Schools of Thought:

Leader Education and Policy Outcomes

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Abstract

In this article, we develop and test a leader-specific theory of economic and political liberalization. Our theoretical mechanism is the link between the learning model of the educational institution and the emphasis on the promotion of the liberal economic and political values in its graduates. Whereas the more hierarchical Eastern European or East Asian learning models emphasize narrow specialization and technical skills, the general education curriculum at Anglo-American institutions introduces liberal principles of open markets, property rights, and individual political freedoms. Using a novel dataset on international leaders' educational attainment and specialization, we show that leaders who attended Anglo-American universities are more likely to implement liberal policies across a number of issue areas, such as trade and financial liberalization, judicial independence, human rights protections, and democratic reforms.

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Introduction

Waves of economic and political liberalization—and subsequent backsliding—have been a key feature of the international system in the post-World War II era. Most analyses have explained these trends in terms of systemic and macro-level processes; much less attention has been paid to the individual leaders that initiate liberal reforms and oversee policy implementation. While institutions and the international environment shape the menu of policy options, national leaders maintain significant discretion over when and which policies are ultimately enacted.

Nonetheless, country leaders are key to a number of political and economic outcomes, such as conflict initiation (Chiozza and Goemans 2011; McManus 2018; Saunders 2018), crisis bargaining (Wolford 2007; McManus 2019, 2021; Lupton 2020), economic performance (Jones and Olken 2005; Li, Xi, and Yao 2020), and international commitments (Colgan and Lucas 2017). Individual-level attributes, such as prior life experiences, influence leader beliefs and, ultimately, their policy actions (Bashevkin 2014, 2018; Horowitz, Stam, and Ellis 2015; Carter and Nordstrom 2017; Carter and Smith 2020).

We argue that leaders' decision-making and policy choices are shaped, in part, by the learning model of the educational institution they attended. While national leaders come from a variety of demographic and economic backgrounds, the majority are children of economic elites. As such, they have the resources to obtain their education at the most elite institutions around the world. Out of 986 international heads of state from non-OECD countries in our dataset, twenty percent studied at a university in the US or UK. While the prestige, high rankings, and abundant resources of Anglo-American institutions attract students from all over the world, these institutions also follow a very distinct education model. The goals and the unique features of the Anglo-American education model condition its graduates to prefer liberal economic and political outcomes.

In contrast to more hierarchical learning institutions that emphasize narrow specialization and technical skills, Anglo-American universities have traditionally placed greater value

on liberal arts, critical thinking, open dialogue, and other liberal values. The liberal principles of free markets, property rights, and individual political freedoms, taught as part of the general education curriculum at these institutions, are echoed and replicated through the broader institutional culture and lifestyle. Whether individual students agree or disagree with the content of their general education classes, these concepts and ideas often serve as perfect conversation starters with their peers. College friendship networks reinforce the ideas taught in classes in coffee-shops, through student organizations, at parties, and in late night conversations. Laying the foundation for their friendship networks, the liberal concepts learned in class also become the foundation of individuals' policy knowledge and worldview. Importantly, the values internalized as part of college education persist long after graduation. As some one the international graduates of the Anglo-American institutions return to their home countries and gain leadership positions, the act to translate their preferences for liberal principles into policy.

We evaluate our theory across several economic and political policy outcomes, including trade and financial openness, degree of judicial independence, respect for human rights, and depth of liberal democracy. To measure educational background, we introduce an original dataset detailing the location and field of study for leaders of non-OECD countries between 1946–2015. Our statistical results provide strong support for our predictions.

Our study makes a number of contributions. First, it adds to the expanding literature on leader-focused research. Country leaders have tremendous agency when selecting among policy options, even under the constraints of both international conditions and domestic institutions. We show that formative past experiences, such as educational background, have systematic effects on policy implementation. Second, we introduce a novel dataset on leader educational backgrounds, that includes any degrees attained, major, and the name and location of the institutions. Third, we use these data to demonstrate an important, but under-emphasized, avenue of policy diffusion: education networks. While previous work has focused on the mechanisms of coercion, competition, or socialization at the state-level

(Plümper, Troeger, and Winner 2009; Thies, Chyzh, and Nieman 2016), we emphasize the importance of micro-level leader-specific processes. Finally, the analysis identifies tertiary education as am important channel for policy and value diffusion from a small set of countries to the rest of the world. At a macro-level, evidence of this diffusion validates the policy of investing in domestic educational institutions as a powerful source of normative and ideational influence.

This article proceeds as follows: we begin by establishing the importance of national leaders in promoting various large-scale policy transformations. Next, we describe the two causal mechanisms that link a leader's educational background to specific types of political and economic reform. We then describe the data and methods, present our empirical results, and conclude.

Liberalization and Leader Life Experiences

Widespread economic and political liberalization is a relatively recent phenomenon. Economic liberalization, or the reduction of barriers to economic transactions between nations, has been the trend for many developing nations in the 20^{th} and 21^{st} centuries (Sachs and Warner 1995; Wacziarg and Welch 2008). Open markets bring numerous economic benefits, such as economic growth and access to new goods and technologies (Dornbusch 1992; Billmeier and Nannicini 2013). Political liberalization has also dramatically increased in recent decades, with improvements in human rights protections (Fariss 2014, 2019; Nieman and Ring 2015; Sikkink 2019) and expansion of democracy in all regions of the world (Vanhanen 2004; Coppedge et al. 2020; Lührmann et al. 2020).

Liberalization is often explained as the result of macro-level processes. Political and economic reforms are treated as a corollary of other domestic transformations, such as economic development (Boix 2011; Mousseau and Mousseau 2008; Urbatsch 2013, 2016), political competition (Acemoglu and Robinson 2006; Lobell 1999), and social movements (Beaulieu

2014; Brancati 2014). Regional or global diffusion processes also explain political (Kadera, Crescenzi, and Shannon 2003; Gleditsch and Ward 2006; Gunitsky 2014) and economic liberalization (Simmons and Elkins 2004; Chyzh 2017). Others argue that economic and political reforms may be endogenous (Chyzh 2016). The micro-level processes behind political and economic liberalization, such that the role played by individual national leaders has received little scholarly attention.

Despite receiving little scholarly attention, national leaders certainly have the power, ambition, and resources to shape large-scale political and economic outcomes in their countries. While institutional and social constraints may limit the menu of possible actions, leaders often have great latitude in agenda setting and advocating for specific policy goals.

Previous research has linked policy actions to specific leader characteristics, such as age and psychological traits. Older leaders, for example, are more likely to enter military disputes (Horowitz, McDermott, and Stam 2005). Leader's risk-taking propensity, particularly their locus of control, has been shown to be a key predictor for their willingness to use military force (Keller and Foster 2012; Keller, Grant, and Foster 2020).

Life experiences also impact leader behavior. Prior military experience is linked with conflict onset (Horowitz and Stam 2014), but also greater oversight of military operations and more limited terms of engagement by legislators (Lupton 2017) and distinct legislative agendas (Best and Vonnahme 2021). In an ethnographic study, Bashevkin (2018) shows that the interaction of gender, education, and career experiences affect the policy agenda of foreign ministry officials. Personal experiences are powerful drivers of behavior, as these experiences "form a mental Rolodex that both citizens and leaders turn to when making strategic decisions" (Horowitz, Stam, and Ellis 2015, 10). This is to say that leaders will draw upon these experiences when confronted with the many difficult decisions they face as chief executive.

Educational background is another life experience that influences a leader's policy-making. Gift and Krcmaric (2017) find that leaders educated at Western universities are

more likely to democratize their home state. Leaders with lengthier educational experiences are linked to increased rates of economic growth and trade liberalization (Besley, Montalvo, and Reynal-Querol 2011; Li, Xi, and Yao 2020). These effects are particularly pronounced for leaders with economics degrees, who may have a greater understanding of the complex economic systems in which they operate.

