The New System of Mexican Migration: The Role of Entry Mode–Specific Human and Social Capital

Joshua Wassink and Douglas S. Massey

ABSTRACT Between 2000 and 2020, undocumented migration declined, temporary labor migration rose, and legal permanent residents arrived at a steady pace—together creating a new system of Mexico—U.S. migration based on the circulation of legal temporary workers and permanent residents. Drawing on data from the U.S. Department of Homeland Security and the Mexican Migration Project, we specify multinomial event-history models to predict the likelihood of departure on first and later trips via four entry categories: no documents, noncompliant tourist visas, temporary work visas, and legal residence visas. The models reveal how the accumulation of entry mode—specific social and human capital powered a system of undocumented migration that emerged between 1965 and 1985, and how that system deteriorated from 1985 to 2000. After 2000, employers took advantage of new visa categories to recruit legal temporary workers, leading to the accumulation of migration-related human and social capital specific to that mode of entry and the emergence of a new system of Mexico—U.S. migration.

KEYWORDS Undocumented migration • Temporary labor migration • Social capital • Networks • Human capital

Introduction

A new system of Mexico–U.S. migration emerged in the first decades of the twenty-first century, one characterized by the mass movement of legal temporary workers back and forth across the border combined with a smaller inflow of legal permanent residents (LPRs) and the limited participation of undocumented migrants. In this article, we undertake a theoretical and empirical analysis of this new migration system. We begin by describing the emergence of the new system and then draw on theories of human capital, social capital, and path dependence to explain how the new system operates. We introduce the idea that human and social capital operate in ways that are specific to modes of entry that function to perpetuate the system until other factors bring it to a halt. After describing our data and methods, we specify and estimate multinomial event-history models to predict the likelihood of departing for the United States in one of four legal status categories. We conclude with a summary of our findings and their implications for the future of Mexico–U.S. migration.

Emergence of the New System

Figure 1 succinctly summarizes the emergence of the new migration system from 1995 to 2020, drawing on data from the U.S. Department of Homeland Security (2021) to plot the number of Mexicans apprehended along the southwestern border, together with the number of entries by legal temporary workers and new LPRs from Mexico. The number of apprehensions peaked at 1.6 million in 2000 and then dropped by almost half to 866,000 in 2003. Apprehensions then rebounded to about a million in 2004 and edged downward to 974,000 in 2005. Thereafter, annual apprehensions plummeted to 281,000 in 2011 and then trended slowly downward to reach 128,000 in 2017, the lowest number recorded since 1967. In keeping with these downward shifts, over the decade from 2008 to 2018, the population of undocumented Mexicans residing north of the border declined by 1.6 million persons (*cf.*, Baker 2021; Hoefer et al. 2010).

The low number of Mexicans apprehended and the sharp decline in the undocumented Mexican population herald the end of the system of circular undocumented migration that emerged in 1965 after the demise of the Bracero Program (Massey et al. 2002), while trends in entries by legal temporary workers and LPRs exemplify the system that replaced it. As the number of apprehensions plummeted between 2004 and 2017, the number of entries by legal temporary workers rose from 118,000 to 906,000. In contrast, entries by LPRs remained stable, averaging 155,000 per year (with a standard deviation of just 29,000) from 1995 through 2020.

The new migratory system is thus characterized by the annual cross-border circulation of hundreds of thousands of legal temporary workers combined with the yearly arrival of around 155,000 new LPRs and just a trickle of undocumented migrants. The decline in undocumented migration after 2000 is also apparent in the sharp decline in the likelihood of undocumented departure, which according to data from the Mexican Migration Project (2021) fell by 72% between 2000 and 2018. Using two-stage least squares, Massey et al. (2016) showed that the decline in undocumented migration was not caused by rising border enforcement, but instead by the aging of the Mexican workforce, whose average age rose from 23.4 in 1972 to 45.9 in 2010.

The increase in average age is important because labor migration displays a characteristic age curve, rising rapidly in the late teens, peaking at around age 22 or 23, and then dropping to low levels by age 30 (Rogers 2015). The aging of Mexico's population stemmed from its decline in fertility, which fell from a rate of 6.6 children per woman in 1970 to just 2.1 children per woman in 2020. Over the same period, the average age in Mexico's population climbed from 15 to 29 (Consejo Nacional de Población 2021).

The rise in entries by legal temporary workers stemmed not from changes in Mexico but from policy shifts in the United States that increased the supply of temporary work visas. Although 12 visa categories permit temporary labor in the United States, Mexican migrants are concentrated in just three: H-2A visas for agricultural workers, H-2B visas for nonagricultural workers, and TN visas for professionals. The H-2 visa was originally created by the 1952 Immigration and Nationality Act to permit the entry of seasonal farm workers from the Caribbean. In 1986, however, the Immigration Reform and Control Act (IRCA) subdivided the category into separate H-2A and H-2B programs, which were opened to Mexican participation. The TN visa

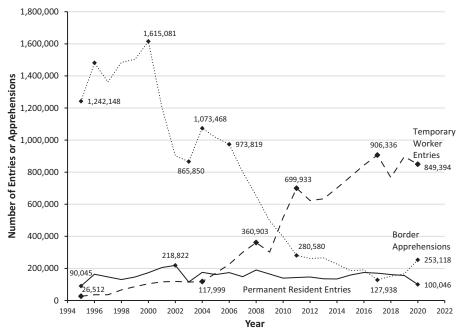


Fig. 1 Border apprehensions of Mexicans and entries by Mexican temporary workers and legal permanent residents, 1995–2020. *Source:* U.S. Department of Homeland Security (2021).

was created in 1994 to permit the entry of professional workers from Mexico and Canada under the North American Free Trade Agreement (NAFTA).

Figure 2 draws on data from the U.S. Department of State (2021) to show trends in the number of visas issued to Mexicans in these three categories from 1997 (the first year for which data are available) to 2020. The number of TN visas experienced little growth initially, rising from fewer than 300 to nearly 700 in 2003. However, TN visas rose to more than 7,000 by 2008, dipped to less than 6,000 in 2010, and then rose again to 31,000 in 2019. In contrast, H-2B visas immediately underwent a sharp increase, from nearly 8,000 in 1997 to 85,000 in 2007, in response to rising demand in the construction industry. With the onset of the Great Recession in 2008, the number of H-2B visas plummeted to 30,000 in 2009. Thereafter, the number rose more slowly, reaching 72,000 by 2019, but never surpassing its earlier peak.

The number of H-2A visas rose from 15,000 in 1997 to 27,000 in 1999 and then varied narrowly between 27,000 and 29,000 through 2005. Thereafter, it jumped to nearly 60,000 in 2008, fell slightly during the Great Recession, and then rose exponentially throughout the recovery to climb from 52,000 in 2011 to 198,000 in 2020. In that year, Mexicans were issued a total of 278,822 temporary work visas, with 71% going to H-2A workers, 17% to H-2B workers, and 7% to TN workers; only 5% went to workers scattered across nine other visa categories. Although the annual numbers of temporary labor visas and yearly worker entries from Mexico are correlated (r=.88), it is difficult to translate the number of visas shown in Figure 2 into the number of temporary worker entries observed in Figure 1 because visas in the three categories are issued in different numbers with different durations and options for renewal.

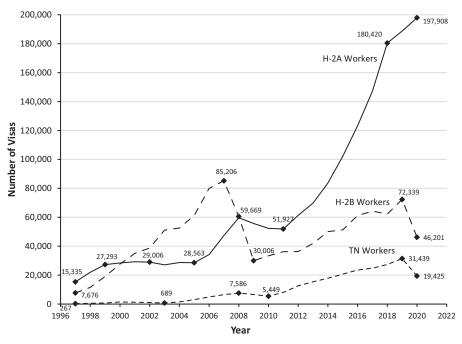


Fig. 2 Number of temporary work visas issued to Mexicans by category, 1997–2020. *Source:* U.S. Department of State (2021).

