



FINAL REPORT

JUNE 2024

DEMOCRATIC BACKSLIDING AND MIGRATION INTENTIONS IN LATIN AMERICA AND THE CARIBBEAN

**AN ANALYSIS OF U.S. CUSTOMS AND
BORDER PROTECTION (CBP) AND GOOGLE
TRENDS DATA**

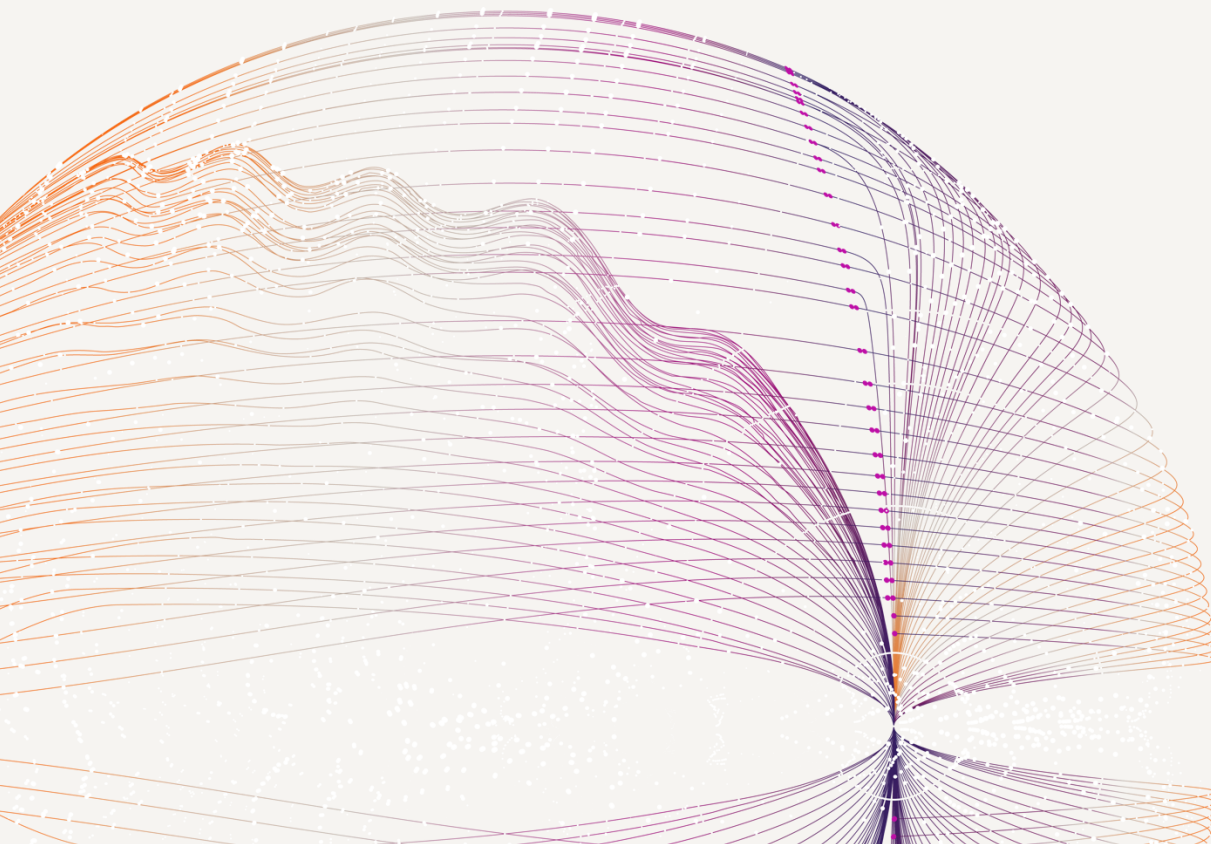


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Acronyms

| | |
|-------|--|
| CBP | Customs and Border Protection |
| CPI | Consumer Price Index |
| GDP | Gross Domestic Product |
| LAC | Latin America and the Caribbean |
| NORC | NORC at the University of Chicago |
| RQ | Research Question |
| TRAC | Transactional Records Access Clearinghouse |
| V-Dem | Varieties of Democracy |

Executive Summary

Summary of Key Findings and Implications

The analysis documents a *conditional relationship* between democratic backsliding and migration in the Latin America and Caribbean (LAC) region, showing that while democratic declines are not uniformly related to migration, backsliding does increase migration when it affects livelihoods through widespread repression and/or by causing deterioration in economic or security conditions.

In Nicaragua the 2018 government crackdown on public protests and subsequent widespread targeting of opposition supporters led to an immediate spike in migration to the U.S. and Costa Rica.

Other backsliding events in Nicaragua – including the 2014 constitutional amendment that eliminated term limits and the 2016 election that was widely described as a sham – had no discernible effect on migration.

In El Salvador data from Google Trends searches provides no evidence that key backsliding events since Nayib Bukele’s 2019 election have increased migration intentions.

Region-wide analysis using U.S. Custom and Border Protection (CBP) data on annual encounters from a large set of LAC countries between 2008 and 2019 shows no evidence of a consistent association between backsliding and migration to the U.S.

These findings confirm the importance of investing in strategies that preserve and expand respect for human rights and democratic freedoms in LAC. Though not all backsliding episodes cause an uptick in migration, regimes that adhere to basic democratic norms and procedures will be less likely to engage in the types of backsliding that does undermine security and prosperity, causing citizens to flee.

Research Overview

This study examines the connection between democratic backsliding and migration in the LAC region using data from CBP and Google Trends.¹ The goal of the overall project is to examine whether democratic erosion contributes to increased migration to the U.S. and other countries in the LAC region, after accounting for other push and pull factors that also influence migration trends.

¹ Through this report, we use democratic “backsliding” and “erosion” as synonyms, reflecting common usage in the existing literature. As described on page 9, backsliding typically involves the dismantling of democratic norms, procedures, and institutions from the inside by anti-democratic incumbents.

To answer this question, the research team examined multiple data sources, including opinion survey data on migration intentions, data on migration flows to the U.S. and other countries in the LAC region, and alternative measures from Google and Twitter. The first report presents results based on analysis of opinion poll data and includes in-depth case studies of two priority countries: Nicaragua and El Salvador. This report presents results based on analysis of CBP data on encounters at the U.S. Southern border, complemented by data on refugee applications in Costa Rica and Google Trends analysis. The third report summarizes the use of Twitter data to estimate migration trends, while the fourth report summarizes the findings of this research project. All reports are available [here](#).

Methodology

This report uses quantitative analysis of CBP data obtained by the Transactional Records Access Clearinghouse at Syracuse University through multiple Freedom of Information Act requests to CBP. We conduct two types of analysis. First, to examine the relationship between democratic erosion and migration throughout LAC, we use cross-sectional time-series regression analysis with annual data from a large set of LAC countries over a 12-year period from 2008 to 2019. This approach relates the annual number of encounters at the U.S. Southern border by country of origin to changes in democracy ratings from the Varieties of Democracy liberal democracy index. The aim is to determine whether major backsliding years are associated with increases in migration to the U.S., after accounting for other root causes of migration, including economic and security conditions in countries of origin.

The second type of analysis uses an “event study” regression approach to identify the effects of specific backsliding events on migration. While this analytic approach is narrower in scope, it is better suited for isolating the causal effects of key events on migration patterns. As part of the initial feasibility test for this study, we examined the suitability of this approach for two primary countries of interest: Nicaragua and El Salvador. While we are not able to use this approach for El Salvador because key backsliding events are near the end of the time period for the available CBP data, Nicaragua is well suited due to the longer timeframe of democratic decline. We therefore focus the event study analysis on Nicaragua, with a particular interest in examining the effects of the 2018 government crackdown on protests sparked by the announcement of a plan to cut social services and raise taxes. We also examine prior backsliding events in 2014 and 2016.

In addition, the research team explored potential uses of data on Google searches available from Google Trends.² Google search data has been used in prior research to measure migration intentions and has been shown to be a useful predictor of actual population movements.³ The research team collected information on the volume of Google searches in Nicaragua and El Salvador to determine whether the data is sufficiently sensitive to allow for its use in studying

² <https://trends.google.com/trends/>

³ Böhme, Marcus H., André Gröger, and Tobias Stöhr. 2020. “Searching for a Better Life: Predicting International Migration with Online Search Keywords.” *Journal of Development Economics* 142: 102347. Wanner, Philippe. 2021. “How Well Can We Estimate Immigration Trends Using Google Data?” *Quality & Quantity* 55(4): 1181-1202.

the effects of key backsliding events on migration intentions. This is particularly important for El Salvador, since the CBP data is not well-suited for analyzing how backsliding events affect actual migration due to the limitations noted above.

Main Findings

The analysis documents a *conditional relationship* between democratic backsliding and migration in the LAC region, corroborating the conclusions from the prior study based on opinion poll data and qualitative case studies of Nicaragua and El Salvador. Taken together, the results from multiple data sets and analytic strategies show that while democratic declines are not uniformly related to migration, backsliding does increase migration when it affects livelihoods through widespread repression and/or by causing deterioration in other root causes of migration – particularly economic and security conditions.

While the regional analysis using CBP data shows no evidence of a consistent association between major backsliding years and migration to the U.S., examination of key backsliding events in Nicaragua shows that some types of erosion do cause significant out-migration to the region and the U.S. Specifically, the 2018 government crackdown and subsequent widespread targeting of opposition supporters led to an immediate spike in migration. While the largest share of political refugees migrated to Costa Rica, a substantial number entered the U.S. Other backsliding events – including the 2014 constitutional amendment that eliminated term limits and the 2016 election that was widely described as a sham – had no discernible effect on migration. Taken together, these results imply that backsliding directly contributes to migratory pressures when it entails significant, direct costs for a substantial share of the population. Comparison of Google search data from Nicaragua and El Salvador supports this conclusion. We observe a significant spike in migration intentions following the 2018 government crackdown in Nicaragua and no clear evidence that key backsliding events in El Salvador since Nayib Bukele’s 2019 election have increased out-migration pressures.

In documenting these findings, this report adds to the existing evidence base on migration in LAC in three ways. First, by employing a rigorous quantitative approach, this report provides a stronger foundation for policy decisions and programming. While prior research points to democratic backsliding as a key contributor to migration in several LAC countries, these conclusions are based on anecdotal evidence and observations. Second, this report is distinct from much of the prior research in that the event study approach we employ isolates the effects of political events from other factors. Past research on Nicaragua, for example, typically notes that recent migration trends are driven by a multifaceted nexus of economic and political variables. By narrowing our focus to the months before and after key backsliding events, we demonstrate that backsliding has a causal effect on migration, independent of other factors. Finally, examining the effects of multiple backsliding events in Nicaragua and El Salvador deepens understanding of why some types of democratic erosion cause increased migration while others do not, adding nuance to current understanding of the complex relationship between democratic erosion and population movement in the region.

1. Introduction

Report Structure

The structure of this report is as follows. Section 2 offers a definition of democratic backsliding and provides an overview of existing literature. Section 3 describes the data and methods. Section 4 presents the results from the regional analysis, using U.S. Customs and Border Protection (CBP) data. We find no evidence that backsliding is universally associated with higher (or lower) migration to the U.S. Section 5 presents the event study results from Nicaragua, showing that the 2018 crackdown on public protests precipitated a substantial exodus to Costa Rica and the U.S. Prior backsliding events in 2014 and 2016 had no discernible effect on migration trends. Section 6 draws on the Google Trends analysis for Nicaragua and El Salvador, providing additional evidence of a conditional relationship between backsliding and migration. The analysis confirms that the 2018 government crackdown in Nicaragua contributed to an immediate spike in out-migration intentions and shows that key backsliding events in El Salvador did not produce comparable spikes. These results contribute to a deeper understanding of why some types of backsliding increase migration pressures while others do not. Section 7 summarizes the overall findings.