Universities around the world vary greatly in terms of resources and funding, academic curricula, learning models, and research activity. Universities located in economically prosperous nations, such as the US and UK, have larger budgets, which usually translate in more diverse curricula, especially in liberal arts, and higher research activity. Liberal arts curricula tend to promote liberal values with an emphasis in critical thinking, as well as individual political and economic rights and freedoms. Leaders who traveled abroad to attend a university that follows the Anglo-American model have vastly different educational experiences than leaders who attended a school that does not follow the Anglo-American model. We argue that these differences impact a leader's future policy decisions.

How Education Shapes Worldviews

College is a particularly formative experience in an individual's life. For many students it will be the first time "leaving the nest" to explore new corners of the world. Most are attending college at an age where their political beliefs and values are most malleable (Stoker and Jennings 2008). The skills learned and the connections formed as a part of college experience continue to shape individuals' worldview and decision-making long after graduation, whether they go on to become middle managers, CEOs, or leaders of states.

University experience, and the way it shapes individual political and economic preferences, depends on whether the school follows the Anglo-American learning model, which emphasises liberal values, critical thinking, and individualism. An auxiliary source of variation has to do with the individual-level specialization decision. Individuals who study economics

or other liberal arts fields have a greater exposure to liberal principles than those educated in other fields. We argue that this exposure early in life manifests in policy preferences for political and economic reforms for individuals that go on to become heads of state.

Anglo-American Learning Model

The Anglo-American education model is most widespread in the US and UK, but has been increasingly implemented elsewhere (Marginson 2006; Curaj et al. 2015). Universities that follow this model are distinct from alternative models, such as the Eastern European or East Asian models, on several key dimensions, such as research intensity, pedagogy, and student environment.[1] Though many countries seek the development of world class universities, this distinction tends to be dominated by schools in the US, UK, and a handful of other countries (Guri-Rosenblit 2015), many of which adopted the Anglo-American model (Marginson 2006; Curaj et al. 2015). Despite recent budget constriction, these universities that follow this learning model tend to be better financed, have fewer faculty vacancies, offer higher compensation, and produce more scholarly output (World Bank 2009). High rankings and prestige makes US and British universities attractive destinations for students from all over the world.

A distinct feature of the Anglo-American learning model, in contrast to other models, is an emphasis on critical thinking, debate, and individualism over rote memorization (Biggs 1997; Egege and Kutieleh 2004). The debate-style seminars, with instructors serving as moderators whose views, just like those of students, are open to critique, contrasts with pedagogies of more hierarchical structures, such as the Eastern European and East Asian models (Durkin 2008). Rather than treating knowledge as absolute, students are encouraged to critique and evaluate theories based on logical consistency and data-based evidence

[1]Marginson (2006) describes the hegemony of the Anglo-American university system as built on four key parts. First, it aims to combine both elite and mass education within one structure. Second, teaching and research are treated as mutually reinforcing. Third, its diverse makeup allows it multiple competencies and serves global, national, and local actors. Fourth, its governance structure, incorporating academics, executive leadership, and external actors, can be rearranged to meet new challenges.

(Kember 2001; Durkin 2008). This emphasis on critical thinking, debate, and individualism instills support of liberal principles.

Anglo-American universities also differ in terms of coursework. The traditional liberal arts education model requires students to take classes in the social sciences and liberal arts, as well as humanities. The general education courses do not only create opportunities for connections among students from different majors, but also lay a common values foundation for cohorts of students. The focus on breadth and well-roundedness, at the expense of specialization, encourages good citizenship (Callan 1997). The content of general education classes, such as microeconomics, political science, or philosophy, introduce the concepts of individual liberties and the open-market system, such as the individual ownership of property and the equality of all people under the law (Halsey and Trow 1971). As a result, students that take these classes develop a preference for free trade and globalization (Hainmueller and Hiscox 2006).

Student life also differs. Anglo-American universities increasingly seek to incorporate students in the construction of curricula, giving them greater voice as key stakeholders within the university community (Ashwin and McVitty 2015; Logermann and Leišytė 2015). Outside the classroom, university-sponsored student organizations engage with political, economic, and social issues–something that would be unthinkable within more closed and hierarchical Eastern European or East Asian models. The concept of an Anglo-American college campus itself as a mostly self-contained administrative unit that contains student housing, dining, coffee-shops, shopping and recreation, and even its own monetary units, is completely unique. These member-only microcosms multiply the opportunities for student interaction. Whether individual students agree or disagree with the liberal ideas learned in general education classes, these concepts are the natural starting point and the foundation for their friendships and relationships, as well as their broader worldview (Pascarella and Terenzini 1991; Strother et al. 2021). College-related social experiences tend to leave a lasting impression on young individuals, shaping their beliefs, and actions for years to come.

Socialization does not end at graduation. The social connections made at university often turn into life-long transnational linkages (Gift and Krcmaric 2017). As some individuals go on to become national leaders, their college friends take on prominent positions in industry or government of their own. Weymouth and Macpherson (2012) argue that college-based network linkages create epistemic communities that affect policy decisions at the national level (see also Coombs 1964). Others have argued that close ties to Western nations are responsible for the dissemination of democracy (Spilimbergo 2009; Levitsky and Way 2010; Gift and Krcmaric 2017). Once in office, leaders continue to draw on their transnational linkages for support, favors, or even policy expertise. Transnational social networks originating from Anglo-American college campuses exhibit a stronger preference for liberal policies and reform than other types of social networks. Support or favors from members of these networks are likely to come in exchange for promise of liberal reform; their policy expertise is likely to be grounded in liberal principles. As a result, leaders educated at Anglo-American universities are more likely to consider and implement liberal political and economic reform than leaders that do not have this experience.

Specialization

The socialization effects of Anglo-American universities are even stronger for students that major in liberal arts. In addition to general education classes, liberal arts majors, such as economists, sociologists, and political scientists, are exposed to upper level classes that provide an in-depth and nuanced treatment of various economic and political models, policy trade-offs, and data-based evidence. Students specializing in these fields develop an understanding of complex economic and political theories, such as the costs and consequences of economic liberalization, the relationship between property rights and economic growth, and the effect of human rights protections on the development of human capital. Weymouth and Macpherson (2012) show that the specializing training and close social connections shared among Ph.D. economists from the US have been instrumental in the spread of trade liber-

alization cross-nationally. Li, Xi, and Yao (2020) provide evidence that leaders trained in economics are more likely to implement economic liberalization than leaders without such training.

Liberal arts coursework, of course, does more than just preach the virtues of economic openness. Their emphasis on individualism and political equality also fosters greater respect for physical integrity rights and liberal democracy. A historical emphasis on negative freedoms is enshrined in legal and constitutional texts, that are often taught and debated as apart of liberal arts curriculum at Anglo-American universities. Even theories that are critical of liberal principles must start by defining these principles, giving them a privileged 'default' status.

The Anglo-American education model's focus on liberal principles, and the effect this has on a leader's future policy implementation, is illustrated in the cases of Colombian President Virgilio Barco Vargas and Costa Rican President Oscar Arias Sánchez. Barco Vargas earned an MA in economics from the Massachusetts Institute of Technology, where he took classes from world-renowned economists and Nobel laureates Paul Samuelson and Robert Solow. He then earned a PhD in economic from Boston University in 1954. Once he became president in 1986, he implemented liberal economic reforms as part of Colombia's Economic Openness program. Likewise, Arias Sánchez was educated in the United States (Boston University) as well as the United Kingdom (University of Essex), earning a doctorate in political science at the latter. During his first term as president, from 1986–1990, Arias Sánchez significantly liberalized Costa Rica's economy. Arias Sánchez also helped developed peace plans for several Central American countries experiencing internal conflict, for which he was awarded a Nobel Prize.

