

Security issues and immigration flows: Drug-violence refugees, the new Mexican immigrants *

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Abstract

Mexican immigration figures have reached its lowest point since 2000. Yet, even if as a whole the US is receiving less Mexican migrants, the opposite is true for cities at the border. In this paper, I present evidence to show that this sui generis migration pattern cannot be understood only using traditional explanations of migration dynamics. Instead, Mexicans are migrating because of security issues, fearing drug-related violence and extortion, which has spiked since 2008. I estimate that a total of 264,693 have migrated fearing organized crime activities. By doing so, I combine the literature of migration dynamics with the one of violence and crime in Latin America, pointing towards ways in which non-state actors shape actions of state members.

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*“Why are we in Mexico?” I asked my research fellow
after falling sleep during our border road trip.
“We are in Texas,” he answered.*

Mexican immigration to the US has diminished steadily since 2000. With figures dropping from an estimated of 525 thousand Mexicans yearly leaving their country to establish at the US to fewer than 100 thousand, current migration figures are the lowest on record (Sheridan, 2011; Cave, 2011). Among the main reasons behind this diminishing trend are changes in Mexico’s demographic profile (Terrazas et al, 2011), an increase in the number of Mexicans earning college degrees (Ibarraran and Lubotsky, 2007; Orrenius and Zavodny, 2005), a constant increase in the costs associated with crossing the border (Massey and Durand 2003; Orrenius 2004; Wayne and Lewis 2006; MPP, 2009), and the recession that the US economy has been facing since late 2007 (Papademetriou et al, 2011).

Even if the US as a whole has experienced a decrease in the number of Mexican immigrants, the opposite seems to be true for US cities located at the border. Mexican immigration to El Paso, McAllen, Brownsville and other cities in Texas have actually increased, increasing the price of housing and promoting the development of brand new housing complexes targeted towards Mexican consumers. Only preliminary figures are available on the size of this migration but the preliminary reports estimate about 115,000 Mexicans have arrived US border cities since 2006 (IDCM, 2010; Rice, 2011). El Paso, for example, has grown by 50,000 inhabitants from 2009 to 2011, and at least 30,000 of these new inhabitants are Mexicans moving from Ciudad Juarez (Rubio Salas interviewed by Alvarado, 2011).

Furthermore, these new Mexican immigrants have little in common with the traditional Mexican immigrants. At border cities, it has become more and more common to see Mexicans wearing Prada and driving Mercedes. They cross into Mexico to work and come back to the US to sleep and spend their weekends in their newly constructed gated communities (citizen interviews by Rios, 2008). The new Mexicans are investors and relatively wealthy businessman that used to live at Mexican border cities and have

recently changed their residency to the US. They get into the US legally, buy property and open businesses (Martinez, 2011).

In order to understand these phenomenon, I bring together one of the most important strings of Latin American academic research, the examination of migration flows (Hellman, 2011), and what is considered the upcoming research topic of the region: studies of crime, security and violence (Di Tella, Edwards and Schargrotsky 2010). It is my claim that to fully understand migration dynamics from Mexico to the US, and within Mexico, we need to broaden our analysis of the factors that we normally analyze as part of traditional immigration literature –such as economic hardship, network analysis, or labor dynamics– to include the impact that non-state-actors behaviour –such as violence caused by criminal organizations– is having on migration flows. In particular, I argue that drug-related violence and organized crime activities are affecting migration dynamics in Mexico. A important share of Mexicans are relocating to the US, and to other cities within their country, running away from drug-related homicides and criminal activity which has spiked since 2008.

In making this argument, I speak to broader political science theories of the impact that non-state actors may have on shaping decisions taken by state members, as well as on the way in which non-state actors can fundamentally change the allocation of human capital and resources within a polity, or from one polity to another. Furthermore, the same logic used within this piece can be used to understand other research agendas such as the "white flee" and other forms of migration caused by neighborhood effects (Wilson 1997, Cullen and Levitt 1999, Olive and Shapiro 2006), and way in which state capacity ultimately affects the relationship between the state and criminal organizations (Bailey and Godson 2000, Williams 2002).

This paper is organized in five sections. The first presents an overview of Mexico's security situation with a particular emphasis on a very recent phenomenon: an abrupt increase in the number of homicides related to drug trafficking activities, and other ac-

tivities related to organized crime such as kidnappings and extortions. A second section explores migration flows at the border and within Mexico, and shows why Mexicans living at border towns seem to be particularly sensitive towards migrating. The third and fourth sections show my statistical specifications and results. I estimate that a total of 264,693 Mexicans have changed residency in direct response to drug-related homicides. A fifth section provides qualitative evidence of migration flows driven by security concerns, rather than by economic hardship, and describes some particularly interesting cases that support my quantitative findings.

Mexico's drug-related violence

*“Fear has become part of our lives () There's panic. We don't know when the shooting is going to break out”
—Tijuana citizen ¹*

Mexico's homicide rates have increased every year since 2004 –particularly sharply since 2008– as a result of increases in territorial fights between drug cartels. From December of 2006 to 2010, 34,550 killings have been officially linked to organized crime, a dramatic increase from previous years (2000–2006) when only 8,901 killings were linked to organized crime. The major increase violence spike of 2008 came when drug-related homicides jumped from 2,826 to 6,837 killings, a 142% increase with respect to the previous year. After another increase of more than 40%, homicides reached 9,614 victims in 2009, and the record figure of 15,273 by 2010. In this last year, organized crime was officially responsible for 47% of all intended homicides happening in Mexico (Rios and Shirk, 2011).

