## Risk of Death and Aggressions Encountered while Illegally Crossing the U.S.-Mexico Border

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#### Abstract

This article analyzes the type of migrant who is most likely to be exposed to the risk of death or be a victim of aggression by U.S. authorities while illegally crossing the U.S.-Mexico border, and the impact this has on the future migration intentions of repatriated or deported individuals. On the basis of a logistic regression analysis, the study shows that those most vulnerable to risk or aggressions are first-time migrants who hire the services of human smugglers. Furthermore, migrants who were previously exposed to the risk of death or whose belongings were confiscated and never returned are less likely to engage in subsequent migration attempts. Finally, being a victim of physical or verbal abuse at the hands of U.S. Border Patrol agents is unrelated to future migration intentions.

*Keywords:* 1. illegal migration, 2. migrant deaths, 3. aggression, 4. Mexico, 5. United States.

## Riesgo de muerte y agresiones al cruzar ilegalmente la frontera Estados Unidos-México

#### Resumen

Este artículo estudia qué tipo de migrantes tienen mayores probabilidades de enfrentarse al riesgo de muerte y ser víctimas de agresiones por parte de autoridades estadounidenses al cruzar ilegalmente la frontera Estados Unidos-México, y el impacto que esto tiene sobre las intenciones migratorias futuras de los individuos repatriados o deportados. Con base en regresiones logísticas, se muestra que las personas más vulnerables son aquellas que migran por primera vez y contrataron los servicios de un coyote. Así mismo, aquellos migrantes previamente expuestos al riesgo de muerte o cuyas pertenencias fueron confiscadas y nunca devueltas tienen menor probabilidad de incurrir en subsecuentes intentos migratorios. Por último, ser víctima de abuso físico o verbal por parte de agentes de la Patrulla Fronteriza no está relacionado con las intenciones migratorias futuras.

*Palabras clave:* 1. migración ilegal, 2. muerte de migrantes, 3. agresión, 4. México, 5. Estados Unidos.

#### Introduction

Unauthorized migration and the hardships encountered by individuals who illegally attempt to enter the U.S. across the Mexican border has been a topic of intensive debate and political discussion in recent years. As migrants journey to the U.S. to improve their quality of life and compensate for failed or non-existent markets in Mexico, U.S. policy-makers attempt to protect their boundaries and domestic labour market from unwanted visitors, by implementing policies that endanger the lives and well-being of illegal immigrants.

As a result of the rapid increase in the number of unauthorized migrants entering the U.S. in the 1980s, border control efforts were intensified following the enactment of the Immigration Reform and Control Act (IRCA) in 1986 (USCIS, 1986), increasing the difficulties associated with unlawful migration. The subsequent enactment of the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) in 1996 (USCIS, 1996) broadened the powers of the Immigration and Naturalization Service (INS), granting it wide-ranging authority to arrest, detain and remove immigrants, and generating unprecedented focus on border enforcement issues (Phillips, Hagan, and Rodriguez, 2006). The enactment of IRCA and IIRIRA, together with the implementation of preventive measures by the U.S. Border Patrol (USBP) designed to deter unauthorized migrants from crossing the border, made undocumented migration progressively more hazardous, forcing migrants to travel through isolated, hazardous terrains when attempting to enter the United States. As a result, the number of undocumented border-crosser deaths along the U.S.-Mexico border increased, where it is estimated by the USBP to have totalled 5 570 between 1998 and 2012 (USCBP, 2013).1

<sup>1</sup> USBP statistics on migrant deaths undercount the actual number of fatalities, since they employ a restrictive set of criteria when classifying mortalities as an unauthorized border-crosser death (Rubio-Goldsmith *et al.*, 2006:10) and fail to include individuals that died in Mexico or whose bodies were never recovered. Taking this into account, it is estimated that from 1993 to 2012 the total number of migrant deaths surpassed 7 000 (Alonso, 2012:230).

The intensification of border enforcement efforts has been accompanied by an increase in the number of USBP agents, which stood at 4 028 in 1993 and had risen to 21 165 by 2012. The rapid surge in the number of USBP and Immigration and Customs Enforcement (ICE) agents has led to concerns about their training, since numerous cases of physical or verbal abuse against unauthorized migrants have been documented (OIG, 2006; Slack *et al.*, 2013). Furthermore, studies have shown that migrants commonly report that while they were detained, their belongings, including money, mobile phones and identification documents, were confiscated and never returned (Danielson, 2013; Slack *et al.*, 2013). This creates an additional set of problems for migrants, since after they are returned to Mexico they are unable to access certain types of jobs, receive money transfers, or buy bus tickets to their homes (Slack *et al.*, 2013:24).

Due to the increasing perils unauthorized migrants encounter while illegally crossing the U.S.-Mexico border or on being detained by U.S. authorities, a study of the individuals that are exposed to these difficulties and their relationship with future migration intentions warrants attention. Specifically, the research questions we attempt to answer are: "What type of migrant is more likely to be exposed to the risk of death while illegally crossing the U.S.-Mexico border or be a victim of aggressions at the hands of USBP agents when apprehended?", and "what impact do previous exposure to the risk of death or aggressions encountered when detained have on the future migration intentions of previously repatriated or deported individuals?"

## Border Enforcement, Unauthorized Migration and Exposure to Risk and Aggression

During the early 1990s, the U.S. Border Patrol adopted the "prevention through deterrence" strategy, altering its previous approach, which had involved apprehending migrants and subsequently returning them, to one that discouraged people from migrating altogether (Cornelius, 2001; Feldmann and Durand, 2008).<sup>2</sup> As part of this strategy, several preventive measures were carried out including Operation Hold-the-line (or Operation Blockade) in El Paso in 1993, Operation Gatekeeper in San Diego and Operation Safeguard in Nogales in 1994, and Operation Rio Grande in the Border Patrol's McAllen (currently Rio Grande Valley) sector in 1997. These similar measures strengthened patrol efforts in urban areas, thus channelling unauthorized migrants into more inconspicuous and less political sensitive regions (Cortés, 2003; Feldmann and Durand, 2008). Consequently, undocumented migrants were forced to alter their entry routes from the traditional Tijuana-San Diego and Ciudad Juarez-El Paso corridors, to more inherently treacherous crossing zones such as the Sasabe-Arizona Desert, the All-American Canal, or the Rio Grande (Eschbach et al., 1999; Cornelius, 2001; Cortés, 2003). This created a "funnel effect", which increased the flows of migrants travelling through hazardous and isolated areas and ultimately raised the number of migrant deaths (Cornelius, 2001; USGAO, 2006; Rubio-Goldsmith et al., 2006).

