

# Immigration and Economic Freedom: Does Education Matter?

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## Abstract

This paper builds on Padilla and Cachanosky (2018) and examines if immigrants' educational attainments matter, particularly for immigrants with low educational attainments, when testing immigrants' impact on the economic freedom of the US states. Except in the area of government transfers and subsidies, we do not find any evidence to support such a hypothesis. In addition, we find that the negative impact on economic freedom in the area of government transfers and subsidies that is associated with immigrants who lack a high school diploma is likely trivial. Our results are robust to various specifications.

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## I. Introduction

This paper builds on Padilla and Cachanosky (2018) and examines whether immigrants' educational attainments matter when testing immigrants' institutional impact. Borjas (2014, 2015, 2016) argues that much of the literature examining the global economic benefits of immigration ignores immigrants' institutional impact.<sup>1</sup> His criticism is

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<sup>1</sup> This literature argues that current immigration restrictions are inefficiently high and, as a result, they generate a significant world deadweight loss. Removing these restrictions completely or partially would generate global economic benefits far greater than those associated with eliminating barriers to free trade. See, for example, Hamilton and Whalley (1984); Moses and Letnes (2004); Walmsley and

twofold. First, Borjas (2015, p. 169) argues that this literature ignores the possibility that immigrants coming from countries with low-quality institutions might import their institutions into their host countries, which in turn would deteriorate host countries' institutions. Second, Borjas (2016, pp. 66–87) revives Benjamin Franklin's ([1753] 1904, pp. 408–16) concerns about immigrants' educational attainments and their related inability to assimilate and to understand the importance of preserving the host country's unique institutions. As a result, Borjas argues that a massive migration to the United States of a poorly educated population coming from countries with poor institutions could depress economic growth.

Most of the attention has been given to the first part of Borjas's criticism of the literature examining the global economic benefits of immigration. This strand of the literature tests what impact, if any, immigrants have on the institutions of their host countries. Using economic freedom as a proxy for institutional quality,<sup>2</sup> most of these studies find statistically and economically significant positive correlations between immigration and the level of economic freedom

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Winters (2005); Clemens (2011); Kennan (2013); di Giovanni, Levchenko and Ortega (2015); and Docquier, Machado, and Sekkat (2015).

<sup>2</sup> While there is no clear consensus on what constitutes good institutions, a large empirical literature presents a preponderance of evidence showing a positive relationship between economic freedom and economic growth. For example, Faria and Montesinos (2009, p. 123) “report the existence of a strong, positive, statistically consequential impact of EFW [Economic Freedom of the World] on growth and the level of income.” See also Gwartney, Holcombe, and Lawson (2004) and Easton and Walker (1997), who find strong positive relationships between the level of economic freedom, economic growth, and income. Hall and Lawson (2014, p. 1) survey the economic literature using the economic freedom of the world as an independent variable and find that “over two-thirds of these studies found economic freedom to correspond to a ‘good’ outcome such as faster growth, better living standards, more happiness, etc. Less than 4% of the sample found economic freedom to be associated with a ‘bad’ outcome such as increased income inequality. The balance of evidence is overwhelming that economic freedom corresponds with a wide variety of positive outcomes with almost no negative tradeoffs.” At the subnational level, several studies have demonstrated that higher EFNA scores correlate positively with economic growth and income growth (Compton, Giedeman, and Hoover 2011; Wiseman 2017; Bennett 2016). See also Stansel and Patrick Tuszynski (2018), who survey the literature using the EFNA as an independent variable and find results similar to Hall and Lawson (2014). They show that out of 155 papers that empirically assess the impact of economic freedom in North American states and provinces, “two-thirds of these found economic freedom to be associated with ‘good’ outcomes (such as faster economic growth), and only one found economic freedom to be associated with a ‘bad’ outcome” (Stansel and Patrick Tuszynski 2017, p. 1).

of their host countries or states (Clark et al. 2015; Powell, Clark, and Nowrasteh 2017; Nowrasteh, Forrester, and Blondin 2019).<sup>3</sup> When they find a negative relationship between immigration and economic freedom, that relationship is neither statistically nor economically significant (Padilla and Cachanosky 2018; Padilla and Cachanosky 2019). However, economists have given much less attention to the second part of Borjas’s criticism, that is, whether immigrants’ educational attainment matters when it comes to impacting their destination countries’ institutions.<sup>4</sup> Even when the aforementioned literature accounts for the quality of the institutions of immigrants’ origin countries, it essentially treats all immigrants from these countries as one homogeneous group (Padilla and Cachanosky 2019). In other words, it does not take into account the educational attainments of immigrants. If Borjas (and Franklin) are correct in their conjecture, the “non-effect” that immigrants have on institutions might be the results of two opposite effects neutralizing each other. Therefore, not finding any institutional impact from immigration does not really address Borjas’s concerns about the impact unskilled immigrants may have on their host countries.<sup>5</sup>

Building on Padilla and Cachanosky (2018), this paper fills the gap in the literature. We test Borjas’s conjecture and examine whether immigrants with different levels of educational attainment have different impacts on the US states’ economic freedom. If Borjas (and Franklin) are correct, we should anticipate a positive relationship between immigrants with higher levels of education and economic freedom. Additionally, we should expect the relationship between

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<sup>3</sup> See also Powell, Bologna Pavlik, and Lujan Padilla (2019), who use corruption as a proxy for institutional quality and find no robust relationship between migration and corruption levels in the host countries.

<sup>4</sup> Powell, Clark, and Nowrasteh (2017, p. 87) do not explicitly examine the relationship between immigrants’ educational attainment and countries’ economic freedom, but they observe that most of Israel’s immigrants from the former Soviet Union were skilled workers, with almost a third being scientific academic workers. Therefore, although they came from a country with a poor economic institutional environment, these immigrants were more likely to “think like economists” and more likely to appreciate the importance of having a high-quality economic institutional environment to promote long-run economic growth—which would be reflected in their votes (Caplan 2001).

<sup>5</sup> Even for studies showing a positive correlation between immigration and economic freedom, the interpretation remains the same. It’s possible that the positive impact from more educated immigrants is greater than the negative impact less educated immigrants may have on economic freedom.

immigrants with lower levels of education and economic freedom to be negative.

Section 2 discusses the data and our model. Section 3 discusses our results. Section 4 concludes.

## II. Data and Model

Since this paper builds on Padilla and Cachanosky (2018), we follow a similar empirical strategy to assess the institutional impact that immigrants and, more particularly, immigrants grouped according to their educational attainment, have on the US states' economic institutions. We use the levels of economic freedom from the Economic Freedom of North America (EFNA) 2015 report (Stansel, Torra, and McMahon 2016) as our dependent variable.<sup>6</sup> The EFNA report measures “the extent to which policies of individual provinces and states are supportive of economic freedom—the ability of individuals to act in the economic sphere free of undue restrictions” (Stansel, Torra, and McMahon 2016, p. v) The report uses ten variables across three areas: (1) government spending; (2) taxes; and (3) labor market freedom. The EFNA assigns economic freedom scores to sub-areas in these three areas. Among these sub-areas, we are interested in (1) government transfers and subsidies as a percentage of income (Area 1B); (2) top marginal income tax rate and the income threshold at which it applies (Area 2B); and (3) minimum wage legislation (Area 3i). These three sub-areas are often seen as areas that immigration, particularly unskilled immigration, would affect. Since immigrants tend to be less educated and skilled and, consequently, earn less, they might push for policies to increase redistribution toward them.

