Your Friends and Neighbors: Localized Economic Development, Inequality, and Criminal Activity

Matthew Freedman^a, Emily G. Owens^b

February 2012

Abstract

We exploit the large but temporary increase in demand for lowwage workers generated by the 2005 Base Realignment and Closure (BRAC) program in San Antonio, Texas to identify the effects of changes in economic conditions on local crime. Taking advantage of variation in BRAC's impact over time and across neighborhoods, we use a difference-in-difference methodology to estimate how an exogenous shock to demand for low-wage workers affects criminality. We find that while improvements in economic conditions have no robust impact on violent behavior, appropriative criminal behavior increases in neighborhoods where some residents experienced increases in earnings.

Keywords: Economic Conditions and Crime, Local Economic Development, Criminal Opportunities, Inequality *JEL Codes:* K4, R5, H7

^a Cornell University, Department of Economics, ILR School, 262 Ives Faculty Building, Ithaca, NY 14853 (e-mail: freedman@cornell.edu).

^b Cornell University, Department of Policy Analysis and Management, 137 MVR, Ithaca, NY 14853 (e-mail: ego5@cornell.edu).

1. INTRODUCTION

A large literature dating back to Becker (1968) and Ehrlich (1973) links legitimate economic opportunities to criminal behavior, where individuals divide their time between legal and illegal "work" in order to maximize their expected utility. A direct implication of this theory, and one consistent with public perceptions, is that crime rates should be countercyclical. In turn, interventions that improve labor market opportunities, especially opportunities for lowwage workers, should reduce crime. A vast empirical literature testing this hypothesis has typically focused on the relationship between unemployment rates and crime, and has found at most a small negative impact of legitimate work on burglary, car theft, and larceny.

One explanation for why the effect of employment opportunities on crime is so small is that an increase in the income of some individuals increases the return to criminal behavior for others. To the extent that criminal opportunities increase when unemployment falls, this will place downward pressure on the net effect of unemployment rates on property crime in particular. Compared to the literature on the behavioral response to increases in the expected cost of crime for a given private return due to say, increased police presence, research on the response to changes in the private return to criminal behavior is scant.¹

In this paper, we provide evidence on the pro-cyclicality of criminal opportunities following a large increase in demand for construction workers in San Antonio, Texas. Between 2007 and 2009, the Department of Defense spent roughly \$2 billion on renovation and construction of three military bases in the city as part of the 2005 Military Base Realignment and Closure (BRAC). This increase in expenditure was roughly equal to 3% of the 2007 metropolitan area GDP and represented a seven-fold increase in typical military construction spending in the area.² The federal Office of Military Affairs promotes the positive impact of BRAC on local economies as a major benefit of the program in general, and the San Antonio BRAC specifically was described as the "largest economic development event in the city's history."³

The sheer magnitude of spending associated with BRAC in San Antonio makes it an attractive candidate to study the social impacts of local economic development programs.

¹ Exceptions include Cantor and Land (1985), Cook and Zarkin (1985), and Jackson and Owens (2010).

² Average military spending on construction in San Antonio was roughly \$100 million a year, compared to \$667 million per year, on average, over this three year period.

³ http://www.embracebrac.org/

Existing research on the impact of place-based programs suffer from lack of power; there is only limited evidence that geographically targeted state and federal economic development programs increase employment at all, let alone increase employment enough to generate a measurable impact on criminal behavior (Glaeser and Gottlieb 2008). The BRAC created a uniquely appealing policy experiment through which to measure the impact of criminal opportunities because the economic benefits were, at least initially, concentrated among one particular part of the population of a relatively low income city: federally contracted construction workers.⁴

Using data on the residence of accused felons in San Antonio combined with detailed information on employment and neighborhood conditions in census block groups, we first show that BRAC improved the economic circumstances and increased the purchasing power of some San Antonians during the 2000s. Poverty rates increased in San Antonio as a whole over this period, but were more stable in neighborhoods with relatively more construction workers. Also, households in these construction-intensive neighborhoods purchased relatively more vehicles. There is less convincing evidence that BRAC lifted all boats, however; we find much smaller changes in median household income or housing values.

We then show that BRAC was associated with an increase in car theft, burglary, and robberies committed by people who lived near construction workers. This increase in criminal behavior was driven by people who had been accused or convicted of felonies in the past. The criminal background of the newly accused felons is particularly relevant, because due to strict employment guidelines for federal contractors, these people were unlikely to directly benefit from BRAC, but are instead better characterized as the neighbors of BRAC beneficiaries. We find some evidence that assaults may have increased after BRAC, but this result is more sensitive to the model specification. We do not observe any change in other violent criminal behavior is a rational response to an increase in criminal opportunities generated by the increased earning power of local construction workers.

While a large literature focusing on individuals who gain or lose jobs generally finds that the beneficiaries of improvements in economic conditions commit fewer crimes, our results

⁴ The San Antonio Business Journal estimated that 80% of the total economic impact of BRAC was the direct result of the increased labor market opportunities for construction workers (Thomas 2009). According to the 2009 ACS, per capita income in San Antonio was roughly \$22,600, compared to \$24,000 in Texas, and \$26,400 in the nation as a whole.

suggest that the associated decline in aggregate crime may be attenuated by increased criminal activity by non-beneficiaries. This finding is consistent with research that has focused on the impact of economic inequality on crime, such as Kling et al. (2005) and Bjerk (2010). To the extent that business cycles or economic development programs increase local inequality, our results suggest that increased acquisitive crime may be an unanticipated and unfortunate consequence.

The paper proceeds as follows. In the next section, we briefly summarize the existing literature on economic conditions and criminal behavior. In Section 3, we provide institutional background on the 2005 BRAC, with particular emphasis on the selection process and pattern of spending. We also discuss a series of other major public works projects that partially coincided with BRAC. Section 4 provides a theoretical framework for thinking about the impact of BRAC on criminal behavior. We then describe the data that we use to measure the impact of BRAC on crime in Section 5, and outline our differences-in-differences identification strategy in Section 6. In Section 7, we present evidence that BRAC was associated with specific socioeconomic improvements in neighborhoods with more construction workers, but also with higher rates of acquisitive crime. We conclude with brief discussion in Section 8.

2. WHAT DO WE KNOW ABOUT ECONOMIC CONDITIONS AND CRIME?

In the now standard economic model of criminal behavior (Becker 1968, further developed by Ehrlich 1973), rational agents will engage in crime if doing so increases their lifetime expected utility, and on the margin people should equalize the expected return of spending an additional hour in legitimate and illegitimate activity. Since variation in business cycles generates variation in the relative return to legitimate activity, the standard economic model of criminal behavior implies that crime rates should be countercyclical.

Reviews of the theoretical advances and empirical evidence on the relationship between economic conditions and criminal behavior, notably Piehl (1998), Fagan and Freeman (1999), Bushway and Reuter (2001), and Mustard (2010), highlight a surprising lack of consensus despite a large and growing literature. Specifically, many relatively unambiguous theoretical predictions have not been borne out in published empirical research. The studies that have identified countercyclical crime rates typically estimate only a small positive relationship between economic downturns and crime (Freeman 1983, Chiricos 1987, Machin and Meghir

2004, Mocan and Rees 2005). A noted exception to this is Raphael and Winter-Ebmer (2001); their 2SLS approach implies relatively large impacts of unemployment on property crime, and they argue that over 80% of the decline in larceny between 1992 and 1997 can be attributed to the 2.5 percentage point reduction in unemployment during that period. In contrast, Rege et al. (2009) examine the criminal behavior of Norwegian men who exogenously lose their jobs due to the plant closures, and find no evidence that men who lose their jobs are more likely to commit property crime.

Outside of concerns about identification and omitted variables in individual studies, there are a number of conceptual explanations for the mixed empirical results. Recent work by Mocan et al. (2005) and Mocan and Bali (2010) points out that criminal human capital may deteriorate at a slower rate than legitimate human capital, implying that economic booms may reduce crime by less than busts increase it. Reuter et al. (1990) and Freeman (1999) both document instances where individuals work in both legal and illegal sectors simultaneously. Levitt (2004) argues that many violent crimes do not appear to have an economic motivation at all.

Some scholars have also pointed out mechanisms through which criminal behavior may be procyclical. For example, when people have more money, they may consume more alcohol, which increases individual aggression (Cook and Zarkin 1985). People with jobs also tend to leave their homes more often than the unemployed, increasing criminal opportunities for burglars (Cantor and Land 1985). Similarly if the beneficiaries of economic booms purchase fancier cars or nicer home furnishings, the return to criminal activity by those who are not as well off increases.

Experimental evidence suggests that criminal opportunities are potentially of great importance in explaining crime patterns, but the empirical results are still not entirely conclusive. Glaeser and Sacerdote (1999) estimate that steeper local income gradients can explain at most one-fourth of the increased crime rates in cities compared to rural or suburban areas. A handful of cross sectional studies of income inequality and property crime find a positive, although often statistically imprecise, relationship (Fajnzylber et al. 2002, Kelly 2000, Hsieh and Pugh 1993), while the time series analyses in Brush (2007) and Saridakis (2004) yield negative relationships. Kling et al. (2005) found that male children who moved to slightly wealthier neighborhoods as part of the Moving to Opportunity experiment were more likely to be arrested for property crimes than the control group. Bjerk (2010) presents quasi-experimental evidence that

increasing income segregation, meaning that poor people are less likely to interact with wealthier people, lowers property crime rates at the city level.

In this paper, we combine spatially disaggregated data on where criminals live with quasi-exogenous variation in local economic conditions in the city of San Antonio, Texas between 2000 and 2010. We examine the impact of an economic boom, which Mocan and Bali (2010) show may change crime by a smaller amount than the busts examined by Rege et al. (2009). Our identification strategy is based on the fact that our local economic shock benefited a specific subset of the population, creating geographic heterogeneity in the impact of the economic boom. In that sense, out identification strategy is similar to that of Machin and Marie (2006), who exploit geographic heterogeneity in the impact of a reduction in unemployment insurance benefits in the UK to identify the relationship between crime and economic incentives. Unlike much of the previous research, our analysis also takes advantage of highly geographically disaggregated information on criminal activity. As many review papers have pointed out, crime is a local phenomenon, and studies based on the geography available in commonly used data sources like the Uniform Crime Reports may miss important spatial differences in both the dependent and independent variables (Freeman 1995, Levitt 2001, Mustard 2010). These differences could confound the relationship between criminal behavior and economic conditions.

The implementation of the 2005 BRAC is in many ways comparable to place-based programs, such as state enterprise zones, the federal Low-Income Housing Tax Credit (LIHTC), the federal New Markets Tax Credit, Weed and Seed, and Business Improvement Districts (BIDs), in the sense that its impacts were concentrated in certain geographic areas. A small literature has found mixed evidence on the impacts of these programs on crime. For example, Bushway and Reuter (2001) review evaluations of Weed and Seed, which generally find no impact on crime at all. In contrast, Cook and McDonald (2010) find that BIDs, where businesses pay extra taxes or fees to finance improvements within a designated area (often including improvements to security), effectively reduce property crime as well as violent offenses. Meanwhile, Freedman and Owens (2011) find that rental housing development subsidized by the LIHTC is associated with reduced rates of assault and robbery, but higher rates of car thefts in low-income areas. By improving the quality of the housing stock in particularly poor neighborhoods, the LIHTC program may have attracted slightly wealthier people to low-income neighborhoods, which could increase criminal opportunities for existing residents. Similarly, by

improving the welfare of some residents and not others within neighborhoods, the 2005 BRAC in San Antonio, Texas might be expected to foster more acquisitive crime in affected communities. We discuss the details of the 2005 BRAC and its implementation in San Antonio in the next section.

3. THE 2005 MILITARY BASE REALIGNMENT AND CLOSURE

In 2005, Congress established a new Defense Base Closure and Realignment Commission, which was tasked with orchestrating the first military base realignment and closure (BRAC) in ten years. The goal of the 2005 BRAC was to increase the efficiency of the Department of Defense (DoD) by concentrating domestic military operations in a small number of areas. In May of 2005, the commission announced that San Antonio, Texas would become the new "home of Military Medicine and Installation Command" for the U.S. Military.⁵

In previous BRACs, the DoD officially ranked "local economic impact" as the third most important criteria in their reshuffling decision.⁶ When the selection criteria for the 2005 BRAC were announced, local economic impacts had fallen to the 12th most important criteria. Instead, locations with more available space, and little history of residents complaining about base activities, had the most weight in the BRAC selection decision (Sorenson 2007).

BRAC affected four bases in San Antonio. Units from other parts of the country were reassigned to three existing bases in the San Antonio area: Randolph Air Force Base, Lackland Air Force Base, and Brooks City-Base. The most military activity would occur at Fort Sam Houston, a base roughly two miles north east of the Alamo, which was designated as a new major medical research and education center for the DoD. Overall, the 2005 BRAC was projected to bring roughly \$8.3 billion to San Antonio by 2011 (Nirvin 2009).

This economic boon was not equally shared by all residents. In fact, approximately 80% of the Federal money would be spent on construction and renovation (Nirvin 2009). The federal government awarded \$92 million in construction contracts in September of 2007, followed by an additional \$1.2 billion in 2008, and \$700 million in both 2009 and 2010. To put these expenditures in perspective, prior to 2005, the military spent between \$65 and \$100 million on construction in San Antonio per year (AFD-071217-009).

⁵ DoD Document AFD-101004-006.ppt

⁶ Previous BRAC rounds occurred in 1988, 1991, 1993, and 1995.

In the same way that the effects of place-based economic development programs are spatially concentrated, BRAC's effects were felt more in some neighborhoods than others. In particular, its initial impacts were felt most acutely in neighborhoods in which a large fraction of workers were in the construction industry. Figure 1 highlights the plausible spatial heterogeneity in the impact of BRAC spending on the purchasing power of different parts of Bexar County, which contains the city of San Antonio. The figure shows the fraction of employment across block groups in different industries based on 2000 Decennial Census data and 2005-2009 American Community Survey. The construction industry is a more important employer in the south and central parts of the county, including in many of the smaller block groups that constitute San Antonio.

While BRAC was a federal project, construction jobs were contracted out to private companies. These companies were primarily headquartered in San Antonio or had large branches in the area. In September 2009, a representative of the Association of General Contractors of San Antonio estimated that two-thirds of all commercial construction in San Antonio was taking place on one of the bases, and that without BRAC, unemployment in the construction industry would be "at 15-17 percent." (Thomas 2009).

While BRAC was "keeping a lot of people busy ... who would otherwise be struggling to find work" (Thomas 2009), these jobs were not necessarily open to all construction workers. Civilians working on federal contracts enjoy relatively lucrative wages and benefits, but face some additional barriers to employment. On August 27, 2004, President George W. Bush issued Homeland Security Presidential Directive 12, which required that all employees of federal contractors must have a "verified identity" if they were to be allowed access to a federal government facility. The language of this Directive was also interpreted by the Government Accountability Office (GAO) as requiring all employees of companies with federal contracts to undergo a criminal background check (U.S. GAO 2007). Because of Directive 12, construction workers with criminal histories, or without legal documentation of their immigrant status, were in principal ineligible to work on contracts awarded by the federal government.

