

Casasola, David, Andres Marroquin, Antonio Saravia, and Monica de Zelaya. 2024. "College Education and Economic Beliefs in Guatemala." *Journal of Private Enterprise*, 39(2): 57–70.

College Education and Economic Beliefs in Guatemala

David Casasola*

Universidad Francisco Marroquín
Guatemala

Andres Marroquin

Mercer University
United States of America

Antonio Saravia

Mercer University
United States of America

Monica de Zelaya

Universidad Francisco Marroquín

Abstract

We study the link between college education and economic beliefs. More specifically, we study whether college education is associated with promarket beliefs. We use a new data set derived from a survey conducted in Guatemala in 2022. Our main results suggest that individuals with college education voice less support for private property, markets, and privatization but more support for individual liberty relative to those without college education. We propose some explanations for these results based on recent literature.

JEL Codes: A13, A22, Z1

Keywords: economic beliefs, Guatemala, college education

I. Introduction

Douglass North (2005) argues that the key to understanding economic performance is to understand institutions (the social rules

* We are thankful to an anonymous referee for valuable suggestions and the School of Business and Economics at Universidad Francisco Marroquin in Guatemala for providing the data. All errors are ours.

of the game that bind economic behavior). But to understand institutions it is important to understand economic beliefs. Our goal in this article is to explore how economic beliefs relate to college education.

Our study enhances the existing literature by introducing a novel data set from Guatemala. Our findings reveal that individuals with college education tend to exhibit less pro-market beliefs relative to individuals without college education. More specifically, although individuals with some or complete college education voice more support for individual liberty relative to those without college education, they also voice less support for private property, markets, and privatization.

II. Literature Review

A. Bryan Caplan's Contributions

Caplan (2007) explores the idea that voters often make irrational choices about economic and political policies. He challenges the assumption that voters are well informed and act in their best interest. He argues that voters frequently hold biased and uninformed views because of systematic errors in their thinking.

To illustrate these biases and misconceptions, Caplan compares public opinion with that of economists on various questions related to economic policies. He analyzes the results of the Survey of Americans and Economists on the Economy, which includes interviews with 1,510 randomly selected members of the US public and 250 PhD economists. Based on the answers to some of the survey questions he builds a category called the *enlightened public*, which groups together the more educated individuals. He finds more similarities in the way economists and the enlightened public see policies relative to the general public.

Caplan argues that while the general public may generally oppose regulation in abstract terms, they tend to support specific policies such as minimum wages or subsidies. Economists, on the other hand, are generally less enthusiastic about regulation because of concerns about efficiency and doubts regarding regulators' hidden agendas. Furthermore, Caplan (2001) argues that education makes people think like economists. However, this does not imply that more educated people will take strong positions against government intervention; rather, it suggests that more educated people will become more skeptical about the actual impact of different government policies. In a follow-up study, he finds that a variable

that represents cognitive abilities has a stronger association (relative to education) with economists' thinking (Caplan and Miller 2010).

Our study finds that college-educated individuals are less likely to hold promarket beliefs. If we assume economists support promarket beliefs, then our results suggest conclusions opposite to Caplan's. He focuses, of course, on surveys from the US while we study one from Guatemala.

B. Education and Free Market Beliefs

Caplan's studies were followed by a rising literature on the effect of college education on pro-free-market beliefs. Results are mixed. Using data from the 1970 British Cohort study, Scott (2022) finds that obtaining a college degree increases "economic right-wing attitudes." The question he analyzes is whether government should redistribute income from the better off to those who are less well off. This question is similar to one we use regarding progressive taxation. We find, however, the exact opposite result: those who attended college favor progressive taxation.¹

Another important study is that of Czegledi and Newland (2018), who, based on self-reported educational levels from the World Values Survey, find that "the mentality of more educated people is friendlier towards markets." Their definition of being friendlier toward markets is derived from an index, like ours, in which they include questions on whether competition stimulates people to work hard and develop new ideas, whether private ownership of business and industry should be increased, whether wealth can grow so there is enough for everyone, and whether people should take on more responsibility to provide for themselves. Again, we find the opposite result, although, of course, we only look at the link to college and not education in general. Also, the wording of the questions in their survey is different from ours.

Murphy and O'Reilly (2019) find a "robust positive effect of education on the quality of institutions," where institutions are captured by the Economic Freedom of the World Index (Gwartney, et al. 2017) and education by the Penn World Table's human capital index (Feenstra, Inklaar, and Timmer 2015). Similar results are found by Mayda and Rodrick (2005) and Jones and Potrafke (2014). We find opposite results, but, again, we only look at the effect of college.

