



# Addition by Subtraction? A Longitudinal Analysis of the Impact of Deportation Efforts on Violent Crime

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Contemporary criminological research on immigration has focused largely on one aspect of the immigration process, namely, the impact of in-migration (i.e., presence or arrival) of foreign-born individuals on crime. A related but understudied aspect of the immigration process is the impact that the removal of certain segments of the foreign-born population, and specifically undocumented or deportable aliens, has on aggregate levels of criminal violence. In an effort to cast new light on the association between forced out-flows of immigrants and crime, we begin with descriptive analyses of patterns of deportation activity across the continental United States over an eleven-year period (1994–2004). We then examine the relationship between deportation activity and violent crime rates in a multilevel framework wherein Metropolitan Statistical Areas (MSAs) are situated within border patrol sectors. The results of dynamic regression modeling indicate that changing levels of deportation activity are unrelated to changing levels of criminal violence for the sample of MSAs for the national at large. However, we also detect significant interactions by geographic location for selected violent offenses. For MSAs within sectors along the Mexican border, the deportation measure exhibits a significant negative effect on one indicator of criminal violence—the aggravated assault rate. For MSAs within non-border sectors, the effect of the deportation measures is significantly positive for the violence crime index and the aggravated assault rate. Overall, our analyses indicate that the relationship between deportation and criminal violence is complex and dependent on local context.

Immigration, and particularly the arrival of extra-legal or undocumented individuals, is a cornerstone of national discussions and public policy debates. The topic of illegal immigration elicits strong responses from both immigration advocates and opponents alike, with both sides recognizing the need for an overhaul of current immigration policy. Criminologists and immigration scholars have pointed out that in the recent past the United States has adopted increasingly punitive and militaristic responses for securing the border and stemming the flow of undocumented

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immigrants into this country (Andreas 2000; Martinez 2002; Martinez, Stowell, & Cancino 2008; Massey, Durand, & Malone 2002; Nevins 2002). The growing commitment of money and resources for the purposes of enhancing border security, of which the forced removal of undocumented immigrants is a key component, underscores the belief that there is a direct connection between illegal immigration and public safety. For example, in less than a decade the annual appropriations for border-related security measures have grown from approximately \$1 billion (FY 2002) to over \$10 billion (FY2010) (see Massey, Durand, & Malone 2002: 115). Furthermore, as Nevins (2002: 11) argues, undocumented immigration, and more specifically the individuals who arrive (or remain) in this country without authorization are often portrayed "not only as lawbreaker[s], but more importantly as a threat to national sovereignty."

The legislation in Arizona passed in 2010 (Senate Bill 1070) provides an illuminating case study of the widely held perceptions about illegal immigration and its consequences for the receiving society. According to the language of the bill, the intent of the law is "to make attrition through enforcement the public policy of all state and local agencies" and to "discourage and deter the unlawful entry and presence of . . . persons unlawfully present in the United States." Concerns over the increased levels of criminal violence and the compromised public safety caused by illegal immigration were cited as some of the principle considerations underpinning this legislation. In her official statement regarding the legislation, Arizona's Governor Jan Brewer indicated that she became convinced to sign the bill into law, in part, due to her concerns about "border-related violence and crime due to illegal immigration." <sup>1</sup>

The belief expressed by the Governor is not limited to communities adjacent to the United States/Mexico border. In fact, it is common for politicians and pundits to make similar claims regarding the detrimental impact of illegal immigration on levels of violence (see Lee & Martinez 2009; Martinez 2006; Unz 2010). The national concern resonates with the sentiment of Arizona lawmakers—that increased violence is the natural outcome associated with the presence of undocumented immigrants. The perceived violent tendencies of undocumented immigrants have

<sup>&</sup>lt;sup>1</sup> http://tucsoncitizen.com/mark-evans/archives/236 (retrieved August 27, 2013). Generally, this law seeks to reduce the number of undocumented immigrants in the state of Arizona. The provisions of the statute allow law enforcement officers to determine the immigration status of individuals reasonably suspected of being undocumented, and for all persons arrested. To document immigration status, individuals are required to present valid local, state, or federal identification to law enforcement agents (see Federation for Federal Immigration Reform (FAIR) 2010). More recently, the Supreme Court upheld the constitutionality of this identification provision (Beard Rau 2012, see also http://www.supremecourt.gov/opinions/11pdf/11-182b5e1.pdf).

prompted some immigration opponents to argue that illegal immigration has made American society "more deadly" than were the "battlefields of Iraq" (see Sampson 2008: 29). Although less incendiary, recent public opinion polls find large-scale support for the law enacted in Arizona. According to a study conducted by the New York Times, nearly 80 percent of American adults felt that the country should do more to keep undocumented immigrants out of the country, and over 50 percent characterized Arizona's statute as "about right" (Archibald & Thee-Brenan 2010). Such pervasive public support for Arizona's law and opposition to illegal immigration more generally, illustrate how deeply held are concerns surrounding illegal immigration in the national consciousness. Further, as the above discussion indicates, intensified efforts to remove undocumented immigrants are often justified with reference to alleged benefits in reducing criminal violence. Taken together, this negative public perception is highly consequential because it encourages punitive law enforcement policies in response to undocumented immigration. However, there is actually little evidence on the nature of the relationship—if any—between deportation activity on the part of the government and violent crime rates.

The current study addresses the issue of whether, and to what extent, increases in deportation activity are associated with changes in levels of criminal violence. In our estimation, the picture is likely to be complex and not easily deciphered, due in part to geographic particularities associated with deportation efforts. The current study is an initial assessment of how deportation may affect rates of violent crime. We address this question using a number of different approaches. First, we rely on descriptive techniques to highlight geographic trends in deportations and to detail trends in violent crime in areas of the country with varying concerns about involvement with deportation. We then employ a longitudinal analytical design to estimate regression models based on pooled cross-sectional time-series data for a large sample of metropolitan areas nested within border patrol sectors for the years 1994–2004. The results from these analyses, although instructive, represent an initial attempt to quantify the impact of deportation on levels of criminal violence. Although the available data allow us to examine only a limited aspect of deportation activity (as explained below), our research represents one of the first studies to generate quantitative evidence relevant to a subject that continues to galvanize public opinion, but one that has not received much scholarly attention. Put simply, the current study examines only one component of a complex issue, the association between illegal immigration and crime. But it is one that merits analysis.

# Theory and Previous Research

The topic of immigration and crime has been of longstanding interest in criminology. The classical Chicago School theorists identified the high levels of immigration at the time (the early decades of the twentieth century) as one of the key structural conditions associated with urban growth that contributes to high crime rates in certain neighborhoods. Social disorganization theory holds that immigration influences crime through its influence on the social structural composition of communities (Bursik 2006; Martinez & Lee 2000). Disorganization theory identifies areas that are most susceptible to crime as those with high levels of socioeconomic disadvantage, racial/ethnic diversity, and residential instability (Shaw & McKay 1942). According to the logic of the theory, immigration contributes to levels of criminal deviance because it perpetuates structural disruption (i.e., poverty and residential turnover). Further, areas with high immigrant concentrations are conducive to crime, due to the concomitant cultural and language differences between ethnic groups, which present obstacles to the formation of strong informal control mechanisms that help to curb levels of criminally deviant behavior (see Thomas & Znaniecki 1920).

Recent criminological studies—across a variety of contexts and using a variety of methodological approaches—have not offered strong evidence that immigration affects crime as outlined in disorganization theory. Much previous research has focused on neighborhood-level predictors of homicide victimization in cities with large immigrant populations and has consistently found that immigration has a null or inverse association with levels of violence (Lee 2003; Lee, Martinez, & Rosenfeld 2001; Martinez 2002; Martinez & Lee 2000; Martinez, Stowell, & Cancino 2008; Sampson & Bean 2006; Sampson, Morenoff, & Raudenbush 2005; Stowell & Martinez 2007; see also Lee & Martinez 2009; Martinez 2008; Peterson & Krivo 2005 for more comprehensive reviews).