How the New System Works

Mexican migration is now dominated by the circulation of H-2A workers supplemented by the movement of H-2B visa holders, a growing number of TN holders, and a steady inflow of LPRs (see Massey et al. 2015). Although both the prior system of undocumented migration and the new system of legal migration respond to the forces of labor demand in the United States and labor supply in Mexico, the former system was extralegal and grounded in informal recruitment processes, whereas the new system is organized through the U.S. immigration bureaucracy.

LPR and TN visas are issued directly to individuals sponsored by family members (in the former case) or employers (in both cases). In contrast, H-2A and H-2B visas are issued to U.S. employers or their agents. H-2 migration begins with the submission of a Temporary Labor Certification Application (TLCA) to the U.S. Department of Labor, in which the employer offers evidence of a local labor shortage and presents data to suggest that hiring temporary migrants will not adversely affect local wages or working conditions. Once the TLCA is approved, employers submit a Petition for a Nonimmigrant Worker (Form I-129) to U.S. Citizenship and Immigration Services that lists the visa category of the proposed workers (H-2A or H-2B), the number of visas requested, and the names of the workers proposed to receive the visas. These petitions have very high approval rates (97% for H-2A visas and 78% for H-2B visas in 2018) (see U.S. Department of Labor 2019). Although employers may apply directly for these visas, they are more likely to work through labor contractors who submit petitions on their behalf.

Contractors have connections both to personnel in the immigration bureaucracy and to U.S. employers, and they serve as key intermediaries connecting potential workers in Mexico to jobs in the United States (Casanova and McDaniel 2005; Griffith 1993, 2010). Studies reveal the multiple ways that temporary labor migration begins in sending communities. Sometimes U.S. employers or contractors travel directly to Mexico to recruit workers (Griffith 2005). In other instances, U.S. employers solicit recommendations from current employees (Casanova and McDaniel 2005). In Griffith's (1993) survey of North Carolina poultry processors, 100% of the hiring agents relied on migrant recommendations to fill out their workforce, with one third offering cash bonuses to employees who recruited workers from their hometowns.

Because H-2 visas are granted in response to petitions from U.S. employers or their agents, legal temporary migrants necessarily depend on them as middlemen to achieve U.S. entry (Hernández-León 2021; Moorefield 2019). In her study, Dellinger (2015) accompanied one U.S. employer on two journeys to Monterrey, Mexico: one to arrange for the entry of H-2A workers and the other to bring in H-2B workers. Before arriving, the employer completed application forms for all the proposed beneficiaries listed in the I-129 petition. Once in Monterrey, he and an assistant carefully checked all the forms and applicant identification documents and prepped migrants for their consular interviews. In this way, employers and contractors serve as migrant "couriers" (see Dellinger 2015:814).

Given the significant costs involved in relying on legal temporary workers, employers have a strong incentive to rehire the same workers year after year and to routinize recruitment through trusted contractors. For their part, the migrants recognize the value of employer sponsorship, given that unauthorized border crossing in recent years has become very hazardous and smuggling fees have skyrocketed. According to Casanova and McDaniels (2005:65), by cultivating relations of trust with intermediaries, "workers protect their jobs and access to networks, which is advantageous to all involved."

As more people join the migrant workforce through ties to migrants, employers, and contractors, the number of people with such ties increases, thereby expanding the stock of social capital, bringing more people into the migrant labor force, and ultimately yielding a feedback loop that sustains a process of cumulative causation (Massey and Zenteno 1999). The nature of the social capital accumulated by undocumented migrants versus legal temporary workers is very different, however. Social ties to unauthorized migrants have little value in securing a temporary work visa, and connections to labor contractors or H-2 employers are of little use in facilitating undocumented migration. Thus, the value of migration-related social capital tends to be specific to the mode of entry.

Across multiple U.S. trips, both undocumented and legal temporary migrants build their own stocks of migration-related *human* capital, consisting of personal knowledge and experience relevant to the migration process. As trips are repeated, migrants increasingly rely on human capital rather than social capital to support and sustain their cross-border mobility (Massey and Espinosa 1997). Stocks of human and social capital are also specific to the mode of entry, and communities tend to develop path-dependent migration trajectories tied either to undocumented or legal temporary entry—but usually not to both. Path dependence also follows from the mode of entry used by the first migrants to exit the community—a category that Lindstrom and Ramirez (2010) have labeled "pioneer migrants."

Data and Methods

We draw upon detailed life histories compiled for household heads surveyed by the Mexican Migration Project (MMP). Each year since 1987, the MMP has randomly sampled households in four to six communities located in diverse regions throughout Mexico. Using respondent-driven sampling methods, investigators also survey households from those same communities that have settled in the United States. A combination of ethnographic and survey methods is used to compile detailed information about the community, the household, its head, and the head's spouse and children (Massey 1987). In addition, each household head is administered a life-history module centered on work, migration, and border crossing. Although the resulting data do not come from nationally representative surveys, their accuracy has been validated using representative samples from both Mexico and the United States (Massey and Capoferro 2004; Massey and Zenteno 2000).

As of 2018, the MMP sample included 27,274 households in 170 communities, spread across 24 of Mexico's 32 states. At the inception of the MMP, priority was given to selecting communities located in the traditional heartland for U.S. migration in west-central Mexico (the states of Guanajuato, Jalisco, Michoacán, San Luís Potosí, and Zacatecas, plus the small states of Aguascalientes, Colima, and Nayarit). Communities in these states make up 48% of the MMP sample, with survey dates from 1987 through 2018 yielding an average of 1997. In 1993, the MMP surveyed its first community outside the heartland region, with more following thereafter with an average survey date of 2006. These surveys provide coverage of newer sending regions, such as the core states around Mexico City (Guerrero, Hidalgo, México, Morelos, Puebla, Querétaro, Tlaxcala, and Veracruz), the southern region (Oaxaca, Tabasco, and Yucatán), and the northern tier (Baja California, Chihuahua, Nuevo León, and Sinaloa).

Among the communities surveyed, nine display an unusually high degree of participation in legal temporary labor migration: one in the state of Chihuahua, one in México, one in Nuevo León, one in Tabasco, two in Tlaxcala, two in Querétaro, and one in San Luís Potosí. All but the last community are located outside the traditional heartland for U.S. migration, and that community lies at the fringes near the frontier with the northern border state of Tamaulipas. Although one third of the communities surveyed in recent years were in the heartland, none except this single case displayed a high level of participation in temporary worker migration.

To model the likelihood of departure on first and later U.S. trips, we created yearly event-history files capturing movements to the United States by legal status, along with time-varying social, demographic, and economic indicators defined at various levels of analysis. To estimate models predicting the likelihood of taking a first U.S. trip, we follow household heads with no prior U.S. experience from their entry into the labor force up to the point of first migration, the survey date, or age 66, and assign a code of 1 if a U.S. trip was taken in the person-year and 0 otherwise. To model the likelihood of departure on subsequent U.S. trips, we track each migrant from the point of return to Mexico until the next departure for the United States, the survey date, or the migrant's 66th birthday.

