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Labor Market Policy as Immigration Control: The Case of Temporary Protected Status

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Controlling immigration has become a central political goal in advanced democracies. Politicians across the world have experimented with a range of policies such as foreign aid in the hopes that aid will spur development in migrant origin countries and decrease the demand for emigration. We argue that internal policy tools are more effective, in particular, the use of policies that allow temporary migrants short-term access to host country labor markets. These policies provide migrants an opportunity to obtain higher wages, which, in turn, increases remittances back to home countries. This increase in financial flows to households decreases subsequent demand for migration into destination countries. We test this argument using data on migration to the United States and find that an increase in remittances from the United States decreases subsequent demand for entry in that country.

Controlar la inmigración se ha vuelto un objetivo político central de las democracias avanzadas. Los políticos de todo el mundo han experimentado con un abanico de políticas, como la asistencia en el extranjero, con miras a que la ayuda fomente el desarrollo en los países de origen de los migrantes y reduzca la demanda de emigración. Sostenemos que las herramientas de política interna son más efectivas: en particular, el uso de políticas que permiten a los migrantes temporales el acceso a corto plazo a los mercados laborales del país de destino. Estas políticas brindan a los migrantes la oportunidad de obtener salarios más altos, lo que, a su vez, aumenta las remesas a los países de origen. Este aumento del flujo económico hacia los hogares reduce la subsecuente demanda de migración hacia los países de destino. Evaluamos este argumento con información de migraciones a EE. UU. y observamos que el aumento de las remesas desde EE. UU. disminuye la demanda de ingreso al país.

Le contrôle de l'immigration est devenu un objectif politique central dans les démocraties avancées. Des politiciens du monde entier ont expérimenté toute une série de politiques telles que l'aide étrangère dans l'espoir que cette aide stimule le développement des pays d'origine des migrants et réduise la demande d'émigration. Nous soutenons que les outils de politique intérieure sont plus efficaces, en particulier, le recours à des politiques qui dotent les migrants temporaires d'd'un accès à court terme aux marchés du travail du pays d'accueil. Ces politiques donnent l'opportunité aux migrants d'obtenir des salaires plus élevés, ce qui, à son tour, augmente les fonds qu'ils transfèrent vers leurs pays d'origine. Cette augmentation des flux financiers vers leurs foyers dans leurs pays d'origine diminue la demande ultérieure de migration dans les pays de destination. Nous avons mis cet argument à l'épreuve à l'aide de données sur la migration vers les États-Unis et nous avons constaté qu'une augmentation des transferts de fonds en provenance des États-Unis diminuait la demande ultérieure d'entrée dans ce pays.

Introduction

Politicians in advanced democracies see controlling immigration—particularly undocumented or irregular migration from developing countries—as a central policy goal.[1] The belief that immigration results in increased labor market competition, greater stress on the welfare state, and heightened social conflict feeds into grievances that fuel nativist political movements (Dancygier 2010; Mayda 2006; Inglehart and Norris 2019).[2] In response, politicians have promoted a variety of policies to signal their opposition to irregular migration. While border walls and third-party agreements are the solution *de jure*, politicians also use tools of economic statecraft—notably foreign aid and trade agreements—to exercise immigration control beyond the border's edge. The rationale is that aid and trade flows spur economic development in the Global South, which in turn influence the "root causes" of migration, economic privation, and absence of social safety nets, decreasing the demand for emigration (Asencio 1990; Peters 2015).

There is growing skepticism, however, that traditional tools of economic statecraft reduce immigration as trade and aid do not meaningfully improve the lives of those most likely to emigrate and may even increase migration in the short run (Clemens and Postel 2018). This skepticism is

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[1] Following the United Nations High Commission for Refugees (UNHCR), we use the language "irregular" or "unauthorized" to denote those who have entered a country without proper documents. See https://www.unhcr.org/cy/wp-content/uploads/sites/41/2018/09/TerminologyLeaflet_EN_PICUM.pdf.

[2] Whether these concerns are rooted in material reality or in psychological dispositions such as ethnocentrism is strongly disputed by a wealth of scholarly research (Hainmueller and Hopkins 2014). Yet to politicians who want to stay in office, this debate is mostly irrelevant, as anti-migrant sentiment is a political reality regardless of its origins.

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driven, in part, by concerns that trade and aid do not necessarily impact individuals at the lower end of the income distribution and, if they do, the increment to income provided by additional trade or aid may actually facilitate migration by reducing financial constraints.

This does not mean that policies in destination countries are ineffective in decreasing the demand for irregular entry. We argue that policymakers in destination countries can effectively manage the demand for irregular inflows by promoting policies that grant or enhance formal labor market access to those who have *already* emigrated. Such policies give migrants a better chance at obtaining employment that, on average, pays higher wages than if they did not have formal labor market access. Higher wages will increase migrant remittances, which, because they accrue directly to households, raise the income of the migrant's household (Taylor 1999; Adams and Page 2005) and reduce the propensity for other household members to migrate for economic opportunity. In other words, policies that augment labor market opportunities for immigrants allow households in the developing world to more effectively diversify economic risk via increased remittances, serving as a substitute for subsequent immigration. Importantly, remittances matter beyond the recipient, as expenditures and investments made by the household generate positive spillovers to the community at large (Ratha 2013). This, in turn, may decrease overall migration.

To test our argument, we investigate one such policy in the United States: the provision of Temporary Protected Status (TPS) to immigrants residing in the United States. Established by Congress in 1990, TPS grants temporary legal status to foreign nationals present in the United States from nations experiencing natural disaster or civil war. Importantly, TPS provides those *currently* in the United States with a stay of deportation and access to the formal labor market. We expect countries whose migrants hold TPS receive more remittances than countries whose migrants are not TPS-eligible. And we show, both theoretically and empirically, that this increase in remittances *decreases* the demand for entry into the United States. Our findings shed light on recent executive and judicial decisions regarding the termination of TPS for many crisis-affected countries. While the intention of ending TPS protections may be to reduce the immigrant population, the indirect effect of TPS termination is likely to be a decline in remittance flows and increased subsequent demand for irregular entry.

Our arguments and evidence are presented as follows. In the second section, we develop the argument linking labor market access–enhancing policies for immigrants to models of bilateral migration flows. That section provides a contextual discussion of the policy of interest: TPS. In the third section, we examine the effect of TPS on remittances, authorized migration, and unauthorized migration. We also employ synthetic control methods for comparative case studies to address the question: what would remittances and to El Salvador and Honduras be had its expatriates not received TPS? We discuss potential objections to our arguments and evidence in the fourth section while the fifth section concludes.

Labor Market Access, Remittances, and Migration

We argue that providing foreign nationals with legal access to the domestic labor market has the potential to decrease subsequent irregular migration from the foreign national's country of origin. This argument is developed in two steps: first, we argue that legalization increases a migrant's wages, which, in turn, increases remittances and, second, that an increase in remittances decreases the demand for subsequent migration of friends and family members.

There is a variety of existing, microlevel, evidence consistent with the argument that labor market access–enhancing policies are an economic boon for eligible immigrants. For instance, Rivera-Batiz (1999) and Kossoudjii and Cobb-Clark (2002) find that obtaining a green card—a shift to permanent legal status in the United States—increases the wages of an immigrant by 6–13 percent on average.[3] Devillanova, Fasani, and Frattini (2018) find, in the Italian context, that when undocumented immigrants are eligible for amnesty, they are significantly more likely to find employment than those who are ineligible. Kaushal (2006) finds a similar result in the United States. In the case of TPS, a policy we discuss in detail below, the economic benefits to immigrants are similarly large. Orrenius and Zavodny (2015) find that Salvadoran immigrants with TPS are more likely to find employment as compared to Salvadorans in the United States without authorization and that, on average, the jobs they find pay higher wages.

These increased incomes of migrants can increase remittances, or income sent from migrants to family members back home. Direct evidence on this point is limited, as data enabling scholars to establish a causal link between labor market access and remittances do not exist. However, in a set of papers, Bollard, McKenzie, and Morton (2009) and Bollard et al. (2011) exploit surveys of migrants residing in the United States, France, Germany, Italy, Spain, and Australia. Using these microlevel data, they find that even after controlling for a migrant's gender and their level of education—along with a battery of other demographic, economic, and social characteristics—higher wages and legal status are associated with an increase in both the frequency and the amount of remittances that migrants send home. While we do not have access to microlevel data that allow us to ascertain whether migrants granted TPS remit more, in the aggregate, we hypothesize that when immigrants gain access to the formal labor market as a result of such policies, their homelands will receive larger flows of remittances.