The EFNA uses a scale from zero to ten for each component, where ten represents the highest level of economic freedom. In addition, the authors argue that to avoid “imposing subjective judgments about the relative importance of the components, each area was equally weighted and each component within each area was equally weighted” (Stansel, Torra, and McMahon 2016, p. 9).

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<sup>6</sup> EFNA goes back only as far as 1981, but our period of analysis starts in 1980. However, as Padilla and Cachanosky (2018, p. 357) note, because institutional change takes time, we can assume that the scores US states received in 1981 are unlikely to be much different from the scores the same states would have received in 1980. It's also unlikely that the variation in scores between 1980 and 1981 would be the result of the immigration stock in 1980 or the change in that stock in the preceding twelve months.

Since one of Borjas's concerns is that most new immigrants are less educated and skilled than those in earlier immigration waves were, we group immigrants in three groups: immigrants who did not earn a high school diploma, immigrants with a high school diploma or equivalent, and immigrants who went to college. This latter variable represents all immigrants who went to college. This group includes immigrants having some college but less than one year, immigrants having one or more years of college but no degree, and immigrants whose highest educational attainment is an associate's degree, a bachelor's degree, a master's degree, a professional degree beyond a bachelor's degree, or a doctoral degree. Since the literature shows that better-educated people tend to think more like economists, we would expect to find a positive relationship between immigrants with a college education and economic freedom (Caplan 2001). At the other extreme, we would expect to find a negative relationship between economic freedom and immigrants who did not attend or did not finish high school.

Our data on immigrants come from the US Census public-use microdata available from IPUMS (Ruggles et al. 2015). We use data from 1980, 1990, and 2000 (5 percent samples) and from the 2010 American Community Survey. Using those data, we construct a panel with data at ten-year intervals, where the starting date of the panel refers to the dependent variable (i.e.,  $t = 2010$ , so  $t - 1 = 2000$ ).

To study the relationship between immigration and economic freedom, we use an empirical strategy similar to the one adopted by Acemoglu et al. (2008) and Spilimbergo (2009): dynamic panel regressions. Our basic model is

$$ef_{it} = \alpha ef_{it-1} + \gamma imm_{iet-1} + \beta X_{it-1} + \mu_t + \delta_i + \varepsilon_{it}, \quad (1)$$

where  $ef_{it}$  is the level of economic freedom of a state  $i$  in period  $t$ . We include the lagged value of economic freedom in our specification in order to capture the various long-run historical, cultural, economic, political, and other factors that influence economic freedom. Our main variable of interest,  $imm_{iet-1}$ , is the lagged value of the share of immigrants of education level  $e$  in state  $i$ 's total population. Therefore, parameter  $\gamma$  measures the effect of foreign-born immigrants of a specific education level on economic freedom. All other potential covariates are included in the vector  $X_{it-1}$ . Finally,  $\delta_i$  denotes a full set of state dummies and  $\mu_t$  denotes a full set of year dummies to capture common shocks (common trends) in the economic freedom score of all states;  $\varepsilon_{it}$  is an error

term, which captures omitted factors, with  $E(\varepsilon_{it}) = 0$  for all  $i$  and  $t$ .<sup>7</sup>

The set of additional controls included in the vector  $X_{it-1}$  and likely to affect economic freedom are as follows:

- (i) the share of US natives with a college education
- (ii) the log of personal income per capita (excluding government transfer payments) adjusted for inflation in 2010 dollars;
- (iii) the share of state population living in urban areas; and
- (iv) the share of state population identifying as African-American

We follow Higgins et al. (2006) and use the personal income measure from the Regional Economic Information System of the Bureau of Economic Analysis (BEA-REIS), which, along with census mid-year state population estimates, gives us per capita income. We adjust per capita income by subtracting government transfers and converting it to 2010 dollars. In all our regressions, we use the log of real income per capita throughout and lag it.

The share of US natives with a college education comes from the US Census Bureau's public-use microdata as available from IPUMS (Ruggles et al. 2015). That variable contains the share of US natives who have had some college but less than one year, those who have had one or more years of college credit but no degree, and the US natives whose highest educational attainment is an associate's degree, a bachelor's degree, a master's degree, a professional degree beyond a bachelor's degree, or a doctoral degree. As we mentioned earlier, the literature shows that people with a higher level of education tend to think more like economists. Therefore, we would expect to find a positive relationship between immigrants with a college education and economic freedom (Caplan 2001).

The share of state population living in urban areas and the share of state population who identify as African-American are also from the US Census Bureau's public-use microdata as available from IPUMS (Ruggles et al. 2015). The measure of urbanization is used "to control for the degree of 'cosmopolitanism' in states that may, for various reasons, be more accepting of immigrant inclusion" (Hero and Preuhs 2007, p. 503), which in turn is likely to affect economic

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<sup>7</sup> A potential problem with our equation is that the unobserved determinants of economic freedom, represented in  $\varepsilon_{it}$ , likely are correlated with the share of immigrants, leading to an upward-biased estimate of  $\gamma$ . To some extent, our first estimation method circumvents this problem. In section 3, we discuss further how we attempt to address this problem.

freedom or, at least, some dimension of economic freedom, such as government transfers and subsidies. We control for the share of the population identifying as African-American because of evidence that “less generous welfare provisions are associated with the size of the African-American population,” which in turn would affect the measure of economic freedom associated with government spending (Hero and Preuhs 2007, p. 503). Table 1 reports descriptive statistics for the main variables.

**Table 1. Descriptive statistics**

Variables	(1) N	(2) Mean	(3) S.D.	(4) Min.	(5) Max.
Economic freedom	200	6.615	0.745	4.060	8.490
Economic freedom area 1B	200	7.216	1.597	1.440	10
Economic freedom area 2B	200	7.165	2.047	0.500	10
Economic freedom area 3i	200	6.455	2.009	0	9.510
Share of foreign born with no high school diploma	200	0.0281	0.0263	0.00163	0.143
Share of foreign born with high school diploma	200	0.0172	0.0153	0.00159	0.0749
Share of foreign born with college education	200	0.0322	0.0297	0.00329	0.161
Share of US natives with college education	200	0.440	0.0950	0.204	0.621
Urbanization	200	0.701	0.148	0.322	0.950
Log net personal income per capita	200	10.23	0.234	9.645	10.90
Share of African Americans	200	0.0892	0.0863	0.000598	0.350
Number of states	50	50	50	50	50

### III. Immigration, Education, and Economic Freedom

Our variable of interest is  $imm_{iet-1}$ . It represents the shares of foreign-born immigrants grouped according to their educational attainment  $e$  at period  $t - 1$  in the state  $i$ 's population age 25 and older, which is the sum of the US-born citizen population age 25 and older ( $nativ_{it-1}$ ) and the foreign-born population also age 25 and older ( $imm_{it-1}$ ):

$$imm_{iet-1} = \frac{imm_{iet-1}}{imm_{it-1} + nativ_{it-1}}$$

We examine the relationship between shares of foreign-born immigrants grouped according to their educational attainments and economic freedom as well as the EFNA's sub-areas of economic freedom: government spending, taxes, and labor market freedom. Within those sub-areas, we pay closer attention to economic freedom scores as they pertain to the areas of (1) transfers and subsidies; (2) top marginal income tax rate and the income threshold at which it applies, and (3) minimum wage legislation.