Mexico's security issues are particularly acute at the border. Most drug-related homicides concentrate at border cities because US-Mexico crossing points are where the

¹Lacey (2008); Tijuana is a border town located south of San Diego, CA; during 2008, it saw 614 drug-related homicides, a rate of about 43.72 per 100,000 inhabitants — quite larger than not-drug-related homicides, which cause only 20.46 casualties per 100,000.

most profitable part of drug trafficking business chain occurs (See Figure 1). When a kilogram of cocaine crosses into the US, its value increases from \$ 6,000—10,000 to up to \$ 19,000 (DEA cited by Brouwer et al, 2006). Mexican border towns are the centers of operation of most Mexican drug cartels. In fact, two of the most important criminal organizations in Mexico are named after border cities: the Tijuana Cartel, which operates mostly south of California, and the Juarez Cartel, which controls most the border located on west Texas. A third cartel, Gulf —named after the Gulf of Mexico— controls the east border crossings.

[Figure 1 about here]

The five Mexican states located at the border account for 47.81% of all drug-related murders despite containing just 17.62% of all Mexico’s population. Chihuahua, south of Texas, is the most violent border state with 10,126 murders, followed by Baja California and Tamaulipas with 2,016 and 1,477 drug-related homicides respectively. The same pattern of violence spiking in areas in close proximity to the border is present at the municipal level as well. Municipalities located near the US-Mexico border, particularly those containing large border cities, are among the most violent. Approximately 30.04% of all drug-related homicides occurred in 39 border municipalities, which represent less than one percent of the roughly 2,450 municipalities in Mexico, and just 6.06% of the country’s population. The most violent city in Mexico is Juarez, south of El Paso, Texas, a relatively small city of about 1.31 million inhabitants in which 6,437 homicides have occurred from 2006 to 2010 (18.65% of the total national toll). To put this figure in perspective, Juarez exhibited drug-related homicide rates of 216.06 victims per 100,000 inhabitants in 2010, a casualty rate that is comparable to that of war zones.

Drug-related homicides within Mexico have not only increased but changed in nature. Unlike before, government authorities are increasingly targeted by traffickers (Freeman, 2006; CNDH, 2009). In border cities like Tijuana, south of California, at least 100 policemen die on duty every year (Guerrero, 2009). To put this in perspective, in the

entire United States 133 police officers were killed in the line of duty in 2008. The chief of police in Nuevo Laredo, south of Texas, lasted eight hours in the position (Garza 2009) before being assassinated by traffickers. Traffickers have also created new ways to spread fear among the population. Bodies are left in the streets with messages towards other citizens, politicians or fellow criminals. Heinous acts such as decapitation and torture have become the norm rather than the outlier; heads are thrown into the doors of primary schools, and executions of many people have replaced targeted murders of a single person.

Furthermore, criminal organizations have diversified their activities getting into alternative illegal businesses. Extortion is perhaps the most widespread of these new criminal ventures. Criminals initially used extortion to target illegal business such as prostitution rings and casinos, industries in which the probability of being denounced to the police by the owner was exceedingly low. However, the extortion of businesses soon extended into the legal sphere and became the most accessible means of quickly acquiring cash for traffickers. It has deeply affected business dynamics. High protection fees and intimidation have forced businesses to go into bankruptcy and have pushed some businessmen to take radical action such as creating violent organizations for self-defense. In fact, some businessmen in northern Mexico claim to be part of an association called “The Zeta Killers”—referring to Zetas, a drug cartel well known for their participation in extortion and kidnapping. The Zeta Killers have taken credit for the assassination of hundreds of Zetas (citizen interviewed by Rios, 2008). The bodies of tortured traffickers regularly appear in cities around Mexico like Boca del Rio, Benito Juarez, and Celaya next to messages signed by this group, such as, “We are the new group of The Zeta Killers and we are against kidnapping and extortion, and we will fight against them in all the states for a cleaner Mexico (sic) (Sipse, 2009)”.

Unexpected migration flows in Mexico

“Those who can, leave, those who can’t, hide.”

Over the last couple years, some Mexican cities have started depopulating unexpectedly. As a result, the usual general predictors of population trends, which have previously been quite successful in predicting the yearly population in Mexican counties (Partida Bush, 2008) are producing higher than normal prediction errors. Cities like Praxedis de Guerrero, Mier and Guadalupe have faced expected unexpected outflows of more than 25% of their whole population (CONAPO, 2008; INEGI 2010).

Unexpected migration outflows have been particularly prominent in areas located on the US-Mexico border, probably because acquiring U.S. residency is relatively easy there (Table 1). While border cities tended to lose an average of 35,255 inhabitants unexpectedly, not border counties tended to gain an average of 1,297.86 inhabitants. The tendency is less strong when considering all border counties—independently on whether these are or not cities—yet even so, on average about 8,103.63 people left unexpectedly in these cases.

[Table 1 about here]

When considering all Mexican cities, among the ones experiencing the largest unexpected population outflows are important border cities. Juarez has lost 150.36 thousand inhabitants—about 11% of its population. Other cities with considerably high violence levels like Tijuana, Reynosa, and Matamoros have lost between 6%, 9% and 4% of their population during the same period (CONAPO, 2008; INEGI, 2010) (Table 2).