How can these policies, and the associated increase in remittances, influence subsequent inflows of migrants from affected countries? There is vast evidence that remittances increase and smooth consumption patterns in the Global South. This occurs at two levels. First, remittances accrue directly to households in developing countries (Escriba-Folch, Meseguer, and Wright 2015), meaning that they directly affect patterns of immediate consumption among recipient households. Combes and Ebeke (2011) find that remittances decrease household consumption instability and act as insurance in the face of natural disaster or economic crisis. Remittances allow households in developing countries to accumulate savings and overcome local credit market deficiencies (Stark 1984). Whether saved, consumed, or invested, remittances help the migrant's family smooth consumption in the face of domestic (home country) volatility and reduce local credit constraints that the migrant's family faces (Stark 1984). At the household level, then, we expect that increased remittances act as a *substitute* for subsequent immigration of household members, as remittances augment and smooth household income in the migrant's homeland.

[3] Amuedo-Dorantes and Bansak (2011) and Pan (2012) reach differing conclusions with regard to the effect of legal permanent resident status on employment for women, with Amuedo-Dorentes and Bansak (2011) finding that women are more likely to exit the workforce once they obtain status while Pan (2012) finds the opposite effect for women.

The effect of remittances extends beyond the migrant's household. It is plausible that observing a community member move abroad incentivizes others in the community to likewise emigrate. While this is certainly possible, we suggest that the net effect of remittances is emigration-reducing in the recipient household's community. This is because remittances have a multiplier effect in the migrant's community: remittances generate positive spillovers through their effect on investments in housing, health care, and schooling, which increase employment in construction (Taylor et al. 1996), community health (Nwajiuba 2005), and education (Conway and Cohen 1998), not to mention broader, aggregate increases in consumption that lift economic development in communities (e.g., Orrenius et al. 2010). Kaniaupuni and Donato (1999) find that remittances reduce infant mortality across Mexican communities for both immigrant and nonimmigrant households. de Haas (2006) describes how foreign remittances lead to community development in Morocco such that internal migrants increasingly return home. In the aggregate, Adams and Page (2005) find that remittances reduce poverty and inequality even if the overall effect of remittances on economic growth is an open question (Clemens and McKenzie 2014).

The aggregate migration-reducing effect of remittances is in stark contrast to aid or trade flows, which, if they do have an effect on the household, takes (much) longer to observe (Rodriguez and Rodrik 2000; Yanikkaya 2003; Qian 2015; McKenzie 2017). Remittances are also orders of magnitude larger than most other international economic flows for many low- and middle-income countries, especially foreign economic assistance. In recent years, remittances to developing countries are more than three times larger than foreign aid, and this gap has only grown over time. Remittances are also comparable in size to private debt and portfolio equity flows, and only lag foreign direct investment among all global financial flows (World Bank 2016). While scholars remain skeptical that paltry aid flows can have a significant impact on the causes of emigration from the developing world, remittances may be able to pack a more powerful punch.

In summary, we expect policies that open the formal labor market to immigrants will (1) increase the incomes of immigrants who already reside in an industrialized state, (2) increase the amount of remittances sent home to friends and family by immigrants who benefit from these policies, and (3) reduce subsequent demand for irregular immigration to that industrialized state. We focus on remittances as an international financial flow that is distinct from other flows such as foreign aid or international trade, and we suggest policies that increase remittances that can affect subsequent immigration in unexpected ways.

Temporary Protected Status: A Brief Digression

To test our argument, we take TPS in the United States as a particular case of labor market access–enhancing policy for immigrants already present in the country. TPS is the product of a long history of executive action on immigration to the United States. Every president other than Donald Trump in the post-World War II (WWII) era has deployed blanket protections for immigrant groups facing hardship depending on circumstance.[4] With Congress unwilling to act, President Truman issued executive grants of relief following WWII for groups liberated from Nazi concentration camps. President Kennedy extended and expanded protections to Cubans due to the Cuban Revolution. President Carter suspended deportation proceedings for 250,000 Silva letter-holders in 1977,[5] while President Reagan provided similar protection for 200,000 Nicaraguan refugees in 1987. President H.W. Bush continued this tradition of shielding individuals from deportation by extending Reagan's "family fairness" policy to 100,000 spouses in 1990, and President Clinton similarly halted deportation proceedings for 40,000 Haitians in 1997 over concerns about political instability. In 2001, President George W. Bush extended protections for El Salvadorians in response to a devastating earthquake in that country, and President Barack Obama used executive authority to implement Deferred Action for Childhood Arrivals (DACA).

Over the course of the 1980s, the public as well as members of Congress became increasingly vocal over what they viewed as an arbitrary—and increasingly political—use of executive action to protect migrant populations. Most noticeably, concerns over the Reagan Administration's refusal to grant those fleeing El Salvador's civil war either refugee status or other blanket protections led to congressional action, culminating in the Immigration Act of 1990 (Anchors 2007). The Immigration Act of 1990 created the category of TPS and extended that protection to Salvadorians who were currently present in the United States. Administratively, TPS was intended to eliminate politicized actions on immigration policy, by giving the Attorney General the statutory authority to designate states "whose nationals would be eligible for the protection of TPS should their home country become unsafe or unable to handle the return of is nationals" (Segerblom 2007, 666). While TPS is an administrative tool, the grant, extension, and revocation of TPS rest with the executive branch, so political considerations are not entirely removed from the use of this tool. We return to this issue later. Table 1 lists each case of TPS provision between 1990 and 2015, its length, and the reason for extension.

As noted earlier, TPS provides blanket relief for citizens of a crisis-affected country who were present in the United States when a crisis hit their home country. Those who receive TPS are eligible to legally enter the labor market—whether the migrant is present in the United States with or without authorization.[6] For those who entered the United States on temporary work visas, TPS crucially provides a blanket extension of that status. Importantly, however, TPS does not provide either a path to citizenship or access to social benefits. TPS holders are not eligible for family reunification, nor do they have access to social welfare programs regardless of how much they have paid in social security or income taxes. Because of these central provisions, executive actions related to granting TPS fit squarely into the class of labor market access–enhancing policies for immigrants who are already present in the United States. We hypothesize that when a country's migrants residing in the United States are TPS-eligible, those countries will receive increased income in the form of remittances as compared to countries whose migrants are TPS-ineligible. We also hypothesize

[4] See online appendix table A.1 for a near-exhaustive list of executive actions on immigration since WWII (besides TPS).

[5] In 1977, due to a lawsuit involving Cuban visas and immigration quotas for the Western Hemisphere, a federal court ordered the Immigration and Naturalization Service to issue documents to Mexicans present in the United States that shielded them from deportation and allowed them to gain employment. These documents came to be known as Silva letters due to the namesake of the court case, and Silva letter-holders were either allowed to apply for visas or granted legal permanent residency with the 1986 Immigration Reform and Control Act (IRCA).

[6] TPS allows for formal labor market access regardless of whether the migrant entered the United States illegally or legally and overstayed their visa. TPS allows both authorized and unauthorized migrants to remain in the country and not fear deportation, so long as the individual does not commit a felony.

Table 1. Provision of TPS, 1990–2015

Country	*Years*	*Reason*
Bosnia and Herzegovina	1992–2001	Civil war
Burundi	1997–2009	Civil war
El Salvador	2001–2015	Earthquake
Haiti	2010–2015	Earthquake
Honduras	1998–2015	Hurricane
Liberia	2014–2015	Ebola epidemic
Nepal	2015	Earthquake
Nicaragua	1998–2015	Hurricane
Rwanda	1995–1997	Civil war
Sierra Leone	1997–2004 and 2014–2015	Civil war and Ebola epidemic
Yemen	2015	Civil war

that these remittances will reduce subsequent irregular immigration into the United States.

TPS, Remittances, and the Demand for Entry

Our interest is in the effect of labor market access on demand for irregular entry. We proceed in two stages. First, using a sample of low- and middle-income countries, we test the hypothesis that TPS increases remittances. We then explore whether remittances, all else equal, decrease the demand for irregular entry into the United States. This section discusses the sample, model, data, and results from our empirical exercise; it concludes with a discussion of the robustness of our argument and the potential endogeneity of TPS.