### *A. Immigration and Economic Freedom: Does Immigrants' Educational Achievement Matter?*

Table 2 reports the results from our pooled OLS estimation, which is identical to (1) without the state fixed effects,  $\delta_i$ , and the results from our fixed-effects regressions. In the model described above, state dummies capture any time-invariant state-specific factors that would affect the level of economic freedom. However, when the model is given by (1) and state dummies are correlated with the immigration variable ( $imm_{iet-1}$ ) or the vector of covariates ( $X_{it-1}$ ), then the pooled estimates are biased and inconsistent (Acemoglu, Johnson, et al. 2008, p. 816). In addition, as demonstrated by Nickell (1981), controlling for fixed effects won't necessarily provide better estimates if the standard fixed effect estimator is biased upward because a correlation exists between regressor  $ef_{it-1}$  and the error term  $\varepsilon_{it}$  (Baum 2013, p. 3).

We use two strategies to alleviate the problem associated with the likely correlation between regressor ( $ef_{it-1}$ ) and error ( $\varepsilon_{it}$ ). The first strategy, implemented in Padilla and Cachanosky (2018, p. 360), is to run baseline fixed-effects regressions without the lagged dependent variable. Since fixed effects control for any time-invariant unobserved heterogeneity between the states, which among other things includes the initial level of economic freedom, running fixed-effects regressions without the lagged dependent variable should rule out the Nickell bias.

Our second strategy is to use a two-step system GMM estimation methodology suggested by Arellano and Bover (1995) and Blundell and Bond (1998) and implemented by Spilimbergo (2009) and Docquier et al. (2016). The system GMM estimator uses both lagged levels and lagged differences to estimate the coefficients with the assumption that the first-differenced instrumental variables are not correlated with the unobserved fixed effects in the model. System GMM is used as opposed to the difference GMM estimator (Arellano and Bond 1991). Using the standard first-differenced GMM estimator in a panel of data with short sample periods and persistent series, as is the case in our study of immigration's impact on economic freedom, will likely cause the estimates of the coefficients to suffer from biases and imprecision (Blundell and Bond 1998, p. 138).

**Table 2. Immigration, education, and economic freedom: levels**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Lagged variables	Fixed effects OLS	Pooled OLS	Fixed effects OLS	System GMM	Fixed effects OLS	Pooled OLS	Fixed effects OLS	System GMM
Economic freedom		0.765*** (0.0378)	-0.187** (0.0880)	0.190 (0.120)		0.765*** (0.0379)	-0.167* (0.0849)	0.372 (0.227)
Share of foreign born with no high school diploma	-2.475 (2.692)	-0.503 (0.850)	-3.638 (2.716)	0.213 (3.245)				
Share of foreign born with high school diploma					-14.77* (8.203)	-1.006 (1.546)	-15.47* (8.526)	-2.859 (4.175)
Share of foreign born with college education								
Share of US natives with college education								
Log net personal income per capita								
Urbanization								
Share of African Americans								
Obs.	150	150	150	150	150	150	150	150
R-squared	0.497	0.753	0.525		0.508	0.753	0.532	
No. of states	50		50	50	50		50	50
Adjusted R-squared	0.487	0.747	0.512		0.498	0.747	0.519	
AR(1) test				0.000510				0.0902
AR(2) test				0.00162				0.116
Hansen's J. test				0.393				0.171
No. of instruments				13				13

**Table 2 (cont.). Immigration, education, and economic freedom: levels**

Lagged variables	(9) Fixed effects OLS	(10) Pooled OLS	(11) Fixed effects OLS	(12) System GMM	(13) System GMM	(14) System GMM
Economic freedom		0.764*** (0.0378)	-0.148* (0.0867)	0.413** (0.158)	0.578*** (0.0999)	0.704*** (0.0772)
Share of foreign born with no high school diploma					3.632 (3.988)	-0.503 (6.091)
Share of foreign born with high school diploma					2.451 (13.57)	9.315 (14.06)
Share of foreign born with college education	-5.242* (2.715)	-1.118 (0.928)	-4.764* (2.766)	-1.433 (2.633)	-6.939 (4.521)	-4.327 (4.670)
Share of US natives with college education						0.113 (0.867)
Log net personal income per capita						-0.291 (0.592)
Urbanization						0.185 (0.662)
Share of African Americans						-0.534 (0.616)
Obs.	150	150	150	150	150	150
R-squared	0.512	0.754	0.530			
No. of states	50		50	50	50	50
Adjusted R-squared	0.502	0.748	0.517			
AR(1) test				0.0402	0.138	0.956
AR(2) test				0.0675	0.237	0.852
Hansen's J. test				0.130	0.132	0.152
No. of instruments				13	23	43

*Notes:* Dependent variable is economic freedom. The sample is a strongly balanced panel comprising data at ten-year intervals between 1980 and 2010. All right-hand side variables are lagged ten years (if  $t = 2010$ ,  $t - 1 = 2000$ ). Robust standard errors clustered by state in parentheses. In system GMM regressions, shares of foreign born grouped according to educational achievements and all control variables are treated as endogenous or predetermined and are instrumented for using their own first to third lags in level and differences. AR(1) and AR(2) are Arellano-Bond test for serial correlations. All regressions are run with constant; constant is not displayed. \*\*\* significant at the 1 percent level ; \*\* significant at the 5 percent level; \* significant at the 10 percent level.

In addition, instead of using an external instrument such as the “shift-share” instrument described in Card (2001, 2007), we follow Spilimbergo (2009, p. 533) and Docquier et al. (2016, p. 213) and use internal instruments.<sup>8</sup> We treat immigrant shares grouped according to their educational attainment and all other control variables excluding time fixed effects as endogenous or predetermined, where all variables of interest and control variables are instrumented by using their own first to third lags in level and difference. We also verify that the number of lags allowed does not generate too many instruments, which itself creates a problem of overfitting the endogenous variables.<sup>9</sup>

We investigate whether immigrants with different educational attainments may have different impacts on sub-areas of the EFNA report: government transfers and subsidies as a percentage of income, top marginal income tax rates and income threshold at which it applies, and minimum wage legislation.

For government transfers and subsidies (see table 3), our system GMM regression with all controls shows that the relationship between the share of immigrants with no high school diploma and the economic freedom score associated with government transfers and subsidies (area 1B) as a share of income is negative and statistically significant at the 5 percent level, where one standard deviation increase in the share of this immigrant group decreases the economic freedom score for area 1b by about two-fifths of a

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<sup>8</sup> The main reason for using an internal instrument instead of the “shift-share” instrument often used in the immigration literature is this: an important assumption behind the “shift-share” instrument is that the size of the past settlement of immigrants from an origin country is the sole determinant of migration to a specific state by immigrants from the same origin country. However, given that the past location of immigrants across host countries is likely correlated with past institutions, which themselves tend to be persistent and correlated over time, the exclusion restriction of the shift-share instrument such as the one developed by Card (2001) becomes invalid.

<sup>9</sup> To avoid overfitting the endogenous variables, Roodman (2009) recommends keeping the number of instruments below the number of states.

standard deviation. On the other hand, a one standard deviation increase in the share of immigrants with a high school diploma is associated with an increase in that economic freedom score of almost one point, or about three-fifths of a standard deviation. It's worth noting that, for both immigrants and US natives with a college education, that relationship is negative even if not statistically significant.