Goals and Research Questions

NORC at the University of Chicago (NORC) seeks to understand whether and how democratic backsliding affects migration in the Latin American and Caribbean (LAC) region, with a particular interest in two priority countries, Nicaragua and El Salvador, that have experienced sustained crises of democratic governance in parallel with rising out-migration to the U.S. and other countries in the region. The primary goal of this research activity is to shed light on whether democratic erosion contributes to increased migration to the U.S. and other countries in the LAC region, after accounting for other push and pull factors that also influence migration trends. Additionally, the activity seeks to assess alternative data sources for studying country-to-country migration and advance methods for the use of alternative data sources.

To expand the evidence base for investing in interventions designed to increase and sustain democracy in the region, the research team conducted complementary analysis using multiple data sources and analytic techniques. The first component of the project examines *migration intentions* using opinion poll data throughout the LAC region and in two priority countries: Nicaragua and El Salvador. The second component examines migration trends to the U.S. with CBP data, the results of which are presented in this report. Finally, given the well-known limitations with administrative data on cross-border migration, the research team is also exploring potential uses of alternative strategies for measuring migration intentions and population movement using Google Trends and social media (Twitter) data. This report includes the results of our analysis using Google Trends; a separate report provides details on the Twitter data. All reports, including a summary of findings, are available [here](#).

The output from this research activity builds a stronger evidence base for understanding the connection between backsliding and migration. While recent events in the region suggest a strong link, prior studies have yet to substantiate this relationship using rigorous research methods and high-quality data sources. In addition, this activity advances the use of alternative data sources for studying migration trends and developing effective real-time responses. While data from Twitter and Google Trends hold considerable potential for studying country-to-country migration, research exploiting these sources is still in its infancy. By advancing methods that leverage these data, the activity develops tools that have multiple potential future uses, including developing early warning systems, tracking the origin and travel routes of migrant caravans, and providing alternative datasets on cross-national movement in LAC and elsewhere.

The overall activity is guided by three specific Research Questions (RQs) listed below.

RQ1: Does democratic backsliding in the LAC region increase migration to the US and/or other countries in the region?

RQ2: What are the challenges related to using CBP data from the United States and other receiving countries for studying the connection between democratic backsliding in LAC countries and out-migration? What best practices should be adopted for using this data? What alternative sources should be used as complements to the CBP data?

RQ3: Can alternative methods and data sources be used to estimate country-to-country migration trends and intentions to migrate for countries in the LAC region? What methods should be adopted for using these alternative data sources?

2. Prior Literature

The existing literature on North-South migration has traditionally emphasized several key push and pull factors that affect migration trends: economic deprivation, war and insecurity, social networks in receiving countries, environmental crises, and others.⁴ More recently, studies have also examined the effects of crime and gang violence in the LAC region,⁵ as well as policy shifts in receiving countries.⁶ However, less attention has been devoted to domestic political factors. While it is well understood that major political upheavals can spark mass refugee flows, few studies have examined whether the more gradual process of democratic backsliding affects migration. This is a potentially significant omission since many countries in the LAC region have

⁴ Massey, D. S., J. Arango, G. Hugo, A. Kouaouci, and A. Pellegrino. *Worlds in Motion: Understanding International Migration at the End of the Millennium*. Clarendon Press, 1999.

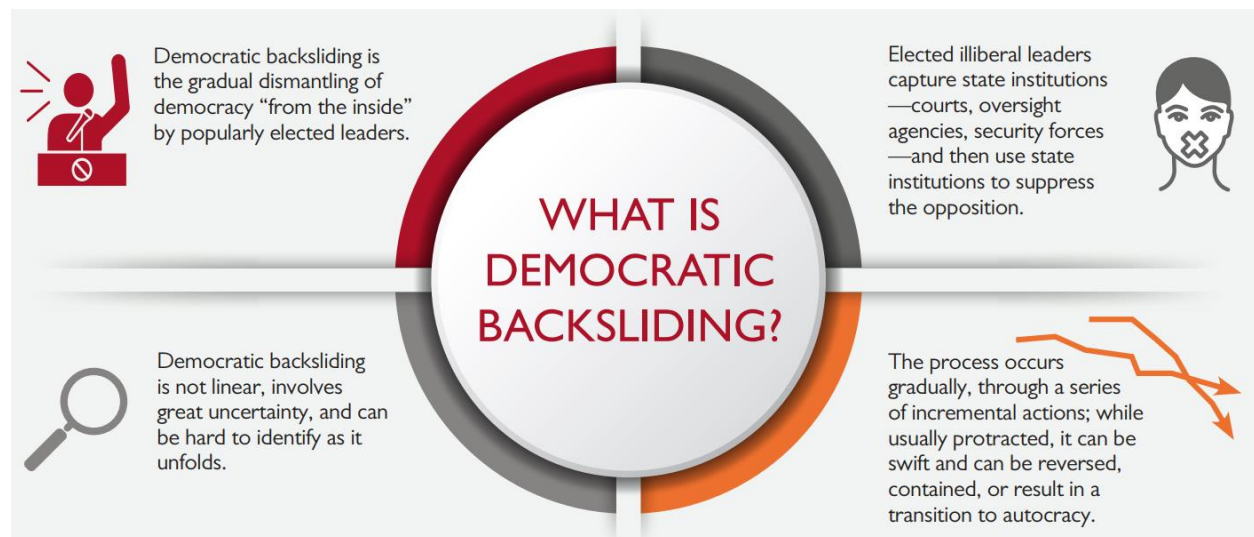
⁵ Hiskey, J. T., A. Córdova, M. F. Malone, and D. M. Orcés. "Leaving the Devil You Know: Crime Victimization, US Deterrence Policy, and the Emigration Decision in Central America." *Latin American Research Review* 53, no. 3 (2018): 429-447. Clemens, Michael A. "Violence, Development, and Migration Waves: Evidence from Central American Child Migrant Apprehensions." *Journal of Urban Economics* 124 (2021).

⁶ E.g., Holland, A. C., and M. E. Peters. "Explaining Migration Timing: Political Information and Opportunities." *International Organization* 74, no. 3 (2020): 560-583.

experienced sustained democratic reversals in the last two decades while many others have experienced periods of democratic decline.⁷

As illustrated in Figure 1, democratic backsliding is defined as the gradual dismantling of democracy from the inside by popularly elected leaders. Erosion typically occurs through executive aggrandizement whereby anti-democratic leaders expand their power by undermining checks and balances, including independent judiciaries, legislatures, bureaucracies, civil society, and the media. Backsliding often includes measures to restrict opposition parties and candidates and reforms that remove term limits or undermine electoral integrity. It may also include restrictions on public expression, popular protests, and human rights more broadly. Democratic erosion is often a gradual process, occurring through a series of incremental reforms, but can occur more quickly. In some cases, backsliding has resulted in autocratic systems, while in other instances democratic declines have yielded semi-democracies that retain aspects of both democracy and authoritarianism.

Figure 1. Key Aspects of Democratic Backsliding In LAC⁸



While democratic backsliding is a global phenomenon that has affected all world regions, concerns about democratic erosion are particularly acute in LAC, where recent events have undermined progress toward democratic consolidation in several countries.⁹ These trends can be seen in Figure 2, which plots democracy ratings from the Varieties of Democracy (V-Dem) Project since 1980 for the LAC region as a whole and for the two priority countries in this study.

In Nicaragua, the erosion of democracy began with Daniel Ortega's return to power in 2006. Since then, Ortega and loyalists in the Sandinista National Liberation Front have consolidated

⁷ Mainwaring, Scott, and Aníbal Pérez-Liñán. "Why Latin America's Democracies Are Stuck." *Journal of Democracy* 34, no. 1 (2023): 156-170.

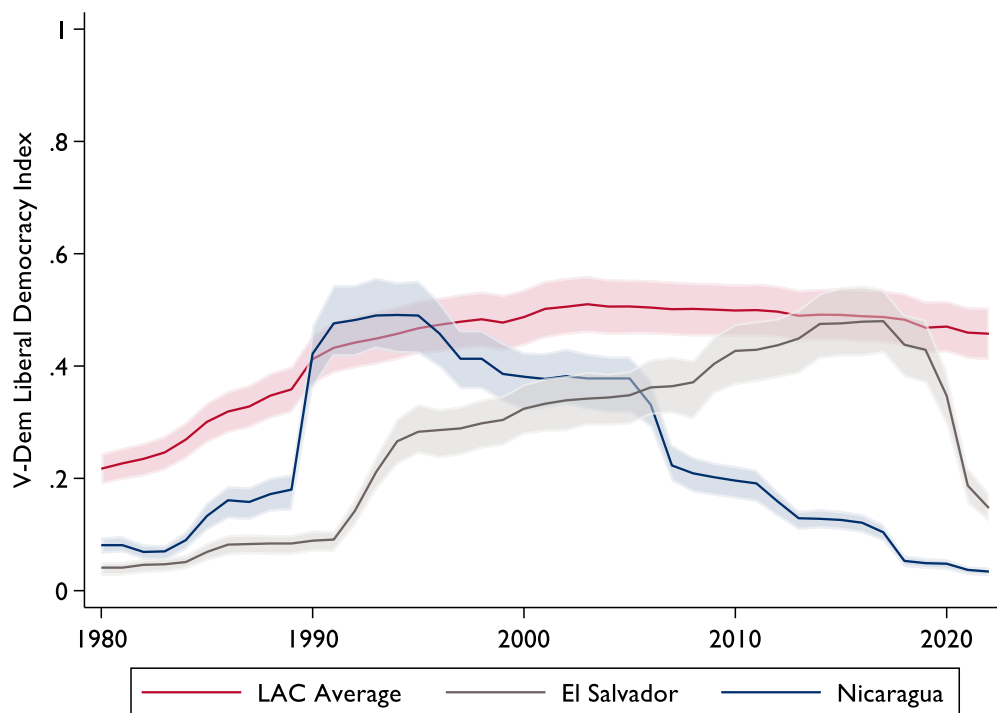
⁸ This figure was created to summarize key insights from a roundtable on backsliding in Latin America convened by NORC at the University of Chicago on April 28, 2022. Additional information is available at: <https://www.norc.org/research/projects/democratic-backsliding-and-authoritarian-resurgence-in-latin-america.html>.

⁹ Zovatto, D. "The Rapidly Deteriorating Quality of Democracy in Latin America." *Order from Chaos*. Brookings Institution, March 9, 2022. <https://www.brookings.edu/blog/order-from-chaos/2020/02/28/the-rapidly-deteriorating-quality-of-democracy-in-latin-america/>.

control over all branches of government, eliminated opposition voices, and silenced regime critics. Of particular concern, Ortega’s regime has become increasingly repressive in response to public protests in 2018 that erupted in response to planned reduction in social services.

In El Salvador, erosion is more recent, beginning after Nayib Bukele came to power in 2019. Since then, President Bukele has attacked democratic norms and institutions on multiple fronts, constraining the autonomy of other branches of government, limiting individual rights, and altering the constitution to allow him to stand for and win a second term. Early in his first term, Bukele deployed military forces to the legislature to pressure lawmakers to support a USD \$109 million loan for updated military equipment. After his party, *Nuevas Ideas*, gained a supermajority in the legislature in May 2021, Bukele removed five Supreme Court Judges and the Attorney General, paving the way for constitutional reforms that allowed him to run for a second term in El Salvador’s February 2024 election, which he won by a wide margin. In March 2022, Bukele imposed a state of emergency that allows the security services to arrest and detain individuals suspected of being gang members without due process. Reports indicate that over 58,000 individuals have been detained, including many thought to be falsely accused.¹⁰

Figure 2. Democracy in the Lac Region, El Salvador, and Nicaragua – 1980-2022



Some literature suggests a possible connection between backsliding and out-migration in the LAC region. In particular, Hiskey, Montalvo, and Orcés (2018) use survey data from the 2008

¹⁰ Human Rights Watch. 2022. “‘We Can Arrest Anyone We Want’ Widespread Human Rights Violations under El Salvador’s ‘State of Emergency.’”