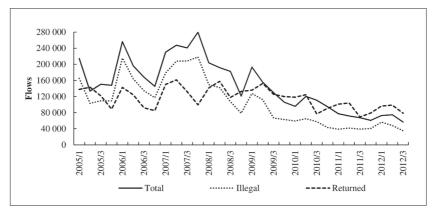
Efforts by the U.S. government to reduce the unauthorized entry of migrants have also been reflected in the continued growth of the enacted USBP program budget, which rose from 262.65 million dollars in 1990 to 3.53 billion dollars in 2012 (USCBP, 2013). By 2012, throughout the 1 969 mile U.S-Mexico border, close to 700 miles of vehicle and pedestrian fencing had been constructed, along with the installation of electronic sensing devices and aerial drones which significantly reduced the likelihood of evading capture (Alden, 2012:107).<sup>3</sup>

Altogether, these measures have been implemented with the purpose of deterring unauthorized migration by raising its physical and monetary costs, increasing the probability of detention,

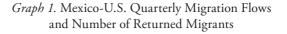
<sup>2</sup> The "prevention through deterrence" strategy intensified enforcement activities in unauthorized points of entry throughout specific segments of the border, and augmented the number of inspection points along key transportation arteries (Eschbach *et al.*, 1999).

<sup>3</sup> Measures of internal border control have also been put into effect including the creation of the E-Verify system and the enactment of the Legal Arizona Workers Act (ASL, 2007), among others.

and lowering its expected benefits. In addition, the terrorist attacks of 9/11 heightened border enforcement efforts, prompting the creation of the Department of Homeland Security (DHs) and altering the view of the problem of clandestine border crossing to one of international security.



*Source:* Authors' calculation based on the Emif Norte (2005-2012). Flows correspond to Mexicanborn migrants between 18 and 65 years who migrated or attempted to migrate to the United States. Returned category includes migrants repatriated through voluntary departure or deported by U.S. authorities.



Despite increased border enforcement efforts, it is estimated that from 2005 to 2012, an average of approximately 570 000 Mexican-born migrants attempted to enter the U.S. each year. Graph 1 shows that among these individuals, 71.81 percent did not have the required documentation to lawfully enter the country. Nonetheless, there has been a significant drop in the number of migrants attempting to cross the U.S.-Mexico border in recent years, particularly from 2008 onwards.<sup>4</sup> While the reduction in undocumented migration flows may suggest that the border enforcement strategy has successfully deterred clandestine immigration,

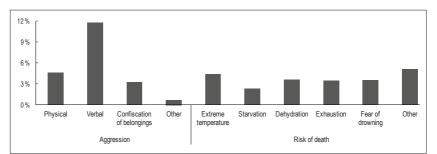
<sup>&</sup>lt;sup>4</sup> This data is taken from the Emif Norte (2005-2012). The USBP reports that illegal detentions from Mexico dropped from 1 075 221 in 2005 to 262 341 in 2012 (USCBP, 2013).

previous research on the success of this policy suggests that its effect has been limited (Espenshade, 1994; Sorensen and Carrión-Flores, 2007), given that these flows are mainly driven by earnings differentials. Furthermore, it has been stated that the downturn of the U.S. economy and the high unemployment rates in sectors that traditionally employ a large proportion of legal and illegal migrants seem to be the main factors behind the reduction in the Mexico-U.S. migration flow (Alonso, 2012:229).

The number of deaths among migrants attempting to cross the border increased parallel to the decline in undocumented migration flows. According to the USBP, the number of migrant deaths rose steadily from 380 in 2000 to 463 in 2013, averaging 419 deaths per year between 2005 and 2012 (USCBP, 2013). The rise in the number of clandestine migrant deaths along the border has attracted the notice of researchers at the Centers for Disease Control and Prevention (CDC), who conclude that this phenomenon has developed into a major public health issue (Rubio-Goldsmith *et al.*, 2006). Moreover, it is estimated that for every 100 000 detentions by the USBP, the number of bodies recovered along the deadliest parts of the border, such as the Sonoran Desert, was one and a half times higher in 2009 than in 2004, and 17 times greater than it had been in 1998 (Jimenez, 2009).

Due in large part to the substantial degree of attention that undocumented border-crosser deaths have received, the Mexican and U.S. governments have implemented a series of measures designed to reduce the risks and dangers migrants are exposed to when attempting to cross the border. These include posting warning signs at high-risk crossing points, distributing fliers in Mexican border towns, increasing the presence of search and rescue teams in hazardous areas on both sides of the border (Nevins, 2003:171), and the implementation of the Border Safety Initiative (BSI), the Arizona Border Control Initiative, and the Interior Repatriation Program, among others (USGAO, 2006).

In addition to the large number of migrant deaths, many of the individuals who manage to enter the U.S. encounter life-threatening conditions or instances of abuse, producing long-term physical and psychological scars (Marroni and Alonso, 2006). Graph 2 shows that it is not unlikely for migrants to be exposed to the risk of death when attempting to cross the U.S.-Mexico border. These risks are mainly induced by extreme temperatures, starvation, dehydration, exhaustion and fear of drowning. Moreover, a significant fraction of previously arrested migrants report that, when they were detained by USBP agents, they were subjected to different types of aggression including physical abuse, verbal abuse, or a permanent confiscation of their belongings. Given the significant number of migrants that are detained and subsequently repatriated or deported, this implies that tens of thousands of individuals encounter these harmful and potentially life-threatening experiences each year.



*Source:* Authors' calculation based on the Emif Norte (2005-2010). Figures correspond to Mexicanborn migrants between 18 and 65 years returned through voluntary departure or deported by U.S. authorities.

*Graph 2.* Aggression at Detention and Risk of Death Encountered while Crossing the Border, Percentage of Total Repatriated and Deported Migrants

Infante *et al.* (2012:450) argue that illegal migrants are vulnerable to physical, sexual, and verbal abuse by members of the local population, authorities, and organized crime groups, and are commonly subjected to various displays of discrimination such as racism, xenophobia, abuse and violence.<sup>5</sup> It has been documented

<sup>5</sup> Perhaps the most blatant display of the dangers encountered by undocumented migrants was the murder of 72 people from Central and South America in the municipality of San Fernando in the state of Tamaulipas in August 2010, massacred in an act related to organized crime groups on their journey to the U.S. (Luhnow, 2010).

that in multiple cases USBP agents and ICE personnel have committed human rights violations of detained migrants (OIG, 2006; NMD, 2008). These actions generally consist of ill-treatment and disregard towards detainees, insufficient or untimely provision of health care, physical aggression, verbal abuse, and safety and environmental health concerns.