One possible interpretation of this result is that immigrants without a high school diploma are more likely to end up at the bottom of the income ladder. As a result, they are more likely to push for policies with more generous levels of subsidies and transfers.

Testing the relationship between shares of immigrants and the economic freedom score for top marginal income tax rates and the income threshold at which it applies (area 2B), our results in table 4 show that the relationship between economic freedom and the share of immigrants without a high school diploma and those with a college education is negative but not statistically significant. Similarly, while the relationship between being foreign born with a high school diploma and the economic freedom score for area 2B is positive, it's not statistically significant.

**Table 3. Immigration, education, and economic freedom area 1B – government spending – transfers and subsidies: levels**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Lagged variables	Fixed effects OLS	Pooled OLS	Fixed effects OLS	System GMM	Fixed effects OLS	Pooled OLS	Fixed effects OLS	System GMM
Economic freedom area 1B		0.504*** (0.0535)	0.128 (0.107)	0.522*** (0.115)		0.504*** (0.0518)	0.151 (0.0997)	0.591*** (0.0749)
Share of foreign born with no high school diploma	-13.87 (13.34)	2.186 (3.297)	-8.914 (13.78)	3.090 (6.726)				
Share of foreign born with high school diploma					34.36 (41.35)	5.135 (6.360)	30.75 (38.06)	16.67** (8.201)
Share of foreign born with college education								
Share of US natives with college education								
Log net personal income per capita								
Urbanization								
Share of African Americans								
Observations	150	150	150	150	150	150	150	150
R-squared	0.164	0.421	0.180		0.156	0.422	0.180	
Number of states	50		50	50	50		50	50
Adjusted R-squared	0.147	0.405	0.157		0.138	0.406	0.158	
AR(1) test				0.304				0.136
AR(2) test				0.374				0.459
Hansen's J. test				0.0702				0.373
Number of instruments				13				13

**Table 3 (cont.). Immigration, education, and economic freedom area 1B – government spending – transfers and subsidies: levels**

	(9)	(10)	(11)	(12)	(13)	(14)
Lagged variables	Fixed effects OLS	Pooled OLS	Fixed effects OLS	System GMM	System GMM	System GMM
Economic freedom area 1B		0.491*** (0.0517)	0.131 (0.0982)	0.519*** (0.105)	0.570*** (0.0932)	0.502*** (0.0713)
Share of foreign born with no high school diploma					-3.340 (10.21)	-25.36** (10.92)
Share of foreign born with high school diploma					29.39 (32.80)	63.41** (31.18)
Share of foreign born with college education	17.31 (12.19)	-0.251 (3.659)	13.67 (11.95)	0.255 (3.388)	-11.93 (11.64)	-10.28 (11.85)
Share of US natives with college education						-2.591 (3.526)
Log net personal income per capita						-3.031 (1.834)
Urbanization						3.401*** (1.037)
Share of African Americans						0.0917 (1.371)
Observations	150	150	150	150	150	150
R-squared	0.168	0.420	0.186			
Number of states	50		50	50	50	50
Adjusted R-squared	0.151	0.404	0.164			
AR(1) test				0.301	0.133	0.997
AR(2) test				0.327	0.647	0.150
Hansen's J. test				0.288	0.135	0.257
Number of instruments				13	23	43

*Notes:* The dependent variable is economic freedom area 1B: government spending – transfers and subsidies. The sample is a strongly balanced panel comprising data at ten-year intervals between 1980 and 2010. All right-hand side variables are lagged ten years (if  $t = 2010$ ,  $t - 1 = 2000$ ). Robust standard errors are clustered by state in parentheses. In system GMM regressions, shares of foreign born are grouped according to educational achievement and all control variables are treated as endogenous or predetermined and are instrumented for using their own first to third lags in level and differences. AR(1) and AR(2) are Arellano-Bond tests for serial correlations. All regressions are run with a constant; the constant is not displayed. \*\*\* significant at the 1 percent level; \*\* significant at the 5 percent level; \* significant at the 10 percent level.

**Table 4. Immigration, education, and economic freedom area 2B – top marginal income tax rate and income threshold at which it applies: levels**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Lagged variables	Fixed effects OLS	Pooled OLS	Fixed effects OLS	System GMM	Fixed effects OLS	Pooled OLS	Fixed effects OLS	System GMM
Economic freedom area 2B		0.579*** (0.0783)	-0.150 (0.111)	0.363*** (0.114)		0.580*** (0.0775)	-0.156 (0.108)	0.350*** (0.109)
Share of foreign born with no high school diploma	0.326 (12.32)	-1.519 (4.527)	-1.703 (12.63)	-3.792 (12.69)				
Share of foreign born with high school diploma					-41.57* (22.41)	-2.553 (9.213)	-46.54* (26.43)	-17.04 (22.36)
Share of foreign born with college education								
Share of US natives with college education								
Log net personal income per capita								
Urbanization								
Share of African Americans								
Observations	150	150	150	150	150	150	150	150
R-squared	0.016	0.540	0.074		0.037	0.540	0.100	
Number of states	50		50	50	50		50	50
Adjusted R-squared	-0.00452	0.527	0.0481		0.0177	0.527	0.0756	
AR(1) test				0.0442				0.0391
AR(2) test				0.0209				0.0194
Hansen's J. test				0.0363				0.0169
Number of instruments				13				13

**Table 4 (cont.). Immigration, education, and economic freedom area 2B – top marginal income tax rate and income threshold at which it applies: levels**

	(9)	(10)	(11)	(12)	(13)	(14)
Lagged variables	Fixed effects OLS	Pooled OLS	Fixed effects OLS	System GMM	System GMM	System GMM
Economic freedom area 2B		0.578*** (0.0772)	-0.150 (0.106)	0.391*** (0.0890)	0.391*** (0.0805)	0.442*** (0.114)
Share of foreign born with no high school diploma					-6.025 (14.49)	-8.303 (20.03)
Share of foreign born with high school diploma					23.97 (47.13)	43.68 (73.13)
Share of foreign born with college education	-23.65** (9.470)	-4.786 (4.771)	-23.85** (11.00)	-9.048 (6.509)	-12.22 (10.74)	-20.67 (16.14)
Share of US natives with college education						5.640 (5.175)
Log net personal income per capita						-0.818 (1.998)
Urbanization						0.713 (2.758)
Share of African Americans						-1.862 (1.408)
Observations	150	150	150	150	150	150
R-squared	0.084	0.543	0.143			
Number of states	50		50	50	50	50
Adjusted R-squared	0.0652	0.530	0.119			
AR(1) test				0.0709	0.0574	0.293
AR(2) test				0.0132	0.0319	0.0698
Hansen's J. test				0.0283	0.309	0.376
Number of instruments				13	23	43

*Notes:* The dependent variable is economic freedom area 2B: top marginal income tax rates and income threshold at which it applies. The sample is a strongly balanced panel comprising data at ten-year intervals from 1980 to 2010. All right-hand side variables are lagged ten years (if  $t = 2010$ ,  $t - 1 = 2000$ ). Robust standard errors are clustered by state in parentheses. In system GMM regressions, shares of foreign born are grouped according to educational achievement and all control variables are treated as endogenous or predetermined and are instrumented for using their own first to third lags in level and differences. AR(1) and AR(2) are Arellano-Bond test for serial correlations. All regressions are run with a constant; the constant is not displayed. \*\*\* significant at the 1 percent level; \*\* significant at the 5 percent level; \* significant at the 10 percent level.

