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4 The Role of Global Perceptions on International Student Enrollments in U.S. Educational Institutions

Catalina Amuedo-Dorantes
University of California, Merced, USA
Mary Lopez
Occidental College, USA
Ashley Muchow
University of Illinois at Chicago, USA

Abstract

The number of F1 visas issued by the U.S. Department of State to international students has declined since 2015. Although international students have a strong presence in U.S. higher education, we know little about the factors responsible for recent fluctuations in enrollments. Using data from the Student and Exchange Visitor Information System, we examine whether global perceptions of Donald Trump, as captured by Google search data, impacted international student enrollments. We find that increased searches on Trump are associated with reduced international graduate student enrollments.

Keywords: international students, F1 visas, Donald Trump, higher education, global perceptions of U.S.

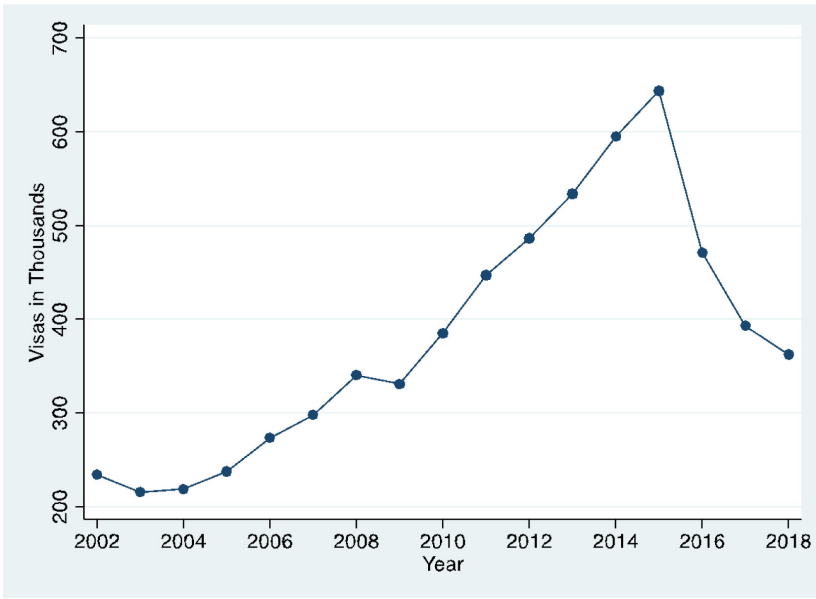
Introduction

Technology and innovation, which continue to drive productivity and global economic growth, have created a competitive global market for skilled workers (Blank, 2021). Foreign workers in science, technology, engineering, and mathematics (STEM) fields have been shown to increase the productivity of college and non-college educated workforces (Peri et al., 2015). As the demand for skilled workers intensifies, international student mobility has become a strategy for attracting and retaining skilled workers (She and Wotherspoon, 2013). Several countries, such as Australia, New Zealand, Canada, and the U.S., have taken steps to recruit and retain skilled workers through visa and immigration policies aimed at international students. Canada has adopted multiple policy initiatives aimed at reducing processing times for student visas and

Note: This study relies on de-identified public data and did not require Institutional Review Board (IRB) human subjects' approval.

expanding host country employment opportunities post-graduation (She and Wotherspoon, 2013). The U.S. experienced a 400-percent increase between 2008-2016 in the number of international students graduating from U.S. colleges and obtaining authorization to work in STEM fields through the Optional Practical Training (OPT) program, a temporary work program that allows international graduates in certain fields of study to receive up to 36 months of employment authorization (Ruiz and Budiman, 2018). The program helped boost the already high share of international students—45 percent (Ruiz, 2014)—transitioning to the labor market in the United States (Israel and Batalova, 2021). In sum, international student mobility is a strategy for managing skilled labor migration and one that is proving to be more complex and multifaceted than initially expected by many countries.

Figure 1 F1 Visas Issued Annually



Source: U.S. Department of State, non-immigrant visa detailed tables 2002-2018. https://travel.state.gov/content/travel/en/legal/visa-law0/visa-statistics/nonimmigrant-visa-statistics.html

In 2018, the number of F1 visas issued by the U.S. Department of State to international students was 42 percent lower than in 2015 (Figure 1). Various factors likely contributed to that decline, including rising costs of pursuing a U.S. degree and greater competition from programs in Europe, Canada, and institutions closer to home (Meckler and Korn, 2018). Visa

policies and country-specific funding may have also played a role, such as visa term extensions for Chinese students from one to five years (Meckler and Korn, 2018), the closure of Brazilian scholarship programs, and shifts in scholarship eligibility requirements for Saudi Arabian students (Baer, 2017; Korn, 2017). This chapter focuses on another explanation—global perceptions of former President Donald Trump.

A 2017 survey administered by the Institute of International Education revealed that 52 percent of U.S. higher education institutions cited the country's social and political climate as a deterrent to prospective international students (Baer, 2017). Policy measures, such as the 2017 travel ban initiated under the Trump Administration, have been cited as explanations for the decline in graduate student applications and enrollments (Berman, 2019), which have been falling since 2016 (Okahana and Zhou, 2019). The nearly 10 percent drop in new students starting in the 2016-2017 academic year is notable given the near-consistent growth in the 69 years prior (Grawe, 2019). The decrease is mainly attributed to fewer graduate applications from Indian nationals (12 percent) and Middle Eastern and North African students (14 percent)—Iranian students in particular (27 percent). While media outlets and some universities have cited a "Trump effect"—alluding to the rhetoric used by former President Trump and the policies adopted by his administration—as the reason for the recent decline, there is no empirical evidence supporting this assertion (Fox, 2019; Hartocollis, 2019).

In this chapter, we empirically explore the "Trump effect" by examining how recent trends in international student enrollments relate to the former president's saliency as captured by Google Trends Indexes (GTI). GTIs have been increasingly used to measure issue salience (Mellon, 2014) and public attitudes. While the index is not ideal for capturing interest in specific policies, search data on "Trump" provides temporal cross-country variation in international awareness, which is an important predictor of international student enrollment for a large set of countries.