The announcement of BRAC coincided with another shock to lower income, working San Antonio residents, particularly those working in construction and tourism. In June of 2005, Phil Hardberger narrowly defeated Julian Castro in a run-off election for city mayor. During his four-year term, Mayor Hardberger oversaw three major projects. First, after Hurricane Katrina,

Mayor Hardberger successfully lobbied to have the displaced New Orleans Saints NFL franchise temporarily move to San Antonio and play half of their home games in the city's major sports arena, the Alamodome. Second, between 2006 and 2007, Mayor Hardberger oversaw a significant extension of the San Antonio Riverwalk, the city's major tourist attraction, which is lined with restaurants, bars, and hotels. Finally, Mayor Hardberger spearheaded the renovation of the downtown Main Plaza in 2008.

In Figures 2 and 3, we provide graphic evidence on the impact of BRAC and the Hardberger projects on construction jobs in San Antonio using data from the Quarterly Census of Employment and Wages (QCEW) for Bexar County for 2001 to 2010.⁷ Approximately 76% of Bexar County residents live in San Antonio. In Figure 2, we plot the number of jobs in Bexar County in construction (NAICS 23), tourism (NAICS 72), and health care and social services (NAICS 62). We choose these two additional industries because of their importance to the San Antonio economy; according to the San Antonio Chamber of Commerce, roughly one quarter of San Antonio jobs were in one of these two sectors in 2011 (Greater San Antonio Chamber of Commerce 2011). Also, tourism in particular should have directly benefited from the Hardberger projects.

Employment in these three sectors follows two noticeably different paths. Both health care and tourism jobs are growing steadily through the decade, with some depression of tourism jobs in 2010. Construction jobs, however, declined between 2001 and 2003, stabilized in 2004, then after the beginning of the Harbinger projects, jump by almost 6%. After the first BRAC contract is awarded in 2007, construction employment jumped again, from 40,000 jobs to 43,000 jobs, and then declined in 2009 and 2010 after Hardberger left office and his projects wound down.

In Figure 3, we see a corresponding increase in the wages of construction workers, relative to the health care industry, that coincides with the Hardberger projects and implementation of BRAC. Also note that workers in accommodation and food services (tourism) also saw a jump in their salary, especially in 2006, which we attribute to the shared benefit of the Hardberger projects among these two industries. While not directly apparent in the figure, in terms of purchasing power, the growth in construction wages was substantially larger than in tourism. Average wages in construction increased from \$635 a week in 2001 to \$781 a week by

⁷ QCEW data are not available prior to 2001.

2006, and were \$862 a week by 2010. Workers in the tourism industry earned, on average, \$279 a week prior to 2006. Their average weekly wages increased to \$327 in 2006, fell by \$14 a week in 2007, and finally rose to about \$330 per week between 2008 and 2010.

Based on the graphical evidence, as well as DoD and Chamber of Commerce publicity, we conclude that BRAC had the largest effect on employment opportunities for construction workers, as both the number of jobs and wages increased. At the same time, the Hardberger projects also had a major impact on the demand for construction workers. The impact of the Hardberger projects was broader than BRAC in two ways. First, construction workers on Hardberger projects were not subject to the requirements of Directive 12. Second, the Hardberger projects directly affected the tourism industry as well as construction. Changes in labor demand in that sector largely manifested themselves in higher wages. The health care sector appears to be unaffected by the BRAC, with both jobs and wages increasing steadily from 2001 to 2010.

4. LOCAL ECONOMIC SHOCKS AND LOCAL CRIME

We will use a simple model of appropriative conflict in the spirit of Ehrlich (1973), Grossman and Kim (1995), and Bjerk (2010) to think about the impact of the BRAC on the criminal behavior of two types of neighbors: construction workers who would benefit from BRAC, and people who, because of their human capital, immigration status, or criminal history, will not receive any direct benefit from BRAC. While simple and stylized, this model captures some basic empirical facts about the relationship between criminals and offenders, and in particular the role of income shocks and geographic space.

Suppose that a given individual can earn w_i in the legitimate labor market. They can supplement their income by stealing, which gives them s_i additional dollars, but with the potential loss of utility u(f) if they are caught. Apprehension happens with probability p. Each neighbor will engage in crime in a given period if and only if $u(w_i + s_i) - pu(f) \ge u(w_i)$. Assuming that people are risk averse, with u' > 0 and u'' < 0, a higher legal wage will reduce person i's likelihood of engaging in crime, as it will reduce the extra utility from an additional s_i , but not the disutility associated with punishment. It is also the case that as s_i increases, the incentive to commit crime increases. However, what determines s_i ? We follow a large literature on criminal behavior, specifically routine activity and the distance-decay hypothesis, and define $s_i as \sum_{i} \frac{w_j}{f(d_{ij})}$, where d_{ij} is the linear distance between neighbors i and j. We include flexible function in distance in order to capture several possible mechanisms relating to distance to criminal behavior; not only is travel costly, but the amount of income that other people have, w_j , may not be known with certainty when someone decides to commit a crime. We assume that individuals have better information about the wages of people who live closer to them, making one's neighbors more attractive targets for theft than someone whose actual resources are unclear. However, this is counterbalanced by the fact that anonymity itself also contributes to criminal behavior (Wilson and Herrnstein 1985)

Recall that BRAC created a positive wage shock for construction workers who were eligible to work as federal contractors. This should have lowered the incentives for these construction workers to engage in crime, but also may have made these workers more attractive criminal targets for the remainder of the population. Indeed, as the number of construction workers in an area increases, so does the number of criminal opportunities for non-construction workers. The net effect of BRAC on crime is therefore unclear, as it depends on the behavioral response of BRAC beneficiaries and those who did not directly benefit. Among all San Antonians not employed in construction, we expect that those who live closest to construction workers, ceteris paribus, would be most likely to increase their criminal behavior because of BRAC. Note also that, to the extent that criminals who commit crimes close to home are more likely to be caught, we might expect more of these offenders to be arrested.⁸

5. ESTIMATING THE IMPACT OF BRAC ON CRIME

We estimate the impact of BRAC on criminal behavior using data on all felony charges filed in Bexar County District Court between 1976 and 2010. There are two features of this dataset that merit discussion. First, individuals only appear in these data if they have felony charges filed against them, and multiple people could be accused of the same criminal act. In Table 1, we present estimates of the number of criminals, by charge, per index crime in Bexar County using county-level crime estimates from the Uniform Crime Reports (UCR) for 2000-

 $^{^{\}rm 8}$ This could be reflected in our simple model by making p a function of d_{ij}

2008.⁹ Not surprisingly, the felony charges have more murders, rapes, and robberies relative to the estimated number of crimes, and no more than 2% of the larcenies that occur in Bexar County appear to result in felony charges being filed.¹⁰ There is no obvious trend over time in the "coverage" of the felony data.

The fact that only a small fraction of crimes appear to result in a felony charge is a limitation of our data, but it is important to point out that all research on the characteristics of offenders using official reports suffers this limitation. For example, researchers regularly interpret the age of arrestees in the UCR as representative of changes in the age of offenders (see, for example, Donohue and Levitt (2001) and Lochner and Moretti (2004)). For the sake of comparison, in 2000, the San Antonio police cleared 40% of known murders by arrest, 24% of rapes by arrest, 19% of robberies by arrest, fewer than 10% of assaults and burglaries by arrest, and less than 4% of larcenies and car thefts by arrest according to the UCR. It is possible that BRAC increased the probability that criminals who live near construction workers have felony charges filed against them. However, instead of being problematic bias, we argue that this is consistent with a behavioral change in our model, as criminals who commit crimes closer to where they live may be more likely to be apprehended.

We do not have information on where the crimes in our data occurred, but we appeal to criminology literature on criminal mobility that finds most criminals do not travel very far to commit crimes. There are also some consistent patterns in criminal mobility across crime types. For example, Wiles and Costello (2000) estimate that British car thieves travel on average 1.97 miles to commit their crimes. Meanwhile, burglars in their sample travel on average 1.88 miles, and shoplifters (larcenists) travel on average 2.5 miles. Rhodes and Conly (1981) estimated that the average burglary occurred 1.2 miles from a burglar's home, the average rape about 0.73 miles from a rapist's home, and the average robbery less than 1.6 miles from a robber's home. Finally, Phillips (1980) estimated that the mean distances traveled by people committing assault, burglary, car theft, and larceny were 0.7, 1.05, 1.15, and 2.46 miles, respectively. We therefore predict that, within crimes against property, burglaries and car thefts are more likely to have occurred in the same neighborhood where accused felons live than larcenies or robberies.

⁹ These estimates are derived from the UCR County-Level Detailed Arrest and Offense Data, which are only available through 2008.

¹⁰ Police clearance rates for larceny are generally quite low. Also, because larceny is typically considered a "minor" crime, prosecutors may be less likely to file felony charges against an arrested thief.

Taking advantage of information on initially filed charges and a fingerprint-supported unique identifier in the Bexar County District Court data, we identified individuals who were accused of committing a crime that occurred between 2000 and 2010. We then used mapping software to locate the census block group where each individual in the data lived at the time that charges were filed against them.¹¹ A block group is larger than a city block but smaller than a census tract. The median population of the 1,009 block groups in Bexar County was 1,100 in 2000, and the median land area was 0.2 square miles.¹²

For each census block group in Bexar County, we calculate crime rates for a variety of different offenses, using block group population estimates based on linear interpolations between the 2000 Decennial Census and 2005-2009 American Community Survey (ACS). We calculated rates for major index crimes, including murder, assault, rape (including sexual assault), burglary, robbery, larceny, and car theft. Texas does not have a specific statute against motor vehicle theft. Instead, Texas law differentiates between someone stealing a car for acquisitive purposes and "joyriding." Someone who takes another's car with the "intent to deprive" the owner of that property is charged with theft of a vehicle. This is a different, and more serious, charge than unauthorized use of a motor vehicle (UUM). In Texas, UUM only means that someone operated a vehicle without the consent of the owner, without the intent to permanently deprive the owner of that vehicle. We focus on actual acquisitive car theft, rather than less acquisitive UUM.

For our main measures of criminal activity, we simply calculated the number of offenses that residents of each census block group were alleged to have committed each year. Next, we divided offenses into two additional groups: crimes allegedly committed by people who had never appeared in the Bexar District Court before, and crimes allegedly committed by those who had a felony charge filed against them at any time since 1976. Since most if not all BRAC workers were required to have criminal background checks, we believe that people who had been in Bexar district court before are more likely to be ineligible to work on a BRAC contract than those who had never been in court before. We further refine this by calculating a fourth crime rate, based on crimes alleged to be committed by people who had previously been found guilty of a felony in Bexar County. To the extent that Directive 12 was enforced, any change in the

¹¹ We use 2000 Decennial Census geographic boundaries.

¹² We drop seven block groups in Bexar County that had zero population in either the 2000 Decennial Census or the 2005-2009 American Community Survey data.

criminal behavior of this group after BRAC should be related to the increase in criminal opportunities.

We then link these block group crime rates to information on local demographic characteristics and economic conditions using 2000 Decennial Census data and 2005-2009 ACS data. We use the 2000 Decennial Census to calculate the fraction of jobs held by construction workers in each block group in Bexar County. We also extract from the 2000 Decennial Census a host of demographic characteristics, including information on total population, racial and ethnic composition, the age distribution, educational attainment levels, household and family income, poverty rates, employment rates, and unemployment rates. The 2000 data also include a number of housing variables, including total housing units, share vacant, share occupied, share owned, share rented, median age of units, household turnover, median house values, and vehicle ownership.

To assess changes in neighborhood conditions later in the decade, we use recently released small-area estimates from the 2005-2009 ACS. These estimates are based on interviews conducted by the Census Bureau between January 1, 2005 and December 31, 2009. The ACS block group estimates cannot be used to measure neighborhood characteristics in a given year; they can only be used to measure average neighborhood characteristics over the entire five-year period. The dates for which the ACS block group estimates are available, however, bracket the period during which the BRAC and Hardberger projects were underway. Also, the geographic boundaries in the 2005-2009 ACS for Texas match those used in the 2000 Decennial Census, ensuring that no measurement error arises from changes in geographic boundaries driven by shifts in the geographic distribution of the population. We extract from the ACS information on population, poverty rates, employment, household income, median house values, and vehicle ownership.

The magnitude of the impact of BRAC on local economic conditions is assumed to be proportional to the fraction of workers in that block group who work in construction, or "construction share." The median share of block group workers in construction in Bexar County in 2000 was 7%. In Table 2, we present some basic descriptive statistics for block groups with a 2000 construction shares above and below the 50th percentile. Note that places with a higher construction share also tend to have more workers in the tourism industry, and that people in the health care sector tend to live in areas with fewer construction workers. It is also clear from the

table that areas with higher construction shares are typically more disadvantaged along a number of dimensions. Educational attainment levels, income levels, and house values are all lower in areas with higher construction employment shares. Not surprisingly, each type of major crime is more common in neighborhoods with higher construction shares.¹³

In Figures 4 and 5, we provide some graphical evidence on the net effect of BRAC on crime rates based on trends in crime over time across block groups divided into quartiles based on year 2000 construction concentration. For the sake of space, we focus on serious acquisitive crimes (burglary, robbery, larceny, and car theft) and crimes without a clear economic incentive (murder, assault, and rape). We note both when BRAC was announced and the Hardberger projects began (2005) as well as when the first BRAC contract was awarded (2007).

As the figures make clear, more criminals live in areas with more construction workers, likely in part reflecting the fact that these tend to be lower income neighborhoods. There is a broad co-movement in acquisitive criminal behavior, although there is a differential trend upwards in the upper quartile neighborhoods starting in 2005, just as the Riverwalk Extension began but before the first BRAC contract was awarded. Acquisitive crime rates in the upper quartiles remained elevated as BRAC construction got underway in 2007. Trends over time in non-acquisitive violent criminal behavior do not display the same pattern. More people are accused of violent crime after 2006, but it is not obvious that the share of workers employed in construction is related to the size of the increase.

6. ANALYTIC FRAMEWORK

Based on the graphical evidence, we will use a simple differences-in-differences approach to identify the net effect of a localized economic shock on crime rates. The main outcome of interest is the natural log of the number of crimes committed by resident of block group b in year t divided by the population of block group b in year t. Because the Census Bureau does not publish annual estimates of the population at the block group level, we interpolate values between the 2000 Decennial Census and the 2005-2009 ACS.¹⁴ We begin by examining how crime rates (technically the number of felony charges filed) vary with

¹³ To calculate crime rates for block groups, we use as the denominator population linearly interpolated (and extrapolated) between 2000 and 2010 using the 2000 Decennial Census and the 2005-2009 ACS.

¹⁴ We extrapolate 2010 values.

construction shares controlling for baseline (i.e., year 2000) demographic and housing characteristics and tract fixed effects:

$$\ln\left(\frac{Charges_{brt}}{Population_{brt}}\right) = (ConstructionShare_{brt}BRACHardberger_{t})\beta_{1}$$

$$+ (ConstructionShare_{brt}BRACAward_{t})\beta_{2} + ConstructionShare_{brt}\beta_{3}$$

$$+ \mathbf{X}_{brt}\Omega + \alpha_{t} + \gamma_{r} + \varepsilon_{brt}$$

where *b* indexes census block groups, *r* census tracts, and *t* years. We include a baseline control for the fraction of block group workers who are employed in construction (NAICS 23), but the main estimates of interest are β_1 and β_2 , the coefficients on the interaction of the share of block group workers who work in construction and the two stages of BRAC. The first-order impact of BRAC on criminal behavior is absorbed by year fixed effects α_t , and therefore β_1 and β_2 differentiate between block groups where we expect the economic impact of BRAC to be larger. *BRACHardberger*_t takes the value of 1 in the years 2005 and 2006, when the BRAC decision was made public and the Hardberger projects began. During this period, wages for both construction workers and those working in tourism rose. *BRACAward*_t is equal to one in the years 2007, 2008, 2009, and 2010, when BRAC construction took place, which did not benefit those in tourism.