A similar pattern of findings is reported in studies that concentrate on larger areas (cities, metropolitan areas), which employ both cross-sectional and longitudinal research designs. For example, in their analyses of a national sample of metropolitan areas, Reid et al. (2005) find that immigration has either a null or negative association with levels of property and violent crime. Another metropolitan-level study conducted by Butcher and Piehl (1998), which focuses on changes in the size of the immigrant population between 1980 and 1990, finds little quantitative support for the hypothesis that growth in the immigrant population is positively associated with levels of crime. Although the period under investigation in the Butcher and

Piehl (1998) study concentrates on a decade that predates the most recent wave in immigration (1980–1990), it is of interest to the present study because of its consistency with more contemporary research on this topic.

Criminologists have also taken up the question of how levels of criminal violence are shaped by changes in immigration. Sampson and Bean (2006) raised the question of whether increases in immigration may be one of the factors that has contributed to the well-documented reductions in violence in the United States (see also Blumstein & Wallman 2000). There are relatively few longitudinal studies in the research literature, yet there is a high degree of similarity in their findings. In a study that employs annual metropolitan-level data, Stowell et al. (2009) find that changes in immigration predict lower levels of violent crime, aggravated assault, and robbery rates; while the effect is null (negative but not statistically significant) for changes in rates of homicide and rape. Similarly, Ousey and Kubrin (2009) report that changes in immigration between 1980 and 2000 are associated with significant reductions in city-level violent crime rates. Interestingly, the authors also find evidence that the impact of immigration helps to reduce crime because "immigration appears to have a dampening influence on family instability" (Ousey & Kubrin 2009: 464). In a study of San Diego neighborhoods over the same period, Martinez, Stowell, and Lee (2010) find an inverse relationship between changes in the nativity composition of communities and levels of overall homicide victimization. In addition, the results from this study indicate that immigration is linked to reductions in lethal violence for Latinos and non-Latino whites, a finding that is consistent with the notion that the beneficial impact of immigration is not limited to foreign-born individuals (Martinez, Stowell, & Lee 2010; see also Sampson & Bean 2006). Based on these findings, the evidence suggests that immigration in the contemporary era is likely to be associated with lower levels of criminal violence.

Despite the accumulating body of work on crime and immigration in general, research on the relationship between *illegal* immigration and crime and on the benefits of intensified enforcement of immigration statutes has been limited. The case for an appreciable impact of the deportation of illegal immigrants on levels of criminal violence is typically not articulated with reference to explicit criminology theory, but it invokes well-established criminological processes. The most common argument is predicated on the logic of incapacitation. There is widespread belief among the general public and many legislators that illegal aliens constitute a group at high risk of violent offending. It follows that levels of criminal violence should fall when illegal aliens are effectively incapacitated through apprehension and deportation.

The findings regarding the impact of undocumented immigration on levels of criminal violence are at odds with this widely held sentiment (see Hagan & Palloni 1999; Nevins 2002). The results from individual-level analyses indicate that unauthorized aliens (including those who entered the United States illegally and those with expired travel visas) do not pose an increased risk to public safety (Hickman & Suttorp 2008; see also Valenzuela 2006). Specifically, Hickman & Suttorp (2008) find no significant differences in terms of the timing, frequency, or occurrence of recidivism between legal and deportable aliens. A study conducted by Hagan and Palloni (1999), which focuses on the impact of the presence of extra-legal immigration on metro-level arrest rates, does not offer strong support for the notion that the presence of undocumented immigrants corresponds with increased levels of criminal involvement. Because there has been relatively little research on the subject of undocumented immigration and crime, the findings from these studies need to be interpreted with caution.

## **Deportation and Public Policy**

Despite the lack of empirical research, public policies regarding immigration enforcement and border security assume that deportation efforts, as part of a broader program to curb illegal immigration, will reduce levels of criminal violence. In response to public opposition to the presence of undocumented immigrants, a recent trend has been for state legislatures to consider stronger, more punitive immigration policies in an effort to dissuade migrants from entering the United States illegally. Many immigration opponents support legal initiatives designed to "make life so difficult for illegal immigrants" that they will either leave the country, or alternatively, decide against migrating to the United States altogether (Preston 2011: A15; see also Passel & Cohn 2011).<sup>2</sup> This position is known as "attrition through enforcement," which advocates for limiting the accessibility for undocumented immigrants in a number of domains, including education (admissions/receipt of financial aid), employment, and the ability to obtain a driver's license. Interestingly, a number of state and federal legislators are proposing laws seeking to end the issuance of

<sup>&</sup>lt;sup>2</sup> Research suggests that one result of enhanced border security is that such efforts have disrupted the circular migration patterns common among undocumented immigrants, thereby increasing the stock of unauthorized immigrants in this country. Currently, undocumented immigrants tend to stay in the United States for longer periods of time, or attempt to establish permanent residency (see Cornelius 2005; Massey, Durand, & Malone 2002). It is not clear the extent to which this shifting migratory pattern affects the likelihood of deportation or whether the point in the migration process in which deportation occurs may have a differential impact on levels of violent crime.

birthright citizenship, or the automatic granting of American citizenship to children of undocumented immigrants who are born in the United States, as outlined in the Fourteenth Amendment. When considered together, such efforts resonate closely with conventional wisdom regarding undocumented immigration; that reductions in criminal violence are likely if those with a higher propensity to offend are either deported, prevented from entering the country, or if individuals repatriate due to the harsh conditions experienced while residing in the United States. Such approaches reflect the pervasive negative public perception regarding undocumented immigration. That is, the punitive responses to immigration are grounded in this negative sentiment, which is used to legitimate stringent law enforcement and border security policies.

There are also reasons to anticipate that the impact of disrupting the flow of immigrants into the United States-legal and otherwise-might not be so benign. It is possible to identify potentially deleterious consequences for the economies of the communities of destination. The willingness of many undocumented immigrants to work under less-than ideal conditions (i.e., menial, labor-intensive, dangerous) often for less than market wages, in generally undesirable positions, suggests an inelastic quality to labor markets in the areas that attract migrant workers (see Freeman 1996; Valenzuela 2006). Despite the availability of such jobs, there may not be a ready supply of labor seeking to fill the positions left vacant as a result of deportation activity. More generally, because of labor force inelasticity, it stands to reason that deportation efforts (and the resultant absence of replacement labor for many jobs) may negatively affect the businesses that were to employ these individuals, and by extension, those established in support of (and patronized by) these companies and their employees.

Recent research on the link between immigration and economic robustness is consistent with this argument. For example, a report issued by the Fiscal Policy Institute (2009: 1) finds that since 1990 "metropolitan areas with the fastest economic growth were also the areas with the greatest increase in immigrant share of the labor force." The reverse was also true, as areas in which immigrants were the smallest share of the work force showed the slowest economic growth over the same period. These facts suggest that the presence of foreign-born individuals (independent of immigration status) may "encourage new forms of social organization that mediate disorganizing influences" in communities (Lee 2003: 131; Martinez 2006; see also Carr, Lichter, & Kefalas 2012).

The findings discussed above hint at a broader theme—identifying the social benefits associated with immigration—which has captured the attention of urban researchers and immigration

scholars more broadly. Although the particular explanations for the source of the positive outcomes associated with immigration vary, research has consistently revealed that immigration carries positive consequences for the areas into which foreign-born individuals settle. As Waldinger (1989: 222) argues, immigration tends to spur economic growth generally by providing both "a source of low wage labor [and] consumers of services mainly produced and provided locally." Recognition of this principle is observed in a number of recent reports, which connect the vitality of city and regional economies to sustained immigration flows (see Austin 2006; Singer 2012).