TPS and Remittances

We first examine the relationship between TPS and remittances for a global sample, 1990–2015. Our dependent variable is $RemittancesPerCapita_{it}$, total remittances received by country i at time t in current US dollars, divided by population.[7] We draw on macroeconomic models of remittances, which emphasize conditions in migrant home and host countries, and control for a number of variables that could influence the size of remittance flows.[8] We include $lnMigrantStock_{it}$, the logged size of the foreign-born population from country i residing in the United States at time t; $\Delta ExRate_{it-1}$, the annual change in country i's exchange rate vis-à-vis the US dollar at time $t-1$, and $\Delta\, US\, Unemp_{t-1}$, the change in unemployment rate in the United States at time $t-1$. A larger migrant population in the United States provides larger remitting capacity, while exchange rate changes account for the likelihood that migrants are likely to remit more (rather than consume) when the US dollar has greater purchasing power (Katz and Stark 1986; Yang 2008). We use the US unemployment rate to proxy for migrants' employment opportunities and expected wages. We also include a range of economic, political, and environmental conditions in origin countries: $lnGDPPC_{it-1}$, logged Gross Domestic Product (GDP) per capita in country i at time $t-1$; $CivilWar_{it-1}$, an indicator equal to one if country i is experiencing civil war at time $t-1$; and $DisasterDeaths_{it-1}$, the number of natural disaster–related deaths per 1,000 people in country i at time $t-1$.[9]

We model remittances per capita using ordinary least squares and include a complete set of country-fixed effects to account for unmeasured factors that are constant within countries. All independent variables are lagged by one year with the exception of $lnMigrantStock_{it}$, which represents a cumulative count of migrants in the current year. We estimate Newey–West standard errors, which are robust to both serial correlation and heteroscedasticity. Because remittance flows exhibit a high level of persistence, we calculate standard errors accounting for persistence over two years. We report results that include a lagged endogenous variable in the online appendix.

Table 2 presents our baseline results. TPS provision is operationalized in three ways. In column (1), TPS_{it-1} is an indicator equal to one from the year country i received TPS until its designation ends; this means that TPS renewals are coded as one. In column (2), $TPSSpell_{it-1}$ represents a linear spell, equal to the number of consecutive years country i has received TPS. In column (3), we include $TPSSpell_{it-1}$variable nonlinearly in the form of individual indicator variables for each unique TPS spell length.

Regardless of operationalization, TPS is strongly associated with increased remittances per capita. The estimates in column (1) suggest that TPS designation is associated with an average increase of roughly $100 per capita. Whether included either linearly or nonlinearly, longer TPS spells are associated with increased remittances. Column (3) illustrates that the largest estimated effects come for countries that experience long spells of TPS (i.e., longer than ten years). This would be consistent with the idea that regularization enables migrants, once they enter the legal labor market, to experience levels of advancement and wages comparable to natives.

In columns (4)–(6), we reestimate the models on a sample of Western Hemisphere countries, the largest source of both regular and irregular immigration to the United States. These results are substantively very similar to the global sample, with TPS being strongly associated with increased remittances per capita across different operationalizations of TPS. We briefly note the estimated coefficients of our control variables. Countries with more migrants in the United States experience increased remittance inflows; exchange rate appreciations appear to be associated with increased remittances within the Western Hemisphere but not

[7] We focus on remittances per capita, rather than as a percentage of GDP, for two reasons. First, countries in crisis—those that would warrant a grant of TPS—likely would have declining GDP, so we might measure an increase in remittances due to that decrease rather than an increase in remittances. Second, our models of migration are predicated on the notion that remittances influence household decisions. Remittances per capita is a better measure than remittances as a share of GDP in this respect. That said, in supplementary materials available upon request, we perform these same exercises using remittances as a percentage of GDP and obtain identical results.

[8] See more detailed discussion in Leblang (2017).

[9] Online appendix table A.2 provides further variable descriptions and data sources.

Table 2. TPS and remittances

	Dependent variable: $RemittancesPerCapita_{it}$					
	(1) *Global*	*(2)* *Global*	*(3)* *Global*	*(4)* *WH*	*(5)* *WH*	*(6)* *WH*
TPS_{it-1}	109.110***			110.795***		
	(19.616)			(22.129)		
$TPSSpell_{it-1}$		13.529***			11.051***	
		(2.093)			(1.870)	
$lnMigrantStock_{it}$	18.952***	18.648***	18.394***	157.424***	157.673***	152.987***
	(3.791)	(3.747)	(3.734)	(25.595)	(25.503)	(25.922)
$\Delta ExRate_{it-1}$	3.052	2.982	3.186	30.137***	29.161***	29.259***
	(5.129)	(5.097)	(5.092)	(7.843)	(7.857)	(7.744)
$lnGDPPC_{it-1}$	139.507***	137.172***	138.055***	116.687***	108.497***	112.129***
	(14.523)	(14.469)	(14.568)	(28.554)	(28.344)	(28.733)
$DisasterDeaths_{it-1}$	2.624**	1.819*	2.275**	2.363**	1.242	1.881*
	(1.040)	(0.967)	(1.026)	(1.095)	(0.883)	(1.053)
$CivilWar_{it-1}$	−11.697**	−11.278**	−11.419**	−2.274	−7.021	−5.085
	(5.508)	(5.478)	(5.499)	(20.251)	(21.279)	(20.228)
Δ $US\ Unemp_{t-1}$	−38.930	−50.825	−53.908	−221.602	−181.509	−244.357
	(258.575)	(258.289)	(261.076)	(395.638)	(395.520)	(411.810)
First year of TPS			35.362**			36.004*
			(16.903)			(20.116)
Second year of TPS			50.985***			41.008**
			(14.288)			(18.256)
Third year of TPS			65.323***			61.933***
			(18.156)			(23.833)
Fourth year of TPS			92.606***			85.139***
			(27.681)			(32.961)
Fifth year of TPS			113.674***			101.035**
			(35.775)			(44.407)
Sixth year of TPS			128.288***			136.306***
			(46.086)			(48.201)
Seventh year of TPS			141.639***			161.433***
			(34.193)			(35.714)
Eighth year of TPS			117.187***			154.990***
			(37.278)			(26.261)
Ninth year of TPS			132.167***			161.250***
			(47.197)			(27.645)
Tenth year of TPS			133.377***			162.445***
			(51.588)			(27.624)
Eleventh year of TPS			157.900***			141.596***
			(34.900)			(27.785)
Twelfth year of TPS			167.164***			148.563***
			(33.592)			(24.778)
Thirteenth year of TPS			171.942***			156.256***
			(38.059)			(24.729)
Fourteenth year of TPS			200.042***			151.340***
			(32.353)			(27.628)
Fifteenth year of TPS			180.506***			138.237***
			(35.090)			(22.597)
Sixteenth year of TPS			186.978***			134.804***
			(40.657)			(24.844)
Seventeenth year of TPS			196.866***			144.009***
			(47.275)			(27.948)
Constant	−1069.434***	−1051.732***	−1054.332***	−2917.449***	−2846.101***	−2823.505***
	(94.536)	(94.342)	(94.792)	(283.450)	(289.972)	(293.307)
Observations	2,874	2,874	2,874	764	764	764

Notes: All models estimated with OLS and include a set of country-fixed effects. Newey–West standard errors accounting for two lags in parentheses. WH, Western Hemisphere; OLS, ordinary least squares.
$^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Figure 1. Synthetic control estimates for TPS and remittances per capita in El Salvador (top panel) and Honduras (bottom panel).
Note: Further details and model diagnostics are available in online appendix B.

in the global sample. Increases in natural disaster deaths are associated with increased remittances, although experiencing a civil war appears to have little effect.[10] While increases in unemployment in the United States are associated with declining remittances, the estimated effect does not reach conventional levels of significance. Wealthier low- and middle-income countries receive greater remittances per capita on average.

In online appendix table A.3, we present an analogous set of models that include a lagged endogenous variable and continue to estimate Newey–West standard errors accounting for two periods of persistence. The inclusion of a lagged endogenous variable attenuates the estimated effect of TPS, but there remains a positive and statistically significant relationship between TPS and remittances per capita, both in the global sample and within the Western Hemisphere. In short, TPS designation is strongly associated with greater remittance flows. These findings are consistent with existing literature that cites the benefits of legal status for wages and a migrant's capacity to remit. Our analysis of TPS spells suggests that labor market access has a persistent effect on remittances long after the impact of the adverse event that initiated protection.