¹ The wording of the survey question he uses is different from ours.

In contrast, using a Latin American sample, Saravia and Marroquin (2021, p. 1) conclude that “attending college in Latin America is associated with economic views situated to the left of the ideological spectrum in general/abstract terms and as they pertain to domestic economic issues. The exact opposite is true, however, regarding economic views that pertain to international trade issues.” This last result is consistent with Mayda and Rodrick (2005).

Saravia and Marroquin (2021) propose three theories for why a negative association could arise between college education and promarket beliefs: (a) college students’ views in Latin America during the twenty-first century might have been shaped by the influence of governments aligned with socialism of the 21st century, (b) the involvement of students in university government in the region traditionally led to “confrontation with the *status quo*” (p. 2), which usually implied amity with unions and left-wing political parties and “enmities with right wing political powers, as well as weak relations with entrepreneurs” (p. 2), and finally, (c) because of the low level of economic development in the region, universities in Latin America may be more “naturally focused on issues of poverty, development and income inequality, than universities in the U.S” (p. 2).

Moreover, based on a study using data from Bolivia, Saravia (2022, p. 193) finds that “college-educated individuals display left-leaning social preferences (they favor social equality and a tax system in which not everybody must pay taxes), but right-leaning individual preferences (they favor individual liberty and, to a lesser extent, private property, which are variables that affect them more directly).” We find a similar result for Guatemala.²

C. Interplay between Intelligence and Political and Economic Beliefs

Education can be both the source and the result of intelligence or cognitive abilities. The interplay between cognitive abilities and economic and political beliefs has gained significant attention particularly in the context of voting behavior in various political systems. Ludeke and Rasmussen (2018), Rindermann and Thompson (2011), Ritchie et al. (2018), Carl (2015), and Ganzach (2018) all study the influence of cognitive abilities on political and economic perspectives. Nilsoon et al. (2019), for their part, look at the link

² Our study also contributes to the literature on economic beliefs in general (Blendon et al. 1997; Klein and Stern 2007; Maio 2013; and De Benedictis and Di Maio 2016).

between political ideology, beliefs, and susceptibility to deceptive information.

Using data from the US and Denmark, Ludeke and Rasmussen (2018) find that higher cognitive ability predicts left-wing social and right-wing economic views—which eliminates the effect of cognitive ability on how people vote in the left-versus-right dimension. In their study of a multiparty system in Denmark, however, they show that it is possible to use different dimensions (authoritarian egalitarianism and libertarianism) to find an effect of cognitive abilities on voting behavior.

Studying the relationship between wealth creation and cognitive ability, Rindermann and Thompson (2011) argue that “wealth in modern times is the result of cognitive capitalism.” *Cognitive capitalism* refers to the idea that the cognitive ability of society is a prerequisite for technological progress and the rise of wealth. The authors also find that the cognitive ability of the intellectual class increases economic freedom.

Regarding the link between education and intelligence, Ritchie et al. (2018) find that “education has a causal effect on intelligence test scores. The effect of 1 additional year of education . . . was estimated at approximately 1 to 5 standardized IQ points.”

Using data from the 2012 wave of the American Election Study, Carl (2015) finds that “cognitive ability was positively associated with both socially liberal beliefs and fiscally conservative beliefs” (2015, p. 247). He also shows a positive correlation between cognitive abilities and socioeconomic position—which was obtained by extracting the first principal component, which included measures of education and income.

Regarding the link between cognitive abilities and rationality, Ganzach (2018, p. 67) finds that more intelligent people are more rational in their political preferences. By *rationality*, he means consistency between political attitudes and political preferences. He measures political preferences with party affiliation and voting, and political attitudes with views such as beliefs on abortion.

Regarding the link between political ideology, beliefs, and susceptibility to deceptive information, Nilsson et al. (2019) study the relationship between political ideology and receptivity to pseudo-profound *bullshit* (defined as “obscure sentences constructed to impress others rather than convey truth”). They summarize their findings as follows: “Bullshit receptivity was clearly associated with social conservatism, and . . . ingroup loyalty, respect for authority,

and purity, but it was associated with centrism or even leftism . . . in the economic domain.”