Further examples include the 20 cases of lethal force by USBP agents from 2010 to 2012 reported by the Southern Border Communities Coalition (Soboco, 2013); the sexual assault of a female detainee in San Diego (OIG, 2006:28); and the hundreds of cases reported by the No More Deaths organization, including the case of a male migrant who was kicked in the stomach by an USBP agent, not given medical care, and on his return to Mexico was recommended for surgery given that he had swelling in his genitals and blood in his urine, indications of abdominal and testicular injury (NMD, 2008:17). Additionally, although there is an agreement between Mexico and U.S. officials to restrict the use of lethal fire-power on migrants, this remains an ever-present factor, the usual justification being that they are used in "selfdefence" (Feldmann and Durand, 2008). Lastly, actions taken by local population members include manhunts for undocumented immigrants organized by xenophobic cattle ranchers in Arizona, in which they commonly shoot migrants inside their ranches, or allegedly "act in self-defence", since they feel "threatened" by the presence of intruders on their properties (Alonso, 2005:123).

Spener (2008) attributes the acts of violence committed by U.S. authorities on unauthorized migrants to the conflictive nature of their encounters, the nationalistic and racist attitudes of the agents, and the cultural differences between those involved. Nevertheless, not all detained immigrants report negative experiences with the USBP, with many of them expressing gratitude after being rescued by USBP agents (Slack *et al.*, 2013).

### Literature Review

Previous evidence suggests that the decision to illicitly migrate from Mexico to the U.S. is a function of several factors, including the wage differential between the two countries, the costs and fees incurred during the journey to the U.S., and access to migration networks, among others. Given that it has now been well-documented that heightened border enforcement as of 1993 led to a substantial increase in the total quantity of undocumented border-crosser deaths (Cornelius, 2001; Eschbach, Hagan, and Rodríguez, 2003), a growing body of literature has focused on migrant deaths along the U.S.-Mexico border.

Among these studies, Rubio-Goldsmith et al. (2006) examine autopsy reports on illegal migrants from the Medical Examiner's Office of Pima County. The authors show that during the period of study, there was an exponential rise in the number of migrant bodies held by the Medical Examiner's Office, from nine in 1990 to 201 in 2005. As a result, the Border Patrol's Tucson sector is now the place where the majority of migrant deaths are recorded. In addition, an escalation in the number of migrant deaths caused by heat exposure has been observed, together with a reduction in the number of deaths due to all other causes. In a comprehensive study, Sapkota et al. (2006) use medical examiners' data from 2002 and 2003 to investigate the characteristics of undocumented migrants who perished while attempting to enter the U.S. from Mexico. Focusing on 409 deaths registered in different counties in Arizona, New Mexico and Texas, their study shows that 72.8 percent of the casualties were men, 66.1 percent were between the ages of 20 and 39 years, and that the most common cause of death was heat exposure, accounting for 43.4 percent of victims. Furthermore, in an investigation undertaken by the U.S. Government Accountability Office (USGAO, 2006), based on information from BSI reports, the authors observe an upward trend in the number of migrant deaths, which rose from 266 in 1998 to 472 in 2005. This is in stark contrast to the figures registered from the late 1980s to the early 1990s, when there was a decline in the number of undocumented border-crosser deaths (USGAO, 2006:14).

With respect to the causes of death, Eschbach, Hagan, and Rodríguez (2003) observe that from 1985 to 2002, the leading causes of death among migrants were drowning and motor vehicle accidents, whereas after 1993, there was an upsurge in the proportion of deaths induced by environmental heat, cold exposure and dehydration. Jimenez (2009) reports similar results where, based on information from the USBP, 30.25 percent of the 390 deaths reported in the fiscal year of 2008 were the result of environmental heat exposure, while 13.84 percent were water-related and 11.28 percent were linked to motor-vehicle accidents. On the other hand, Santibáñez (2000), focusing on exposure to the risk of death and based on data on detained migrants for 1999 and 2000, states that approximately 70 percent of migrants report being exposed to some type of physical risk, in other words, dehydration, starvation or extreme temperatures, when trying to enter the U.S. illegally.<sup>6</sup>

Even though the main violent act migrants are exposed to is death (Alonso, 2005:122), they also face the risk of encountering abuses. Based on information from the Migrant Border Crossing Study, Slack et al. (2013) state that one in every ten migrants reports being the victim of some form of physical abuse during his or hers most recent detention while one in four reports being subjected to verbal abuse at the hands of U.S. authorities. Moreover, the authors observe that 12 percent of respondents report that they were robbed by bandits during their last crossing, while seven percent report that they were kidnapped, and 39 percent state that their possessions were confiscated and never returned. On the other hand, based on information collected at the Centro de Atención a Migrantes Deportados in Nogales, Sonora, Danielson (2013) observes that 24.8 percent of returned migrants report that they were abused in some capacity by USBP agents. Compared to the local police in Mexico and criminals, the USBP was the most common perpetrator of abuse against migrants (Danielson, 2013:8).

While it would be unwise to suggest that previous exposure to risk and aggression are the determining factors driving migrants'

<sup>6</sup> Going beyond the statistics on migrant deaths, Marroni and Alonso (2006) try to give this phenomenon "a human face". The authors focus on a case study involving the disappearance of migrant women from the state of Puebla, the role played by the smuggler and the reaction by other members of the community of origin.

future migration intentions, as argued by Cornelius and Salehyan (2007:143), theoretically a significant proportion of individuals on the "cusp" of migrating are expected to be persuaded by the traumatic effects of the encounter with these adverse factors to return back home. Nevertheless, for some migrants, returning home is not an option, since they have to work in the U.S. to earn the money needed to repay the amount they borrowed in order to migrate.

Investigating the link between risk perception and migration intentions, Cornelius and Salehyan (2007) seek to determine whether the perception of the physical danger involved in illegally crossing the border is a sufficiently strong deterrent to influence the likelihood of migrating. Based on 603 interviews of returnmigrants and potential first-time migrants in two rural communities in the states of Jalisco and Zacatecas, the scholars conclude that migrants' strategies were indeed affected by increases in border security. Changes in strategy include the selection of different border-crossing points, a higher propensity to hire smugglers, and an increase in the probability of trying enter the U.S. through legal ports of entry. Nevertheless, very few migrants appear to have been permanently persuaded to stay home. In a similar study, using data from the Mexican Migration Field Research Program, Cornelius et al. (2008) analyze the success and unintended consequences of the U.S. border enforcement strategy. Relying on information collected in Oaxaca and San Diego in 2007-2008, the authors analyze whether the perceptions of the risk involved in clandestine border-crossing or knowing someone who died while illegally entering the U.S. are useful predictors of whether an individual will migrate. The study shows that the respondent's perception of border-crossing difficulties and the dangers encountered when attempting to enter the U.S. do not have a significant effect on the intent to migrate.