As noted by Baer (2017) and Berman (2019), tough rhetoric and policy toward immigration characterized the Trump Administration. Public calls for the intensification of restrictive immigration policies increased during and immediately following the 2016 presidential campaign. As a candidate, Donald Trump placed immigration at the forefront of his policy agenda. Following his inauguration, the Trump Administration banned foreign nationals of eight countries from entering the country, reduced refugee admissions, ended new applications for the Deferred Action for Childhood Arrivals program, terminated Temporary Protected Status designations for Sudan, Nicaragua, Haiti, and El Salvador, and instated "zero tolerance" policies at the border that increased child detentions and family separations (Leiber, 2019; Pierce and Selee, 2017).

Within nine months of Trump taking office, arrests for immigration violations increased by 42 percent and non-border deportations rose 25 percent (Economist, 2018). These efforts, along with attempts to adjust how "unlawful presence" for higher education students is calculated and promises of regulatory change to the Optional Practical Training program and non-immigrant work visas, may have influenced international confidence in the United States and how its policies were perceived abroad (Grawe, 2019; Wike et al., 2017).

We explore how interest in the former president and policies adopted by his administration, as captured by Google searches, relates to trends in international student enrollments. Using data on international student enrollment in U.S. institutions of higher education from 2004 to 2017, along with Google search data proxying for Trump saliency, we find that a one standard deviation increase in the GTI capturing interest in Trump is linked to a 3.8 percent reduction in international graduate student enrollments. This decrease is uniquely associated with changes in the GTI that capture Trump saliency, as opposed to changes in a placebo GTI, and do not seem to be driven by the largest group of international students—Chinese nationals.

Empirically assessing the extent to which interest in the former president relates to international student enrollments is important for several reasons. International students provide billions of dollars to the U.S. economy each year (Anderson, 2018). To the extent that countries can strengthen the college-to-workforce transition policies available to international students, they stand to gain further increases in productivity and economic growth (Peri et al., 2016). In addition, they are a key source of revenue for public universities, which relied on the growing pool of international students during much of the 1990s and 2000s to offset declining state appropriations (Bound et al., 2016). Adding housing, food and other expenditures, international students are estimated to have a $40 billion economic impact, with 10 states receiving more than $1 billion each in benefits and seven states reporting gross domestic product (GDP) contributions in the order of 0.25 percent (Grawe, 2019). Furthermore, international students constitute a key source of talent and contribute significantly to U.S. innovation (Stuen et al., 2012), the U.S. labor market (Borjas, 2005; Hunt, 2011), and diversity in higher education.

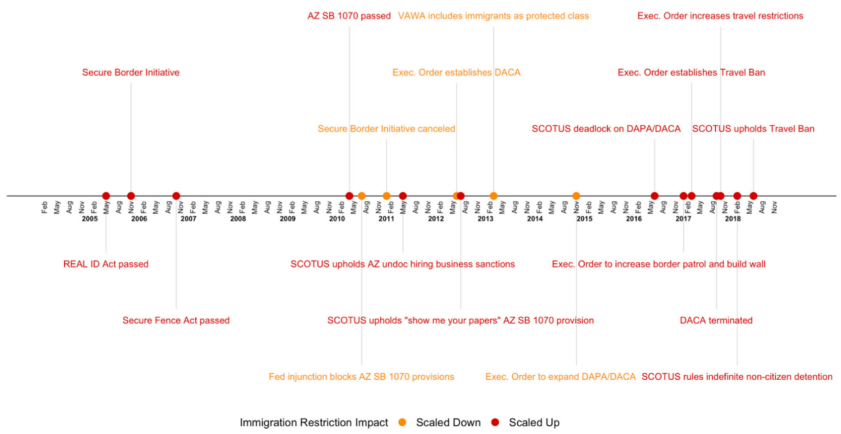
Enrollments and Global Perceptions

In deciding on where to pursue their studies, international students weigh the perceived benefits and costs of studying in a particular location. The costs and benefits are influenced by both home and host

country characteristics. Home country conditions like the availability of high-quality undergraduate and graduate programs, economic activity, exchange rates, and college-age population size influence the number of students studying in the United States (Bird and Turner, 2014; Bound et al., 2009). Host country characteristics like economic conditions, employment opportunities, tuition costs, state appropriations, institutional prestige and quality, and financial assistance have also been identified as important factors influencing U.S. international student enrollments (Bound et al., 2015, 2016; Lowell and Khadka, 2011; Rosenzweig, 2006; Stephan et al., 2015). Additionally, host country visa policies can influence foreign students' motivations. For instance, Shih (2016) found that the October 2003 reduction in the H-1B visa cap reduced international student enrollment in the U.S. by 10 percent. Examining the same policy change, Kato and Sparber (2013) found that the visa cap reduced international applicants' SAT scores by 1.5 percent—a result driven by fewer score reports from students in the top quintile, who might have chosen to study elsewhere given the reduced chances to stay and work in the United States.

Perceptions can also impact international students' decision on where to study. Negative perceptions regarding the host country's environment can lower the net benefit of studying abroad and result in lower international student enrollments. As previously mentioned, media outlets and universities have cited a "Trump effect" as the reason for the decline in international student enrollments in the United States. A similar concern arose after 9/11, when a stricter visa application system and hostility toward Arab students led some to believe that the

Figure 2 Key Immigration Policy Timeline 2004-2018



country no longer welcomed foreign students, slowing the growth in international student enrollments (Arnone, 2004; McMurtrie, 2001). Considering the drastic stance that the former president took towards immigration, it's conceivable that decisions to study in the U.S. were influenced by him.

The highly restrictive agenda of the Trump Administration compared to previous administrations is illustrated in Figure 2, which shows key immigration policies and proposals based on their level of inclusiveness (scaled down) or restrictiveness (scaled up) toward immigrants. To the extent that the global community identified the former president as the person responsible for expansive executive actions restricting immigration, prospective international students attuned to these shifts may have decided to study elsewhere. Indeed, the number of international students in Canada (a good alternative for English-speaking students) increased 20 percent in 2017 and by 16 percent in 2018 (Anderson 2019).