Because our interest lies in the shift of Mexican migration away from undocumented entry toward various forms of documented entry, we restrict our analysis to

the post-Bracero years of 1965–2018 and classify U.S. trips according to the mode of entry: no documentation, a permanent resident visa, a tourist visa, or a temporary work visa. No migration serves as the reference category. We then estimate a multinomial logistic regression equation using independent variables measured in year t to predict the likelihood of departure in year t+1. Undocumented migrants who enter surreptitiously without inspection are known colloquially as EWIs ("entered without inspection"). Those who enter on a tourist visa and then violate the terms of the visa by overstaying or taking a job are labeled "noncompliant tourists."

For our purposes, migration-related social capital stems from ties to family members with prior U.S. experience. Unfortunately, the MMP does not collect time-varying information on the legal status of each person in the sample, so we cannot define mode-specific social capital across all four documentation categories. Only for those who were legal U.S. residents at the time of the survey did the MMP questionnaire ask the year in which permanent residence was achieved, enabling us to construct a set of dichotomous time-varying variables indicating whether a parent, spouse, sibling, or child were LPRs in any given year.

We also constructed a set of dichotomous measures indicating whether in each person-year these family members had been to the United States in *any other* status besides LPR. Although this classification cannot distinguish between undocumented migrants, noncompliant tourists, and legal temporary workers, the social capital indexed by this category overwhelmingly reflects ties to undocumented migrants. Of first U.S. trips reported by household heads in the MMP, 86% were in undocumented status, and on later trips the figure was 87%. Therefore, we consider the social capital in this entry category to stem from family ties to "likely undocumented migrants."

To measure migration-related social capital at the community level, we followed Massey, Goldring, and Durand (1994) in computing migration prevalence ratios—the proportion of community members with prior U.S. experience in any person-year. Instead of defining just one ratio, however, we created four ratios to indicate the share of community members with prior experience as LPRs, legal temporary migrants, noncompliant tourists, and undocumented migrants. To measure mode-specific human capital, we created four dummy variables to indicate whether in any given person-year the household head reported having prior experience as an LPR, legal temporary migrant, noncompliant tourist migrant, or unauthorized migrant.

Finally, to assess path dependence in the formation of migration networks, we estimated the era in which U.S. migration began, by computing the average year of departure for the first five U.S. migrants from each community, labeling them "pioneer migrants." Those who began migrating in earlier years generally did so in unauthorized status and were likely to have seeded undocumented networks, whereas those who began migrating in recent years were more likely to depart using temporary work visas and tended to seed temporary legal worker networks. The average year of first departure partially reflects the year in which the 170 communities were added to the MMP over three decades, and the average year of first migration was only weakly correlated with the survey year (r=.35).

To further assess path dependence by mode of entry, we sought to measure the share of pioneer migrants in each of the four entry categories. We quickly discovered, however, that virtually all pioneer migrants (95%) departed either as temporary legal workers or undocumented migrants. The principal issue is whether the pioneers

seeded an undocumented or legal temporary network, so we included only the proportion entering as legal temporary workers in our models.

In addition to the foregoing variables of theoretical interest, we include in our models a variety of controls drawn from earlier work (see Massey et al. 2014, 2016; Massey and Espinosa 1997), including demographic characteristics (age, gender, marital status, number of minors in the household, and years of schooling), occupational origins (agriculture, unskilled manual, skilled manual, or professional), asset ownership (farmland, real property, businesses), and period (1986–2000 vs. 2001–2016, with 1965–1986 as the reference). We also include controls for community size using simple dichotomous measures to indicate metropolitan areas (≥100,000 inhabitants), small cities (15,000–99,999 inhabitants), and towns (2,500–14,499 inhabitants), with rural villages (<2,500 inhabitants) serving as the reference category.

Finally, we include three indicators of conditions in the binational political economy: the rate of employment growth in the United States (capturing U.S. labor demand), the rate of growth in Mexican GDP per capita (signaling economic opportunity in Mexico), and the size of the Border Patrol's annual budget (quantifying the U.S. border enforcement effort). Given that these control variables have been well-studied in earlier analyses, to conserve space we include them in tables but focus interpretation only on variables of theoretical interest.

Results

Social Capital and Mode of Entry on First Trips

Table 1 presents the results of a multinomial logistic regression model that estimates the likelihood of taking a first trip to the United States. The first panel examines how family ties to LPRs affect the likelihood of departure in the four modes of entry. The bolded coefficients in the table confirm our hypothesis that social capital promotes migration in a mode-specific fashion. Ties to LPRs greatly increase the likelihood that an aspiring migrant will depart for the United States in that same status, with respective coefficients of 2.896, 1.760, 1.325, and 2.568 for ties to an LPR parent, spouse, sibling, or child, respectively (all highly significant at p<.001). Taking the exponent of these coefficients reveals that, compared with persons remaining in Mexico, the odds of heading to the United States as an LPR are 18.1 times greater for those with an LPR parent, 5.8 times greater for those with an LPR spouse, 3.8 times greater for those with LPR offspring.

These powerful effects do not necessarily imply that ties to LPRs have *no* influence on the likelihood of migration in other categories. Indeed, ties to an LPR parent, spouse, or sibling significantly increase the likelihood of taking a first trip in undocumented status, though not to the same degree that they predict first departure as an LPR. The respective coefficients predicting first undocumented migration from ties to an LPR parent, spouse, and sibling are 0.633, 0.939, and 0.668 (p < .001). Exponentiating these coefficients, we learn that having an LPR parent raises the odds of taking a first undocumented trip by 88%, whereas having an LPR spouse and LPR sibling increases the odds by 156% and 95%, respectively.

Table 1 Discrete-time event-history analysis predicting the likelihood of taking a first trip to the United States in four legal categories, 1965–2018

	Entry Status on First Trip to the United States			
	EWI Undocumented	Legal Permanent	Noncompliant Tourist	Legal Temporary
THEORETICAL VARIABLES				
Social Capital: Ties to Legal Permanent Res	sidents			
Parent	0.633**	2.896***	0.235	313.616
	(0.213)	(0.344)	(0.608)	(1,749.782)
Spouse	0.939***	1.760***	0.970**	-12.201
	(0.174)	(0.329)	(0.371)	(878.725)
Sibling	0.668***	1.325***	1.120***	0.108
	(0.113)	(0.349)	(0.291)	(0.720)
Child	0.462	2.568***	2.317***	1.145
	(0.277)	(0.425)	(0.322)	(1.041)
Social Capital: Ties to Likely Undocumente	d Migrants			
Parent	0.471***	0.713***	0.377**	-0.524
	(0.043)	(0.186)	(0.146)	(0.444)
Spouse	0.603***	1.133**	0.461	1.162*
•	(0.099)	(0.353)	(0.326)	(0.515)
Sibling	0.754***	0.484**	0.969***	0.121
	(0.034)	(0.173)	(0.114)	(0.237)
Child	0.511***	0.777	0.894**	0.509
	(0.103)	(0.445)	(0.286)	(0.463)
Community Social Capital: Migration Preva	` /	(0.1.0)	(0.200)	(0.103)
Prevalence of undocumented migrants	0.038***	-0.030***	-0.007	-0.011
Trevalence of andocumented in grants	(0.002)	(0.008)	(0.007)	(0.011)
Prevalence of legal permanent migrants	-0.045***	0.051***	-0.015	0.020
revalence of legal permanent inigrants	(0.004)	(0.009)	(0.016)	(0.021)
Prevalence of noncompliant tourists	0.004	0.004	0.074**	-0.156*
revalence of honcompliant tourists	(0.010)	(0.035)	(0.025)	(0.076)
Prevalence of legal temporary migrants	0.007*	0.028	0.004	0.113***
r revalence of legal temporary inigrants	(0.003)	(0.015)	(0.013)	(0.008)
Pioneer Migrant Characteristics	(0.003)	(0.013)	(0.013)	(0.000)
Average year of first migration	-0.012***	-0.058***	-0.046***	0.018*
Average year or mist migration	(0.001)	(0.008)	(0.006)	
Proportion entered as temporary workers	` /	-0.423	(0.000) - 0.201	(0.007) 0.663 *
Proportion entered as temporary workers	(0.048)	(0.263)	(0.200)	(0.281)
CONTROL VARIABLES	(0.046)	(0.203)	(0.200)	(0.201)
Demographic Characteristics				
Female	1 155***	0.720**	0.155	0.624
remaie	-1.155***	-0.720**	0.155	-0.624
•	(0.070)	(0.258)	(0.149)	(0.328)
Age	0.003	-0.101*	0.056	0.042
	(0.009)	(0.039)	(0.030)	(0.047)
Age squared	-0.001***	0.001	-0.001**	-0.001*
	(0.0002)	(0.001)	(0.0004)	(0.001)
Married/consensual union	-0.082	-0.147	-0.615*	0.412
	(0.062)	(0.398)	(0.309)	(0.226)
Minors	0.015	-0.047	-0.183***	-0.055
	(0.009)	(0.052)	(0.039)	(0.055)
Years of schooling	-0.022***	0.025	0.109***	0.032
	(0.004)	(0.019)	(0.013)	(0.023)