In summary, we argue that universities that follow the Anglo-American educational model instill their students with liberal values and principles, and foster long-lasting social networks that continue to reinforces these values long after students graduate. Having internalized these values as part of their college experience, individuals act upon these values

and implement liberal economic and political reforms, once they take on leadership positions later in life.

These effects are particularly strong for individuals who study economics or other liberal art disciplines. Leaders trained in economics are more likely to implement liberal policies in the areas of trade and financial liberalization and the rule of law, as their liberal economic training would emphasize limited state intervention and robust property rights protections. Leaders trained in the liberal arts are most likely to oversee improvements in human rights protections and liberal democracy, as a result of the traditional liberal emphasis on negative freedoms. This leads us to two hypotheses:

Hypothesis 1 (Educational Model): *Leaders that attended Anglo-American educational institutions are more likely to implement liberal economic and political policies.*

Hypothesis 2 (Specialization): *The likelihood of economic and political liberalization is greatest for leaders trained in economics or other liberal arts.*

Research Design

We test our hypotheses using an original dataset cataloging the higher-educational experience of leaders from non-OECD countries between 1946–2015. We look at the effect of educational experience across a range of liberal policies, including trade and financial liberalization, judicial independence, human rights protections, and liberal democratic reforms.

The unit of analysis is the leader-spell—the consecutive period of time that an individual leader is in office. This allows us to look at how liberal policies have changed from the beginning to the end of a leader's tenure. If a leader holds office during multiple non-consequtive spells, each leader spell is coded as its own observation. National leaders are identified using the Archigos dataset (Goemans, Gleditsch, and Chiozza 2009). We limit analysis to leaders of non-OECD countries, since most OECD countries tend to score

highly—and exhibit very little variation—on each of the liberal policy indicators.[2]

Educational Background

We introduce an original dataset recording the higher-educational experience of over 950 heads of state between 1946–2015. The list of national leaders that we build upon comes from the Archigos dataset (Goemans, Gleditsch, and Chiozza 2009). Data were collected using a variety of online databases and text sources.[3] Cases were coded independently by multiple research assistants and compared meticulously to ensure inter-coder reliability.

We code two primary classes of explanatory variables: (1) educational institution, and (2) subject studied. We construct a measure for *Anglo-American* universities—coded as 1 if a college is located in the US or UK, and zero otherwise.[4] Those that attended universities outside of the US or UK are coded as *non-Anglo-American*.[5]

We create a separate indicator variable for whether a leader attended a military school. A number of leaders attended military institutions in Western nations, such as the Army Command and General Staff College in the US or the Royal Military Academy Sandhurst in the United Kingdom. Though military training is a means of soft power that has been linked to increased influence by major powers on recipient states (Ruby and Gibler 2010; Martinez Machain 2021), we treat military degrees as a distinct category and exclude them from our coding of the *Anglo-American* learning model. We expect that liberal values, such as the belief in open-market economies, are most likely transferred in a traditional university rather than a more hierarchical setting of a military academy. By separating and controlling for civilian and military education, we are able to isolate the theoretical causal process of liberal

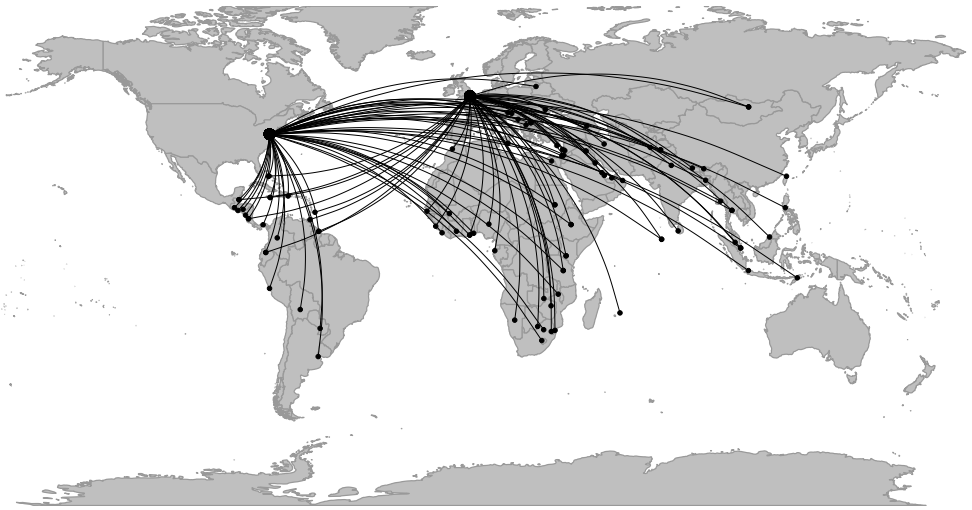
[2]Since it may take some time to implement liberal policies (see, for example, Gift and Krcmaric (2017)), we also examined subsamples using various tenure length inclusion thresholds, such as >2 of >3 years. These subsamples did not differ substantively from analyses using the entire sample.

[3]Sources for all data collected available upon request from the authors

[4]This is the same definition that Gift and Krcmaric (2017) use to identify "Western-education" in their analysis of leader education and demoncratization.

[5]We also perform robustness checks, in which the Anglo-American model is coded as to include all Western universities, such as those located in Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Norway, the Netherlands, Portugal, Spain, Sweden, and Switzerland. These results are not substantively different from our main results. These additional results are presented in the online appendix.

Figure 1: Countries with at Least One Leader Educated at an Anglo-American University



values promotion through the Anglo-American education model from related, but distinct, forms of socialization, such as increased contact with peers and common experiences. The reference category for these educational institution variables contains leaders with no post-secondary education.

Next, we create variables indicating a leader's field of study. Among those at universities, we code whether they studied *economics*, 1 if yes, 0 otherwise. We also construct a second measure, *liberal arts*, indicating whether a leader studied a field within the social sciences or humanities. The *economics* variable, of course, is a subset of *liberal arts*.

Of the 986 country leaders in the sample, 441 studied abroad—379 at an academic university and 61 at a foreign military school. Among those that studied abroad, the US and UK are by far the most popular destinations for tertiary schooling, with nearly 30% of the leaders attending university in one of these two countries.

Figure 1 shows home countries of leaders that attended an Anglo-American university.[6] The figure demonstrates that Anglo-American education is equally attractive to individuals all over the world.

Table 1 reports the frequencies of institutional type and specialization of leaders in the sample. Almost two-thirds of leaders attended a university, with just over 30% attending

[6]The figure excludes leaders trained at US or UK military schools.

Table 1: Leader Educational Institution and Subject Studied

	Total	Economics	Liberal Arts
Anglo-American	198	39	133
Other University	452	71	275
Military School	213	–	–
No Post-secondary	123	–	–
Total	986	110	408

an *Anglo-American* university. Among those with a university education, over 15% studied economics, with nearly two-thirds studying a major within the liberal arts. Over 20% of leaders attended a military school, and just over one in ten have no post-secondary education.

Liberal Policy Implementation

We measure the dependent variable—implementation of liberal reform—using several economic and political policy areas, such as trade liberalization, independence in the rule of law, financial openness, improved human rights protections, and democratic reforms. In each of these areas, the dependent variable is measured as a first difference, by subtracting the relevant indicator of liberalization at the beginning from that at the end of the leader's tenure.

