The Criminal Justice Response to Policy Interventions: Evidence from Immigration Reform

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Abstract

Changes in the treatment of individuals by the criminal justice system following a policy intervention may bias estimates of the effects of the intervention on underlying criminal activity. We explore the importance of such changes in the context of the Immigration Reform and Control Act of 1986 (IRCA). Using administrative data from San Antonio, Texas, we examine variation across neighborhoods and ethnicities in police arrests and in the rate at which those arrests are prosecuted. We find that changes in police behavior around IRCA confound estimates of the effects of the policy and its restrictions on employment on criminal activity.

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I. Introduction

Plausibly exogenous policy changes are frequently used to evaluate economic theories of behavior. However, a policy intervention that alters individual incentives may also induce changes in the behavior of government agencies, biasing estimates of the intervention's impacts.[1] The potential confounding effects of changes in the behavior of government agencies arise in a wide variety of settings, but are arguably of particular concern when policies target a group of individuals who are readily singled out by actors in these agencies. This is often the case with policies affecting immigrants, and specifically policies affecting immigrants' status in the community and their employment opportunities. The extent to which one can accurately measure the effects of such policies on individual behavior hinges on whether one can disentangle changes in actual behavior from changes in the treatment of individuals by government agencies with which those individuals come into contact.

In this paper, we examine the impact of the largest change in immigration policy in recent U.S. history, the Immigration Reform and Control Act of 1986 (IRCA), on the administration of criminal justice in Bexar County, Texas (whose seat is San Antonio). We exploit the timing and conditions of IRCA, which differentially affected immigrants according to arrival date and legal status, to explore the extent to which changes in the behavior of the criminal justice system affected observed patterns of crime. In a difference-in-differences framework, we explore variation across neighborhoods and ethnicities in both arrest rates and the rates at which those arrests are prosecuted. Extending the approach of Knowles, Persico, and Todd (2001), we use the prosecutorial acceptance rate as an indicator of arrest quality, which helps to shed light on

[1] For example, a public awareness campaign about the dangers of drug use could cause police officers to take drug violations more seriously, leading to an increase in arrests for drug offenses that might mask any actual reductions in drug-related crime due to the campaign.

otherwise unobserved changes in police behavior in response to the policy. Our results suggest that failure to account for changes in the treatment of individuals by the criminal justice system can lead to a misinterpretation of estimates of the effects of public policies on crime.

II. The Immigration Reform and Control Act of 1986

On November 6, 1986, Congress passed IRCA, a set of reforms aimed at reducing the unauthorized population in the U.S. in two main ways. First, IRCA granted amnesty to long-time resident non-citizens through a general legalization program (LAW) and a program specific to agricultural workers (SAW). LAW required continuous residence in the U.S. since before January 1, 1982. SAW had no date of entry cutoff, but was only intended for agricultural workers who met certain work requirements. Enforcement of these entry rules was lax, but those who applied for legal status under LAW and SAW had to do so by May 4, 1988 and November 30, 1988, respectively. Nationwide, these two programs legalized 2.7 million immigrants, roughly three-fourths of whom were Mexican (Orrenius and Zavodny 2003).

Second, IRCA aimed to deter further unauthorized immigration by blocking access to legal employment.[2] In particular, IRCA made it criminal for firms to knowingly hire immigrants who were unauthorized or had not begun the amnesty process. Consequently, as of 1988, individuals living in the U.S. without proper documentation were barred from the formal labor market.[3] Freedman et al. (2014) find that the reduced labor market opportunities for unauthorized residents in the wake of IRCA contributed to an increase in felony charges, and in particular

[2] IRCA also stepped up border and interior enforcement measures. For further discussion of IRCA's provisions, see Freedman et al. (2014).

[3] While IRCA did not change long-term patterns of undocumented immigration (Orrenius and Zavodny 2003), the labor market prospects of immigrants who could not meet IRCA's amnesty requirements deteriorated significantly (Kossoudji and Cobb-Clark 2002).

felony drug charges, in Bexar County. However, some of the observed changes in charges could be driven by changes in the treatment of Hispanic individuals in the criminal justice system.