III. Data, Methods, and Results

Our data come from the Global Entrepreneurship Monitor survey ($n = 3,261$). This representative survey is conducted every year in Guatemala by Universidad Francisco Marroquín. In 2022, the survey included a unique set of items about economic beliefs:

- a. Private property should be respected (*Private_Property*).
- b. The market economy is the best system to develop a country (*Market*).
- c. Public companies should be privatized as much as possible (*Privatization*).
- d. Individual freedom is important for me (*Liberty*).

Interviewees chose the degree of agreement with each of these statements on a scale from 1 to 5. Based on these items, we built an index of economic beliefs by adding the answers ($a + b + c + d$) for each interviewee. As a result, the index runs on a scale from 4 to 20; this is our main dependent variable.

We assess the robustness of our results using two alternative dependent variables: *Individual_Resp*, which takes the value of 0 if interviewees believe that the government should be responsible for the individual’s welfare and 1 if they believe that individuals should be responsible for their own welfare (mean = 0.64); and *Progressive_Tax*, which takes the value of 1 if interviewees believe that people who earn higher income should pay a higher tax percentage, and 0 if they believe that people should all pay the same tax percentage or nobody should pay any type of tax (mean = 0.57).

The main independent variable is *College*, a dummy variable that takes the value of 1 if the person has attended college (regardless of completion) and 0 otherwise.³ Approximately 20 percent of the respondents indicated that they had completed college or had some college education.

We adjusted our regressions with a set of demographic variables: *Age*; *Capital*, an indicator for whether the person lives in the capital of the country—Guatemala City—rather than a province; *Female*, an indicator for being female; *Married*, an indicator for being married; *Sources_Income*, the number of sources of income in the household; *Head*, if the interviewee produces the main source of income for the

³ We excluded thirty-seven individuals with postgraduate degrees.

household; *Household_Income*, the income of the household on a scale of 1–11 that goes from US\$0–\$64 to > \$2,550.⁴ Table 1 presents descriptive statistics.

Table 1. Descriptive statistics

	n	mean	sd	median	min	max	range
<i>Age</i>	3260	34.77	12.48	32	18	64	46
<i>Private Property</i>	3259	4.80	0.60	5	1	5	4
<i>Market</i>	3233	4.22	1.04	5	1	5	4
<i>Privatization</i>	3219	2.60	1.54	2	1	5	4
<i>Liberty</i>	3256	4.72	0.72	5	1	5	4
<i>Index</i>	3197	16.34	2.27	16	4	20	16
<i>Individual Resp</i>	3229	0.64	0.48	1	0	1	1
<i>Progressive Tax</i>	3242	0.57	0.49	1	0	1	1
<i>Capital</i>	3261	0.33	0.47	0	0	1	1
<i>Female</i>	3261	0.51	0.50	1	0	1	1
<i>Married</i>	3259	0.39	0.49	0	0	1	1
<i>Sources Income</i>	3243	2.23	1.37	2	0	20	20
<i>Head</i>	3248	0.38	0.49	0	0	1	1
<i>Household Income</i>	2833	5.23	2.29	6	1	11	10
<i>College</i>	3223	0.20	0.40	0	0	1	1

Figure 1 shows the histogram for each of the variables that build our index of economic beliefs. One can see that Guatemalans generally hold promarket beliefs, except when it comes to *Privatization*. Figure 1 also shows the density of *Index*.

⁴ These values are based on a conversion from the local currency to US\$ using an exchange rate of 1 US\$ = 7.84 quetzales.