AmericasBarometer to show that migration intentions are lower in more democratic countries.¹¹ The authors propose a simple explanation for these findings: in more democratic political systems, citizens have institutionalized avenues for expressing their political demands. Where such avenues are blocked, a larger number of citizens may conclude that they need to leave the country to improve their lives. This implies that as democracies erode, the share of citizens seeking to emigrate should increase due to heightened political discontent and frustration.

However, there are at least two reasons to doubt that backsliding will typically cause increased migration pressures in the LAC region. First, most forms of backsliding have little direct effect on individual livelihoods. The main form of backsliding globally and in the LAC region in recent decades is executive aggrandizement, whereby incumbent leaders implement reforms that limit the autonomy of other branches of government, particularly legislatures and judiciaries, and undermine electoral competition.¹² These reforms may heighten political discontent, particularly among opposition supporters and those most attached to democratic values. However, given the costs associated with emigration and the challenges that most migrants can expect to face in the U.S. and neighboring countries, most citizens are unlikely to leave merely because they disapprove of the current political regime – particularly if other root causes of migration are unaffected by democratic erosion. For this reason, backsliding may be distinct from other factors that drive migration – including poverty, violence, and natural disasters – that have more direct effects on the material well-being of individuals and their families.

Second, a substantial literature demonstrates that citizens often fail to sanction leaders for anti-democratic actions, implying that we should not expect all instances of backsliding to increase political discontent that might fuel a desire to emigrate.¹³ In the LAC region, backsliding has often been justified as necessary to remove impediments that stand in the way of policies aimed at addressing major societal problems. For example, in El Salvador, Nayib Bukele's rationale for dismissing five Supreme Court judges in May 2021 was that they had obstructed his efforts to enforce critical measures needed to combat Covid-19. Likewise, the imposition of a state of emergency in 2022 was justified as a necessary measure to fight endemic gang violence. These examples resonate with research showing that voters frequently rationalize anti-democratic behavior that promotes desired policies or outcomes.¹⁴ The upshot is that if anti-democratic reforms do not generate widespread public discontent, we should not expect an increase in migration in response to them.

¹¹ Hiskey, J., J. D. Montalvo, and D. Orcés. "Democracy, Governance, and Emigration Intentions in Latin America and the Caribbean." *Studies in Comparative International Development* 49, no. 1 (2014): 89-111.

¹² Bermeo, Nancy. "On Democratic Backsliding." *Journal of Democracy* 27, no. 1 (2016): 5–19. Svobik, M. W. (2019). "Polarization Versus Democracy." *Journal of Democracy*, 30, no. 20. Haggard, S., & Kaufman, R. (2021). "The Anatomy of Democratic Backsliding." *Journal of Democracy* 32, no. 4, 27-41. Pérez-Liñán, Anibal, Nicolás Schmidt, and Daniela Vairo. "Presidential Hegemony and Democratic Backsliding in Latin America, 1925–2016." *Democratization* 26, no. 4 (2019): 606-625. Mainwaring, Scott, and Anibal Pérez-Liñán. "Why Latin America's Democracies Are Stuck." *Journal of Democracy* 34, no. 1 (2023): 156-170.

¹³ Krishnarajan, Suthan. 2023. "Rationalizing Democracy: The Perceptual Bias and (Un)Democratic Behavior." *American Political Science Review* 117(2): 474-496. Braley, Alia, et al. 2023. "Why Voters Who Value Democracy Participate in Democratic Backsliding." *Nature Human Behaviour* 7(8): 1282-1293. Bessen, Brett R. 2024. "Populist Discourse and Public Support for Executive Aggrandizement in Latin America." *Comparative Political Studies*.

¹⁴ Svobik, M. W. (2019). "Polarization Versus Democracy." *Journal of Democracy* 30, no. 20. Krishnarajan, Suthan. "Rationalizing Democracy: The Perceptual Bias and (Un)Democratic Behavior." *American Political Science Review* 117, no. 2 (2023): 474-496. Hahl, O., M. Kim, and E. W. Zuckerman Sivan. "The Authentic Appeal of the Lying Demagogue: Proclaiming the Deeper Truth about Political Illegitimacy." *American Sociological Review* 83, no. 1 (2018): 1-33.

To summarize, the existing literature implies a conditional relationship between backsliding and migration: democratic erosion will likely increase migration only when it has direct negative effects on a substantial share of citizens, e.g., by causing a deterioration in security or economic conditions. Common forms of executive aggrandizement – absent such direct effects on citizens – generally will not produce a significant increase on migration pressures.

3. Data

This section provides an overview of the data used in the analysis, our approach to measuring backsliding, and the statistical methods used to examine the connection between backsliding and migration. Given the extensive prior literature on migration in LAC and particularly the Central America countries of El Salvador, Guatemala, and Honduras, as well as Nicaragua, this report focuses narrowly on the connection between democratic erosion and migration, rather than examining the full set of economic, security, and other factors that have been shown to influence migration in the region.

CBP Data

The analysis uses a disaggregated version of the CBP dataset that provides individual entries for all encounters between October 1, 2007 and July 31, 2022, rather than monthly aggregates available in CPB's public reporting. This available dataset, which contains more than nine million entries, comes from the Transactional Records Access Clearinghouse (TRAC) at Syracuse University, which obtained the data from CBP through multiple Freedom of Information Act requests. Accessing this data was important because it allows for regression modeling of the daily number of encounters, increasing statistical power needed to identify the effects of key backsliding events on migration trends in the event study models described below. We focus on encounters – which includes individuals who attempt to cross at border posts and those apprehended between them – along the U.S. Southern border.¹⁵

There are several well-known limitations with the CBP data. Most important is that trends in the CBP counts reflect both changes in the number of people attempting to cross the border and U.S. enforcement policies and practices. This makes it difficult to isolate whether changes over time reflect domestic factors in countries of origin rather than changes in U.S. policy. Particularly important in this regard is the adoption of Title 42 restrictions starting in March 2020 that allowed for the expulsion of would-be asylum-seekers without formal processing. Because those expelled were not formally processed or subjected to removal proceedings or longer-term legal consequences, Title 42 led to an increase in repeat crossings, likely distorting total arrival numbers upward during the period the policy was in place.¹⁶ While CBP provides an annual estimate of the share of repeat crossers counted in the CBP data, these estimates are thought

¹⁵ The official designation used by CBP is the U.S. Southwest land border. Throughout the report we use the more colloquial term – “Southern border” – as a synonym.

¹⁶ “Fact Sheet: A Guide to Title 42 Expulsions at the Border.” American Immigration Council. May 25, 2022. Accessed at: <https://www.americanimmigrationcouncil.org/research/guide-title-42-expulsions-border>

to be unreliable.¹⁷ Moreover, because rates of repeat crossing differ across countries, we cannot use the CBP estimate as a common discount factor (i.e., we cannot assume the same rate of repeat crossing applies to Mexicans and Nicaraguans).¹⁸ Relatedly, the CBP data provides an undercount of actual migration to the U.S., since it does not include those who enter the U.S. illegally and evade capture by the U.S. Border Patrol, those who perish on the journey, or those who are apprehended and deported by the Mexican government authorities on route to the U.S. Recent data suggest that roughly a quarter of all entrants to the U.S. are not counted in official statistics.¹⁹ To circumvent these challenges, we restrict the regional analysis to the period preceding the start of Title 42 expulsions and employ an event study model designed to isolate the effects of key events on short-term migration trends.

Data on Nicaraguan Refugees in Costa Rica

As part of this activity, the research team also sought to evaluate whether government data from countries in the LAC region could be used to examine migration trends, particularly from and through Central America.²⁰ We found that publicly available data from most sources lacked sufficient detail or temporal coverage. However, the research team was able to obtain data on asylum applications from Nicaraguans in Costa Rica. This data is useful for two reasons. First, it allows us to corroborate the event study findings based on U.S. CBP data with a second, high-quality measure of out-migration from Nicaragua in response to the 2018 government crackdown. Second, by studying migration to the U.S. and Costa Rica – the two principal destinations for Nicaraguan refugees and migrants – we are able to understand how migration to the U.S. fits into the broader context of population movement from Nicaragua. The data, obtained from the Migration and Alien Affairs Office, tracks the number of asylum applications submitted by month from 2015 to 2023. It is important to note that like the CBP data, this data may also represent an undercount; while potential asylees are required by law to submit an application within 30 days of arriving in Costa Rica, some may fail to do so entirely or within the specified timeline.²¹ Nonetheless, it allows for an exceptionally useful complement to our analysis of trends in migration to the U.S.

Google Trends Data

To complement the analysis of actual migration flows, the research team also collected publicly available data from Google Trends on keyword searches related to migration from web users in

¹⁷ “Most Border Patrol Apprehensions Are for Repeat Crossers, but Agency Data Doesn’t Yet Provide the Full Picture.” TRAC, September 9, 2022. Accessed at: <https://trac.syr.edu/reports/694/>

¹⁸ While data on country-specific repeat crossing rates are not available, other data show wide variation in the share of individuals expelled under Title 42, implying that there are likely significant differences by country of origin. For example, in FY2002 86 percent of Mexicans were expelled, relative to just 3 percent of Nicaraguans. Data accessed at: <https://www.wola.org/2022/11/migration-country-by-country-at-the-u-s-mexico-border/>

¹⁹ For FY2022, CBP estimated that there were more than 600,000 uncounted entrants along the Southern border (referred to as “got-aways”), relative to 2,378,944 recorded encounters. It is important to note that the CBP estimates of got-aways are known to be imprecise, and the statistics on encounters reflect high levels of repeat crossers from some countries during this time period. Source: <https://www.oig.dhs.gov/sites/default/files/assets/2023-05/OIG-23-24-May23.pdf>

²⁰ As part of this activity, the research team examined other potential data sources including government statistics from Mexico, Honduras, and Panama, along with data from IOM, UNIFEF, and UNHCR.

²¹ Given Costa Rica’s relatively generous migration policies, we expect that official statistics likely include most irregular migrants during the period under study. See: <https://www.migrationpolicy.org/article/costa-rica-nicaragua-migrants-subtle-barriers>

Nicaragua and El Salvador. Google Trends data has been used in several prior studies to measure migration intentions and predict actual population movement, particularly in Global South countries where official data is limited.²² Given the project's interest in identifying alternative data sources that could be useful when administrative data is unavailable or low quality, we examined the Google search data with two goals in mind. First, we aimed to assess whether Google search data is sufficiently sensitive to allow for its use in studying the effects of backsliding or other major domestic events on migration intentions. Second, we sought to examine whether this data could provide additional richness that would help understand decisions to depart home countries and/or destination choices. For this investigation, the research team developed a set of keywords through trial and error after consulting prior literature, country experts, and by using a Google Trends feature that shows related searches for each item.²³

Google trends data has some important advantages but also limitations. First, it covers a wide time period and geography, allowing for the examination of searches from 2004 to the present.²⁴ This is particularly useful for the present study, since the CBP dataset available through TRAC ends in mid-2022, making it difficult to use that data for examining recent backsliding events in El Salvador, including the State of Emergency that began on March 27, 2022. Second, Google search data likely provides a more meaningful measure of migration intentions than survey-based measures that have been widely used in prior research, both because surveys are conducted at infrequent intervals and stated intentions may not match actual behavior very well. Third, Google search data is highly disaggregated, available by week, which allows for examination of short-term responses to specific events. At the same time, there are two important limitations. Like other measures of intentions, Google Trends data provide a measure of interest in migration, not actual population movements. While these data have been shown to be predictive of actual movements, we cannot assume that in all cases search behavior will correlate highly with subsequent migration.²⁵ Finally, because the Google Trends data is scaled by country, it can be difficult to assess the relative magnitude of results from multiple countries.²⁶

Measuring Backsliding: Annual Declines and Key Events

In the analysis that follows, we operationalize backsliding in two ways, focusing on 1) declines in annual democracy ratings and 2) specific events that represent democratic erosion. Backsliding can take many forms, including restrictions on opposition leaders and parties, steps to limit the autonomy of the judiciary or legislature, reforms that limit election quality, limitations on media

²² Böhme, M. H., Gröger, A., & Stöhr, T. 2020. "Searching for a Better Life: Predicting International Migration with Online Search Keywords." *Journal of Development Economics*, 142.