Lastly, focusing on the experiences of previously detained migrants, DeLuca, McEwen, and Keim (2010) conduct a qualitative investigation in which they analyze how migrants receive information regarding the risks involved when crossing the border, how this information affects their strategy to gain entry into the U.S., and how the journey impacts their future migration intentions. The authors perform eight in-depth interviews on men who had attempted to enter the U.S. illegally and had recently been returned to Mexico. It is observed that migrants obtain information from the media, family members, and friends, and identify possible risks such as travelling with people who have health problems. Furthermore, among the eight men interviewed, five reported that they intended to cross the border at a later date. Those that did not intend to cross explained that this was because the risks associated with crossing the border were too great.

#### Data

The data used in this study is taken from the "Encuesta sobre migración en la frontera norte de México" (Emif Norte)-Survey on Migration in the Northern Border of Mexico-, a crosssectional survey conducted by El Colegio de la Frontera Norte (El Colef et al.), similar in design to the UK "International Passenger Survey" (Office for National Statistics, 2014). The Emif Norte is conducted within Mexico, primarily in the border region, where the travellers interviewed are divided into visitors and migrants, and individuals are interviewed in bus stations, train stations, airports, international bridges, ports of entry and Mexican customs inspection points.<sup>7</sup> The survey provides information on migrants who return to Mexico either voluntarily or because they were sent back to their native country by U.S. authorities. The Emif Norte collects detailed data on the migrant's socioeconomic characteristics and his/hers most recent trip to the United States. The survey also provides information on the respondent's previous migration experience and future migration intentions.

Nevertheless, due to the structure of the survey, it is only possible to capture the risks and aggressions encountered by unauthor-

<sup>&</sup>lt;sup>7</sup> The survey therefore does not include migrants who travel directly from their place of origin in Mexico to their destination in the U.S. (Solís and Alonso, 2009:255).

ized migrants who had previously been detained and subsequently returned back to Mexico.<sup>8</sup> Insofar as returned individuals differ from all other illegal migrants, the interpretation of the findings must be limited to previously detained individuals, in which case the results cannot be generalized to all unauthorized migrants. It is therefore necessary to determine whether detained migrants constitute a representative sample of all the different cohorts of illegal migrants included in the Emif Norte.

Table 1 presents the means of selected variables of potential, repatriated or deported, and returning unauthorized migrants. Relative to potential and returning migrants, individuals that have been repatriated are slightly older, less likely to be male or a household head, and less prone to hire the services of human smugglers. Furthermore, they tend to have more migration experience and higher educational attainment than potential migrants, while the opposite is true for returning migrants. A t-test on the means of the continuous variables, in other words, age, years of schooling, and fee paid to the smuggler, shows that between potential migrants and individuals that have been repatriated, there is a statistically significant difference in age and number of years of schooling. Among returning migrants and repatriated or deported individuals, the only statistically significant difference is in smuggling fees. Given the mostly subtle differences between the three groups, this sample can be said to be representative of all unauthorized migrants surveyed in the Emif Norte.

Lastly, the sample comprises Mexican-born individuals between the ages of 18 and 65 that live in Mexico, do not have the required documentation to legally enter the U.S., and were previously detained by USBP agents. Furthermore, since the variables of interest were only included in the Emif Norte for the period from 2005 to 2010, the study is limited to pooled data from this period. The total number of respondents with no missing values rises to 31 213 observations, of which 26 486 are male and 4727 female.

<sup>8</sup> Because of data constraints, the present study does not distinguish between the categories of repatriations and deportations, and instead focus jointly on these two groups of returned migrants.

	Potential	Repatriated or deported	Returning
Age	28.46	28.66	28.58
Male	0.9496	0.8485	0.9244
Married	0.5402	0.4517	0.4472
Head of household	0.6325	0.5357	0.5835
Years of schooling	6.55	7.62	7.67
Previously migrated			
to the U.S.	0.1569	0.2568	0.3029
Hired smuggler	0.6283	0.5058	0.7820
Fee paid to the			
smuggler	1 816.85	1 799.10	1 673.70
Observations	37 132	31 213	6 800

*Table 1.* Means of Selected Variables of Potential, Repatriated or Deported, and Returning Illegal Immigrants

*Note:* Data includes individuals between 18 and 65 years born in Mexico. "Potential" refers to individuals interviewed in the Mexican border region who state that they are planning to migrate to the United States. "Repatriated or deported" denotes respondents who were detained by U.S. authorities and returned back to Mexico. "Returning" describes individuals who illegally entered the U.S. from 2005 to 2010 and are voluntarily returning to Mexico.

Source: Authors' calculation based on the Emif Norte (2005-2010).

#### Analysis

The first part of the study examines the type of migrant who is most likely to be exposed to the risk of death while illegally crossing the U.S.-Mexico border, and is most likely to be a victim of aggressions at the hands of USBP agents when apprehended. The dependent variables are self-reported exposure to the risk of death while crossing the border during the most recent migration attempt and aggression encountered when detained by USBP agents during the most recent migration attempt. The second part of the study analyzes the impact of the exogenous covariates of exposure to risk and aggressions encountered on the future migration intentions of previously detained migrants. In this case, the dependent variable indicates whether the respondent intends to migrate to the U.S. at a later date.

It is difficult to know *a priori* exactly what type of migrants are most vulnerable. Nonetheless, if migrants have been nega-

tively affected by previous life threatening conditions encountered while illicitly entering the U.S., or by aggressions from USBP agents when apprehended, then *ceteris paribus* migrants who have been exposed to risk or have been the victims of aggression will be less likely to attempt to enter the U.S. illegally at a later date, compared with those whose life was not in jeopardy or who did not suffer some type of abuse or aggression.

Due to the empirical nature of the study, a maximum likelihood estimation of a binomial logistic regression model with robust standard errors is undertaken, for which a series of different econometric specifications are defined. These include a general model, where risk and aggression are introduced in a broad form, and a detailed specification, where exogenous variables are disaggregated into different types of risks and aggressions.9 In keeping with the Mexico-U.S. migration literature, a series of controls are inserted and presented in table 2. Age and age squared are introduced in order to capture the non-linear relationship between the covariate and the likelihood of migrating; education is incorporated since numerous studies have shown that this is an important predictor of the migration decision, and a series of dummy variables are inserted in order to control for differences in the characteristics of migrants and external factors that may affect migration intentions. Quarter and year dummies are introduced, since illegal migrants are highly sensitive to business cycle conditions and relative wages in the U.S. and Mexico.