Table 1 (continued)

	Entry Status on First Trip to the United States			
	EWI Undocumented	Legal Permanent	Noncompliant Tourist	Legal Temporary
Occupation (ref.=not working)				
Agricultural	0.409***	-0.365	-0.149	0.917**
	(0.049)	(0.204)	(0.192)	(0.293)
Unskilled manual	0.212***	-0.850***	0.174	0.199
	(0.047)	(0.183)	(0.137)	(0.289)
Skilled manual	-0.349***	-0.652*	-0.109	0.454
	(0.092)	(0.313)	(0.210)	(0.397)
Professional	-0.6975***	-1.123**	-0.038	-0.377
	(0.099)	(0.363)	(0.188)	(0.455)
Household Assets	` ′	, ,	. ,	` ′
Owns farmland	-0.210***	0.1748	-0.1776	0.016
	(0.056)	(0.287)	(0.254)	(0.243)
Owns property	-0.165***	-0.555**	-0.168	-0.189
1 1 3	(0.037)	(0.206)	(0.125)	(0.188)
Owns business	-0.427***	0.129	-0.502**	-0.679*
	(0.062)	(0.262)	(0.189)	(0.320)
Binational Context	(****-)	(**=*=)	(****)	(***=*)
Border Patrol budget (in \$1,000s)	-0.0001*	0.0003	0.0000	0.001***
	(0.0001)	(0.0003)	(0.0002)	(0.0001)
U.S. employment growth	0.068***	0.028	0.031	0.135*
0.00 v	(0.011)	(0.050)	(0.038)	(0.066)
Mexican per capita GDP growth	0.003***	-0.005	-0.003	0.005
Mexican per capita GB1 growth	(0.001)	(0.004)	(0.003)	(0.005)
Community Size (ref.=village)	(0.001)	(0.001)	(0.003)	(0.005)
Town	-0.111**	0.096	0.065	0.006
10 111	(0.039)	(0.252)	(0.204)	(0.199)
Small urban area	-0.067	0.124	0.127	0.046
	(0.042)	(0.266)	(0.205)	(0.232)
Metropolitan area	-0.631***	0.257	0.401	0.305
Metropolitan area	(0.064)	(0.318)	(0.228)	(0.307)
Period (ref. = 1965–1985)	(0.004)	(0.516)	(0.228)	(0.307)
1986–2000	0.312***	0.175	0.320*	1.602***
1980–2000		(0.208)	(0.137)	
2001–2016	(0.039) 0.243*	(0.208) -0.346	(0.137) -0.220	(0.238) 1.317**
2001-2010				
D1- p?	(0.111)	(0.757)	(0.446)	(0.425)
Pseudo-R ²	0.138			
Person-years	612,915			

Notes: Boldface highlights data that are emphasized in the text. SEs are shown in parentheses. EWI = entered without inspection.

In addition, having a tie to an LPR spouse, sibling, or child increases the likelihood of first departure as a noncompliant tourist (all p < .001), most likely by providing the justification for receipt of a tourist visa. Exponentiating the coefficients indicates that having an LPR spouse raises the odds of departure on a tourist visa by a factor of 2.6, whereas having an LPR sibling and child increase the odds of such a departure by

^{*}*p*<.05; ***p*<.01; ****p*<.001

factors of 3.1 and 10.1, respectively. In contrast, social ties to LPR family members have no significant influence in determining the likelihood of departing as a legal temporary worker, indicating a high degree of social separation between the networks of migrants in this entry modality and those in the other three categories.

The second panel examines how family ties to relatives with prior experience as likely undocumented migrants affect the odds of initiating migration in different entry categories. The bolded coefficients in the first column are consistent with our hypotheses in that all are highly significant in predicting departure as an undocumented migrant (p<.001). The coefficients, however, are not as large as those linking ties to LPRs to LPR departures, nor are they systematically larger than other coefficients in the panel more generally. For example, having a parent or spouse who was a likely undocumented migrant is more likely to predict departure in LPR status than in undocumented status, with respective coefficients of 0.471 and 0.603 predicting departure as an undocumented migrant and 0.713 and 1.133 predicting departure as a permanent resident (all p<.001).

Exponentiating these values, we find that ties to likely undocumented parents and spouses raise the odds of departure in undocumented status by 60% and 83%, respectively, whereas these same ties double and triple the odds of departing in LPR status. Having a likely undocumented sibling increases the odds of undocumented departure by a factor of 2.1, and the same tie boosts the odds of departing as a noncompliant tourist by a factor of 2.6. Finally, having a child who is a likely undocumented migrant increases the odds of departing without documents by 67% while raising the odds of leaving as a noncompliant tourist by a factor of 2.4.

In sum, although estimates in the second panel suggest that ties to likely undocumented migrants strongly predict undocumented departures, they also reveal them to be quite predictive (and at times more predictive) of departures in LPR status and in noncompliant tourist status as well. Once family members have attained permanent resident status, however, the mode-specific nature of social capital takes hold more firmly and strongly predicts initial departure as an LPR, although not to the exclusion of undocumented and noncompliant tourist departures.

The outliers in the first two panels of Table 1 are legal temporary migrants. Of the eight ties that potentially predict departure as a legal temporary worker, only one was statistically significant. Having a spouse who is a likely undocumented migrant roughly doubled the odds of departing as in legal temporary status, and that effect is not as significant statistically as other relationships in the table (p<.05). The fact that only one social tie to other migrants predicts legal temporary migration indicates the relatively high degree of social separation between migrants in this category and those departing in undocumented, permanent resident, and noncompliant tourist status.

The third panel of Table 1 focuses migration prevalence ratios computed within each entry category, and they more clearly show the mode-specific nature of community-level social capital. Given that modes of entry are listed in the same order in both rows and columns, we expect to find strong and significant coefficients along the panel's diagonal if our hypotheses are correct, and this is precisely what we observe (see the bolded coefficients). Taking the exponent of the coefficient connecting the community prevalence of undocumented migrants with likelihood of departing in undocumented status, we find that each point increase in the prevalence of undocumented migrants increases the odds of taking a first undocumented trip by 3.9% (p < .001).

