The Relationship between Individual & Parent Foreign Residency and Occupation

Executive Summary

In context of the recent discussions of the United States' readiness for the future economy in terms of our STEM capacity and the debates on immigration reform, assessing whether there is a relationship between foreign residency and occupation seems relevant. The following research paper explores the relationship between exposure to foreign factors (defined as living in a foreign country or having immigrant parents) and occupation choice for the 1997 National Longitudinal Survey cohort. I find that these foreign factors do relate to individuals' proclivities to work in certain industries, although these industries aren't necessarily ones identified as important for future economic preparedness.

Motivation

The policy motivation behind this research question has to do with readiness for the future economy. According to the US Department of Labor's 1999 Futurework report, 65% of current grade-schoolers were projected to take on jobs that didn't exist at the time of the report. A more recent 2012 report by the US Congress Joint Economic Committee concluded that if current trends continue, there will be a shortage of workers in the STEM fields. These facts, combined with the recent renewed vigor in the immigration debate, set an

important framework for policy analysis. If foreign exposure, be that studying or working in a foreign country or having parents who grew up in a foreign country, directs individuals' preferences towards certain fields, it is important to be aware of this relationship.

Hypotheses

The primary hypotheses are that living in a foreign country or having a foreign citizenship make a difference on choice of career. More formally, given the explanatory variables of foreign citizenship (foreigncit) and migration, along with a dummy occupation variable (eg/ sales), a null hypothesis would be that there is no difference in choosing sales as an occupation between individuals who have a foreign citizenship and those who do not.

Empirical Approach

Data

All my quantitative data was drawn from the NLSYS 1997 dataset. I used information in the NLSY codebook about the frequency of each occupation to create my dummy variables; any occupation that showed up 50 times or greater in the first round was included.

Methods

The dependent variable of interest was occupation, broken down into dummy variables for each occupational field. The explanatory variables, also dummied, were whether individuals had ever migrated to or from a foreign country and

whether they had ever held a foreign citizenship. I coded all missing variables as (.)s. I ran t-tests on a number of control variables (race-ethnicity, income, parents' education) that I thought could also affect job choice to see whether there were baseline differences in the group of people who had migrated/held a foreign citizenship and those who had not. The factors that were found to have significant baseline differences were included as controls in my regression. I also did a subgroup analysis based on race-ethnicity and ran the regressions with interaction variables for each race-ethnicity dummy.

Results

My analysis revealed that after controlling for income, parents' level of education, and race/ethnicity, foreign residency and immigrant background influences individuals' propensities towards certain careers. In particular, having lived in a foreign country increased the likelihood of pursuing a career in teaching and decreased the likelihood of working in sales, food services, construction, healthcare, health practice, maintenance, technical operations, math and computer science, protection services, social services, production and operations, and legal services. Individuals who held a foreign citizenship at any time were less likely to pursue food, transport, maintenance, construction, media and communication, or legal services.

The subgroup analysis brought to light some interesting findings. Individuals of black race who had lived in a foreign country were less likely to work in

administrative or entertainment roles and more likely to work in teaching or social services; black individuals with foreign citizenships were more likely to work in transportation. Hispanic individuals who had lived abroad were less likely to work in transportation, teaching, or entertainment and more likely to work in health practice and production and operating services; those with foreign citizenships were less likely to work in food services and more likely to work in maintenance, health practice, and production and operating services. Interestingly, although overall Hispanic people in general were less likely than other groups to work in health practice or production and operations, foreign exposure flipped this trend. Non-hispanic/black individuals who had lived abroad were less likely to work in health practice and more likely to work in administrative services, food services, and entertainment; those with foreign citizenships were less likely to work in administrative services and health practice and more likely to work in food. In an opposite trend from the Hispanic individuals, non-hispanic/black individuals in general were more likely to work in health practice than other groups but those who had any foreign exposure were less likely to.

Discussion

Ultimately, there are statistically and practically significant differences in choice of certain careers between groups who have lived abroad or held foreign citizenships and those who have not. However, these correlations are not

relevant to the STEM field – choice in the STEM industries (math and computer science or engineering) had no correlation with exposure to foreign factors. The one field related to STEM that was affected by foreign exposure was health practice – in general having a foreign citizenship had a negative effect on likelihood of working in health practice; however Hispanic individuals who had either lived in a foreign country or had foreign citizenships were more likely to work in health practice.