Table 3 presents a summary of the statistics, showing that a large proportion of respondents who crossed the border alone do not intend to migrate to the U.S. at a later date. Moreover, sampled individuals tend to be quite young, with an average age of 28.66 years. There is a difference of approximately one year between the mean ages of men and women, and between individuals who do or do not intend to enter the U.S. illegally at a

<sup>&</sup>lt;sup>9</sup> In the general model, migrants are classified as encountering aggression when they state that they suffered physical, verbal, or some other type of abuse at the hands of USBP agents when apprehended, or that their belongings were confiscated and never returned.

Variable	<b>Operational Definition</b>
Age	Self-reported age
Married	Dummy variable indicating whether the respondent is married
Head of household	Dummy variable denoting whether the respondent is a household head
Schooling	Dummy variable indicating the highest level of schooling completed
Risk of death while crossing border:	Dummy variable denoting whether the respondent was exposed to the risk of death induced by:
General	Any type of danger
Extreme temperatures	Extreme temperatures
Lack of food	Lack of food
Dehydration	Dehydration
Drowning	Drowning
Other	Another factor
Aggression at detention:	Dummy variable denoting whether:
General	The respondent encountered some form of aggression when detained by U.S. Border Patrol agents
Physical	The respondent was physically assaulted
Verbal	The respondent was verbally assaulted
Confiscation of belongings	The respondent's belongings were confiscated and never returned
Other type of problem	The respondent encountered another type of problem
Previously migrated to the U.S.	Dummy variable indicating whether the respondent had previously migrated to the U.S.
Previously repatriated or deported	Dummy variable denoting whether the respondent had been previously repatriated or deported by U.S. authorities
Worked in the U.S.	Dummy variable indicating whether the respondent worked in the U.S. prior to being repatriated or deported by U.S. authorities
Borrowed money	Dummy variable denoting whether the respondent had to borrow money in order to migrate to the U.S.
Crossed to the U.S. alone	Dummy variable indicating whether the respondent crossed the Mexico-U.S. border alone
Hired smuggler	Dummy variable denoting whether the migrant hired a smuggler
Price paid to the smuggler	Price paid to the smuggler in U.S. dollars
State of residence	Respondent's state of residence in Mexico
Border-crossing point	Mexican city from which the respondent entered the U.S.
City returned to by U.S. authorities	Mexican city to which the respondent was returned by U.S. authorities
Lateral repatriation or deportation	Dummy variable indicating whether the respondent was returned to a different city in Mexico from the one from which he/she had previously entered the U.S.
Year dummy	Denotes the year in which the survey was carried out
Quarter dummy	Indicates the quarter in which the survey was undertaken

Table 2. Definition of Variables

Source: Authors' compilation based on the Emif Norte (2005-2010).

later date. Additionally, education attainment is low, with 50.40 percent of men and 45.46 percent of women having fewer than nine years of schooling.

Regarding exposure to the risk of death, 23.64 percent of migrants state that they put their life in danger when attempting to enter the United States. Nonetheless, the raw data does not show any significant differences between the levels of exposure to risk encountered by men and women, or by those individuals who do or do not intend to cross at a later date. For all sampled migrants, the most common types of risks encountered are drowning, exposure to extreme temperatures, and dehydration. Moreover, 14.62 percent of respondents report having been subjected to some form of abuse by USBP agents, where a similar frequency of men and women state that they were victims of these harmfulacts. Among the most common forms of aggression, verbal abuse was experienced by 12.02 percent of the sample, while 4.76 percent of migrants report having suffered physical aggression, and 3.17 percent claim that their belongings were confiscated and never returned. Moreover, migrants that do not plan to illegally enter the U.S. at a later date are more likely to have been victims of aggressions than those that do intend to cross.<sup>10</sup>

A surprising characteristic is that the individuals included in the analysis are mostly first-time migrants, where only 27.80 percent of males and 13.64 percent of females report having previously migrated. This reflects the absence of migration specific human capital since respondents lack prior migration experience (Solís and Alonso, 2009:259). The high cost of international migration is reflected in the fact that 68.31 percent of respondents state that they were forced to borrow money in order to undertake their most recent trip to the United States. This is not unexpected given their low earnings in Mexico, the high transportation costs

<sup>10</sup> The present study also analyzed whether there is a systematic difference among respondents who do or do not report suffering physical or verbal abuse at the hands of USBP agents. Compared to respondents that were not victims of abuse, migrants that were physically or verbally assaulted by USBP agents tend to be younger, are more likely to be male, and more educated, and less likely to have had previous migration experience.

	Planning to return to the U.S.				
	Men		Wo	men	
	Never			Later date	
Age	30.36	28.6	28.8	28.05	
Married	0.4694	0.4562	0.3861	0.4254	
Head of household	0.6551	0.599	0.193	0.1475	
Years of schooling	7.32	7.61	7.75	7.84	
Risk of death while crossing the border:	0.2455	0.23	0.3386	0.2516	
Extreme temperature	0.1063	0.0721	0.157	0.1157	
Lack of food	0.0766	0.0483	0.0893	0.0572	
Dehydration	0.0997	0.068	0.121	0.0766	
Drowning	0.0403	0.103	0.0792	0.0362	
Other type of risk	0.1223	0.1309	0.1757	0.1621	
Aggression at detention:	0.171	0.146	0.1397	0.1338	
Physical	0.0554	0.0491	0.0317	0.0366	
Verbal	0.1112	0.1226	0.1066	0.1125	
Confiscation of belongings	0.0744	0.0285	0.0504	0.0238	
Other type of problem	0.0124	0.0054	0.0086	0.0071	
Previously migrated to the U.S.	0.3479	0.2714	0.1368	0.1386	
Previously repatriated or				/	
deported	0.2562	0.1738	0.1066	0.0924	
Worked in the U.S.	0.2575	0.1223	0.072	0.0547	
Borrowed money	0.5651	0.706	0.5951	0.6265	
Crossed to the U.S. alone	0.5345	0.3078	0.3573	0.236	
Hired smuggler	0.4144	0.5029	0.4913	0.5767	
Fee paid to the smuggler	1 768.32	1 784.66	1 711.37	1 897.03	
Lateral repatriation or			0.00 <i>c</i> (		
deportation	0.882	0.9156	0.8904	0.9206	
Observations	2 256	24 230	694	4 033	

## *Table 3.* Summary Statistics of Repatriated or Deported Illegal Migrants, Means

*Source:* Authors' calculation based on the Emif Norte (2005-2010). The fee paid to the smuggler is given in January 2010 U.S. dollars.

involved, and the rising prices charged by smugglers. Finally, a latent issue in the econometric exercise is that it is not possible to measure the migrant's expected earnings in the U.S., leading to a potential problem of omitted variable bias. In order to minimize this issue, additional controls are introduced such as the migrant's education attainment and age which, in addition to having an effect of their own, are highly correlated with expected income in the U.S. (Cornelius and Salehyan, 2007:146).

