years since migration, controlling for cohorts of entry and years since migration fixed-effects. Both panels are based on a sample of male workers who report to be currently employed. Panel A shows the percent change in the estimated annual earnings gap. Panel B shows the percent change in the estimated hourly earnings gap. In each panel, the dashed lines are constructed using estimates from equation (6), while the shaded lines are constructed using the counterfactual estimates as in equation (10).

## K Heterogeneity

**Table K.1: Female immigrants**

Years Since Migration	Annual Earnings (1)	Hourly Earnings (2)	Annual # Hours (3)	Probability of Unemployment (4)	Probability of low-paying jobs (5)
0	-0.002 (-0.020,0.018)	-0.006 (-0.017,0.005)	5.115 (-9.841,19.42)	0.002 (-0.001,0.006)	0.005 (-0.002,0.013)
1-4	-0.002 (-0.013,0.010)	-0.005 (-0.013,0.003)	4.130 (-4.188,12.46)	-0.001 (-0.003,0.001)	0.006 (0.001,0.011)
5-8	0.002 (-0.007,0.011)	-0.002 (-0.009,0.006)	3.572 (-3.405,10.52)	-0.002 (-0.004,-0.001)	0.006 (0.001,0.010)
9-12	0.007 (-0.001,0.017)	0.002 (-0.005,0.008)	6.176 (-0.697,12.82)	-0.001 (-0.002,0.000)	0.006 (0.001,0.010)
N. Obs	272	272	272	272	272
Adj.R2	0.71	0.75	0.79	0.55	0.79

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated gaps in annual wages (column 1), hourly wages (column 2), annual hours (column 3), and probability of being unemployed (column 4) between immigrants and natives on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. All the gaps are estimated using our baseline specification. Results are based on a sample of female workers reporting to be employed. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table K.2: Male immigrants without college degrees**

Years Since Migration	Annual Earnings (1)	Hourly Earnings (2)	Annual # Hours (3)	Probability of Unemployment (4)	Probability of low-paying jobs (5)
0	-0.029 (-0.049,-0.011)	-0.022 (-0.035,-0.008)	-11.59 (-25.30,1.83)	0.002 (-0.009,0.005)	0.026 (0.014,0.038)
1-4	-0.027 (-0.038,-0.015)	-0.022 (-0.032,-0.010)	-9.656 (-19.27,0.359)	-0.002 (-0.004,0.000)	0.027 (0.017,0.036)
5-8	-0.019 (-0.029,-0.008)	-0.017 (-0.027,-0.006)	-4.790 (-13.65,3.561)	-0.002 (-0.004,0.000)	0.014 (0.005,0.023)
9-12	-0.013 (-0.024,-0.002)	-0.010 (-0.020,0.002)	-7.344 (-15.51,1.081)	-0.001 (-0.003,0.001)	0.010 (0.001,0.019)
N. Obs	272	272	272	272	272
Adj.R2	0.68	0.66	0.52	0.42	0.54

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated gaps in annual wages (column 1), hourly wages (column 2), annual hours (column 3), and probability of being unemployed (column 4) between immigrants and natives on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. All the gaps are estimated using our baseline specification. Results are based on a sample of male immigrants without a college degree. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table K.3: Male immigrants with college degrees**

Years Since Migration	Annual Earnings (1)	Hourly Earnings (2)	Annual # Hours (3)	Probability of Unemployment (4)	Probability of low-paying jobs (5)
0	-0.016 (-0.032,0.001)	-0.021 (-0.037,-0.004)	6.083 (-3.047,14.49)	0.001 (-0.000,0.003)	0.004 (-0.001,0.010)
1-4	-0.004 (-0.020,0.013)	-0.005 (-0.020,0.012)	1.490 (-7.326,10.484)	-0.000 (-0.002,0.001)	-0.003 (-0.007,0.002)
5-8	-0.009 (-0.025,0.007)	-0.009 (-0.025,0.006)	0.695 (-7.036,8.32)	-0.001 (-0.002,0.001)	-0.000 (-0.005,0.004)
9-12	0.001 (-0.015,0.016)	0.001 (-0.015,0.017)	1.490 (-6.119,8.909)	-0.000 (-0.002,0.001)	0.000 (-0.004,0.004)
N. Obs	272	272	272	272	272
Adj.R2	0.69	0.71	0.35	0.37	0.49

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated gaps in annual wages (column 1), hourly wages (column 2), annual hours (column 3), and probability of being unemployed (column 4) between immigrants and natives on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. All the gaps are estimated using our baseline specification. Results are based on a sample of male immigrants with a college degree. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table K.4: Immigrants from high-income countries**