²³ Böhme, M. H., Gröger, A., & Stöhr, T. 2020. "Searching for a Better Life: Predicting International Migration with Online Search Keywords." *Journal of Development Economics*, 142. Qi, H., & Bircan, T. 2023. "Can Google Trends Predict Asylum-Seekers' Destination Choices?" *EPJ Data Science*, 12(1), 41. Wanner, P. 2021. "How Well Can We Estimate Immigration Trends Using Google Data?" *Quality & Quantity*, 55(4), 1181-1202.

²⁴ Google made changes to how geolocations are assigned starting on January 1, 2011 that enhanced the precision of the data.

²⁵ Böhme, Marcus H., André Gröger, and Tobias Stöhr. 2020. "Searching for a Better Life: Predicting International Migration with Online Search Keywords." *Journal of Development Economics* 142: 102347. Wanner, Philippe. 2021. "How Well Can We Estimate Immigration Trends Using Google Data?" *Quality & Quantity* 55(4): 1181-1202.

²⁶ Google Trends provides a measure of "interest over time" which is scaled so that the peak value for any item during the selected time series equals 100 and other values are relative to that peak.

and civil society, and other actions. Both backsliding measures used here are designed to capture these various forms of democratic erosion.

Major backsliding years (annual declines): The first measure of backsliding captures the magnitude of year-to-year erosion, similar to the measure used in Report 1 to track democratic declines across the LAC region. To track democratic declines, we use the V-Dem liberal democracy index, which ranges from 0 to 1. This index is a summary measure based on information on several sub-categories related to elections, the rule of law, checks and balances, and civil liberties.²⁷ The index, which provides annual measures for all countries, reflects the total value of positive and negative changes on any of these sub-components. We expect that minor declines likely have little effect on migration, whereas more substantial erosions might affect migration pressures in a more consistent way. We therefore define *major backsliding years* as years in which the V-Dem index declined by one standard deviation or more from the mean decline in all countries and years included in the regional-level analysis. In absolute terms this is equivalent to a decline of 0.031 or more. While this cut-off may seem small in absolute terms, declines of this magnitude or greater are relatively rare. Indeed, we observe 15 instances of major backsliding in the 12 countries included in the analysis during the period under study, 2008-2019. Table 1 shows the countries and years coded as having experienced major backsliding, along with a brief description of relevant events in each case. It is important to note that backsliding occurred in some countries that were fairly democratic at the time, including Brazil in 2015, 2016, and 2018, as well as in countries that were more autocratic at the time of the decline, including Nicaragua in 2012 and 2018.

Table 1. Major Backsliding Instances, Based on V-Dem Annual Ratings

| Country | Year | V-dem score | V-dem score in prior year | Annual decline | Relevant event(s) |
|-------------|------|-------------|---------------------------|----------------|---|
| Ecuador | 2008 | .356 | .420 | -.064 | 2008 Ecuadorian constitutional referendum |
| Ecuador | 2013 | .272 | .315 | -.043 | President Correa won a controversial re-election for a third term |
| Brazil | 2016 | .649 | .78 | -.131 | Impeachment of then-president Dilma Rousseff |
| Brazil | 2018 | .604 | .64 | -.036 | The far-right populist politician, Jair Bolsonaro, won the country's presidential elections |
| Brazil | 2019 | .525 | .604 | -.079 | Jair Bolsonaro assumed office on January 1, 2019 |
| El Salvador | 2018 | .438 | .48 | -.042 | Allegations of unlawful killings of suspected gang members and others by security forces |
| Honduras | 2009 | .285 | .319 | -.034 | 2009 Coup and aftermath |
| Honduras | 2010 | .243 | .285 | -.042 | 2009 Coup and aftermath |
| Nicaragua | 2012 | .159 | .191 | -.032 | Daniel Ortega took office after securing a third term in the 2011 general elections |
| Nicaragua | 2018 | .053 | .104 | -.051 | Announcement of social security reform |

²⁷ Coppedge, Michael et al. V-Dem Codebook V-13. Gothenburg: Varieties of Democracy (V-Dem) Project. March 2013. Accessed at: https://v-dem.net/documents/24/codebook_v13.pdf.

| Country | Year | V-dem score | V-dem score in prior year | Annual decline | Relevant event(s) |
|-----------|------|-------------|---------------------------|----------------|---|
| Mexico | 2013 | .416 | .449 | -.033 | 2013 Mexican state elections were marred by a surge in election violence |
| Venezuela | 2013 | .113 | .15 | -.037 | After Chavez' death, Nicolas Maduro became the successor |
| Venezuela | 2017 | .091 | .124 | -.033 | Creation of Constituent National Assembly by Maduro and his allies |
| Guatemala | 2018 | .421 | .465 | -.044 | Then president Morales refused to carry out a Constitutional Court decision on the re-entry of Ivan Velasquez, the head of the UN-backed International Commission against Impunity in Guatemala |
| Colombia | 2019 | .502 | .537 | -.035 | Brutal crackdowns on protests driven by the controversies surrounding corruption, inequality, and peace process |

The main advantage of defining backsliding in this way is that the V-Dem index is based on consistent coding rules that are applied systematically across all countries and years. There is, however, one important limitation, which is that this approach does not distinguish between different types of backsliding. Thus, we have no way of testing in the regional statistical analysis whether some types of backsliding events – for example government repression of public protests – exert a greater influence on migration intentions relative to others, such as executive aggrandizement or reforms that limit the competitiveness of elections.

Backsliding events: Our second measure of backsliding, used in the event-study framework, focuses on key events in Nicaragua between 2014 and 2018 and El Salvador between 2018 and 2023. For Nicaragua, we focus on the effects of three key events shown in Table 2: 1) the 2014 constitutional amendment that eliminated term limits, 2) the 2016 elections in which key opposition figures were barred from running, and 3) the 2018 government crackdown on protests that erupted in response to government plans to cut social services and raise taxes. For El Salvador, we focus on the effects of three events in Table 3: 1) the 2020 suppression of the legislature, 2) the 2021 dismissal of five Supreme Court Justices and the Attorney General, and 3) the 2022 State of Emergency (known locally as the State of Exception).

Table 2. Selected Backsliding Events in Nicaragua

| Key date | Event | Details |
|------------------|---|---|
| January 28, 2014 | 2014 Constitutional Amendment | The government pushed through a constitutional amendment that eliminated term limits for the presidency, allowing Ortega to run for a third consecutive term in 2016. |
| November 6, 2016 | 2016 Elections and Opposition Crackdown | Ortega secured his third consecutive term amid accusations of electoral manipulation and the exclusion of viable opposition candidates. The elections were marred by accusations of |

| Key date | Event | Details |
|----------------|--|--|
| | | electoral fraud, repression of opposition parties, and restrictions on media freedom. |
| April 18, 2018 | 2018 protests and government crackdown | Widespread protests began in April 2018 in response to government plans to cut social services and raise taxes. The government responded with heavy-handed tactics that led to many deaths and injuries. |

Table 3. Selected Backsliding Events in El Salvador

| Key date | Event | Details |
|------------------|--|---|
| February 9, 2020 | Suppression of legislature | Troops occupy the legislature to encourage MPs to support a loan for police and military equipment. |
| May 1, 2021 | Removal of Supreme Court Justices and Attorney General | Five Supreme Court justices and the Attorney General were removed by Bukele and legislators. |
| May 27, 2022 | State of Emergency | The State of Emergency allows security forces to arrest individuals thought to be gang members or supporters. |

4. Regional Analysis of CBP Trends

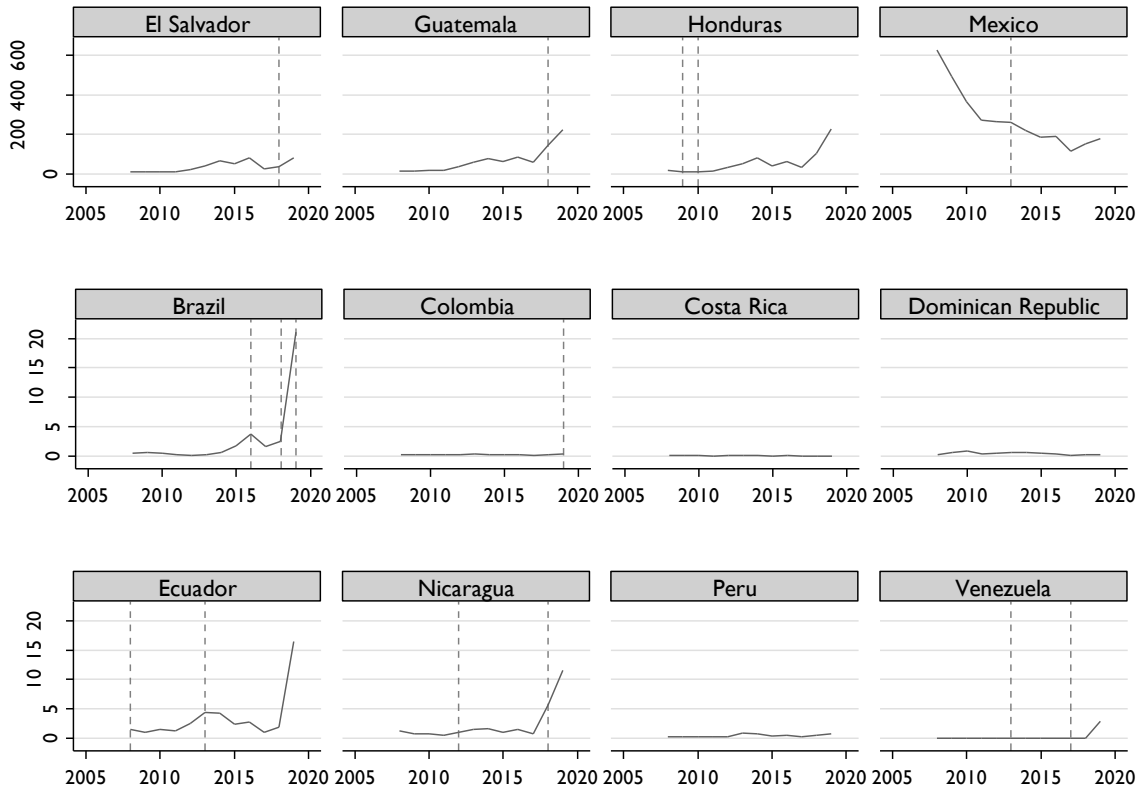
The first set of analyses uses data from across the LAC region to examine how democratic backsliding relates to migration trends between 2008 and 2019.²⁸ Figure 3 shows country trends for the set of cases included in this analysis. A few points are noteworthy. First, there are dramatic differences in the scale of migration to the U.S. from countries in the sample. For Mexico and the three Northern Central America countries (Guatemala, Honduras, and El Salvador), encounters at the Southern border routinely exceeded 100,000 per year during the period under study, whereas for the other cases, encounters were typically below 20,000 per year. Second, we observe several important trends within countries, most notably the steady decline in Mexico, the spike in migration from the Northern Central America countries in the mid-2010s, and the smaller jumps in Brazil, Ecuador, and Nicaragua which are lower in magnitude than the Northern Central America cases but represent an important departure from prior low levels in each case.