[Table 2 about here]

It is impossible to know where these people relocated but preliminary figures agree that at least half of them moved to the US (IDMC, 2010; Rice, 2011). Particularly, for

²Interviewed by Author (2008); Reynosa is a Mexican border city located south of Texas with drug-related homicide rates of about 26.18 per 100,000 inhabitants in 2010.

middle and upper class Mexicans living on the border, migration to the US feels like the natural choice if a change of residency is being planned. For many of them it is just like moving from one neighborhood to another within a same city, or as they describe it, “moving to the American side of the city (citizen interviewed by Author, 2008).” Inhabitants commonly refer to border cities using their Mexican or American name almost interchangeably. As the mayor of Laredo said “we are inhabitants of Laredos” —referring to Laredo, Texas (USA) and Nuevo Laredo, Tamaulipas (Mexico)— “the border does not divide our policies or families (Garza interviewed by Author, 2009).”

The integration of US and Mexican cities located right at the border is quite strong and rooted in historically important but informal agreements. Many border cities were divided artificially when the Rio Bravo was determined to be the natural frontier between Mexico and the US during the late XIX century (Garza interviewed by Author, 2008). The border divided families and communities, leading Mexican and American authorities to create informal mechanisms to facilitate transportation between border-city inhabitants. Many of these have lasted over the years, generating a much more porous border than Washington and Mexico City seem to be willing to accept. Students at Juarez, for example, pay local tuition at the University of Texas at El Paso. Furthermore, border cities have instituted “day border passes,” a form of one-day-visa given to Mexican border inhabitants that allow them to cross into the US without a formal visa or passport.

Other Mexicans have surely relocated within Mexico. Indeed, some cities, particularly Acapulco, Chimalhuacan and Tlajomulco have experienced unexpected migration inflows (Table 1). Tlajomulco for example, grew about 30% more than population predictions had accounted for, Juarez (Nuevo Leon) and Bahia de Banderas also grew in more than 18%.

In the following section I present empirical evidence linking drug violence and organized crime activities to Mexican migration outflows. The results represent the first empirically-based theory to argue that Mexico’s migration flows are being driven by se-

curity concerns rather than by traditional economic variables.

Empirical specifications

As my main specification I used a linear regression model, with White-Huber corrected standard errors, whose dependent variable is the number of Mexicans unexpectedly leaving their county of residence from 2005 to 2010. All figures were scaled to represent rates per 100,000 inhabitants. To measure unexpected migration outflows I compare population predictions (CONAPO, 2008) to real population figures (INEGI, 2010) at each of the \sim 2.5 thousand Mexican counties.

This research project was made possible because of a mistake made by Mexico's National Population Council (CONAPO). Every year, CONAPO predicts county-level population figures considering demographic changes and expected immigration outflows. Given how important migration outflows to the US are as predictors of population figures, CONAPO uses very sophisticated methods to predict the total number of Mexicans that will change their residency to the U.S.³ The predictions take into account economic conditions both in Mexico and the U.S., surveys, polls, previous census figures, and panel studies. Every five years, when a census is conducted in Mexico, CONAPO predictions can then be checked for accuracy. Their predictions are normally quite good. For the 2005 census, for example, the prediction had an error of just 686,478 thousand individuals, about 0.66% of the total population.

In my main specification, I compare CONAPO predictions to census figures in 2010 (last census year; INEGI, 2010) to capture population outflows that could not be predicted by changes in economic or demographic conditions. Unexpected outflows are

³Predictions are based in the algorithms developed by Bean et al (2001) and Corona and Tuiran (2006) using Mexican and US Census figures (1950 — 2005), the Current Population Survey (1990 — 2005) and the American Community Survey (2002 — 2005). For more details on the specification see Partida Bush (2008).

larger when CONAPO predicted more people will be living in a county than the census captured.

In every specification, I added a control to account for other unmeasurable factors driving possible errors in CONAPO's prediction. I proxied for "expected CONAPO's errors" by measuring the error that CONAPO had in its previous predictions. I used the estimation errors that CONAPO had in the second to last census year (INEGI, 2005) because time wise, I expect 2010 municipalities to be more similar to what they were in 2005 than to any other census year further behind. The logic behind this proxy is to control for counties that have proven to be difficult to estimate for CONAPO. Some counties may have inherent characteristics that make their population figures more variable and thus, highly susceptible to be incorrect estimation.

As my independent variables, I used measures of three of the most common types of organized crime violence in Mexico: homicides linked to drug trafficking, extortion, and kidnapping. These variables quantified as the total number of incidences of these crimes per county, per 100,000 inhabitants for years in between census (i.e. 2006 to 2009). Drug-related homicides figures come from Mexico's National Security Council (2011), an institutions that counts the number of homicides related to activities of criminal organizations and provides monthly figures per county since December of 2006 and until December of 2010 ⁴. Kidnapping and extortion figures were obtained from state-level Mexico's offices of the general attorney (INEGI, 2009).

To control for social and economic factors which may have generated unexpected economic conditions within Mexico (which could have changed migration patterns more than CONAPO could have predicted) I added two sets of controls: employment and education figures. Academic research indicates that these two variables are among the most important drivers of migration (Massey, et al, 1998). Particularly, research shows that

⁴Mexican authorities follow strict procedures to identify whether a homicide is related to organized crime according to the characteristics of the event as well as intelligence reports. For more information, refer to STSP (2011).

the number of college graduates is an important deterrent of migration to the US and an enhancer of migration within Mexico, from rural to urban areas (MPP, 2009). Higher levels of employment normally translate into less migration (Tuiran, 2000a; Tuiran, 200b).