#### Results

# Exposure to the Risk of Death and Aggression Encountered when Apprehended

Table 4 presents the marginal and impact effects of the logistic regression models that predict exposure to the risk of death while unlawfully crossing the U.S.-Mexico border. The results show that for both men and women there is a concave relationship between age and exposure to risk, although for men the quadratic term is not significant. Moreover, male migrants who previously entered the U.S. illegally are, on average and ceteris paribus, 3.51 percentage points less likely to encounter risk than respondents with no prior migration experience. This suggests that during their trips to the U.S., migrants acquire knowledge that helps them evade more dangerous border-crossing points in the future. Moreover, married migrants are 0.022 probability points less likely to encounter risk than unmarried respondents, which may reflect the former's desire to travel through less dangerous routes. Additionally, migrants who cross the border alone have a lower likelihood of being exposed to the risk of death, a relationship that is significant for both men and women.

Furthermore, male migrants that have previously been repatriated or deported are 4.52 percentage points more likely to be exposed to risk compared to migrants undertaking their first trip to the United States. This result may indicate that previously detained migrants are more willing to travel through particularly inauspicious areas or use riskier methods in order to avoid be-

	Men		Women	
	Marginal effects	Standard error	Marginal effects	Standard error
Age	0.0045**	0.0022	0.0183***	0.0049
Age <sup>2</sup>	-0.0001	0.0001	-0.0002***	0.0001
Married	-0.0219***	0.0074	-0.0231**	0.0136
Head of household	0.0015	0.0082	-0.0334**	0.0188
Previously migrated to the U.S.	-0.0351***	0.0099	-0.0377	0.0308
Previously repatriated or deported	0.0452***	0.0128	0.0523	0.0448
Borrowed money	0.0845***	0.0069	0.0189	0.0146
Crossed the U.S. border alone	-0.0972***	0.0068	-0.031**	0.0182
Hired smuggler	0.0419***	0.0096	0.0942***	0.0216
Fee paid to the smuggler	0.0001	0.0001	0.0001**	0.0001
Border-crossing point				
Agua Prieta	0.1321***	0.0269	0.245***	0.0849
Ciudad Juárez	0.0249	0.0231	0.2501***	0.0785
Matamoros	0.34***	0.0437	0.2307**	0.1277
Nogales	-0.0284	0.0174	-0.0217	0.0542
Nuevo Laredo	0.2504***	0.0373	0.2401**	0.102
Piedras Negras	-0.0145	0.0289	0.1847	0.1285
Sásabe	0.1354***	0.0206	0.2365***	0.0708
Tecate	0.0234	0.0212	0.1073**	0.0598
Returned to:				
Ciudad Juárez	0.0737***	0.021	0.134**	0.066
Matamoros	0.6444***	0.0251	0.399***	0.1087
Mexicali	0.0958***	0.0281	0.0798	0.0571
Nogales	-0.0753***	0.0167	0.0796	0.0577
Nuevo Laredo	0.1412***	0.0323	0.1983**	0.0945
Piedras Negras	-0.0115	0.0265	0.0005	0.0902
Year				
2006	-0.0172**	0.0095	0.0015	0.0244
2007	0.0262***	0.0095	0.0795***	0.0248
2008	0.0076	0.0096	0.033	0.0259
2009	0.0086	0.0093	-0.007	0.0225
2010	-0.005	0.0165	-0.1218***	0.0377
Observations	26 4	79	4 695	

#### *Table 4.* Logistic Regressions Results of Variables Predicting Exposure to the Risk of Death while Crossing the Border during the Most Recent Migration Attempt

*Note:* \*p < 0.10; \*\*p < 0.05; \*\*\*p < 0.01. Additional controls not shown are dummy variables for the quarter, the migrant's highest level of schooling, state of residence, and a constant term. The omitted group for border-crossing point and city returned to is Tijuana in both cases. The Emif Norte includes information on 32 different border-crossing points; however, only the coefficients for the eight most common crossing points are shown.

Source: Authors' calculation based on the Emif Norte (2005-2010).

ing captured by USBP agents since repeat-offenders tend to face harsher sanctions, particularly since the implementation of Operation Streamline (Lydgate, 2010). Furthermore, it is observed that males who report borrowing money in order to travel to the U.S. have a higher likelihood of having been exposed to risk compared to male respondents that did not borrow money. This result suggests that financial constraints play an important role in the risks faced by migrants. Regarding the risks posed by relying on human smugglers, males and females who hired their services are 4.19 and 9.42 percentage points, respectively, more likely to have been exposed to the risk of death than those who did not hire a *coyote*. Finally, with respect to Tijuana, the most dangerous crossings zones were Matamoros and Nuevo Laredo for men, and Ciudad Juárez and Agua Prieta for women.

In regard to migrants that encounter abuse by USBP agents or whose belongings were confiscated and never returned, table 5 shows that for both men and women there is a positive, decreasing relationship between age and the likelihood of encountering aggression. For men, previous experience in entering the U.S. without authorization reduces the likelihood of having faced some type of aggression by 4.97 percentage points, while having previously been returned increases it by 5.48 percentage points. Furthermore, people that choose to cross the border alone or contract the services of a *coyote* are more likely to have encountered some type of aggression, suggesting that individuals that do not cross alone and do not hire a human smuggler are less likely to be victims of abuse by U.S. authorities or have their belongings permanently confiscated. In general, the probability of encountering aggression has been much higher in recent years relative to 2005, as yearly dummy variables are generally positive and statistically significant. On the other hand, few variables are significant predictors of whether a woman will encounter aggression at the hands of USBP agents when apprehended. This may be a product of the broad definition of the variable or of the smaller sample size for women. Among the exogenous variables, age and age squared are statistically different from zero. Furthermore, only one covariate related to the border-crossing point is significant, where