We control for baseline (year 2000) demographic and housing characteristics of block groups in the vector **X**. These include log population, share black, share Hispanic, share male, share under age 30, share age 65 and over, share of households that speak Spanish, share foreign born, share who lived in the same house one year ago, share with only a high school degree, share with some college, share with a college degree, unemployment rate, labor force participation rate, log household income, log number of housing units, share of units vacant, share of units owner occupied, median house age, and log house value. We also include in **X** the share of block group employment in tourism (NAICS 72), the share in health care (NAICS 62), and interactions between these two variables and the dummies for both stages of BRAC. We also control in this specification for time-invariant differences across tracts using a vector of tract fixed effects, γ_r . There are 276 census tracts containing the 1,009 block groups in our sample.¹⁵

¹⁵ In one robustness test, we also include tract-specific time trends, which control for variation in across tracts in crime trajectories.

In order to mitigate any potential remaining omitted variable bias owing to unobservable differences across block groups within tracts, we also consider a specification that includes block group fixed effects:

(2)
$$\ln\left(\frac{Charges_{brt}}{Population_{brt}}\right) = (ConstructionShare_{brt}BRACHardberger_{t})\delta_{1} + (ConstructionShare_{brt}BRACAward_{t})\delta_{2} + \mathbf{X}_{b}\Psi + \eta_{t} + \theta_{b} + v_{brt}$$

In this specification, the block group fixed effects θ_b subsume all time-invariant block group characteristics. However, we continue to include employment shares interacted with the two stages of BRAC. In all regressions, we allow for arbitrary correlation in crime rates within block groups by clustering our standard errors at the block group level.

7. RESULTS

7.1. BRAC and Neighborhood Characteristics

Before we present our estimates of the impact of BRAC on criminal behavior, we first must establish that BRAC improved the economic circumstances of some San Antonio residents, increasing the criminal opportunities for others. We do this by replacing the dependent variable in equations (1) and (2) with a series of measures of block group economic conditions. These neighborhood conditions are measured in the 2000 Decennial Census and again in the 2005-2009 ACS, such that we only effectively have two observations for each block group. Further, to the extent that some of the surveys used to generate the 2005-2009 ACS estimates were conducted prior to construction beginning on some of the Hardberger or BRAC projects, we might expect our estimates to understate the degree of neighborhood improvements owing to the projects. Still, to the extent that we see relative improvement in neighborhood conditions between 2000 and 2005-2009 in areas with relatively more construction workers, it would lend credence to our assumption that BRAC increased criminal opportunities relatively more in neighborhoods with a disproportionate number of construction workers.

The results of our analysis of changes in neighborhood conditions appear in Table 3. We find that poverty rates were statistically significantly lower after 2005 in block groups with greater shares of construction workers. Note, however, that the average block group resident did not appear to benefit from BRAC; the impact on median household income is small, and

statistically indistinguishable from zero once we include block group fixed effects. This is consistent with the idea that BRAC only benefited a subset of households in a neighborhood.

Consistent with there being more job opportunities for some construction workers, employment-to-population ratios were also significantly higher in block groups with relatively more construction workers after the BRAC was announced and the Hardberger projects began.¹⁶ House values in affected neighborhoods also rose, but only by about 0.5% for each additional percentage point of employment in construction. Notably, a one percentage point increase in the share of employment in construction increased the percentage of households with two or more vehicles increased by a statistically significant 0.2 percentage points. Improved job opportunities for construction workers are associated with more cars in neighborhoods where more construction workers lived.

These results suggest that improvements in economic conditions in the neighborhoods most affected by BRAC and the Hardberger projects were not enjoyed by all residents. Indeed, the effects appear to be concentrated among lower income individuals and households. The fact that poverty rates fell, but median household incomes remained relatively unchanged hints at the fact that only a subset of households gained from BRAC, and that many of those households may have previously been living below the poverty line.

7.2. BRAC and Criminal Opportunities

After 2005, neighborhoods with more construction workers had lower poverty rates and higher employment rates. Median house values and household income rose by only a small amount. There was also a considerable increase in the fraction of households with two or more cars. Along with improved economic conditions in these neighborhoods came increased criminal opportunities.

Table 4 presents our baseline estimates of the impact of BRAC on property crimes. We estimate that, after BRAC began, each percentage point increase in construction workers in a block group increased the number of residents who were charged with burglary by an imprecisely measured 2%. The effect is very similar whether we include block group

¹⁶ Because the ACS does not contain information at the block group level on unemployment rates or the number of people living in a block group age 16 and over, we use total employment divided by total population (including those under age 16) as our measure of the employment to population ratio.

characteristics and tract fixed effects or block group fixed effects.¹⁷ The overall effect on burglaries, however, masks underlying heterogeneity in criminal behavior among different individuals within neighborhoods. Indeed, we see no impact on the number of first-time offenders charged with burglary, but much larger and statistically significant increases in burglaries committed by people who were ineligible for BRAC jobs. Each percentage point increase in construction workers in a block group increased the number of burglaries committed by neighbors who had been charged with felonies before by over 4% and the number committed by neighbors who had been previously convicted of felonies by nearly 5% (both effects are significant at the 1% level). The effects are typically much smaller and insignificant for burglaries committed after the Hardberger projects began but before the first BRAC contracts were awarded. We find more muted changes in burglaries post-2005 in tourism- and health careintensive areas; these results are reported in Appendix Table A1.

Car thefts also increased by roughly 2% after BRAC increased the purchasing power of construction workers. As shown in the second panel of Table 4, while first-time offenders living near construction workers were no more or less likely to steal a car after 2007, people with criminal histories were. In particular, those who had been charged with felonies or were previously convicted of a felony were nearly 3% more likely to steal a car for each percentage point increase in construction jobs. We do not estimate that car thefts increased after the Hardberger projects began and BRAC was announced. Adding unauthorized use of a motor vehicle to our definition of car theft (in the third panel) yields the expected changes in the estimated coefficients. After BRAC, each percentage point increase in the share of construction workers in the 2000 census is associated with a roughly 2 percent increase in the rate of car theft by people with criminal histories. We estimate that people without criminal histories are less likely to steal cars after BRAC, but this reduction in criminal behavior begins during the Hardberger projects.

In the fourth panel of Table 4, we also find that people who lived near construction workers were more likely to be charged with larceny after BRAC was announced, and some evidence that this began with the Hardberger projects. This is again driven by people who had previously been charged with or convicted of a felony. We also observe that people living in

¹⁷ The relationship between block group characteristics and crime rates (not shown) generally conform to expectations; average education and income levels are negatively related to crime, while the median age of the housing stock and share of renters are positively related to crime.

neighborhoods with tourism workers were more likely to be accused of stealing after the Hardberger projects increased opportunities for workers in that sector. However, the impacts are smaller than those for construction workers (see Appendix Table A4).

Overall, these results are highly consistent with an increase in criminal opportunities when construction workers earn relatively more money. While we do not know where the criminal acts in question actually occurred, our results are strongest for crimes that criminology research suggests occur close to where offenders live: burglary and car theft.

We turn to people charged with violent crimes in Table 5. Robbery is clearly an acquisitive crime, which we should expect to see increase, while murders and rapes are non-acquisitive crimes. We tend to view assault as non-acquisitive, although the distinction between assault and robbery is not perfectly clear.¹⁸ Overall, we observe less change in violent crime in neighborhoods that benefited from BRAC. To the extent that there are increases, they are entirely driven by crimes committed by people living in the same neighborhoods as construction workers, but who are unlikely to pass a FBI background check.

In particular, after BRAC construction began, a one percentage point increase in the share of neighborhood jobs in construction was associated with an approximately 2.5% increase in robberies committed by their neighbors who had previously been accused of a felony, and a 2.2% increase in robberies committed by their neighbors with a felony record. There is also some impact on assaults, which rise by about 2% overall and by between 3% and 4% for accused or convicted felons. People who have never been accused on a felony appear to be slightly less likely to commit assault after the Hardberger projects began. Consistent with these crimes being less driven by economic incentives, we find no evidence that the neighbors of construction workers are any more or less likely to commit murder or sexual assault after BRAC spending began.

7.3. Robustness Tests

7.3.1. Level Analysis

First, we inspect whether our results are sensitive to functional form, and in particular our use of logged crime rates. In Table 6, we replace our dependent variable with charges filed per

¹⁸ For example, someone who injures another in the course of a robbery would have committed both assault and robbery. Depending on the facts of the case, assault may be an easier case to prove than the intent to take property, particularly if the robbery was unsuccessful.

capita. For brevity, we should only the results from regressions with block group fixed effects. We find qualitatively similar results for burglary, car theft, and robbery; BRAC was associated with an increase in criminal behavior in construction neighborhoods, driven by people who were unlikely to have directly benefited from the development.

However, we no longer observe a statistically significant increase in the assault rate in construction-intensive neighborhoods. We also find weaker results for larceny when we assume that changes are better described in rates. While it is not obvious to us that neighborhoods with a higher share of construction workers should experience a constant increase in criminal behavior per capita rather than a constant percentage increase in criminal behavior, the fact that the observed increases in larceny and assault are sensitive to this functional form assumption makes us somewhat less confident in these results. However, after BRAC, neighbors of BRAC beneficiaries were more likely to engage in robbery, car theft, and burglary relative to those who did not live near construction workers, in both percentage and level terms.

7.3.2. ACS Employment Shares

In the previous regressions, we used employment shares for construction and other industries based on 2000 Decennial Census data. It is plausible that, potentially in part in response to new construction projects, the geographic distribution of construction workers changed by mid-decade, such that 2000 construction shares no longer reflect the communities most impacted by the new projects. Hence, as a robustness test, we calculate the industry employment shares using the 2005-2009 ACS. These data represent averages between 2005 and 2009, and will capture any reshuffling in the geographic distribution of workers that may have occurred mid-decade as construction projects got underway.

The results of this test appear in Table 7. For brevity, we only show results for each crime using block group fixed effects, but the results controlling for block group demographic and housing characteristics along with tract fixed effects were very similar. The results are very similar to the main results in Tables 4 and 5. We continue to see sizable and statistically significant increases in burglaries, car theft, and larcenies committed by accused and convicted felons. We do see some increase after the Hardberger projects in these neighborhoods, but the BRAC effects are consistently larger in magnitude and higher in precision. As before, there are much more muted effects on murder and rape.

7.3.3. Tract-Specific Time Trends

Based on Figures 4 and 5, trends in crime rates pre-BRAC in block groups with more and fewer construction workers appear to be very similar. As an additional robustness test, however, we include in our baseline regressions tract-specific crime trends. These trends will capture any differential rates of change in crime rates across areas, and in these regressions we effectively identify the impact of having a greater share of construction workers in a block group off the difference between the change in crime in that block groups relative to the average change in crime occurring over the decade among all block groups in the same tract. Given that block groups with high construction shares are often situated close to one another and that there are fewer than four block groups per tract on average in Bexar County, we would expect the effects to be somewhat attenuated in these regressions relative to the baseline regressions. However, to the extent that the signs are similar, it would give us confidence that we are neighborhoods affected by BRAC were not just neighborhoods that would have witnessed increases in property crimes anyway.

The results appear in Table 8. As expected given that we are not allowing each tract to have its own slope as well as each block group to have its own intercept, the effect sizes tend to be smaller and the significant levels lower. However, the results are qualitatively similar. For example, we continue to see that accused and convicted felons in block groups with higher construction shares commit more burglaries, car theft, larcenies, and robberies.

7.3.4 Relaxing the Timing of BRAC

The potential confounding of BRAC with the Hardberger projects also means that we want to be particularly sensitive to the timing of our "shock" to construction workers. In Tables 9 and 10, we present results from a more flexible specification of equation (1). Instead of dividing our sample into three time periods, we allow for the impact of the presence of construction workers on the criminal behavior of neighborhood residents to vary in each year between 2004 and 2010.

As Table 9 shows, the relationship between construction workers and criminal behavior appears to have fundamentally changed during BRAC construction. While there is some increase in car theft and burglaries by repeat felons in 2006, the estimated coefficients are typically larger after BRAC contracts were awarded, and are more likely to be statistically significant. In Table 10, we focus on violent crimes. We also see that the increase in robberies is driven by repeat felons in 2007 and people who had previously been accused on felonies after

2009. Turning to assault, we find the unusual result that first-time offenders in constructionheavy neighborhoods become less likely to commit assault after 2004. There is no strong pre-BRAC trend in the behavior of people with criminal histories, but the unusual result for first-time offenders suggests that the observed changes in assaults may be driven by factors other than BRAC.

Based on these results, we conclude that there was some increase in acquisitive crime by residents living in neighborhoods with more construction workers that only began in earnest as BRAC awards began to be made and construction hiring increased in 2007. Further, we do not find strong evidence that pre-treatment trends are driving the observed relationship in Tables 4 and 5; there is no gradual increase in the coefficient estimates prior to BRAC. Instead, the fact that there is more criminal behavior in areas with more construction workers during BRAC is driven by higher crime later in the decade.

8. CONCLUSION

Empirical evidence on the relationship between economic conditions and criminal behavior is mixed despite a compelling theoretical link. While some of the inconsistent findings can be attributed to an absence of quasi-experimental variation or aggregation bias, many interesting theories have been proposed. These include asymmetric responses to busts and booms, countercyclical consumption of alcohol, and countercyclical changes in criminal opportunities. In this paper, we present evidence that criminal opportunities play an important role in the overall relationship between business cycles and crime.

We take advantage of a positive economic shock to one particular group of workers in San Antonio, Texas. The 2005 BRAC dramatically increased wages and employment opportunities for construction workers in San Antonio who were in the United States legally and who did not have criminal records. Using a unique data set of the residence of people accused of committing felonies in Bexar County and detailed, block-group level information on employment and other neighborhood characteristics from the Census, we provide evidence that an important outcome of BRAC was an increase in criminal opportunities. Specifically, people living in block groups with more construction workers were actually more likely to be accused of burglary, car theft, larceny, and robbery after the job prospects for these workers improved. These results are robust to using a log or level specification and do not appear to be driven by

pre-treatment trends. While we do not know whether or not these accused felons were construction workers, this increase in criminal behavior is driven by people who, based on their criminal histories, were unlikely to be working for federal contractors required to demonstrate an "ethical capacity" to perform the work (U.S. GAO 2007).

The fact that acquisitive crime rates increased in neighborhoods where the economic conditions of residents were, on average, improving has strong policy implications. Specifically, place-based economic programs that only benefit certain residents may have perverse effects on crime rates. Our findings also suggest that income inequality, rather than simply average income levels or poverty rates, deserves careful attention when estimating the criminal justice impacts of any economic policy.

