Trends in U.S. Border Patrol Apprehension: Exploring the Role of Discretion That Matters

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Recent research on apprehensions (or arrests) made by the United States Border Patrol is largely descriptive and focused on apprehensions along the U.S.-Mexico border. Using data from the Department of Homeland Security that span two decades (1992-2012), this study documents trends in Border Patrol apprehension for three different borders (i.e., the Southwestern, Northern, and Coastal Borders). Using data from 2012, it contrasts the Border Patrol's three borders in terms of jurisdictional characteristics, in addition to key indicators of enforcement and apprehension. Pooled time series models identify factors that drive year-to-year change in apprehension rates along the three borders. The results suggest that the rate at which Border Patrol agents are apprehending the unauthorized population differs across the three borders. They also suggest that factors driving change in apprehension rates differ by border as well.

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The U.S. government now spends more on immigration enforcement than all other law enforcement agencies combined (e.g., the FBI and Drug Enforcement Administration). Federal funding for immigration enforcement increased from almost 575 million dollars in fiscal year 1986 to nearly 18 billion dollars in fiscal year 2012 (Meissner et al 2013). The U.S. Border Patrol continues to receive much of this funding (i.e., 3.6 billion dollars in FY 2014). In just the past two decades, its funding has increased tenfold (Ewing 2014). Yet, the number of arrests (or "apprehensions") made by the Border Patrol is considerably lower now than it was two decades ago (i.e., 1,199,560 in FY 1992 versus 420,789 in FY 2013). In sharp contrast, the number of deportations (or "removals") has risen sharply and is now at a record-high level (Meissner et al. 2013). The unprecedented levels of deportation reflect a culmination of policies that the DHS and its predecessor, the Immigration and Naturalization Service (INS), have implemented in recent decades. The implication of these policies is that Border Patrol agents play an increasingly prominent role in "determining" the future of the unauthorized population.

In spite of the fact immigration enforcement is the largest of all U.S. law enforcement bureaucracies, it is the least studied (Cox and Miles 2013). A handful of studies have examined how local police work with ICE agents in enforcing immigration laws within specific jurisdictions, most of which are in Southeastern states (e.g., Coleman 2012b; Donato and Rodriguez 2014; Menjívar 2014; Varsanyi et al. 2012). Research on the Border Patrol, however, is largely descriptive and focused on the Southwestern Border. Reflecting

the limited information publically available on Border Patrol practices, depictions of Border Patrol enforcement are typically "border-centric" (Coleman 2012a). According to U.S. Customs and Border Protection (CBP), the Border Patrol not only seeks to arrest individuals as they attempt to cross the border. It also conducts roving patrols near the border, sets up traffic checks at roads that lead to the border, and inspects interior-bound buses and trains (U.S. CBP 2012). The American Civil Liberties Union (ACLU) has challenged the fact that the Border Patrol has the authority to inquire about citizenship legally anywhere within the 100-mile border zone.

This study fills a major gap in the fields of immigration and criminology by identifying factors that drive change in immigrant apprehension. Toward this end, this study reviews studies on Border Patrol enforcement and apprehension before covering research on related outcomes (e.g., local police arrests of the unauthorized population). Using data from the Department of Homeland Security (DHS) that span two decades (FY 1992-2012), this study documents how the yearly number of apprehensions along the Northern, Coastal, and Southwestern Borders has changed over time. It also highlights the exigencies each border, as illustrated by a variety of indicators of enforcement and apprehension corresponding to FY 2012. It additionally reveals how the jurisdictional areas of the three borders differ in terms economic, demographic, and social characteristics. Pooled time series models examine the effects of various factors on year-to-year change in apprehension rates. The findings suggest that the nature of enforcement differs fundamentally across the three borders.

BACKGROUND

Border Patrol Apprehension

Studies conducted during the 1970s and 1980s relied on apprehensions data to estimate flows of the Mexican population into the United States while recognizing the limitations of these data (Donato and Armenta 2011). These data overestimate flows because they record events rather than individuals. They underestimate flows because some migrants successfully cross the border without detection (Cornelius 2001). Despite the fact that data on apprehensions are a "conceptually inappropriate indicator" of unauthorized flows, earlier studies demonstrated that they tracked change in illegal migration reasonably well (Espenshade 1995). To the extent apprehensions capture migratory flows, they will change in response to economic conditions in both Mexico and the United States (i.e., economic "pushes" and "pulls").

Recent changes in border enforcement have increased the costs of crossing the border. As changes in Border Patrol enforcement are elaborated elsewhere, I summarize them briefly. In the 1990s, the INS ushered in the strategy of "prevention through deterrence" using a variety of technologies (e.g., cameras and sensors). Most notably, the DHS began constructing a fence covering 651 miles of the U.S. Mexico border (Ewing 2014). The 1996 Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) increased the number of Border Patrol agents; allocated millions of dollars towards the construction of the fence; expanded the number of crimes that warranted removal for noncitizens to include minor offenses such as shoplifting; and barred those found to be unlawfully present in the U.S. from being legally admitted for a period of three to ten years (Coleman 2012a). Following the 9/11 attacks, the DHS increased investment in the Northern Border to

prevent terrorists from entering the United States through Canada.

Since 2004, the DHS has attempted to deter border crossings through a new strategy of "enforcement with consequences." This strategy expanded the use of expedited removal, enabling the Border Patrol to formally remove aliens who were apprehended within 100 miles of the border, ultimately denying them the opportunity of a trial before a judge (Rosenbaum 2012). Other changes included the criminal prosecution of unauthorized individuals who were caught multiple times; mandatory detention for the apprehended while they await a trial; and repatriation flights to Mexico or locations far away from migrants' initial ports of entry (Coleman and Stuesse 2014). Prior to this period, voluntary returns were more common. Voluntary returns continue to be the most favorable disposition for migrants because they do not involve any penalties (e.g., bars to re-entry). In FY 2004, 1,035,477 of the 1,160,395 cases apprehended by the BP received a disposition of voluntary return (Dougherty, Wilson, and Wu 2005), in contrast to 178,351 of the 420,789 cases in FY 2013 (Simanski 2014). Expedited removals increased from 41,752 to 193,032 in this period (Dougherty, Wilson, and Wu 2005; Simanski 2014).