	Men		Women	
	Marginal effects	Standard error	Marginal effects	Standard error
Age	0.0033**	0.0017	0.0158***	0.0038
Age <sup>2</sup>	-0.0001*	0.0001	-0.0002***	0.0001
Married	0.0147***	0.0056	-0.0013	0.0099
Head of household	-0.0246***	0.0063	-0.0067	0.0135
Previously migrated to the U.S.	-0.0497***	0.0068	-0.0237	0.0208
Previously repatriated or deported	0.0548***	0.0107	0.0586	0.036
Borrowed money	-0.03***	0.0056	0.0027	0.0107
Crossed over to the U.S. alone	0.0105**	0.0055	-0.0111	0.0124
Hired smuggler	0.0587***	0.0068	0.0004	0.0145
Fee paid to the smuggler	0.0001**	0.0001	0.0001	0.0001
Border-crossing point				
Agua Prieta	0.0215	0.0155	0.0773	0.0514
Ciudad Juárez	0.0027	0.0156	-0.0207	0.0302
Matamoros	0.0138	0.0178	0.1644	0.1094
Nogales	0.0363***	0.0141	-0.0235	0.0282
Nuevo Laredo	0.0015	0.0162	0.0761	0.0673
Piedras Negras	-0.0414***	0.0145	0.0566	0.0816
Sásabe	-0.0157	0.0111	0.0387	0.0367
Tecate	-0.0065	0.0128	-0.046**	0.0231
Returned to:				
Ciudad Juárez	0.0176	0.0132	0.0183	0.0354
Matamoros	0.2581***	0.0331	0.1205	0.0889
Mexicali	0.0239	0.0161	0.1093**	0.0469
Nogales	-0.0031	0.0111	0.0216	0.0333
Nuevo Laredo	0.3132***	0.0326	0.1769**	0.0873
Piedras Negras	0.0735***	0.0261	-0.01	0.0539
Year				
2006	0.0235***	0.0081	0.0522**	0.0235
2007	0.0206***	0.0075	0.03	0.0197
2008	0.0489***	0.0085	0.0568**	0.0235
2009	0.0309***	0.0077	0.0163	0.0185
2010	0.0838***	0.0167	0.0424	0.0475
Observations	26 4	86	4 68	31

 Table 5. Logistic Regression Results of Variables Predicting Aggression

 Encountered when Detained by USBP Agents during the Most Recent

 Migration Attempt

*Note:* \*p < 0.10; \*\*p < 0.05; \*\*\*p < 0.01. Additional controls not shown are dummy variables for the quarter, the migrant's highest level of schooling, state of residence and a constant term. Omitted group for border-crossing point and city returned to is Tijuana in both cases. The Emif Norte includes information on 32 different border-crossing points; however, only the coefficients for the eight most common crossing points are presented.

Source: Authors' calculation based on the Emif Norte (2005-2010).

migrants that entered the U.S. from Tecate, into the region of east San Diego County, have a lower probability of having been victims of aggression relative to those who entered the U.S. from Tijuana. Moreover, migrants returned to Mexicali and Nogales are less likely to have been victims of some type of aggression compared with those returned to Tijuana.

#### Future Migration Intentions

Table 6 presents the results of the general model, where the relationship between aggregate measures of previous exposure to the risk of death, aggressions encountered when detained by USBP agents, and future migration intentions are explored. Men and women previously exposed to the risk of death are 3.72 and 9.44 percentage points respectively less likely to engage in future migration attempts compared to their counterparts who did not encounter these dangers. Moreover, while aggression encountered when detained is not a statistically significant predictor for women, men who were victims of some type of abuse or whose belongings were confiscated and never returned are 1.34 percentage points less likely to engage in future migration attempts. Additional controls such as previous migration experience or work experience in the U.S. are statistically significant predictors of future migration intentions, while variables related to the highest level of schooling do not seem to influence the migration decision. On the other hand, the lateral deportation variable has a negative, statistically significant effect in the case of men, since it reduces the intent to migrate at a later date by 2.77 percentage points. This result offers tangential evidence that this strategy, called the Alien Transfer Exit Program (ATEP) by the U.S. government, has proved to be a reasonably effective measure in deterring unauthorized migration.<sup>11</sup>

<sup>11</sup> According to USGAO (2010), the objective of the ATEP is to disturb migration patterns and break up human smuggler rings. Deportees are flown hundreds of miles from where they entered the U.S. and returned to a different port of entry in Mexico. The program has been criticized since it leaves migrants in unfamiliar surroundings in the border region where, given the high levels of insecurity in certain Mexican states, they become highly vulnerable to crime.

	Men		Wom	een
	Marginal effects	Standard error	Marginal effects	Standard error
Risk of death while crossing				
the border	-0.0372***	0.0045	-0.0944***	0.014
Aggression at detention	-0.0134***	0.0043	0.0056	0.013
Age	0.0014	0.001	0.0057**	0.0031
Age <sup>2</sup>	-0.0001**	0.0001	-0.0001**	0.0001
Married	0.0021	0.0035	0.0078	0.0096
Head of household	-0.0054	0.0039	-0.0033	0.0129
Schooling				
Elementary	0.0023	0.0066	0.0384**	0.0199
Secondary	0.0068	0.0067	0.0268	0.0219
High school	0.0088	0.0068	0.028	0.0208
University	-0.0123	0.0154	0.0043	0.0352
Previously migrated to the U.S.	0.0195***	0.0044	0.0561***	0.0172
Previously repatriated or deported	-0.0197***	0.0063	-0.0741*	0.0406
Worked in the U.S.	-0.0241***	0.0057	0.0185	0.0182
Borrowed money	0.0173***	0.0038	0.0055	0.0107
Crossed over to the U.S. alone	-0.0232***	0.004	0.0022	0.0112
Hired smuggler	-0.0009	0.0049	-0.0358**	0.0166
Price paid to the smuggler	0.0001	0.0001	0.0001***	0.0166
Lateral deportation	-0.0277***	0.007	-0.0234	0.0365
Year				
2006	-0.0155**	0.0069	-0.0094	0.0203
2007	-0.0124*	0.0063	-0.0217	0.0199
2008	-0.0248***	0.007	-0.1166***	0.0281
2009	-0.0959***	0.007	-0.1732***	0.0261
2010	-0.1376***	0.009	-0.0776	0.0659
Observations	26 4	81	4 687	

 Table 6. Logistic Regressions Results of Exposure to the Risk of Death

 and Aggression Encountered when Detained by USBP Agents Predicting

 Future Migration Intentions (General)

*Note:* \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01. Additional controls not shown are dummy variables for the migrant's state of residence, border-crossing point, city were the migrant was returned to, quarter in which the interview was held and a constant term.

Source: Authors' calculation based on the Emif Norte (2005-2010).