Unlike the pattern uncovered in the prior two panels, however, a rising prevalence of undocumented migrants in the community acts to *reduce* rather than increase the odds of departing as an LPR. For each point increase in the prevalence of undocumented migrants, the odds of departing as an LPR fall by 3.0%. Turning to the prevalence ratio for LPRs, we see in the second line of the third panel that each point increase in the prevalence of LPRs *raises* the odds of LPR departure by 5.2% (p<.001) but *lowers* the odds of undocumented departure by 4.4% (p<.01). Thus, a rising community share of undocumented migrants not only increases the likelihood that others will depart in undocumented status but decreases the likelihood that they will depart in LPR status, and vice versa.

Also consistent with our hypotheses, we see that a rising prevalence of noncompliant tourists similarly channels first-time migrants toward entry in that same category, raising the odds by 7.7% for each point increase in the prevalence ratio (p<.001). However, instead of channeling migrants away or toward entry as EWIs or LPRs, a rising share of noncompliant tourists channels them away from entering as legal temporary workers, reducing the odds of departing in this status by 14.4% for each point increase in the prevalence ratio (p<.05), again indicating the social distance between temporary migrant workers from migrants using other modes of entry.

Turning to the final column of the panel, we note that the coefficient of 0.113 is the largest of all those on the diagonal, implying that the odds of entering as a temporary worker rise by 12% for each point increase in the prevalence ratio. The rising prevalence of legal temporary workers also has a smaller but still significant influence channeling new migrants toward undocumented entry, raising the odds of undocumented departure by 0.7% for each point increase in the prevalence ratio (p<.05), suggesting at least some social connection between temporary and undocumented migrant workers.

The power of mode-specific social capital to perpetuate temporary labor migration is further underscored by results in the panel on pioneer migrants. Whereas the percentage of pioneers entering as temporary workers is insignificant in predicting the likelihood of departure in undocumented status, legal resident status, and noncompliant tourist status, it is *highly* significant in predicting the likelihood of departure as a legal temporary worker (p < .001). Taking the exponent of the coefficient 0.663 reveals that each point increase in the prevalence of legal temporary workers among the pioneers almost doubles the odds of departing in that same status.

Finally, as expected given the timing of when H-2 visas became available to Mexicans, we see that the more recently pioneer migrants began departing for the United States, the greater the likelihood that others in the community will also depart as legal temporary workers. With each passing year, the odds of migration as a legal temporary worker rise by 1.8% (p<.05), whereas each additional year significantly *reduces* the likelihood of departure in the other entry categories, lowering the odds of departure in undocumented status by 1.2% per year, in LPR status by 5.6% per year, and in noncompliant tourist status by 4.5% per year.

Mode-Specific Social and Human Capital on Later Trips

Table 2 continues the analysis by presenting a multinomial regression model that predicts the likelihood of taking *later* U.S. trips beyond the first. We begin in the top panel by examining the mode-specific influence of migration-related *human*

Table 2 Discrete-time event-history analysis predicting the likelihood of taking an additional trip to the United States in four legal categories, 1965–2018

	Entry Status on Later Trip to the United States			
	EWI Undocumented	Legal Permanent	Noncompliant Tourist	Legal Temporary
THEORETICAL VARIABLES				
Human Capital: Prior U.S. Experience				
Previous unauthorized border entry	2.120***	1.098***	0.486***	0.517***
•	(0.067)	(0.062)	(0.135)	(0.148)
Previous legal permanent resident entry	-5.425***	4.885***	-2.496***	-15.680
	(1.002)	(0.058)	(0.716)	(953.331)
Previous noncompliant tourist entry	-0.108	0.758***	4.727***	0.537
•	(0.114)	(0.116)	(0.154)	(0.397)
Previous temporary worker entry	0.158***	0.005	-0.058	4.451***
	(0.043)	(0.075)	(0.192)	(0.186)
Social Capital: Ties to Legal Permanent Re	` /	,	,	` /
Parent	0.198	0.267	-0.539	1.923***
	(0.176)	(0.156)	(0.453)	(0.439)
Spouse	0.715***	0.032	-0.824	-13.384
1	(0.160)	(0.081)	(0.487)	(2,160.828)
Sibling	0.076	0.642***	0.773***	0.204
3	(0.078)	(0.089)	(0.224)	(0.321)
Child	0.236	0.822***	0.976***	-2.049*
	(0.123)	(0.092)	(0.263)	(1.020)
Social Capital: Ties to Likely Undocument	,	(, ,	()	(** *)
Parent	0.255***	0.439***	0.594***	0.217
	(0.031)	(0.056)	(0.126)	(0.219)
Spouse	0.381***	0.235**	-0.139	0.182
~F*****	(0.046)	(0.075)	(0.170)	(0.214)
Sibling	0.298***	0.565***	0.057	0.342**
Siding	(0.027)	(0.054)	(0.113)	(0.131)
Child	0.284***	0.358***	0.537**	-0.238
Ciniu	(0.049)	(0.082)	(0.186)	(0.254)
Community Social Capital: Migration Prev	(/	(0.002)	(0.100)	(0.254)
Prevalence of undocumented migrants	0.017***	0.005*	0.003	-0.017*
revalence of undocumented inigrants	(0.001)	(0.002)	(0.006)	(0.008)
Prevalence of legal permanent migrants	-0.002	0.002)	0.018	0.027
revalence of legal permanent inigrants	(0.002)	(0.003)	(0.010)	(0.015)
Prevalence of noncompliant tourists	-0.084***	-0.131***	-0.033	-0.200**
revalence of noncompliant tourists	(0.009)	(0.014)	(0.026)	(0.065)
Pravalence of legal temporary migrants	0.023***	0.014)	0.020)	0.003)
Prevalence of legal temporary migrants	(0.002)	(0.004)	(0.011)	(0.005)
Pioneer Migrant Characteristics	(0.002)	(0.004)	(0.011)	(0.003)
Average year of first migration	0.007***	-0.019***	-0.002	0.033***
Average year of first inigration	(0.002)	(0.003)	(0.002)	(0.006)
D	-0.033	-0.441***	-0.555**	-0.114
Proportion entered as temporary workers				
CONTROL VARIABLES	(0.041)	(0.082)	(0.202)	(0.201)
Demographic Characteristics	0.160	0.121	0.415*	0.220
Female	-0.168	-0.121	-0.415*	0.339
	(0.094)	(0.159)	(0.197)	(0.268)

Table 2 (continued)

	EWI			
	EWI Undocumented	Legal Permanent	Noncompliant Tourist	Legal Temporary
Age	-0.109***	-0.060***	-0.049	-0.060
	(0.009)	(0.016)	(0.034)	(0.041)
Age squared	0.0004***	-0.0002	0.0000	-0.0002
	(0.0001)	(0.0002)	(0.0004)	(0.0005)
Married/consensual union	-0.057	-0.244	0.427	-0.341
	(0.063)	(0.135)	(0.231)	(0.193)
Minors	0.042***	0.009	-0.066*	-0.008
	(0.006)	(0.013)	(0.030)	(0.032)
Years of schooling	0.004	-0.030***	-0.014	0.086***
	(0.005)	(0.008)	(0.015)	(0.021)
Occupation (ref. = not working)				
Agricultural	0.561***	1.376***	-0.145	0.810**
	(0.057)	(0.100)	(0.190)	(0.302)
Unskilled manual	0.537***	1.208***	0.047	0.616*
	(0.057)	(0.100)	(0.161)	(0.302)
Skilled manual	-0.497***	0.601***	-0.362	-1.307
	(0.109)	(0.162)	(0.289)	(0.773)
Professional	-0.723***	-0.159	-0.958***	-0.525
	(0.122)	(0.154)	(0.259)	(0.443)
Household Assets				
Owns land	-0.152***	-0.066	0.241	-0.455**
	(0.036)	(0.058)	(0.161)	(0.151)
Owns property	-0.002	0.140**	-0.342**	0.077
	(0.027)	(0.053)	(0.114)	(0.133)
Owns business	-0.662***	-0.871***	-0.321*	-0.458*
	(0.043)	(0.068)	(0.138)	(0.183)
Binational Context				
Border Patrol budget (in \$1,000s)	-0.0001***	-0.001***	-0.0001	0.0001
	(0.00005)	(0.0001)	(0.0002)	(0.0001)
U.S. employment growth rate	0.057***	0.119***	0.058	0.100*
	(0.009)	(0.018)	(0.040)	(0.047)
Mexican GDP per capita growth rate	-0.001	-0.007***	-0.0003	-0.001
	(0.001)	(0.001)	(0.003)	(0.004)
Community Size (ref. = village)				
Town	-0.185***	-0.440***	-0.308	0.105
	(0.036)	(0.076)	(0.223)	(0.151)
Small urban area	0.079*	0.256***	0.986***	0.091
	(0.039)	(0.078)	(0.210)	(0.187)
Metropolitan area	-0.281***	-0.167	-0.265	-0.736*
	(0.068)	(0.129)	(0.279)	(0.371)
	Departed on Additional Trip to the United States			
	Unauthorized Border Crosser	Legal	Noncompliant	Legal
	Dorder Crosser	Permanent	Tourist	Temporary
Period (ref. = 1965–1985) 1986–2000	-0.543***	0.900***	-0.005	2.210***
1,00 2000	(0.037)	(0.068)	(0.146)	(0.221)