Several studies have considered the consequences of Border Patrol enforcement for migratory flows and other outcomes. Based on apprehensions data for specific sectors (the BP's operational jurisdictions) along the Southwestern Border, in addition to other sources of data, Cornelius (2001) found evidence that enforcement rechanneled flows of unauthorized migrants to more hazardous crossing areas (as indicated by the number of deaths), raised the fees charged by smugglers (or coyotes), and discouraged unauthorized migrants residing in the U.S. from returning to their countries of origin. Orrenius (2001) also examined patterns apprehension for Southwestern sectors but utilized data on border

crossing patterns and smuggler use from a different source (the Mexican Migration Project) and reached similar conclusions. Both of these studies concluded that prior enforcement efforts were largely ineffective in deterring illegal immigration. (See also Massey and Riosmena 2010.)

More recently, studies have evaluated the effects of immigration enforcement on patterns of migration in statistical models using measures of linewatch hours, the number of Border Patrol agents, and a variety of instruments for enforcement. Using data from the Mexican Migration Project, Villarreal (2014) found that the number of staff along the Southwestern Border in different years reduced Mexican men's odds of migrating between the years of 2005 and 2013 by 45%. He also found that reduced labor demand in the United States for Mexican workers lowered their odds of migration. Specifically, employment losses in construction (the top industrial sector employing Mexican-born male workers during this period) decreased the odds of migration by 28.9%. The quarterly unemployment rate in Mexico, on the other hand, had a significant positive effect on the odds of migration. Other research found that stronger enforcement not only reduced migration flows but increased the selectivity of migrants in terms of human capital (Angelucci 2012).

As some studies have noted, the Immigration Reform and Control Act (IRCA) built a significant degree of officer discretion into immigration enforcement (Makowsky and Stratmann 2014; Purcell and Nevins 2005). Using a political economy framework, Hanson and Spilimergo (2001) pointed out that regional enforcement is responsive to lobbying, reflecting the fact that U.S. Congress determines the funds appropriated to the Border Patrol. Firms have an interest in lobbying the government for lax enforcement, while labor

unions have an incentive in strengthening enforcement. Focusing the period from 1970 to 1999, they found that border enforcement (as indicated by linewatch hours) increased when labor markets tightened (i.e., unemployment decreased). They speculated that the government strengthened enforcement when they anticipated more frequent attempts to cross the border. In another study based on data from 1968 to 1996, Hanson and Spilimergo (1999) examined apprehensions along the Southwestern Border and found support for a migration model. As evidence of this, the number of apprehensions increased as wages in the U.S. increased and as wages in Mexico decreased.

As can be seen, studies on what drives change in border enforcement and apprehension are dated. A handful of studies, however, have examined Border Patrol practices in specific areas. Ethnographic research revealed how the Border Patrol teamed with the Chandler Police in 1997 in order to conduct a five-day immigration raid in Hispanic areas of the city that included house searches (Romero 2006). Data from the Rochester Station covering the years between 2005 and 2009 demonstrated that the Border Patrol was raiding Amtrak trains and Greyhound buses in upstate New York to identify undocumented travelers; less than one percent of those arrested had recently crossed a border (NYCLU 2011). Analyses based on the Sandusky Bay Station in Ohio, which began operating in 2008, also documented transportation raids in 2010 and 2011. The most striking finding for this station, however, is that other agencies (e.g., local police and highway patrol) initiated a majority of its arrests (Joyner 2012). The centrality of other agencies in Border Patrol apprehension begs the question: what is the role of police and highway patrol in immigration enforcement?

Policing of Immigrants

Policies and programs aimed at interior enforcement have proliferated in recent decades. One provision of the IIRIRA, 287(g), gave state and local police and highway patrol officers the authority to carry out immigration law (e.g., to arrest noncitizens for civil violations of federal immigration law) after entering into a Memorandum of Agreement (MOA) with federal immigration authorities. The 287(g) program, which began to take off in 2006, was implemented in fewer than 100 jurisdictions and in three different ways: a detention model, a task force model, and a hybrid model. The detention model allowed local and state police officers to check the immigration status of anyone they arrested while the task force model permitted them to check the status of anyone they encountered (Coleman 2012b). Most of the counties and cities participating in the 287(g) program followed a detention model rather a hybrid or task force model. Many of them were located in the Southeast and were implemented in response to a growing Hispanic population.

More recently, the rollout of the federal program Secure Communities has enabled local and state agencies to have ICE agents electronically screen the immigration status of any person they arrest and have FBI agents search their criminal records (Cox and Miles 2013). While 287(g) required state and local agencies to opt into the program, Secure Communities now requires all counties across the U.S. to participate. (Miles and Cox 2014) Local police have always had the option of contacting a DHS agent (CBP or ICE depending on location) after an arrest to check immigration status, but now it is facilitated with information sharing.

These changes have prompted a handful of studies on how local policies and programs shape police practices within specific jurisdictions (e.g., Coleman 2012b; Donato

and Rodriguez 2014; Varsanyi et al. 2012). This body of research illustrates how control over immigration enforcement has devolved from the federal government to state and local agencies (Donato and Armenta 2011). Some police departments participating in the 287(g) program were found to be using pretextual traffic stops (e.g., a stop for failing to use a turn signal) as a means of checking immigration status (Coleman 2012b). As evidence of this, Donato and Rodriguez (2014) documented an increase in minor traffic violations among foreign-born drivers following the passage of 287(g) in a new immigrant gateway. Its passage increased the salience of issues such as legal status. Observations of other jurisdictions suggest that presence of a 287(g) program does not necessary increase the arrest of immigrants. In one Southern city participating in the program, contact between ICE and local police was discouraged and police were ordered not to inquire about immigration status (Coleman 2012b).

Technically, unauthorized immigrants who have entered the country illegally have committed a misdemeanor offense, while those who are unauthorized for other reasons (e.g., an overstayed visa) have committed a civil offense. As suggested above, some police may stop and arrest unauthorized immigrants for minor driving offenses to determine they have violated immigration law. But in prosecution, the federal government typically pursues civil removal as an outcome rather than criminal penalties, as criminal prosecutions have stricter standards. The likelihood that an arrest involving a U.S. citizen leads to prosecution depends largely on its severity. The higher standards required for criminal prosecution are thought to temper decisions on the part of police to arrest citizens for minor offenses (Motomura 2011). The ease with which courts can initiate civil removal processes means that arrests involving immigrants likely produce a tangible result. Even

when sentenced in federal criminal courts, noncitizens typically receive harsher sentences than citizens (Light, Massoglia, and King 2014).