Table 7 presents results in which the main exogenous variables of interest, in other words, previous exposure to the risk of death and aggression encountered when detained, are presented in a disaggregated manner. In regard to risk, the regressions confirm the expectation that migrants exposed to different kinds of dangers have a lower likelihood of engaging in future migrant attempts. Specifically, previous exposure to extreme temperatures lowers the desire to migrate by 3.37 percentage points for men and 6.59 percent for women, while dehydration lowers it by .025 probability points for men and .076 probability points for women, whereas exhaustion decreases it by 2.81 percentage points for men and 5.48 percent for women, among others. Amid the categories that appear to produce a positive effect, men and women who report being exposed to the risk of drowning are 2.35 and 6.06 percentage points, respectively, more likely to intend to migrate at a later date. Moreover, people who were exposed to "other" types of risks also present a heightened likelihood of intending to migrate in the future.<sup>12</sup> Since the results do not reflect a causal relationship, it is likely that for many migrants, being previously exposed to the risk of death is not a strong enough incentive to deter them from attempting to enter the U.S. illegally at a later date. As argued by Cornelius and Salehyan (2007:147), with successful crossings being made constantly, migrants perceive their probability of dying to be low, even though there is a general consensus that the likelihood of dying while attempting to cross the border has increased over time.

With respect to the connection between aggressions encountered when detained by USBP agents and future migration intentions, table 7 shows that the negative relationship between these two variables is mainly driven by the "confiscation of belongings" category, where this covariate decreases the probability of intending to migrate by 4.78 percentage points for men and 9.75 percentage points for women. This suggests that the reluctance of migrants to illicitly attempt to enter the U.S. at a later date may be more the result of financial constraints, particularly in the short

<sup>&</sup>lt;sup>12</sup> The category other type of risk includes respondents who, when asked about the type of risk they were exposed to, answered "other" from 2005 to 2010. It also includes migrants who stated in the 2010 survey that they were exposed to the risk of death caused by: wild animals, traffic accidents, asphyxiation, abandonment by a smuggler, or assault and robbery.

	Men		Women	
	Marginal	Standard	Marginal	Standard
	effects	error	effects	error
Risk of death while crossing the border				
Extreme temperatures	-0.0337***	0.0067	-0.0659***	0.0183
Lack of food	-0.0143**	0.0066	-0.0371**	0.0205
Dehydration	-0.0251***	0.0066	-0.0755***	0.0218
Exhaustion	-0.0281***	0.0076	-0.0548***	0.0192
Drowning	0.0235***	0.0065	-0.0606**	0.0309
Lost	-0.0492***	0.0136	-0.0232	0.0337
Other type of risk	0.0179***	0.0065	0.0438**	0.0175
Aggression at detention				
Physical	0.0069	0.0066	0.0432	0.0397
Verbal	0.0054	0.0047	0.0106	0.0156
Confiscation of belongings	-0.0478***	0.0103	-0.0975**	0.0401
Other type of problem	-0.0463**	0.0222	0.0155	0.0421
Age	0.0013	0.001	0.0053**	0.003
Age <sup>2</sup>	-0.0001*	0.0001	-0.0001**	0.0001
Married	0.0013	0.0034	0.0085	0.0095
Head of household	-0.005	0.0038	-0.0033	0.0128
Schooling				
Primary	0.0023	0.0064	0.0354*	0.02
Secondary	0.0068	0.0066	0.0251	0.0219
High school	0.0089	0.0066	0.0256	0.021
University	-0.0094	0.0147	-0.0029	0.0368
Previously migrated to the U.S.	0.0182***	0.0044	0.0537***	0.0174
Previously repatriated or deported	-0.0171***	0.006	-0.0692*	0.0398
Worked in the U.S.	-0.0192***	0.0054	0.0242	0.0174
Borrowed money	0.0153***	0.0037	0.0052	0.0106
Crossed over to the U.S. alone	-0.0211***	0.0039	0.004	0.0111
Hired smuggler	0.0002	0.0049	-0.0353**	0.0164
Fee paid to the smuggler	0.0001	0.0001	0.0001***	0.0001
Lateral deportation	-0.0258***	0.007	-0.0161	0.0384
Year				
2006	-0.0146**	0.0068	-0.003	0.0195
2007	-0.0124**	0.0062	-0.0134	0.0192
2008	-0.0234***	0.0068	-0.0995***	0.0269
2009	-0.0908***	0.0088	-0.1545***	0.0254
2010	-0.1365***	0.0192	-0.0611	0.0612
Observations	26 481		4 687	

 Table 7. Logistic Regression Results of Exposure to the Risk of Death

 and Aggression Encountered when Detained by USBP Agents Predicting

 Future Migration Intentions (Detailed)

*Note:* \*p < 0.10; \*\*p < 0.05; \*\*\*p < 0.01. Additional controls not shown are dummy variables for the migrant's state of residence, border-crossing point, city were the migrant was returned to, quarter in which the interview was held and a constant term.

Source: Authors' calculation based on the Emif Norte (2005-2010).

run, rather than the psychological or physical damage caused by exposure to physical, verbal, or other types of abuse at the hands of USBP agents, since they are not statistically significant variables.

## Conclusions

This study has shown that around one-sixth of Mexican undocumented immigrants claim to have been victims of some form of aggression at the hands of USBP agents while around one-fourth report having been exposed to the risk of death while attempting to enter the U.S. through its border with Mexico. While the present study does not claim to find a causal relationship, the results suggest that individuals who were previously exposed to the risk of death are less likely to migrate in the future compared to migrants whose life was never in jeopardy. On the other hand, being a victim of abuse when detained by USBP agents does not seem to be related to the future migration intentions of unauthorized migrants. Nevertheless, individuals whose belongings were confiscated and never returned are less likely to migrate to the U.S. at a later date compared to migrants that did not encounter such difficulties.

Although undocumented migration flows from Mexico to the U.S. have decreased in recent years, due to its higher earnings potential, the U.S. will continue to offer powerful economic incentives for Mexican workers. Since the demand for cheap labour by U.S. employers easily surpasses legal immigrant and work visa quotas, individuals that are unable to gain legal entry into the U.S. will continue to resort to unlawful means in their quest to enter the country, risking their life and well-being in the process.

In order to diminish the adverse and potentially lethal effects encountered by unauthorized migrants when attempting to cross the border, a series of complementary measures could be implemented. As a means of reducing the exposure to the risk of death among migrants, the U.S. and Mexican governments should allocate additional resources to USBP search and rescue teams and the *grupos* Beta, respectively, and increase their support to private altruistic efforts along the border. On the other hand, in order to decrease the number of migrants who report being victims of some type of abuse or aggression when apprehended, further training should be provided for USBP and ICE agents, accompanied by appropriate monitoring of their treatment of detained migrants. Lastly, sustained growth by the Mexican economy and the implementation of a comprehensive legal temporal-worker program which adapts to U.S. labour demand surpluses and shortages would benefit both countries and reduce the flow of migrants who endanger their lives in their attempt to enter the United States.

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