Figure 3 also shows major backsliding years, indicated by dashed vertical lines, based on the V-Dem liberal democracy index. Nine of the 12 countries in the sample experienced at least one major backsliding year, while three (Costa Rica, Dominican Republic, Peru) were immune from major declines during the period under study. The data in Figure 3 suggests that there likely is no consistent relationship between backsliding and migration in this sample of countries. While

²⁸ We include data from 12 countries: Mexico, El Salvador, Honduras, Guatemala, Nicaragua, Costa Rica, Dominican Republic, Venezuela, Colombia, Brazil, Ecuador, and Peru. We exclude Southern Cone countries – Chile and Argentina – since we observe very few migrants from these cases at the U.S. Southern border and in practice traveling to the U.S. by land is difficult due to the greater distance. We also exclude several small countries with few encounters at the U.S. Southern border during the period under study: Belize, Panama, Guyana, Surinam, and French Guiana – along with Caribbean islands.

we observe several instances in which migration increased following backsliding (e.g., El Salvador 2018, Brazil 2018, Nicaragua 2018), we also observe multiple instances in which migration declined or was flat following backsliding years (e.g., Mexico 2013, Ecuador 2013, Venezuela 2013).

Figure 3. Annual Encounters at U.S. Southern Border



Notes: Figure shows annual encounters at the U.S. Southern border for countries included in the analysis from 2008 to 2019. Dashed vertical lines represent major backsliding years, as defined above based on the V-Dem liberal democracy index. The scale of the y-axis varies so that country trends are more easily observed.

Estimation Approach

To examine the relationship between democratic backsliding and migration to the United States (measured by encounters at the Southern border) more formally, we estimate regression models with the number of encounters per year from each country at each of the nine border sectors as the outcome variable. The key explanatory variable is the measure of backsliding based on the V-Dem liberal democracy index described above. Models control for other factors, including crime victimization, Gross Domestic Product (GDP) per capita, and inflation. The total number of observations is 1,296 (12 countries * 12 years * 9 sectors). Appendix 1 describes the estimation approach in detail, including model parameters related to country- and year-level fixed effects and time trends, and provides a description of all variables and data sources.

Results

Table 4 provides results from models estimated with and without the country-level covariates. In both specifications, the coefficients on backsliding have the expected sign but fall short of statistical significance. Moreover, the estimates imply that backsliding is associated with a 12-19% increase above the mean number of encounters per country per year, which equates to an increase of 504 to 798 additional encounters per year following major backsliding instances. In substantive terms the magnitude of the estimates is essentially meaningless in relation to the overall country-level flows observed during the time period of the study. The margin error for this estimate indicates that we cannot distinguish this effect from zero.

We interpret these null findings to mean that there is no general relationship between democratic erosion and migration to the U.S. in the LAC region during the period under study. Because of the costs associated with cross-border migration, most citizens are unlikely to leave their home country due to the erosion of democratic rights and freedoms. We caution, however, that the results in Table 4 represent average, region-wide estimates. The null findings for the overall region do not imply that democratic erosion never leads to out-migration in response to particular types of backsliding or in particular cases.

Table 4. Regression Models of Encounters at the U.S Southern Border – 2008-2019

| | (1) | (2) |
|------------------------------|----------|-----------|
| Major backsliding year | 0.115 | 0.178 |
| | (0.127) | (0.121) |
| GDP per capita (\$USD 1,000) | | -0.0846 |
| | | (0.0703) |
| Crime victimization rate | | -0.0162 |
| | | (0.0126) |
| Inflation (CPI) | | 0.0131 |
| | | (0.00965) |
| Country fixed effects | Yes | Yes |
| Year fixed effects | Yes | Yes |
| Sector fixed effects | Yes | Yes |
| Country-specific trends | Yes | Yes |
| Sector-specific trends | Yes | Yes |
| Constant | 1.094*** | 1.804** |
| | (0.229) | (0.762) |
| Observations | 1,296 | 1,242 |

| | (1) | (2) |
|-----------|-------|-------|
| R-squared | 0.922 | 0.925 |

Notes: The dependent variable in both models is the logged annual count of encounters at the U.S. Southern border from each country. All covariates have a 1-year lag.²⁹ See Appendix 1 for variable definitions, data sources, and details on the estimation equation. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

5. Event Study Analysis for Nicaragua

Overview

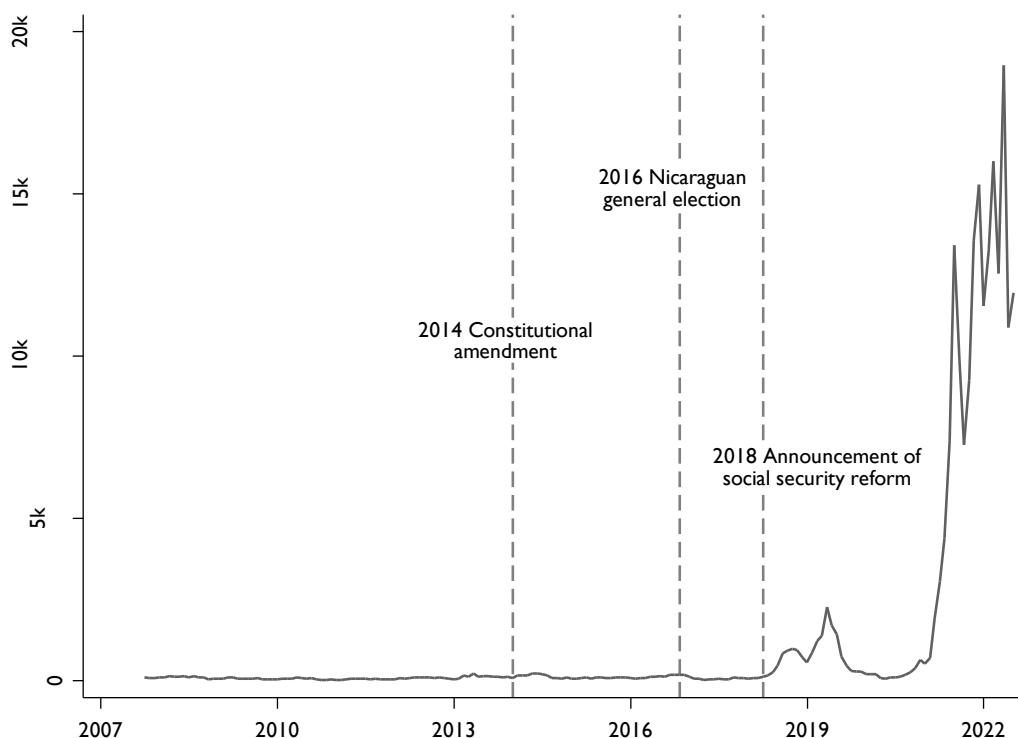
The second set of analyses focus on Nicaragua, which is well-suited for examining whether and how backsliding events affect migration using country-level analysis for several reasons. First, the current period of democratic erosion, which started following Ortega's return to power in 2006, covers more than 17 years, allowing for a careful examination of multiple events over a long period. Second, the key backsliding events that we are interested in examining precede the start of the Title 42 policy in March 2020, which means that the principal outcome of interest – encounters at the U.S. Southern border – is not confounded by double counting due to repeat crossing. Third, we are able to use complementary data on asylum requests in Costa Rica, the other main destination for refugees and migrants who have fled Nicaragua in recent years, to corroborate the findings based on CBP data. Finally, given the ease of crossing the border into Costa Rica, Nicaragua may constitute a most-likely case for observing significant out-migration in response to domestic political events, relative to other cases where exit options are more limited.

Figure 4 shows Nicaraguan encounters at the U.S. Southern border for the entire period in the CBP data from TRAC: October 1, 2007 to July 31, 2022. Prior to 2018, few Nicaraguans entered the U.S. at the Southern border. The average number of encounters per month from 2008 to 2018 was only 91. We observe two spikes in subsequent years. The first peak began in mid-2018 and continued through 2019. In 2020, encounters dropped back to nearly zero, as was the case for other LAC countries due to travel restrictions and border closures related to Covid-19.³⁰ A second larger peak started in late-2021, continuing through the end of the time-series. Our analysis focuses on the first peak, particularly the period between April and December 2018, where we can more effectively isolate the effects of backsliding on migration trends. Longer-term trends in 2021 and subsequent years were driven in part by the on-going political crisis in Nicaragua but also by external factors including two major hurricanes in 2020, the effects the Covid-19 pandemic, and the end of foreign aid from Venezuela – making it difficult to assess the extent to which political factors contributed to out-migration separate from other variables.

²⁹ Results are similar using 2-year lags for the key independent variables.

³⁰ Hansen, Claire. "U.S.-Mexico Border to Close Amid Coronavirus Spread." *US News & World Report*, March 20, 2020. <https://www.usnews.com/news/national-news/articles/2020-03-20/us-mexico-border-to-close-amid-coronavirus-spread>

Figure 4. Nicaraguan Encounters at U.S. Southern Border – 2007-2022



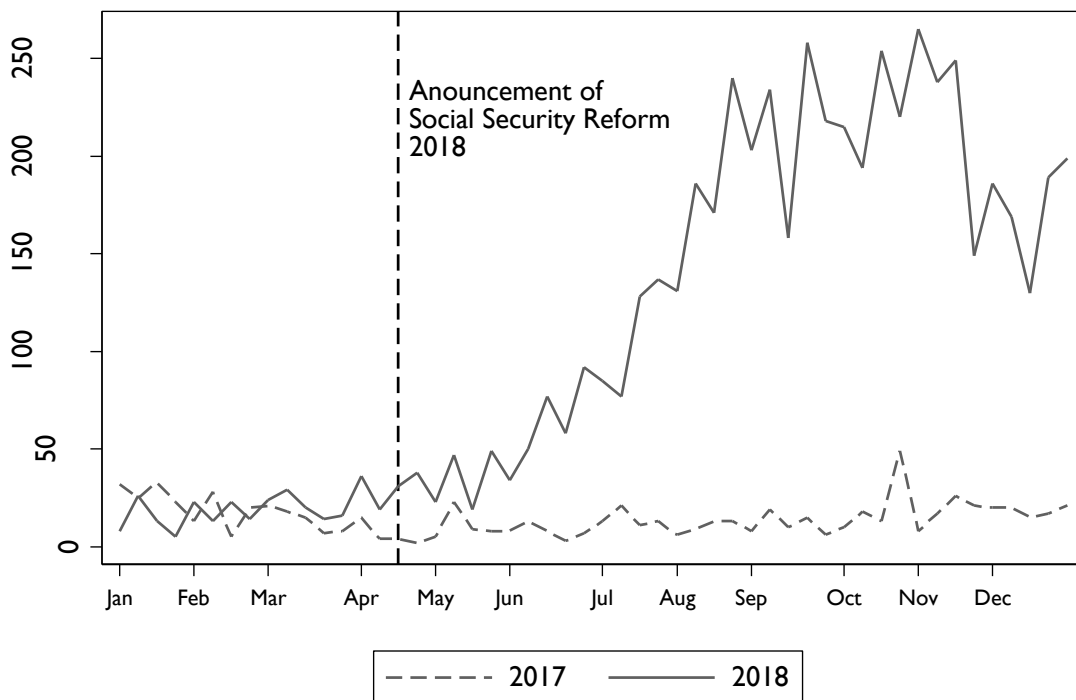
The analysis in this section focuses on the effects of the government’s brutal crackdown on public protests that began in April 2018. We proceed in three steps. First, we use an event study approach designed to estimate the causal effects of the crackdown on migration to show that government repression produced a significant increase in migration to the United States and Costa Rica. Second, we examine migration trends in a set of comparison cases – Honduras, El Salvador, and Guatemala – during the same period to rule out the possibility that the spike observed in Nicaragua in 2018 might be attributable to external, regionwide factors rather than internal political dynamics. Third, we use the same analytic framework to examine the effects of two prior backsliding events in 2014 and 2016 to deepen our understanding of why some types of backsliding cause out-migration while others do not.