Studies have yet to examine factors associated with change in the policing of immigrants across different jurisdictions. The closest any study has come to this is to consider factors that explain yearly change in criminal deportation rates. Using data from over a century (1908-2005), King, Massoglia, and Uggen (2012) found that labor markets had contingent effects on deportation. In the period when judicial discretion was greatest (i.e., between 1941 and 1986), deportation rates increased in concert with unemployment rates. This is consistent with Massey's (2009) argument that immigration policy tends to be more restrictive during periods of economic distress. In the period following 1986, deportation increased with the prison boom, reflecting a more punitive strategy for managing dangerous populations. Of course, these findings are specific to criminal deportation; the majority of deportation cases (240,027 out of 438,421 in FY 2013) involve individuals with no prior criminal convictions (Simanski 2014). This underlines the need for studies that more broadly consider the apprehension of immigrants.

Noting the growing emphasis of the DHS on interior enforcement, Coleman (2012a) argues that the U.S. immigration enforcement has changed its emphasis from "managing territories" to "managing populations." In other words, immigration enforcement has migrated from state borders inward to everyday spaces. At the same time, control over immigration enforcement has devolved to a multiplicity of authorities, including local police. These changes beg a consideration of spatial variation immigrant policing and the identification of factors that drive change in immigrant arrest over time. As an entity, the Border Patrol is interesting because it exercises both external and internal enforcement.

THEORETICAL FRAMEWORK

In summary, the migration model suggests that apprehension decreases with improvement in the Mexican economy and deterioration in the United State economy. The assumption here is that apprehension rates increase in tandem with migratory flows from Mexico to the United States. The geographic political economy model suggests that greater unemployment creates a demand on the part of authorized workers for stronger immigration enforcement. Recent research adds that the prison boom has fueled increases in immigrant policing. Studies have yet to identify factors that shape immigrant apprehension in the post 9/11 era, let alone whether they differ by region. Recent theorizing on the Border Patrol suggests that they engage in both internal and external control. Thus, both frameworks potentially explain patterns of Border Patrol apprehension.

Border Patrol agents along the Southwestern Border likely focus more attention on catching the unauthorized as they cross the border than do agents assigned to the Northern and Coastal Borders. Agents along the Northern Border, in contrast, are mandated to enhance border security by working with "local, tribal, and Canadian partners" (GAO 2010). Evidence from stations along this border suggests they spend much of their time patrolling areas far away from the border. They appear to place a greater emphasis on internal enforcement than stations along the other two borders. Thus, I predict that apprehension along the Southwestern Border will be sensitive to factors that influence migratory flows while apprehension along the Northern Border will increase in response to local unemployment rates. For instance, a recent study concerning the discretionary enforcement of immigration laws found that the number of employment verification audits (per state and year) increased with unemployment (Makowsky and Stratmann 2014).

According to King and colleagues (2012), the management of populations thought to be dangerous has become so institutionalized in recent decades that it overrides the influence of national shifts in other factors. They did not consider the possibility that regions of the country may differ in their use of punitive strategies for managing the immigrant population. As rates of imprisonment are greatest in the South and Southwest (Lynch 2011), they may be more strongly associated with apprehension along the Coastal Border than along other borders. The fact that very few counties outside of the South or Southwest have signed 287(g) agreements is suggestive of this (Parrado 2012). To my knowledge, studies have yet to document the practices of agents working along the Coastal Border.

DATA AND METHODS

Dependent Variable

Yearly apprehension rates for Border Patrol sectors (again, its operational jurisdictions) combine data from the DHS and the Pew Hispanic Center. Specifically, the numerator (the number of apprehensions) is based on data on apprehensions made publically available by the CBP. The CBP posts data for each fiscal year and sector on the total number of apprehensions and the number of apprehensions involving Mexican nationals. I use data from fiscal years 1992 to 2012, a period for which estimates of the unauthorized population are also available. The denominator is based on the number of unauthorized individuals in the states comprising each sector. Following Leerkes, Bachmeier, and Leach (2014), I used linear interpolation to estimate the unauthorized population in years for which data was not available. For states with smaller unauthorized

populations (e.g., Maine and Montana) estimates are not available for the 1990s; these states are given a value of zero for the years that estimates of the unauthorized population are not available. Yearly apprehension rates are logged to stabilize their variance in the time series analyses.

A complication of using sector-years as the unit of analysis is that some states include multiple sectors (e.g., Texas) and other states cut across sectors (i.e., New York). In addition, some sectors include states with few unauthorized immigrants. In fact, the Houlton Sector represents only Maine. I combined many sectors so that they correspond to state-level estimates of the unauthorized population. Most of the newly created sectors aggregate estimates for multiple states. States that do not fall within 100 miles of the border are excluded altogether from the analyses. Figure 1 shows the reconfigured sectors. In some cases, these sectors correspond to large regions of the United State, creating a potential for aggregation bias. Much of the literature on immigration enforcement, migration flows, and key factors this study highlights (i.e., incarceration rates and unemployment) highlights regional variation. A prior study modeling yearly change in deportation rates failed to even account for regional variation (King et al. 2012).

[Figure 1 about here.]

Other Indicators of Border Enforcement

The CBP also reports at a sector level other indicators of enforcement, including the number of agents, the weight of drugs confiscated, and the number of deaths and rescues; however, this information is not available for most of the years this study considers. To offer a contemporary profile of enforcement indicators, information on these other indicators is presented for 2012. Recent estimates of the percent of Mexicans in each state's

unauthorized population for this same year (also from PEW) additionally enables me to measure the overrepresentation of Mexicans among those apprehended. Overrepresentation ratios indicate the extent to which Mexicans are overrepresented in the apprehended population in comparison to what we would expect on the basis of their relative group size.