In regards to shortcomings, there was a significant number of missing observations in terms of foreign citizenship, migration, and father's education. Furthermore, NLSY data does not include undocumented individuals or the informal economy, which limits analysis on job choice. Other limitations come from lack of detail - in terms of further research, it would be beneficial to break down the foreign citizenship and migration variables by country. It would also be useful to have a more detailed breakdown of the race-ethnicity variable. Finally, to control for possible circular or spurious relationships, running a fixed effects model may be prudent to see whether individuals changed their job choice after having lived in a foreign country. Finally, individual educational attainment should be a control variable.

Variable Codes

admin	Office And Administrative Support Workers
sales	Sales And Related Workers
exec	Executive, Administrative And Managerial
food	Food Preparations And Serving Related

transp	Transportation And Material Moving Workers
construct	Construction Trades And Extraction Workers
healthcare	Health Care Technical And Support
teachers	Teachers
personalcare	Personal Care And Service Workers
management	Management Related
operator	Setter, Operators, And Tenders
maintenance	Installation, Maintenance, And Repair Workers
cleanbuild	Cleaning And Building Service
protection	Protective Service
healthpractice	Health Diagnosis And Treating Practitioners
mathcs	Mathematical And Computer Scientists
social	Counselors, Social, And Religious Workers
entertain	Entertainers And Performers, Sports And Related
mediacomm	Media And Communication Workers
prodop	Production And Operating Workers
edu	Education, Training, And Library Workers
legal	Lawyers, Judges, And Legal Support Workers
engineerarch	Engineers, Architects, And Surveyors

Descriptive Statistics

Outcome Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
engineerarch	8607	0.007	0.084	0	1
legal	8607	0.008	0.087	0	1
prodop	8607	0.009	0.092	0	1
edu	8607	0.009	0.092	0	1
mediacomm	8607	0.015	0.122	0	1
mathcs	8607	0.020	0.141	0	1
social	8607	0.022	0.147	0	1
entertain	8607	0.022	0.148	0	1
healthpractice	8607	0.025	0.157	0	1
protection	8607	0.027	0.163	0	1
cleanbuild	8607	0.034	0.181	0	1
maintenance	8607	0.034	0.182	0	1
management	8607	0.037	0.188	0	1

operator	8607	0.038	0.191	0	1
personalcare	8607	0.045	0.208	0	1
healthcare	8607	0.053	0.225	0	1
teachers	8607	0.054	0.225	0	1
construct	8607	0.060	0.237	0	1
transp	8607	0.066	0.248	0	1
exec	8607	0.066	0.248	0	1
food	8607	0.074	0.262	0	1
sales	8607	0.105	0.307	0	1
admin	8607	0.133	0.340	0	1

Explanatory Variables

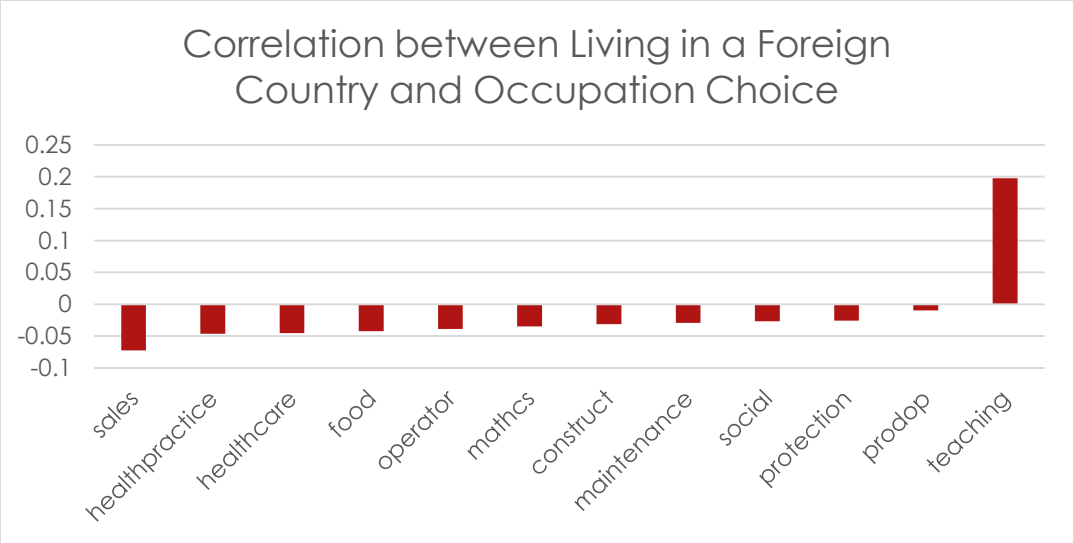
Variable	Obs	Mean	Std. Dev.	Min	Max
foreigncit	74100	0.0483	0.2144	0	1
migration	11790	0.0492	0.2163	0	1