A dummy for each of the 39 Mexican counties located right at the border was added. The intention is to capture, in a very indirect way, the easiness of migration decisions. The assumption is that any factor increasing migration willingness among Mexicans will have an increased effect on border counties, where migration costs are lower with respect to the rest of the country. An alternative specification also added a dummy for each of the 5 border states.

Finally, as part of robustness tests, extra controls and specifications were tested. An alternative specification adds figures of general homicides not related to organized crime as assessed by INEGI (2009) to account for the effects that other forms of violence may have had in driving migration. State fixed effects (32 clusters, one per Mexican state) were also added⁵.

General descriptive statistics of the dependent and independent variables are presented in Table 3.

[Table 3 about here]

Principal Results

The results of the model are given in Table 2, and they strongly support my hypothesis. Migration outflows are higher in places with higher drug-related violence and crime, even accounting for factors such as employment and human capital. Several models were spec-

⁵I tested for weighted coefficients based on the inverse of their squared residuals. The use of weights did not changed coefficients or standard errors meaningfully. Results available under request.

ified.

Model 1 present results without controlling for not-drug-related homicides while the rest of the specifications (Model 2 and 3) control for them. Controlling for not-drug-related homicides does not change the results but increases the goodness of fit of the models. Drug-related violence is strongly linked to migration flows, independent of the general homicide rate in a county. Furthermore, in every specification the coefficients of drug-related homicides are larger than those of general homicides which confirms my hypothesis that Mexicans are taking migration decisions based in organized crime activities rather than in general security concerns. The reason why drug-related homicides are better predictors of migration flows than general homicides may be that drug-related homicides are a newer phenomena, not an important cause of homicides before 2004 (Rios and Shirk 2011), and leave a longer lasting impression in the communities because of their particularly violent features. Unlike general homicides, the victims of drug-related homicides are tortured and beheaded, and their bodies are dumped at the streets, hanged from pedestrian bridges, or displayed publicly next to messages directed to rivalry trafficking organizations.

Model 3 adds fixed effects per states to capture changes happening at the state level that may have influenced migration dynamics—for example, we should expect citizens living in states with well publicly regarded justice systems to be less affected by drug-related violence even if the number of homicides are the same than in states where citizens are less confident of their governments. The goal of the paper is to show that outflows are correlated with organized crime activities, which is why Model 3 is considered the preferred specification.

[Table 4 about here]

Indeed, in all specifications, drug-related homicides are an important factor in Mexican migration outflows. In my preferred specification (model 3), drug-related homi-

cides increased the number of Mexicans unexpectedly migrating out of their residency counties by 220,291. Every one point increase in the rate drug-related homicides per 100,000 inhabitants is correlated with 6.34 Mexicans fleeing their county of residency. As an example, consider the case of Tijuana; in the period from 2007 to 2008, its drug-related homicides rate changed by 31.04 points (going from 176 to 614 drug-related homicides in just one year). If the results of the model hold, an average of 5,367 Mexicans left Tijuana just during 2008 fleeing from drug-related homicides.

Drug-related homicides are less robust predictors of unexpected immigration inflows actually, when fixed effects per state are added, the variable becomes insignificant. That is to say, even if drug-related homicides are correlated with people leaving their counties, this does not mean that, when deciding on where to relocate, people will feel more attracted to counties with less drug-related homicides. Counties with higher drug-related homicides expel people but counties with lower drug-related homicides do not attract people.

Other organized crime activities, particularly extortion also have had important effects in migration flows. Extortion is correlated with unexpected migration outflows—and less robustly with unexpected migration inflows. In the preferred specification, every additional case of extortion per 100,000 inhabitants increases unexpected migration outflows in 13.03 per 100,000 inhabitants. That accounts for a total of 44,401 Mexicans relocating running out of extortion. Tijuana has lost about 926 citizens because of extortion; other border cities like Nuevo Laredo, Reynosa and Juarez had lost 286, 334 and 221, respectively. Kidnappings were not significantly correlated with migration outflows or inflows. This result is quite robust among all models and is consistent with what we would expect given the particularities of the victims of this crime. Kidnapper pick their victims according to their wealth not by location. Because kidnapping victims are hunted, migration does not change their attractiveness as targets.

Traditional, economic explanations of migration flows take the expected signs and

are significant in all outflows specifications. An increase of one point in employment rates or in the number of college degrees per 100,000 inhabitants reduces migration outflows in 0.01 and 0.11 per 100,000 inhabitants, respectively. Neither employment, nor education are significantly correlated with migration inflows. In other words, when deciding where to relocate, Mexicans do not go to cities with higher levels of education or lower unemployment.

Finally, all variables introduced to correct for CONAPO's error were strongly significant. Indeed, it seems like CONAPO faces inherent problems in measuring population flows in some places more than others. In general, places where CONAPO's 2005 predictions were upward biased (i.e. CONAPO predicted more people than the 2005 census) had the same upper bias in 2010. The relationship is 1 to 0.77 in the preferred specification, meaning an error of 1 in 2005 figures is correlated with an error of 0.77 in 2010 figures⁶

The new driver of Mexico's immigration flows: security issues.