Methodology

We rely on a utility maximizing framework in which students' weigh the perceived costs and benefits of studying in a particular location. Negative perceptions about the host country's environment may lower the net benefit of studying abroad. Our aim is to gauge the extent to which recent international student enrollments relate to interest in Trump, as captured by a Google Trends index (GTI) that reflects the relative volume of online searches on Donald Trump and his presidency. To that end, we estimate the following benchmark regression:

$$(1) \quad log\,(Y_{ct}) - log\,(Y_{ct-1}) = \alpha + \beta GTI_{c,t-1} + log\,(X_{ct})\gamma + \theta_d + \mu_s + \rho_c + \varphi_t + \varepsilon_{dsct}$$

where Y_{ct} represents the number of student visas granted to individuals from country c in year t or t-1. The vector GTIc,$_{,t-1}$ represents the Trump GTI in country-of-origin c one year before enrollment to match Trump saliency to the period when students were likely applying for admission. The vector X_{ct} contains country-of-origin push factors likely to shape international student flows, such as the country's population, secondary school enrollments, GDP per capita, and unemployment rates. The vector also includes imports and exports between the origin country and the United States to capture bilateral ties affecting student exchanges. Additionally, real bilateral currency exchange rates reflect the relative cost of attending U.S. institutions. To account for the potential diversion of international students to other English-speaking countries, we also include information on the share of students studying in the United Kingdom, Canada, or Australia—English-speaking

countries that traditionally compete with the U.S. for international students. Lastly, equation (1) includes fixed-effects θ_d and μ_s to account for the role of specific student traits, such as degree level and subject (STEM vs. non-STEM) of study. In addition, we include country-specific (ρ_c) and year-specific (φ_t) fixed-effects capturing time-invariant country-level differences in enrollments and time-varying macroeconomic factors influencing enrollment, such as a global economic downturn. We apply country weights reflecting baseline (2004) U.S. enrollment to produce globally representative estimates.

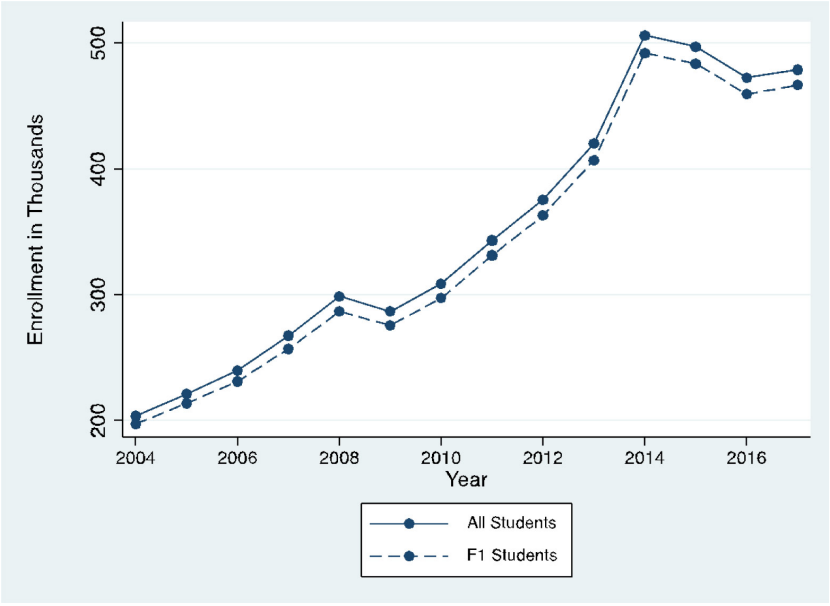
Our coefficient of focus, β, captures the relationship between interest in Trump and international student enrollments. We also conduct a couple of robustness checks. First, we experimented with a placebo GTI based on weather-related searches. Second, we exclude China—a major sender of students to the United States—to gauge if results are driven by this country alone or by a broader set of nations.

Data

International Student Enrollments

We use individual-level data from the Student and Exchange Visitor Information System (SEVIS) accessed through the Freedom of

Figure 3 International Student Enrollments



Notes: All students include F1 students and M1 students.

Figure 4 International F1 Student Enrollments by Country of Origin/ Region

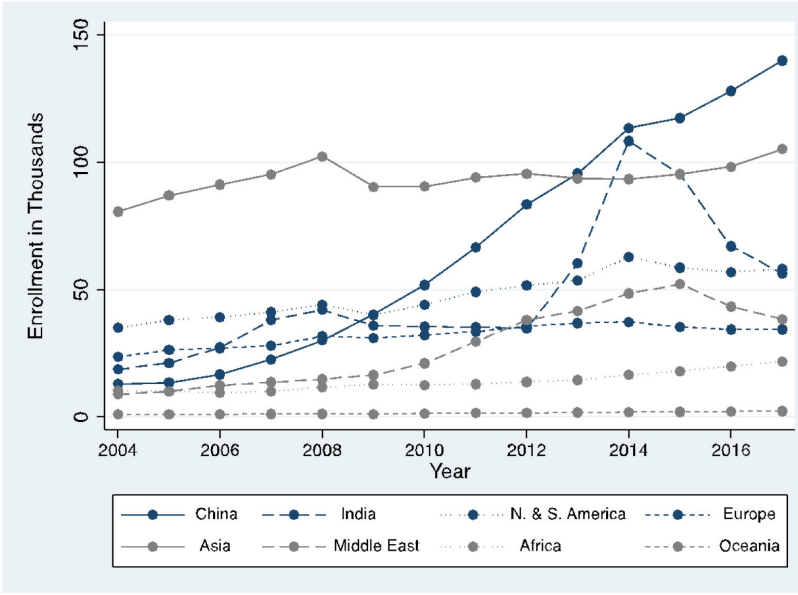
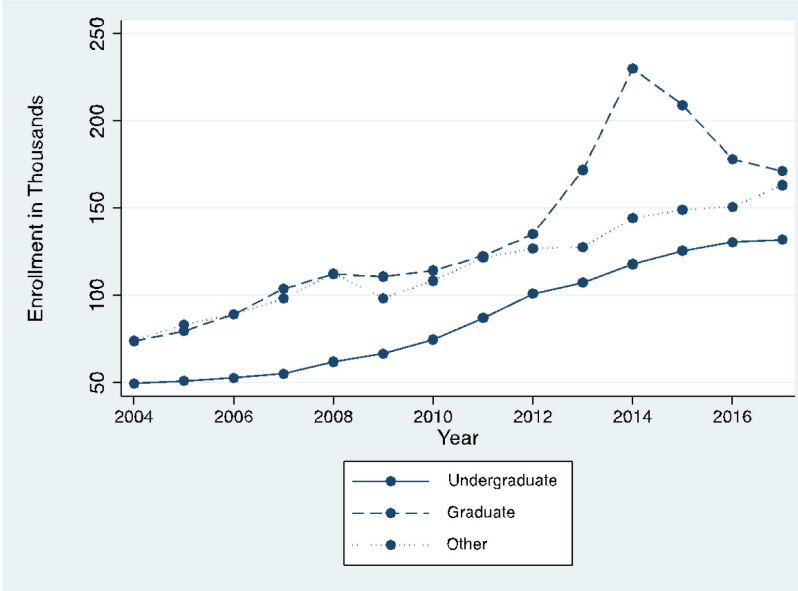