The fortuitous consequences of immigration are related, but not limited, to labor market participation and economic outcomes. Drawing from the sociological literature, researchers describe immigration as a "constructive force in many cities . . . [promoting] the revival of language and traditional social controls, the strengthening of networks, and the emergence of new community institutions" (Moore & Pinderhughes 1993: xxiv). Both individual and macro-level studies document the ways in which immigration may have a stabilizing influence on communities. For example, there is evidence to suggest many immigrants arrive in the United States oriented for involvement through conventional channels and a willingness to "defer gratification in the interest of long-term success" (Tonry 1997: 21; see also Model 1995; Portes & Rumbaut 2001). The adherence to culturally prescribed normative frameworks has prompted some to view immigration as an important "booster shot" of traditional morality into American society. As Brooks (2006) contends, immigration has contributed to "social repair . . . [because] immigrants work hard. They build community groups. They have traditional ideas about family structure," all of which have clear social benefits.

Another characteristic of many immigrant communities is the existence of strong social networks, which assist with the "process of adjustment and adaptation" (Palloni & Morenoff 2001: 160). Such networking is a characteristic of ethnic enclaves, which are ethnically based communities that cater to the needs of a given ethnic group and that also have ties to a city's broader social and economic structures (Logan, Alba, & McNulty 1994; Zhou 1992). More specifically, researchers contend that living and working in ethnic enclaves offers returns to human capital, and prospects for upward social mobility, that are not available in the primary labor market (Portes & Bach 1985; Wilson & Portes 1980). As an example, Zhou (1992) argues that enclaves insulate foreign-born workers from discrimination that they may face for not speaking English and that co-ethnic employment is more psychologically satisfying. It is also the case that the types of jobs available in enclaves are both physically demanding and the workdays are quite long (Light & Bonacich

1988; Zhou 1992; see also Sanders & Nee 1987; Venkatesh 2006). Nevertheless, according to the immigrant enclave perspective, such communities provide access to stable employment and other resources not otherwise available to immigrants. With the arrival of new residents, community resources are expanded and strengthened, contributing to higher levels of social integration.

Although these perspectives approach the understanding of immigration in different ways, they share in the notion that immigration is not a disruptive social process. Rather, the research shows that there are observable benefits for the conditions of the communities into which immigrants settle and for the individuals living within them. In part, this may be due to differences in social and human capital and "optimism" that immigrants possess (see Kao & Tienda 1995). Yet it would be a mistake to overlook the role that broader social context plays in these outcomes. Individual characteristics are certainly important factors in assimilation and capitalizing on opportunities in American society. However, research suggests that immigration can carry with it wider benefits for communities, which often result in robust, revitalized, and safer communities. Assessing the explanatory power of any one of these theoretical offerings is beyond the scope of the present study. Still, following the logic of these perspectives, one might expect that the lack of an appreciable presence of immigrants, including undocumented aliens, would be associated with macro-level conditions known to be associated with criminal violence (i.e., poverty, unemployment, disorganized communities).

In short, plausible theoretical arguments can be advanced for either positive or negative overall and geographically specific effects of deportation on levels of violent crime. Alternatively, the net impact of deportation efforts might prove to be trivial reflecting a mix of these countervailing processes or some other, unanticipated processes. In our statistical analyses, we examine the effect on violent crime rates of one important dimension of deportation activity: the identification of "deportable aliens" by the federal government, which is an initial official step in the deportation process.

#### Data and Methods

Our analysis builds upon prior work on the relationship between immigration and violent crime (Stowell et al. 2009). The prior study focused on the "in-flow" of immigration, that is, annual changes in the relative size of the immigrant population for a sample of large Metropolitan Statistical Areas (MSAs) over the 1994–2004 period. The present study adopts MSAs as the primary units of analysis and employs the same data sources for all

indicators except for information about deportation activity. Specifically, we make use of data compiled through the Current Population Survey (CPS) and provided by the Integrated Public Use Microdata Series (IPUMS). The CPS is a nationally representative sample of households which surveys individuals aged 15 and older (Noonan, Smith, & Corcoran 2007). To ensure stability of estimates, only metropolitan areas in the continental United States with populations of 500,000 or greater in the year 2000 were included in our analyses. Imposing this population threshold yields a final sample size of 102 MSAs. As Stowell et al. (2009: 612) argue, these data are ideal for a study such as this because they provide annual, geographically specific information on an "array of demographic and socioeconomic factors." By introducing measures of governmental deportation efforts to the regression models, we are able to extend earlier analyses by assessing the potential consequences associated with the forced "out-flow" of immigrants, a process which has not been widely studied.

The data on deportation efforts are collected at a unique geographic scale—the border patrol sectors as established by the U.S. Department of Homeland Security (see U.S. Immigration and Naturalization Service 1999, 2000, 2002a, 2002b, 2003; U.S. Department of Homeland Security 2003, 2004, 2006a, 2006b, 2008, 2010). These are fairly large jurisdictions some encompassing portions of states, while others include multiple states. A map of border patrol sectors is depicted in Figure 1. For our regression models, we employ a multilevel design, wherein MSAs are located within border sectors, and the data on immigration enforcement actions are assigned to each MSA within sectors as contextual variables.

The specific enforcement action that can be measured with these data is the identification of "deportable aliens." A deportable alien is defined as "an alien who has been admitted into the United States but who is subject to removal pursuant to provisions of the Immigration and Nationality Act" (U.S. Department of Homeland Security 2008: 2). Reasons for removal include attempted entry into the United States without proper documents or through fraud or misrepresentation, being convicted of a crime, failing to maintain status, having been removed previously, being present without authorization, for national security reasons, participating in smuggling or aiding illegal activity (U.S. Department of Homeland Security 2006a: 96).

The removal process begins with an arrest of the suspect by local law enforcement or Detention and Removal Operations (DRO) officers, which is the primary enforcement arm of Immigration and Customs Enforcement (U.S. Department of Homeland Security 2010). After the arrest, the suspect is interviewed by DRO officers to determine if custody is warranted to assure the

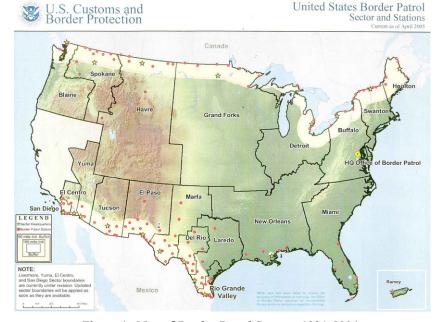


Figure 1. Map of Border Patrol Sectors, 1994–2004.

individual will appear in immigration court. DRO staff can initiate an expedited removal process, which does not require a hearing in an immigration court, if they determine the individual does not have proper documentation. For those aliens possessing proper documentation, a court hearing is conducted before an immigration judge. The immigration hearing can result in a variety of outcomes including "entry of an order of removal, adjustment to lawful permanent resident status, grant of voluntary departure, or termination of proceedings" (2010: 2). Individuals ordered to leave the country are transferred back to DRO custody subsequent to their formal deportation.

The current study does not focus exclusively on the potential overall effects of levels of deportation activity on changes in crime rates. We also consider the possibility that the impact of deportation on crime may vary geographically. Although the overall pattern has shown some convergence over time, much of the deportation activity occurs in the areas adjacent to the United States/Mexico border. This represents a substantively important consideration because to the extent that there is a "tipping point" or threshold for the effects of deportation to be manifested, a statistical interaction with proximity to the border might be expected. Any effect of deportation activity—either negative in sign reflecting incapacitation or positive reflecting social disruption—might be more pronounced in border sectors in comparison with non-border sectors.