Policy Analysis: Synthetic Control

We extend our analysis of TPS with two quantitative case studies using the synthetic control method (Abadie, Diamond, and Hainmueller 2015). Our goal is to evaluate the following counterfactual: what would remittances to beneficiary countries look like had they not received TPS?[11] Our focus is on El Salvador and Honduras—two countries that are large sources of migration to the United States and that received TPS designation due to natural disaster. For the synthetic control, we restrict the pool of control units to Western Hemisphere countries (excluding Canada) whose migrants have never received TPS that have sufficient data.[12]

In 2001, 263,000 migrants from El Salvador received TPS following an earthquake; this status has been continuously extended as of 2021. Panel A of figure 1 illustrates our synthetic control estimates for El Salvador. While El Salvador and its synthetic counterpart are closely matched during the pretreatment period, shortly after TPS designation, actual remittances per capita far outpace synthetic El Salvador. This gap persists to 2015, suggesting that TPS has a positive and persistent effect on remittances. By 2015, the gap between El Salvador and its synthetic counterpart is nearly $250 in remittances per capita. The synthetic control analysis suggests that had TPS not been granted to Salvadorians in the United States in 2001, remittances per capita to El Salvador likely would have been much lower than they were.

Similarly, more than 80,000 Honduran migrants in the United States received TPS following a hurricane in 1998; Hondurans continue to hold TPS designation as of 2021. Panel B of figure 1 illustrates our main synthetic control estimates for Honduras. We again observe a large and persistent gap in remittances per capita between Honduras and its synthetic counterpart, despite their close match in the pretreatment period. By 2015, the gap between Honduras and synthetic Honduras is roughly $150 in remittances per capita; this relatively smaller estimated effect is consistent with the smaller number of Hondurans who hold TPS as compared to El Salvador. These results suggest that granting TPS to Salvadorian and Honduran migrants in the United States was effective at stimulating remittances to those countries, long after initial implementation.

TPS and Irregular Immigration

Are remittance flows associated with a decrease in irregular immigration? Authorized immigration to the United States is regulated by a complex legal framework that determines legal entry, duration of stay, and rights to access the labor market and social welfare benefits. We set aside authorized immigration and focus on irregular

[10] This may be due, in part, to reverse causality. Miller and Ritter (2013) find that remittances increase the likelihood of civil war onset, while Regan and Frank (2014) find the opposite.

[11] We use synthetic control because (1) it is well suited to evaluate policy interventions at an aggregated level (Abadie, Diamond, and Hainmueller 2015) and (2) it provides an estimate of how TPS affects the over-time outcome path of remittances to countries of interest, allowing us to further observe whether TPS has long-lasting effects.

[12] See online appendix B for a more technical discussion of our synthetic control results, including a list of donor pool countries and model diagnostics. This analysis is limited to remittances per capita because the apprehension and asylum application time series are too short for estimation.

immigration to the United States. Our conception of irregular immigration draws on an emerging literature from humanitarian policy on "mixed migration," which argues that separating the causes of undocumented economic migration and forced migration (i.e., asylum seekers and refugees) is difficult or impossible (Long and Crisp 2010; Martin, Weerasinghe, and Taylor 2014). The logic is that climate change, natural disaster, and civil conflict—and the economic consequences thereof—displace people from their communities, and it is difficult to distinguish between "economic" migrants and those who have "legitimate" asylum claims. Consequently, we examine both *unauthorized immigration*—those attempting to enter the United States without legal documentation—and *asylum applications*—those who arrive in the United States and ask for protection from persecution.[13]

Unauthorized Immigration

We first analyze unauthorized immigration to the United States, 1999–2015.[14] The main challenge in estimating the relationship between remittances and unauthorized immigration is measurement. Assuming that immigration authorities want to prevent unauthorized entry,[15] observing unauthorized migration is effectively impossible. We cannot directly measure the number of unauthorized entrants into the United States over time. We use $Apprehensions_{it}$, the count of people from country i who are apprehended while attempting to enter the United States without inspection at time t, as our measure of undocumented immigration; we obtain these data from the Department of Homeland Security. While imperfect, assuming "that the *apprehension rate* is constant, changes in apprehensions are a direct indicator of changes in illegal inflows" (Office of Immigration Statistics 2017). We cannot directly test whether the apprehension rate is constant, but we control for a primary factor besides increased entry—level of enforcement—that could influence the apprehension rate: $lnBorderPatrol_{t-1}$, the logged number of Border Patrol agents at $t-1$.[16]

We draw on the existing models of international migration and include a standard set of covariates: $lnMigrantStock_{it}$; $GDPRatio_{it-1}$, the ratio of GDP per capita in country i and the United States at time $t-1$; $lnPopulation_{it-1}$, logged population of country i at time $t-1$; and $Democracy_{it-1}$, the level of democracy in country i at time $t-1$ using V-Dem's polyarchy measure. We include $CivilWar_{it-1}$ and $DisasterDeaths_{it-1}$ from our models of remittances, and also add $HomicideRate_{it-1}$, the homicide rate in country i at time $t-1$ as measured by the World Health Organization (WHO)[17]; we regard these as major "push" factors that both drive people to engage in irregular immigration and may lead current immigrants to remit more.

Finally, we include a number of variables suggested by other studies of unauthorized immigration. We proxy for changes in unauthorized labor demand by including $\Delta\ US\ Unemp_{t-1}$and $lnHousingStarts_{t-1}$, the logged number of new housing starts in the United States at time $t-1$. We account for the relative availability of authorized entry with $lnTotalVisas_{t-1}$, the total number of visas (all categories) issued by the United States in the prior year. Finally, we include two variables that capture factors unique to unauthorized immigration: $DeportationRate_{it-1}$, the number of individuals from country i who were deported at time $t-1$ divided by population, and $lnAsylumWait_{it-1}$, the logged average wait time (in days) for an asylum hearing for applicants from country i at time $t-1$ (Ambrosius and Leblang 2020). All independent variables are lagged by one year with the exception of $MigrantStock_{it}$, which represents a cumulative count of migrants.

We model the count of apprehensions using pseudo-Poisson maximum likelihood (PPML) estimation and include a complete set of country-fixed effects.[18] We opt for a Poisson specification because the dependent variable—apprehensions—is discrete, countable, and bounded below by zero. OLS would generate inconsistent results as well as negative predicted values. Recent scholarship (Santos Silva and Tenreyro 2006; Correia Guimarães, and Zylkin 2020) shows that PPML outperforms both OLS and negative binomial models when the dependent variable is non-negative and contains a large proportion of zeros and when the empirical model includes a battery of fixed effects. An additional advantage of PPML is that the standard errors we report are robust to both heteroscedasticity and serial correlation of an unknown form.

Table 3 presents the results for apprehensions. Column (1) estimates this model using a global sample of low- and middle-income countries. The effect of remittances per capita on apprehensions is not statistically significant. Upon closer inspection, however, we find the reason: Mexico is an extreme outlier, with orders of magnitude more apprehensions than any other country. In our sample, apprehensions of Mexicans average over one million a year, while the average number of apprehensions in the sample *excluding* Mexico is roughly 1,000. The *minimum* number of apprehensions Mexico experiences in a year (267,885) is more than twice as large as the *maximum* number of apprehensions experienced by any other country (106,928, Honduras).[19] Extreme outliers can have a variety of effects on statistical estimation and inference; in some cases, winsorizing—either trimming or down-weighting outliers—can improve inference. Apprehensions of Mexicans in our sample are such that either approach to winsorizing the apprehension data results in the de facto exclusion of Mexico. In column (2), we show results in a global sample excluding Mexico and find that, as hypothesized, remittances per capita are associated with a reduction in the number of apprehensions.

In figure 2, we show the predicted number of annual apprehensions across the range of remittances per capita in the global sample. A $100 increase in remittances per capita above the mean is associated with roughly 200 fewer apprehensions on average. In column (3), we limit the sample to the Western Hemisphere (again, excluding Mexico) and find a substantively similar effect of remittances on apprehensions. Overall, our results are consistent with the

[13] We thank an anonymous referee for suggesting that we focus on apprehensions and asylum claims, as authorized migration is determined in large part by US immigration policy.