"I know that we came here illegally, but at least we can sleep in peace now"
Citizen of Juarez relocated at El Paso (Torres, 2011)

The effect of violence in determining migration outflows is a well-studied phenomenon within political science research of Africa and other civil-war contexts (Zolberg et al, 1989; Morrison, 1993). Most of these studies emphasize the role of violence in generating

⁶The fact that drug-related violence is predictor or unexpected migration outflows is a particularly robust finding even more, if we consider that CONAPO's 2010 population predictions assumed migration flows to the US will remain at least as high as those measured in 2000, which now we know, is the highest point of Mexico-US migration up to date (MPP, 2009). Given unexpectedly harsh economic conditions in the US, particularly 2007 and 2008, CONAPO's should result in an upper bias. In other words, CONAPO assumed US labor markets will remain as appealing for Mexicans as they were in 2000, which clearly was not the case. The fact that, even with CONAPO's upper estimation bias, migration figures were underestimated in border towns strongly reinforces my hypothesis that other factors, not economical, are driving migration decisions.

unexpected migration flows and refugees. However, until now Mexican migration flows had never been understood in these terms, probably because prior to the current explosion of drug-related violence in Mexico, it was economic rather than political or social concerns that drove most migration decisions (Massey et al, 1998; Fussel, 2011; Papademetriou et al, 2011). This article has provided evidence supporting the idea that gaining a more complete understanding of migration flows within Mexico and between Mexico and the US requires one to account for measures of organized crime violence. Recent spikes in drug-related violence within Mexico have changed migration dynamics, adding a whole new dimension to it, one that considers well-being and security issues, as a fundamental part of migration decisions ⁷.

The total number of Mexicans migrating as a result of drug-related criminal activities has not yet been fully counted but preliminary figures point to about 230,000 Mexicans moving out of violent cities, 115,000 of them to relocate at the US (IDMC, 2010). Some claim this number may be underestimated as it does not account for Mexicans who leave on a temporary basis, checking in at US hotels for short periods of time, “to rest from the constant violence (Corchado, 2009).” Others claim 120,000 is the figure only for Juarez (Martinez, 2010). The accuracy of these figures remains doubtful as none of these sources explain their methodology.

Based in my own estimates, I claim drug-related violence had yielded a total displacement figure of about 220,291 from 2006 to 2010, and extortion had caused an additional displacement of 44,401, for a total of 264,693 Mexicans drug-violence refugees. This figure accounts for all relocations either within Mexico —from violent to non-violent cities— and from Mexico to the US. Some cities though, particularly the most violent ones, seem to carry the most of the burden. According to my estimates, Juarez alone has lost 40,993 drug-violence refugees; about 15.48% of all displacements in Mexico had happened in a city that has just 1.26% of total Mexico’s population.

⁷See Alvarado and Massey (2010) for a similar attempt using Latin American countries as his level of analysis, and Lindley (2009) for a good lit-review on the topic.

Figure 2 shows a map of 2.5 thousand Mexican counties (population) and the number of drug-violence refugees. The cities with the largest burden during 2006 — 2010 are Ciudad Juarez, Culiacan and Tijuana with 40.99, 12.4 and 11.37 thousand inhabitants leaving unexpectedly, respectively. In relative terms, the cities with the largest drug-related migration outflows are Guadalupe, Mier and Gral. Trevino with 9% of their population leaving unexpectedly because of security concerns. All figures, by county and type of crime (drug-related homicides or extortion) at appendix 1 (to be posted at author’s website, along with ArcGIS files) as open-source material to be used by other academics interested in the topic.

[Figure 2 about here]

My estimate of 264,693 Mexican refugees of violence matches what ethnographic, journalistic, and public opinion accounts have been describing as a massive Mexican exodus both within Mexico and from Mexico to the US. At the US, Henry Cisneros, former mayor of San Antonio, Texas, classified Mexican migration flows as the “largest since the 1920s” and acknowledged that “whole areas of San Antonio () are being transformed (Sheridan, 2011).” Within Mexico, recent opinion polls have showed that out of all people interviewed, 17% had moved its residency because of drug violence or to run away from criminal activities. This represents about 2% of the total migration flows happening in the country (Parametria, 2010), slightly above my own estimates.

Perhaps, the most telling study case of drug-violence migration flows is that of Juarez, Chihuahua, and its US-city counterpart, El Paso, Texas. The impacts of Mexican outflows have been felt with such strength at El Paso that some have even claimed that “a sort of ‘Little Juarez,’ akin to Miami’s Little Havana, is emerging” (Martinez, 2011). Housing, schooling, business associations and many other spheres have changed significantly over the last couple years to adapt to new migration patterns.

Actually, the influx of immigrants has had a positive effect on real estate markets in Texas. Housing prices, particularly El Paso, have remained steady even on face of the recession, largely because of the influx of Mexicans buying properties (Rice, 2011). Completely new housing developments have started to pop up in McAllen and Brownsville, many of them specifically targeting Mexican markets, tastes, and needs. As a real estate developer at McAllen acknowledged, “the tendency is towards developing gated communities, close to border bridges, with larger kitchens, and more rooms because our customers have larger families and need to cross every day to Mexico to work (interviewed by Author, 2008)”

Mexicans have not moved alone but with their businesses, especially when their businesses were already targeted towards American consumers. Mexican restaurants, bars and hair salons, have closed their doors in Mexico and re-opened in the US. Relocating allows American clients who are increasingly fearful of crossing into Mexico because of violence to maintain their regular spending habits and most importantly, allows Mexican businessmen to avoid paying extortion fees to traffickers. For example, it is estimated that as much as 700 businesses closed in Nuevo Laredo, Tamaulipas, in 2006 just because of this reason (Garza, 2009)⁸. Estimates for Juarez point to about 10,000 business closed from 2007 to 2010 (Torres, 2011b).