Independent Variables

The creation of independent variables similarly entailed the summation of state-level estimates to obtain sector-level estimates. Other studies using CBP Border Patrol data have similarly aggregated data to the sector level in evaluating the effects of border enforcement on crime and other outcomes (e.g., Orrenius and Coronado 2005; Gathman 2008). As the independent variables are lagged one year, these variables are created for years that range from 1991 to 2011. Unemployment rates for each sector are computed by summing state-level estimates from the Bureau of Labor Statistics on the number of individuals in the labor force and the number unemployed; as the fiscal year begins in October, September estimates of the labor force are selected. Another economic indicator aggregated from state data is adjusted per capita GDP (Bureau of Economic Analysis). I also include analogous economic measures for Mexico; these measures differ across years but not sectors (i.e., unemployment rate and adjusted GDP). Incarceration rates for each sector are computed using state-level data on population size combined with the year-end estimates of the population in state prisons from the Bureau of Justice Statistics (BJS).

A number of other sector-level variables were included as control variables. These variables are included in studies of related outcomes such as immigrant-related state

legislation (e.g., Chavez and Provine 2009). State-level estimates of the total population size and the number of Hispanics come from the U.S. Census. The number of violent crimes and property crimes reported by the Uniform Crimes Reports were used to estimate crime rates. Other control variables could not be measured yearly: Republican representation in the House of Representatives and per capita sworn officers. The total number of representatives and the number of Republican representatives were measured for the election years. The number of sworn personal in each state was reported every four years in the Census of State and Local Law Enforcement Agencies. These variables remain constant in some years. For instance, proportion of Republicans in the House of Representatives in 2009 will be equivalent to the proportion in 2008 (i.e., the previous election year) but can change values in 2010. The results of models are similar when these two variables are excluded.

Pooled Time Series Models

This study uses pooled time series models to examine the effects of key variables on Border Patrol apprehension rates. Preliminary models regressed yearly apprehension rates on a set of key independent variables (e.g., unemployment and incarceration rates) prior to de-trending the data. A regression plot of the current residuals against the lagged residuals revealed substantial autocorrelation (Becketti 2013). (I could not run a Durbin-Watson test because of multiple sectors in the time series.) To address autocorrelation, I de-trended the data by first differencing in the variables, including a one-year lag for the independent variables (i.e., $y_t - y_{t-1}$ and $x_{t-1} - x_{t-2}$). I first estimate a model that combines the sectors and includes the variables listed above; this model includes indicator variables for the

different sectors with one sector omitted. A second model adds a control variable for the number of Border Patrol agents per 100,000 unauthorized individuals in the population. A comparison of the coefficients in first and second models reveals the extent to which strength of enforcement mediates the effects of variables on apprehension. Next, I run a parallel set of models for each of the three borders. The results of Chow-tests (not shown) revealed that the combined effects of variables differ significantly according to border.

RESULTS

Figure 3 shows the number of apprehensions made by Border Patrol agents along the three borders in each fiscal year. For the sake of comparison, I also include the number of apprehensions for ICE agents as well. As the numbers for ICE and the Southwestern Border dwarf those for the Coastal and Northern Borders, they utilize a different *y*-axis. As can be seen, the numbers fluctuate considerably over the years. Generally speaking, the number of Border Patrol apprehensions declined considerably during the period of 1992 to 2012. In contrast, the number of ICE apprehensions increased in this time frame. Both ICE and the Northern Border experienced a substantial increase in apprehensions between 2007 and 2008. This increase coincided with the beginning of the Great Recession but also with the implementation of 287(g) programs agreements in several local areas (Parrado 2012).

[Figure 3 about here.]

Figure 4 displays the number of agents assigned to each border for the different fiscal years. To my knowledge, this information is not available for ICE. Again, the graph utilizes two different *y*-axes for ease of examining trends for three borders. Both the

Southwestern and Coastal Borders have experienced an increase in their number of agents, but the increase for the Northern Border is particularly dramatic. Since 1992, the number of agents along the Northern Border has increased by 600% (i.e., 600 = 100 * [2,093 – 299]/299). Still, the Southwestern Border is assigned considerably more agents than the Coastal and Northern Borders.

[Figure 4 about here.]

Table 1 contrasts the three borders in terms of indicators of enforcement and characteristics of their jurisdictional areas; data for the sectors comprising each of these borders is aggregated here. One indicator of success in enforcement could be the number of apprehensions per agent. Both the Southwestern and Coastal Borders apprehend at a higher rate than the Northern Border (i.e., 19.1 and 18.2 versus 1.9). Individual agents along the Northern Border apprehend, on average, about 2 undocumented individuals per year. Agents along the Coastal Border are most successful in confiscating cocaine, while agents along the Southwestern Border are most successful in confiscating marijuana. Northern Border agents appear relatively unsuccessful in identifying drug traffickers. Missing data on the number of deaths and rescues suggest these events are less frequent along the Northern and Coastal Borders. The numbers of Mexicans apprehended along the Southwestern and Coastal Borders is proportional to their representation in the undocumented population in these areas. In contrast, the Northern Border arrests a disproportionately large number of Mexicans. Specifically, Mexican representation is 59% greater than what we would expect given their representation among the unauthorized population in states along the Northern Border (i.e., 59% = 1.59 – 1.00 = 0.558 / 0.344).

[Table 2 about here.]

Turning to jurisdictional characteristics, the demographic composition of these borders differs as well. The Southwestern Border is comprised of more Hispanics and Mexicans than the other two borders. For instance, the proportion Hispanic among states that fall along the Southwestern Border is 0.377, in comparison to 0.124 and 0.102 along the Coastal and Northern Borders, respectively. Rates of violent crime and property crime are higher along the Southwestern and Coastal Borders than along the Northern Border. Partly reflecting higher crime rates, incarceration rates are also greater along these borders. In spite of its lower crime rates, the Northern Border's per capita number of sworn officers is close to that for the Coastal Border and exceeds that for the Southwestern Border. The patterns for economic indicators are less consistent. The Coastal Border has greater Republican representation in the House of Representative than do the other two borders (i.e., over two-thirds versus one-half).

[Table 3 about here.]

Table 3 shows the results from the pooled time series models of yearly change in apprehension. As the apprehension rates are logged prior to being differenced, the coefficients reveal the percent change in apprehension rates corresponding to a one-unit change in *x*. Models pooling all three border reveal only one significant effect: apprehension rates are positively correlated with incarceration rates. This is consistent with King et al. (2012); they similarly found that incarceration was the only factor associated with deportation rates when they pooled their model for all years. An alternative measure of incarceration rates that subtracted aliens from the imprisoned population also had significant effect (analyses not shown). The number of BP agents fails to have a significant

effect on apprehension rates. As mentioned earlier, the effects of variables differ across the three borders, necessitating border-specific models.

