

Appendix to
“Immigration and Employer Transitions for STEM Workers”

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Data Access:

Research requires confidential access to the LEHD dataset through the U.S. Census Bureau. Programs and data for this research are archived in folder br0786/data/immig/programs/earnings/aea.

Table 1: Traits of departing native workers by employer-level immigration

	Sample split by abnormal immigrant hiring in year of employee departure compared to firm's baseline employment			
	High	Low	Difference	Ratio
Initial worker traits as measured in CPS in year of CPS observation during 1995-1997				
Share: Caucasian	0.869 (0.009)	0.875 (0.008)	-0.006 (0.012)	-0.007
Share: Male	0.541 (0.013)	0.528 (0.012)	0.013 (0.018)	0.024
Share: Ages 20-29	0.392 (0.013)	0.400 (0.012)	-0.008 (0.017)	-0.020
Share: Ages 30-39	0.355 (0.012)	0.341 (0.011)	0.014 (0.017)	0.040
Share: Ages 40-49	0.253 (0.011)	0.259 (0.010)	-0.006 (0.015)	-0.023
Share: High school drop-out	0.074 (0.007)	0.104 (0.007)	-0.030 (0.010)	-0.337
Share: High school diploma	0.283 (0.012)	0.309 (0.011)	-0.026 (0.016)	-0.088
Share: Some college	0.333 (0.012)	0.351 (0.011)	-0.018 (0.017)	-0.053
Share: Bachelor's degree and higher	0.311 (0.012)	0.236 (0.010)	0.075 (0.016)	0.274
Share: STEM occupation	0.053 (0.006)	0.041 (0.005)	0.012 (0.007)	0.255
Quarterly earnings at departure	8,552 (129)	7,718 (113)	834 (172)	0.103
Initial employment histories as measured in LEHD over years prior to CPS observation				
Average quarterly earnings	7,944 (141)	6,601 (127)	1,342 (189)	0.185
Quarters worked	8.850 (0.092)	7.989 (0.091)	0.861 (0.129)	0.102
Associated SEINs	3.761 (0.043)	3.553 (0.042)	0.208 (0.060)	0.057
Share: Switching main industry	0.434 (0.013)	0.462 (0.012)	-0.028 (0.017)	-0.063
Initial SEIN conditions in year of CPS observation during 1995-1997				
Share: Mining, constr., and mfg.	0.275 (0.012)	0.231 (0.010)	0.044 (0.015)	0.174
Share: Transp., utilities, and trade	0.239 (0.011)	0.302 (0.011)	-0.063 (0.016)	-0.233
Share: Finance and services	0.485 (0.013)	0.467 (0.012)	0.018 (0.018)	0.038
Log count of employees	6.183 (0.050)	5.939 (0.046)	0.244 (0.068)	0.040
Employment growth	0.081 (0.008)	0.102 (0.011)	-0.021 (0.014)	-0.230
Immigrant share of workers	0.091 (0.002)	0.116 (0.002)	-0.025 (0.003)	-0.242

Notes: Estimations consider employment transitions of a random sample of workers who were surveyed by the CPS during 1995-1997 and were present in an LEHD-covered state. The sample is restricted to workers with the following traits during the CPS sample year: natives aged 20-49, earning \$2,500 or more in the quarter of departure (real 2008 dollars), and departing their main employer.

Table 2a: Regression comparison of employment transition rates and conditions

	Sample conditional on being observed in LEHD subsequent to departure						
	Indicator variable for being observed in LEHD again	Number of quarters with no employment evident in LEHD (max 20)	Number of quarters employed at next main job (max 20)	Indicator variable for switching industry for main job	Log annualized earnings in LEHD over next year	Log annualized earnings in LEHD over next five years	Log annualized earnings in LEHD over next ten years
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Estimations with linear immigration factor transformed to have unit standard deviation							
Ratio of abnormal immigrant hiring at time of departure	-0.007 (0.007)	0.050 (0.120)	0.205 (0.158)	-0.016 (0.011)	-0.020 (0.023)	0.011 (0.026)	0.004 (0.027)
x (0,1) indicator variable for STEM worker	0.004 (0.033)	0.863 (0.476)	0.338 (0.595)	0.028 (0.050)	-0.138 (0.079)	-0.191 (0.070)	-0.120 (0.079)
(0,1) indicator variable for STEM worker	-0.028 (0.029)	0.401 (0.483)	-0.500 (0.597)	0.019 (0.046)	0.146 (0.079)	0.161 (0.082)	0.106 (0.092)
Observations	3,327	3,011	3,011	3,011	3,011	2,904	2,904
Linear combination of first two rows for STEM worker	-0.003 (0.033)	0.913 (0.465)	0.544 (0.579)	0.012 (0.049)	-0.158 (0.077)	-0.180 (0.067)	-0.116 (0.076)

Notes: See Table 1. OLS estimations consider employment transitions of a random sample of workers who were surveyed by the CPS during 1995-1997 and were present in an LEHD-covered state. Column headers indicate subsequent employment outcome variables measured through the LEHD. The main regressors are the degree to which abnormally high immigrant hiring is observed in the employee's firm at the time of the employee's departure and an interaction of this hiring trait with whether or not the employee is working in a STEM occupation. Abnormal immigrant hiring is measured through the ratio of immigrants among hires compared to the overall immigrant employment share of the firm. This variable is entered linearly and transformed to have unit standard deviation in Table 2a. In Table 2b, the sample is split at the median value of the ratio with an indicator variable. Similar results are found if normalizing the immigrant inflows by the average rate in their state-sector-year. Regressions include state-sector-year fixed effects, include employee and firm covariates identified in the text and shown in Table 1, are unweighted, and cluster standard errors by firm. Sectors are defined at the one-digit SIC level.

Table 2b: Regression comparison of employment transition rates and conditions

	Sample conditional on being observed in LEHD subsequent to departure						
	Indicator variable for being observed in LEHD again	Number of quarters with no employment evident in LEHD (max 20)	Number of quarters employed at next main job (max 20)	Indicator variable for switching industry for main job	Log annualized earnings in LEHD over next year	Log annualized earnings in LEHD over next five years	Log annualized earnings in LEHD over next ten years
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Estimations with an indicator variable for the immigration factor being above the median value							
(0,1) indicator for abnormal immigration rate at departure	-0.007 (0.011)	0.247 (0.196)	0.397 (0.270)	-0.040 (0.019)	-0.023 (0.039)	-0.004 (0.043)	-0.016 (0.045)
x (0,1) indicator variable for STEM worker	-0.026 (0.053)	1.338 (0.973)	0.857 (1.142)	-0.120 (0.085)	-0.325 (0.150)	-0.315 (0.169)	-0.148 (0.186)
(0,1) indicator variable for STEM worker	-0.013 (0.037)	-0.157 (0.655)	-0.893 (0.799)	0.091 (0.063)	0.296 (0.111)	0.245 (0.130)	0.163 (0.147)
Observations	3,327	3,011	3,011	3,011	3,011	2,904	2,904
Linear combination for STEM worker	-0.034 (0.052)	1.585 (0.956)	1.254 (1.117)	-0.160 (0.840)	-0.348 (0.146)	-0.320 (0.164)	-0.164 (0.181)

Notes: See Table 2a.