III. Data

Police may have responded to IRCA by changing the extent to which they patrolled immigrant neighborhoods or by changing their propensity to arrest people who, based on their appearance, could be immigrants. We obtained records from the Bexar County Department of Information Technology of all adult felony and misdemeanor arrests made in Bexar County between July of 1986 and March of 1991.[4] Using mapping software, we located the census block groups in Bexar County where individuals in the data were arrested.[5] We then merged these data with block group-level proxies for new immigrant neighborhoods in which policing may have changed after IRCA, including the poverty rate and the percent of residents who were foreign born in 1990.[6] As over three-fourths of San Antonio's foreign born population in 1990 was from Latin America, we assume that non-Hispanic people were not directly affected by any changes in employment opportunities or police behavior associated with IRCA's implementation.[7]

[4] We were able to determine the location of 70 percent of the arrests. Most of the remaining arrests were made in a courthouse or police department, or had missing location information. In contrast to the court data used in Freedman et al. (2014), which identify where the alleged offender lived, the arrest data identify where the arrest occurred.
[5] We use 1990 geographic boundaries; after excluding 12 block groups with missing demographic information, we were left with 1,001 block groups in Bexar County. The median population of these block groups was 1,061.
[6] Each of these variables has a well-established correlation with immigrant destinations (Zavodny 1999). We obtain similar results when we use the number of residents per housing unit, the percent of residents of Mexican descent, or the percent speaking Spanish at home. All block group demographic characteristics are all derived from the 1990 Decennial Census.
[7] We classified an arrestee as Hispanic, and thus potentially an immigrant, if his or her last name was one of the 639 most frequently occurring heavily Hispanic surnames identified in Word and Perkins (1996) or if it originated in Central or South America, Spain, or Portugal according to Ancestry.com.

IV. Results

First, we examine felony and misdemeanor arrest rates of Hispanic residents relative to non-Hispanic residents of Bexar County around IRCA. Figure 1 shows the difference between the number of Hispanic and non-Hispanic people arrested each month scaled by the number of Hispanic people arrested. While there is little change in the relative number of Hispanic people arrested for misdemeanors over time, the relative number of Hispanic people arrested for felonies increased after 1990, when Hispanic people went from being arrested 10 percent less frequently to 5 percent more frequently than non-Hispanic people.