Estimation Approach

The estimation approach used here compares daily counts of encounters at the U.S. Southern border for 2018 to counts from the prior year, 2017. The intuition is that if the April 2018 backsliding event caused a subsequent spike in migration, we would expect to observe a positive difference in counts relative to the prior year after the event date but not before it. Moreover, by comparing encounters between years, this approach implicitly accounts for seasonal trends that might affect migration dynamics.

To visualize trends in 2018 relative to 2017, Figure 5 plots encounters for both years. The figure shows a sharp increase in encounters at the U.S. border in the months following the protests that began in April 2018. We observe a nearly ten-fold increase in encounters in August through November, relative to the first three months of the year. The trend for the prior year (2017) shows no concomitant increase in the latter half of the calendar year, suggesting that the surge in 2018 relates to events unique to 2018, not common seasonal trends.

Figure 5. Weekly Nicaraguan Encounters at the U.S. Southern Border – 2017 and 2018

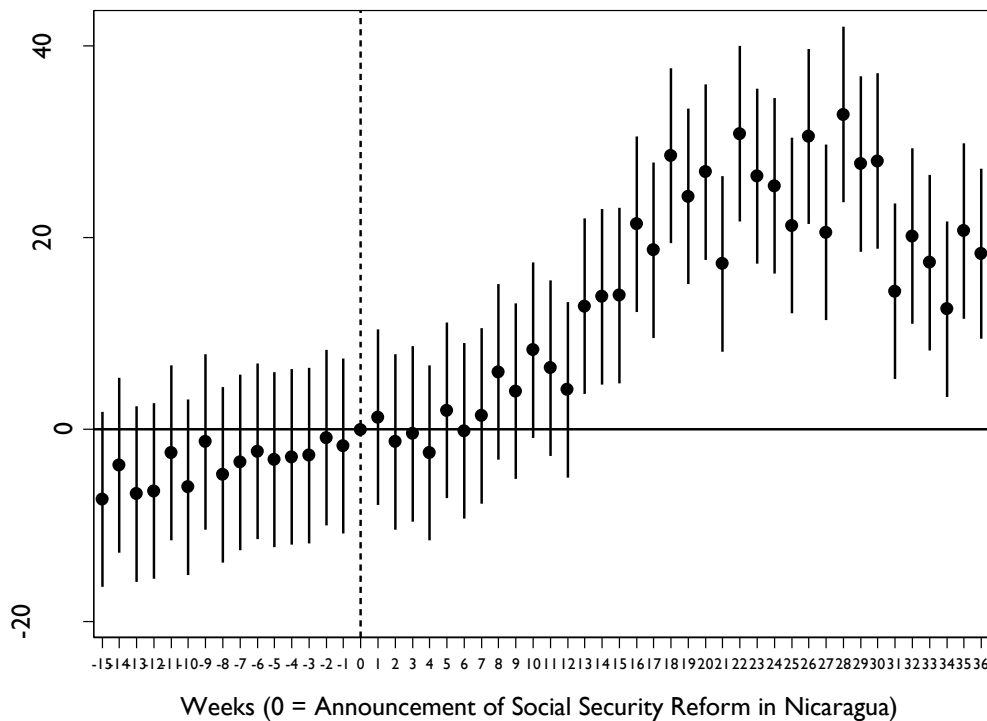


To examine the relationship between the 2018 government crackdown and migration trends more carefully, we use regression analysis to model the change in the number of weekly encounters in a given week-sector after the announcement of the social security reform by comparing encounters in 2018 to the same week-region in the previous year, 2017. The starting date of the reform indicates the “activation” of the treatment (week 0), and all weeks from April 18th onward are considered post-treatment units. We restricted the sample to Weeks 2–52 in the calendar year, as the first week has fewer days depending on the start of the year. Week 16 of 2018 (April 15–21st) is the base category, as it is the previous week before the reforms. Thus, the post-event period runs for almost eight months, from April 18 to December 31, 2018. The pre-event period runs from January 8 to April 18, 2018. This identification strategy allows us to compute a vector of treatment coefficients, which is essential for analyzing the dynamics of the backsliding effects. Appendix 1 describes the estimation approach in detail.

Results

Figure 6 shows the regression results visually. Each dot represents the estimated difference in daily encounters at the U.S. Southern border by week in 2018 relative to 2017, with 95% confidence intervals represented by the vertical lines extending from the dots. For this analysis we set Week 0 to be the week containing April 18th, when the anti-government protests began. We do not expect an immediate spike in out-migration because of the time required for migrants to organize their departure and travel to the U.S. border. Results show an upward trend starting in Week 8, with statistically significant increases observed in Week 13 – roughly three months after the start of the protests and the government crackdown.³¹ These estimates indicate that the government crackdown caused an increase in the daily number of encounters ranging from about 10 to 30 additional migrants per day from Week 13 to Week 36, the endpoint of the analysis time frame. Cumulatively, this amounts to an estimated total increase of 3,751 people from July – December 2018 above the anticipated number in the absence of the government crackdown.³²

Figure 6. Estimated Effects of the 2018 Government Crackdown on Migration to the U.S.



Notes: Figure shows the average daily increase in encounters by week attributable to the 2018 government crackdown in 2018 relative to 2017. Vertical lines show 95% confidence intervals.

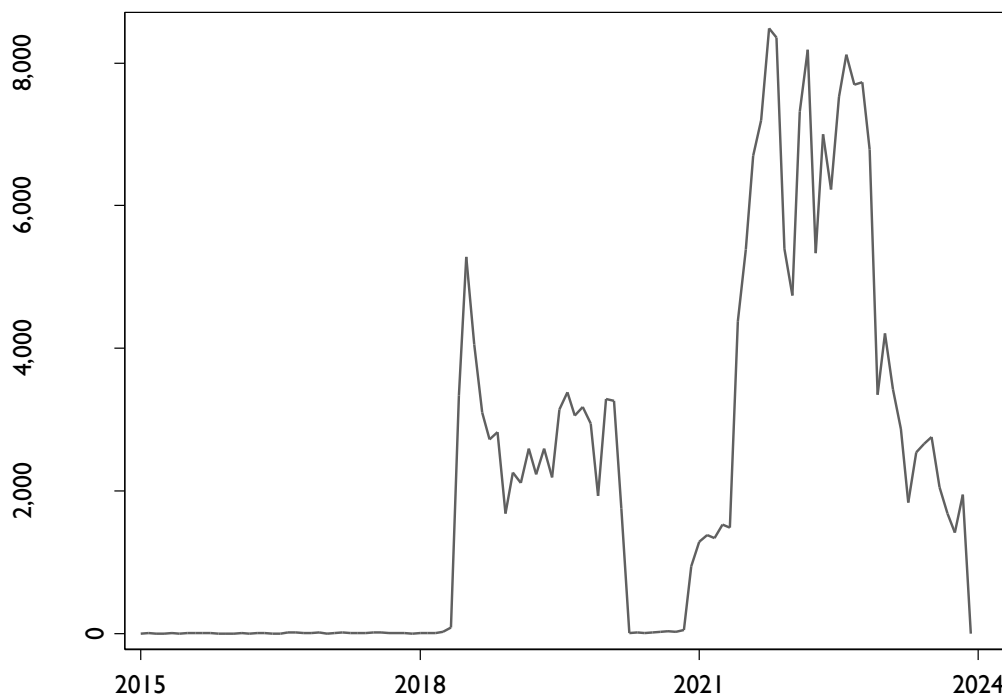
³¹ Note a statistically significant increase is one in which the full vertical bars extending from the dot clear the horizontal line at 0. In other words, even if the true value was at the lowest portion of a 95% confidence interval from the expected value, it would still be an increase in encounters relative to the same calendar week in 2017.

³² It is important to note that this may be an undercount since individuals who entered the US illegally without being apprehended by the border patrol are not included in the CBP data. However, we do not expect that undercounting to be a significant issue for Nicaraguans during this period since 1) asylum seekers could make a plausible case based on the on-going political crisis in Nicaragua and 2) few Nicaraguans were sent back to Mexico while they awaited trials for their asylum cases. As a result, incentives to sneak across the border were minimal for this population.

Nicaraguan Refugees in Costa Rica

Data on asylum applications submitted by Nicaraguan refugees in Costa Rica confirm that the 2018 government crackdown increased out-migration. Figure 7 plots Nicaraguan asylum applications in Costa Rica from 2015 to 2023. We observe a similar overall trend as in the CBP data. Prior to 2018, there were few asylum applications: from 2015 to 2017 we observe an average of just five asylum applications per month. Starting in May 2018, however, we observe an uptick in applications, with a sharp increase in June. It is interesting to note that the spike in Costa Rica precedes the jump in encounters at the U.S. Southern border: migration flows to Costa Rica peak in July 2018, whereas the peak in the U.S. does not occur until August to November. This may reflect the greater challenges associated with traveling to the U.S. over land. In addition, some individuals who initially migrated to Costa Rica may have subsequently entered the U.S. It is also noteworthy that the magnitude of migrants to Costa Rica in 2018 is significantly higher than to the U.S. Thus, between May and December 2018 a total of 23,088 Nicaraguans filed asylum applications in Costa Rica, while 5,330 encounters were recorded at the U.S. Southern border during the same period. This likely reflects the ease of crossing into Costa Rica, the density of social ties there, and the relative ease of obtaining work permits for Nicaraguan exiles.³³ Finally, asylum applications drop in late-2020 after Costa Rica briefly closed its border due to Covid-19. A larger spike in applications is then observed starting in early-2021, paralleling the jump in U.S. border encounters.

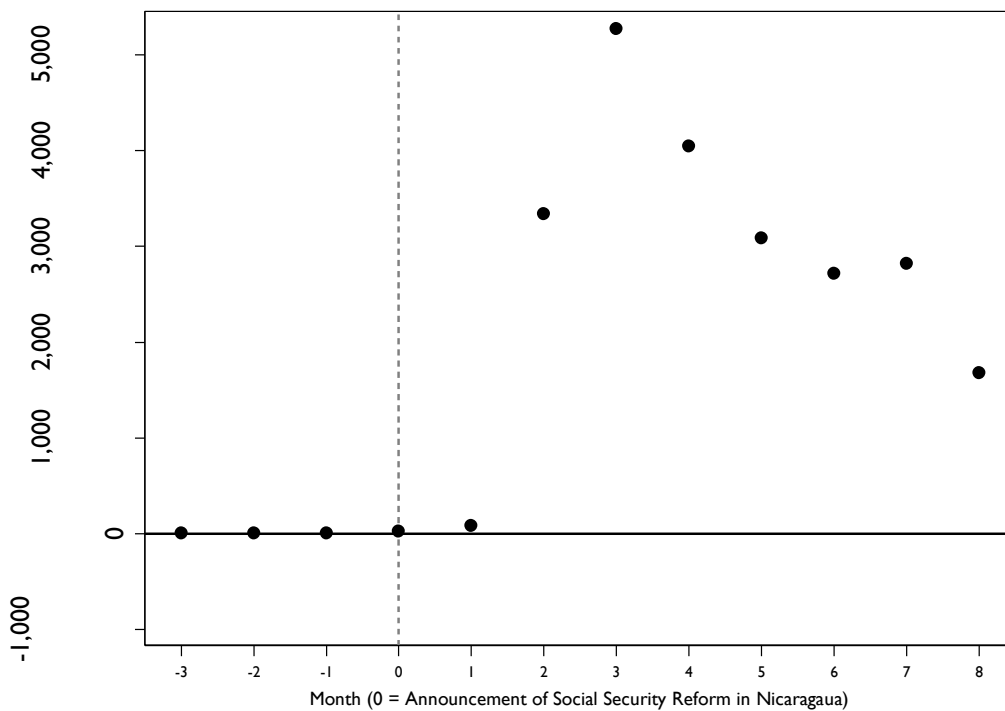
Figure 7. Nicaraguan Asylum Applications in Costa Rica – 2015-2023



³³ Chaves-González, Diego and María Jesús Mora. "The State of Costa Rican Migration and Immigrant Integration Policy." Migration Policy Institute. November, 2021.