**Table 5. Immigration, education, and economic freedom area 3i – labor market freedom – minimum wage legislation: levels**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Lagged variables	Fixed effects OLS	Pooled OLS	Fixed effects OLS	System GMM	Fixed effects OLS	Pooled OLS	Fixed effects OLS	System GMM
Economic freedom area 3i		0.659*** (0.0485)	0.0412 (0.0499)	0.516*** (0.143)		0.629*** (0.0482)	0.0415 (0.0460)	0.270*** (0.0865)
Share of foreign born with no high school diploma	-6.977 (4.463)	0.127 (1.699)	-6.740 (4.437)	-1.644 (4.896)				
Share of foreign born with high school diploma					-29.38* (16.53)	4.676 (4.026)	-28.72* (16.46)	12.13 (8.444)
Share of foreign born with college education								
Log net personal income per capita								
Urbanization								
Share of African Americans								
Observations	150	150	150	150	150	150	150	150
R-squared	0.561	0.730	0.563		0.570	0.732	0.572	
No. of states	50		50	50	50		50	50
Adjusted R-squared	0.552	0.722	0.551		0.561	0.725	0.560	
AR(1) test				0.0551				0.000329
AR(2) test				0.467				0.00928
Hansen's J. test				0.00108				0.00505
Number of instruments				13				13

**Table 5 (cont.). Immigration, education, and economic freedom area 3i – labor market freedom – minimum wage legislation: levels**

	(9)	(10)	(11)	(12)	(13)	(14)
Lagged variables	Fixed effects OLS	Pooled OLS	Fixed effects OLS	System GMM	System GMM	System GMM
Economic freedom area 3i		0.629*** (0.0441)	-0.0133 (0.0464)	0.317*** (0.0983)	0.437*** (0.116)	0.349** (0.134)
Share of foreign born with no high school diploma					-13.68** (6.784)	-5.984 (6.600)
Share of foreign born with high school diploma					37.48** (16.69)	19.28 (17.29)
Share of foreign born with college education	-12.37*** (3.915)	2.889 (1.995)	-12.65*** (3.901)	9.999** (4.074)	3.901 (9.540)	0.489 (9.339)
Share of US natives with college education						0.131 (1.957)
Log net personal income per capita						1.976*** (0.705)
Urbanization						-0.636 (0.890)
Share of African Americans						0.437 (0.668)
Observations	150	150	150	150	150	150
R-squared	0.589	0.733	0.590			
No. of states	50		50	50	50	50
Adjusted R-squared	0.581	0.726	0.578			
AR(1) test				0.00212	0.0157	0.207
AR(2) test				0.0836	0.795	0.590
Hansen's J. test				0.00622	0.0350	0.0943
Number of instruments				13	23	43

*Notes:* The dependent variable is economic freedom area 3i: minimum wage legislation. The sample is a strongly balanced panel comprising data at ten-year intervals from 1980 to 2010. All right-hand side variables are lagged ten years (if  $t = 2010$ ,  $t - 1 = 2000$ ). Robust standard errors are clustered by state in parentheses. In system GMM regressions, shares of foreign born are grouped according to educational achievement and all control variables are treated as endogenous or predetermined and are instrumented for using their own first to third lags in level and differences. AR(1) and AR(2) are Arellano-Bond tests for serial correlations. All regressions are run with a constant; the constant is not displayed. \*\*\* significant at the 1 percent level; \*\* significant at the 5 percent level; \* significant at the 10 percent level.

Table 5 presents the results of our regressions when it comes to the impact immigrants may have on minimum wage legislation (area 3i). Our baseline system GMM regression (column 13) shows that the relationship between the share of immigrants without a high school diploma and economic freedom for minimum wage legislation is negative and statistically significant at the 5 percent level. Alternatively, the relationship between immigrants with a high school diploma and economic freedom is positive and significant at the 5 percent level. Once we add all control variables, the signs of the coefficients remain the same, but they are no longer statistically significant.

When examining the relationship between immigrants without a high diploma and economic freedom, only in the area of government transfers and subsidies do we find a statistically significant relationship. However, the impact on economic freedom is about two-thirds of a point, and such a small decrease in economic freedom is unlikely to be economically significant.

### *B. Robustness Checks*

#### 1. Immigration, education, and economic freedom: differences

Our regressions show that immigrants, even when grouped according to their educational attainment, don't seem to have much or any impact on the economic freedom scores of the US states. However, it's possible that we face omitted variable problems. To address such issues, we follow a standard empirical strategy and estimate our model in first differences to remove all possible state-specific effects in two ways (Spilimbergo 2009, pp. 535–36). First, we control for state fixed effects by taking first differences:

$$\Delta ef_{it} = \gamma \Delta imm_{iet-1} + \beta \Delta X_{it-1} + \mu_t + \varepsilon_{it} \quad (2)$$

Second, we also control state-specific trends with fixed effects in differences:

$$\Delta ef_{it} = \gamma \Delta imm_{iet-1} + \beta \Delta X_{it-1} + \mu_t + \delta_i + \varepsilon_{it} \quad (3)$$

The first specification attempts to control for state fixed effects by taking first differences. The second specification also controls for state-specific trends.

In addition, to avoid simultaneity bias, we lag the explanatory variables ten years in those specifications where we examine how the change in share of migrants with an educational attainment ( $\Delta imm_{iet-1}$ ) *e* in state *i* from 1980 to 1990 ( $t - 1$ ) impacts the change in economic freedom ( $\Delta ef_{it}$ ) in state *i*, in the following decade, that is, from 1990 to 2000 ( $t$ ).

Table 6 shows that, when statistically significant, foreign-born immigrants with a college education decrease economic freedom. One standard deviation increase in the (change in the) share of foreign-born individuals with a college education is correlated with a decrease in (change in) economic freedom by one half of a standard deviation. These results are statistically significant at the 1 percent level and occur in our fixed effects in differences.

We also examine the relationship between changes in foreign-born population grouped according to their educational attainment and certain sub-areas of economic freedom often seen as more likely to be harmed by immigrants without a high school diploma: government transfers and subsidies as a percentage of income (area 1B), top marginal income tax rate and the income threshold at which it applies (area 2B), and minimum wage legislation (area 3i).

None of our regressions shows a statistically significant relationship between (change in) share of immigrants without a high school diploma and (change in) in economic freedom score in those areas (see table 6).<sup>10</sup> However, the relationship between (change in) share of immigrants with a college education and (change in) economic freedom score in the area of government transfers and subsidies is negative and statistically significant at the 5 percent level. One standard deviation increase in (change in) the share of immigrants with a college education is associated with a decrease in the (change in) economic freedom score by two-thirds of a standard deviation (a little less than one point). While the impact on economic freedom is not zero, it's far from being economically significant. It's unlikely that this reduction in economic freedom would have much economic significance.

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<sup>10</sup> Similarly, the relationship between (change in) the share of immigrants with a high school diploma and (change in) economic freedom score, overall and for its subcomponents, is not statistically significant in any of our regressions even if the relationship is positive.