Our measure of enforcement activity is the count of deportable aliens identified in a given patrol sector in a specified year. It would be useful to be able to compute an indicator of "certainty of deportation" as well, but that would require estimates of the actual numbers of illegal immigrants—the "population at risk." Such data are not available. As described below, our regression models include controls for overall population size of MSAs and the size of the enumerated immigrant population.

## **Dependent Variables**

We examine the effect of deportation on multiple indicators of criminal violence for the sampled MSAs: the overall violent crime index as well as the index's component crimes of criminal homicide, robbery, forcible rape, and aggravated assault. Each of the indicators of criminal violence was constructed using data for crimes known to the police, as provided by the Federal Bureau of Investigation's Uniform Crime Report (UCR). The crime rates for the period under study were extracted from the Interuniversity Consortium for Political and Social Research. The violent crime index and the specific violent crime rates are expressed per 100,000 based on population totals as reported by the UCR.

# **Independent Variables**

The primary independent variable is the number deportable aliens identified per border patrol sector as reported by the U.S. Department of Homeland Security. As noted above, border patrol sectors are fairly large jurisdictional areas. They were originally created by the U.S. Office of Immigration and Naturalization Services but are currently overseen by the Office of Immigration and Customs Enforcement. Due to our expectations that border patrol activities would be heightened in areas along the Mexican border, we also include a dichotomous variable, Border, which reflects whether sectors share a border with Mexico.

Our regression models include an array of additional predictors that are commonly included in analyses of metropolitan violent crime rates.<sup>3</sup> Consistent with previous research, the following variables were constructed using annual, metro-level CPS data. The Immigration Concentration Index is a measure that has been used

<sup>&</sup>lt;sup>3</sup> Following conventional practices in the literature on immigration and crime, we treat common structural predictors of crime as control variables in the regression models to minimize the risk of misinterpreting spurious relationships as causal effects. It is important to note, however, that some of the predictors might conceivably operate as mediating variables. The regression results for the deportation measure might thus be regarded as potentially conservative estimates of causal influences.

extensively in previous research focused on the impact of the "inflow" of immigrants (Sampson et al. 1997; Sampson & Morenoff 2004; Stowell et al. 2009). This index represents the summed z-scores for the percent Latino and the percentage of the population who are foreign born. The foreign-born population was constructed using the "nativity" IPUMS variable and includes individuals born outside of the United States.<sup>4</sup>

We also include the following control variables: population (logged), adult/child ratio (number of individuals aged 18 and older divided by the number of individuals under age 18), percent non-Hispanic black, percent male (percent of the population who are males aged 18–24), percent unemployed (percent of labor force population who are unemployed), percent divorced (percent of the population aged 15 and older who are divorced). Additionally, we include a measure of residential instability, measured by the percent of the population who are living in a different house than they were 1 year ago and the percent living in owner-occupied housing units.

An extensive body of research has documented a dramatic crime drop in the United States during the 1990s. To control for this, we include two final variables that have been identified as potentially important factors for explaining this drop in crime police size and a proxy for firearm availability (Levitt 2004; Rosenfeld 2002). Police size is measured as the total number of sworn officers per 1000 population based on the 1994–2004 Uniform Crime Reporting program: Police Employee (LEOKA) Data. Researchers on firearms generally agree that, in the absence of accurate administrative data or representative survey data, the most reliable proxy measure of firearm availability is the proportion of suicide deaths where guns were used (Azrael, Cook, & Miller 2004; Cook & Ludwig 2006; Kleck 2004).<sup>5</sup> Although criminologists have not reached a consensus on the effect of firearm availability on levels of violence, we include the firearm indicator to be consistent with previous studies of immigration and criminal

<sup>&</sup>lt;sup>4</sup> We recognize that the issue of undocumented immigration is often conflated with immigration more generally. We explored the possibility of including a proxy for the number of undocumented immigrants in our models, following a methodology that has been used in previous research (see Hagan & Palloni 1999; Passel 2005). However, because the annual estimates tend to be unstable, we were unable to include such a measure in our regression models. As Passel (2005: 10) observes, due to "inherent uncertainties in the residual technique, the difference in successive annual estimates of the unauthorized population is not a valid measure of growth." The development of more reliable estimates of this segment of the foreign-born population is certainly an important issue that should be addressed in future research.

<sup>&</sup>lt;sup>5</sup> Kleck (2004) reports that the suicide proxy measure is valid for cross-sectional research but advises against using any of the standard proxies for longitudinal analyses. In contrast, Azrael et al. (2004) and Cook and Ludwig (2006) conclude that the percentage of suicides involving guns is a useful proxy for both kinds of analyses.

violence (Stowell et al. 2009). We constructed such a proxy measure using data from the Multiple Cause-of-Death Mortality Data from the National Vital Statistics System of the National Center for Health Statistics.<sup>6</sup>

Many of the socioeconomic indicators at the MSA level are highly correlated. In order to circumvent multicollinearity among the measures of socioeconomic status, we followed standard procedures and performed exploratory factor analysis. The results indicated that the percent college educated (0.765), household income (0.717), percent of households headed by females (0.673), and percent below poverty (0.818) loaded highly on the same component, so we created a factor score labeled "economic resources." With an average eigenvalue of 2.50, this indicator explains, on average, 58.97 percent of the variation in economic resources.

The two indicators of residential stability (percent owner occupied and percent of the population who moved) are also highly correlated. We therefore computed an index using the summation of the z-scores. All other variables are entered into the regression as single-item covariates. Finally, all variables (save the border dummy) are measured as first differences for change-change dynamic time-series models.

#### **Statistical Procedure**

Unit root tests indicate that sector-specific crime rates and deportation counts are difference stationary processes, so they (and all other independent variables) are measured as annual change (Raffalovich 1999). Our data contain several layers of nesting: years are nested within MSAs, and MSAs are nested within sectors. We do not estimate three-level models, however, because within level sample size is very small (9 years within MSAs, an average of nine MSAs within sectors, and 17 sectors). Instead we estimate a two-level model (years within MSAs) and aggregate over sectors. We do, however, distinguish two types of sectors: those adjacent to the Mexican border and those not adjacent.

Following Raffalovich (1999), we estimate a fixed effects variable parameter time series regression model:

<sup>&</sup>lt;sup>6</sup> Another factor that has been cited as a likely cause of both the rise and fall of violent crime is the operation of crack cocaine markets (Blumstein, Rivara, & Rosenfeld 2000). In an effort to control for this variable in our earlier study, we collected data on arrest rates for the sale and manufacture of cocaine from the Uniform Crime Reporting Program County-Level Detailed Arrest and Offense Data for our study period. Unfortunately, after aggregating to the MSA level, we found that this measure contains significant missing data for strategic cases in a study of the effects of immigration. Specifically, data are not available for the seven Florida MSAs for 1996–2000. Alabama and South Carolina MSAs had missing data for 1994, Chicago failed to report data from 1995 on, and the Milwaukee MSA did not report arrest data for 1998–2000.

$$\Delta C_{i,t} = \beta_{i,0} + \beta_{i,1} \Delta D_{i,t} + \Sigma_k \beta_{i,k} \Delta X_{k,i,t} + \varepsilon_{i,t}$$
 (1)

where  $\Delta C_{i,t}$  is annual change in the crime rate for MSA i in year t,  $\Delta D_{i,t}$  is annual change in deportations in the sector containing MSA i in year t,  $\Delta X_{k,i,t}$  are annual change in control variables,  $\varepsilon_{i,t}$  is a stochastic error term assumed to be AR(1).  $\beta_{i,0}$ ,  $\beta_{i,1}$ ,  $\beta_{i,2}$ , and the  $\beta_{ik}$  are parameters to be estimated.