Figure 1. Histograms of main dependent variables

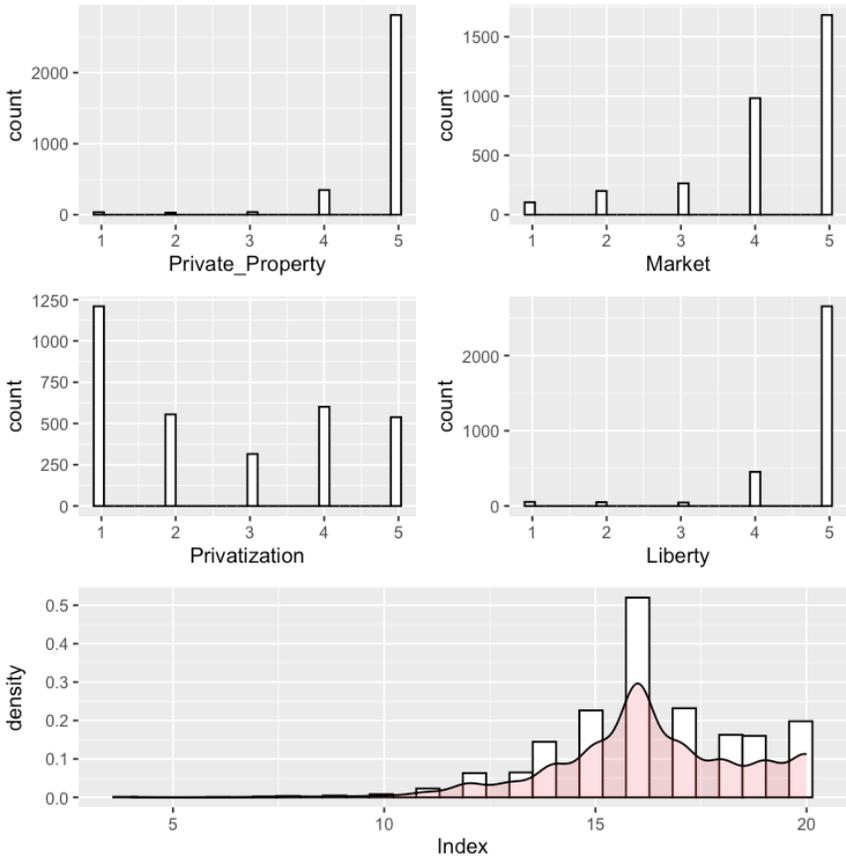


Table 2 shows OLS regression results. *Index* is the dependent variable in models 1 through 3. Notice that *College* is negative and significant. College education is associated with a 0.5-point decrease in the index. Other highly significant variables include *Age*, *Married*, and *Head*. Younger people, nonmarried people, and heads of household voice more promarket beliefs.

Table 2. Regression results: OLS and logistic models

	Dependent variable				
	Index			Individual Resp	Progressive Tax
		OLS		logistic	logistic
	(1)	(2)	(3)	(4)	(5)
<i>College</i>	-0.502*** (0.099)	-0.558*** (0.100)	-0.526*** (0.114)	-0.169 (0.108)	0.344*** (0.110)
<i>Age</i>		-0.018*** (0.003)	-0.021*** (0.004)	-0.004 (0.004)	0.036*** (0.004)
<i>Capital</i>		-0.069 (0.086)	-0.064 (0.093)	-0.272*** (0.087)	-0.051 (0.087)
<i>Female</i>		-0.066 (0.080)	-0.024 (0.093)	0.108 (0.087)	-0.456*** (0.088)
<i>Married</i>		-0.120 (0.087)	-0.195** (0.094)	0.291*** (0.090)	0.119 (0.089)
<i>Sources Income</i>			0.034 (0.033)	-0.032 (0.032)	-\$0.047 (0.032)
<i>Head</i>			0.211** (0.102)	0.133 (0.096)	0.049 (0.096)
<i>Household Income</i>			0.001 (0.020)	0.088*** (0.019)	0.098*** (0.019)
<i>Constant</i>	16.449*** (0.045)	17.178*** (0.131)	17.168*** (0.191)	0.250 (0.180)	-1.223*** (0.183)
<i>Observations</i>	3,159	3,156	2,741	2,765	2,773
<i>R2</i>	0.008	0.020	0.024		
<i>Adjusted R2</i>	0.008	0.019	0.021		

Note: *p<0.1; **p<0.05; ***p<0.01

To assess the consistency of our results, we run two more regressions using *Individual_Resp* and *Progressive_Tax* as dependent variables (models 4 and 5). Even though *College* is not significant in model 4, the sign is negative, consistent with our results for *Index*. The coefficient of *College* is positive and significant in model 5, which is also consistent with our main results. More specifically, individuals

with college education are 1.41 times more likely to voice support for progressive taxation ($e^{0.344} = 1.41$).⁵

Even though the index gives us a good idea of the general link between college education and economic beliefs, indexes can hide important information about individual variables. Table 3 shows ordered-logit regression results for each individual component of the index. *College* is significant and negatively correlated with *Private_Property*, *Market*, and *Privatization*, but it is significant and positively correlated with *Liberty*. In other words, college students, relative to noncollege students, voice less respect for private property, the free market economy, and privatization of public companies but favor more individual liberty for themselves.