Trade liberalization measures whether a leader opened their domestic markets and reduced trade restrictions in a significant way. We code this as a binary indicator using the data collected by Sachs and Warner (1995), and updated by Wacziarg and Welch (2008).[7] States are coded as closed on trade if they meet any of the following conditions, "(1) average tariff rates of 40% or more, (2) nontariff barriers covering 40% or more of trade, (3) a black market exchange rate that is depreciated by 20% or more relative to the official exchange rate, on average, during the 1970s or 1980s, (4) a state monopoly on major exports, or (5) a socialist economic system as defined by Kornai (2002)" (Wacziarg and Welch 2008, 190).

[7]Trade liberalization is often a quick process, with many of the economic gains realized within three to ten years (Wacziarg and Welch 2008). States that liberalize tend to remain economically open, making a binary indicator more appropriate and informative than a continuous measure.

Trade liberalization is coded as 1 if none of these conditions are met, and 0 otherwise. We analyze only those leaders whose countries were closed when they took office.[8] These data are available for the period 1950–2001.

Financial openness measures changes in the degree of openness of a state's financial sector from when a leader took office to the end of their tenure. Financial openness data are gathered from Chinn and Ito (2006). Chinn and Ito create a continuous measure that captures the intensity of a state's capital controls based on reports from the IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions*, ranging from -1.92 to 2.33, with greater values indicating openness. The data are available from 1970–2015.

We measure judicial reforms with the variable *rule of law*. We operationalize rule of law as the degree of *de facto* judicial independent using data from Linzer and Staton (2015). Linzer and Staton use a measurement model to estimate a state's latent level of judicial independence based on several indicators of direct and indirect judicial independence from 1948–2012. This is measured as an interval between 0–1.

Human rights relate to changes in the level of physical integrity rights protections in a state from the beginning until the end of a leader's tenure. Human rights are measured using data from Fariss (2014). Fariss uses a measurement model to estimate latent human rights protections over time, accounting for changing standards in accountability. The data measured as an interval, ranging between -3.76 and 5.14, and are available from 1946–2015.

Democratic reforms are assessed using the *liberal democracy* score from the *Varieties of Democracy* project (Coppedge et al. 2020; Pemstein et al. 2020). Liberal democracy assesses the degree that a state protects negative political rights and is constructed from an index weighing various indicators of electoral processes and government constraints. The measure is an interval scaled between 0–1 and is available from 1946–2015.

[8]Only seven countries shifted from open to close between 1950–2001.

Control Variables

We include a number of statistical control variables. We control for state-level economic factors, such as *economic development*, measured as GDP/capita, using data from Gleditsch (2002), and whether a state is an *oil producer*, measured as a binary variable equal to 1 if oil exceeds $\frac{1}{3}$ of total exports, extending data from Gibler and Miller (2014). We also account for domestic institutional and demographic factors. *Executive constraints* are obtained from Polity Marshall and Gurr (2020), which measures this variable on a 7-point scale. *Ethnic fractionalization* is measured using data from Drazanova (2020) and Gibler and Miller (2014), while *population* figures come from Gleditsch (2002).

We include two variables to account for possible international and historic influences. The first is an indicator variable for whether a state is a *former British colony*, as colonial history is associated with inherited legal constraints. Second, we include an indicator of whether a state has a defense pact with the US (*US-aligned*), as these states may face external pressure to liberalize. These data are gathered from Hensel (2014) and Leeds et al. (2002). To account for reverse causality, each of the domestic and international state-level controls are taken the year before the leader enters office. For cases of newly independent states, we follow Gift and Krcmaric (2017) and use values from the year of independence.

Finally, we include an individual-level measure of how long a leader has been in power. *Time in office* is measured as the length of a leader spell (in years). If a leader has multiple spells in power, the variable is reset for each spell.[9]

Results

We estimate two models for each of our five dependent variables—*trade liberalization*, *rule of law*, *financial openness*, *human rights protections*, and *liberal democracy*—in the main

[9]We estimate a variety of models using various specification of this variable, such as 1-, 2-, and 3-thresholds for inclusion in the sample, and using quadtratic and logged transformations. None of these alternative measures affect the substantive results.

analysis. In the first model in each case, the primary independent variable is *Anglo-American education*, while the second model also includes a series of variable measuring the area of specialization. The results related to the economic outcomes are reported in Table 2, while the results for the political outcomes are presented in Table 3. Since the first dependent variable, *trade liberalization*, is binary, it is modeled using a logistic regression, while the other four dependent variables are modeled using OLS. As noted above, the models of *trade liberalization* are estimated on a subsample of countries that have not already liberalized.[10] To account for temporal dependence in the OLS models, we include a lagged dependent variable. Across all models, standard errors are clustered by country.

The results for *trade liberalization* are reported in models 1 and 2 of Table 2. The coefficient for *Anglo-American education* is positive and statistically significant in model 1. This indicates that leaders with an Anglo-American education are more likely to liberalize their trade policies than leaders that did not attend an Anglo-American university. This result is consistent with hypothesis 1. Model 2 explores the effect of specialization under different learning models. Here, both the *Anglo-American economics* and *Anglo-American other* variables are statistically significant, indicating that leaders educated in the US or UK are more likely to implement liberal trade reforms than leaders without a post-secondary education (the reference category). Moreover, post-estimation Wald tests confirms that *Anglo-American economics* is significantly larger than *Anglo-American other*, and that the latter is larger than *non-Anglo-American economics*, *non-Anglo-American other*, or *military school*. This suggests that while leaders with US and British educations are more likely to implement liberal trade reforms than leaders with any other post-secondary education, this effect is the largest for US- and UK-trained economists. These results are consistent with hypothesis 2.

These results are also substantively meaningful. Based on model 2 estimates, leaders with an Anglo-American education has a $\approx$0.55 probability of liberalizing trade if they

[10] See fn 8.

Table 2: Tertiary Education Learning Model and Specialization Effect on Economic Outcomes.

	Dependent variable:					
	Trade Liberalization		Rule of Law		Financial Openness	
	Location	Major	Location	Major	Location	Major
	(1)	(2)	(3)	(4)	(5)	(6)
Anglo-American Education	1.421**		0.024**		0.238**	
	(0.546)		(0.009)		(0.087)	
Anglo-American Economics		3.020**		0.052**		0.101
		(1.277)		(0.018)		(0.176)
Anglo-American Other		2.050**		0.035**		0.289**
		(0.760)		(0.011)		(0.119)
Non-Anglo-American Economics		0.787		0.023		−0.016
		(0.932)		(0.018)		(0.121)
Non-Anglo-American Other		0.983*		0.019**		0.011
		(0.592)		(0.008)		(0.095)
Military School		0.860		0.016		0.001
		(0.699)		(0.012)		(0.150)
Economic Development	0.053	0.011	0.012**	0.011**	0.068	0.069
	(0.235)	(0.236)	(0.004)	(0.004)	(0.051)	(0.052)
Oil Producer	−0.399	−0.335	−0.023	−0.020	−0.003	−0.010
	(0.578)	(0.548)	(0.015)	(0.015)	(0.132)	(0.135)
Executive Constraints	0.305**	0.294**			0.028	0.028
	(0.126)	(0.128)			(0.021)	(0.021)
Former British Colony	−0.731	−0.748	0.002	0.003	−0.164**	−0.156*
	(0.492)	(0.499)	(0.009)	(0.009)	(0.081)	(0.084)
US-aligned	0.055	−0.115	0.012*	0.009	0.059	0.055
	(0.491)	(0.484)	(0.006)	(0.007)	(0.099)	(0.097)
Ethnic Fractionalization	−0.181	−0.199	−0.012	−0.011	−0.291*	−0.291*
	(0.752)	(0.761)	(0.016)	(0.016)	(0.159)	(0.162)
Population	−0.027	−0.056	−0.003*	−0.004**	−0.019	−0.017
	(0.133)	(0.132)	(0.002)	(0.002)	(0.022)	(0.022)
Time in Office	0.043	0.038	> 0.001	> 0.001	0.015	0.015
	(0.030)	(0.030)	(0.001)	(0.001)	(0.009)	(0.010)
Lagged DV			−0.102**	−0.106**	−0.224**	−0.224**
			(0.020)	(0.021)	(0.035)	(0.035)
Constant	−3.400*	−3.381	−0.010	−0.010	−0.434	−0.462
	(2.005)	(2.071)	(0.036)	(0.037)	(0.506)	(0.507)
Observations	221	221	735	735	529	529
Log Likelihood	-88.840	-87.158				
R^2			0.071	0.079	0.134	0.136