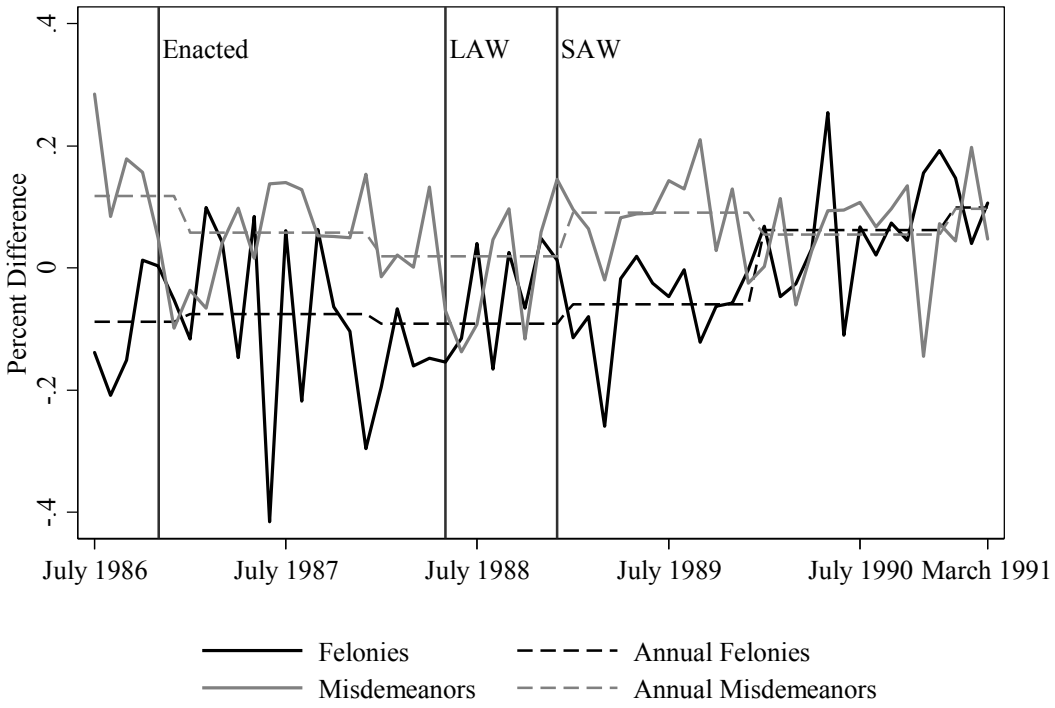

FIGURE 1: PERCENT DIFFERENCE BETWEEN HISPANIC AND NON-HISPANIC FELONY AND MISDEMEANOR ARRESTS

Notes: From left to right, the vertical lines represent the months of IRCA enactment (November 1986), LAW amnesty expiration (May 1988), and SAW amnesty expiration (December 1988).
Sources: Bexar County Department of Information Technology

While these changes could reflect actual increases in criminal activity among Hispanic residents of Bexar County after IRCA limited employment opportunities for immigrants, they could also be attributable to a reallocation of law enforcement resources toward immigrant communities or a change in the police's propensity to arrest Hispanic residents after the highly publicized and controversial reform went into effect. Therefore, we next examine changes around IRCA in the spatial distribution of arrests as well as in the rate at which arrests in different neighborhoods were accepted for prosecution. The intuition behind the latter is that if police cast a wider net in immigrant communities after IRCA, we would observe more individuals in those communities arrested, but in the absence of an increase in the underlying criminality of residents, fewer of the arrestees should be prosecuted.[8]

Our baseline difference-in-differences specification takes the following form:

$$(1) \qquad y_{bt} = \alpha_b + \gamma_t + D_b\theta_0 + (Enact_t \times D_b)\theta_1 + (LAW_t \times D_b)\theta_2 + (SAW_t \times D_b)\theta_3 + \varepsilon_{bt}$$

where y_{bt} is, alternately, the natural log of the rate of arrests and the prosecutorial acceptance rate for arrests made in block group b in month t.[9] We allow for time invariant differences in outcomes across block groups (α_b) and include a set of monthly fixed effects γ_t that allow for seasonality as well as long run trends.[10] The variable D_b is, alternately, the poverty rate and the percent of residents who were foreign born in 1990. The dummy variables for IRCA enactment ($Enact_t$) and the expiration of the two amnesty programs (LAW_t and SAW_t) are equal to one in every month beginning in November of 1986, May of 1988, and December of 1988, respectively.

[8] Arrests in immigrant neighborhoods could also rise if legalization increased residents' propensity to report crimes. However, not only is there is no reason to believe this would affect misdemeanors and felonies differently, but existing evidence suggests that such changes in reporting are unlikely to be large (Davis and Henderson 2003).
[9] We scale arrests by linearly interpolated block group population between 1980 and 1990, and add 0.001 to the rate of arrests so that the dependent variable is defined for all neighborhoods. Linear probability models in which the dependent variable is whether or not any resident is arrested generate results of the same sign and significance.
[10] The monthly fixed effects include 56 dummies, one for each month in each year in our sample. These subsume the IRCA enactment and amnesty date dummies.

The results appear in Table 1, where we present separate estimates using the poverty rate (Panel A) and the percent immigrant (Panel B) and break out results for misdemeanors (columns 1 and 2) and felonies (columns 3 and 4). There was a statistically significant reduction in the misdemeanor arrest rate in immigrant destinations (as measured by block groups with higher poverty rates or percent immigrant) that coincided with IRCA's enactment. This could be interpreted as reduction in minor offenses in immigrant neighborhoods during the initial rollout of IRCA.[11] However, there was also an increase in the rate at which prosecutors accepted misdemeanor arrests from immigrant destinations for prosecution following IRCA's enactment.[12] After November of 1986, each percentage point increase in the neighborhood poverty rate (percent immigrant) was associated with a 0.1 (0.4) percentage point increase in the likelihood that a district attorney decided that an arrest made in that neighborhood warranted prosecution. The fact that misdemeanor arrests in immigrant communities were more likely to be accepted for prosecution suggests that police changed their behavior in immigrant neighborhoods, and in particular reduced "disorder" arrests for which charges were likely to be quickly dropped, after IRCA's enactment. Back-of-the-envelope calculations suggest that 10-15 percent of the reduction in arrests can be explained by changes in policing.