Table 2 (continued)

	Departed on Additional Trip to the United States			
	Unauthorized Border Crosser	Legal Permanent	Noncompliant Tourist	Legal Temporary
2001–2016	-0.398*** (0.105)	1.316*** (0.179)	-0.633 (0.438)	2.553*** (0.312)
Pseudo-R ²	0.391	()	()	()
Person-years	110,679			

Notes: Boldface highlights data that are emphasized in the text. SEs are shown in parentheses. EWI = entered without inspection.

capital, as opposed to social capital, expecting the former to predominate over the latter among experienced migrants. Once again, entry categories are listed in the same order in the rows and columns, yielding a set of theoretically expected outcomes bolded along the diagonal. Consistent with expectations, this exercise yields four large and highly significant mode-specific coefficients: 2.120 for undocumented entry, 4.885 for LPR entry, 4.727 for noncompliant tourist entry, and 4.506 for legal temporary worker entry (all p < .001).

Taking the exponent of these coefficients, we learn that the odds of migrating in the same status on both prior and current U.S. trips are 8.3 times greater for undocumented migrants, 132.3 times greater for LPRs, 113.0 times greater for noncompliant tourist migrants, and 85.7 for temporary labor migrants. Once migrants have accumulated U.S. experience in one entry category, therefore, they are very likely to continue migrating in that same category on later U.S. trips. Although this pattern holds across all entry categories, it is particularly salient in modes that entail interaction with the immigration bureaucracy. Having overcome the bureaucratic hurdles to gain access to a legal entry visa, the path to future entries in the same status is smoothed. LPRs, of course, are free to come and go as they please, but they must return within 12 months of their last departure to maintain their status, thus building repeat migration into the behavioral repertoire of legal immigrants.

What most distinguishes the entry categories from one another is not their mode-specific proclivities, but whether they predict migration in other categories. Note that the coefficient linking prior undocumented experience to later undocumented trips is the smallest one on the diagonal, consistent with the fact that prior undocumented experience predicts entries in *all other* categories. Exponentiating the coefficients in the first line of the table, we see that in addition to increasing the odds of undocumented migration by a factor of 8.2, prior unauthorized experience triples the odds of moving in LPR status, raises the odds of departing as a noncompliant tourist by 62%, and increases the odds of entering in temporary legal status by 68%.

Prior experience as an LPR has a *negative* effect on the likelihood of departing as an undocumented migrant or a noncompliant tourist (with respective coefficients of -5.425 and -2.496; p < .001) and no significant influence on the likelihood of leaving as a legal temporary worker. Exponentiating the coefficients reveals that prior LPR

^{*}p < .05; **p < .01; ***p < .001

experience reduces the odds of departing in undocumented status by 99.6% and lowers the odds of departing in noncompliant tourist status by 91.8%. Thus, gaining access to a legal resident visa unsurprisingly channels migrants decisively *away from* taking additional trips as an undocumented migrant or noncompliant tourist.

Prior experience as a noncompliant tourist has no significant effect on the likelihood of migrating as either an undocumented migrant or a legal temporary worker, but it does increase the probability of later departure in LPR status. The coefficient of 0.758 is highly significant (p<.001), suggesting that it more than doubles the odds of taking later trips in that same status. While substantial, these odds are much smaller than the 113-fold increase in the odds of migrating again as a noncompliant tourist.

The foregoing results once again suggest multiple pathways for movement between the categories of undocumented migrant, LPR, and noncompliant tourist, but only one pathway into migration as a legal temporary worker: that emanating from prior experience in undocumented status. In addition, prior experience as a legal temporary worker has no significant influence on the likelihood of later migrating as an LPR or noncompliant tourist. Although the coefficient of 0.158 connecting previous experience as a legal temporary worker to later undocumented migration indicates a 17% increase of the odds of undocumented departure, this effect is quite small compared with the increased odds implied by the coefficients along the diagonal, and it is the smallest effect among the set of off-diagonal coefficients.

Earlier, we hypothesized that experienced migrants would likely substitute migration-specific human capital for migration-specific social capital in moving northward, thereby reducing the importance of social capital in predicting later U.S. trips. This pattern of change is indeed what we observe, as can be verified by comparing the social capital coefficients contained in Table 1 with the corresponding coefficients in Table 2. Looking at the second panel concerning ties to LPRs, we see that although the coefficients for ties to LPR parents, spouses, siblings, and children are all positive and significant, they are smaller in size than the same coefficients in Table 1. Of the 16 coefficients in the panel, all either decline in value or remain insignificant at both dates.

We observe much the same pattern of change between first and later trips in the third panel concerning ties to family members with likely undocumented experience. Of the 16 coefficients shown, all but three decline in value or remain insignificant in both tables. Moreover, among the three coefficients that increase in size, none of the shifts is significant statistically. In the fourth panel as well (focusing on community social capital), all the coefficients along the diagonal decrease in value compared with Table 1, with one lapsing into insignificance. Among the 12 off-diagonal coefficients, all but three decline in value or remain insignificant on both first and later trips.

Turning finally to the influence of pioneer migrants on the likelihood of later departure, results suggest that over time the share leaving as legal temporary workers becomes less important and the average year of their departure becomes more important in perpetuating temporary labor migration. The coefficient linking the share of pioneer migrants departing as legal temporary workers to the likelihood of migrating in that same status is statistically insignificant at –0.114 (compared with 0.663 on first trips), indicating a drop in the odds from 194% to zero. In contrast, the coefficient linking the average year of pioneer migration to later temporary labor migration rises from 0.018 to 0.033, representing

a shift in the odds of departure in legal temporary status from 1.8% to 3.4% per year, consistent with what we know about the growing access to temporary work visas over time.

Whereas the share of legal temporary workers among pioneer migrants comes to matter less in predicting continued migration in that same status on later versus first trips, the negative influence of this variable on the probabilities of migrating in legal resident and noncompliant tourist statuses (which were insignificant on first U.S. trips) becomes statistically significant on later trips. As the number of trips accumulates, therefore, an early predominance of legal temporary workers among pioneer migrants tends to channel migrants *away from* entry as LPRs and tourists. Finally, the negative coefficients linking the average year of pioneer departure for legal residents and noncompliant tourists either decrease in value or reverse sign, suggesting that as migration streams mature, the timing of pioneer migrants' departure becomes less relevant in determining the composition of the outflow.