For the model pooling sectors along the Southwestern Border, incarceration rates are significantly associated with apprehension rates. Other significant effects include the proportion of House Republican and the adjusted GDP of Mexico. Mirroring the results from King et al. (2012) for their model pooling years 1987 to 2005, greater Republican representation in the House *decreases* apprehension rates. In support for the migration model, apprehension rates decrease when the GDP of Mexico improves. The effect of a Republican House falls out of significance ($p < .05$) with the inclusion of BP staffing, in spite of the fact that this latter variable is not statistically significant.

Incarceration rates are also significantly associated with apprehension rates along the Coastal Border; however, the magnitude of the effect is larger than that estimated for the Southwestern Border. No other variables have a significant effect in this model. These patterns persist after BP staffing is taken into account. Incarceration rates are not significantly associated with apprehension rates along the Northern Border; staffing appears to be critical to this border. Apprehension rates along the Northern Border increase with both the per capita numbers of BP agents and sworn officers. Keep in mind that the power to detect significant differences is weaker for the Coastal Border than for the other two borders, as it is comprised of only two sectors (versus four). In fact, the coefficient for the number of BP agents is larger for the Coastal Border than the Northern Border. Also note that the inclusion of this variable in the model for the Coastal Border increases the r-squared value substantially (i.e., from 26.7% to 32.0%). Importantly, apprehensions *increase* along the Northern Border when unemployment increases. The

inclusion of the variable for BP staffing fails to alter the levels of significance for other variables in this model.

I additionally conducted a number of sensitivity tests (not shown). I re-ran the models shown in Table 2 using contemporaneous measures of change for the independent variables and measures of change that incorporated a two-year lag (as opposed to the one-year lag). Considering the results for the models pooling all three sectors, the model fit was strongest for the two-year lag and weakest for the contemporaneous measures. Related to this, the magnitude and significance level for the effect of incarceration increased with the size of the lag; incarceration had significant effects only in the models with lagged measures of change. Other variables failed to reach statistical significance in these models as well. I additionally re-ran the models in Table 2 omitting variables that failed to have an effect in any of the models (e.g., proportion Hispanic) and obtained the same general pattern of results. The small sample sizes, however, precluded the inclusion of indicator variables for fiscal year. I also experimented with the specification of several variables. For instance, I squared the variable for proportion Hispanic prior to de-trending the data in order to examine whether absolute changes in this variable had larger effects in sectors with higher concentrations of Hispanics (i.e., threshold effects).

Figure 4 presents time series graphs for specific sectors to illustrate how yearly change in apprehension rates coincides with yearly change in key independent variables. Forward moving and backward moving correlation analyses were conducted to determine the structural breaks for these graphs (e.g., Isaac and Griffin 1989); for the sectors and variables highlighted in these graphs, the correlations were greatest for the 2003 to 2012 period. Thus, the *x*-axis covers this period. (For the year 2003, the logged apprehension

rates for 2002 are subtracted from the logged apprehension rates for 2003; the 2001 values for independent variables are subtracted from the 2002 values.)

[Figure 4 about here.]

Figure A shows for the San Diego Sector how the yearly percent change in apprehension rates trends with yearly change in employment rates. For most of the years, increases in employment rates are accompanied by increases in apprehension rates. Conversely, decreases in employment rates are accompanied by decreases in apprehension rates. The patterns in this graph support the migration model. Figure B substitutes the number of jobs gained in construction for the employment rates using data on County Business Patterns data from the U.S. Census. The correlation for this time series is even stronger (i.e., 0.772 versus 0.623). Figures C and D show how apprehension rates change with incarceration rates for the New Orleans and Miami sectors, respectively. They illustrate the fact that increases (and decreases) in incarceration are closely followed by increases (and decreases) in apprehension rates. Turning to the Detroit Sector, Figure E shows how apprehension rates increased following periods of increase in unemployment and Figure 5 reveals how they increased following periods of job loss in manufacturing. This pattern is opposite what is found for the San Diego Sector. (Notice the employment categories are reversed across these sectors for ease of examining co-variation in trends.) Note the strong correlations here as well (r = 0.802 for unemployment rates and r = 0.858 for job losses in manufacturing). Graphs for other sectors and variables (e.g., incarceration rates for the El Paso Sector) are equally compelling but not shown due to space limitations.

CONCLUSION

In spite of the fact that levels of deportation have reached record levels, studies have yet to identify factors that explain temporal or spatial variation in the arrest of unauthorized immigrants. Studies on shifts in border enforcement and the policing of immigrants, however, provide some important theoretical insights. They suggest that two general frameworks may be useful in explaining border enforcement and apprehension. The migration framework suggests that changes in apprehension reflect changes in the flows of unauthorized migrants into the U.S. from Mexico. The political economy framework links changes in apprehension to shifting interests on the part of local citizens, industry, and law enforcement in cracking down on illegal immigration.

The salience of these competing frameworks is presumed to depend on whether the Border Patrol focuses more on internal versus external enforcement. Regrettably, the CBP fails to distinguish the events that lead to arrest or the location of arrests, information that could address the nature of enforcement across the three borders. Alternative indictors of enforcement, however, suggest that apprehension along these borders differs in some fundamental ways. Most notably, the Northern Border appears to relatively uneventful in comparison to the Coastal and Southwestern Borders. Agents along the Northern Border apprehend the unauthorized population less frequently and confiscate fewer drugs than their counterparts assigned to the other two borders. They also arrest a disproportionately large fraction of Mexicans.

Factors that drive change in apprehension rates over time also differ across the three borders. Along the Southwestern Border, apprehension decreases when the GDP of Mexico improves and when unemployment in regions along the U.S.-Mexico border

increases. For both the Southwestern and Coastal Borders, apprehension increases with growth in regional imprisonment rates. Contrary to the patterns for the Southwestern Border, apprehension along the Northern Border increases when regional unemployment increases. King et al. (2012) theorize that local conditions have more of a bearing on immigrant outcomes when discretion is greater. The findings of this study suggest that Border Patrol agents working along the Northern Border may have more of a "discretionary beat" than their counterparts employed along the Southwestern and Coastal Borders.