References

- Becker, Gary. 1968. "Crime and Punishment: An Economic Approach." *Journal of Political Economy* 76(2): 169-217
- Bjerk, David. 2010. "Thieves, Thugs, and Neighborhood Poverty." *Journal of Urban Economics* 68(3): 231-246.
- Brush, Jesse. 2007. "Does Income Inequality Lead to More Crime? A Comparison of Cross-Sectional and Time-Series Analyses of United States Counties." *Economics Letters* 96(2): 264-268.
- Bushway, Shawn and Peter Reuter. 2001. "Labor Markets and Crime." In *Crime*, 3rd Edition, Eds. James Q. Wilson and Joan Petersilia. Richmond, CA: ICS Press.
- Cantor, David and Kenneth Land. 1985. "Unemployment and Crime Rates in the Post-World War II United States: A Theoretical and Empirical Analysis." *American Sociological Review* 50(3): 317-332.
- Chiricos, Theodore. 1987. "Rates of Crime and Unemployment: An Analysis of Aggregate Research Evidence." *Social Problems* 34(2): 187-212
- Cook, Philip and Gary Zarkin. 1985. "Crime and the Business Cycle." *Journal of Empirical Legal Studies* 14(1): 115-128.
- Cook, Philip and John MacDonald. 2010. "Public Safety Through Private Action: An Economic Assessment of BIDs, Locks, and Citizen Cooperation." NBER Working Paper 15877.
- Donohue, John and Steven Levitt. 2001. "The Impact of Legalized Abortion on Crime." *Quarterly Journal of Economics* 116(2): 379-420
- Ehrlich, Isaac. 1973. "Participation in Illegitimate Activities: A Theoretical and Empirical Investigation." *Journal of Political Economy* 81(3): 521-565.
- Fagan, Jeffrey and Richard Freeman. 1999. "Crime and Work." In *Crime and Justice* Vol. 25: 225-290.
- Fajnzylber, Pablo, Daniel Lederman, and Norman Loayza. 2002. "What Causes Violent Crime?" *European Economic Review* 46(7): 1323-1357.
- Freedman, Matthew and Emily Owens. 2011. "Low-Income Housing Development and Crime." *Journal of Urban Economics* 70(2-3): 115-131.
- Freeman, Richard. 1983. "Crime and Unemployment." In *Crime and Public Policy*, Ed. James Q. Wilson. San Francisco: Institute for Contemporary Studies Press.
- ____. 1995. "The Labor Market" In *Crime: Public Policies for Crime Control*, Eds. James Wilson and Joan Petersilia. San Francisco: ICS Press.
- _____. 1999. "The Economics of Crime." In *Handbook of Labor Economics* Volume 3C, Eds. Orley Ashenfelter and David Card. San Diego, CA: North Holland.
- Glaeser, Edward and Bruce Sacerdote. 1999. "Why Is There More Crime in Cities?" *Journal of Political Economy* 107(6): S225-S258.
- Glaeser, Edward and Joshua Gottlieb. 2008. "The Economics of Place-Making Policies." *Brookings Papers on Economic Activity* 1: 155-239.
- Greater San Antonio Chamber of Commerce. 2011. "2011 Quarterly Economic Trends, First Quarter." <u>http://sachamber.org/cwt/external/wcpages/publications/Economic_Reports.aspx</u>
- Grossman, Herschel and Minseong Kim. 1995. "Swords or Plowshares? A Theory of the Security of Claims to Property." *Journal of Political Economy* 103(6): 1275-1288.
- Hsieh, Ching-Chi and M.D. Pugh. 1993. "Poverty, Inequality, and Violent Crime: A Metaanalysis of Recent Aggregate Data Studies." *Criminal Justice Review* 18(2): 182-202

- Jackson, Kirabo and Emily Owens. 2010. "One for the Road: Public Transportation, Alcohol Consumption, and Intoxicated Driving." *Journal of Public Economics* 95(1-2): 106-121.
- Kelly, Morgan. 2000. "Inequality and Crime." *Review of Economics and Statistics* 82(4): 530-539.
- Kling, Jeffrey, Jens Ludwig, and Lawrence Katz. 2005. "Neighborhood Effects on Crime for Female and Male Youth: Evidence from a Randomized Housing Voucher Experiment." *Quarterly Journal of Economics* 120(1): 87-130.
- Levitt, Steven. 2001. "Alternative Strategies for Identifying the Link Between Unemployment and Crime." *Journal of Quantitative Criminology* 17(4): 377-390.
- Levitt, Steven. 2004. "Understanding Why Crime Fell in the 1990s: Four Factors that Explain the Decline and Six that Do Not." *Journal of Economic Perspectives* 18(1): 163-190.
- Lochner, Lance and Enrico Moretti. 2004. "The Effect of Education on Crime: Evidence from Prison Inmates, Arrests, and Self-Reports." *American Economic Review* 94 (1): 155-189.
- Machin, Stephen and Olivier Marie. 2006. "Crime and Benefit Sanctions," *Portuguese Economic Journal* 5(2): 149-165.
- Machin, Stephen and Costas Meghir. 2004. "Crime and Economic Incentives." *Journal of Human Resources* 39(4): 958-979.
- Mehlum, Halvor, Edward Miguel, and Ragnar Torvik. 2006. "Poverty and Crime in 19th Century Germany." *Journal of Urban Economics* 59(3): 370-388.
- Mocan, Naci and Turan Bali. 2010. "Asymmetric Crime Cycles." *Review of Economics and Statistics* 92(4): 899-211.
- Mocan, Naci, Stephen Billups, and Jody Overland. 2005. "A Dynamic Model of Differential Human Capital and Criminal Activity." *Economica* 72(288): 655-681.
- Mocan, Naci and Daniel Rees. 2005. "Economic Conditions, Deterrence and Juvenile Crime: Evidence from Micro Data." *American Law and Economics Review* 7(2): 319-349.
- Mustard, David. 2010. "How Do Labor Markets Affect Crime? New Evidence on an Old Puzzle." IZA Discussion Paper 4856.
- Nirvin, Steve. 2009. "Fort Sam Houston Economic Impact Update." Office of Military Affairs, Military Transformation Task Force Publication. <u>http://www.sanantonio.gov/oma/mttf.aspx</u>
- Phillips, Phillip.1980. "Characteristics and Topology of the Journey to Crime." In Crime: A Spatial Perspective, Eds. D.E. Georges-Abeyie and K.D. Harries. New York: Columbia University Press.
- Piehl, Anne. 1998. "Economic Conditions, Work and Crime." In *Handbook of Crime and Punishment*, Ed. Michel Thorny. New York: Oxford University Press.
- Raphael, Steven and Rudolf Winter-Ebmer. 2001. "Identifying the Effect of Unemployment on Crime." *Journal of Law and Economics* 44(1): 259-283.
- Rege, Mari, Torjorn Skardhamar, Kjetil Telle, and Mark Votruba. 2009. "The Effect of Plant Closure on Crime." Statistics Norway Discussion Paper 593.
- Reuter, Peter, Robert MacCoun, and Patrick Murphy. 1990. *Money from Crime: A Study of the Economics of Drug Dealing in Washington, DC*. Santa Monica, CA: The RAND Corporation.
- Rhodes, William and Catherine Conly. 1981. "Crime and Mobility: An Empirical Study." In *Environmental Criminology*. Eds. P.J. Brantingham and P.L. Brantingham. Beverly Hills, CA: Sage.
- Saridakis, George. 2004. "Violent Crime in the United States of America: A Time-Series Analysis Between 1960-2000." *European Journal of Law and Economics* 18(2): 203-221.

- Sorenson, David. 2007. *Military Base Closure: A Reference Handbook*. Westport, CT: Greenwood Publishing.
- Thomas, Michael. 2009. "BRAC Work Providing City Multi-Billion Dollar Shot in the Arm." San Antonio Business Journal, September 3.
- United States Government Accountability Office. 2007. "Selected Agencies Use of Criminal Background Checks for Determining Responsibility" GAO-07-215R.
- Wiles, Paul and Andrew Costello. 2000. "The Road to Nowhere: The Evidence for Travelling Criminals." UK Home Office Research Study 207.
- Wilson, James Q., and Richard J. Herrnstein. 1985. *Crime and Human Nature*. New York: Simon and Schuster.

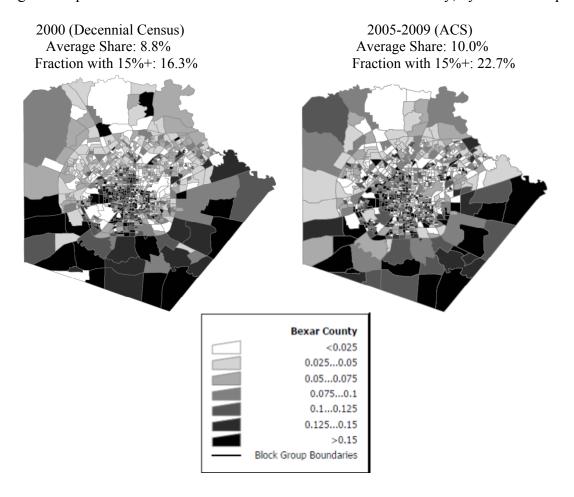


Figure 1: Spatial Concentration of Construction Jobs in Bexar County, by Block Group

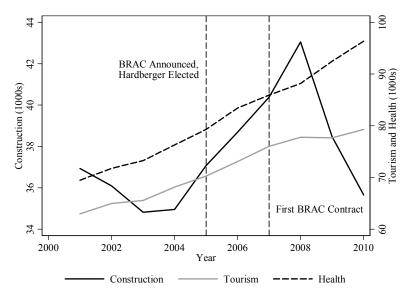
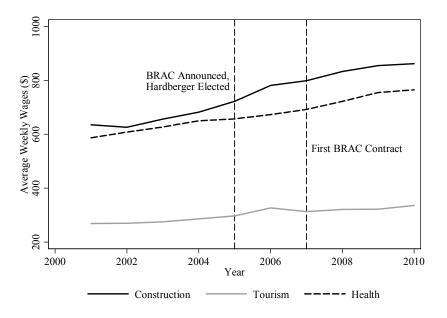


Figure 2: QCEW Employment in Bexar County in Construction, Tourism, and Health Care

Note: Includes private-sector employment in each industry.

Figure 3: QCEW Weekly Wages in Bexar County in Construction, Tourism, and Health Care



Note: Includes private-sector employment in each industry.

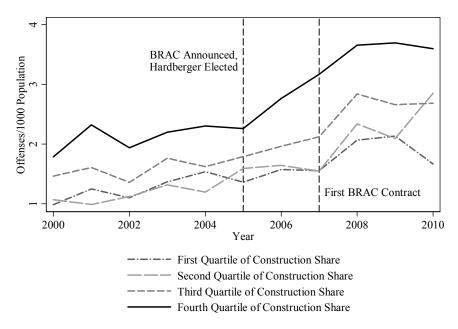


Figure 4: Acquisitive Crime in Bexar County

Note: Acquisitive crimes include burglary, robbery, larceny, and car theft.

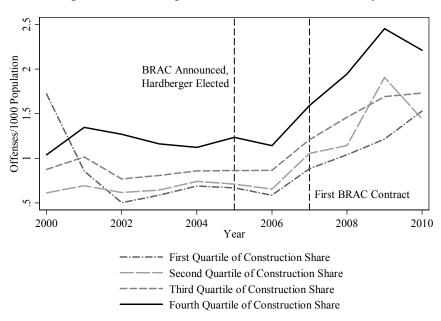


Figure 5: Non-Acquisitive Crime in Bexar County

Note: Non-acquisitive crimes include murder, assault, and rape.

	Table 1. Feople Charged with Felonies per 100 OCK index crimes, bexar county										
		Property	Crimes	V	Violent Crimes						
	Burglary	Car Theft	Larceny	Robbery	Murder	Assault	Rape				
2000	4.15	2.36	0.83	19.11	80.81	11.50	48.47				
2001	3.68	1.83	0.99	18.40	94.39	10.36	48.50				
2002	3.76	1.24	1.03	14.64	76.32	9.14	44.79				
2003	4.07	1.21	1.34	18.86	86.00	14.57	31.22				
2004	3.93	2.30	1.26	16.64	83.65	13.42	31.75				
2005	3.89	3.19	1.31	19.49	89.69	14.32	33.09				
2006	4.24	3.58	1.60	19.55	56.15	14.64	32.49				
2007	3.93	3.08	1.76	20.23	109.09	24.60	29.36				
2008	4.37	3.54	1.70	22.93	79.71	19.30	31.25				

Table 1: People Charged with Felonies per 100 UCR Index Crimes, Bexar County

Notes: Authors' calculations from Uniform Crime Reports County-Level Detailed Arrest and Offense Data and Bexar County District Court felony filings.