Discussion: The Past and Future of Mexican Migration

Although U.S. policy shifts clearly have strong effects on the course of Mexican immigration, we do not view their influence as a *deus ex machina* in which U.S. interventions inevitably lead to specific outcomes. Whatever the effects of U.S. policies might be, the size and character of Mexico's migratory flows are also influenced by changes in the binational political economy, by external shocks from climate change, the COVID pandemic, and the price of oil. Most importantly, migratory outcomes depend crucially on how migrants respond to shifts in the context of decision-making induced by macro-level developments.

The U.S. policy of "prevention through deterrence" launched under President Clinton, for example, was grounded in the hypothesis that raising the costs and risks of unauthorized border crossing would deter undocumented migrants from deciding to head northward (see U.S. Border Patrol 1994). It was not a foregone conclusion that Mexican migrants would respond to the rising costs and risks by remaining longer in the United States rather than desisting from departure in the first place, although that is what ultimately happened (see Massey et al. 2015). A more interesting question is why Presidents Bush and Obama continued to militarize the border even as evidence accumulated to show that the policy was backfiring: steadily lowering out-migration to Mexico but having little effect on in-migration to the United States, thus increasing the net volume of immigration and accelerating undocumented population growth (Massey et al. 2016).

We also do not wish to overstate the degree to which path dependencies are built into migration systems by the mode-specific effects of human and social capital identified here. Our results *do* show that human and social capital function to perpetuate migration in ways that are specific to the mode of entry, and consequently existing flows tend to be perpetuated over time, *ceteris paribus*. However, *ceteris paribus* assumptions never hold in the longer term and path dependencies are commonly interrupted by external events and changed circumstances. We simply argue that to properly understand and model the short-term dynamics of any migration system, the mode-specific nature of human and social capital must be recognized, measured, and taken into account.

The sources of human and social capital relevant to legal temporary labor migration, in particular, are quite specific to that mode of entry and unlikely to generate

U.S. trips via other categories of entry. Although mode-specific effects presently function to perpetuate a system of legal circular labor migration, the persistence of the system depends on access to specific visas. If Congress were to eliminate the H-2A, H-2B, and TN visa categories, the current system of legal temporary labor migration would come to an abrupt halt, just as happened when Congress abandoned the Bracero Program on January 1, 1965. We estimate our models with full awareness of the historical contingencies that have transformed Mexican migration in the past and will likely do so again in the future.

The system of undocumented migration that arose after 1965 was powered by the expansion of migrant networks seeded by former Braceros (Massey et al. 2014; Massey and Espinosa 1997). These migrants continued to move back and forth across the border after the program's demise, mostly in undocumented status, but also as LPRs sponsored by U.S. employers (Massey et al. 2002). Reflecting the mode-specific nature of social capital, people socially connected to LPRs tended to depart in that same status. However, if an LPR visa were not available owing to quota limitations, persons connected to legal residents were quite likely to depart without documents or as noncompliant tourists.

Social capital derived from ties to undocumented migrants is less mode-specific than that from ties to legal residents, however, and persons connected to such migrants are quite likely to depart in other statuses as well. Among individuals, the accumulation of social capital in various entry categories led after 1965 to a self-sustaining system dominated by undocumented migrants, but also including noncompliant tourists and LPRs. As more people were drawn into the migration system, the prevalence of migrants in communities rose and stocks of social capital grew, promoting still more people to migrate. But at the community level, the effect of accumulating social capital was decidedly more mode-specific than at the individual level, with the rising prevalence of undocumented migrants channeling people toward undocumented departure and away from leaving in permanent resident status. Similarly, a rising community prevalence of LPRs channeled people toward entry in LPR status and away from entry without inspection, and a rising share of noncompliant tourists mainly channeled migrants toward that mode of entry.

After 1965, these mode-specific tendencies were further reinforced by the mode-specific nature of migration-related human capital. Prior experience as an LPR strongly pushed migrants away from taking additional trips as undocumented migrants or non-compliant tourists and toward repeat migration as LPRs. Prior experience as a non-compliant tourist greatly increased the likelihood of undertaking later trips in the same status and weakly toward later trips as LPRs. Although prior undocumented experience also pushed migrants toward taking additional trips in undocumented status, its mode-specific effects were weaker.

The foregoing social processes yielded a circular system of network-based migration that worked through multiple social links to promote migration across all three entry categories. The mode-specific tendencies of migration-related human and social capital were strongest among LPRs, less strong among noncompliant tourists, and least powerful among undocumented migrants, yielding a system within which undocumented migrants dominated but movements through other entry categories were none-theless common. From 1965 to 1985, it functioned to sustain and expand a system of migration that annually channeled Mexican workers to U.S. jobs with little need for direct action by employers.

After 1986, the system of circulatory undocumented migration began to break down as the militarization of the border reduced rates of return migration back to Mexico and that country's fertility decline increased the average age of those at risk of labor migration (Massey et al. 2016). As the number of undocumented Mexican entries fell after 2000, U.S. employers increasingly turned to recruiting workers using the H-2A and H-2B visas created by IRCA and to a lesser extent via TN professional visas authorized under NAFTA. As Figures 1 and 2 reveal, these recruitment efforts began slowly in the late 1990s and early 2000s, targeting communities outside the historical heartland for U.S. migration where the migrant networks were saturated and dominated by the undocumented. Recruitment instead focused on new communities in such states as Chihuahua, México, Nuevo León, Tabasco, Tlaxcala, and Querétaro.

This burst of recruitment in new regions by employers using H-2A and H-2B visas seeded an entirely new set of networks dominated by legal temporary workers, one that was socially disconnected from the earlier interconnected networks composed of undocumented migrants, noncompliant tourists, and LPRs. Our analysis suggests that entry into the new system of legal temporary migration is not influenced by ties to LPRs and only marginally predicted by ties to undocumented migrants. Instead, temporary labor migration is fueled by powerful mode-specific processes associated with the rising prevalence of legal temporary migrants within specific communities, especially in places where pioneer migrants were dominated by legal temporary workers. The continued migration of legal temporary workers is pushed forward on later trips by strong mode-specific effects connected to the accumulation of migration-related human as well as social capital.

With the end of circular migration, undocumented networks decayed and the ties that remain do not connect aspiring migrants either to legal temporary workers or the employers and contractors who recruit them. As a result, migration from new sending communities has grown while that from older sending communities reliant on undocumented networks has withered, setting up a pattern of path dependence moving forward. Absent external shocks or policy interventions, the new system of legal temporary migration can be expected to reproduce itself steadily over time. Figure 3 illustrates the forward momentum built into the current system by the mode-specific influence of social capital accumulated at the community level. It shows the likelihood of taking a first U.S. trip in each of the four entry categories predicted from the equations in Table 1 by varying entry-specific prevalence ratios from 0% to 50%, holding other variables constant at their means.

As the prevalence of legal temporary workers rises in a community, so does the likelihood that other community members will initiate U.S. migration in that same status. The curve rises slowly at first but then increases exponentially to a value of 0.144 when the prevalence ratio reaches 50 percent. In contrast, as the prevalence of undocumented migrants rises over the same range, the probability of undocumented migration only climbs to 0.034, and as the prevalence of noncompliant tourists and LPRs similarly rises, the respective probabilities of first departure in those statuses climb to just 0.020 and 0.005.