Random effects models are ruled out by the small number of MSAs within sectors (Mass & Hox 2005). We did estimate models with sector-fixed effects, but could not reject the null of no between-sector differences. Instead, we estimated equation (1) with a border dummy variable (Border sector = 1):

$$\Delta C_{i,t} = \beta_{i,0} + \beta_{i,1} \Delta D_{i,t} + \beta_{i,2} BORDER_i + \beta_{i,3} BORDER_i * \Delta D_{i,t} + \Sigma_k \beta_{i,k} \Delta X_{k,i,t} + \varepsilon_{i,t}$$
(2)

We also estimated equation (1) separately for Border and non-Border sectors.

Model estimation used the estimated generalized least squares procedure with cross-section (MSA) weights in the Eviews 7 software package.<sup>7</sup>

#### Results

## **Descriptive Analyses**

We begin with descriptive analyses to paint a portrait of deportation activity. The national trend in the detection of deportable aliens during the period under study reveals that the number of individuals identified increased steadily through the year 2000, followed by a sharp reduction during in the following 2 years, and an uptick through 2004 (see Figure 2). The reasons behind the notable decline are not entirely clear, and the reports provided by the Department of Homeland Security offered no explanation of this pattern. Nevertheless, it is worth noting that the variation occurs around a high baseline level of detection, with a minimum of nearly one million deportable aliens identified annually.

A closer examination of this trend documents a distinct geographic profile with respect to the detection of deportable aliens. The nine patrol sectors that are adjacent to the United States/

<sup>&</sup>lt;sup>7</sup> For all models except rape, we used the simultaneous iteration of weights and coefficients option in EViews7. For the rape equations, this option converged to a singular covariance matrix. The rape equations were estimated by a one-time update of the weight matrix, then iterating coefficients to convergence. We are investigating the reasons for this anomaly.

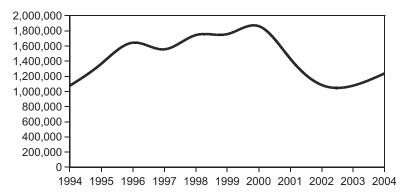


Figure 2. Number of Deportable Aliens Located Nationally, 1994-2004.

Mexico border yield the highest numbers of deportable aliens. Returning to Figure 1, the sectors along the border tend to cover smaller geographic areas than those elsewhere and contain portions rather than the full expanse of single states (California, Arizona, New Mexico, and Texas). In terms of deportation efforts, for each of the years under investigation, over 90 percent of the individuals identified as deportable were located in one of the nine border sectors (ranging from approximately 95 percent in 1994 to about 98 percent in 2004). In addition to the high level of deportation activity within these sectors, it is also worth noting that enforcement efforts steadily declined in the remaining areas. Between 1994 and 2004, the number of deportable aliens located in border sectors increased by 17 percent, while the numbers in the non-border areas declined by approximately 60 percent (Border: 915,571 to 1,074,958; Non-border 45,790 to 18,190). The intense geographic concentration associated with deportations is understandable, as these areas serve as the primary entry points into the United States and those that have also been subject to the intensification of border enforcement efforts (i.e., programs such as Operations Gatekeeper and Hold the Line; see Nevins 2002).

The data also suggest that there is considerable variability in deportation activity both between the patrol sectors along the border and over time. Figure 3 presents annual information for the share of the deportable aliens identified in each of the border sectors included in the present study. It is clear from this comparison that the proportion of aliens located varies widely across sectors. In a given year, it is common for a single border sector to account for more than a third of all identifications across border sectors, and for some of the years the share exceeds 40 percent. These data also indicate shifting focus, likely due to temporal changes in migratory routes into the United States, as influenced by

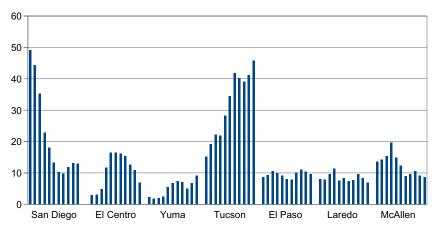


Figure 3. Annual Percent of Deportable Aliens Located in Sectors Along U.S./Mexico Border, 1994–2004.

enhanced deportation activity in targeted locations (see Massey, Durand, & Malone 2002; Nevins 2002). For example, nearly half of all deportable aliens were located in the San Diego sector in 1994, yet by 2004, the share fell to 13 percent, a reduction of nearly 74 percent. At the same time, the Tucson sector experienced an increase of nearly 200 percent (15.3 percent to 45.7 percent of border sector identifications). Although much smaller in magnitude, the number alien detections also spiked in the El Centro and Yuma sectors. It appears that this shift was influenced, at least in part, by the implementation in 1994 of Operation Gatekeeper, an initiative designed specifically to minimize undocumented immigration into the San Diego area (Nevins 2002).

In a comparison of levels of violent crime in areas characterized by varying levels of enforcement activity, we observe a number of interesting patterns. Figures 4 and 5 present information for average violent crime and homicide rates for our sample of metro areas disaggregated by proximity to the border, defined with reference to enforcement sector. There is a high degree of consistency in the trends presented in both figures, as each illustrates the documented sharp and sustained reduction in criminal violence experienced during this period. It is also clear that average levels of both violent crime and lethal violence are higher among the metropolitan areas in the sectors located along the border. Yet the rates of decline for both the violent crime and homicide rates among metro areas nested within border sectors were slightly larger. Specifically, within border areas, the violent crime rates dropped by 37 percent compared to a 33 percent decline among metro areas located in non-border sectors. The pattern for homicide rates was

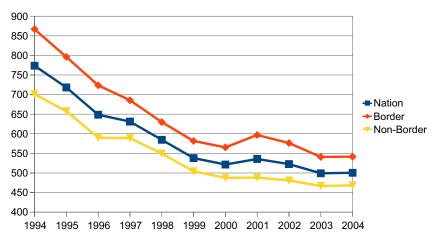


Figure 4. Trends in Violent Crime Rates (per 100,000), by Proximity to U.S./Mexico Border, 1994–2004.

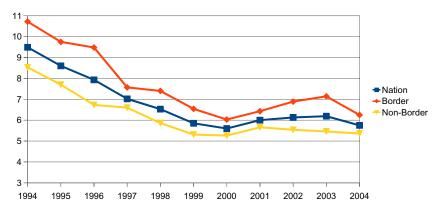


Figure 5. Trends in Homicide Rates (per 100,000), by Proximity to U.S./Mexico Border, 1994–2004.

very similar, where border and non-border metropolitan areas experienced 41 percent and 37 percent reductions, respectively.

The levels of violence also varied widely across border sectors. As illustrated in Figure 6, following the national pattern, each of the border-area sectors experienced reductions in violent crime. The trends were consistent for levels of lethal violence, as each observed an overall reduction during the period under study (data available upon request). Still it is clear that the initial levels of violence were not uniform across metropolitan areas in these areas, nor was the magnitude of the declines. Figure 7 presents the trends in violent crime rates for the San Diego and Tucson sectors, the areas which

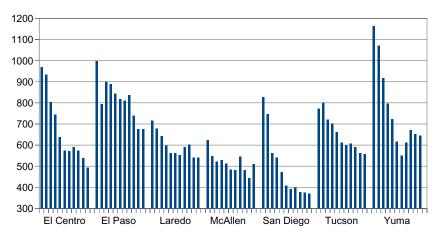


Figure 6. Annual Violent Crime Rates (per 100,000), in Sectors Along U.S./Mexico Border, 1994–2004.