We replicate the event study analytic approach used for the U.S. CBP data, comparing monthly counts of asylum applications following the April 2018 protests to counts for the same months in prior years (2015-2017). Figure 8 shows the regression results visually. Results indicate an average increase of 3,282 refugees per month for the second to seventh months following the start of the protests (June to November), relative to the average for prior years. In conjunction with the above results using U.S. CBP data, these findings confirm that the government’s response to the 2018 protests caused a significant spike in out-migration, primarily to Costa Rica but also to the U.S.

Figure 8. Increase in Monthly Asylum Applications – 2018 vs. 2015 to 2017



Notes: Figure shows the monthly increase in asylum applications attributable to the 2018 government crackdown in 2018 relative to prior years (2015 to 2017). Vertical lines connected to dots show 95% confidence intervals.

Ruling Out Regional Factors

We interpret the spikes in migration to the U.S. and Costa Rica as causally related to the government’s heavy-handed response to the 2018 protests. Additional analysis in this section bolsters this interpretation by showing that the spike in out-migration in mid-2018 cannot be explained by broader external factors that affect migration trends throughout Central America. There is good reason to worry about alternative explanations since regional trends might be explained by common economic shocks including irregular rains and droughts that have periodically affected the sub-region, along with the growth of a fungus – “coffee rust” – that has

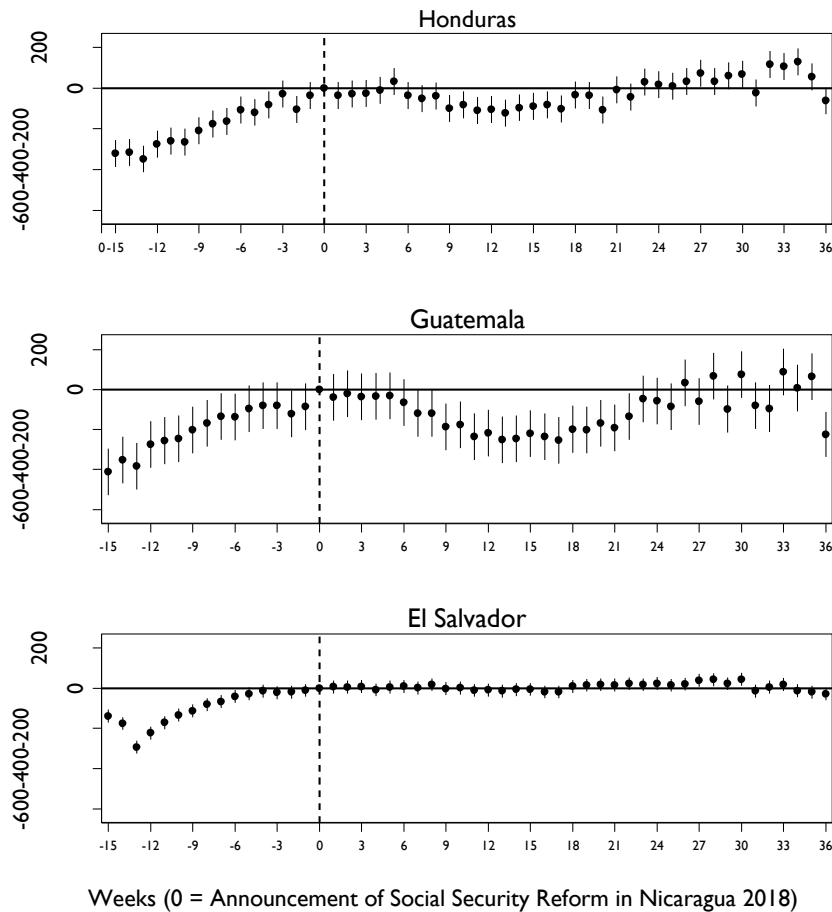
decimated coffee production in the region in recent years.³⁴ In addition, short-term fluctuations in out-migration from the region may reflect changes in U.S. policy making.

To assess whether the jump in migration from Nicaragua in mid-2018 might be attributable to these or other external factors, we examine trends during the same period for the three Northern Central America countries: Honduras, Guatemala, and El Salvador. These cases make for an apt comparison since proximity to Nicaragua means that they typically experience common weather and ecological shocks. Moreover, because the three cases have experienced significant out-migration to the U.S., we would expect the countries to be especially sensitive to changes in U.S. migration policy that might also affect Nicaraguans.

Figure 9 shows regression results using the same event study estimation approach. In all three cases, we observe that encounters at the U.S. Southern border do not spike in the latter half of 2018 (relative to the prior year), suggesting that *the increase observed from Nicaragua during this period can be attributed to country-specific factors, not broad, region-wide causes*. For two of the comparison cases – Honduras and Guatemala – we observe a drop in encounters relative to the prior year at roughly the same time as Nicaraguan encounters peaked in August to September 2018. For the third comparison case, El Salvador, encounters are unchanged relative to the prior year throughout the latter half of 2018.

³⁴ Viscidi, Lisa and MK Vereen. "Climate Threats in the Northern Triangle: How the United States Can Support Community Resilience." *The Dialogue*. February 2022. Access at: <https://www.thedialogue.org/wp-content/uploads/2022/02/climate-threats-draft-6.pdf>

Figure 9. Event Study Results for Honduras, Guatemala, and El Salvador – 2018 relative to 2017



Notes: Figure shows the average daily increase in encounters by week in 2018 relative to 2017. Vertical lines show 95% confidence intervals.

Other Backsliding Events

The final set of analyses examines two prior backsliding events in Nicaragua to deepen understanding of why some types of democratic erosion cause increases in out-migration while others do not. As noted above, we use the same event study regression framework to examine the effects of: 1) the 2014 constitutional amendment that removed term limits, allowing the incumbent president, Daniel Ortega, to stand for additional terms,³⁵ and 2) the 2016 election in which key opposition figures were barred from running.³⁶ These events are viewed as important landmarks in Nicaragua’s steady slide toward authoritarianism under the Ortega regime and are typical of the strategies anti-democratic incumbents throughout LAC use to centralize their hold

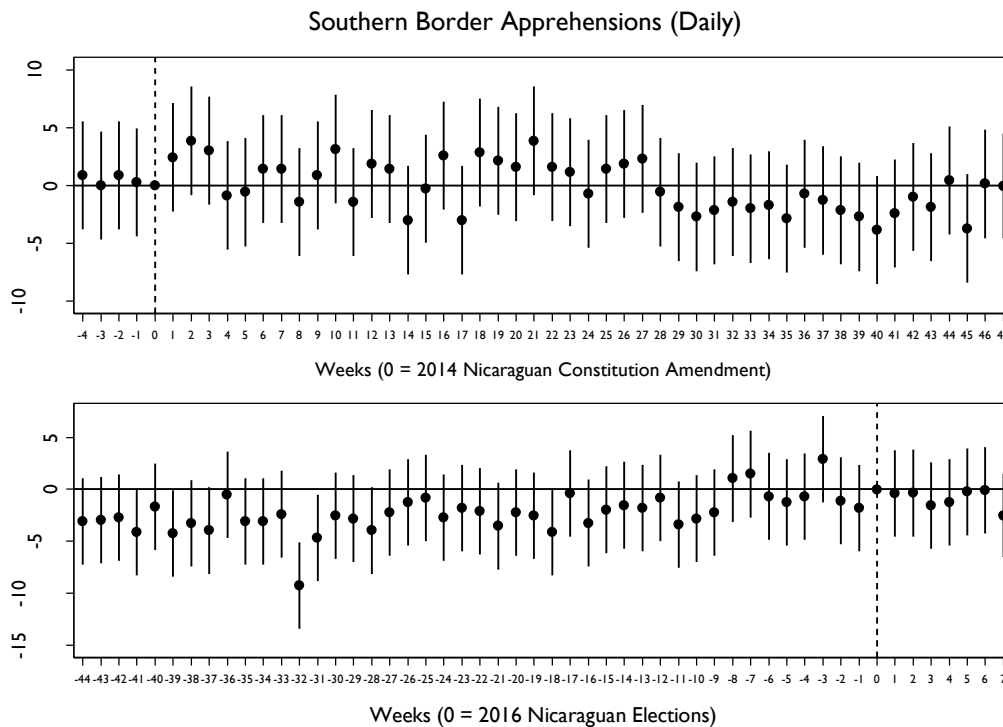
³⁵ “Nicaragua’s New Constitution Becomes Law.” BBC, February 11, 2014. Accessed at: <https://www.bbc.com/news/world-latin-america-26146038>

³⁶ “Nicaragua Leader Daniel Ortega Wins Third Consecutive Term.” BBC, November 7, 2016. Accessed at: <https://www.bbc.com/news/world-latin-america-37892477>

on power and limit the threat posed by elections.³⁷ They also make for useful comparisons to the 2018 government crackdown because neither of the prior events included large-scale public repression.

Results in Figure 10 show that neither of the prior backsliding events caused a spike in migration from Nicaragua to the U.S. Consistent with the case study research on Nicaragua included in Report 1, we interpret these findings to mean that backsliding contributes to out-migration when it entails direct costs for a significant share of the population. Neither of the prior 2014 and 2016 events entailed widespread material costs. Indeed, given Ortega’s popularity at the time of each event, these moves may not have been understood to be anti-democratic by the president’s supporters, who made up a substantial majority of the population at the time of each event.³⁸ By contrast, the 2018 crackdown entailed mass violence against anti-government protestors that resulted in at least 300 deaths and another 2,000 injuries, according to human rights observers.³⁹ Moreover, the violence led to an immediate drop in tourism to Nicaragua, causing an economic downturn that affected individual livelihoods in a direct, material way.

Figure 10. Event Study Results for the 2014 Constitutional Amendment and 2016 National Elections



³⁷ Meléndez-Sánchez, Manuel. 2021. "Latin America Erupts: Millennial Authoritarianism in El Salvador." *Journal of Democracy* 32(3): 19-32.

³⁸ Opinion poll data show that presidential approval exceeded 60 percent in the 2012, 2014, and 2016 surveys conducted in Nicaragua.