Low Construction Share High Construction Share Employment Shares (2000) 0 Share in Construction 0.04 0. Share in Tourism 0.10 0. Share in Health Care 0.13 0. Demographic & Housing Characteristics (2000) 0 0 Population 1553 12 Share Black 0.09 0. Share Hispanic 0.45 0. Share Male 0.47 0. Share Male 0.43 0. Share Male Speak Spanish* 0.39 0. Share in Same House 1 Year Ago 0.51 0. Share with SDegree 0.23 0. Share with SDegree 0.25 0. Share with College Degree 0.34 0. Unemployment Rate* 0.06 0. Labor Force Par
Share in Construction 0.04 0. Share in Tourism 0.10 0. Share in Health Care 0.13 0. Demographic & Housing Characteristics (2000) Population 1553 12 Population 1553 12 Share Black 0.09 0. Share Black 0.09 0. Share Hispanic 0.45 0. Share Male 0.47 0. Share Age 65 or Over 0.13 0. Share Age 65 or Over 0.13 0. Share Age 65 or Over 0.13 0. Share Foreign Born 0.09 0. Share in Same House 1 Year Ago 0.51 0. Share with HS Degree 0.23 0. Share with Some College 0.25 0. Share with College Degree 0.34 0. 0. 0. 0. 0. Unemployment Rate* 0.06 0.
Share in Health Care 0.13 $0.$ Demographic & Housing Characteristics (2000) Population 1553 12 Population 1553 12 Share Black 0.09 $0.$ Share Hispanic 0.45 $0.$ Share Male 0.47 $0.$ Share Under Age 30 0.43 $0.$ Share Under Age 50 or Over 0.13 $0.$ Share Age 65 or Over 0.13 $0.$ Share Age 65 or Over 0.13 $0.$ Share In Same House 1 Year Ago 0.51 $0.$ Share with Bogeree 0.23 $0.$ Share with Some College 0.25 $0.$ Share with College Degree 0.34 $0.$ Unemployment Rate* 0.06 $0.$ Labor Force Participation Rate 0.64 $0.$ Poverty Rate 0.14 $0.$ $0.$ Housing Units 608 4 Share Units Owner-Occupied* 0.63 $0.$ Housing Units 608 4 Share Units Owner-Occupied*
Demographic & Housing Characteristics (2000) Population 1553 12 Share Black 0.09 0. Share Black 0.09 0. Share Hispanic 0.45 0. Share Male 0.47 0. Share Under Age 30 0.43 0. Share Age 65 or Over 0.13 0. Share Foreign Born 0.09 0. Share in Same House 1 Year Ago 0.51 0. Share with BD egree 0.23 0. Share with Some College 0.25 0. Share with College Degree 0.34 0. Labor Force Participation Rate 0.64 0. Poverty Rate 0.14 0. Median HH Income 44,959 30,3 Employment to Pop. Ratio [†] 0.45 0. Housing Units 608 4 Share Units Vacant* 0.06 0. Median House Age 33.22 37. Share HHs with 2+ Vehicles 0.54 0.
Population 1553 12 Share Black 0.09 0. Share Black 0.09 0. Share Hispanic 0.45 0. Share Male 0.47 0. Share Under Age 30 0.43 0. Share Under Age 30 0.43 0. Share Age 65 or Over 0.13 0. Share HHs Speak Spanish* 0.39 0. Share in Same House 1 Year Ago 0.51 0. Share with BS Degree 0.23 0. Share with Some College 0.25 0. Share with College Degree 0.34 0. Labor Force Participation Rate 0.64 0. Poverty Rate 0.14 0. Median HH Income 44,959 30,3 Employment to Pop. Ratio [†] 0.45 0. Housing Units 608 4 Share Units Vacant* 0.06 0. Median House Value* 92,975 54,4 Median House Age 33.22 37. Share HHs with 2+ Vehicles 0.54 0. <tr< td=""></tr<>
Share Black 0.09 0.1 Share Hispanic 0.45 0.1 Share Male 0.47 0.7 Share Under Age 30 0.43 0.7 Share Under Age 30 0.43 0.7 Share Lore Age 65 or Over 0.13 0.7 Share Foreign Born 0.09 0.7 Share in Same House 1 Year Ago 0.51 0.7 Share with HS Degree 0.23 0.7 Share with Some College 0.25 0.7 Share with Some College 0.25 0.7 Share with College Degree 0.34 0.7 Unemployment Rate* 0.06 0.7 Labor Force Participation Rate 0.64 0.7 Poverty Rate 0.14 0.7 Median HH Income $44,959$ $30,33$ Employment to Pop. Ratio [†] 0.45 0.7 Housing Units 608 44 Share Units Owner-Occupied* 0.63 0.7 Median House Value* $92,975$ $54,4$ Median House Age 33.22 <
Share Hispanic 0.45 $0.$ Share Male 0.47 $0.$ Share Under Age 30 0.43 $0.$ Share Under Age 30 0.43 $0.$ Share Under Age 30 0.43 $0.$ Share Under Age 30 0.13 $0.$ Share Male 0.39 $0.$ Share Age 65 or Over 0.13 $0.$ Share HHs Speak Spanish* 0.39 $0.$ Share Foreign Born 0.09 $0.$ Share with Speak Spanish* 0.39 $0.$ Share with Some College 0.23 $0.$ Share with Some College 0.25 $0.$ Share with Some College 0.25 $0.$ Labor Force Participation Rate 0.64 $0.$ Poverty Rate 0.14 $0.$ Median HH Income $44,959$ $30,3$ Employment to Pop. Ratio [†] 0.63 $0.$ Housing Units 608 $4.$ Share Units Owner-Occupied* 0.63 $0.$
Share Male 0.47 $0.$ Share Under Age 30 0.43 $0.$ Share Under Age 30 0.43 $0.$ Share Age 65 or Over 0.13 $0.$ Share Age 65 or Over 0.13 $0.$ Share HHs Speak Spanish* 0.39 $0.$ Share HHs Speak Spanish* 0.39 $0.$ Share Foreign Born 0.09 $0.$ Share in Same House 1 Year Ago 0.51 $0.$ Share with SDegree 0.23 $0.$ Share with Some College 0.25 $0.$ Share with College Degree 0.34 $0.$ Unemployment Rate* 0.06 $0.$ Labor Force Participation Rate 0.64 $0.$ Poverty Rate 0.14 $0.$ Median HH Income $44,959$ $30,3$ Employment to Pop. Ratio [†] 0.45 $0.$ Housing Units 608 44 Share Units Vacant* 0.663 $0.$ Median House Value* $92,975$ $54,4$ Median House Age 33.22 $37.$ Share HHs with 2+ Vehicles 0.54 $0.$ Demographic & Housing Characteristics (2005-2009) 0.54 $0.$ Poverty Rate 0.17 $0.$ $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 0
Share Under Age 30 0.43 $0.$ Share Age 65 or Over 0.13 $0.$ Share Age 65 or Over 0.39 $0.$ Share HHs Speak Spanish* 0.39 $0.$ Share Foreign Born 0.09 $0.$ Share in Same House 1 Year Ago 0.51 $0.$ Share with SDegree 0.23 $0.$ Share with Some College 0.25 $0.$ Share with College Degree 0.34 $0.$ Unemployment Rate* 0.06 $0.$ Labor Force Participation Rate 0.64 $0.$ Poverty Rate 0.14 $0.$ Median HH Income $44,959$ $30,3$ Employment to Pop. Ratio [†] 0.45 $0.$ Housing Units 608 44 Share Units Vacant* 0.06 $0.$ Share Units Owner-Occupied* 0.63 $0.$ Median House Value* $92,975$ $54,4$ Median House Age 33.22 $37.$ Share HIs with 2+ Vehicles 0.54 0.7 Demographic & Housing Characteristics (2005-2
Share Age 65 or Over 0.13 0. Share HHs Speak Spanish* 0.39 0. Share Foreign Born 0.09 0. Share in Same House 1 Year Ago 0.51 0. Share with HS Degree 0.23 0. Share with Some College 0.25 0. Share with College Degree 0.34 0. Unemployment Rate* 0.06 0. Labor Force Participation Rate 0.64 0. Poverty Rate 0.14 0. Median HH Income 44,959 30,3 Employment to Pop. Ratio [†] 0.45 0. Housing Units 608 4 Share Units Vacant* 0.06 0. Median House Value* 92,975 54,4 Median House Age 3.22 37. Share HHs with 2+ Vehicles 0.54 0. Demographic & Housing Characteristics (2005-2009) 0. Poverty Rate 0.17 0. Median HH Income* 52,489 358 Employment to Pop. Ratio [†] 0.45 0. Median HH Income* <
Share HHs Speak Spanish* 0.39 $0.$ Share Foreign Born 0.09 $0.$ Share in Same House 1 Year Ago 0.51 $0.$ Share with HS Degree 0.23 $0.$ Share with Some College 0.25 $0.$ Share with College Degree 0.34 $0.$ Unemployment Rate* 0.06 $0.$ Labor Force Participation Rate 0.64 $0.$ Poverty Rate 0.14 $0.$ Median HH Income $44,959$ $30,3$ Employment to Pop. Ratio [†] 0.45 $0.$ Housing Units 608 44 Share Units Vacant* 0.06 $0.$ Median House Value* $92,975$ $54,4$ Median House Age 33.22 $37.$ Share HHs with 2+ Vehicles 0.54 $0.$ Demographic & Housing Characteristics (2005-2009) 0.17 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median HH Income* $52,489$ 358 Employment to
Share Foreign Born 0.09 $0.$ Share in Same House 1 Year Ago 0.51 $0.$ Share with HS Degree 0.23 $0.$ Share with Some College 0.25 $0.$ Share with College Degree 0.34 $0.$ Unemployment Rate* 0.06 $0.$ Labor Force Participation Rate 0.64 $0.$ Poverty Rate 0.14 $0.$ Median HH Income $44,959$ $30,3$ Employment to Pop. Ratio [†] 0.45 $0.$ Housing Units 608 44 Share Units Vacant* 0.06 $0.$ Median House Value* $92,975$ $54,4$ Median House Age 33.22 $37.$ Share HHs with 2+ Vehicles 0.54 $0.$ Demographic & Housing Characteristics (2005-2009) 0.17 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median Hou
Share in Same House 1 Year Ago 0.51 $0.$ Share with HS Degree 0.23 $0.$ Share with Some College 0.25 $0.$ Share with College Degree 0.34 $0.$ Unemployment Rate* 0.06 $0.$ Labor Force Participation Rate 0.64 $0.$ Poverty Rate 0.14 $0.$ Median HH Income $44,959$ $30,3.$ Employment to Pop. Ratio [†] 0.45 $0.$ Housing Units 608 4 Share Units Vacant* 0.06 $0.$ Median House Value* $92,975$ $54,4$ Median House Age 33.22 $37.$ Share HHs with 2+ Vehicles 0.54 $0.$ Demographic & Housing Characteristics (2005-2009) 0.17 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Demographic & Housing Characteristics (2005-2009) 0.17 $0.$ Median HH Income* $52,489$ 358 588 Employment to Pop. Ratio [†] 0.45 <
Share with HS Degree 0.23 $0.$ Share with Some College 0.25 $0.$ Share with College Degree 0.34 $0.$ Unemployment Rate* 0.066 $0.$ Labor Force Participation Rate 0.64 $0.$ Poverty Rate 0.14 $0.$ Median HH Income $44,959$ $30,33$ Employment to Pop. Ratio [†] 0.45 $0.$ Housing Units 608 $4.$ Share Units Vacant* 0.066 $0.$ Median House Value* $92,975$ $54,4.$ Median House Value* $92,975$ $54,4.$ Median House Age 33.22 $37.$ Share HHs with $2+$ Vehicles 0.54 $0.$ Demographic & Housing Characteristics (2005-2009) 0.17 $0.$ Poverty Rate 0.17 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median House Val
Share with Some College 0.25 $0.$ Share with College Degree 0.34 $0.$ Unemployment Rate* 0.06 $0.$ Labor Force Participation Rate 0.64 $0.$ Poverty Rate 0.14 $0.$ Median HH Income $44,959$ $30,3$ Employment to Pop. Ratio [†] 0.45 $0.$ Housing Units 608 $4.$ Share Units Vacant* 0.06 $0.$ Median House Value* $92,975$ $54,4$ Median House Age 33.22 $37.$ Share HHs with $2+$ Vehicles 0.54 $0.$ Demographic & Housing Characteristics (2005-2009) 0.17 $0.$ Poverty Rate 0.17 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median House Valu
Share with College Degree 0.34 $0.$ Unemployment Rate* 0.06 $0.$ Labor Force Participation Rate 0.64 $0.$ Poverty Rate 0.14 $0.$ Median HH Income $44,959$ $30,3$ Employment to Pop. Ratio [†] 0.45 $0.$ Housing Units 608 $4.$ Share Units Vacant* 0.06 $0.$ Share Units Owner-Occupied* 0.63 $0.$ Median House Value* $92,975$ $54,4.$ Median House Age 33.22 $37.$ Share HHs with 2+ Vehicles 0.54 $0.$ Demographic & Housing Characteristics (2005-2009) 0.17 $0.$ Poverty Rate 0.17 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median House Value* $136,413$ $81,8$ Share HHs with 2+ Vehicles 0.54 $0.$
Unemployment Rate*0.060.1Labor Force Participation Rate0.640.Poverty Rate0.140.Median HH Income44,95930,3Employment to Pop. Ratio [†] 0.450.Housing Units6084Share Units Vacant*0.060.Share Units Owner-Occupied*0.630.Median House Value*92,97554,4Median House Age33.2237.Share HHs with 2+ Vehicles0.540.Demographic & Housing Characteristics (2005-2009)0.Poverty Rate0.170.Median HH Income*52,489358Employment to Pop. Ratio [†] 0.450.Median HH Income*136,41381,8Share HHs with 2+ Vehicles0.540.
Labor Force Participation Rate 0.64 $0.$ Poverty Rate 0.14 $0.$ Median HH Income $44,959$ $30,3$ Employment to Pop. Ratio [†] 0.45 $0.$ Housing Units 608 44 Share Units Vacant* 0.06 $0.$ Share Units Owner-Occupied* 0.63 $0.$ Median House Value* $92,975$ $54,4$ Median House Value* $92,975$ $54,4$ Median House Age 33.22 $37.$ Share HHs with 2+ Vehicles 0.54 $0.$ Demographic & Housing Characteristics (2005-2009) 0.17 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median House Value* $136,413$ $81,8$ Share HHs with 2+ Vehicles 0.54 $0.$
Poverty Rate 0.14 $0.$ Median HH Income $44,959$ $30,3$ Employment to Pop. Ratio [†] 0.45 $0.$ Housing Units 608 4 Share Units Vacant* 0.06 $0.$ Share Units Owner-Occupied* 0.63 $0.$ Median House Value* $92,975$ $54,4$ Median House Age 33.22 $37.$ Share HHs with 2+ Vehicles 0.54 $0.$ Demographic & Housing Characteristics (2005-2009) 0.17 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median House Value* $136,413$ $81,8$ Share HHs with 2+ Vehicles 0.54 $0.$
Median HH Income $44,959$ $30,3$ Employment to Pop. Ratio [†] 0.45 $0.$ Housing Units 608 4 Share Units Vacant* 0.06 $0.$ Share Units Owner-Occupied* 0.63 $0.$ Median House Value* $92,975$ $54,4$ Median House Age 33.22 $37.$ Share HHs with 2+ Vehicles 0.54 $0.$ Demographic & Housing Characteristics (2005-2009) 0.17 $0.$ Poverty Rate 0.17 0.45 $0.$ Median HU Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median Huse Value* $136,413$ $81,8$ Share HHs with 2+ Vehicles 0.54 $0.$
Employment to Pop. Ratio 0.45 0.45 Housing Units 608 4 Share Units Vacant* 0.06 0.63 Share Units Owner-Occupied* 0.63 0.63 Median House Value* $92,975$ $54,4$ Median House Age 33.22 $37.$ Share HHs with 2+ Vehicles 0.54 0.54 Demographic & Housing Characteristics (2005-2009) 0.17 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median House Value* $136,413$ $81,8$ Share HHs with 2+ Vehicles 0.54 0.54
Housing Units60844Share Units Vacant*0.060.Share Units Owner-Occupied*0.630.Median House Value*92,97554,4Median House Age33.2237.Share HHs with 2+ Vehicles0.540.Demographic & Housing Characteristics (2005-2009)0.170.Poverty Rate0.170.Median HH Income*52,489358Employment to Pop. Ratio†0.450.Median House Value*136,41381,8Share HHs with 2+ Vehicles0.540.
Share Units Vacant*0.060.0Share Units Owner-Occupied*0.630.0Median House Value*92,97554,4Median House Age33.2237.Share HHs with 2+ Vehicles0.540.0Demographic & Housing Characteristics (2005-2009)0.170.Poverty Rate0.170.Median HH Income*52,489358Employment to Pop. Ratio†0.450.Median House Value*136,41381,8Share HHs with 2+ Vehicles0.540.
Share Units Owner-Occupied* 0.63 0.7 Median House Value* $92,975$ $54,4$ Median House Age 33.22 37 Share HHs with 2+ Vehicles 0.54 0.7 Demographic & Housing Characteristics (2005-2009) 0.17 0.7 Poverty Rate 0.17 0.17 Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 0.7 Median House Value* $136,413$ $81,8$ Share HHs with 2+ Vehicles 0.54 0.7
Median House Value*92,97554,4Median House Age 33.22 $37.$ Share HHs with 2+ Vehicles 0.54 $0.$ Demographic & Housing Characteristics (2005-2009) 0.17 $0.$ Poverty Rate 0.17 0.17 Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median House Value* $136,413$ $81,8$ Share HHs with 2+ Vehicles 0.54 $0.$
Median House Age 33.22 $37.$ Share HHs with 2+ Vehicles 0.54 0.54 Demographic & Housing Characteristics (2005-2009) 0.17 0.17 Poverty Rate 0.17 0.17 Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 0.17 Median House Value* $136,413$ $81,8$ Share HHs with 2+ Vehicles 0.54 0.54
Share HHs with 2+ Vehicles 0.54 0.54 Demographic & Housing Characteristics (2005-2009) 0.17 0.17 Poverty Rate 0.17 0.17 Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 0.17 Median House Value* $136,413$ $81,8$ Share HHs with 2+ Vehicles 0.54 0.54
Demographic & Housing Characteristics (2005-2009) 0.17 0. Poverty Rate 0.17 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median House Value* $136,413$ $81,8$ Share HHs with 2+ Vehicles 0.54 $0.$
Poverty Rate 0.17 $0.$ Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 $0.$ Median House Value* $136,413$ $81,8$ Share HHs with 2+ Vehicles 0.54 $0.$
Median HH Income* $52,489$ 358 Employment to Pop. Ratio [†] 0.45 0.45 Median House Value* $136,413$ $81,81$ Share HHs with 2+ Vehicles 0.54 0.54
Employment to Pop. Ratio 0.45 0.45 Median House Value*136,413 $81,8$ Share HHs with 2+ Vehicles 0.54 0.45
Median House Value*136,41381,8Share HHs with 2+ Vehicles0.540.54
Share HHs with 2+ Vehicles0.540.
Observations (2000, 2005-2009) 504 5
Crime Rates (2000-2010)
Burglary Rate 0.472 0.7
Car Theft Rate 0.119 0.1
Larceny Rate 0.638 0.9
Robbery Rate0.3300.4
Murder Rate 0.060 0.0
Assault Rate 0.735 1.0
Rape Rate 0.135 0.1
Observations (2000-2010) 5544 55 Notes: * Missing one or more observations in 2000 Decennial Census and/or 2005-2009 ACS data

Table 2: Descriptive Statistics

Observations (2000-2010)55445555Notes: * Missing one or more observations in 2000 Decennial Census and/or 2005-2009 ACS data. [†]Employment to population ratio calculated as total employment divided by total population (including persons with ages less than 16).