[14] We focus on this period because we have near-universal coverage of apprehensions. While some data are available for earlier years, these only include a smaller sample of countries within the Western Hemisphere.

[15] A crackdown on unauthorized migrants would hinder the labor supply and push up wages in sectors such as agriculture, construction, and hospitality. That would decrease wages for business owners in some politically sensitive and geographically concentrated areas. See, for example, Root (2016) for a discussion of the sensitivity of immigration enforcement in Texas.

[16] Our preferred enforcement measure is line-watch hours. Unfortunately, the Department of Homeland Security stopped reporting this after 2009. The correlation between line-watch hours and number of officers is 0.987.

[17] When data on homicides are missing, we carry forward the last available value to limit data loss.

[18] Santos Silva and Tenreyro (2006) show the efficiency gains of using PPML in the presence of a large number of fixed effects. We use the *ppmlhdfe* command in Stata as developed by Correia, Guimarães, and Zylkin (2020).

[19] Mexico is slightly *below* average in terms of remittances per capita: average remittances per capita in the global is roughly $190, while for Mexico it is $124.

Table 3. Remittances and unauthorized immigration

	Dependent variable: Apprehensions$_{it}$		
	(1) *Global incl. Mexico*	*(2)* *Global excl. Mexico*	*(3)* *WH*
Remittances PerCapita$_{it-1}$	0.001	−0.001***	−0.001***
	(0.001)	(0.000)	(0.000)
lnMigrantStock$_{it}$	5.021***	0.871***	1.295***
	(0.608)	(0.264)	(0.397)
GDPRatio$_{it-1}$	18.730***	−15.401***	−19.072**
	(6.052)	(4.934)	(7.691)
lnPopulation$_{it-1}$	−3.070	0.104	1.176
	(4.062)	(1.271)	(1.499)
Democracy$_{it-1}$	−2.138*	0.339	1.244
	(1.237)	(0.626)	(0.824)
DisasterDeaths$_{it-1}$	0.016*	0.012***	0.012***
	(0.008)	(0.003)	(0.004)
CivilWar$_{it-1}$	−0.138	−0.253	0.247***
	(0.109)	(0.249)	(0.074)
HomicideRate$_{it-1}$	−0.680	−0.022	−0.522
	(0.706)	(0.040)	(0.435)
lnAsylumWait$_{it-1}$	−0.141	−1.008***	−1.066***
	(0.211)	(0.113)	(0.142)
lnBorderPatrol$_{t-1}$	−2.708**	1.866***	1.568***
	(1.138)	(0.426)	(0.432)
lnTotalVisas$_{t-1}$	−1.424***	−2.567***	−2.419***
	(0.249)	(0.545)	(0.691)
Δ *US Unemp*$_{t-1}$	−5.391	−11.074***	−12.376***
	(4.097)	(1.677)	(2.103)
lnHousingStarts$_{t-1}$	−0.991***	−0.180	−0.326*
	(0.336)	(0.184)	(0.197)
DeportationRate$_{it-1}$	0.272***	0.166**	0.102
	(0.093)	(0.066)	(0.064)
Constant	41.983	20.208	0.181
	(57.172)	(20.808)	(25.682)
Observations	1,580	1,563	384

Notes: All models estimated with PPML and include a set of country-fixed effects. Robust standard errors clustered by country in parentheses. WH, Western Hemisphere.
$^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

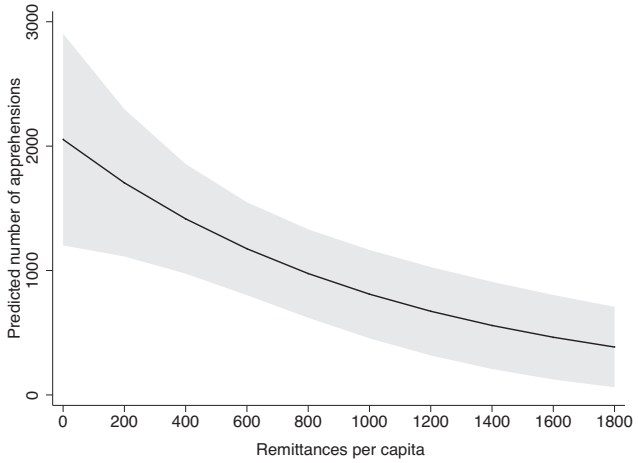

Figure 2. Predicted number of apprehensions across range of remittances per capita with 95 percent confidence intervals.
Note: Prediction based on model (2) of table 3.

argument that remittances are associated with a reduction in unauthorized immigration to the United States.

Asylum Applications

We separately estimate the effect of remittances on *AsylumApplications*$_{it}$, the count of applications for asylum in the United States from country i at time t, 1999–2015. Our empirical model of asylum applications is very similar to that of unauthorized immigration. We include the same set of control variables, but also include *ApprehensionRate*$_{it-1}$, the number of people from country i who are apprehended at time $t-1$ divided by population, to account for a potential substitution effect between unauthorized immigration and asylum-seeking. We estimate these models using PPML with country-fixed effects and robust standard errors clustered by country. Table 4 shows our main results. Column (1) presents a model estimated on the global sample, including Mexico,[20] while column (2) zooms in on the Western Hemisphere. Increased remittances are associated with decreases in asylum applications, whether observing a global sample or the Western Hemisphere.

The estimates in column (1) suggest that a $100 increase in remittances per capita is associated with 200 fewer applications for asylum, on average. The coefficient estimates in model (2) show that this effect increases both substantially

[20] We include Mexico in these models because it is not a substantial outlier for asylum applications.

Table 4. Remittances and asylum applications

	Dependent Variable: $AsylumApplications_{it}$	
	(1) Global	*(2) WH*
$RemittancesPerCapita_{it-1}$	−0.004***	−0.010***
	(0.001)	(0.002)
$lnMigrantStock_{it}$	0.616	−0.033
	(0.487)	(1.549)
$GDPRatio_{it-1}$	7.842	0.932
	(6.459)	(12.839)
$lnPopulation_{it-1}$	1.718	2.448
	(1.295)	(2.548)
$Democracy_{it-1}$	−1.318*	−1.762
	(0.784)	(1.609)
$DisasterDeaths_{it-1}$	−0.027***	-0.016
	(0.006)	(0.012)
$CivilWar_{it-1}$	0.120	−0.135
	(0.150)	(0.141)
$HomicideRate_{it-1}$	0.030***	2.659**
	(0.007)	(1.180)
$lnAsylumWait_{it-1}$	−0.657*	−0.566
	(0.344)	(0.435)
$lnBorderPatrol_{t-1}$	−1.300*	0.822
	(0.728)	(0.884)
$lnTotalVisas_{t-1}$	−0.100	−0.985
	(0.393)	(1.085)
Δ $USUnemp_{t-1}$	−11.241***	−8.153
	(3.238)	(7.717)
$lnHousingStarts_{t-1}$	−0.579**	0.621
	(0.255)	(0.514)
$DeportationRate_{it-1}$	0.794***	0.935***
	(0.109)	(0.204)
$ApprehensionRate_{it-1}$	0.052**	0.081**
	(0.026)	(0.032)
Constant	−7.986	−29.495
	(18.055)	(42.059)
Observations	1,489	378

Notes: All models estimated with PPML and include a set of country-fixed effects. Robust standard errors clustered by country in parentheses. WH, Western Hemisphere. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

and significantly when only focusing on the Western Hemisphere, as the United States receives three times as many asylum applications from countries in this hemisphere as compared to the rest of the world. In addition to reducing unauthorized immigration to the United States, remittances are also associated with reductions in asylum-seeking. These results suggest that policies that increase remittance flows to migrant origins can be a powerful tool to reduce demand for irregular immigration. While remittances may signal the benefits of migration to other households, our results suggest that this potential effect is more than offset by alternate mechanisms that reduce the demand for entry.

Robustness

We probe the robustness of findings with respect to unauthorized immigration and asylum applications. One potential concern is that the demand for irregular immigration is persistent over time, and that our models do not sufficiently account for serial correlation. We first note that we estimate PPML models with standard errors that are robust to potential serial correlation of an unknown form. However, bias may still arise from model misspecification if either apprehensions or asylum applications are persistent over time.