The exodus of businesses can be tracked to some extent by the number of US “Investors visas” (E1-E2) given to Mexican citizens during the last years. While from 2001 to 2005 only 7,603 visas were granted, from 2006 to 2010 the number increased to 31,066. Mexican businessmen have even started to organize themselves into self-support clubs. At El Paso, for example, a club named “La Red” (“The Network”) provides new comers advice on how to relocate their business successfully in the US. As of 2011,

⁸Relocation though is not an easy task and fails most of the times. Businesses cannot remain profitable paying US salaries and following US regulations. The move itself is costly and even worse, the attractiveness of business may be reduced by the change in location itself. What is considered a charming, local restaurant at Juarez is perceived as a low quality venue by El Paso residents, who are generally used to higher quality standards (Garza, 2009). Fulfilling legal requisites such as getting a SSN and passing the fire inspection is also difficult for relocated business.

“La Red” has almost 500 members, most of them enrolling just recently (Martinez, 2011).

The school system may also be changing in important ways. There is no way to officially count the exact numbers of students transferring from Mexican schools to El Paso Schooling District, but some numbers provide evidence of Mexicans increasingly studying at the US. The number of students enrolled in bilingual or limited English proficiency programs has increased by 1,330 students from 2007 to 2010 even as the total number of students enrolled at the school district has dropped from 45,049 in 2007 to 44,778 in 2010 (Martinez and Torres, 2011; Torres, 2010a).

These new Mexican immigrants are not only changing US border cities but also Mexican ones. Unoccupied dwellings in Mexican border cities are quite high and correlate strongly with the rates of drug-related homicides. According to census figures, 26% of all dwellings in Juarez are unoccupied, 20% in Tijuana, and 19% in Mexicali. Other non-border cities facing drug-violence also have significantly low levels of occupancy: Chihuahua is 15% empty, and Monterrey, second most important city in Mexico, faces the same situation in 11% of its houses (Martinez et al, 2011)⁹. Some claim that forced migration has affected smaller, rural towns to the point of creating de facto ghost towns. Teachers, doctors, policemen, and public servers have left their communities without previous notice fearing violence episodes in communities of Tamaulipas, Michoacan, and Chihuahua.

Ciudad Mier, a border county located south of Texas, is quite impressive case in this regard. My estimates account for a total displacement of about 430.91 individuals, something considerable given the city only counts with 6,662 inhabitants. Most of Mier migration happened in mid-2010 when Tony Tormenta, a Mexican drug-trafficker was assassinated (Corchado interviewed by Rios, 2010). Mier inhabitants, fearing violence and retaliation from Tony Tormenta allies, left the city immediately, creating a true state of

⁹A poll conducted at Juarez showed that only 6.95% of all dwellings were empty, totaling about 32,858 thousand residencies (Velazquez Vargas et al, 2010).

emergency. The exodus of at least 100 families was so abrupt that Mexican authorities had to install a refugee camp in a neighboring community (Guzman, 2010). Other cases of refugee camps in response to traffickers' turfs have also been created in Michoacan. In this Southern Mexican state, forced, unexpected migration has displaced at least 2.5 thousand Mexicans into refugee camps ¹⁰.

Migration flows within Mexico have favored cities with larger markets and employment opportunities. Mexico City, for example, has become a quite attractive place for relocation (MEPI et al, 2011). In the past, few businessmen wanted to move to Mexico City because of bureaucracy, the high cost of real estate, and lack of bank financing. Nonetheless, in 2010, about 6,500 businesses relocated into Mexico City coming from other states (MEPI et al, 2011). Mexico City has not experienced high levels of drug-related violence; In fact, it is much safer than at any point since 1994.

Conclusion

Mexican immigration is changing in fascinating ways. Immigration figures have reached their lowest point since 2000. Better socioeconomic conditions in Mexico and economic hardship in the US are among the main causes behind this trend. Yet even if as a whole the US is receiving fewer Mexican migrants, the opposite is true for cities located right at the border. Cities in Texas and other US border states are not only receiving more Mexicans but are receiving a different type of them. New Mexican migrants belong to the upper and middle class and cross into the US legally, some even bringing their own businesses and buying property. As a result, the face of some border towns has changed significantly. Housing prices have increased, many Mexican businesses have been opened,

¹⁰Indeed, migration is not restricted to border communities but has also affected other highly violence counties within the country. Journalistic accounts have identified at least 70 counties where drug-violence has had important consequences for migration flows, particularly in the Mexican states of Chihuahua, Guerrero, Durango, Michoacán, Nuevo León, San Luis Potosí, Sinaloa, Sonora y Tamaulipas (Zermeño, 2011).

and enrollment in English as a second language school programs has gone up.