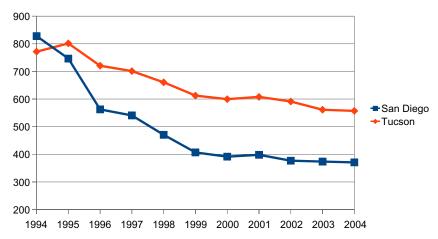


Figure 7. Trends in Violent Crime Rates (per 100,000), for San Diego and Tucson Border Patrol Sectors, 1994–2004.

experienced the largest changes in levels of enforcement activity. In this figure it is apparent that, with the exception of 1994, levels of violence were higher in the metropolitan areas within the Tucson sector, and changed at a slower rate than in the San Diego sector. More specifically, violent crime rates fell nearly 55 percent in San Diego, whereas Tucson experienced a decline of approximately 28 percent. The rate of decline for homicides was also less dramatic in the Tucson sector, in which levels of lethal violence fell by 16 percent, compared to a 52-point reduction within the San Diego sector.

Clearly, these descriptive analyses do not permit a definitive assessment of the potential influence of deportation activity on violent criminal deviance. However, the observed patterns do suggest the presence of a systematic, though complex, association. On the one hand, the rates of decline for violent crime and homicide were more pronounced among metropolitan areas nested within sectors adjacent to the border. Again, these are the areas characterized by the highest levels of enforcement activity. Such a pattern might be taken as supportive of the arguments in favor of stricter border security as a means of controlling crime. At the same time, there is some evidence of a direct (rather than an inverse) association between deportation activity and crime, as indicated by the fact that some areas experienced both a reduction in enforcement and violence. Furthermore, it appears that levels of violence may be more resistant to change in the areas experiencing the highest levels of enforcement, and presumably also receiving the highest numbers of undocumented immigrants. These descriptive analyses also reveal the high degree of geographic concentration of deportation activity, and thus it is reasonable to expect that deportation activity may have a differential impact on crime in MSAs located in sectors adjacent to the United States/Mexico border compared to those in non-border sectors. In an attempt to quantify the distinctive effect of deportation activity, we turn to our multivariate dynamic regression analyses.

## **Regression Analyses**

Table 1 reports the results of the regressions of the violent crime index and each of the separate components of the index on the measure of the deportation count, the dummy variable for border proximity of the sector within which the MSA resides, and the control variables. All variables with the exception of the border dummy variable are expressed as change scores, and thus the corresponding coefficients reveal dynamic processes: "change on change." The pattern observed for the indicator of deportation activity is easily summarized. The coefficient for this variable is not significant for any of the violent crime rates. In other words, for the sample of MSAs at large, changes in deportation at the sector level are unrelated to changes in violent crime rates for the MSAs within them after adjustments for the control variables. The dummy variable for border location, in contrast, is negative and significant for the violent crime index, the homicide rate, and the aggravated assault rate. Accordingly, for these offenses, the comparatively greater declines in violent crime in the MSAs within border sectors that we observed in the descriptive analyses are also detected net of the impact of the other variables in the multivariate models.

Table 1. Dynamic Regressions of Violent Crime Rates on Deportation Activity and Controls<sup>a</sup>

	Violent Crime	Homicide	Robbery	Aggravated Assault	Rape
Deportation count	-0.077(0.059)	-0.003(0.002)	0.001 (0.028)	-0.078(0.041)	-0.003(0.004)
Border dummy	-12.184**(3.984)	-0.215**(0.079)	-1.623(1.757)	-10.874**(2.333)	-0.199(0.217)
Immigration concentration index	-2.466(3.18)	-0.109(0.097)	-2.877*(1.257)	-2.989(2.433)	-0.011(0.296)
Economic resources	-1.604(2.811)	0.168*(0.080)	-1.738 (1.060)	-0.378(1.974)	-0.120(0.267)
Adult/child ratio	-17.884 (40.202)	-0.234 (1.244)	-30.089 (15.561)	-14.257 (29.076)	1.026 (4.176)
Stability index	-1.771(1.102)	0.045 (0.034)	-0.763(0.409)	-0.732(0.774)	0.202(0.111)
Percent non-Hispanic black	0.025(0.346)	0.056**(0.012)	0.021 (0.141)	-0.179(0.244)	-0.006(0.035)
Percent male	0.279(0.797)	-0.027(0.024)	-0.435(0.311)	0.338(0.566)	-0.059(0.082)
Percent unemployed	1.388** (0.500)	0.057**(0.016)	0.563**(0.186)	1.498**(0.365)	0.155** (0.049)
Percent divorced	1.474*(0.581)	0.008 (0.012)	0.027 (0.225)	0.905*(0.419)	0.033(0.062)
Officers per 1000 population	1.694(3.161)	0.077 (0.074)	2.355 (1.238)	-0.497(2.113)	0.737** (0.285)
Percent of suicides by firearms	-0.333*(0.151)	0.002 (0.005)	-0.166**(0.058)	-0.106(0.108)	-0.039*(0.017)
Population (logged)	-3.465(11.893)	-0.809*(0.389)	-7.605(4.256)	-4.381(9.311)	-0.473(1.270)
Constant	-11.678**(1.323)	-0.161**(0.029)	-4.471**(0.574)	-7.062**(0.837)	-0.409**(0.086)
AR(1)	0.112**(0.031)	-0.254**(0.030)	0.139**(0.030)	0.007 (0.030)	-0.199**(0.032)

*Notes:* \*All variables except for the border dummy variable are expressed as first-differences. \*\*p < 0.01, \*p < 0.05 (two-tailed tests); standard errors in parentheses.

Several of the control variables also exhibit significant effects in the regression models. The coefficient for the immigration concentration index is consistently negative, but it reaches statistical significance only for the offense of robbery. In previous analyses based on the same sample of MSAs but with a slightly different model specification, a significant immigration effect was observed for the violent crime index as well as the robbery rate. These analyses also revealed that the immigration effect was "particularly pronounced and robust for the offense of robbery," which is consistent with the current findings (Stowell et al. 2009: 915). The coefficients for the unemployment measure are significantly positive across all models in Table 1. This indicates that for each of the measures of criminal offenses, increases in unemployment are associated with increases in violent crime. The coefficients for the measures of divorce, police size, gun availability, and population occasionally reach significance, but similar to the findings for the immigration index, the significance of these coefficients varies across offenses.

To assess whether the effects of deportation are moderated by location, we computed a product term for the deportation count measure and the border sector dummy variable, and added this product term to the fully specified regression models. The results reveal significant interactions (p < 0.01) for the violent crime index and the aggravated assault rate. The signs of the coefficients for the constituent components, however, suggest rather complex patterns. To facilitate the interpretation of these interactions, we estimated regression models for the two measures of criminal violence with significant interactions separately for the subsamples of MSAs within border sectors and within non-border sectors. The coefficients for the deportation measure in the subsample analyses are reported in Table 2.

The results are intriguing, as they yield contrasting theoretical implications. For MSAs within border sectors, the deportation coefficient yields a *negative* coefficient for the violent crime index and aggravated assault, although the coefficient is significant only in the

**Table 2.** Regression Coefficients for Deportation Activity by Location of Sector<sup>a</sup>

		Geographic Location	
		Border Sectors	Non-Border Sectors
Offense	Violent crime Index Aggravated Assault	-0.079 (0.069) -0.094* (0.045)	2.800* (1.150) 2.841** (0.773)

*Notes*: "Regression coefficients are based on the fully specified models as shown in Table 1 (with the exception of the sector dummy variable, which defines the subsamples). \*\*p < 0.01, \*p < 0.05 (two-tailed tests); standard errors in parentheses.

model for aggravated assault (see the first column in Table 2). The pattern differs dramatically for MSAs in non-border sectors. In the models for both the violent crime index and aggravated assault, the measure of deportation activity has a significant *positive* coefficient. Referring back to the theoretical perspectives reviewed above, there is thus some support for the "incapacitation" hypothesis in the results for MSAs within border sectors (for aggravated assault), whereas the "socially destructive" hypothesis is more consistent with the findings for MSAs within non-border sectors. We consider possible interpretations for the perplexing "mixed" nature of the results in the concluding section.