While this study fills an important gap, it has some significant limitations. Ideally, the pooled time series models would use stations as the unit of analysis rather than sectors. Smaller jurisdictional areas, however, would require contextual data at the county level. Information on the unauthorized and incarcerated populations is not available at this level. The use of sectors (some of which are reconfigured) rather than stations likely produces aggregation bias. Another issue is that the time series extends only twenty years, reducing the power to detect significant effects. But as mentioned earlier, moving correlations revealed that the associations were strongest for the 2003 to 2012 period. Finally, this study fails to directly address the mechanisms by which various factors influence apprehension. For instance, it is not clear whether the effect of imprisonment on apprehension reflects a "culture of control" versus other mechanisms. Alternatively, the effect could reflect lobbying by the private prison industry for stronger enforcement or the availability of detention facilities needed to temporarily house the apprehended population (Doty and Wheatley 2013).

The strengths of this study arguably overwhelm its limitations. Some of the key

findings are prefigured by the results of previous studies on apprehension and deportation (e.g., the overarching effect of imprisonment). Monthly data on apprehensions and economic factors could provide for more refined time series models. A successful FOIA request for data on stations would make it possible to consider the influence of county-level employment patterns (e.g., job losses in a variety of different industries) on apprehension by the Border Patrol. Studies could address whether internal control is distinctively discretionary by estimating pooled time series models of arrests made by ICE agents. Another possibility would be to estimate pooled time series models of hearings in state immigration courts using data from the Transaction Records Access Clearinghouse (TRAC). Finally, ethnographic research suggests that immigration laws have injurious effects on immigrants (Menjívar and Abrego 2012; Stuesse and Coleman 2014). An important question is whether local and regional variation in immigrant arrests rates translates into spatial variation in immigrant outcomes.

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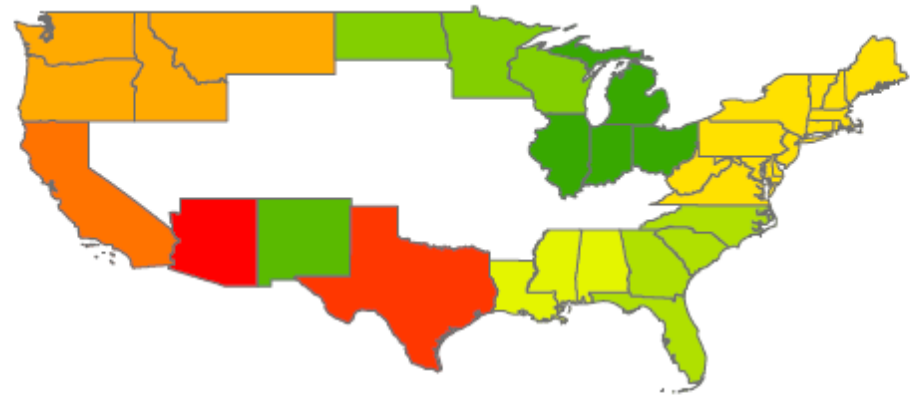
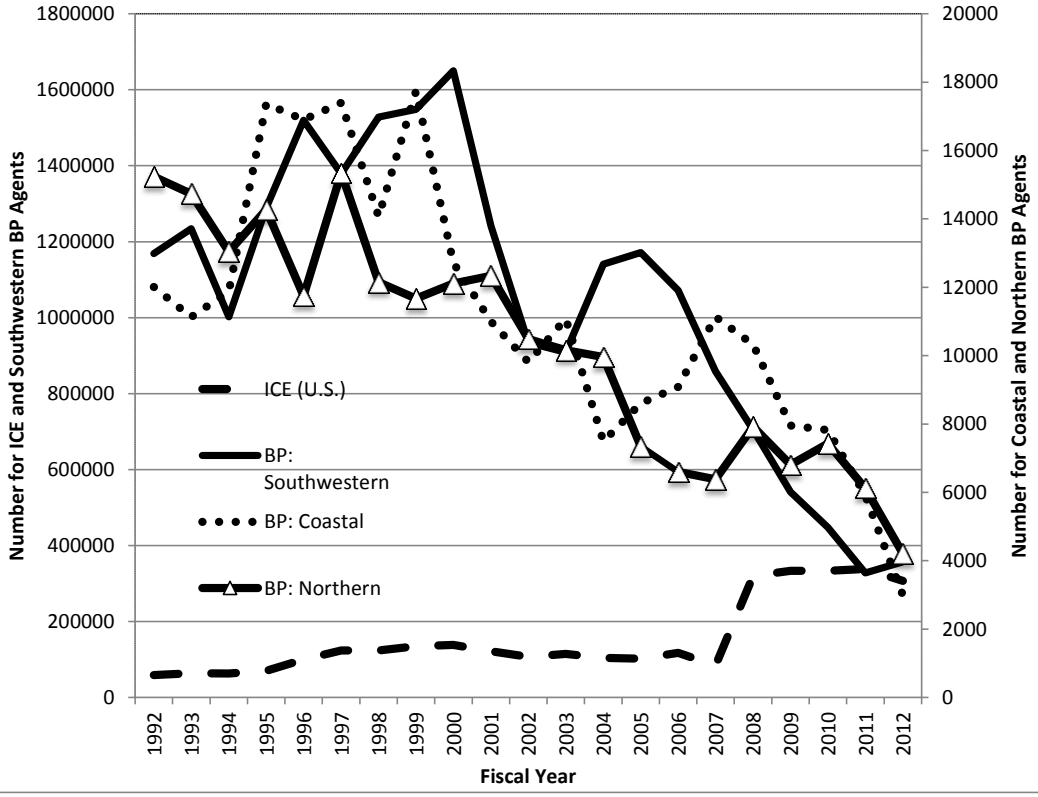


Figure 1. States Comprising Different Sectors

Figure 2. Trends in Apprehensions Made by ICE and Border Patrol Agents: Fiscal Years 1992-2012