	Poverty 1	Rate (%)	e	dian HH ome	Employme Ratic	ent to Pop.	-	ian House lue	Percentage o 2+ Vehi	
Percentage in Construction x BRAC/Hardberger	-0.314*** [0.082]	-0.259** [0.110]	0.003* [0.002]	0.002	0.396*** [0.061]	0.336*** [0.083]	0.005*** [0.002]	0.005** [0.002]	0.235*** [0.090]	0.215* [0.120]
Percentage in Construction	0.122** [0.061]		-0.001 [0.001]		-0.121*** [0.036]		-0.001 [0.001]	t J	-0.042 [0.063]	
Percentage in Tourism	0.002	0.045	0.002	0.002	-0.011	-0.044	0.007***	0.006**	0.150*	0.122
x BRAC/Hardberger	[0.082]	[0.118]	[0.002]	[0.003]	[0.067]	[0.093]	[0.002]	[0.003]	[0.091]	[0.126]
Percentage in Tourism	0.057		0.000		-0.020		-0.001		-0.098*	
	[0.056]		[0.001]		[0.033]		[0.001]		[0.058]	
Percentage in Health Care	-0.177*	-0.033	0.003*	0.001	0.224***	0.172*	0.002	0.002	0.140	0.074
x BRAC/Hardberger	[0.098]	[0.151]	[0.002]	[0.003]	[0.066]	[0.095]	[0.002]	[0.003]	[0.092]	[0.148]
Percentage in Health Care	-0.018		0.001*		-0.012		0.000		0.018	
	[0.058]		[0.001]		[0.037]		[0.001]		[0.061]	
Demographic & Housing Controls	Y		Y		Y		Y		Y	
Tract Fixed Effects	Y		Y		Y		Y		Y	
Year Fixed Effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Block Group Fixed Effects		Y		Y		Y		Y		Y
Observations	1982	2018	1982	2016	1982	2018	1964	1972	1982	2017
R-Squared	0.669	0.803	0.861	0.909	0.645	0.781	0.917	0.948	0.729	0.846

Table 3: Socio-Economic Outcomes and Construction Workers in Bexar County, 2000 to 2005-2009

Notes: Demographic and housing controls measured in 2000 at the block group level include log population, share black, share Hispanic, share male, share under age 30, share age 65+, share of households that speak Spanish, share foreign born, share who lived in the same house 1 year ago, share with only a HS degree, share with some college, share with a college degree, unemployment rate, labor force participation rate, log household income, log number of housing units, share of units owner occupied, median house age, and log house value. Standard errors in brackets allow for arbitrary correlation within block groups. *p<0.10, **p<0.05, ***p<0.01.

able 4. Fixed Effects Estimates of Floperty Chil	A A			Time		d Felons	۲۵	ons
	A	11	THSt		glary		rei	0115
Percentage in Construction x Hardberger	-0.002 [0.013]	-0.008 [0.013]	-0.007 [0.012]	-0.013 [0.012]	0.008 [0.010]	0.004 [0.010]	0.019* [0.010]	0.015
Percentage in Construction x BRAC	0.021*	0.015	-0.003	-0.008	0.045***	0.043***	0.049***	0.047***
	[0.012]	[0.013]	[0.010]	[0.011]	[0.010]	[0.010]	[0.009]	[0.009]
Percentage in Construction	-0.009		0.004		-0.018**		-0.026***	
	[0.011]		[0.009]	~	[0.008]		[0.007]	
					Theft			
Percentage in Construction x Hardberger	-0.007	-0.005	-0.011	-0.011	0.005	0.007	0.007	0.009
	[0.009]	[0.009]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]
Percentage in Construction x BRAC	0.021**	0.018**	-0.002	-0.003	0.030***	0.028***	0.028***	0.026***
	[0.009]	[0.009]	[0.006]	[0.006]	[0.007]	[0.007]	[0.007]	[0.007]
Percentage in Construction	-0.008		0.005		-0.017***		-0.016***	
	[0.007]		[0.005]		[0.004]		[0.004]	
-					d Use of a M			
Percentage in Construction x Hardberger	-0.028***	-0.027**	-0.031***	-0.031***	0.001	0.002	-0.001	0.002
	[0.011]	[0.011]	[0.009]	[0.009]	[0.008]	[0.008]	[0.008]	[0.008]
Percentage in Construction x BRAC	0.002	-0.002	-0.017**	-0.020**	0.022***	0.020***	0.019**	0.017**
	[0.009]	[0.009]	[0.008]	[0.008]	[0.007]	[0.007]	[0.007]	[0.007]
Percentage in Construction	-0.001		0.009		-0.011*		-0.008	
	[0.009]		[0.008]		[0.006]		[0.006]	
_					ceny			
Percentage in Construction x Hardberger	0.006	0.005	-0.017	-0.021*	0.021*	0.022*	0.019*	0.020*
	[0.013]	[0.014]	[0.012]	[0.012]	[0.011]	[0.012]	[0.011]	[0.012]
Percentage in Construction x BRAC	0.031**	0.029**	-0.002	-0.004	0.046***	0.045***	0.048***	0.047***
	[0.012]	[0.012]	[0.012]	[0.012]	[0.011]	[0.010]	[0.010]	[0.010]
Percentage in Construction	-0.019*		-0.012		-0.020*		-0.017	
	[0.011]		[0.009]		[0.010]		[0.011]	
Demographic & Housing Controls, Tract Fixed Effects	Y		Y		Y		Y	
Block Group Fixed Effects		Y		Y		Y		Y
Observations	10901	11099	10901	11099	10901	11099	10901	11099

Table 4: Fixed Effects Estimates of Property Crime and Construction Workers in Bexar County, 2000-2010

Notes: Dependent variables are ln(people charged with felonies committed in year/1000 population). All regressions include year fixed effects, and tourism employment share interacted with Hardberger and BRAC dummies as well as health care employment share interacted with Hardberger and BRAC dummies. See Table 3 notes for additional controls. Standard errors in brackets allow for arbitrary correlation within block groups. *p<0.10, **p<0.05, ***p<0.01.

	А	.11	First	Time	Accuse	d Felons	Fel	ons
			Robbery					
Percentage in Construction x Hardberger	0.011	0.015	0.006	0.010	0.002	0.0005	0.0003	-0.0004
	[0.012]	[0.012]	[0.011]	[0.011]	[0.009]	[0.009]	[0.008]	[0.008]
Percentage in Construction x BRAC	0.025***	0.025**	0.00003	0.001	0.025***	0.023***	0.021***	0.020***
5	[0.010]	[0.010]	[0.009]	[0.009]	[0.007]	[0.008]	[0.007]	[0.007]
Percentage in Construction	-0.020**		-0.005		-0.007		-0.005	
-	[0.009]		[0.007]		[0.007]		[0.007]	
				Мι	ırder			
Percentage in Construction x Hardberger	-0.009	-0.008	-0.008	-0.008	-0.001	0.000001	-0.0002	-0.00003
	[0.006]	[0.006]	[0.005]	[0.005]	[0.005]	[0.005]	[0.004]	[0.004]
Percentage in Construction x BRAC	-0.003	-0.003	-0.006	-0.005	0.001	0.001	ົ 0.005	0.005
8	[0.006]	[0.006]	[0.004]	[0.005]	[0.004]	[0.004]	[0.004]	[0.004]
Percentage in Construction	-0.003		-0.004		0.00001		-0.003	
C	[0.004]		[0.004]		[0.003]		[0.002]	
	Rape							
Percentage in Construction x Hardberger	-0.011	-0.011	-0.014*	-0.013	0.003	0.002	0.0001	-0.0005
c c	[0.010]	[0.010]	[0.009]	[0.008]	[0.005]	[0.005]	[0.005]	[0.005]
Percentage in Construction x BRAC	-0.008	-0.008	-0.011	-0.011	0.002	0.002	-0.006	-0.005
6	[0.008]	[0.007]	[0.007]	[0.007]	[0.004]	[0.004]	[0.004]	[0.004]
Percentage in Construction	0.011*	. ,	0.012**	. ,	0.001		0.006	. ,
	[0.007]		[0.006]		[0.004]		[0.004]	
			Assault				· ·	
Percentage in Construction x Hardberger	-0.017	-0.024	-0.024*	-0.026*	0.007	0.003	0.008	0.004
6	[0.015]	[0.016]	[0.014]	[0.014]	[0.011]	[0.011]	[0.011]	[0.011]
Percentage in Construction x BRAC	0.022**	0.017	0.007	0.007	0.037***	0.029**	0.042***	0.035***
0	[0.011]	[0.012]	[0.011]	[0.011]	[0.010]	[0.011]	[0.010]	[0.011]
Percentage in Construction	-0.009		0.001		-0.018**		-0.015**	
-	[0.010]		[0.009]		[0.007]		[0.007]	
Demographic & Housing Controls, Tract Fixed Effects	Y		Y		Y		Y	
Block Group Fixed Effects		Y		Y		Y		Y
Observations	10901	11099	10901	11099	10901	11099	10901	11099

Table 5: Fixed Effects Estimates of Violent Crime and Construction Workers in Bexar County, 2000-2010

Notes: Dependent variables are ln(people charged with felonies committed in year/1000 population). All regressions include year fixed effects, and tourism employment share interacted with Hardberger and BRAC dummies as well as health care employment share interacted with Hardberger and BRAC dummies. See Table 3 notes for additional controls. Standard errors in brackets allow for arbitrary correlation within block groups. *p<0.10, **p<0.05, ***p<0.01.

	All	First Time	Accused Felons rglary	Felons				
<u> </u>								
Percentage in Con. x Hardberger	-0.003	-0.005	0.002	0.003				
	[0.005]	[0.004]	[0.003]	[0.003]				
Percentage in Con. x BRAC	0.015***	-0.004	0.019***	0.017***				
	[0.006]	[0.004]	[0.004]	[0.004]				
			Theft					
Percentage in Con. x Hardberger	0.001	-0.002	0.004	0.004				
	[0.003]	[0.001]	[0.002]	[0.003]				
Percentage in Con. x BRAC	0.005*	-0.001	0.006***	0.006***				
	[0.003]	[0.002]	[0.002]	[0.002]				
		La	rceny					
Percentage in Con. x Hardberger	0.001	-0.007*	0.008	0.008				
	[0.007]	[0.004]	[0.005]	[0.005]				
Percentage in Con. x BRAC	0.010	-0.002	0.012	0.011				
	[0.011]	[0.005]	[0.008]	[0.008]				
		Ro	bbery					
Percentage in Con. x Hardberger	0.006	0.004	0.002	0.001				
	[0.005]	[0.004]	[0.002]	[0.002]				
Percentage in Con. x BRAC	0.013**	0.001	0.011**	0.009*				
	[0.006]	[0.003]	[0.006]	[0.006]				
		M	urder					
Percentage in Con. x Hardberger	-0.001	-0.001	0.0003	-0.0004				
	[0.002]	[0.001]	[0.001]	[0.001]				
Percentage in Con. x BRAC	0.002	0.001	0.001	0.002**				
	[0.002]	[0.002]	[0.001]	[0.001]				
			lape					
Percentage in Con. x Hardberger	-0.003	-0.003	-0.0004	-0.001				
	[0.002]	[0.002]	[0.001]	[0.001]				
Percentage in Con. x BRAC	-0.004	-0.004	-0.0002	-0.002*				
	[0.003]	[0.002]	[0.001]	[0.001]				
	Assault							
Percentage in Con. x Hardberger	0.009	0.005	0.003	0.003				
	[0.014]	[0.013]	[0.004]	[0.004]				
Percentage in Con. x BRAC	0.024	0.018	0.006	0.006				
	[0.016]	[0.013]	[0.007]	[0.006]				
Employment Interactions	Y	Y	Y	Y				
Year Effects	Y	Y	Y	Y				
Block Group Fixed Effects	Y	Y	Y	Y				
Observations	11099	11099	11099	11099				

Table 6: Fixed Effects Estimates of Crime and Construction Workers in Bexar County, Level Analysis

Notes: Dependent variables are ln(people charged with felonies committed in year/1000 population). Employment interactions include tourism employment share interacted with Hardberger and BRAC dummies as well as health care employment share interacted with Hardberger and BRAC dummies. Standard errors in brackets allow for arbitrary correlation within block groups. p<0.10, p<0.05, p<0.01.

	All	First Time	Accused Felons	Felons
_			rglary	
Percentage in Con. x Hardberger	0.012	0.004	0.011*	0.013**
	[0.008]	[0.008]	[0.006]	[0.006]
Percentage in Con. x BRAC	0.024***	0.004	0.033***	0.034***
	[0.008]	[0.007]	[0.006]	[0.006]
			Theft	
Percentage in Con. x Hardberger	0.004	-0.005	0.009*	0.009*
	[0.006]	[0.004]	[0.005]	[0.005]
Percentage in Con. x BRAC	0.011*	0.005	0.009*	0.010**
	[0.006]	[0.004]	[0.005]	[0.005]
		La	rceny	
Percentage in Con. x Hardberger	-0.001	-0.017*	0.017**	0.014*
	[0.009]	[0.009]	[0.008]	[0.008]
Percentage in Con. x BRAC	0.009	-0.008	0.024***	0.024***
	[0.007]	[0.007]	[0.008]	[0.007]
		Ro	bbery	
Percentage in Con. x Hardberger	0.001	0.001	0.001	0.002
	[0.007]	[0.008]	[0.007]	[0.006]
Percentage in Con. x BRAC	0.004	0.003	-0.008	0.009
	[0.007]	[0.007]	[0.006]	[0.005]
		M	urder	
Percentage in Con. x Hardberger	-0.002	-0.004	0.003	0.002
	[0.005]	[0.004]	[0.003]	[0.003]
Percentage in Con. x BRAC	0.0001	-0.002	0.001	0.001
	[0.004]	[0.003]	[0.003]	[0.002]
		R	lape	
Percentage in Con. x Hardberger	0.003	-0.002	0.006*	0.003
	[0.007]	[0.006]	[0.004]	[0.003]
Percentage in Con. x BRAC	-0.003	-0.005	0.002	0.0002
	[0.006]	[0.005]	[0.003]	[0.003]
		As	sault	
Percentage in Con. x Hardberger	-0.024	-0.026*	0.003	0.004
	[0.016]	[0.014]	[0.011]	[0.011]
Percentage in Con. x BRAC	0.017	0.007	0.029**	0.035***
	[0.012]	[0.011]	[0.011]	[0.011]
Employment Interactions	Y	Y	Y	Y
Year Effects	Y	Y	Y	Y
Block Group Fixed Effects	Y	Y	Y	Y
Observations	11099	11099	11099	11099

Table 7: Fixed Effects Estimates of Crime and Construction Workers in Bexar County, ACS-Based Estimates

Notes: Dependent variables are ln(people charged with felonies committed in year/1000 population). Employment interactions include tourism employment share interacted with Hardberger and BRAC dummies as well as health care employment share interacted with Hardberger and BRAC dummies. Standard errors in brackets allow for arbitrary correlation within block groups. *p<0.10, **p<0.05, ***p<0.01.