Figure 5 International F1 Student Enrollments by Degree of Study



Notes: 'Other' includes associate/vocational/language degrees and flight school.

Figure 6 Undergraduate International F1 Student Enrollments by Region of Origin

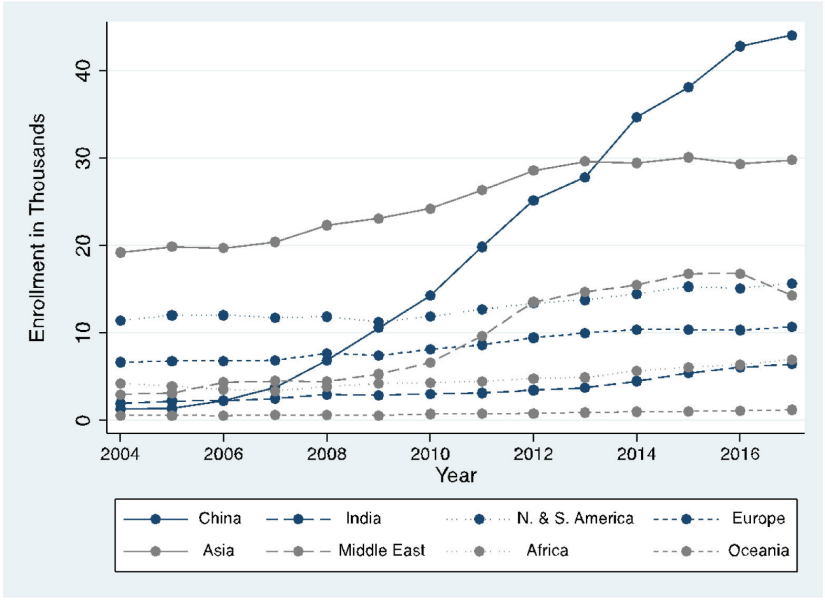
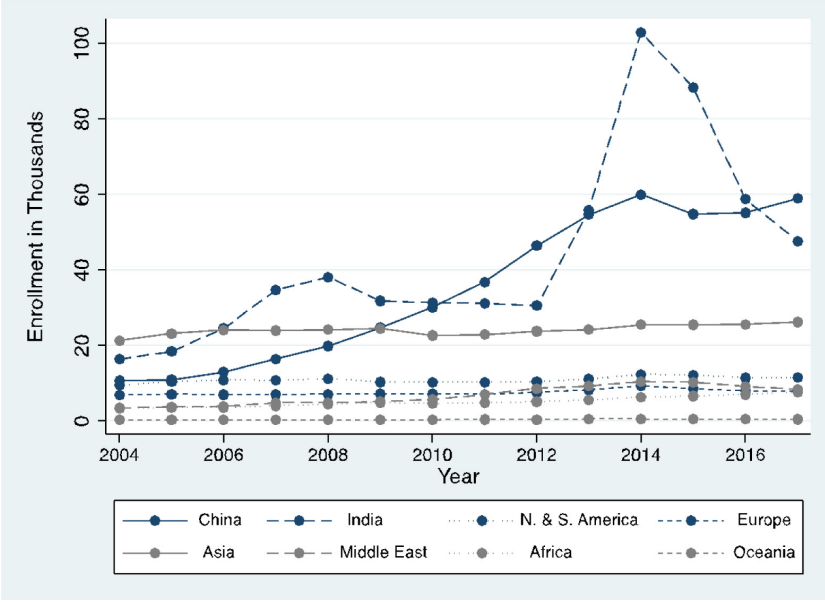


Figure 7 Graduate International F1 Student Enrollments by Country of Origin/Region



Information Act to measure international student enrollments in U.S. educational institutions between 2004 and 2017. SEVIS is a real-time, web-based system used by the Department of Homeland Security to maintain information on international nonimmigrant students and exchange visitors in the United States. All U.S. educational and vocational institutions are required to report annually to SEVIS on enrolled international students. The data included annual student-level records on degree and field pursued, country of origin, and type of student visa (F1 or M1). We collapsed the data to produce annual country totals by degree and area of study (STEM or non-STEM).

Figure 3 shows the total number of international students enrolled in U.S. educational institutions from 2004 to 2017, and separately for F1 students. International student enrollments declined in 2015 after a decade-long increase. Students on F1 visas, who account for most international students in the country (M1 visas are much fewer and typically awarded to pursue vocational programs), were responsible for that trend. Figure 4 further shows the trend in enrollments by select countries and regions. Enrollments among Indian students declined the most, followed by students from the Middle East. A comparison of trends in Figures 5, 6, and 7 reveals a slight downward trend in undergraduate enrollment from Middle Eastern countries and a notable drop in graduate enrollment driven by Indian students.

Because international enrollments are related to country-specific traits, we gathered data on country-specific population and secondary education figures. In addition, we collected information on unemployment rates, GDP, imports, exports, and real exchange rates from the World Bank, UNESCO, and the International Monetary Fund. Data on international student enrollments in Canada, the United Kingdom, and Australia were also included in the analysis. Appendix Table A1 includes basic descriptive statistics for these variables.

International Perceptions of the U.S.