We engage in two supplementary analyses to explore this possibility. First, we estimate PPML models for both apprehensions and asylum applications that include country-specific linear time trends. These results are available in online appendix tables A.4 and A.5. Our baseline results remain robust to the inclusion of country-specific trends regardless of sample selection, suggesting that our findings are not due to strong persistence in irregular immigration or remittances.

Second, we also estimate PPML models for both apprehensions and asylum applications that include a lagged endogenous variable. We note that the inclusion of a lagged dependent variable in a PPML model with few time periods, relative to the number of cross-sectional units, can induce bias on coefficient estimates (Nickell 1981), and we generally prefer our baseline estimates and the results with country-specific trends. That said, we present results with a lagged dependent variable in online appendix tables A.6 and A.7. The coefficient estimates with respect to apprehensions remain substantively identical, although the estimated standard errors increase, rendering the relationship between remittances per capita and apprehensions insignificant ($p = 0.14$) for the global sample (excluding Mexico). Remittances continue to reduce apprehensions within the Western Hemisphere. Our results remain substantively identical and statistically significant with respect to applications for asylum, with remittances per capita exerting a negative effect on asylum seekers both in the global sample and within the Western Hemisphere. Taken together, these results suggest that our hypothesis tests and substantive conclusions are not the product of temporal persistence or serial correlation.

Discussion

The empirical results support our main arguments: TPS, because it provides access to the formal labor market, increases remittances. Increasing remittances in turn decrease the demand for irregular immigration to the United States. We discuss potential objections to our theoretical argument and empirical implementation related to (1) the mechanism, (2) the measurement of remittances, and (3) the potential endogeneity of TPS designation.

Our argument is that the receipt of remittances, in the aggregate, has a negative effect on outflows of migrants. In the second section, we suggest that the effect works through both recipient households and the broader community, as recipient activity generates positive spillovers for the economy as a whole and contributes to the provision of public goods. On the other hand, it might also be the case that remittances have a *demonstration effect*: non-migrant households observe the prosperity of remittance-receiving households and decide to send a member abroad. While our empirical results suggest that remittances reduce overall migration, we cannot directly distinguish between these competing mechanisms.

We explore the extent to which the positive spillover of remittances dominates demonstration effects using individual-level data on emigration intentions from the Gallup World Poll (GWP).[21] The GWP surveys a representative sample of approximately 1,000 individuals in nearly every country about their emigration intentions, asking the following

[21] We thank an anonymous reviewer and the editors for motivating us to address this concern.

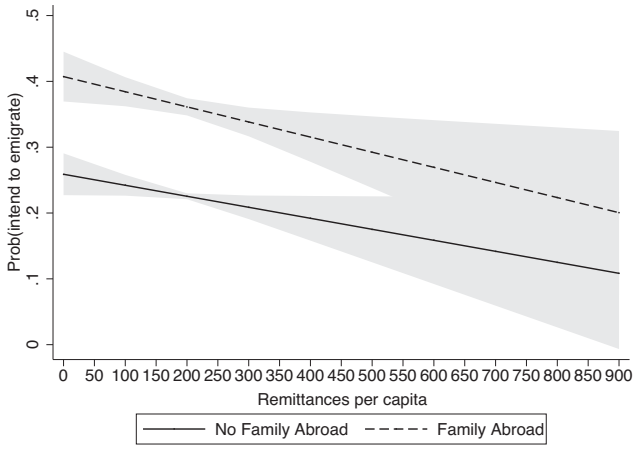

Figure 3. Predicted probability of intending to emigrate across range of remittances per capita for individuals without and with family members abroad with 95 percent confidence intervals.
Note: Prediction based on model (2) of table 5.

question: "Ideally, if you had the opportunity, would you like to move permanently to another country, or would you prefer to continue living in this country?" Respondents can answer "yes," "no," "don't know," or refuse to answer.[22] We analyze emigration intentions of respondents in seventy-seven countries in the Global South for five years between 2009 and 2020 using a linear probability model.[23]

Building on a microlevel model of emigration intentions (Leblang and Helms, 2022), we include a set of individual-level covariates that influence migration desires: age, gender, education level, employment status, and household size. To disentangle differences between immigrant and nonimmigrant households, we include a variable indicating whether the individual had or currently has at least one family member abroad. All else equal, we expect that the coefficient on having a family member abroad will be positive and statistically significant, in line with our discussion about the importance of social networks above.

Our primary independent variable is country-level remittances per capita, lagged by one year. To decrease the possibility that omitted variables are influencing our results, we include country- and year-fixed effects. Our expectation is that if the positive spillovers of remittances dominate potential demonstration effects, remittances will be associated with *reduced* emigration intentions. In contrast, if demonstration effects are more important, increased remittance receipt should be associated with *increased* intentions to exit.

We show our results of this analysis in table 5.[24] The coefficient on lagged country-level remittances per capita is negative and statistically significant, indicating that, on average, remittances decrease individual-level emigration intentions. Is this result driven by migrant or non-migrant households? To answer that question, we include an interaction between having a family member abroad and country-level remittances in column (2) and figure 3. All else equal, remittances have a negative relationship with emigration

Table 5. Remittances and individual-level emigration intentions

	Dependent variable: $Intend\,Emigrate_{jt}$	
	(1)	*(2)*
$RemittancesPerCapita_{it-1}$*	−0.0002**	−0.0002**
	(0.000)	(0.000)
$Family\,Abroad_{jt}$	0.133***	0.148***
	(0.008)	(0.011)
		−0.0001*
$Remittances\,Per\,Capita_{it-1}$ * $Family\,Abroad_{jt}$		(0.000)
$SecondaryEd_{jt}$	0.036***	0.036***
	(0.006)	(0.006)
$TertiaryEd_{jt}$	0.056***	0.055***
	(0.009)	(0.010)
$Female_{jt}$	−0.040***	−0.040***
	(0.004)	(0.004)
Age_{jt}	−0.005***	−0.005**
	(0.000)	(0.000)
$HouseholdSize_{jt}$	0.000	0.000
	(0.001)	(0.001)
$IncomeQuintile_{jt}$	−0.002	−0.002
	(0.002)	(0.002)
$Unemployed_{jt}$	0.084***	0.084***
	(0.008)	(0.008)
$Constant$	0.460***	0.457***
	(0.022)	(0.022)
Observations	123,683	123,683

Notes: All models estimated with OLS and include a set of country- and year-fixed effects. Robust standard errors clustered by country-year in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

intentions for both migrant and non-migrant households. While certainly not conclusive, these results provide suggestive evidence that remittances have positive spillover effects that decrease desires to emigrate. In contrast, we find little evidence to suggest that demonstration effects are salient.

A second objection is with the measure of remittances. TPS provides migrants who are in the United States legal status, which increases the likelihood that they enter the formal labor market and earn higher wages. However, the observed effect of TPS—higher remittances—may not be due solely to higher wages, but may also occur because legal status may induce migrants to use traditional financial institutions. For example, newly legalized migrants may be more willing or able to open a bank account. This may occur because TPS grants migrants requisite legal documents and may make them more comfortable engaging with formal financial institutions. This means that TPS may not increase aggregate remittances; rather, it could be associated with the movement from informal remitting mechanisms (such as Hawala or traveling home) to more formal venues, such as banks and money transfer operators.[25] Our measure of remittances relies on official data reported to the World Bank and cannot capture informal remittance channels.

While plausible, we are skeptical that a shift to legal status can entirely explain the observed effect for a few reasons. First, this explanation is inconsistent with the existing evidence on remitting behavior. Microlevel studies based on surveys of thousands of migrants find that legal status increases the probability of a migrant reporting that they remit; these papers also indicate that, all else equal,

[22] Less than 3 percent of respondents either respond that they don't know or refused to answer.

[23] These years are 2009, 2010, 2011, 2019, and 2020 as these are the only years when the GWP includes both the question about emigration intentions and whether the individual has family members abroad.

[24] We omit discussion of individual-level covariates to save space, noting that the signs and significance of these variables are consistent with existing micro-work in this area.

[25] We are grateful to an anonymous referee for suggesting this alternative explanation.

legal status increases the amount that migrants report that they send home, either informal or informal (Bollard, McKenzie, and Morton 2009; Bollard et al. 2011). Our macrolevel results are consistent with this microlevel evidence. We also note that the effect of TPS appears to be *increasing* over time, with longer TPS spells associated with larger increases in remittances per capita. These results are more consistent with greater earnings and higher total remittances sent over time, rather than a one-time shift in ability or comfort of accessing financial institutions.