The observation of significant effects for selected forms of criminal violence—aggravated assault and the violent crime index (which tends to be driven by aggravated assault)—is also curious. Aggravated assault differs from the other violent offenses in two notable respects. It is the most frequently occurring offense among the serious violent crimes, and it exhibits greater variance. Assault is also more susceptible to differential recording than are two of the three other offenses—robbery and homicide (but not rape). It is not clear why the greater frequency of assault would make any deportation effect more detectable. Note that significant effects are observed for other covariates across the different offense types, and thus restricted variance should not be the culprit.

With respect to recording bias, it is possible that intensified deportation activity might be accompanied by more vigorous policing in general, which would tend to inflate the official statistics on aggravated assaults. This could account for a potential suppression of a genuine negative effect of deportation on aggravated assault or even a positive coefficient that is an artifact of recording, which might not occur to the same extent for other offenses (at least for homicide and robbery). However, while such a process might explain the observed positive effects in non-border sectors, it would not account for the negative effect in the border sector. The differential influence of deportation across offenses thus remains a mystery for further research.

# **Summary and Directions for Future Research**

Illegal entry into the United States is unquestionably a subject that captures public attention and elicits strong sentiment. Among immigration control "hard liners," unauthorized entry is commonly cited as one of the most pressing social problems facing this

<sup>&</sup>lt;sup>8</sup> The variance is greatest for the overall violent crime rate, which tends to be dominated by the assault rate.

nation, and one that requires an immediate and intensive governmental response. Concerns about public safety, and increases in violent crime linked to undocumented immigration, often frame the discussions regarding the imperatives of enhancing border security. Indeed, over the past two decades, a prominent justification for militarizing the United States/Mexico border and bolstering deportation efforts has been the purported relationship between undocumented immigration and broader levels of violence. Following the logic of the arguments in favor of stricter immigration policy, enhanced border security to prevent initial entry of a disproportionately criminogenic population and vigorous efforts to remove those who have slipped through a previously porous shield should lead to appreciable reductions in criminal violence.

The salutary consequences of the strict control of illegal immigration through deportation are by no means self-evident. It is plausible to speculate that intensified border security measures might entail a disruptive social process under certain circumstances, one that affects social conditions associated with lower levels of violent crime (i.e., kinship/employment networks, collective efficacy, levels of socioeconomic disadvantage) (see Rose & Clear 1998; Clear 2007). Yet despite its rising centrality in public and political arenas, debates on this subject continue to be shaped in the absence of empirical support. The current study was undertaken in an effort to marshal the limited quantitative evidence that is available to shed light on whether deportation efforts in the United States might have some effect on levels of criminal violence.

The results of our inquiry based on a sample of MSAs nested within border patrol sectors fail to support the claim of any simple or straightforward effect of deportation activity on rates of violent crime over the course of a recent decade (1994–2004). Contrary to expectations based on the "hard line" position on immigration control, national trends in deportation activity and criminal violence do not track closely. Increased levels of deportation initially accompanied declining violent crime rates, but these crime rates continued their decline in later years when deportation activity dropped sharply. These national trends in violent crime rates are replicated for the subset of MSAs located in patrol sectors along the Mexican border and for the subset located in non-border sectors. In addition, contrary to the "hard line" position on the dangers posed by illegal aliens and the pressing need to expel them, there is no significant relationship between the indicator of deportation activity and any of the measures of violent crime in the dynamic regression models for the sample of MSAs as a whole. A significant effect of geographic location does emerge in these regression analyses for the dummy variable distinguishing border and non-border

location. Location of MSAs in patrol sectors along the Mexican border is negatively associated with changes in the index violent crime rate, the homicide rate, and the aggravated assault rate, net of control variables. This effect of geographic location runs directly counter to the imagery of an out of control, "spillover of violence" from Mexico, at least for the years under investigation.

However, our regression analyses of a moderating effect of geographical location on the relationship between deportation activity and criminal violence provides some support for the "hard line" position on immigration control. The coefficient for the indicator of deportation activity is significantly negative for aggravated assault among MSAs located in border sectors, which is the part of the nation where deportation activity is most intense. At the same time, the results for MSAs located in non-border sectors point to exactly the opposite conclusion, that deportation activity has socially disruptive effects that promote rather than reduce crime. How might these contrasting findings be reconciled?

We propose that the differences in the effect of deportations across geographic area might be due to some combination of the following: (1) features of the communities in which arriving immigrants, including undocumented immigrants, are settling; (2) differential composition of the population at risk of deportation; and (3) differences in law enforcement practices. Unfortunately, the available data on deportation activity and its effects are limited, which implies that our interpretations are necessarily speculative. They do, nevertheless, suggest some hypotheses that might guide future research.

The positive effects of deportation on crime in non-border regions may be due to the fact that many such areas are beyond traditional immigrant settlement destinations (Crowley & Lichter 2009; Fry 2008). These communities may be more vulnerable to the impacts of deportation than those situated in closer proximity to the border. The impact of deportation may be more pronounced (and deleterious) in non-border areas because it removes important resources from communities and stunts the development of important and crime-suppressing features of many immigrant neighborhoods. It may be that the forced removal of individuals in non-border areas fractures the more delicate (i.e., less well established) information and resource networks, thereby undermining informal mechanisms of social control.

This interpretation generates two interrelated research hypotheses. The first has to do with the structural character of immigrant communities along the border, and the extent to which they exhibit higher levels of social organization, as measured by structural factors (unemployment levels, poverty) as well as by more direct indicators of social organization, such as collective efficacy,

compared to non-border areas. A related area of inquiry would focus on the differential durability/fragility of community networks geographically. Independent of initial levels of community characteristics, it may be the case that the "costs" of deportation for communities wherein immigrants have settled are not uniform across places, and thus forced out-migration in non-border communities may undermine stability and processes of revitalization to a greater extent than in the more established immigrant receiving communities along the border (see Martinez 2002; Martinez, Stowell, & Lee 2010).

Similarly, research on the regional variation in the impact of deportation should focus on the characteristics among the population at risk for forced removal. In our estimation, there are two separate processes through which the composition of the deportable population which may contribute to the observed regional differences. With the large influx of undocumented immigrants into border areas, it is possible that the intensified enforcement efforts are likely to result in the apprehension (and removal) of the share of this population who may contribute to levels of violent crime—the population with a high criminal propensity. This is not necessarily to suggest that undocumented immigrants have a disproportionate likelihood to offend in general, but rather that this segment of the population is more heavily concentrated in metropolitan areas adjacent to the border, for some length of time, because these locations are the initial points of reception for individuals who enter the country without proper authorization (Hickman & Suttorp 2008). To the extent that such a process is operating, it is reasonable to expect that the "payoff" of vigorous enforcement efforts for crime reduction would be more pronounced in the border sectors.9

As an initial test of this interpretation, we examined the representation of the foreign born population among incarcerated inmates across different geographic areas. Data are available on the percent of the inmate population in jails that is foreign born by state for a time frame consistent with our analyses (analyses run for 1992–1996 and 1998–2000). With these data, we estimated a regression equation predicting the relative size of the foreign-born inmate population with a dummy variable for border location (1 = state on the border; 0 = other) and a control for the overall size of the foreign born population (percent foreign born). Consistent with the compositional hypothesis, the coefficient for the

<sup>&</sup>lt;sup>9</sup> An anonymous reviewer proposed that our interpretation with respect to differential criminal propensity could be assessed empirically if the deportation data were disaggregated with respect to the reason for deportations, that is, whether the deportations were for criminal violations or for violations of immigration law. Unfortunately, we are unable to pursue such analyses because the requisite data are not available.

border dummy variable is significantly positive. The foreign-born population represents a relatively larger component of the incarcerated population in border states, controlling for the size of the foreign-born population.<sup>10</sup> Although these results offer broad support for the compositional hypothesis, more direct examinations of the criminogenic propensities of the "deportable" populations across areas are required to lend confidence to our interpretations.