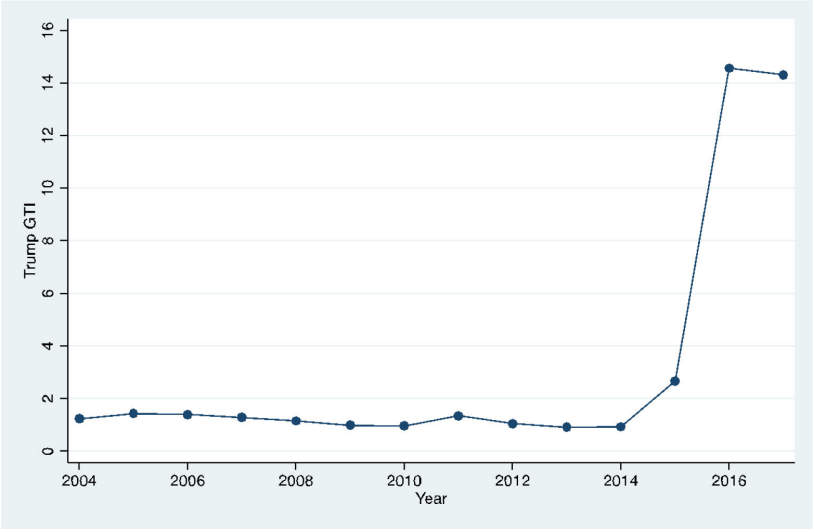
To capture international interest in former President Trump, we used country-specific Google search data. Google Trends analyzes web queries made from the Google search engine and measures the relative volume of searches for specific terms from different geographic areas. We began by constructing country-level GTIs for searches on Donald Trump and his presidency. We relied on a search term strategy to create a "Trump" GTI focusing on the following case-sensitive terms: "donald trump," "Donald Trump," "Trump," and "trump." Appendix Table A2 describes the process for generating GTIs and outlines the specific search parameters and related queries.

Google Trends search data is not reported in absolute volumes but, rather, as a normalized ratio of searches made in country *c*, in month *t*, relative to the number of searches made in the month with the greatest search volume:

$$(2) \qquad GTI_{ct} = \left[\frac{\#searches_{ct}}{\#searchesinthemonthwiththehighestsearchvolume_{c}}\right] \times 100$$

We derived a yearly index for each country by averaging monthly GTIs for the period January 1, 2004 to December 31, 2017. As shown in Appendix Table A1, the Trump GTI averaged 3.1 for the period under

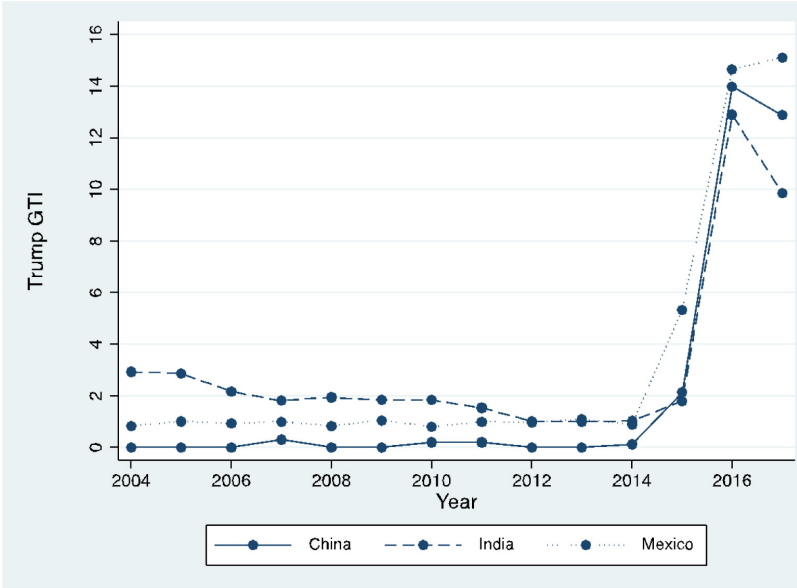
Figure 8 Yearly Variation in Trump GTI (All Countries)



study, signaling that searches across all countries reached 3.1 percent the volume of searches made during the period with the highest search volume.

Figure 8 plots the variation in the Trump GTI, averaged across countries. A Trump GTI of 14.3 in 2017 indicates that searches for Trump reached 14.3 percent of their volume during the month with the highest search levels. The GTI increased in 2015, when he announced his candidacy for president, and continued thereafter. Figure 9 displays yearly variation in the Trump GTI for three large student-sending countries: China, India, and Mexico. Interest in Trump surfaced earlier in Mexico relative to the two other countries, possibly due to derogatory references to Mexico and its citizens during the presidential campaign. We exploited these country-level variations to gauge how interest in Trump may have influenced international student enrollments.

Figure 9 Yearly Variation in the Trump GTI for Three Sample Countries



International Student Enrollments and International Awareness of Trump

Table 1 displays the estimates from equation (2). Based on the results from the most complete model specification, interest in Trump is not associated with a change in the overall number of international students. However, when we distinguish between undergraduate and graduate students, as in Table 2, a one standard deviation increase in the Trump GTI is associated with a 3.8 percent decrease in graduate enrollment (computed as $\Delta\%Y = 100*\beta*\Delta X$, where ΔX=s.d. of GTI). Using estimates on the total number of international students enrolled in U.S. institutions in 2017 (NSF, 2018), we calculate a loss of 13,980 (0.038*367,920) students. Estimates put the contribution of international students to the U.S. economy at $39 billion dollars ($36,000/student) in 2017 (NAFSA, 2019). Hence, the results imply a loss of half a billion dollars ($36,000*13,980).

We conducted several checks to assess the robustness and interpretation of our findings. First, in Table 3 Panel A, we experimented with a placebo GTI based on weather-related searches. As expected, we did not find evidence of graduate international student enrollments being correlated to interest in the weather. We also tested if findings are driven by China. As seen in Panel B of Table 3, our findings proved robust to excluding that country, pointing to a broader global response.

Table 1 Interest in Trump and International Student Enrollment in the U.S.