In this paper I presented the first quantitative evidence available, to show that the reason behind this *sui generis* Mexican migration patterns is not to be found at traditional explanations of migration dynamics. Mexicans are not crossing into the US to get better-paid jobs or run away from economic hardship, at least this is not the only reason. Instead, I argue that Mexicans are migrating out of fear of drug-related violence and extortion which has spiked since 2008. This is particularly true at border counties where Mexican drug-trafficking organizations have caused large increments in homicides rates, and where migration to the US entails relatively low costs.

My estimates showed that even controlling for normal conditions fostering migration, like employment and education, drug-related violence and extortion explain a significant part of migration flows both within Mexico and from Mexico to the US. In my preferred specification (model 3), every one point increase in the rate drug-related homicides per 100,000 inhabitants is correlated with 6.34 Mexicans fleeing their county of residency. A total of 264,693 Mexicans have moved their residency in direct response to drug-related homicides.

Though my methodology does not allow me to disentangle what proportion of Mexicans left violent cities to relocate at other less violent cities within Mexico versus those who did it to relocate at the US, case studies of border communities such as Mier and Juarez showed that quite a significant share of immigrants are actually crossing the border to live in the US, particularly Texas. Further research would need to be done to disentangle these two different migration destinations. The goal of this piece has been to show that traditional economic factors determining migration patterns from Mexico to the US cannot account for large, recent migration flows.

New Mexican immigrants are more similar to violence refugees than to illegal workers. As such, the only way to stop migration flows to keep growing at the border is to

increase safety within Mexican cities. In fact, a recent study measuring Juarez citizens' opinion with respect to moving out for security reasons found that 55 percent of the population would leave the city if they had the opportunity to do so (Torres, 2010a). It seems like this time, not even job creation within Mexico will stop immigration flows to the US. It is time for policymakers to realize that migration won't stop until drug violence does first.

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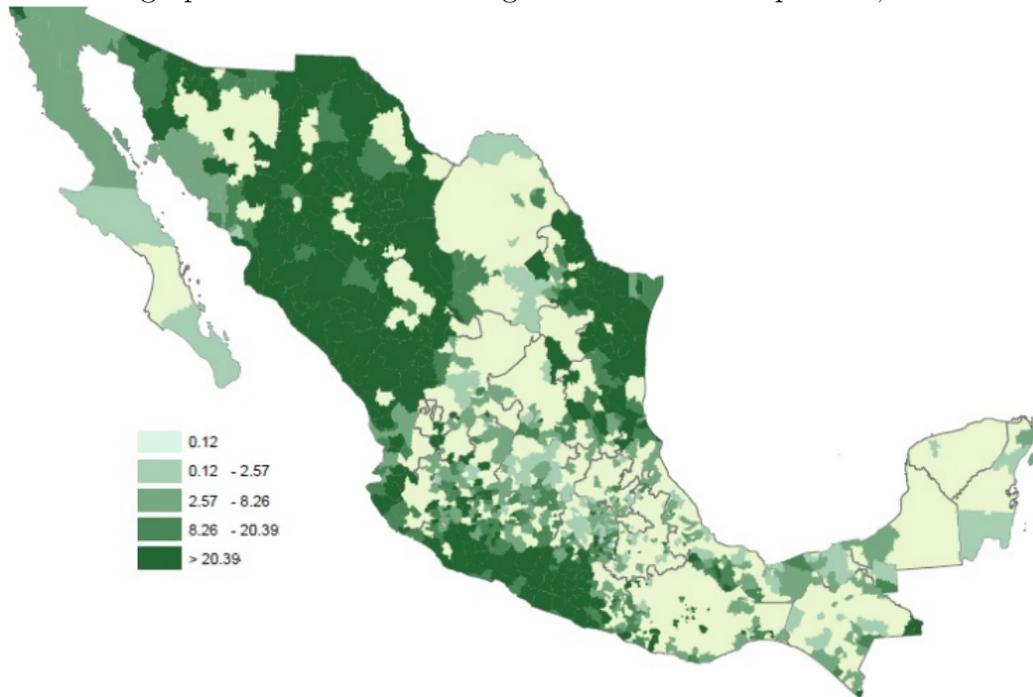
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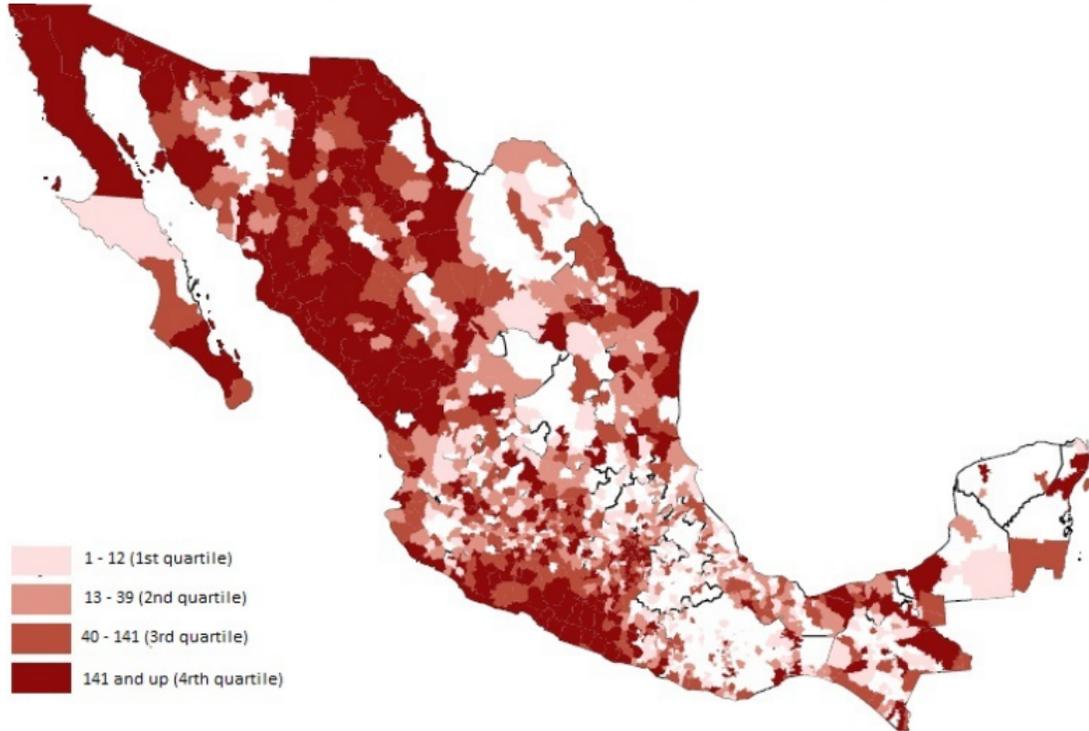
Figures