Table 8: Fixed Effects Estimates of Crime and Construction Workers in Bexar County, Tract-Specific Time Trends

1	All	First Time	Accused Felons	Felons
			rglary	
Percentage in Con. x Hardberger	-0.016	-0.009	-0.016	-0.006
	[0.014]	[0.013]	[0.012]	[0.012]
Percentage in Con. x BRAC	0.0002	-0.002	0.007	0.007
	[0.015]	[0.013]	[0.011]	[0.011]
_			[·] Theft	
Percentage in Con. x Hardberger	-0.016	-0.015**	-0.002	-0.0001
	[0.009]	[0.007]	[0.008]	[0.008]
Percentage in Con. x BRAC	-0.003	-0.011	0.011	0.009
	[0.011]	[0.007]	[0.008]	[0.008]
			rceny	
Percentage in Con. x Hardberger	-0.002	-0.011	-0.002	-0.003
	[0.015]	[0.013]	[0.013]	[0.013]
Percentage in Con. x BRAC	0.017	0.013	0.001	0.004
	[0.015]	[0.013]	[0.013]	[0.013]
		Ro	bbery	
Percentage in Con. x Hardberger	0.015	0.020*	-0.010	-0.007
	[0.012]	[0.011]	[0.009]	[0.009]
Percentage in Con. x BRAC	0.024**	0.018*	0.004	0.007
	[0.012]	[0.010]	[0.009]	[0.009]
		М	urder	
Percentage in Con. x Hardberger	-0.006	-0.008	0.003	0.002
	[0.007]	[0.005]	[0.005]	[0.004]
Percentage in Con. x BRAC	0.0002	-0.005	0.007	0.009**
	[0.007]	[0.005]	[0.005]	[0.005]
		R	lape	
Percentage in Con. x Hardberger	-0.015	-0.015*	-0.002	-0.002
	[0.010]	[0.009]	[0.005]	[0.005]
Percentage in Con. x BRAC	-0.015*	-0.015*	-0.005	-0.009*
	[0.009]	[0.009]	[0.005]	[0.005]
		As	ssault	
Percentage in Con. x Hardberger	-0.029*	-0.020	-0.016	-0.013
	[0.016]	[0.015]	[0.012]	[0.012]
Percentage in Con. x BRAC	0.007	້0.019	-0.005	ົ0.004
-	[0.014]	[0.013]	[0.013]	[0.012]
Employment Interactions	Y	Y	Y	Y
Year Effects	Y	Y	Y	Y
Block Group Fixed Effects	Y	Y	Y	Y
Observations	11099	11099	11099	11099

Notes: Dependent variables are ln(people charged with felonies committed in year/1000 population). Employment interactions include tourism employment share interacted with Hardberger and BRAC dummies as well as health care employment share interacted with Hardberger and BRAC dummies. Standard errors in brackets allow for arbitrary correlation within block groups. p<0.10, p<0.05, p<0.01.

		Burglary				Car	Theft		Larceny			
	All	First Time	Accused Felons	Felons	All	First Time	Accused Felons	Felons	All	First Time	Accused Felons	Felons
Percentage in Con. x 2004	0.009	-0.003	0.026**	0.021	-0.004	-0.010	0.007	0.004	0.018	0.000	0.026*	0.034**
refeelinge in coll. x 2004	[0.018]	[0.017]	[0.013]	[0.013]	[0.011]	[0.010]	[0.008]	[0.008]	[0.017]	[0.017]	[0.016]	[0.015]
Percentage in Con. x 2005	-0.009	-0.011	-0.001	0.007	-0.020*	-0.017*	-0.004	-0.002	0.001	-0.017	0.018	0.02
r creentage in con. x 2005	[0.018]	[0.017]	[0.013]	[0.012]	[0.011]	[0.009]	[0.008]	[0.008]	[0.016]	[0.016]	[0.016]	[0.015]
Percentage in Con. x 2006	-0.004	-0.016	0.02	0.032**	0.008	-0.009	0.020*	0.021*	0.016	-0.025	0.036**	0.032**
refeelinge in con. x 2000	[0.017]	[0.016]	[0.014]	[0.014]	[0.015]	[0.010]	[0.012]	[0.012]	[0.019]	[0.018]	[0.016]	[0.016]
Percentage in Con. x 2007	0.033*	0.004	0.048***	0.055***	0.005	-0.01	0.018*	0.017**	0.041**	0.015	0.035**	0.040**
Tereentage in Cont x 2007	[0.019]	[0.018]	[0.015]	[0.015]	[0.013]	[0.010]	[0.010]	[0.009]	[0.019]	[0.019]	[0.016]	[0.016]
Percentage in Con. x 2008	0.009	-0.01	0.054***	0.051***	0.042***	-0.007	0.059***	0.057***	0.025	-0.007	0.051***	0.057***
i ci contage in com a 2000	[0.018]	[0.016]	[0.016]	[0.016]	[0.015]	[0.010]	[0.014]	[0.014]	[0.018]	[0.018]	[0.017]	[0.017]
Percentage in Con. x 2009	0.017	-0.009	0.045**	0.054***	-0.003	-0.015	0.014	0.014	0.048***	-0.012	0.073***	0.071***
i ci contage in com a 2009	[0.019]	[0.017]	[0.017]	[0.017]	[0.014]	[0.010]	[0.010]	[0.011]	[0.018]	[0.018]	[0.016]	[0.016]
Percentage in Con. x 2010	0.008	-0.021	0.045***	0.042***	0.026*	0.011	0.026**	0.017*	0.016	-0.012	0.041**	0.045***
	[0.020]	[0.018]	[0.016]	[0.016]	[0.014]	[0.012]	[0.011]	[0.010]	[0.019]	[0.016]	[0.017]	[0.017]
Employment Interactions	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year Effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Block Group Fixed Effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	11099	11099	11099	11099	11099	11099	11099	11099	11099	11099	11099	11099

Table 9: Fixed Effects Estimates of Property Crime and Construction Workers in Bexar County, Relaxing the Timing of BRAC

Notes: Dependent variables are ln(people charged with felonies committed in year/1000 population). Employment interactions include tourism employment share interacted with Hardberger and BRAC dummies as well as health care employment share interacted with Hardberger and BRAC dummies. Standard errors in brackets allow for arbitrary correlation within block groups. *p<0.10, **p<0.05, **p<0.01.

		Rob	bery			Mu	rder			Ra	ape			Ass	ault	
	All	First Time	Accused Felons	Felons	All	First Time	Accused Felons	Felons	All	First Time	Accused Felons	Felons	All	First Time	Accused Felons	Felons
Percentage in	-0.024*	-0.021*	-0.012	-0.013	0.008	0.006	0.002	0.002	0.008	0.005	0.005	0.004	-0.033*	-0.048***	0.004	0.001
Con. x 2004	[0.013]	[0.012]	[0.010]	[0.010]	[0.009]	[0.008]	[0.004]	[0.004]	[0.015]	[0.014]	[0.008]	[0.008]	[0.017]	[0.017]	[0.015]	[0.012]
Percentage in	0.016	0.011	-0.004	-0.003	-0.001	-0.008	0.007	0.004	-0.014	-0.016	0.001	-0.004	-0.033*	-0.035*	0.003	0.004
Con. x 2005	[0.016]	[0.014]	[0.012]	[0.011]	[0.010]	[0.007]	[0.008]	[0.006]	[0.012]	[0.011]	[0.007]	[0.007]	[0.019]	[0.018]	[0.013]	[0.014]
Percentage in	0.005	0.001	0.00003	-0.003	-0.012	-0.006	-0.006	-0.003	-0.005	-0.008	0.004	0.005	-0.027	-0.037**	0.004	0.004
Con. x 2006	[0.017]	[0.015]	[0.012]	[0.012]	[0.007]	[0.006]	[0.004]	[0.004]	[0.012]	[0.011]	[0.007]	[0.007]	[0.020]	[0.018]	[0.014]	[0.013]
Percentage in	0.032**	0.012	0.019	0.030**	0.011	-0.002	0.012	0.021**	-0.001	0.0003	0.001	-0.010	-0.00002	-0.014	0.017	0.031**
Con. x 2007	[0.016]	[0.014]	[0.014]	[0.013]	[0.011]	[0.008]	[0.008]	[0.009]	[0.014]	[0.012]	[0.008]	[0.007]	[0.019]	[0.018]	[0.016]	[0.016]
Percentage in	0.015	0.011	0.001	-0.003	0.015	0.010	0.005	0.006	-0.018	-0.024**	0.002	-0.008	0.001	-0.010	0.033**	0.027^{*}
Con. x 2008	[0.017]	[0.015]	[0.014]	[0.014]	[0.011]	[0.009]	[0.006]	[0.005]	[0.011]	[0.010]	[0.006]	[0.005]	[0.019]	[0.018]	[0.016]	[0.015]
Percentage in	0.012	-0.023*	0.032**	0.021	-0.012	-0.005	-0.007	-0.001	0.003	-0.005	0.010	0.008	0.043**	0.029	0.058***	0.059***
Con. x 2009	[0.017]	[0.013]	[0.015]	[0.015]	[0.008]	[0.007]	[0.005]	[0.004]	[0.013]	[0.012]	[0.008]	[0.008]	[0.018]	[0.018]	[0.018]	[0.017]
Percentage in	0.021	-0.012	0.031**	0.019	-0.019**	-0.018***	-0.004	-0.002	-0.009	-0.009	-0.00001	-0.007	-0.004	-0.015	0.010	0.022
Con. x 2010	[0.018]	[0.015]	[0.015]	[0.014]	[0.007]	[0.005]	[0.006]	[0.005]	[0.012]	[0.011]	[0.006]	[0.005]	[0.018]	[0.018]	[0.017]	[0.016]
Employment Interactions	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year Effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Block Group Fixed Effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	11099	11099	11099	11099	11099	11099	11099	11099	11099	11099	11099	11099	11099	11099	11099	11099

Table 10: Fixed Effects Estimates of Non-Sexual Violent Crime and Construction Workers in Bexar County, Relaxing the Timing of BRAC

Notes: Dependent variables are ln(people charged with felonies committed in year/1000 population). Employment interactions include tourism employment share interacted with Hardberger and BRAC dummies as well as health care employment share interacted with Hardberger and BRAC dummies. Standard errors in brackets allow for arbitrary correlation within block groups. *p<0.10, **p<0.05, ***p<0.01.

					Burglary			
	A	.11	First	Time	Accused	l Felons	Fel	ons
Percentage in Construction x Hardberger	-0.002	-0.008	-0.007	-0.013	0.008	0.004	0.019*	0.015
	[0.013]	[0.013]	[0.012]	[0.012]	[0.010]	[0.010]	[0.010]	[0.010]
Percentage in Construction x BRAC	0.021*	0.015	-0.003	-0.008	0.045***	0.043***	0.049***	0.047***
	[0.012]	[0.013]	[0.010]	[0.011]	[0.010]	[0.010]	[0.009]	[0.009]
Percentage in Construction	-0.009		0.004		-0.018**		-0.026***	
	[0.011]		[0.009]		[0.008]		[0.007]	
Percentage in Tourism x Hardberger	-0.013	-0.015	-0.022*	-0.023*	0.018*	0.019*	0.014	0.014
	[0.014]	[0.014]	[0.012]	[0.012]	[0.010]	[0.010]	[0.011]	[0.010]
Percentage in Tourism x BRAC	0.007	0.002	-0.021*	-0.020*	0.028***	0.022**	0.032***	0.025**
	[0.013]	[0.012]	[0.011]	[0.011]	[0.010]	[0.010]	[0.009]	[0.010]
Percentage in Tourism	-0.006		0.016*		-0.024***		-0.023***	
	[0.010]		[0.009]		[0.006]		[0.006]	
Percentage in Health Care x Hardberger	-0.009	-0.009	-0.001	-0.003	-0.005	-0.003	-0.011	-0.01
	[0.014]	[0.015]	[0.012]	[0.013]	[0.011]	[0.011]	[0.010]	[0.011]
Percentage in Health Care x BRAC	-0.012	-0.006	-0.018	-0.016	0.004	0.01	0.003	0.008
	[0.013]	[0.014]	[0.011]	[0.011]	[0.010]	[0.011]	[0.011]	[0.011]
Percentage in Health Care	0		0.004		-0.004		0.001	
	[0.011]		[0.009]		[0.006]		[0.007]	
Demographic and Housing Controls	Y		Y		Y		Y	
Tract Fixed Effects	Y		Y		Y		Y	
Year Fixed Effects	Y	Y	Y	Y	Y	Y	Y	Y
Block Group Fixed Effects		Y		Y		Y		Y
Observations	10901	11099	10901	11099	10901	11099	10901	11099
R-Squared	0.166	0.259	0.115	0.200	0.136	0.221	0.131	0.220

Table A1: Fixed Effects Estimates of Burglary and Construction Workers in Bexar County, 2000-2010

				(Car Theft			
	А	.11	First	Time	Accused	l Felons	Fel	ons
Percentage in Construction x Hardberger	-0.007	-0.005	-0.011	-0.011	0.005	0.007	0.007	0.009
	[0.009]	[0.009]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]
Percentage in Construction x BRAC	0.021**	0.018**	-0.002	-0.003	0.030***	0.028***	0.028***	0.026***
	[0.009]	[0.009]	[0.006]	[0.006]	[0.007]	[0.007]	[0.007]	[0.007]
Percentage in Construction	-0.008		0.005		-0.017***		-0.016***	
	[0.007]		[0.005]		[0.004]		[0.004]	
Percentage in Tourism x Hardberger	0.022**	0.018*	0.006	0.003	0.018**	0.020**	0.009	0.011
	[0.010]	[0.011]	[0.008]	[0.008]	[0.008]	[0.008]	[0.008]	[0.008]
Percentage in Tourism x BRAC	0.002	-0.003	0.002	-0.003	0.001	0.002	0.003	0.004
	[0.009]	[0.010]	[0.007]	[0.008]	[0.006]	[0.006]	[0.006]	[0.006]
Percentage in Tourism	0.003		0.005		-0.003		-0.001	
	[0.006]		[0.005]		[0.004]		[0.004]	
Percentage in Health Care x Hardberger	0.014	0.014	0.013	0.014	0.006	0.006	0.002	0.001
	[0.011]	[0.011]	[0.009]	[0.009]	[0.008]	[0.008]	[0.008]	[0.008]
Percentage in Health Care x BRAC	0.022**	0.022**	0.015**	0.015**	0.016**	0.016**	0.015**	0.015**
	[0.009]	[0.009]	[0.007]	[0.007]	[0.007]	[0.007]	[0.006]	[0.006]
Percentage in Health Care	-0.007		-0.009*		0		0	
	[0.006]		[0.004]		[0.004]		[0.004]	
Demographic and Housing Controls	Y		Y		Y		Y	
Tract Fixed Effects	Y		Y		Y		Y	
Year Fixed Effects	Y	Y	Y	Y	Y	Y	Y	Y
Block Group Fixed Effects		Y		Y		Y		Y
Observations	10901	11099	10901	11099	10901	11099	10901	11099
R-Squared	0.092	0.179	0.056	0.133	0.083	0.174	0.072	0.168
	1 1 0		· · · · · ·	(1000	1	4.1	11 .	