**Table 6. Immigration, education, and economic freedom: differences**

Lagged variables	Change in econ. freedom		Change in econ. freedom area 1B: government transfers and subsidies as a percentage of income		Change in econ. freedom area 2B: marginal income tax rate and income threshold at which it applies		Change in econ. freedom area 3i: minimum wage legislation	
	(1) OLS (10 years)	(2) Fixed effects OLS (10 yrs)	(3) OLS (10 yrs)	(4) Fixed effects OLS (10 yrs)	(5) OLS (10 years)	(6) Fixed effects OLS (10yrs)	(7) OLS (10 years)	(8) Fixed effects OLS (10 yrs)
Change in share of foreign born with no high school diploma	-3.884 (3.995)	-1.224 (7.883)	-24.09 (14.87)	28.65 (29.69)	-2.830 (15.65)	-15.65 (30.59)	-3.857 (4.419)	7.246 (11.02)
Change in share of foreign born with a high school diploma	2.656 (13.91)	5.644 (20.36)	63.32 (52.99)	69.03 (77.32)	17.48 (70.47)	10.80 (100.8)	11.49 (19.54)	23.69 (30.49)
Change in share of foreign born with college education	-1.667 (4.481)	-27.41*** (9.634)	6.417 (19.41)	-95.51** (39.60)	-27.96* (15.99)	-20.18 (41.12)	-6.614 (8.187)	-8.324 (22.02)
Change in share of US natives with college education	1.629 (1.556)	2.924 (2.287)	-5.313 (6.560)	-3.119 (11.17)	-3.497 (9.161)	-12.09 (9.040)	3.615 (3.829)	5.065 (4.979)
Change in log net real personal income per capita	-1.493*** (0.428)	-2.432*** (0.755)	-1.140 (1.681)	-4.322 (3.299)	-2.225 (1.567)	-3.231 (2.325)	-1.163** (0.533)	-1.279 (1.167)
Change in urbanization	-1.757* (0.971)	-2.866* (1.525)	-11.08** (4.721)	-17.24* (9.264)	2.368 (4.108)	5.604 (6.243)	-1.604 (1.501)	-1.403 (2.441)
Change in share of African Americans	-0.164 (0.244)	-0.226 (0.275)	0.179 (1.061)	-0.271 (1.079)	-0.559 (1.018)	-0.391 (1.003)	0.414 (0.346)	0.603 (0.387)
Observations	100	100	100	100	100	100	100	100
R-squared	0.675	0.789	0.219	0.355	0.092	0.118	0.597	0.705
Adjusted R-squared	0.646	0.770	0.151	0.299	0.0125	0.0408	0.562	0.679
No. of states		50		50		50		50

*Notes:* Robust standard errors are clustered by state in parentheses. The sample is a strongly balanced panel containing data from 1980 to 2010. Our dependent variables are change in economic freedom; change in economic freedom area 1B – government spending: transfers and subsidies as a percentage of income; change in economic freedom area 2B – taxes: top marginal income tax rate and the income threshold at which it applies; and change in economic freedom area 3i – labor market freedom: minimum wage legislation. Explanatory variables are lagged ten years in the ten-year specification, that is, if  $t = 2000 - 2010$ ,  $t - 1 = 1990 - 2000$ . All regressions are run with a constant; the constant is not displayed. \*\*\* significant at the 1 percent level; \*\* significant at the 5 percent level; \* significant at the 10 percent level.

## 2. Immigration, education, and economic freedom: long-run differences

Acemoglu et al. (2005, p. 48) posit that the relationship between education and democracy might only operate over very long lags.<sup>11</sup> In other words, institutions take time to change. We test this possibility by looking at the relationship between immigration and economic freedom over longer lags by examining long-run differences. Even though we cannot control for state fixed effects with long-run differences, we expect idiosyncratic state shocks to be less relevant in the longer run. We try the longest difference available with the present data using the following specification:

$$\Delta ef_{i,1980-2010} = \gamma \Delta imm_{ie1980-2010} + \beta \Delta X_{i1980-2010} + \varepsilon_{i,t} \quad (4)$$

Our results (displayed in table 7) show that, in the long run, the only statistically significant relationship between immigrants and overall economic freedom comes from immigrants with a high school diploma (statistically significant at the 10 percent level).

When we examine the sub-areas of the EFNA, we find that the relationship between immigrants grouped according to their educational attainment and economic freedom is negative and statistically significant at the 1 percent level for immigrants without a high school diploma in the sub-area of government spending – government transfers and subsidies as a percentage of income (Area 1B). A one standard deviation increase in (change in) the share of immigrants without a high school diploma is associated with a decrease in (change in) the economic freedom score for this area by about two-thirds of a standard deviation (about one point and a quarter). For all the other immigrant groups, the relationship is positive but not statistically significant. Again, this result should not be surprising, as this immigrant group is more likely to be at the bottom of the income ladder and, therefore, more likely to qualify for government subsidies and transfers.

In the sub-area of taxes—top marginal income tax rate and the

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<sup>11</sup> See also Spilimbergo (2009, p. 536).

income threshold at which it applies (Area 2B)—none of the coefficients (positive or negative) is statistically significant in the long run.

In the sub-area of labor market freedom—minimum wage legislation (Area 3i), the relationship between (change in) economic freedom score and (change in) the share of immigrants without a high school diploma and with a high school diploma is positive but not statistically significant. On the other hand, for immigrants with a college education, the relationship is negative and statistically significant at the 1 percent level. One standard deviation increase in (change in) the share of this immigrant group is associated with a decrease in (change in) the economic freedom score applied to minimum wage legislation of a little bit over two-thirds of a point (about seven-tenths of a standard deviation).

While this decrease in the economic freedom score for minimum wage legislation is likely to be economically insignificant, a possible explanation for this result is that college-educated immigrants tend to be underemployed at a greater rate than college-educated US natives. In addition, among college-educated immigrants, those who receive their college education outside the United States experience a greater underemployment rate than US college-educated immigrants (Batalova, Fix, and Bachmeier 2016, pp. 8–12). Therefore, it's possible that our results are driven by these college-educated immigrants who end up in low-skilled jobs and, therefore, push for higher minimum wages.

**Table 7. Immigration, education, and economic freedom: long-run differences**

Variables	Change in economic freedom area			
	(1) OLS (30 years)	(2) OLS (30 years)	(3) OLS (30 years)	(4) OLS (30 years)
Change in share of foreign born with no high school diploma <sub>1980-2010</sub>	-4.522 (3.052)	-57.03*** (13.28)	-4.116 (18.64)	1.360 (5.651)
Change in share of foreign born with a high school diploma <sub>1980-2010</sub>	-20.68* (11.72)	21.95 (48.80)	-74.15 (46.73)	27.33 (17.91)
Change in share of foreign born with college education <sub>1980-2010</sub>	9.385 (5.899)	32.18 (23.62)	34.51 (28.33)	-26.95*** (8.757)
Change in share of US natives with college education <sub>1980-2010</sub>	1.311 (2.614)	7.321 (9.067)	6.749 (13.71)	1.525 (4.304)
Change in log net real personal income per capita <sub>1980-2010</sub>	-0.320 (0.747)	-2.959 (3.010)	-2.883 (2.369)	4.522*** (0.974)
Change in share of urban population <sub>1980-2010</sub>	0.391 (1.378)	-5.580 (4.502)	0.975 (6.851)	-0.853 (2.450)
Change in share of African Americans <sub>1980-2010</sub>	0.0316 (0.482)	1.170 (2.297)	0.828 (2.224)	1.368 (0.877)
Observations	50	50	50	50
R-squared	0.184	0.371	0.079	0.596
Adjusted R-squared	0.0475	0.266	-0.0743	0.528

*Notes:* Robust standard errors clustered by state in parentheses. The sample is strongly balanced containing data between 1980 and 2010. Explanatory variables are over 30-year change. All regressions are run without a constant. Constant is not displayed. \*\*\* significant at the 1 percent level; \*\* significant at the 5 percent level; \* significant at the 10 percent level.