Dependent Variable	*Growth Rate in Student Visas*	
Column	**(1)**	**(2)**
Model	**Baseline**	**Plus Country Controls**
Lag Trump GTI	0.005	0.004
	(0.007)	(0.007)
STEM	-0.031***	-0.031***
	(0.008)	(0.008)
BA degree	0.027**	0.027**
	(0.013)	(0.013)
PhD. degree	-0.010	-0.010
	(0.009)	(0.009)
Time-Varying Country Level Traits		
Log Unemployment Rate		-0.058**
		(0.024)
Log GDP per Capita		0.000
		(0.001)
Log Population		0.005
		(0.006)
Log Imports		-0.037
		(0.034)

Dependent Variable	*Growth Rate in Student Visas*		
Log Exports			-0.020
			(0.030)
Log Secondary Enrollment			-0.089**
			(0.042)
Log Real Bilateral Exchange Rates			0.036
			(0.028)
Log Share of Students Studying in the UK			-0.358
			(0.247)
Log Share of Students Studying in Canada			-1.539***
			(0.474)
Log Share of Students Studying in Australia			0.978*
			(0.572)
Country Fixed Effects	Y		Y
Year Fixed Effects	Y		Y
Observations	23,520		23,520
R-squared	0.033		0.038
Dependent Variable Mean		0.029	

Notes: All regressions include a constant term. All outcomes are in natural logs. Standard errors (in parentheses) are clustered at the country level. ***$p<0.01$, ** $p<0.05$, * $p<0.10$. Regression weighted by baseline country enrollment.

Table 2 Interest in Trump and International Student Enrollment in the U.S. by Degree

Dependent Variable	*Growth Rate in Undergraduate Visas*		*Growth Rate in Graduate Visas*	
Column	(1)	(2)	(3)	(4)
Model	**Baseline**	**Plus Country Controls**	**Baseline**	**Plus Country Controls**
Lag Trump GTI	-0.006	-0.005	-0.007**	-0.008**
	(0.006)	(0.006)	(0.003)	(0.003)
STEM	0.026***	0.026***	0.012**	0.012**
	(0.003)	(0.003)	(0.005)	(0.005)
Ph.D.			-0.040***	-0.040***
			(0.009)	(0.009)
Time-Varying Country Level Traits				
Log Unemployment Rate		-0.048		-0.032
		(0.033)		(0.021)
Log GDP per Capita		-0.000		0.001
		(0.001)		(0.001)
Log Population		-0.015**		-0.003
		(0.007)		(0.006)
Log Imports		-0.082**		-0.058*
		(0.040)		(0.030)
Log Exports		-0.031		-0.012

Dependent Variable	*Growth Rate in Undergraduate Visas*		*Growth Rate in Graduate Visas*	
		(0.041)		(0.016)
Log Secondary Enrollment		-0.009		-0.067**
		(0.073)		(0.032)
Log Real Bilateral Exchange Rates		0.009		-0.003
		(0.038)		(0.030)
Log Share of Students Studying in the UK		-0.507		-0.166
		(0.391)		(0.180)
Log Share of Students Studying in Canada		-0.085		-0.392
		(0.669)		(0.349)
Log Share of Students Studying in Australia		0.160		0.270
		(0.331)		(0.290)
Country Fixed Effects	Y	Y	Y	Y
Year Fixed Effects	Y	Y	Y	Y
Observations	3,360	3,360	6,720	6,720
R-squared	0.217	0.234	0.063	0.068
Dependent Variable Mean		0.055		0.018

Notes: All regressions include a constant term. All outcomes are in natural logs. Standard errors (in parentheses) are clustered at the country level. ***p<0.01, ** p<0.05, * p<0.10. Regression weighted by baseline (2004) country enrollment.

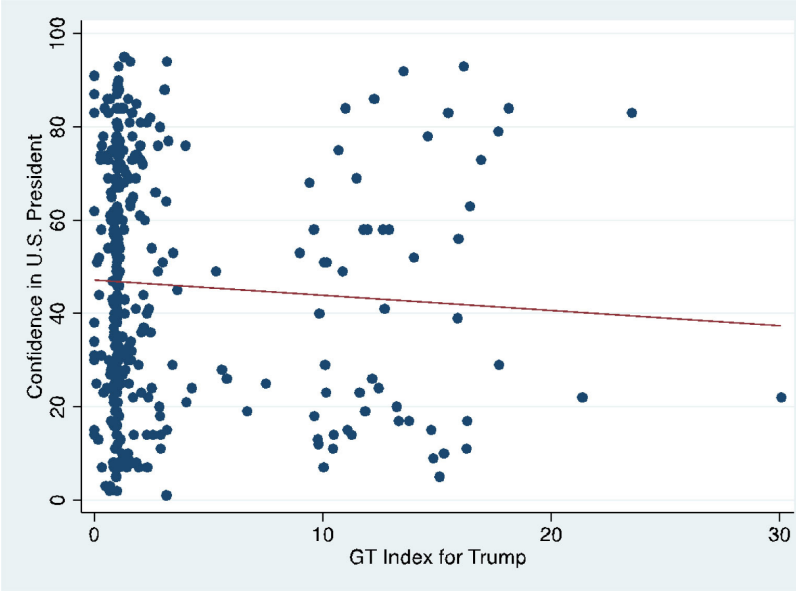
Table 3 Robustness Checks

Dependent Variable	*Growth Rate in Graduate Visas*	
Column	**(1)**	**(2)**
Model	**Baseline**	**Plus Country Controls**
Panel A: Placebo GTI on Weather-related Searches		
Lag Placebo GTI	0.001	0.001
	(0.001)	(0.001)
STEM	0.014***	0.014***
	(0.004)	(0.004)
Ph.D.	-0.028***	-0.028***
	(0.005)	(0.005)
Observations	6,740	6,740
R-squared	0.014	0.014
Panel B: Excluding China		
Lag Trump GTI	-0.007**	-0.008**
	(0.003)	(0.003)
STEM	0.012**	0.012**
	(0.005)	(0.005)
Ph.D.	-0.033***	-0.033***
	(0.006)	(0.006)
Observations	6,668	6,668
R-squared	0.051	0.054
For all specifications above		
Country Fixed Effects	Y	Y
Year Fixed Effects	Y	Y
Country Level Controls	N	Y
Dependent Variable Mean	0.018	

Notes: All outcome variables are in terms of natural logs. Standard errors (in parentheses) are clustered at the country level. ***p<0.01, ** p<0.05, * p<0.10. Regression weighted by baseline (2004) country enrollment.