A second difference in the composition of the deportable population across geographic areas may be linked to vulnerability to victimization. Because border areas continue to serve as the primary entry points for undocumented immigrants, communities along the border may be perceived as attractive locations by offenders, and the recent arrivals viewed as particularly vulnerable upon initial entry into the United States. As Valenzuela (2006) describes, it is not uncommon for undocumented immigrants to experience victimization (at the hands of both natives and other immigrants) soon after crossing the border because many arrive with cash or other portable valuables, and are perceived as easy targets for robbery or other forms of interpersonal violence. To the degree that such experiences escalate into assaultive confrontations (immediate or retaliatory), this may increase the likelihood of involvement by formal law enforcement officers.<sup>11</sup> Thus, there is reason to suggest that the observed negative effect of deportation among border areas may be partially a consequence of the diminishing presence of attractive targets in these areas (Cohen & Felson 1979). This hypothesis implies that undocumented immigrants in the border areas should have an elevated risk of victimization as compared to those in the non-border areas, a hypothesis which could be assessed with victimization survey data.

Another area of research should focus on the role of law enforcement practices as they relate to the identification of undocumented immigrants. With the increasing frequency of initiation of new legislation surrounding illegal immigration, it may be that the regional variation in the effect of deportation on levels of violent crime is partially attributable to differences in enforcement practice. That is, the impact of deportation activity may depend on the quality and nature of enforcement activity, which may vary regionally. In border areas, due to the concentration of undocumented immigrants, it may be that law enforcement agents (both state and

<sup>&</sup>lt;sup>10</sup> Data source: U.S. Department of Justice, Bureau of Justice Statistics: Annual Survey of Jails (http://bjs.ojp.usdoj.gov/index.cfm?ty=dcdetail&iid=261). Also as expected, the coefficient for the percent foreign born in the state is significantly positive in the equation predicting the percent of inmates who are foreign born.

<sup>&</sup>lt;sup>11</sup> See Martinez (2002) for a discussion of the role of escalation with respect to Latino homicide victimization.

federal) are better able to identify potential threats and handle them accordingly. Conversely, perhaps policing dedicated to this issue in non-border areas is less efficacious, due to limited training, organizational culture, or officer experience, which contributes to the observed geographic disparities.

A detailed accounting of agency policies with respect to undocumented immigration, including when such practices were enacted, would cast important light on this issue. Collecting further information on officer perceptions, organizational culture, and experiences with handling immigration cases will also be a key to fleshing out how deportation efforts (and effectiveness) may be linked to variations in police practice, both within and across regions. Research projects designed to examine the hypotheses in any of these three domains will require the collection of original data, likely both quantitative and qualitative, and for more refined geographic areas. Although research addressing any of these issues will not be easily accomplished, such efforts are strongly encouraged. Information on these topics will contribute to a more comprehensive understanding of a complex social issue.

#### **Conclusion**

The current study attempts to understand the impact that deportation efforts have on levels of violent crime in the United States. Our focus is limited to the criminological consequences such processes hold for the "deporting" society. As a transnational process, little scholarship has focused on how rates of violence are shaped by patterns of deportation. Still, it is possible to speculate about the impacts of deportation cross-nationally. Following the logic of conventional sentiment on the subject, immigration opponents would likely agree that deportation contributes to higher levels of crime in the receiving communities, as the process involves a shifting of individuals with elevated propensities to offend. Essentially, this amounts to a crime displacement argument, or an exporting of criminals (and ultimately violent outcomes) between sending and receiving countries. As support for this notion, often the role deportation plays in the increasingly international orientation of street gangs is cited (Lopez, Connell, & Kraul 2005; Papachristos 2005; see also Pine 2008). In a report published in the Los Angeles Times, Lopez, Connell, & Kraul (2005) summarize this position by describing how gang involvement and levels of violent crime "grew explosively as the first waves of deportees arrived" in the early 1990s. Although this report focuses on the gang involvement in El Salvador, scholars have discussed similar processes in other receiving societies (Pine 2008).

In our view, the displacement argument is limited because it overlooks a variety of other ways in which the consequences of forced removal from the United States affect receiving communities.<sup>12</sup> Increased costs and demands for public services is one effect that the United States immigration policy is likely to have for such communities. For example, in a study of drug use among deportees, Ojeda et al. (2011) report that deportation experiences are viewed as stressors (economic, social, and emotional) because those removed report feelings of shame and disruptions in important support networks. Although not tied directly to drug use, such social disruptions are likely exacerbated by other deportation programs implemented in an effort to dissuade future migration attempts. Cornelius (2005) describes efforts such as long-distance repatriation, whereby individuals (as many as 300 per day) were transported to a number of cities in the interior of Mexico instead of traditional locations along the border. Direct evidence on the impact of these particular programs on the receiving cities is not available, yet similar to the contentions made by Ojeda et al. (2011: 114), they are likely to strain "the health and social resources of receiving communities," factors known to help minimize levels of criminal deviance.

The impacts of the enhanced deportation efforts in this country are not experienced in isolation. Although the qualitative research on this subject is illustrative, to our knowledge, criminologists have not yet begun to quantify the impact returning deportees have on levels of crime in receiving countries. Many questions remain regarding repatriation and the extent to which this process is systematically associated with changes in the social structural conditions and levels of violent crime in the communities into which these individuals are returned (see Papachristos 2005). It may be that deportation is linked to violence due to a displacement effect, or that repatriation and crime are associated through a wider process of social disruption influenced by the influx of deportees. At present, these questions remain open but represent an important direction for future researchers. Studies that help to disentangle this relationship will contribute to a broader understanding of the implications of deportation and criminal violence. More generally, we concur with Friedrichs' (2011: 170) assessment that "[if] twenty-first century criminology is to be relevant, it must increasingly become comparative, international and global."

<sup>&</sup>lt;sup>12</sup> Alternative effects are important to consider because deportees with gang or other criminal involvement represent a small share of the total number of individuals removed (U.S. Department of Homeland Security 2004: 162). For example, in Fiscal year 2004, only 7 percent of deportations (including those removed after formal deportation proceedings and voluntary departures) involved individuals with a criminal conviction. This pattern shows relative stability during the period under investigation (see U.S. Department of Homeland Security 2004, Tables 40 and 43).

Many important questions are left open regarding the manner, and under what conditions, levels of violent crime are influenced by the forced removal of undocumented immigrants. Our analyses imply that if there is a relationship between these two social processes, it does not lend itself to simple characterizations, for our results run counter to some of the claims made by both advocates and opponents of strict immigration controls. The complexities of the relationship highlighted in this study underscore the potentially important role that research can play in informing public debates on immigration policy. It is our hope that the results from this research, as well as those from future studies on this topic, will help ground these often contentious debates more securely in empirical evidence and thereby alleviate the current reliance on rhetoric and anecdote.

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