Note: *p<0.1; **p<0.05. Standard errors clustered by country.

studied economics, a ≈0.32 probability if they studied other fields. In contrast, for leaders that studied at non-Anglo-American institutions, the same probability is only ≈0.12 if they studied economics, and ≈0.14 if they studied another field. For leaders that attended a military school, the probability of trade liberalization is ≈0.12. Finally, leaders without any post-secondary education have a ≈0.06 probability of liberalizing trade.

Leader education has similar effects on the *rule of law* (models 3 and 4).[11] In model 3, the coefficient for *Anglo-American education* is positive and statistically significant. In model 4, *Anglo-American economics* and *Anglo-American other* are positive and statistically significant. Post-estimation Wald tests also show that the two *Anglo-American* variables are statistically distinct from the two *non-Anglo-American* variables, as well as *military school*. Among the leaders educated at Anglo-American universities, those specializing in *economics* are associated with greater improvements in rule of law than those studying other subjects.

To show the substantive effects, we start by arranging the sample of 153 countries based on their rule of law scores in 2012 (lowest first). Holding all else constant, a country with the median ranking on the rule of law would experience a 13-spot improvement in ranking if its leader is educated in economics at an Anglo-American university, and a 7-spot improvement in ranking if its leader studied another subject at an Anglo-American university.

Models 5 and 6 report the relationship between education and *financial openness*. Model 5 demonstrates that *Anglo-American education* is associated with statistically significant increases in financial openness. Surprisingly, model 6 shows that this difference is largely driven by leaders specializing in non-economics majors. None of the other categories are statistically distinguishable from one another. Substantively, the effect sizes are modest, equivalent to a 3-position improvement in the ranking of a country with the median value on the financial openness out of 182 states in 2012 for a leader educated at an Anglo-American university for a non-economics major.

Table 3 displays the political outcome variables, with *human rights protections* reported

[11] *Executive constraints* is not included as a predictor for *liberal democracy*, as the former is one of the indicators used in the measurement model employed to construct the latter.

Table 3: Tertiary Education Learning Model and Major Effect on Political Outcomes.

	Dependent variable:			
	Human Rights Protections		Liberal Democracy	
	Location	Major	Location	Major
	(1)	(2)	(3)	(4)
Anglo-American Education	0.137**		0.026**	
	(0.051)		(0.009)	
Anglo-American Liberal Arts		0.115*		0.051**
		(0.069)		(0.012)
Anglo-American Other		0.329**		0.041**
		(0.087)		(0.013)
Non-Anglo-American Liberal Arts		0.073		0.046**
		(0.069)		(0.010)
Non-Anglo-American Other		0.087		0.031**
		(0.073)		(0.010)
Military School		0.002		−0.024*
		(0.086)		(0.013)
Economic Development	0.083**	0.084**	0.013**	0.010**
	(0.028)	(0.028)	(0.005)	(0.004)
Oil Producer	−0.155**	−0.150**	−0.023**	−0.019*
	(0.077)	(0.076)	(0.011)	(0.011)
Executive Constraints	0.032**	0.029*		
	(0.014)	(0.015)		
Former British Colony	−0.123**	−0.117**	−0.006	−0.005
	(0.052)	(0.052)	(0.007)	(0.007)
US-aligned	−0.111**	−0.127**	0.002	0.003
	(0.050)	(0.051)	(0.007)	(0.008)
Ethnic Fractionalization	−0.176*	−0.169*	0.009	0.010
	(0.093)	(0.094)	(0.011)	(0.011)
Population	−0.081**	−0.083**	−0.003	−0.003
	(0.016)	(0.016)	(0.002)	(0.002)
Time in Office	−0.004	−0.004	−0.001*	−0.001
	(0.004)	(0.004)	(0.001)	(0.001)
Lagged DV	−0.222**	−0.223**	−0.155**	−0.180**
	(0.031)	(0.030)	(0.025)	(0.027)
Constant	0.022	−0.004	−0.018	−0.003
	(0.266)	(0.266)	(0.041)	(0.040)
Observations	772	772	852	852
R^2	0.118	0.125	0.072	0.117

Note: *p<0.1; **p<0.05. Standard errors clustered by country.

in models 1 and 2, and *liberal democracy* reported in models 3 and 4. Model 1 shows that the effect of *Anglo-American education* on greater human rights protections is positive and statistically significant. Model 2 reports that the effect of Anglo-American education holds for both *liberal arts* and *other* majors, though the effect of the latter is larger than that of the former. For liberal arts majors, the effect is equivalent to a 6-position improvement in the ranking of a country that starts at the median level on human rights ranking, out of a sample of 195 countries in 2012, and a 22-position increase for other majors.

Model 3 shows that *Anglo-American education* has a positive and statistically signif-

icant effect on democratic liberalization.[12] Model 4 reveals that this result is driven by heterogeneity among the non-Anglo-American educations: all university education types are positively associated with increases in liberal democracy compared to the omitted category of no post-secondary education. The substantive effect of Anglo-American liberal arts majors is equivalent to a 9-position improvement for a country that starts at the median value on executive constraints (out of 182, in 2012), a 6-position improvement for non-liberal arts majors from Anglo-American institutions, a 7-position improvement for non-Anglo-American liberal arts majors, and a 4-position increase for non-Anglo-American non-liberal arts majors. Conversely, leaders educated at *military schools* are negatively associated with liberal democracy. Among university educations, post-estimation Wald tests demonstrate that those leaders with a liberal arts degree—whether Anglo-American educated or not—are associated with statistically greater liberal democracy scores than leaders educated at non-Anglo-American universities without a liberal arts degree. *Anglo-American other*, however, is not statistically distinguishable from any of the other university types in post-estimation Wald tests.

In addition to the main results, we also estimate additional models using models with regional and temporal fixed effects. The largely time invariant control variables are excluded from these fixed effects models. This specification greatly increases each estimated model's sample size, as leader-spells with missing values on one or more control variable remain in the sample. The results, presented in tables 4 and 5, are consistent with the main analyses.

For robustness, we construct an expanded definition identifying all *Western* universities, as many have adopted the Anglo-American model over time.[13] We also construct analogous specialization measures using the *Western* variable. The results, reported in the online appendix, are consistent with our primary analysis. Moreover, we replicate both models using each education definition—Anglo-American, Western, and their associated specializations—

[12] *Executive constraints* is not included as a predictor for *liberal democracy*, as the former is a conceptual component of the latter.

[13] See fn 5 for the full list of states.

Table 4: Tertiary Education Learning Model and Specialization Effect on Economic Outcomes, with Decade and Region Fixed Effects.