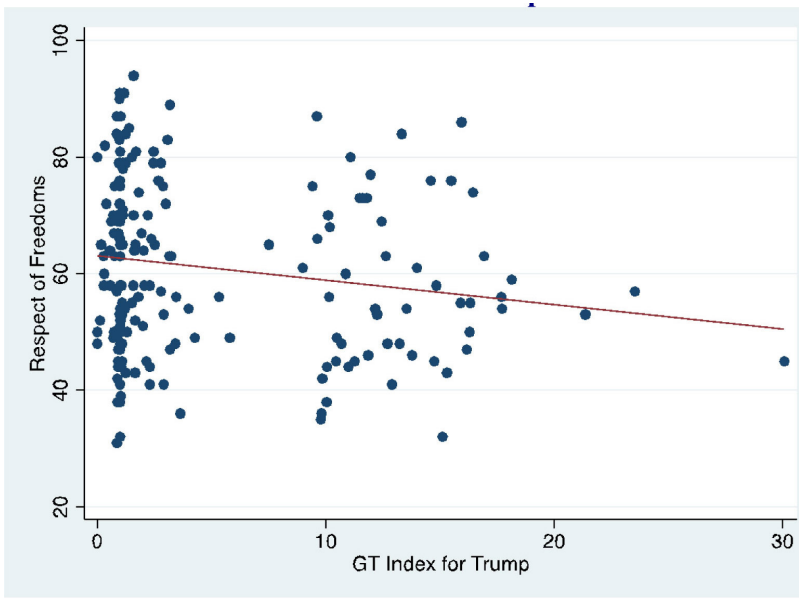
The negative association between Trump awareness and graduate student enrollments may reflect reservations or heightened concern about studying in the United States due to negative perceptions about

Figure 10 Global Confidence in the U.S. President and the Trump GTI



Source: Pew Global Indicators Database and Google Trends.

Figure 11 Global Views on U.S. Government's Respect for Personal Freedoms and the Trump GTI



Source: Pew Global Indicators Database and Google Trends.

Figure 12 Study Locations for Chinese Students by Country or Region of Study

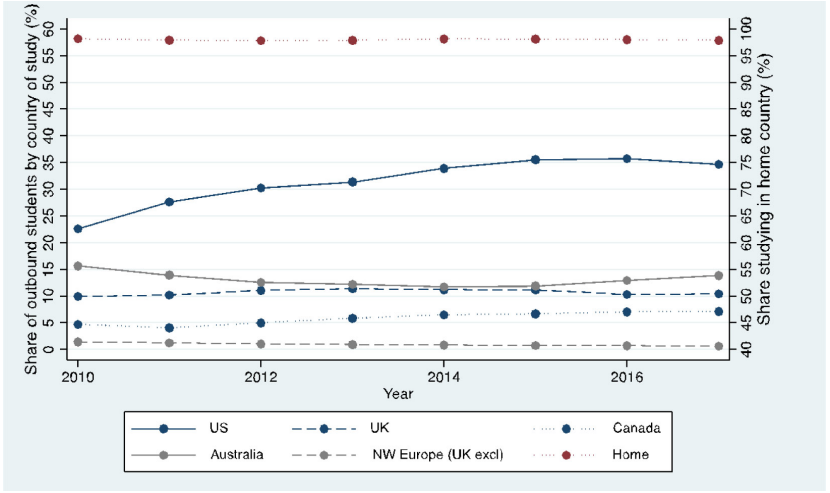
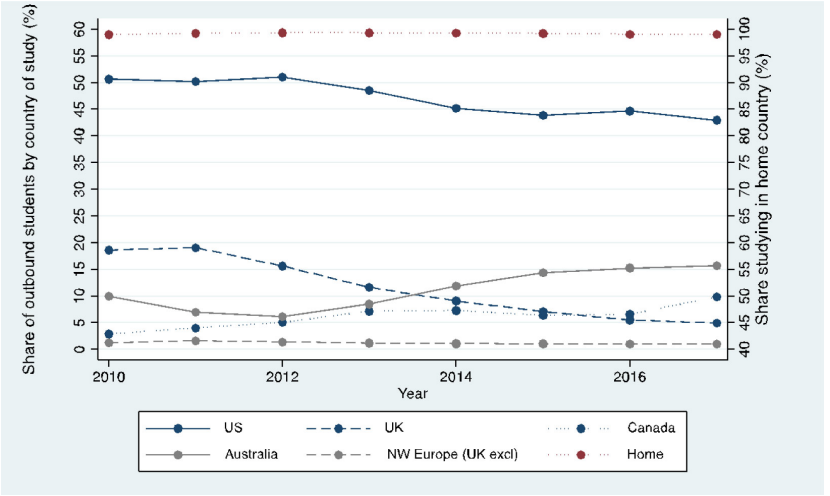
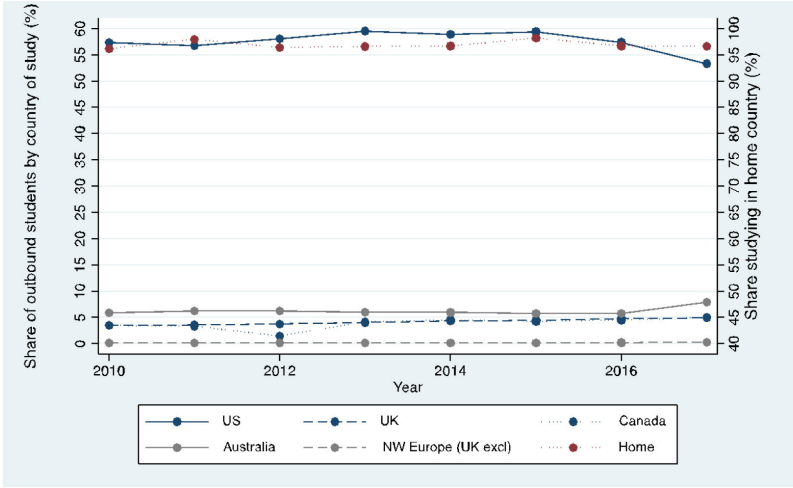


Figure 13 Study Locations for Indian Students by Country or Region of Study



the country and its president. If that is the case, we would expect for the Trump GTI to be inversely related to measures of global confidence in the U.S. government's respect for personal freedoms and its people, as well as to measures of global confidence in the U.S. president—both available from the Pew Global Indicators Database. Figures 10 and 11 confirm that is the case, perhaps due to the anti-immigrant rhetoric and

Figure 14 Study Locations for South Korean Students by Country or Region of Study



restrictive immigration policies characterizing the Trump presidency (Figure 2).