To be sure, our data do not separate immigrants who acquired their college education abroad from immigrants who acquired their college education in the United States. Therefore, we cannot really identify whether these results are driven more by immigrants who were educated abroad or by immigrants who were educated in the United States.<sup>12</sup>

<sup>12</sup> We run a similar set of regressions on the share of foreign born individuals with a bachelor's degree or higher, controlling for the share of native-born US citizens with a bachelor's degree or higher. Our results for the minimum wage legislation specification show that the negative coefficient associated with the share of foreign born individuals with a bachelor's degree or higher is larger and statistically

#### **IV. Conclusion**

Since Franklin ([1753] 1904), there have been concerns that unskilled immigrants (those without a high school diploma) who come to the United States are likely to harm the country's institutions because they are less likely to assimilate and less likely to understand the link between institutional quality and economic growth. Borjas (2016) reiterates such concerns when critiquing the economic literature, arguing that current immigration levels are too low and the deadweight losses of these restrictions are ginormous. In this paper, we test whether Borjas's concerns have merit.

Our results mostly don't support Borjas's concerns. Most of our results don't show any statistically significant negative relationship between immigrants without a high school diploma and the economic freedom score of the US states. We do find that the relationship between immigrants without a high school diploma and the economic freedom score for government transfers and subsidies as a percentage of income is negative and statistically significant in our level (5 percent) and long-run differences (1 percent) regressions. However, the impact on economic freedom score is so small that its economic significance is likely trivial.

On the other hand, we find that more education is not necessarily correlated with greater economic freedom. We find in our differences that (change in) the share of immigrants with a college education is associated with a decline in economic freedom score for government transfers and subsidies. The decline in economic freedom, however, is probably economically insignificant. Additionally, our long-run differences show a negative and statistically significant relationship between immigrants with a college education and the economic freedom score for minimum wage legislation. While the economic impact is likely insignificant, we speculate that this negative correlation might result from the fact that college-educated immigrants, particularly those educated abroad, are more likely to be underemployed—that is, employed in jobs not requiring a college education or degree—and they might be pushing for higher minimum wages.

However, one should not take too much comfort in our results, for several reasons.

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significant at the 1 percent level. Our results also show a negative relationship between the share of native-born US citizens with a bachelor's degree or higher and the economic freedom score for minimum wage legislation, but that relationship is not statistically significant. Our results are available upon request.

1. Our dataset only spans thirty years. Institutions take time to change, and thirty years might not be long enough to see any significant impact on economic freedom. In addition, even if—as Caplan (2001) shows—a higher level of education makes people think more like economists, as we mentioned earlier, our dataset does not identify where immigrants were educated, the quality of their education, or even their degree field.<sup>13</sup>

2. Our results report correlations between shares of different groups of migrants and economic freedom. While we use several robustness checks, correlation is not causation.

3. Despite using several robustness checks, endogeneity problems are unavoidable; they might weaken our results.

4. Borjas's (2015) model hypothesizes that if we eliminated all immigration restrictions, hundreds of millions of immigrants would come to the United States, and these immigrants would have the power to change US institutions via voting or another political process. The contemporary United States has yet to experience the type of mass immigration that Borjas talks about. It is possible that, if the United States experienced the type of mass immigration Israel experienced in the 1990s, the resulting institutional impact might be more significant, particularly if a majority of those immigrants were unskilled.

5. We cannot ignore that contemporary immigration takes place in an institutional environment wherein US immigration is carefully managed, even if imperfectly. This is particularly true for immigrants coming from countries with a poor economic and political institutional environment. In addition, immigrants, particularly those seeking permanent residency or US citizenship, must meet specific requirements that demonstrate they would not represent an economic burden to US taxpayers or undermine US institutions.<sup>14</sup> Therefore, not only should we not be too surprised by our results, but we also must be cautious in advocating for lowering immigration restrictions in the United States.

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<sup>13</sup> As discussed by Hanushek and Wößmann (2010, p. 251), the empirical literature shows that it's not so much the number of years of education that matters for economic growth as it is “the quality of education—measured on an outcome basis of cognitive skills.” See also Batalova, Fix, and Bachmeier (2016, p. 17), who show that underemployment and unemployment rates among college-educated immigrants also vary depending of their undergraduate degree field.

<sup>14</sup> For example, in addition to showing that they are law abiding, immigrants must show that they did not and do not support ideologies antithetical to US institutions.

## References

- Abramitzky, Ran, Leah Platt Boustan, and Katherine Eriksson. 2014. "A Nation of Immigrants: Assimilation and Economic Outcomes in the Age of Mass Migration." *Journal of Political Economy*, 122(3): 457–506.
- Acemoglu, Daron, Simon Johnson, and James A. Robinson. 2001. "The Colonial Origins of Comparative Development: An Empirical Investigation." *American Economic Review*, 91(5): 1369–1401.
- Acemoglu, Daron, Simon Johnson, James A. Robinson, and Pierre Yared. 2005. "From Education to Democracy?" *American Economic Review*, 95(2): 44–49.
- Acemoglu, Daron, Simon Johnson, James A. Robinson, and Pierre Yared. 2008. "Income and Democracy." *American Economic Review*, 98(3): 808–42.
- Arellano, Manuel, and Olympia Bover. 1995. "Another Look at the Instrumental-Variable Estimation of Error-Components Models." *Journal of Econometrics*, 68: 29–52.
- Arellano, Manuel, and Stephen Bond. 1991. "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations." *Review of Economic Studies*, 58(2): 277–97.
- Batalova, Jeanne, Michael Fix, and James D. Bachmeier. 2016. *Untapped Talent: The Costs of Brain Waste among Highly Skilled Immigrants in the United States*. Migration Policy Institute, New American Economy, and World Education Services.
- Baum, Christopher F. 2013. "EC 823 Applied Econometrics." Boston College, January.
- Bennett, Daniel L. 2016. "Subnational Economic Freedom and Performance in the United States and Canada." *Cato Journal*, 36(1): 165–85.
- Blundell, Richard, and Stephen Bond. 1998. "Initial Conditions and Moment Restrictions in Dynamic Panel Data Models." *Journal of Econometrics*, 87: 115–43.
- Borjas, George J. 2015. "Immigration and Globalization: A Review Essay." *Journal of Economic Literature*, 53(4): 961–74.
- Borjas, George J. 2014. *Immigration Economics*. Cambridge, MA: Cambridge University Press.
- Borjas, George J. 2016. *We Wanted Workers*. New York: W. W. Norton.
- Caplan, Bryan. 2001. "What Makes People Think Like Economists? Evidence on Economic Cognition from the Survey of Americans and Economists on the Economy." *Journal of Law and Economics*, 44(2): 395–426.
- Card, David. 2007. *How Immigration Affects US Cities*. CDP Discussion Paper Series No. 11/07, Department of Economics, University College London, Centre for Research and Analysis of Migration.
- Card, David. 2001. "Immigrant Inflows, Native Outflows, and the Local Labor Market Impacts of Higher Immigration." *Journal of Labor Economics*, 19(1): 22–64.
- Card, David. 2001. "Immigrant Inflows, Native Outflows, and the Local Market Impacts of Higher Immigration." *Journal of Labor Economics*, 19(1): 22–64.
- Clark, J., R. Lawson, A. Nowrasteh, B. Powell, and R. Murphy. 2015. "Does Immigration Impact Institutions?" *Public Choice*, 163(3): 321–35.
- Clemens, Michael A. 2011. "Economics and Emigration: Trillion-Dollar Bills on the Sidewalk?" *Journal of Economic Perspectives*, 25(3): 83–106.