	Dependent variable:					
	Trade Liberalization		Rule of Law		Financial Openness	
	Location	Major	Location	Major	Location	Major
	(1)	(2)	(3)	(4)	(5)	(6)
Anglo-American Education	1.260**		0.163**		0.026**	
	(−0.150)		(0.079)		(0.009)	
Anglo-American Economics		3.594**		0.206		0.049**
		(0.978)		(0.169)		(0.017)
Anglo-American Other		1.949**		0.187*		0.035**
		(0.701)		(0.101)		(0.012)
Non-Anglo-American Economics		0.803		−0.040		0.021
		(0.948)		(0.128)		(0.019)
Non-Anglo-American Other		1.013*		0.039		0.015**
		(0.586)		(0.077)		(0.007)
Military School		1.283*		0.083		0.012
		(0.751)		(0.129)		(0.010)
Lagged DV			−0.202**	−0.203**	−0.091**	−0.094**
			(0.027)	(0.027)	(0.018)	(0.018)
Constant	−2.191**	−3.163**	−0.129	−0.172	−0.008	−0.019
	(0.497)	(0.813)	(0.140)	(0.142)	(0.034)	(0.035)
Decade FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Region FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Observations	242	242	676	676	750	750
Log Likelihood	-80.894	-78.513				
R^2			0.133	0.135	0.107	0.113

Note: *p<0.1; **p<0.05. Standard errors clustered by country.

Table 5: Tertiary Education Learning Model and Major Effect on Political Outcomes, with Decade and Region Fixed Effects.

	Dependent variable:			
	Human Rights Protections		Liberal Democracy	
	Location	Major	Location	Major
	(1)	(2)	(3)	(4)
Anglo-American Education	0.101**		0.022**	
	(0.045)		(0.008)	
Anglo-American Liberal Arts		0.070		0.045**
		(0.060)		(0.011)
Anglo-American Other		0.196**		0.023*
		(0.072)		(0.012)
Non-Anglo-American Liberal Arts		0.037		0.036**
		(0.056)		(0.010)
Non-Anglo-American Other		−0.024		0.022**
		(0.059)		(0.009)
Military School		0.016		−0.029**
		(0.079)		(0.011)
Lagged DV	−0.144**	−0.141**	−0.155**	−0.171**
	(0.018)	(0.018)	(0.022)	(0.024)
Decade FEs	*Yes*	*Yes*	*Yes*	*Yes*
Region FEs	*Yes*	*Yes*	*Yes*	*Yess*
Observations	978	978	963	963
R^2	0.118	0.120	0.110	0.147

Note: *p<0.1; **p<0.05. Standard errors clustered by country.

while adding a control for international student flows, in the online appendix. The inclusion of the student flows variable, though significantly reducing sample sizes, has no effect on the results discussed above. In sum, our results are robust to a number of modeling and specification choices using a range of liberal policy outcomes.

Overall, we find support for each of our hypotheses. Anglo-American education is linked to an increased probability of liberal economic and political reforms. Leaders education at Anglo-American institutions are more likely to liberalize their trade, improve the quality of domestic rule of law, and open their financial sector. These leaders are also more likely to strengthen domestic human rights protections and liberal democracy. We also find significant heterogeneity among academic specializations. For trade, rule of law, and liberal democracy, the effects are even stronger for leaders trained in economics and the liberal arts. Taken together, the results indicate that leaders' experiences, in particular their educational background, have important effects on their policy actions.

Conclusion

We argue that leaders' educational background influences the likelihood that they implement liberal economic and political reforms. We explain this effect as a function of the unique socializing features of the Anglo-American learning model, including its emphasis on liberal principles as well as the distinct social experience of an Anglo-American college campus. We argue that the effect is further reinforced for students specializing in economics and other liberal arts. We find support for our theory across five economic and political policy areas—trade liberalization, rule of law, financial openness, human rights protections, and liberal democracy.

This research highlights the importance of micro-level explanations for policy change. We emphasize that, while macro-level factors, such as the institutions and the economic conditions certainly matter, foreign policy decisions are ultimately made by individuals. Linking variation in leader backgrounds to specific theoretical worldviews and policy frameworks, for example, may help explain how leaders select among national roles and foreign policies (Wehner and Thies 2021). Identifying and understanding variation among leaders offers a path towards a more complete picture of foreign policy analysis.

Our study also advances recent research that links leader education to policy outcomes (e.g., Gift and Krcmaric 2017; Li, Xi, and Yao 2020) by highlighting the role of the learning models and individual specialization. Educational experiences provide long-term effects, both directly, through content and values embedded within the learning process, and indirectly, through socialization and peer-networks that may continue long after leaving campus. Government investment in building world-class educational institutions that attract students from all over the world is an important tool of normative and ideational influence. Investment in education has a long-term payoff in terms of influence over the policy agenda of other states by changing the underlying interests of these states' elites (Norrlof 2014, 1063).

Finally, our analysis has important policy implications. One is that tertiary education of international students should be viewed not only as a tool for generating human capital,

but also through the lens of power projection. Educating political elites has long-term benefits to the educating country, as it helps set the policy parameters that leaders are likely to implement in the future. While the empirical analysis here focuses on liberal principles, the causal effect likely works in both directions; other ideological system and foundations values could be transferred as well.

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Online Appendix

This appendix provides additional information to supplement that of the main manuscript. Specifically, we report six additional tables: first, we replicate the analyses displayed in tables 2 and 3 using an alternative measure for *Anglo-American* learning models. As noted in the main text in fn 5, include all universities located in Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Norway, the Netherlands, Portugal, Spain, Sweden, and Switzerland, as many of these have adopted learning models similar to those used in the US and UK. The measure *Western education* captures this expanded classification.

Second, we replicate models using either learning model measure—Anglo-American, Western, and their associated specializations—for both economic and political policy outcomes, while adding a control for international student flows. *Student flows* measure the number of international students a state has currently studying in the US. Previous work has suggested that many of the same socialization processes that we posit for individuals that become country leaders apply more broadly for the sending state (Coombs 1964; Spilimbergo 2009; Weymouth and Macpherson 2012). These data are obtained from the Institute of International Education.

Table 6 reports the results using the *Western education* measure of learning models and economic outcomes. Estimated effect sizes and significance levels of *Western education*, *Western economics*, and *Western other* are very similar to their *Anglo-American* analogues. In models 5 and 6 of table 6, which regress *financial openness* on the learning models and specializations, *Western education* and *Western other* are each significant at the 0.1-level using a one-tailed test, rather than the 0.05-level using a two-tailed test as in the main analysis.

Table 7 displays the results using the *Western education* measure of learning models and political outcomes. Again, the results are similar to those using the more limited *Anglo-American* learning model measure. The primary difference is that, in model 2, *Western*

Table 6: Tertiary Education Learning Model and Specialization Effect on Economic Outcomes, Western Education Measure.