Second, due to the clampdown on money laundering imposed by the US government following 9/11, a number of migrant homelands issued official identification to their nationals living abroad irrespective of their legal status. Mexico, for example, issues Mexico's Matricula Consular for Mexican citizens living in the United States; this document is sufficient for a Mexican resident in the United States to open a bank account or transfer funds using a money transfer operator (e.g., Western Union). Other countries—including Brazil, Colombia, Mali, Senegal, Pakistan, and Nicaragua—have issued similar identification cards to help their expatriates open bank accounts in destination countries (Agunias and Newland 2012; UNCTAD 2013). The existence of these identification cards does not mean that informal channels are not used by irregular migrants; rather, it suggests that a movement into the legal labor market should have demonstrable and measurable effects on the size of remittances sent home.

An additional concern is that the provision of TPS may be endogenous. The authorization of TPS arises from the executive branch, where the Attorney General may (fail to) issue a protective order based on political preference—perhaps targeting countries that may send fewer migrants in the future. On its face, however, it is unlikely that political considerations play significantly into the issuance of TPS in the time period of our analysis. The primary determining factor of TPS is the occurrence of a crisis—natural disaster or civil war—as well as a country's relative ability to handle that crisis. Presidents of both parties have issued and extended TPS and have done so at varying moments in the electoral cycle. Perhaps until the Trump administration, TPS was relatively free from political interference and was not broadly politicized. Because we end our analysis at 2015, our results are not biased by the Trump administration's decisions to revoke TPS from a range of countries, as well as to not extend TPS to several crisis-stricken countries. In results not reported here, we estimate models of TPS onset and find that the United States is no more likely to issue TPS to crisis-stricken countries when they are increasing sources of new immigration.[26]

Conclusions and Implications

For decades, Organizaton for Economic Cooperation and Development (OECD) destination countries have experimented with manipulating international economic flows such as international trade and foreign aid to control irregular immigration from the developing world, despite lack of evidence that such strategies are successful. In this article, we suggest a different route: industrialized countries can decrease immigration with policies that enhance labor market access for those who have already immigrated. In doing so, they can increase remittances to migrant origin countries, a distinct international financial flow that has the power to affect immigration in ways that other flows, notably aid and trade, cannot. We find robust empirical support for this proposition in the case of TPS in the United States, demonstrating that granting TPS increases remittances to countries whose migrants are eligible, and in the process decreases the demand for irregular migration to the United States.

These results have policy implications beyond the US context. The European Union, for example, has a program like TPS, which was unveiled in the wake of civil wars in the Balkans. Turkey offers temporary protection to Syrians fleeing that country's civil war. And Colombia has granted over 100,000 Venezuelans who have fled their homeland temporary labor market access. The United States, countries across the European Union, Canada, Australia, and New Zealand all have temporary, nonimmigrant work visa programs that allow foreign nationals legal entry for the purpose of short-term employment. We conjecture that these programs—whether they are part of a protection or temporary work regime—should have effects similar to what we observe here.

In future research, we envision extending our framework in two different directions. First, there is an existing literature on the global economic effects of migrants and refugees. Leblang (2010) finds a relationship between migration and flows of global foreign direct and portfolio investment while Ghosh and Enami (2015) and Mayda, Guimarães, and Zylkin (2019) report similar results linking refugee flows and global trade. The temporary nature of TPS—and other protection regimes—may have similar effects in that they establish global connections between home and host countries; on the other hand, the economic power of these connections may be limited due to their duration. A second direction for future research would be to examine temporary nonimmigrant work visas on remittances. If temporary admission increases the ability of migrants to return home with large(er) earnings, this may, as we argue above, help reduce the demand for household members to emigrate.

Beyond these policy implications, the above results have implications for our theoretical understanding of global migration. Our findings establish a relationship that traditional models would not predict: that remittances, rather than reducing financial constraints and increasing migration, actually work to broaden the economic stability required for some family and community members to remain at home. In that way, TPS can serve as a mechanism to decrease the demand for irregular migration that, as we discuss above, is far different from the effects of foreign trade and aid programs. When viewed through the lens of a household, policies that increase remittances allow households in developing countries to manage economic risk more effectively, decreasing the need for subsequent immigration in the process. Importantly, household investments and consumption expenditures have spillover effects that increase employment and growth and reduce poverty in a household's community more generally. This, we add, increases the likelihood that remittances may decrease the demand for emigration even among households that do not have a family member living abroad. In short, our findings indicate that we must understand the conditions under which our classic models of international migration are appropriate, and when alternatives might be more theoretically useful.

Finally, our results speak to recent political battles over programs that grant blanket protections for immigrants, including TPS. Executive actions by former President Donald Trump and former Secretary of Homeland Security Kirstjen Nelson attempted to end TPS for more than 400,000 immigrants from El Salvador, Honduras, Haiti, Nicaragua, Sudan,

[26] These results are available upon request.

and Nepal. In the context of our argument, these actions constitute revoking labor market access from a sizable immigrant population, likely leading to reduced migrant incomes and higher unemployment. Immigrants who lose labor market access are likely to remit less as a result, effectively reducing household incomes across these developing countries and generating higher demand for entry, both authorized and unauthorized. In other words, revoking labor market protections for immigrants is likely to have unintended consequences: while it might seem that rescinding these protections will reduce the overall immigrant population, it might also generate further immigration via its indirect effects on remittances to migrant origin countries.

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Supplementary Information

Supplementary information is available at the *International Studies Quarterly* data archive.

References

Abadie, Alberto, Alexis Diamond, and Jens Hainmueller. 2015. "Comparative Politics and the Synthetic Control Method." *American Journal of Political Science* 59 (2): 495–510.

Adams, Richard H., and John Page. 2005. "Do International Migration and Remittances Reduce Poverty in Developing Countries?" *World Development* 33 (10): 1645–69.

Agunias, D., and K. Newland. 2012. *Developing a Road Map for Engaging Diasporas in Development: A Handbook for Policymakers and Practitioners in Home and Host Countries*. Geneva: International Organization for Migration and Migration Policy Institute.

Ambrosius, Christian, and David Leblang. 2020. "Exporting Murder: US Deportations and the Spread of Violence." *International Studies Quarterly* 64 (2): 316–28.

Amuedo-Dorantes, Catalina, and Cynthia Bansak. 2011. "The Impact of Amnesty on Labor Market Outcomes: A Panel Study Using the Legalized Population Survey." *Industrial Relations* 50 (3): 443–71.

Anchors, Sarah. 2007. "Temporary Protected Status: Making the Designation Process More Credible, Fair, and Transparent." *Arizona State Law Journal* 39: 566–600.

Asencio, Diego C. 1990. "Unauthorized Migration: An Economic Development Response." In *Report of the Commission for the Study of International Migration and Cooperative Economic Development*. Washington, D.C.: Government Printing Office.

Bollard, Albert, David McKenzie, and Melanie Morten. 2009. "The Remitting Patterns of African Migrants in the OECD." *CReAM Discussion Paper Series 0921*, Centre for Research and Analysis of Migration (CReAM), Department of Economics, University College London.

Bollard, Albert, David McKenzie, Melanie Morten, and Hillel Rapoport. 2011. "Remittances and the Brain Drain Revisited: The Microdata Show that More Educated Migrants Remit More." *World Bank Economic Review* 25 (1): 132–56.

Clemens, Michael A., and David J. McKenzie. 2014. "Why Don't Remittances Appear to Affect Growth?" *Center for Global Development Working Paper No. 366*, June 20. https://ssrn.com/abstract=2457194 or http://dx.doi.org/10.2139/ssrn.2457194.

Clemens, Michael A., and Hannah M. Postel. 2018. "Deterring Income with Foreign Aid: An Overview of Evidence from Low-Income Countries." *Population and Development Review* 44 (4): 667–93.

Combes, Jean-Louis, and Christian Ebeke. 2011. "Remittances and Household Consumption Instability in Developing Countries." *World Development* 39 (7): 1076–89.

Conway, Dennis, and Jeffrey H. Cohen. 1998. "Consequences of Migration and Remittances for Mexican Transnational Communities." *Economic Geography* 74 (1): 26–44.

Correia, Sergio, Paulo Guimarães, and Tom Zylkin. 2020. "Fast Poisson Estimation with High-Dimensional Fixed Effects." *The Stata Journal* 20 (1): 95–115.