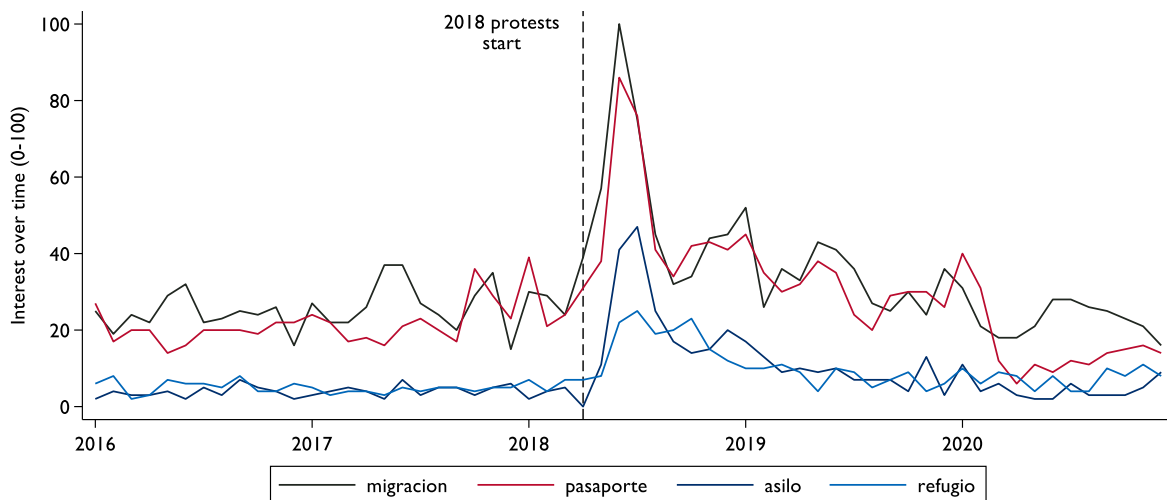
³⁹ "Crackdown in Nicaragua: Torture, Ill-Treatment, and Persecutions of Protesters and Opponents." Human Rights Watch, June 19, 2019. Accessed at: <https://www.hrw.org/report/2019/06/19/crackdown-nicaragua/torture-ill-treatment-and-prosecutions-protesters-and>

6. Google Trends Analysis for Nicaragua and El Salvador

To complement the above analysis of migration flows, the research team also collected data from Google Trends on keywords related to migration from web users in Nicaragua and El Salvador. Based on prior analysis of both cases in Report 1 and the additional analysis for Nicaragua in this report, our expectation is that the Google search data should provide evidence of a spike in migration intentions in Nicaragua following the 2018 government crackdown but not in response to any of the major backsliding events since Bukele’s 2019 election in El Salvador. The results are consistent with these expectations.

For Nicaragua, Figure 11 shows weekly search data for the four search terms related to migration developed for this analysis, focusing on the period from 2016 to 2022. Three points are noteworthy. First, the effects of the 2018 government crackdown on migration intentions are clearly illustrated by all four keywords. We observe a sharp rise in interest in May-June 2018, relative to prior months for all four keywords, confirming that these data are well suited for detecting the influence of domestic backsliding events on migration intentions. Second, consistent with other research showing that Google searches predict population movement, we find that the Google Trends data spike before the observed measures of actual migration examined above. Specifically, the Google Trends data shows a significant jump in May 2018, while the Costa Rica data on asylum applications does not spike until the following month, June, and the data on U.S. encounters increase more slowly, reaching an initial peak in August. These results confirm that Google searches can serve as a useful leading indicator of actual migration in response to domestic political crises. Third, to our surprise basic keywords like “migración” and “pasaporte” worked as well as more narrow terms like “asilo” and “refugio” that we expected would have greater context-specific relevance in this case.

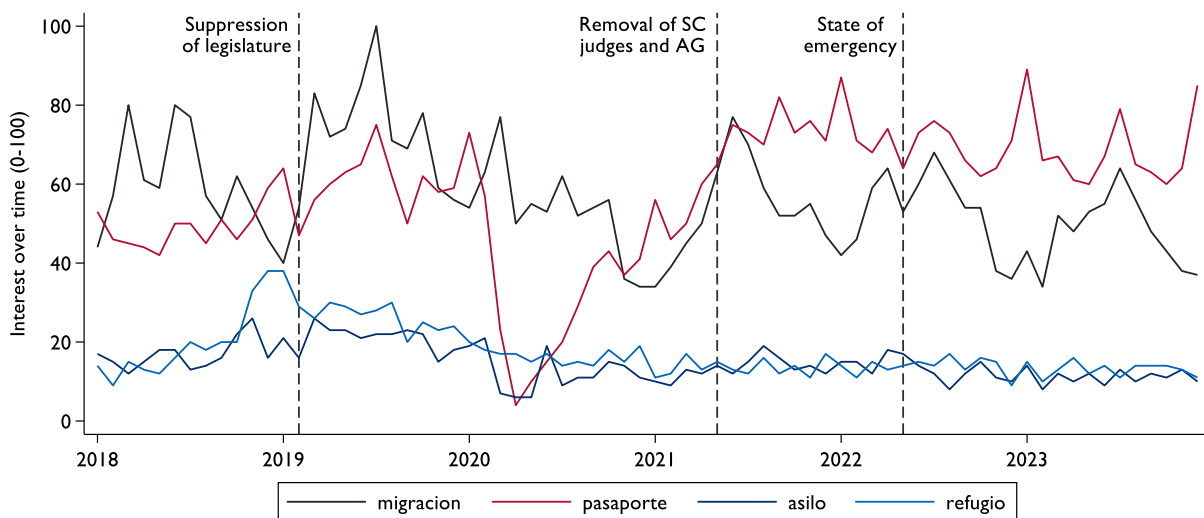
Figure 11. Google Migration Searches in Nicaragua – 2016-2021



Notes: Figure shows weekly data on Google search interest, which is scaled so that the peak for the four search items is equal to 100 and other weekly counts are proportional.

For El Salvador, Figure 12 shows search data using the same set of migration keywords for the period from 2018 to 2023. In contrast to the results for Nicaragua, we find no evidence of a general uptick in migration intentions in response to the three key backsliding events since Bukele’s election in 2019. While we observe increases for some keywords following the suppression of the legislature in early 2019, we suspect that these fluctuations are attributable to other factors since we do not observe similar increases on the other keywords. For subsequent events in 2021 and 2022, search trends are generally flat or decline following key events, providing no evidence that these events sparked a significant increase in migration intentions.

Figure 12. Google Migration Searches in El Salvador – 2018-2023



Notes: Figure shows weekly data on Google search interest, which is scaled so that the peak for the four search items is equal to 100 and other weekly counts are proportional.

7. Conclusion

This report uses multiple data sources and analytic strategies to examine the connection between democratic backsliding and migration in the LAC region. Consistent with results from our analysis of opinion poll data in Report 1, we find a conditional relationship: backsliding leads to increases in migration when it entails substantial public repression and/or affects other root causes of migration, particularly economic and security conditions.

The report’s findings are primarily based on analysis using U.S. CBP data. First, we conduct regional analysis with annual data from 12 countries from 2008 to 2019. The results show that democratic erosion, defined by annual changes in the V-Dem liberal democracy index, do not systematically contribute to increased migration to the U.S. Second, we use an event-study approach that focuses on the effects of key events in Nicaragua from 2014 to 2018. While this approach is narrower in scope, it allows for more careful identification of the effects of specific events on subsequent migration trends. The results show that the 2018 government crackdown

led to a substantial spike in out-migration to the U.S. and Costa Rica, while prior backsliding events in 2014 and 2016 did not. Additional results from Google Trends allow us to examine how migration intentions in Nicaragua and El Salvador shift in response to key events. The analysis confirms that while the 2018 backsliding episode in Nicaragua produced a surge in migration pressures, key events in El Salvador since Bukele's 2019 election have not produced similar increases. Taken together, the results confirm that while backsliding does not exert a uniform influence on migration, certain types of events do cause increases. Specifically, backsliding that entails widespread costs through increased public repression or deteriorations in other security / economic conditions leads to out-migration.

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Appendix 1: Estimation Approach

Regional Analysis Estimation Approach and Variables

To examine the relationship between democratic backsliding and migration to the United States (measured by encounters at the Southern border), we estimate the following regression model:

$$y_{act} = \beta_0 + \beta_1 Backsliding_{ct} + \beta_2 X_{ct} + \delta_a + \gamma_c + \theta_t + \delta_a * trend + \gamma_c * trend + \epsilon_{act}$$

where y_{act} is the logged annual measure of CBP encounters from each country of origin at each border crossing sector. The main explanatory variable – $Backsliding_{ct}$ – is a dummy variable that takes a value of 1 for years in which the V-Dem liberal democracy index declined by 0.031 or more relative to the prior year (this variable is lagged so that declines precede annual migration counts). X_{ct} is a vector of home-country covariates representing other key factors that may influence migration. We include annual measures of the crime victimization rate (based on opinion poll data), GDP per capita, and inflation (measured by the consumer price index) – all lagged one year. Models include fixed effects for each country of origin (γ_c) to account for time-invariant factors that may affect migration the U.S., including distance and other geographical features; year fixed effects (θ_t) that account for temporal shocks that affect all countries in the region, including shifts in U.S. enforcement policies; and fixed effects (δ_a) for each of the nine apprehension sectors to account for different dynamics at each border crossing area. In addition, models include country-specific time trends ($\gamma_c * trend$) to account for trends in migrant flows observed for many countries during the period of study driven by other factors, including the growing stocks of migrant communities within the U.S. over time. Finally, models include apprehension sector-specific time trends ($\delta_a * trend$) to account for differing trends across the nine segments of the U.S. southern border. The total number of observations is 1,296 (12 countries * 12 years * 9 sectors). Table 5 provides definitions and data sources for the variables included in the models.

Table 5. Variable Definition for Regional Analysis

| Variable | Definition | Source |
|--------------------------|---|------------------------------------|
| Total encounters, logged | Number of encounters at the Southern border, by apprehension sector, country, and year. | U.S. Customs and Border Protection |
| Major backsliding year | Binary variable indicating whether there was significant drop from year (t-1) to year t in the V-Dem liberal democracy index, using one standard deviation lower from the sample mean as the threshold. | V-Dem liberal democracy index |
| GDP per capita | The GDP per capita of home countries with a time lag of one year, expressed in thousands of current US dollars | World Development Indicators |

| Variable | Definition | Source |
|--------------------------|---|-----------------------------|
| Crime victimization rate | Percentage of respondents reporting having been a victim of any type of crime in the past 12 months, with a one-year lag. | Opinion poll data |
| Inflation | The Consumer Price Index (CPI) of sending countries with a time lag of one year, measured in annual percentage change | International Monetary Fund |

Nicaragua Event Study Estimation Approach

To examine the relationship between the 2018 government crackdown in Nicaragua and migration trends, we model the change in the number of weekly encounters by comparing total encounters in a given week-sector after the announcement of the social security reform in 2018 with the number of encounters for that same week-sector in the previous year, 2017. Thus, the starting date of the reform indicates the “activation” of the treatment (week 0), and all the weeks from April 18th onward are considered post treatment units. Specifically, we estimate the following regression model:

$$y_{ad} = \sum_{t=-15}^{36} \beta_t \mathbf{1}(Week \tau)_d \times Year2018_d + \delta_{week} + \psi_a + \theta_{dow} + \omega_d + \epsilon_{ad}$$

Where y_{ad} is the outcome variable, measured as the total number of Nicaraguans encountered at the U.S. Southern border during day d of year a . The indicator function $\mathbf{1}(Week \tau)_d$ takes the value of 1 if day d is on week τ , and $Year2018_d$ is an indicator variable that takes the value of 1 for records of the year 2018. When this function is zero, it refers to the same week and day of the year 2017. The interaction of both variables will be the vector of interest β_t , as these coefficients represent the percentage change in 2018 encounters concerning the same calendar-week in 2017. For β_t to represent a strict comparison between the same week unit, we include week (δ_{week}) fixed effects. In addition, to control for any additional source of seasonality, we also include year (ψ_a) and day-of-week (θ_{dow}) fixed effects. These vectors will absorb any annual-specific trend plus any seasonality within a week (e.g., more encounters on the weekends), respectively. Finally, a dummy variable for major U.S. holidays is included (ω_d).⁴⁰ The standard errors are clustered at the day-year level.

⁴⁰ This identification strategy allows us to compute a vector of treatment coefficients instead of a single treatment coefficient. This makes it possible to model the effects of backsliding over time, rather than estimating a single value that represents the average increase attributable to the key event for subsequent time periods, in this case days and weeks. Moreover, the event study technique verifies the plausibility of the parallel trends assumption by approximating it through the pre-event coefficients.