	Dependent variable:					
	Trade Liberalization		Rule of Law		Financial Openness	
	Location	Major	Location	Major	Location	Major
	(1)	(2)	(3)	(4)	(5)	(6)
Western Education	1.211**		0.017**		0.104	
	(0.464)		(0.006)		(0.068)	
Western Economics		3.330**		0.050**		0.090
		(1.254)		(0.016)		(0.165)
Western Other		1.523**		0.030**		0.157
		(0.658)		(0.010)		(0.104)
Non-Western Economics		0.043		0.022		−0.031
		(1.119)		(0.019)		(0.126)
Non-Western Other		1.000		0.019**		0.045
		(0.621)		(0.009)		(0.100)
Military School		0.888		0.016		−0.0001
		(0.690)		(0.012)		(0.150)
Economic Development	0.125	0.031	0.012**	0.011**	0.074	0.075
	(0.269)	(0.268)	(0.004)	(0.004)	(0.051)	(0.052)
Oil Producer	−0.377	−0.307	−0.024	−0.020	−0.020	−0.024
	(0.584)	(0.535)	(0.015)	(0.015)	(0.130)	(0.135)
Executive Constraints	0.287**	0.287**			0.030	0.028
	(0.124)	(0.135)			(0.021)	(0.021)
Former British Colony	−0.386	−0.456	0.005	0.004	−0.140*	−0.141*
	(0.472)	(0.466)	(0.009)	(0.009)	(0.083)	(0.084)
US-aligned	0.201	−0.053	0.013**	0.010	0.081	0.069
	(0.492)	(0.489)	(0.006)	(0.006)	(0.100)	(0.099)
Ethnic Fractionalization	−0.061	−0.044	−0.012	−0.010	−0.276*	−0.262
	(0.759)	(0.742)	(0.016)	(0.016)	(0.159)	(0.163)
Population	0.009	−0.078	−0.003*	−0.004**	−0.019	−0.020
	(0.142)	(0.140)	(0.002)	(0.002)	(0.022)	(0.022)
Time in Office	0.038	0.034	0.0004	0.0004	0.015	0.015
	(0.029)	(0.031)	(0.001)	(0.001)	(0.009)	(0.010)
Lagged DV			−0.099**	−0.105**	−0.226**	−0.225**
			(0.019)	(0.020)	(0.035)	(0.035)
Constant	−4.514*	−3.423	−0.018	−0.013	−0.496	−0.509
	(2.314)	(2.283)	(0.036)	(0.037)	(0.514)	(0.506)
Observations	221	221	735	735	529	529
R^2			0.068	0.078	0.125	0.127
Log Likelihood	-88.289	-86.747				

Note: *p<0.1; **p<0.05. Standard errors clustered by country.

Table 7: Tertiary Education Learning Model and Major Effect on Political Outcomes, Western Education Measure.

	Dependent variable:			
	Human Rights Protections		Liberal Democracy	
	Location	Major	Location	Major
	(1)	(2)	(3)	(4)
Western Education	0.136**		0.027**	
	(0.047)		(0.008)	
Western Liberal Arts		0.107		0.056**
		(0.065)		(0.011)
Western Other		0.275**		0.050**
		(0.086)		(0.014)
Non-Western Liberal Arts		0.061		0.042**
		(0.071)		(0.010)
Non-Western Other		0.068		0.024**
		(0.075)		(0.009)
Military School		−0.0004		−0.024*
		(0.087)		(0.013)
Economic Development	0.085**	0.088**	0.014**	0.011**
	(0.028)	(0.028)	(0.005)	(0.004)
Oil Producer	−0.157**	−0.155**	−0.024**	−0.019*
	(0.075)	(0.076)	(0.010)	(0.011)
Executive Constraints	0.032**	0.029**		
	(0.015)	(0.015)		
Former British Colony	−0.115**	−0.107**	−0.004	−0.005
	(0.052)	(0.052)	(0.007)	(0.007)
US-aligned	−0.108**	−0.120**	0.003	0.002
	(0.049)	(0.050)	(0.007)	(0.008)
Ethnic Fractionalization	−0.189**	−0.176*	0.007	0.008
	(0.091)	(0.094)	(0.011)	(0.011)
Population	−0.080**	−0.081**	−0.002	−0.003
	(0.016)	(0.016)	(0.002)	(0.002)
Time in Office	−0.004	−0.003	−0.001*	−0.001
	(0.004)	(0.004)	(0.001)	(0.001)
Lagged DV	−0.222**	−0.223**	−0.156**	−0.181**
	(0.031)	(0.030)	(0.025)	(0.027)
Constant	−0.017	−0.054	−0.028	−0.011
	(0.264)	(0.266)	(0.041)	(0.040)
Observations	772	772	852	852
R^2	0.120	0.125	0.077	0.122

Note: *p<0.1; **p<0.05. Standard errors clustered by country.

liberal arts is significant at the 0.1-level using a one-tailed test, rather than the 0.05-level using a two-tailed test as in the main analysis.

Lastly, we report analyses for each of the economic and political outcomes, as well as the two learning models measures, while controlling for international student flows. We displays results using the *Anglo-American* learning model measure in tables 8 and 9. The results are again similar to those in the main analysis.

Tables 10 and 11 report the results for the *Western education* measure while controlling for international student flows. All results are similar to those from the main analysis, with

the exception of the *rule of law* analysis. In this case, *Western education* is significant at the 0.1-level using a one-tailed test, while none of the specialization variables are significant. Aside from the *Western education* variable being a less narrow measure, it is worth noting that the same size decreases by 37% by including *student flows*, dramatically reducing statistical power.

Overall, the results displayed in the appendix demonstrate the stability and robustness of the main results.

Table 8: Tertiary Education Learning Model and Specialization Effect on Economic Outcomes, Including Student Flows.

	Dependent variable:					
	Trade Liberalization		Rule of Law		Financial Openness	
	Location	Major	Location	Major	Location	Major
	(1)	(2)	(3)	(4)	(5)	(6)
Anglo-American Education	1.268**		0.021**		0.231**	
	(0.517)		(0.009)		(0.093)	
Anglo-American Economics		3.219**		0.037**		0.040
		(1.094)		(0.015)		(0.186)
Anglo-American Other		2.028**		0.036**		0.282**
		(0.740)		(0.012)		(0.129)
Non-Anglo-American Economics		0.936		0.014		−0.035
		(0.974)		(0.022)		(0.139)
Non-Anglo-American Other		1.154*		0.022**		−0.004
		(0.610)		(0.010)		(0.107)
Military School		1.164*		0.014		0.0003
		(0.687)		(0.012)		(0.163)
Economic Development	0.061	0.030	0.008*	0.007*	0.062	0.061
	(0.270)	(0.279)	(0.004)	(0.004)	(0.054)	(0.055)
Oil Producer	−1.380	−1.348	−0.033**	−0.031**	0.014	0.006
	(1.006)	(0.978)	(0.013)	(0.013)	(0.136)	(0.141)
Executive Constraints	0.330**	0.329**	−0.017**	−0.018**	0.026	0.026
	(0.131)	(0.131)	(0.004)	(0.004)	(0.022)	(0.023)
Former British Colony	−0.950*	−1.030**	−0.010	−0.009	−0.127	−0.113
	(0.493)	(0.505)	(0.009)	(0.010)	(0.089)	(0.091)
US-aligned	−0.986	−1.260*	0.018**	0.015*	0.082	0.083
	(0.785)	(0.746)	(0.008)	(0.008)	(0.099)	(0.096)
Ethnic Fractionalization	−0.499	−0.474	−0.007	−0.006	−0.323*	−0.323*
	(0.844)	(0.829)	(0.017)	(0.017)	(0.174)	(0.177)
Population	−0.314**	−0.377**	−0.007**	−0.008**	−0.011	−0.008
	(0.137)	(0.143)	(0.003)	(0.003)	(0.037)	(0.037)
Time in Office	0.034	0.026	0.0002	0.0002	0.013	0.013
	(0.030)	(0.029)	(0.001)	(0.001)	(0.010)	(0.010)
Student Flows	1.648**	1.770**	0.014**	0.013*	−0.031	−0.031
	(0.634)	(0.603)	(0.007)	(0.007)	(0.073)	(0.075)
Lagged DV			0.024	0.020	−0.230**	−0.229**
			(0.032)	(0.030)	(0.037)	(0.037)
Constant	−0.932	−0.882	0.071*	0.071	−0.428	−0.455
	(2.109)	(2.259)	(0.042)	(0.044)	(0.619)	(0.628)
Observations	213	213	596	596	470	470
R^2			0.138	0.145	0.132	0.135
Log Likelihood	-81.828	-79.522				

Note: *p<0.1; **p<0.05. Standard errors clustered by country.