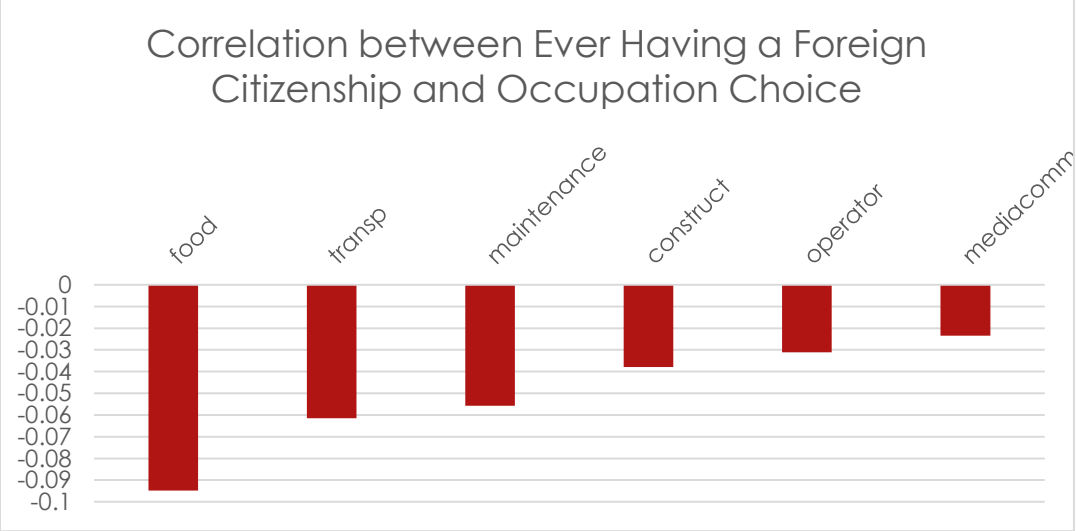
*where foreigncit = 1 if individual has ever held a foreign citizenship and migration = 1 if individual has ever moved to/from a foreign country to the US

Control Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
black	89840	0.260	0.439	0	1
hispanic	89840	0.212	0.408	0	1
mixedrace	89840	0.009	0.096	0	1
other	89840	0.519	0.500	0	1
father's education	57070	12.922	3.800	1	95
mother's education	80100	12.582	3.601	1	95
family income	63090	50279.140	51931.240	0	257697

*note that I used data from the year 2011 and combined the rounds into one single longitudinal set





Subgroup Analysis

Statistically significant interaction effect coefficients:

	Black		Hispanic		Non-black/hispanic	
	Migration	Foreigncit	Migration	Foreigncit	Migration	Foreigncit
Admin	-0.15	-	-	-	0.13	-0.23
Food	-	-	-	-0.073	0.05	0.07
Transp	-	0.077	-0.12	-	-	-
Teaching	0.74	-	-0.29	-	-	-
Maintenance	-	-	-	-0.057	-	-
Healthpractice	-	-	0.05	0.037	-0.03	-0.05
Social	0.15	-	-	-	-	-
Entertain	-	-0.12	-0.11	-	0.11	-
Prodop	-	-	0.01	0.01	-	-

Bibliography

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