[11] Notably, though, following the expiration of SAW at the end of 1988, misdemeanor arrest rates increase, partially counteracting the reduction observed after LAW.

[12] The number of observations is different for the prosecutorial acceptance rate regressions because the acceptance rate is undefined in block groups and time periods in which no arrests occurred.

TABLE 1–DIFFERENCE-IN-DIFFERENCES ESTIMATES

	(1)	(2)	(3)	(4)
	Misdemeanors		Felonies	
	Arrest Rate	Prosecutorial Acceptance Rate	Arrest Rate	Prosecutorial Acceptance Rate
	mean = 11.6	*mean = 63.8*	*mean = 9.8*	*mean = 57.8*
	A. Poverty Rate			
Enact × Poverty Rate	-0.017***	0.103**	0.003	0.080
	[0.002]	[0.052]	[0.002]	[0.081]
LAW × Poverty Rate	-0.012***	-0.007	-0.0005	0.171***
	[0.002]	[0.053]	[0.002]	[0.054]
SAW × Poverty Rate	0.007***	0.066	0.006***	-0.091*
	[0.002]	[0.049]	[0.002]	[0.053]
	B. Percent Immigrant			
Enact × Percent Immigrant	-0.040***	0.411***	-0.0003	0.272
	[0.005]	[0.122]	[0.005]	[0.205]
LAW × Percent Immigrant	-0.024***	0.019	-0.003	0.323**
	[0.004]	[0.122]	[0.004]	[0.153]
SAW × Percent Immigrant	0.010**	0.068	0.016***	-0.107
	[0.005]	[0.118]	[0.005]	[0.151]
Observations	57,057	21,406	57,057	16,338

Notes: All regressions include 56 month dummies and block group fixed effects. Standard errors in brackets allow for arbitrary correlation in crime measure within block group.

*** Significant at the 1 percent level.

** Significant at the 5 percent level.

* Significant at the 10 percent level.

Sources: Bexar County Department of Information Technology

Individual point estimates suggest that there was a further reduction in misdemeanor arrests in immigrant neighborhoods after new immigrants were unable to apply for legal status through LAW, although that effect was attenuated by about 50 percent after SAW. Among the misdemeanor arrests made after the amnesties expired, though, we observe no systematic change in the rate of charges being filed. In other words, after LAW and SAW expiration, we observe fewer people in immigrant neighborhoods whose behavior warrants misdemeanor arrest, and we fail to reject the null hypothesis that police were using the same standards of potential criminal culpability when they arrested someone after the amnesties expired as they were prior to immigration reform.

The number of felony arrests in immigrant neighborhoods was stable after the enactment of IRCA and the expiration of LAW. During the same period, prosecutors became more likely to decide that arrests made were worthy of felony prosecution, particularly after LAW expired. Police arrested more people in immigrant neighborhoods after SAW expired, and there is only suggestive evidence, significant at the 10 percent level, of a corresponding reduction in prosecutorial acceptance rates.[13] Contrary to the notion that changes in policing drove changes in measured serious crime, these results suggest that IRCA, and its more stringent employment regulations, induced greater felony criminal behavior in immigrant neighborhoods.[14]

The preceding results examine the relationship between IRCA and where arrests occurred, rather than how the police interacted with Hispanic people relative to others in the same neighborhoods. In Table 2, we add a third difference to our analysis of arrest patterns and assess how the differential between Hispanic and non-Hispanic arrests changed in immigrant destinations during immigration reform. Specifically, we consider ethnicity-specific (i.e., Hispanic/non-Hispanic) arrest and prosecutorial acceptance rates and include a dummy for Hispanic that we interact with neighborhood demographics and the three IRCA dates.

[13] We count as accepted felony arrests that are prosecuted as misdemeanors. Results in which we count only those prosecuted as felonies are qualitatively similar.

[14] In a single regression that includes both our proxies, we fail to reject the null hypothesis that there is no correlation between patterns of immigrant settlement and the quality of felony arrests made after SAW. The joint significance of all other estimates is identical to the individual estimates reported in Table 1.