Where did these international graduate students go? Using UNESCO bilateral enrollment data from 2010-2017, we plotted the destinations of international students from India, China, and South Korea—countries that account for most international graduate students in the United States. Overall, Figures 12-14 demonstrate clear downward shifts in the share of students studying in the U.S. after 2016. Chinese students are increasingly bound for Australia (Figure 12), Indian students have gradually enrolled in Canadian and Australian institutions (Figure 13), and South Korean students seem to be targeting Australian institutions. Overall, these data support the notion that formerly U.S.-bound students from key contributing countries may be targeting higher education institutions elsewhere in Canada and Australia.

Conclusion

Since 2015, the number of international students enrolling in U.S. academic institutions has declined, coinciding with less favorable global attitudes toward the United States (Wike et al., 2018). This tarnished image has been partly attributed to the rhetoric and policies of former President Trump and a lack of confidence in his leadership (Wike et al., 2017). Using a comprehensive dataset on international student enrollments in U.S. institutions of higher education between

2004 and 2017, we examined the extent to which global awareness of Trump, as captured by related Google searches, relate to international student enrollments. We found that interest in Trump is associated with enrollment declines among *graduate* international students. Graduate enrollments might be more influenced by employment prospects and the ability to stay in the country upon degree completion than undergraduate enrollments. We also find Trump saliency to be related to negative perceptions about the United States and its president, with graduate students increasingly choosing alternative English-speaking destinations like Canada, the U.K., and Australia.

Significant revenues, talent, and innovation emanate from international students, particularly at the graduate level. Given the expanding range of countries offering competitive international programs, gaining a better understanding of how international perceptions of the United States and its leaders may deter international enrollments is well-warranted. Negative perceptions of the host country environment could be offset by outreach efforts from institutions of higher education, as well as state departments and organizations, such as the Institute of International Education, to provide international students accurate and reassuring information on the current political climate in host countries. Global mobility and employment of skilled workers can also be maximized if countries adopt strong college-to-workforce transition programs. In the U.S., this could include the expansion of the OPT program, as well as the development of programs that facilitate the transition of international students with advanced degrees from U.S. institutions to the job market. This could be achieved by increasing the number of H-1B visas or by creating an investor visa with lower start-up requirements (Peri et al., 2016). Overall, further attention to changes in international student flows is well warranted given its link to international labor flows.

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Author Biographies

Catalina Amuedo-Dorantes, PhD, is a Professor in the Economics and Business Management department at the University of California, Merced. Her major research interests lie in the areas of labor and public economics, with special focus on immigration policy, international migration, immigrants, and remittances. E-mail: camuedo-dorantes@ucmerced.edu

Mary Lopez, PhD, is a Professor of Economics at Occidental College. She specializes in immigration and immigration policy, Latino entrepreneurship, and racial/ethnic and gender economic inequality. E-mail: mlopez@oxy.edu

Ashley Muchow, PhD, is an Assistant Professor of Criminology, Law, and Justice at the University of Illinois at Chicago. Her research examines the causes and consequences of social inequality with a particular focus on immigrant integration. E-mail: muchow2@uic.edu

Appendix

Table A1 Descriptive Statistics

Variable	*Mean*	*S.D.*
Log All International Students	3.010	2.348
All International Students	182.696	1393.050
Google Trend Indices		
Trump GTI	3.107	4.773
Time-Varying Country Level Traits		
Log Country Unemployment Rate	2.531	0.842
Log Country GDP Per Capita	7.056	2.463
Log Country Population	7.110	0.979
Log Country Imports	24.385	2.072
Log Country Exports	24.189	2.340
Log Country Secondary Enrollment	5.012	0.490
Log Real Bilateral Exchange Rate	3.677	2.598
Log Share of Students Studying in UK	0.105	0.126
Log Share of Students Studying in Canada	0.025	0.031
Log Share of Students Studying in the Australia	0.041	0.081
Observations		23,590

Notes: Enrollment data is collapsed at the country, year, degree, and subject level. Means above are reported at the collapsed level. Some of our regressors have many zeros; therefore, we transform them using an inverse hyperbolic sine function: $\text{IHS}(Y) = log\left[Y + \sqrt{(Y^2 + 1)}\right]$

Table A2 Google Trends Index

	Overview
Coverage	Ninety one percent of online searches worldwide are made using the Google search engine. Google Trends uses computer IP addresses to identify the geographic area of the search. While use of a virtual private network (VPN) can disguise IP address locations and, by extension, the geolocation accuracy of Google Trends, the majority (65 percent) of young users (age 16-24) do not use VPNs (https://thebestvpn.com/vpn-usage-statistics/#regionalvpnusage). Additionally, while a 2010 decision by the Chinese government blocked users in the country from accessing the Google search engine, Google searches were frequent enough for GTIs to be calculated for the country. GTIs were not calculated for 52 of the 262 countries included in this study. Most of these countries were not identified as a country option in the Google Trends search tool—these consisted of former sovereign states that no longer exist (e.g., Czechoslovakia, Serbia and Montenegro) or administrative regions/territories of nation states (e.g., Saint Pierre and Miquelon, Saint Martin, West Bank). In a handful of instances, the absolute number of searches in a country was lower than the threshold number specified by Google.
Process	Google uses a random sampling routine to produce GTIs. To account for variability in this process, we take the mean of 80 country-level GTIs pulled between December 20, 2018 and April 18, 2019.

Trump GTI	We refer to interest in and searches related to Donald Trump as "Trump" searches or interest in "Trump," since the keywords used in Google searches relate to "Donald Trump" or "Trump." The parameters used to generate the Trump GTI are detailed below.

	Parameters
Category	All categories
Search type	Web search
Search input	donald trump + Donald Trump + Trump + trump
Time period	Jan 1, 2004 to Dec 31, 2017
Date of access	80 repeated draws from Dec 2018 to Apr 2019
Related queries (searches frequently made at the same time)	trump news trump twitter clinton trump president trump obama donald trump twitter obama trump trump polls hillary Clinton 10) election