Years Since Migration	Annual Earnings (1)	Hourly Earnings (2)	Annual # Hours (3)	Probability of Unemployment (4)	Probability of low-paying jobs (5)
0	-0.001 (-0.025,0.025)	-0.013 (-0.036,0.009)	-4.650 (-22.81,13.54)	0.003 (-0.000,0.006)	0.003 (-0.005,0.011)
1-4	0.016 (-0.007,0.040)	-0.002 (-0.024,0.019)	2.916 (-10.81,18.198)	0.001 (-0.002,0.003)	0.003 (-0.004,0.011)
5-8	0.021 (-0.001,0.043)	0.012 (-0.008,0.033)	-4.323 (-17.34,9.685)	0.000 (-0.002,0.002)	0.001 (-0.006,0.008)
9-12	0.011 (-0.011,0.034)	0.005 (-0.016,0.025)	-9.063 (-22.41,4.156)	0.000 (-0.002,0.002)	0.003 (-0.004,0.010)
N. Obs	272	272	272	272	272
Adj.R2	0.47	0.45	0.26	0.18	0.22

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated gaps in annual wages (column 1), hourly wages (column 2), annual hours (column 3), and probability of being unemployed (column 4) between immigrants and natives on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. All the gaps are estimated using our baseline specification. Results are based on a sample of male workers. We restrict the immigrant sample to be only composed of immigrants from high-income countries. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.

**Table K.5: Immigrants from low-income countries**

Years Since Migration	Annual Earnings (1)	Hourly Earnings (2)	Annual # Hours (3)	Probability of Unemployment (4)	Probability of low-paying jobs (5)
0	-0.027 (-0.042,-0.011)	-0.025 (-0.037,-0.012)	-4.374 (-17.43,9.430)	0.001 (-0.001,0.002)	0.020 (0.011,0.030)
1-4	-0.018 (-0.030,-0.007)	-0.016 (-0.028,-0.004)	-5.336 (-14.32,4.181)	-0.002 (-0.003,-0.000)	0.017 (0.010,0.024)
5-8	-0.015 (-0.027,-0.005)	-0.0158 (-0.027,-0.004)	-1.596 (-8.879,5.860)	-0.001 (-0.003,-0.000)	0.009 (0.002,0.016)
9-12	-0.005 (-0.016,0.004)	-0.004 (-0.015,0.007)	-3.634 (-11.02,3.957)	-0.001 (-0.002,0.000)	0.007 (0.000,0.013)
N. Obs	272	272	272	272	272
Adj.R2	0.76	0.77	0.58	0.57	0.61

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated gaps in annual wages (column 1), hourly wages (column 2), annual hours (column 3), and probability of being unemployed (column 4) between immigrants and natives on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. All the gaps are estimated using our baseline specification. Results are based on a sample of male workers. We restrict the immigrant sample to be only composed of immigrants from low-income countries. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, by cohort of arrival and years spent in the US.

**Table K.6: Mexican immigrants**

Years Since Migration	Annual Earnings (1)	Hourly Earnings (2)	Annual # Hours (3)	Probability of Unemployment (4)	Probability of low-paying jobs (5)
0	-0.040 (-0.066,-0.012)	-0.031 (-0.050,-0.012)	-12.63 (-31.73,8.291)	-0.001 (-0.005,0.002)	0.046 (0.028,0.064)
1-4	-0.017 (-0.034,0.001)	-0.018 (-0.032,-0.003)	2.883 (-10.33,16.88)	-0.005 (-0.007,-0.002)	0.030 (0.017,0.044)
5-8	-0.007 (-0.023,0.010)	-0.008 (-0.022,0.005)	4.249 (-8.260,17.74)	-0.005 (-0.008,-0.003)	0.014 (0.002,0.027)
9-12	-0.006 (-0.022,0.010)	-0.005 (-0.018,0.010)	0.444 (-11.45,14.03)	-0.004 (-0.006,-0.002)	0.012 (0.000,0.024)
N. Obs	272	272	272	272	272
Adj.R2	0.71	0.60	0.62	0.20	0.46

Source: ACS, FRED and authors' calculation. Notes: This table reports the estimated coefficients from regressing the estimated gaps in annual wages (column 1), hourly wages (column 2), annual hours (column 3), and probability of being unemployed (column 4) between immigrants and natives on the unemployment rate in the year of entering the US labor market interacted with 5 dummies for the first 16 years since migration (0,1-4,5-8,9-12,13-16), controlling for cohorts of entry and years since migration fixed-effects. All the gaps are estimated using our baseline specification. Results are based on a sample of male workers. We restrict the immigrant sample to be only composed of Mexican immigrants. First-step regressions are population-weighted. 90% confidence intervals for the second step regression estimates (in parenthesis) are bootstrapped using 1000 Rademacher draws, clustered by cohort of arrival and years spent in the US.