⁵ We excluded *Individual_Resp* and *Progressive_Tax* from the index because of discrepancies in the response scales. Specifically, the scale of available responses for these two items differed from those for the initial four questions on economic beliefs.

Table 3. Regression results: ordered-logistic models

	Dependent variable			
	Private Property (1)	Market (2)	Privatization (3)	Liberty (4)
<i>College</i>	-0.431*** (0.144)	-0.399*** (0.096)	-0.340*** (0.092)	0.266* (0.142)
<i>Age</i>	0.006 (0.005)	0.027*** (0.004)	-0.044*** (0.003)	0.022*** (0.005)
<i>Capital</i>	-0.204* (0.121)	-0.090 (0.080)	0.105 (0.076)	-0.025 (0.109)
<i>Female</i>	0.239* (0.123)	-0.293*** (0.081)	0.113 (0.075)	-0.032 (0.108)
<i>Married</i>	-0.003 (0.127)	-0.049 (0.083)	-0.158** (0.078)	-0.070 (0.113)
<i>Sources Income</i>	0.067 (0.047)	0.041 (0.029)	0.001 (0.027)	-\$0.025 (0.037)
<i>Head</i>	0.282** (0.139)	0.208** (0.090)	0.154* (0.084)	0.121 (0.122)
<i>Household Income</i>	0.075*** (0.027)	0.010 (0.018)	-0.065*** (0.017)	0.081*** (0.024)
<i>Observations</i>	2,789	2,769	2,758	2,788

Note: *p<0.1; **p<0.05; ***p<0.01

IV. Discussion

We found that having college experience (either complete or incomplete) is linked negatively with our index of promarket beliefs in Guatemala. More specifically, having college experience is associated with a reduction in the index equivalent to 0.22 standard deviations.

Using a new data set from Guatemala, we explored whether economic beliefs are associated with college education. We used an index of promarket beliefs composed of opinions on whether private property should be respected, whether the market economy is the best system to develop a country, whether public companies should be privatized as much as possible, and whether individual freedom is important. We found that individuals with college education voice less support (0.22 standard deviations) for promarket beliefs than those without college education. When using these variables individually, we found that those with college education voice less support for private

property, markets, and privatization but more support for individual liberty.

We also analyzed beliefs about individual versus government responsibility and about progressive taxation. Although the coefficient of *College* is not statistically significant when the dependent variable is *Individual_Resp*, the sign is negative, which is consistent with our previous results. That is, interviewees with college education voice more support for the idea that governments should be responsible for the individual's welfare rather than their being responsible for their own welfare. The coefficient is statistically significant and positive when the dependent variable is *Progressive_Tax*. This result is also consistent with our previous results and shows that the support for progressive taxation is higher among individuals with college education.

The somewhat-surprising result is that when we ran separate regressions for each of the variables in our promarket index, we found that the coefficient for *College* is significant and positively correlated with individual liberty. This result is consistent with that of Saravia (2002), who finds that college students in Bolivia display left-leaning social preferences (favoring, for example, social equality) but right-leaning individual preferences, as they favor individual liberty. Saravia concludes that this result fits the connotation of terms like *socialista caviar*, “commonly used in Latin America to refer to educated individuals who consider themselves progressive, or even socialist, but admit and enjoy the benefits of individual liberty and markets.”

Of course, we are reporting correlations and not causal results.⁶ And *college education* is a broad category that includes a wide array of degrees. It is possible that some college degrees are more positively linked to certain economic beliefs than others. Unfortunately, our data set does not allow us to examine those differences.

To the extent that promarket beliefs contribute to the establishment of efficient institutions, and such institutions contribute to economic prosperity, our results suggest that universities in Guatemala might not be contributing to this virtuous cycle.

While our results can be explained by the same rationale advanced by Saravia and Marroquin (2021) and Saravia (2022), there may be additional reasons specific to Guatemala to explain them. One possibility is that the prevalent corruption in Guatemala, which

⁶ There are fifteen universities in Guatemala. One is public, and the other fourteen are private. There is wide variation in size and ideological leanings.

coexists with a mostly capitalist system, pushes those that are more educated away from supporting capitalism.⁷ This idea is based on the argument that governance and the performance of public institutions is noticed more by the more educated (Botero, et al. 2013).