Table A2: Fixed Effects Estimates of Car Theft and Construction Workers in Bexar County, 2000-2010

t	Car Theft + Unauthorized Use of a Motor Vehicle									
	А	11	First	Time	Accuse	d Felons	Fel	ons		
Percentage in Construction x Hardberger	-0.028***	-0.027**	-0.031***	-0.031***	0.001	0.002	-0.001	0.002		
	[0.011]	[0.011]	[0.009]	[0.009]	[0.008]	[0.008]	[0.008]	[0.008]		
Percentage in Construction x BRAC	0.002	-0.002	-0.017**	-0.020**	0.022***	0.020***	0.019**	0.017**		
	[0.009]	[0.009]	[0.008]	[0.008]	[0.007]	[0.007]	[0.007]	[0.007]		
Percentage in Construction	-0.001		0.009		-0.011*		-0.008			
	[0.009]		[0.008]		[0.006]		[0.006]			
Percentage in Tourism x Hardberger	0.015	0.009	-0.001	-0.005	0.015	0.016*	0.001	0.004		
	[0.011]	[0.011]	[0.009]	[0.009]	[0.009]	[0.009]	[0.009]	[0.009]		
Percentage in Tourism x BRAC	0.001	-0.004	-0.001	-0.005	0	0.001	0	0.001		
	[0.011]	[0.010]	[0.008]	[0.008]	[0.008]	[0.008]	[0.008]	[0.007]		
Percentage in Tourism	0.003		0.004		0		0.003			
	[0.008]		[0.006]		[0.005]		[0.005]			
Percentage in Health Care x Hardberger	-0.001	-0.003	0.009	0.009	-0.002	-0.005	-0.005	-0.006		
	[0.014]	[0.014]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]		
Percentage in Health Care x BRAC	0.01	0.009	0.007	0.005	0.007	0.007	0.009	0.009		
	[0.011]	[0.011]	[0.008]	[0.008]	[0.009]	[0.009]	[0.009]	[0.009]		
Percentage in Health Care	-0.002		-0.009		0.008		0.006			
	[0.008]		[0.007]		[0.006]		[0.006]			
Demographic and Housing Controls	Y		Y		Y		Y			
Tract Fixed Effects	Y		Y		Y		Y			
Year Fixed Effects	Υ	Y	Y	Y	Y	Y	Y	Y		
Block Group Fixed Effects		Y		Y		Y		Y		
Observations	10901	11099	10901	11099	10901	11099	10901	11099		
R-Squared	0.086	0.208	0.085	0.170	0.086	0.175	0.080	0.175		

Table A3: Fixed Effects Estimates of Car Theft + Unauthorized Use of a Motor Vehicle and Construction Workers in Bexar County, 2000-2010

				La	rceny			
	A	.11	First 7	Time	Accuse	d Felons	Fel	ons
Percentage in Construction x Hardberger	0.006	0.005	-0.017	-0.021*	0.021*	0.022*	0.019*	0.020*
-	[0.013]	[0.014]	[0.012]	[0.012]	[0.011]	[0.012]	[0.011]	[0.012]
Percentage in Construction x BRAC	0.031**	0.029**	-0.002	-0.004	0.046***	0.045***	0.048***	0.047***
	[0.012]	[0.012]	[0.012]	[0.012]	[0.011]	[0.010]	[0.010]	[0.010]
Percentage in Construction	-0.019*		-0.012		-0.020*		-0.017	
	[0.011]		[0.009]		[0.010]		[0.011]	
Percentage in Tourism x Hardberger	-0.015	-0.017	-0.034***	-0.032**	0.011	0.014	0.01	0.013
	[0.014]	[0.013]	[0.013]	[0.013]	[0.013]	[0.013]	[0.013]	[0.013]
Percentage in Tourism x BRAC	0.002	-0.002	-0.025**	-0.026**	0.026**	0.025**	0.028**	0.026**
	[0.013]	[0.013]	[0.012]	[0.012]	[0.013]	[0.012]	[0.013]	[0.012]
Percentage in Tourism	-0.001		0.009		-0.013		-0.01	
	[0.011]		[0.009]		[0.009]		[0.009]	
Percentage in Health Care x Hardberger	-0.017	-0.013	-0.02	-0.019	-0.002	0.001	0.007	0.009
	[0.016]	[0.016]	[0.015]	[0.015]	[0.012]	[0.012]	[0.012]	[0.012]
Percentage in Health Care x BRAC	0.013	0.016	0.004	0.005	0.007	0.009	0.005	0.008
	[0.014]	[0.014]	[0.012]	[0.012]	[0.012]	[0.012]	[0.012]	[0.013]
Percentage in Health Care	-0.015		-0.005		-0.008		-0.007	
	[0.012]		[0.009]		[0.010]		[0.010]	
Demographic and Housing Controls	Y		Y		Y		Y	
Tract Fixed Effects	Y		Y		Y		Y	
Year Fixed Effects	Y	Y	Y	Y	Y	Y	Y	Y
Block Group Fixed Effects		Y		Y		Y		Y
Observations	10901	11099	10901	11099	10901	11099	10901	11099
R-Squared	0.189	0.304	0.109	0.195	0.181	0.309	0.180	0.315

Table A4: Fixed Effects Estimates of Larceny and Construction Workers in Bexar County, 2000-2010

	Robbery								
	A	1	First	t Time	Accuse	d Felons	Felons		
Percentage in Construction x Hardberger	0.011	0.015	0.006	0.010	0.002	0.0005	0.0004	-0.0004	
	[0.012]	[0.012]	[0.011]	[0.011]	[0.009]	[0.009]	[0.008]	[0.008]	
Percentage in Construction x BRAC	0.025***	0.025**	0.00003	0.001	0.025***	0.023***	0.021***	0.020***	
	[0.010]	[0.010]	[0.009]	[0.009]	[0.007]	[0.008]	[0.007]	[0.007]	
Percentage in Construction	-0.020**		-0.005		-0.007		-0.005		
	[0.009]		[0.007]		[0.007]		[0.007]		
Percentage in Tourism x Hardberger	0.008	0.011	-0.001	-0.002	0.009	0.015	0.007	0.015	
	[0.013]	[0.013]	[0.011]	[0.011]	[0.010]	[0.010]	[0.010]	[0.010]	
Percentage in Tourism x BRAC	0.003	-0.001	-0.001	-0.003	0.01	0.009	0.006	0.007	
	[0.012]	[0.011]	[0.010]	[0.010]	[0.009]	[0.009]	[0.008]	[0.008]	
Percentage in Tourism	-0.0005		0.001		0.001		-0.002		
	[0.008]		[0.007]		[0.006]		[0.005]		
Percentage in Health Care x Hardberger	0.010	0.012	-0.004	-0.0001	0.009	0.009	0.006	0.006	
	[0.015]	[0.015]	[0.012]	[0.012]	[0.012]	[0.012]	[0.011]	[0.012]	
Percentage in Health Care x BRAC	0.013	0.014	-0.001	-0.00003	0.015	0.015	0.013	0.014	
	[0.012]	[0.012]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	[0.010]	
Percentage in Health Care	0.008		0.007		0.008		0.009		
	[0.009]		[0.007]		[0.007]		[0.006]		
Demographic and Housing Controls	Y		Y		Y		Y		
Tract Fixed Effects	Y		Y		Y		Y		
Year Fixed Effects	Y	Y	Y	Y	Y	Y	Y	Y	
Block Group Fixed Effects		Y		Y		Y		Y	
Observations	10901	11099	10901	11099	10901	11099	10901	11099	
R-Squared	0.125	0.203	0.094	0.170	0.097	0.172	0.091	0.166	

Table A5: Fixed Effects Estimates of Robbery and Construction Workers in Bexar County, 2000-2010

				М	urder			
	А	11	First	Time	Accuse	d Felons	Fel	ons
Percentage in Construction x Hardberger	-0.009	-0.008	-0.008	-0.008	-0.001	0.000001	-0.0002	-0.00003
	[0.006]	[0.006]	[0.005]	[0.005]	[0.005]	[0.005]	[0.004]	[0.004]
Percentage in Construction x BRAC	-0.003	-0.003	-0.006	-0.005	0.001	0.001	0.005	0.005
	[0.006]	[0.006]	[0.004]	[0.005]	[0.004]	[0.004]	[0.004]	[0.004]
Percentage in Construction	-0.003		-0.004		0.00002		-0.003	
	[0.004]		[0.004]		[0.003]		[0.002]	
Percentage in Tourism x Hardberger	0.003	0.002	0.005	0.003	0.005	0.004	0.010*	0.007
	[0.008]	[0.008]	[0.007]	[0.007]	[0.006]	[0.006]	[0.005]	[0.005]
Percentage in Tourism x BRAC	-0.003	-0.003	-0.003	-0.004	-0.0001	-0.0003	0.001	-0.001
	[0.006]	[0.006]	[0.005]	[0.005]	[0.004]	[0.004]	[0.003]	[0.003]
Percentage in Tourism	-0.0002		-0.003		0.001		-0.002	
	[0.004]		[0.003]		[0.002]		[0.002]	
Percentage in Health Care x Hardberger	0.004	0.004	-0.001	-0.0003	0.0004	0.0002	0.003	0.003
	[0.008]	[0.009]	[0.008]	[0.008]	[0.006]	[0.006]	[0.006]	[0.006]
Percentage in Health Care x BRAC	-0.007	-0.007	-0.005	-0.005	-0.007*	-0.007	-0.002	-0.002
	[0.006]	[0.007]	[0.005]	[0.005]	[0.004]	[0.004]	[0.004]	[0.004]
Percentage in Health Care	0.001		0.001		0.002		0.002	
	[0.005]		[0.004]		[0.003]		[0.003]	
Demographic and Housing Controls	Y		Y		Y		Y	
Tract Fixed Effects	Y		Y		Y		Y	
Year Fixed Effects	Y	Y	Y	Y	Y	Y	Y	Y
Block Group Fixed Effects		Y		Y		Y		Y
Observations	10901	11099	10901	11099	10901	11099	10901	11099
R-Squared	0.045	0.118	0.011	0.108	0.038	0.105	0.039	0.103

Table A6: Fixed Effects Estimates of Murder and Construction Workers in Bexar County, 2000-2010

					Assault			
	А	11	First	Time	Accused	Felons	Fel	ons
Percentage in Construction x Hardberger	-0.017	-0.024	-0.024*	-0.026*	0.007	0.003	0.008	0.004
	[0.015]	[0.016]	[0.014]	[0.014]	[0.011]	[0.011]	[0.011]	[0.011]
Percentage in Construction x BRAC	0.022**	0.017	0.007	0.007	0.037***	0.029**	0.042***	0.035***
	[0.011]	[0.012]	[0.011]	[0.011]	[0.010]	[0.011]	[0.010]	[0.011]
Percentage in Construction	-0.009		0.001		-0.018**		-0.015**	
	[0.010]		[0.009]		[0.007]		[0.007]	
Percentage in Tourism x Hardberger	-0.019	-0.019	-0.007	-0.005	-0.015	-0.016	-0.007	-0.007
	[0.014]	[0.015]	[0.014]	[0.014]	[0.011]	[0.011]	[0.011]	[0.010]
Percentage in Tourism x BRAC	0.009	0.007	0.0003	-0.0001	0.039***	0.037***	0.042***	0.039***
	[0.012]	[0.012]	[0.011]	[0.011]	[0.012]	[0.012]	[0.011]	[0.011]
Percentage in Tourism	0.004		0.004		-0.006		-0.008	
	[0.010]		[0.009]		[0.008]		[0.007]	
Percentage in Health Care x Hardberger	0.016	0.017	0.012	0.013	0.002	0.002	0.0001	-0.0004
	[0.015]	[0.016]	[0.014]	[0.014]	[0.014]	[0.014]	[0.012]	[0.012]
Percentage in Health Care x BRAC	0.011	0.015	0.002	0.006	0.024**	0.024**	0.025**	0.025**
	[0.013]	[0.013]	[0.013]	[0.013]	[0.012]	[0.012]	[0.011]	[0.011]
Percentage in Health Care	-0.012		-0.007		-0.008		-0.008	
	[0.010]		[0.009]		[0.007]		[0.007]	
Demographic and Housing Controls	Y		Y		Y		Y	
Tract Fixed Effects	Y		Y		Y		Y	
Year Fixed Effects	Y	Y	Y	Y	Y	Y	Y	Y
Block Group Fixed Effects		Y		Y		Y		Y
Observations	10901	11099	10901	11099	10901	11099	10901	11099
R-Squared	0.222	0.311	0.164	0.248	0.190	0.266	0.161	0.240

Table A7: Fixed Effects Estimates of Assault and Construction Workers in Bexar County, 2000-2010

				Ra	ape			
	А	.11	First	Time	Accuse	d Felons	Fel	ons
Percentage in Construction x Hardberger	-0.011	-0.011	-0.014*	-0.013	0.003	0.002	0.0001	-0.0005
	[0.010]	[0.010]	[0.009]	[0.008]	[0.005]	[0.005]	[0.005]	[0.005]
Percentage in Construction x BRAC	-0.008	-0.008	-0.011	-0.011	0.002	0.002	-0.006	-0.005
	[0.008]	[0.007]	[0.007]	[0.007]	[0.004]	[0.004]	[0.004]	[0.004]
Percentage in Construction	0.011*		0.012**		0.001		0.006	
	[0.007]		[0.006]		[0.004]		[0.004]	
Percentage in Tourism x Hardberger	0.003	-0.0001	-0.005	-0.005	0.009	0.007	0.008	0.006
	[0.011]	[0.011]	[0.010]	[0.010]	[0.006]	[0.006]	[0.006]	[0.006]
Percentage in Tourism x BRAC	-0.009	-0.004	-0.014*	-0.008	0.002	0.002	-0.003	-0.004
	[0.009]	[0.009]	[0.008]	[0.009]	[0.004]	[0.004]	[0.003]	[0.003]
Percentage in Tourism	0.010		0.014**		-0.003		-0.001	
	[0.007]		[0.006]		[0.003]		[0.003]	
Percentage in Health Care x Hardberger	-0.0002	-0.0003	-0.003	-0.001	-0.001	-0.002	-0.011	-0.01
-	[0.011]	[0.011]	[0.010]	[0.010]	[0.006]	[0.006]	[0.007]	[0.007]
Percentage in Health Care x BRAC	-0.009	-0.008	-0.01	-0.009	-0.004	-0.004	-0.014***	-0.014***
-	[0.009]	[0.009]	[0.008]	[0.008]	[0.004]	[0.004]	[0.005]	[0.005]
Percentage in Health Care	0.009		0.008		0.004		0.010**	
-	[0.006]		[0.006]		[0.004]		[0.004]	
Demographic and Housing Controls	Y		Y		Y		Y	
Tract Fixed Effects	Y		Y		Y		Y	
Year Fixed Effects	Y	Y	Y	Y	Y	Y	Y	Y
Block Fixed Effects		Y		Y		Y		Y
Observations	10901	11099	10901	11099	10901	11099	10901	11099
R-Squared	0.080	0.156	0.071	0.145	0.051	0.125	0.047	0.124

Table A8: Fixed Effects Estimates of Rape and Construction Workers in Bexar County, 2000-2010