Through 2018, the new system of legal temporary migration was clearly reproducing itself along the lines just described as border apprehensions fell and the Mexican portion of the undocumented population declined through 2019 (Center for Migration Studies 2021; Warren 2020). In contrast, the number of Mexicans apprehended ticked

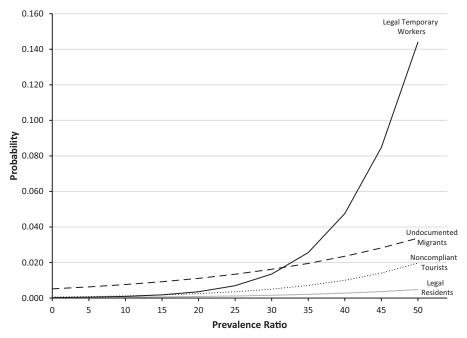


Fig. 3 Probability of taking a first U.S. trip in four entry categories predicted from mode-specific prevalence ratios

up to 253,000 in 2020, and in 2021, the number surged to 551,000 over the first 11 months of the fiscal year (U.S. Customs and Border Protection 2021). It is too early to know whether this surge constitutes a return to mass undocumented labor migration or a short-term response to disruptions in Mexico stemming from rising cartel violence, global warming, shifting U.S. border policies, the COVID-19 pandemic, or some combination thereof. Only time will tell whether the system of temporary labor migration that emerged over the first two decades of the twenty-first century will persist in its third decade.

Acknowledgments Research reported in this publication was supported by the Eunice Kennedy Shriver National Institute of Child Health and Human Development of the National Institutes of Health (grants P2CHD047879 and 1 R01 HD35643). The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

References

Baker, B. (2021). Estimates of the unauthorized immigrant population residing in the United States: January 2015–January 2018 (Population Estimates report). Washington, DC: DHS Office of Immigration Statistics.

Casanova, V., & McDaniel, J. (2005). "No sobra y no falta": Recruitment networks and guest workers in Southeastern U.S. forest industries. Urban Anthropology and Studies of Cultural Systems and World Economic Development, 34, 45–84.

- Center for Migration Studies. (2021). State-level unauthorized population and eligible-to-naturalize estimates [Data set]. New York, NY: Center for Migration Studies. Available from http://data.cmsny.org/
- Consejo Nacional de Población. (2021). Indicadores demográficos de México de 1950 a 2050 [Demographic indicators of Mexico from 1950 to 2050] [Data set]. Ciudad de México, México: Consejo Nacional de Población. Available from http://www.conapo.gob.mx/work/models/CONAPO/Mapa_Ind_Dem18/index_2.html
- Dellinger, K. (2015). The H2 visa process in the catfish industry. Géneros: Multidisciplinary Journal of Gender Studies, 4(3), 806–831.
- Griffith, D. (1993). Jones's minimal: Low-wage labor in the United States. Albany, NY: State University of New York Press.
- Griffith, D. C. (2005). Rural industry and Mexican immigration and settlement in North Carolina. In V. Zuñiga & R. Hernández-León (Eds.), New destinations: Mexican immigration in the United States (pp. 50–75). New York, NY: Russell Sage Foundation.
- Griffith, D. C. (2010). American guestworkers: Jamaicans and Mexicans in the U.S. labor market. University Park, PA: Pennsylvania State University Press.
- Hernández-León, R. (2021). The work that brokers do: The skills, competences and know-how of intermediaries in the H-2 visa programme. *Journal of Ethnic and Migration Studies*, 47, 2341–2358.
- Hoefer, M., Rytina, N., & Baker, B. C. (2010). Estimates of the unauthorized immigrant population residing in the United States: January 2009 (Population Estimates report). Washington, DC: DHS Office of Immigration Statistics.
- Lindstrom, D. P., & Ramirez, A. L. (2010). Pioneers and followers: Migrant selectivity and the development of U.S. migration streams in Latin America. Annals of the American Academy of Political and Social Science, 630, 53–77.
- Massey, D. S. (1987). The ethnosurvey in theory and practice. *International Migration Review*, 21, 1498–1522. Massey, D. S., & Capoferro, C. (2004). Measuring undocumented migration. *International Migration*
- Massey, D. S., & Capoterro, C. (2004). Measuring undocumented migration. *International Migration Review*, 38, 1075–1102.
- Massey, D. S., Durand, J., & Malone, N. J. (2002). *Beyond smoke and mirrors: Mexican immigration in an era of economic integration*. New York, NY: Russell Sage Foundation.
- Massey, D. S., Durand, J., & Pren, K. A. (2014). Explaining undocumented migration to the U.S. International Migration Review, 48, 1028–1061.
- Massey, D. S., Durand, J., & Pren, K. A. (2015). Border enforcement and return migration by documented and undocumented Mexicans. *Journal of Ethnic and Migration Studies*, 41, 1015–1040.
- Massey, D. S., Durand, J., & Pren, K. A. (2016). Why border enforcement backfired. American Journal of Sociology, 121, 1557–1600.
- Massey, D. S., & Espinosa, K. E. (1997). What's driving Mexico-U.S. migration? A theoretical, empirical, and policy analysis. American Journal of Sociology, 102, 939–999.
- Massey, D. S., Goldring, L., & Durand, J. (1994). Continuities in transnational migration: An analysis of nineteen Mexican communities. American Journal of Sociology, 99, 1492–1533.
- Massey, D. S., & Zenteno, R. (1999). The dynamics of mass migration. Proceedings of the National Academy of Sciences, 96, 5328–5335.
- Massey, D. S., & Zenteno, R. (2000). A validation of the ethnosurvey: The case of Mexico-U.S. migration. International Migration Review, 34, 766–793.
- Mexican Migration Project. (2021). Probability of a Mexican taking a first U.S. trip (Graph 9). Princeton, NJ: Princeton University; Guadalajara, Jalisco, México: Universidad de Guadalajara. Retrieved from https://mmp.opr.princeton.edu/results/009firsttrippers-en.aspx
- Moorefield, B. (2019). Challenging employer control within the H-2A and H-2B visa programs. Annals of the American Academy of Political and Social Science, 684, 241–254.
- Rogers, A. (2015). Applied multiregional demography: Migration and population redistribution. Dordrecht, the Netherlands: Springer.
- U.S. Border Patrol. (1994). Border patrol strategic plan: 1994 and beyond: National strategy (Report). Washington, DC: Homeland Security Digital Library. Retrieved from https://www.hsdl.org/?view&did=721845
- U.S. Customs and Border Protection. (2021). Southwest land border encounters (Statistics report). Washington, DC: U.S. Department of Homeland Security. Retrieved from https://www.cbp.gov/newsroom/stats/southwest-land-border-encounters

- U.S. Department of Homeland Security. (2021). Yearbook of immigration statistics. Retrieved from https://www.dhs.gov/immigration-statistics/yearbook
- U.S. Department of Labor. (2019). H-2A temporary agricultural labor certification program—Selected statistics, FY 2018 (Report). Washington, DC: U.S. Department of Labor. Retrieved from https://www .foreignlaborcert.doleta.gov/pdf/PerformanceData/2018/H-2A_Selected_Statistics_FY2018_Q4.pdf
- U.S. Department of State. (2021). Nonimmigrant visa statistics. Retrieved from https://travel.state.gov/content/travel/en/legal/visa-law0/visa-statistics/nonimmigrant-visa-statistics.html
- Warren, R. (2020). Reverse migration to Mexico led to U.S. undocumented population decline: 2010 to 2018. *Journal on Migration and Human Security*, 8, 32–41.

Douglas S. Massey (corresponding author) dmassey@princeton.edu

Wassink • Office of Population Research, Princeton University, Princeton, NJ, USA

Massey • Office of Population Research, Princeton University, Princeton, NJ, USA; https://orcid.org/0000-0002-0109-522X