Table 9: Tertiary Education Learning Model and Major Effect on Political Outcomes, Including Student Flows.

	Dependent variable:			
	Human Rights Protections		Liberal Democracy	
	Location	Major	Location	Major
	(1)	(2)	(3)	(4)
Anglo-American Education	0.129**		0.026**	
	(0.053)		(0.009)	
Anglo-American Liberal Arts		0.108		0.054**
		(0.073)		(0.012)
Anglo-American Other		0.325**		0.042**
		(0.091)		(0.014)
Non-Anglo-American Liberal Arts		0.077		0.050**
		(0.074)		(0.011)
Non-Anglo-American Other		0.095		0.031**
		(0.081)		(0.010)
Military School		0.009		−0.019
		(0.090)		(0.013)
Economic Development	0.078**	0.079**	0.010**	0.007
	(0.029)	(0.028)	(0.005)	(0.005)
Oil Producer	−0.171**	−0.164**	−0.023**	−0.016
	(0.080)	(0.080)	(0.011)	(0.011)
Executive Constraints	0.037**	0.035**		
	(0.015)	(0.016)		
Former British Colony	−0.137**	−0.131**	−0.004	−0.003
	(0.060)	(0.060)	(0.008)	(0.007)
US-aligned	−0.136**	−0.151**	0.002	0.003
	(0.055)	(0.057)	(0.008)	(0.009)
Ethnic Fractionalization	−0.193*	−0.187*	0.007	0.007
	(0.106)	(0.105)	(0.012)	(0.012)
Population	−0.098**	−0.099**	−0.007**	−0.008**
	(0.021)	(0.021)	(0.003)	(0.003)
Time in Office	−0.003	−0.003	−0.001*	−0.001
	(0.004)	(0.004)	(0.001)	(0.001)
Student Flow	0.048	0.046	0.011	0.009
	(0.056)	(0.057)	(0.007)	(0.008)
Lagged DV	−0.234**	−0.234**	−0.166**	−0.189**
	(0.031)	(0.030)	(0.027)	(0.030)
Constant	0.181	0.144	0.048	0.055
	(0.316)	(0.308)	(0.048)	(0.047)
Observations	712	712	785	785
R^2	0.127	0.135	0.079	0.123

Note: *p<0.1; **p<0.05. Standard errors clustered by country.

Table 10: Tertiary Education Learning Model and Specialization Effect on Economic Outcomes, Western Education Measure and Including Student Flows.

	Dependent variable:					
	Trade Liberalization		Rule of Law		Financial Openness	
	Location	Major	Location	Major	Location	Major
	(1)	(2)	(3)	(4)	(5)	(6)
Western Education	0.945**		0.100		0.013*	
	(0.482)		(0.072)		(0.008)	
Western Economics		3.741**		0.050		0.032**
		(1.096)		(0.176)		(0.015)
Western Other		1.399**		0.136		0.032**
		(0.693)		(0.114)		(0.012)
Non-Western Economics		0.139		−0.079		0.016
		(1.130)		(0.146)		(0.023)
Non-Western Other		1.368**		0.040		0.021**
		(0.649)		(0.113)		(0.010)
Military School		1.232*		0.001		0.014
		(0.685)		(0.164)		(0.012)
Economic Development	0.120	0.008	0.064	0.065	0.008*	0.007*
	(0.304)	(0.320)	(0.055)	(0.055)	(0.004)	(0.004)
Oil Producer	−1.394	−1.430	−0.004	−0.012	−0.034**	−0.031**
	(1.061)	(0.995)	(0.135)	(0.140)	(0.012)	(0.013)
Executive Constraints	0.322**	0.345**	0.029	0.027	−0.017**	−0.018**
	(0.129)	(0.143)	(0.022)	(0.023)	(0.004)	(0.004)
Former British Colony	−0.643	−0.825*	−0.106	−0.103	−0.008	−0.008
	(0.482)	(0.488)	(0.092)	(0.092)	(0.009)	(0.009)
US-aligned	−0.777	−1.244*	0.101	0.098	0.019**	0.016**
	(0.753)	(0.716)	(0.100)	(0.097)	(0.008)	(0.008)
Ethnic Fractionalization	−0.348	−0.345	−0.313*	−0.292	−0.007	−0.006
	(0.831)	(0.807)	(0.174)	(0.180)	(0.017)	(0.017)
Population	−0.289*	−0.456**	−0.016	−0.015	−0.007**	−0.008**
	(0.159)	(0.179)	(0.037)	(0.037)	(0.003)	(0.003)
Time in Office	0.030	0.023	0.013	0.013	0.0002	0.0002
	(0.029)	(0.031)	(0.010)	(0.010)	(0.001)	(0.001)
Student Flows	1.571**	1.891**	−0.014	−0.016	0.014**	0.013*
	(0.629)	(0.631)	(0.074)	(0.076)	(0.007)	(0.007)
Lagged DV			−0.232**	−0.230**	0.027	0.021
			(0.037)	(0.037)	(0.031)	(0.031)
Constant	−1.826	−0.228	−0.422	−0.450	0.068	0.068
	(2.504)	(2.747)	(0.626)	(0.629)	(0.042)	(0.044)
Observations	213	213	470	470	596	596
R^2			0.124	0.126	0.134	0.144
Log Likelihood	-82.215	-78.709				

Note: *p<0.1; **p<0.05. Standard errors clustered by country.

Table 11: Tertiary Education Learning Model and Major Effect on Political Outcomes, Western Education Measure and Including Student Flows.

	Dependent variable:			
	Human Rights Protections		Liberal Democracy	
	Location	Major	Location	Major
	(1)	(2)	(3)	(4)
Western Education	0.141**		0.029**	
	(0.051)		(0.008)	
Western Liberal Arts		0.107		0.059**
		(0.069)		(0.012)
Western Other		0.276**		0.051**
		(0.091)		(0.015)
Non-Western Liberal Arts		0.061		0.045**
		(0.077)		(0.011)
Non-Western Other		0.075		0.023**
		(0.084)		(0.009)
Military School		0.006		−0.019
		(0.090)		(0.013)
Economic Development	0.081**	0.083**	0.011**	0.008*
	(0.029)	(0.028)	(0.005)	(0.005)
Oil Producer	−0.174**	−0.170**	−0.024**	−0.017
	(0.079)	(0.080)	(0.011)	(0.011)
Executive Constraints	0.038**	0.035**		
	(0.016)	(0.016)		
Former British Colony	−0.132**	−0.123**	−0.002	−0.003
	(0.059)	(0.059)	(0.008)	(0.007)
US-aligned	−0.133**	−0.144**	0.002	0.002
	(0.055)	(0.056)	(0.008)	(0.009)
Ethnic Fractionalization	−0.211**	−0.195*	0.003	0.004
	(0.104)	(0.105)	(0.012)	(0.012)
Population	−0.096**	−0.098**	−0.007**	−0.007**
	(0.021)	(0.021)	(0.003)	(0.003)
Time in Office	−0.004	−0.003	−0.001**	−0.001
	(0.004)	(0.004)	(0.001)	(0.001)
Student Flow	0.047	0.048	0.010	0.009
	(0.056)	(0.056)	(0.007)	(0.007)
Lagged DV	−0.234**	−0.234**	−0.167**	−0.191**
	(0.031)	(0.030)	(0.027)	(0.029)
Constant	0.134	0.105	0.035	0.046
	(0.317)	(0.309)	(0.049)	(0.047)
Observations	712	712	785	785
R^2	0.131	0.134	0.086	0.128

Note: *p<0.1; **p<0.05. Standard errors clustered by country.