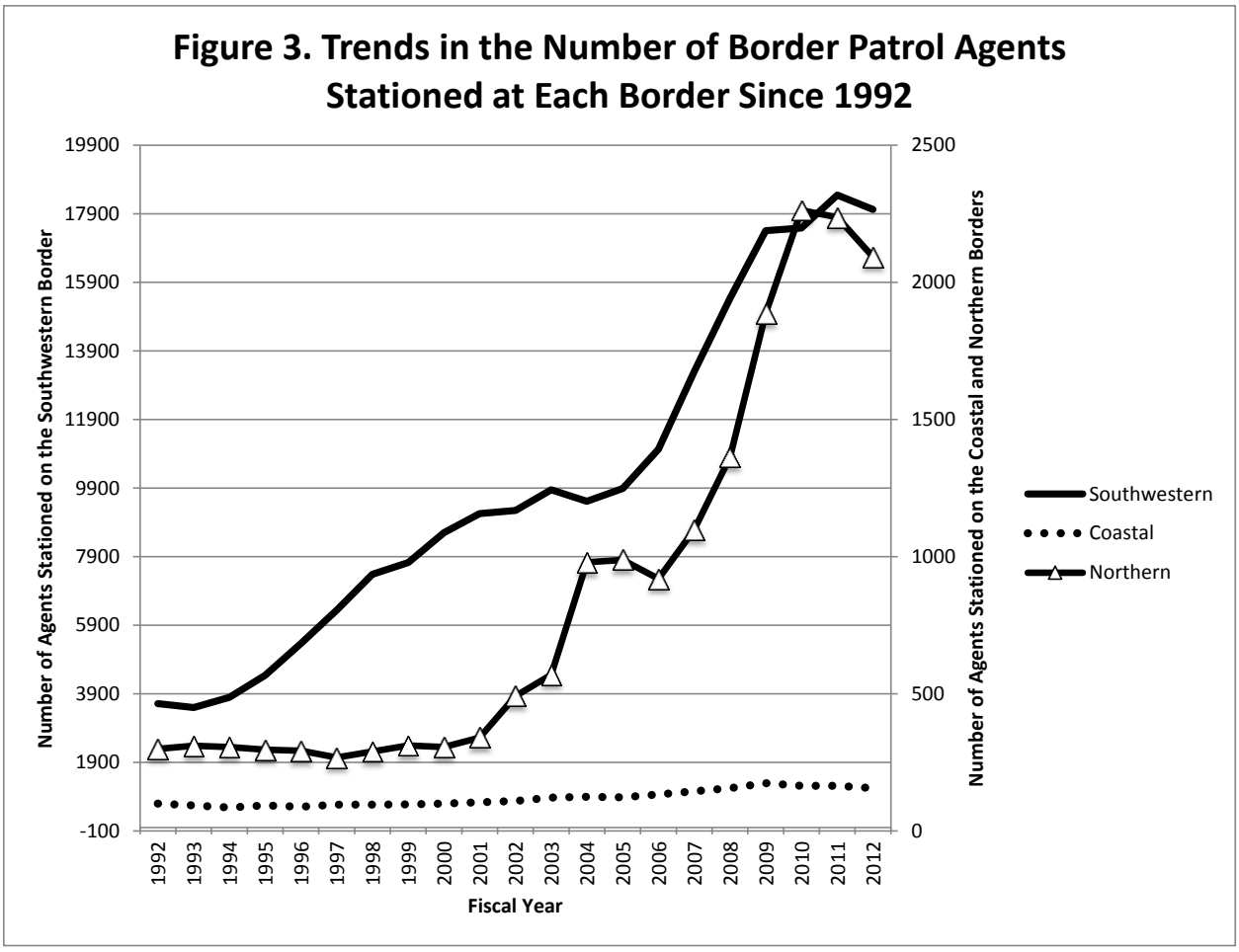


Figure 3. Trends in the Number of Border Patrol Agents Stationed at Each Border Since 1992
Number of Agents Stationed on the Southwestern Border
Number of Agents Stationed on the Coastal and Northern Borders
19900
17900
15900
13900
11900
9900
7900
5900
3900
1900
-100
2500
2000
1500
1000
500
0
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Fiscal Year
Southwestern
Coastal
Northern

Figure 4. Change in Sector Characteristics and Apprehension Rates: Selected Sectors