Figure 1: Geographic distribution of drug-related homicides per 100,000 inhabitants.



Source: STCS (2011)

Figure 2: Geographic distribution of drug-violence refugees



Tables

Table 1: Unexpected migration flows at border communities

	Unexpected migration flows
Border City	-35255.88
Border County	-8103.63
Not Border	1297.86

Note: Negative numbers account for cases where migration outflows (people leaving unexpectedly) exceeded migration inflows (people arriving unexpectedly).

Table 2: Top-twenty unexpected migration outflows/inflows at Mexico

City	Population	City	Population
Juarez, Chih	-163,843	Benito Juarez, QR	-57,522
Puebla	-110,586	Reynosa	-55,075
Ecatepec	-107,789	Coacalco	-50,234
Ixtapaluca	-100,929	Pachuca	-41,045
Tijuana	-91,877	Cuautitlan Izcalli	-40,901
Chicoloapan	-82,324	Tlaquepaque	-38,940
Guadalajara	-80,366	Tultepec	-34,942
Iztapalapa	-65,433	Guadalupe, Chih	-34,739
Solidaridad	-62,083	Nuevo Laredo	-31,597
Zapopan	-61,444	Veracruz	-30,675

Note: This figure refers to unexpected immigration outflows independently of whether they are predicted (or not) by drug-related violence. For figures of drug-violence refugees (the share of unexpected immigration outflows explained by drug-related homicides and extortions according to the results of this paper refer to Appendix 1 and Map 2.

Table 3: Descriptive Statistics

	Dependent Variable	Independent Variables						
	Migration Outflows	Drug-related homicides	Extortion	Kidnapping	Employment	College Degrees	General Homicides	Previous Estimation Error
Min	0	0	0	0	1,604.00	0	102	-20,760.00
Stand. Dev.	-3,543.05	95.32	1.234	1.645	23,415.41	3,725.82	126578.1017	1,526.76
Mean	1,217.00	29.08	0.116	0.175	67,030.00	3,581.27	42079.62021	-1,560.00
Max	-62,149.00	1,552.25	36.64	34.18	658,998.00	36,643.32	1820888	4,928.00

Note: All figures were standardized as rates per 100,000 inhabitants at the county level.

Table 4: Empirical results: Drug-related crime and immigration outflows

MODEL	1	2	3++
Dep. Variable:	Oufflows	Oufflows	Oufflows
Drug-related Homicides	-5.424*	-5.386*	-6.349*
	2.325	2.331	2.64
Extortion	-12.416*	-12.215+	-13.031*
	5.771	6.445	6.091
Kidnapping	1.636	1.533	2.188
	1.75	1.677	3.519
Employment	0.022**	0.021**	0.018*
	0.008	0.008	0.008
College Degrees	0.086***	0.119***	0.116***
	0.024	0.025	0.025
Border county	-2395.069*	-1480.127	-1188.711
	1123.915	1057.787	1087.696
Not-drug related Homicides		-0.002***	-0.002***
		0.001	0.001
Fixed Effects?	NO	NO	YES
Error Correction	-0.709***	-0.704***	-0.771***
	0.105	0.104	0.116
Constant	-3929.086***	-3905.937***	-2445.998**
	614.76	613.901	788.03

Note: OLS coefficients (top) with White-Huber corrected standard errors (below). For significance measures: * $p \geq 0.001$, ** $p \geq 0.050$, *** $p \geq 0.100$. I identified with ++ the preferred specification. The dependent variable is the number of Mexicans unexpectedly leaving their county (outflows) (INEGI 2010, CONAPO 2008). Independent variables intend to capture (a) the effects of organized crime activities (drug-related homicides, extortion and kidnapping) (INEGI 2010, STSP 2011), and of (b) economic variables (number of college graduates, and employment rates) (INEGI 2010) in migration decisions. Controls were added to account for potential measure errors in the dependent variable (CONAPO 2008, INEGI 2010 —see text for further explanation), and the effect of not-drug-related homicides. Fixed state effects and a dummy for Mexican counties located at the US border were also added to some specifications.