Dancygier, Rafaela M. 2010. Immigration and Conflict in Europe. *Cambridge Studies in Comparative Politics*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511762734.

de Haas, Hein. 2006. "Migration, Remittances, and Regional Development in Southern Morocco." *Geoforum* 37 (4): 565–80.

Devillanova, Carlo, Francesco Fasani, and Tommaso Frattini. 2018. "Employment of Undocumented Immigrants and the Prospect of Legal Status: Evidence from an Amnesty Program." *Industrial and Labor Relations Review* 71 (4): 853–81.

Escriba-Folch, Abel, Covadonga Meseguer, and Joseph Wright. 2015. "Remittances and Democratization." *International Studies Quarterly* 59 (3): 571–86.

Ghosh, Sucharita, and Ali Enami. 2015. "Do Refugee-Immigrants Affect International Trade? Evidence from the World's Largest Refugee Case." *Journal of Policy Modeling* 37 (2): 291–307.

Hainmueller, Jens, and Daniel Hopkins. 2014. "Public Attitudes Toward Immigration," *Annual Review of Political Science* 17 (1): 225–249.

Inglehart, Ronald, and Pippa Norris. 2017. "Trump and the Populist Authoritarian Parties: The Silent Revolution in Reverse." *Perspectives on Politics* 15 (2): 443–54.

Kanaiaupuni, Shawn Malia, and Katharine M. Donato. 1999. "Migradollars and Mortality: The Effects of Migration on Infant Survival in Mexico." *Demography* 36 (3): 339–53.

Katz, E., and O. Stark. 1986. "Labor Migration and Risk Aversion in Less-Developed Countries." *Journal of Labor Economics* 4 (1): 131–49.

Kaushal, Neeraj. 2006. "Amnesty Programs and the Labor Market Outcomes of Undocumented Immigrants." *Journal of Human Resources* 41 (3): 631–47.

Khoudour-Casteras, David. 2009. "Neither Migration nor Development: The Contradictions of French Co-Development Policy." Centre d'Etudes Prospectives et d'Informations Internationales (CEPII), Paris.

Kossoudji, Sherri A., and Deborah A. Cobb-Clark. 2002. "Coming out of the Shadows: Learning about Legal Status and Wages from the Legalized Population." *Journal of Labor Economics* 20 (3): 598–628.

Leblang, David. 2010. "Familiarity Breeds Investment: Diaspora Networks and International Investment." *American Political Science Review* 104 (3): 584–600.

———. 2017. "Harnessing the Diaspora: Dual Citizenship, Migrant Return, and Remittances." *Comparative Political Studies* 50 (1): 75–101.

Leblang, David, and Benjamin Helms. 2022. *The Ties that Bind: Immigration and the Global Political Economy*. Cambridge: Cambridge University Press.

Long, Katy, and Jeff Crisp. 2010. "Migration, Mobility, and Solutions: An Evolving Perspective." *Forced Migration Review* 35: 56–57.

Martin, Susan, Sanjula Weerasinghe, and Abbie Taylor. 2014. "What is Crisis Migration?" *Forced Migration Review* 45: 5–6.

Mayda, Anna Maria. 2006. "Who Is Against Immigration? A Cross-Country Investigation of Individual Attitudes toward Immigrants." *Review of Economics and Statistics* 88 (3): 510–30.

MAYDA, A., C. PARSONS, H. PHAM, AND P.-L. VEZINA. 2019. "Refugees and Foreign Direct Investment: Quasi-Experimental Evidence from US Resettlements." *CEPR Discussion Paper 14242*.

MCKENZIE, DAVID. 2017. "How Effective Are Active Labor Market Policies in Developing Countries? A Critical Review of Recent Evidence." *Policy Research Working Paper 8011*. World Bank, Washington, DC. http://documents.worldbank.org/curated/en/256001490191438119/How-effective-are-active-labor-market-policies-in-developing-countries-a-critical-review-of-recent-evidence.

MILLER, GINA LEI, AND EMILY HENCKEN RITTER. 2013. "Emigrants and the Onset of Civil War." *Journal of Peace Research* 51 (1): 51–64.

NICKELL, STEPHEN. 1981. "Biases in Dynamic Models with Fixed Effects." *Econometrica* 49 (6): 1417–26.

NWAJIUBA, CHINEDUM. 2005. *International Migration and Livelihoods in Southeast Nigeria*. Geneva: Global Commission on International Migration.

OFFICE OF IMMIGRATION STATISTICS. 2017. "Efforts by DHS to Estimate Southwest Border Security between Ports of Entry." United States Department of Homeland Security. https://www.dhs.gov/sites/default/files/publications/17_0914_estimates-of-border-security.pdf.

ORRENIUS, PIA, AND MADELINE ZAVODNY. 2015. "The Impact of Temporary Protected Status on Immigrants' Labor Market Outcomes." *American Economic Review: Papers & Proceedings* 105 (5): 576–80.

ORRENIUS, PIA, MADELINE ZAVODNY, JESUS CANAS, AND ROBERTO CORONADO. 2010. "Do Remittances Boost Economic Development? Evidence from Mexican States." *Federal Reserve Bank of Dallas Research Department Working Paper 1007*.

PAN, YING. 2012. "The Impact of Legal Status on Immigrants' Earnings and Human Capital: Evidence from the IRCA 1986." *Journal of Labor Research* 33 (2): 119–42.

PETERS, MARGARET E. 2015. "Trade and Migration." Oxford Handbook of the Political Economy of International Trade. https://doi.org/10.1093/oxfordhb/9780199981755.013.29.

QIAN, NANCY. 2015. "Making Progress on Foreign Aid." *Annual Review of Economics* 7 (1): 277–308.

RATHA, DILIP. 2013. "The Impact of Remittances on Economic growth and Poverty Reduction." *MPI Policy Brief No. 8*, Migration Policy Institute, Washington, DC.

REGAN, PATRICK, AND RICHARD FRANK. 2014. "Migrant Remittances and the Onset of Civil War." *Conflict Management and Peace Science* 31 (5): 502–20.

RODRIGUEZ, FRANCISCO, AND DANI RODRIK. 2000. "Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence." *NBER Macroeconomics Annual* 15: 261–325.

RIVERA-BATIZ, FRANCISCO L. 1999. "Undocumented Workers in the Labor Market: An Analysis of the Earnings of Legal and Illegal Mexican Immigrants in the United States." *Journal of Population Economics* 12 (1): 91–116.

ROOT, JAY. 2016 "In Texas, Lawmakers Don't Mess with Employers of Undocumented Workers." The Texas Tribune, December 14. https://www.texastribune.org/2016/12/14/lawmakers-go-easy-employers-undocumented-workers/.

SANTOS SILVA, J.M.C., AND SILVANA TENREYRO. 2006. "The Log of Gravity." *Review of Economics and Statistics* 88 (4): 641–58.

SEGERBLOM, EVA. 2007. "Temporary Protected Status: An Immigration Statute that Redefines Traditional Notions of Status and Temporariness." *Nevada Law Journal* 7: 664–84.

STARK, O. 1984. "Migration Decision Making: A Review Article." *Journal of Development Economics* 14: 251–59.

TAYLOR, J. EDWARD. 1999. "The New Economics of Labour Migration and the Role of Remittances in the Migration Process." *International Migration* 37 (1): 63–88.

TAYLOR, J. EDWARD, JOAQUÍN ARANGO, GRAEME HUGO, ALI KOUAOUCI, DOUGLAS S. MASSEY, AND ADELA PELLEGRINO. 1996. "International Migration and Community Development." *Population Index* 62 (3): 397–418.

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT (UNCTAD). 2013. *Maximizing the Development Impact of Remittances*. New York: UNCTAD.

———. 2016. *Migration and Remittances Factbook 2016*. 3rd ed. Washington, DC: World Bank. https://openknowledge.worldbank.org/bitstream/handle/10986/23743/9781464803192.pdf.

YANG, DEAN. 2008. "Coping with Disaster: The Impact of Hurricanes on International Financial Flows, 1970–2002." *B.E. Journal of Economic Analysis & Policy* 8 (1): 1–43.

YANIKKAYA, HALIT. 2003. "Trade Openness and Economic Growth: A Cross-Country Empirical Investigation." *Journal of Development Economics* 72 (1): 57–89.

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