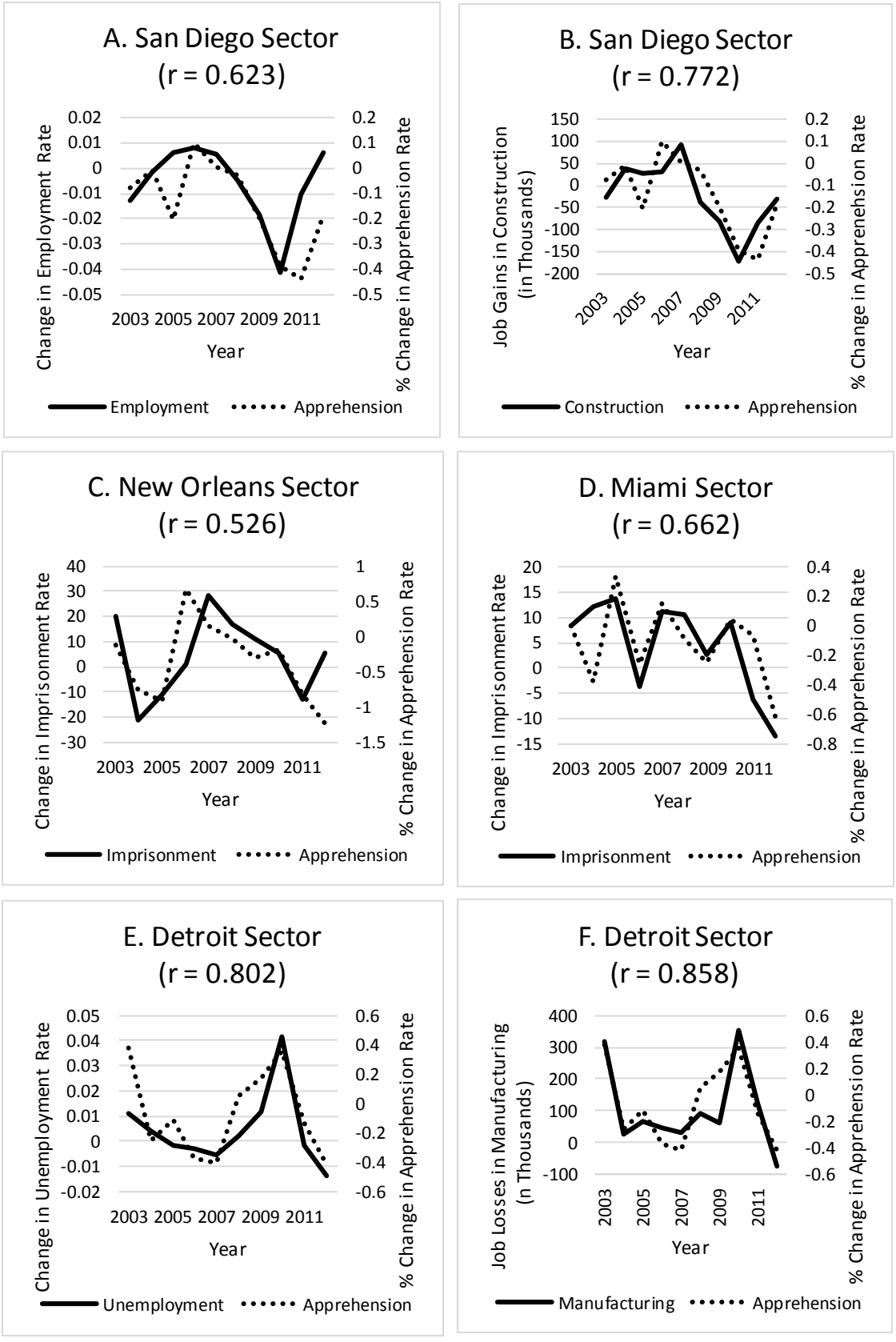


Table 1. Profile of the Three Borders in 2012

Variable	South-western	Coastal	Northern
Indicators of Enforcement			
Number Apprehended	356,873	2,983	4,210
Number of Agents	18,412	164	2,202
Apprehensions per Agent	19.4	18.2	1.9
BP Apprehensions (Per 100,000 Unauthorized)	7941	149	106
BP Agents (Per 100,000 Unauthorized)	410	8	55
Marijuana (Pounds Confiscated Per Agent)	124.79	3.58	0.70
Coke (pounds confiscated per agent)	0.33	36.35	0.09
Number of Deaths	463	---	---
Number of Rescues	1312	---	---
Proportion of BP Apprehensions Mexican	0.735	0.371	0.548
Overrepresentation of Mexicans	1.02	1.01	1.59
Characteristics of Jurisdiction			
Proportion of Unauthorized Mexican	0.721	0.366	0.344
Total Population (in 1000s for this table)	71,052	55,056	138,112
Proportion Hispanic	0.377	0.124	0.102
Property Crime Rate (Per 100,000 Population)	3,071	3,379	2,493
Violent Crime Rate (Per 100,000 Population)	423	436	344
Prison Rate (Per 100,000 Population)	478	556	352
Sworn Officers in 2008 (Per 100,000 Population	229	269	263
GDP per capita (2012 dollars)	54,328	42,416	54,813
Proportion Labor Force Unemployed	0.089	0.086	0.078
Proportion of House Republican	0.500	0.707	0.498

Notes: For the indicators of enforcement the sectors comprising each of the three borders were pooled together. For the characteristics of each border's jurisdiction, data from the states that fall within each border's 100-mile zone were aggregated. Using states rather than counties that comprise the 100-mile zone leads to an overestimation of the number of individuals within the Border Patrol's jurisdiction. Roughly 264 million individuals fall within this zone using states versus the ACLU's 2007 estimate of 197 million individuals using counties.

Table 2. Time Series Models Pooling Data from the Sectors That Comprise the Three Borders: Yearly Change in Logged Apprehension Rates between 1992 and 2012

	All Three Borders		Southwestern		Coastal		Northern	
Independent Variable	1	2	1	2	1	2	1	2
Total Population (Logged)	-0.030	0.000	-2.738	-2.670	0.617	2.542	1.971	5.680
Proportion Hispanic	-26.94	-29.19	-31.99	-38.12	-7.55	-23.52	-3.09	-21.95
Property Crime Rate (Per 100,000)	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.000
Violent Crime Rate (Per 100,000)	-0.001	-0.001	0.000	0.000	0.003	0.001	-0.003	-0.003
Prison Rate (Per 100,000)	0.002 *	0.002 *	0.002 *	0.002 *	0.011 *¥	0.013 **¥	-0.004	-0.003
Sworn Officers (Per 100,000)	0.007	0.007	0.008	0.009	-0.003	0.006	0.033 *¥	0.035 **¥
Adjusted GDP Per Capita	36.30	35.55	45.77 #	41.73 #	28.68	81.88	45.02	58.81
Proportion Labor Force Unemployed	0.65	0.52	-6.33	-6.99 #	4.26	10.47	8.13 *¥	8.27 *¥
Proportion of House Republican	-0.024	-0.020	-0.528 *	-0.500 #	1.135	0.454	0.121	0.201
Adjusted GDP of Mexico (in Billions)	-.0007	-.0007	-.0016 *	-.0015 *	-.0001	.0007	.0004 ¥	.0006 ¥
Unemployment Rate of Mexico (Year)	-0.425	-0.392	-1.688	-1.514	1.473	2.493	5.824	7.648
BP Agents Per 100,000 Unauthorized		-0.110		0.000		0.016		0.004 *¥
Constant	0.034	0.050	0.228	0.273	-0.223	-0.270	-0.209	-0.235
N of Cases (Sector-Years)	200	200	80	80	40	40	80	80
R-squared	0.151	0.152	0.317	0.325	0.267	0.320	0.266	0.289

Notes: These models predict yearly change in the logged apprehension rates as a function of yearly change in the independent variables. The independent variables were lagged one year prior to detrending. Sectors comprising the three borders are pooled in the models. The models also include indicator variables for the sectors and are estimated with robust standard errors (not displayed). Taking the difference between yearly logged rates means that coefficients capture the percentage change in rates per one unit change in the independent variables.

$p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests)

¥ $p < .05$ (difference between the coefficient for Northern and Coastal Borders in comparison to the coefficient for the Southwestern Border)