TABLE 2–TRIPLE DIFFERENCE ESTIMATES

	(1)	(2)	(3)	(4)
	Misdemeanors		Felonies	
	Arrest Rate *mean = 61.2*	Prosecutorial Acceptance Rate *mean = 63.6*	Arrest Rate *mean = 45.8*	Prosecutorial Acceptance Rate *mean = 57.3*
	A. Poverty Rate			
Hispanic × IRCA × Poverty Rate	-0.005 [0.003]	-0.093 [0.091]	0.001 [0.003]	-0.252* [0.150]
Hispanic × LAW × Poverty Rate	-0.002 [0.002]	-0.054 [0.107]	-0.001 [0.002]	0.041 [0.119]
Hispanic × SAW × Poverty Rate	0.001 [0.002]	0.056 [0.096]	0.006** [0.002]	0.205* [0.112]
	B. Percent Immigrant			
Hispanic × IRCA × Percent Immigrant	-0.004 [0.009]	-0.125 [0.208]	0.016*** [0.006]	-0.470 [0.391]
Hispanic × LAW × Percent Immigrant	-0.009 [0.006]	-0.037 [0.251]	-0.005 [0.005]	0.243 [0.324]
Hispanic × SAW × Percent Immigrant	0.009 [0.006]	-0.122 [0.242]	0.014*** [0.005]	0.086 [0.308]
Observations	114,114	27,177	114,114	19,436

Notes: All regressions include 56 month dummies and block group fixed effects as well as month by ethnicity fixed effects. Standard errors in brackets allow for arbitrary correlation in crime measure within block group.

*** Significant at the 1 percent level.

** Significant at the 5 percent level.

* Significant at the 10 percent level.

Sources: Bexar County Department of Information Technology

We find no evidence that the reduction in misdemeanor arrests was ethnicity specific, but Hispanic residents of immigrant communities became more likely than their non-Hispanic neighbors to be arrested for felonies as IRCA rolled out.[15] There is less evidence that prosecutorial acceptance rates changed differentially for Hispanics in new immigrant destinations, whether it be for felony or misdemeanor offenses.[16] Thus, during an apparent reduction in disorder policing in immigrant destinations that coincided with immigration reform,

[15] In a single regression that includes both our proxies, the probabilities that the triple interaction terms with enactment, LAW expiration, and SAW expiration are jointly insignificant are 27 percent, 36 percent, and 30 percent, respectively. For felonies, the corresponding p-values are 1 percent, 65 percent, and 2 percent.

[16] In regressions in which we include both poverty and immigration, fail to reject the null hypothesis that the interactions with enactment, LAW expiration, and SAW expiration are jointly unrelated to the probability of misdemeanor prosecution are 63 percent, 87 percent, and 52 percent. Corresponding values for felonies are 24 percent, 70 percent and 12 percent.

Hispanic people living in those areas were relatively more likely to commit serious crimes than their non-Hispanic neighbors who faced the same incidence of policing.

V. Conclusion

A potential confounding factor in analyses of the effects of policy interventions on criminal activity using commonly available measures of crime is that any observed changes in crime could be driven not by actual changes in underlying criminal activity, but instead by changes in the criminal justice system's treatment of different members of the community. In this paper, we examine policing activity and prosecutorial acceptance rates to determine whether the observed changes in arrests of Hispanic residents of immigrant communities can be attributed to changes in the criminal justice system's treatment of Hispanic residents after IRCA, or if instead they are more likely attributable to the stringent work regulations that the law put in place for new immigrants. We find that failure to account for changes in policing around IRCA confounds estimates of the effects of the policy and its restrictions on employment on criminal activity. This is particularly true for misdemeanor crimes, which the police may have more discretion in pursuing.

More generally, our results indicate that the potential criminal justice response to policy interventions is important to consider in any evaluation focused on crime-related outcomes. Changes in arrest rates are neither necessary nor sufficient to identify a change in criminal behavior. Our approach to evaluating whether observed changes in crime in response to policies can be attributed entirely or in part to changes in the behavior of the criminal justice system can be applied in any context in which researchers have access to an individual's sequence of contacts with the criminal justice system.

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