References

- Blendon, R., J. Benson, M. Brodie, R. Morin, D. Altman, D. Gitterman, M. Brossard, and M. James. 1997. "Bridging the Gap between the Public's and Economists' Views of the Economy." *Journal of Economic Perspectives* 11 (3): 105–18.
- Botero, J., A. Ponce, and A. Shleifer. 2013. "Education, Complaints, and Accountability." *Journal of Law & Economics* 56 (4): 959–96.
- Caplan, B. 2001. "What Makes People Think Like Economists? Evidence on Economic Cognition From the 'Survey of Americans and Economists on the Economy.'" *Journal of Law & Economics* 44 (2): 395–426.
- Caplan, B. 2002. "Systematically Biased Beliefs about Economics: Robust Evidence of Judgmental Anomalies from the Survey of Americans and Economists on the Economy." *Economic Journal* 112 (479): 433–58.
- Caplan, B. 2007. *The Myth of the Rational Voter: Why Democracies Choose Bad Policies*. Princeton, NJ: Princeton University Press.
- Caplan, B., and S. Miller. 2010. "Intelligence Makes People Think like Economists: Evidence from the General Social Survey." *Intelligence* 38 (6): 636–47.
- Carl, N. 2015. "Cognitive Ability and Political Beliefs in the United States." *Personality and Individual Differences* 83: 245–48.
- Czegledi, P., and C. Newland. 2018. "Measuring Global Support for Free Markets, 1990–2014." In *Economic Freedom of the World*, by James Gwartney, Robert Lawson, Joshua Hall, and Ryan H. Murphy. Vancouver: Fraser Institute.
- De Benedictis, L., and M. Di Maio. 2016. "Schools of Thought and Economists' Opinion on Economic Policy." *Eastern Economic Journal* 42: 464–82.
- Feenstra, R. C., R. Inklaar, and M. P. Timmer. 2015. "The Next Generation of the Penn World Table." *American Economic Review* 105 (10): 3150–82.
- Ganzach, Y. 2018. "Intelligence and the Rationality of Political Preferences." *Intelligence* 69: 59–70.
- Gwartney, J., R. Lawson, and J. Hall. 2017. *Economic Freedom of the World Annual Report*. Vancouver: Fraser Institute.
- Jones, G., and N. Potrafke, 2014. "Human Capital and National Institutional Quality: Are TIMSS, PISA, and National Average IQ Robust Indicators?" *Intelligence* 46: 148–55.
- Klein, D. B., and C. Stern. 2007. "Is There a Free-Market Economist in the House? The Policy Views of American Economic Association Members." *American Journal of Economics and Sociology* 66: 309–34.
- Ludeke, S., and S. Rasmussen. 2018. "Different Political Systems Suppress or Facilitate the Impact of Intelligence on How You Vote: A Comparison of the U.S. and Denmark." *Intelligence* 70: 1–6.
- Mayda, A. M., and D. Rodrick. 2005. "Why Are Some People (and Countries) More Protectionist than Others?" *European Economic Review* 49 (6): 1393–1430.

⁷ We thank an anonymous referee for offering this interpretation.

- Murphy, R. H., and C. O'Reilly. 2019. "Applying Vector Autoregression to Institutions, Human Capital, and Output." *Empirical Economics* 57: 1633–1652.
- North, D. 2005. *Understanding the Process of Economic Change*. Princeton, NJ: Princeton University Press.
- Maio, M. D. 2013. "Are Mainstream and Heterodox Economists Different?" *American Journal of Economics and Sociology* 72: 1315–48.
- Nilsson, A., A. Erlandsson, and D. Vastfjäll. 2019. "The Complex Relation between Receptivity to Pseudo-profound Bullshit and Political Ideology." *Personality & Social Psychology Bulletin* 45 (10): 1440–54.
- Rindermann, H., and J. Thompson. 2011. "Cognitive Capitalism: The Effect of Cognitive Ability on Economic Productivity." *Psychological Science* 22 (6): 754–63.
- Ritchie, S., and E. Tucker-Drob. 2018. "How Much Does Education Improve Intelligence? A Meta-analysis." *Psychological Science* 29 (8): 1358–69.
- Saravia, A. 2022. "Does College Make You Progre? Evidence from Bolivia." *Estudios De Economía* 49 (2): 175–97.
- Saravia, A., and A. Marroquín. 2021. "Is College Education Associated with Left-Leaning Economic Views? Evidence from Latin America." *Social Science Journal* 4: 1–16.
- Scott, R. 2022. "Does University Make You More Liberal? Estimating the Within-Individual Effects of Higher Education on Political Values." *Electoral Studies* 77: 102471.