- Compton, Ryan A., Daniel C. Giedeman, and Gary A. Hoover. 2011. “Panel Evidence on Economic Freedom and Growth in the United States.” *European Journal of Political Economy*, 27(3): 423–35.
- di Giovanni, Julian, Andrei A. Levchenko, and Francesc Ortega. 2015. “A Global View of Cross-Border Migration.” *Journal of the European Economic Association*, 13(1): 168–202.
- Docquier, Frédéric, Elisabetta Lodigiani, Hillel Rapoport, and Maurice Schiff. 2016. “Emigration and Democracy.” *Journal of Development Economics*, 120: 209–23.
- Docquier, Frédéric, Joël Machado, and Khalid Sekkat. 2015. “Efficiency Gains from Liberalizing Labor Mobility.” *Scandinavian Journal of Economics*, 117(2): 303–46.
- Easton, Stephen T., and Michael A. Walker. 1997. “Income, Growth, and Economic Freedom.” *American Economic Review*, 87(2): 328–32.
- Faria, Hugo J., and Hugo M. Montesinos. 2009. “Does Economic Freedom Cause Prosperity? An IV Approach.” *Public Choice*, 141(1/2): 103–27.
- Franklin, Benjamin. [1753] 1904. *The Works of Benjamin Franklin, Including the Private as Well as the Official and Scientific Correspondence, Together with the Unmutilated and Correct Version of the Autobiography*, compiled and edited by John Bigelow. The Federal Edition in 12 volumes. New York: G. P. Putnam’s Sons.
- George, Henry. 1899. *Chinese Immigration*. Vol. 1: Abdication–Duty, in *Cyclopaedia of Political Science, Political Economy, and of the Political History of the United States by the Best American and European Authors*, by John J. Lalor, 409–14. New York: Maynard, Merrill, & Co.
- Gwartney, James D., Randall G. Holcombe, and Robert A. Lawson. 2004. “Economic Freedom, Institutional Quality, and Cross-Country Differences in Income and Growth.” *Cato Journal*, 24(3): 205–33.
- Gwartney, James, Robert Lawson, and Joshua Hall. 2013 and 2015. *Economic Freedom of the World*. Vancouver, BC: Fraser Institute.
- Hall, Joshua C., and Robert A. Lawson. 2014. “Economic Freedom of the World: An Accounting of the Literature.” *Contemporary Economic Policy*, 32(1): 1–19.
- Hamilton, Bob, and John Whalley. 1984. “Efficiency and Distributional Implications of Global Restrictions on Labour Mobility: Calculations and Policy Implications.” *Journal of Development Economics*, 14(1): 61–75.
- Hanushek, Eric A., and Ludger Wößmann. 2010. “Education and Economic Growth.” In *International Encyclopedia of Education, Volume 2*, by Penelope Peterson, Eva Baker, and Barry McGaw, pp. 245–52. Oxford, UK: Elsevier.
- Hawley, George. 2019. “Immigration Status, Immigrant Family Ties, and Support for the Democratic Party.” *Social Science Quarterly*, 100(4): 1171–81.
- Hero, Rodney E., and Robert R. Preuhs. 2007. “Immigration and the Evolving American Welfare State: Examining Policies in the US States.” *American Journal of Political Science*, 51(3): 498–517.
- Higgins, Matthew J., Daniel Levy, and Andrew T. Young. 2006. “Growth and Convergence across the United States: Evidence from the County Level Data.” *Review of Economics and Statistics*, 88(4): 671–81.
- Kennan, John. 2013. “Open Borders.” *Review of Economic Dynamics*, 16(2): L1–L13.
- Moses, Jonathon W., and Bjørn Letnes. 2004. “The Economic Costs to International Labor Restrictions: Revisiting the Empirical Discussion.” *World Development*, 32(10): 1609–26.

- Nickell, Stephen. 1981. “Biases in Dynamic Models with Fixed Effects.” *Econometrica* 49(6): 1417–26.
- Nowrasteh, Alex, Andrew Forrester, and Cole Blondin. 2019. “How Mass Immigration Affects Countries with Weak Economic Institutions: A Natural Experiment in Jordan.” *World Bank Review*.
- Padilla, Alexandre, and Nicolás Cachanosky. 2018. “The Grecian Horse: Does Immigration Lead to the Deterioration of American Institutions?” *Public Choice*, 174(3–4): 351–405.
- Padilla, Alexandre, and Nicolás Cachanosky. 2019. “The Grecian Horse II: Do Immigrants Import Their Home Country’s Institutions into Their Host Countries? The Case of the American States.” SSRN. January 15.
- Powell, Benjamin W., Jamie Bologna Pavlik, and Estephania Lujan Padilla. 2019. “Cultural Baggage: Do Immigrants Import Corruption?” *Southern Economic Journal*, 85(4): 1243–61.
- Powell, Benjamin, J. R. Clark, and Alex Nowrasteh. 2017. “Does Mass Immigration Destroy Institutions? 1990s Israel as a Natural Experiment.” *Journal of Economic Behavior & Organization*, 141: 83–95.
- Roodman, David. 2009. “How to Do Xtabond2: An Introduction to Difference and System GMM in Stata.” *Stata Journal*, 9(1): 86–136.
- Ruggles, Steven, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek. 2015. *Integrated Public Use Microdata Series: Version 6.0 [Machine-readable database]*. Minneapolis: University of Minnesota.
- Spilimbergo, Antonio. 2009. “Democracy and Foreign Education.” *American Economic Review*, 99(1): 528–43.
- Stansel, Dean, and Meg Patrick Tuszynski. 2018. “Sub-National Economic Freedom: A Review and Analysis of the Literature.” *Journal of Regional Analysis and Policy*, 48(1): 61–71.
- Stansel, Dean, José Torra, and Fred McMahon, with Milagros Palac. 2016. *Economic Freedom of North America 2015*. Vancouver, BC: Fraser Institute.
- Walmsley, Terrie L., and L. Alan Winters. 2005. “Relaxing the Restrictions on the Temporary Movement of Natural Persons: A Simulation Analysis.” *Journal of Economic Integration*, 20(4): 688–726.
- Wiseman, Travis. 2017. “Economic Freedom and Growth in US State-Level Market Incomes at the Top and Bottom.” *Contemporary Economic Policy*, 35: 93–112.