Does San Francisco's Community Justice Center Reduce Criminal Recidivism?

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SUMMARY ■ The community court model is a novel approach for processing criminal offenders. The goals of community courts are largely similar to those of traditional criminal courts (reducing crime, ensuring safety, and protecting due process rights), but the community court approach differs in two important ways. First, community courts are expressly oriented toward improving outcomes for offenders by addressing factors—like substance use disorders, mental health issues, and unemployment—that are often linked to criminal behavior; this is done by incorporating access to treatment and services within the criminal case management process itself. Second, community courts emphasize ties to a specific neighborhood within a city.

In 2009, San Francisco opened a community court, the Community Justice Center (CJC), located in and designed to serve the Tenderloin and adjacent neighborhoods. This report examines whether the CJC reduces the risk of criminal recidivism (as proxied by rearrest) when compared to more traditional approaches for addressing arrestees. We use a differences-in-differences (DD) design that exploits temporal and geographic variation in CJC eligibility. For the four police districts that touch the CJC catchment area, we examine one-year rearrest rates among those arrested for eligible offenses inside and outside the catchment area both before and after the CJC opened. Our analysis finds that the probability of rearrest for those originally arrested outside the CJC catchment area increased over time, while the probability of rearrest for those originally arrested inside the CJC decreased over time. After controlling for a number of arrestee-level factors (including criminal history) as well as month- and police district–level fixed effects, the DD estimator from our preferred models ranges from –8.2 to –7.1 percentage points, which

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corresponds to an 8.9 percent to 10.3 percent reduction in the probability of being rearrested within one year. These findings support the hypothesis that the CJC reduces criminal recidivism and are robust to a number of sensitivity analyses.

Given these results, it is plausible that the CJC may have produced other benefits to participants, their intimates, and the community. Future research could examine how CJC participation influences treatment outcomes as well as emergency room visits. It is also imperative to incorporate information about the costs of case processing at the CJC and Hall of Justice (and subsequent service utilization) into future analyses.

1. INTRODUCTION

The community court model is a novel alternative approach for processing criminal offenders. The first community court opened its doors in New York City in 1991;[1] at present there are more than three dozen community courts operating in the United States and at least three operating in other countries.[2] The goals of community courts are largely similar to those of traditional criminal courts (reducing crime, ensuring safety, and protecting due process rights), but the community court approach differs in a number of important ways. First, like other problem-solving courts, community courts are expressly oriented toward improving outcomes for offenders by addressing factors—like substance use disorders, mental health issues, and unemployment—that are often linked to criminal behavior; this is done by incorporating access to treatment and services within the criminal case management process itself.[3]

Second, as their name suggests, community courts emphasize ties to a specific neighborhood within a city. This is typically accomplished by placing the court in the neighborhood (which allows court staff to more easily engage with residents, business owners, and other stakeholders) and by incorporating restorative justice and community service components with direct links back to the neighborhood into each offender's case management.[4] Community courts also seek to work collaboratively with these stakeholders, with different agencies within the criminal justice system, and with social service providers to address criminal behavior and the needs of offenders at a neighborhood level.[5]

Finally, in contrast to the traditional criminal case model of trial, adjudication, and sentencing, offenders at community courts participate in what is essentially an extended period of community supervision: The rehabilitative progress of each offender is actively monitored by the court as he or she participates in community service, restorative justice, and social services programs tailored to his or her specific needs.[6]

The San Francisco Community Justice Center (CJC) is San Francisco's implementation of the community court model. The CJC is located in and designed to serve the Tenderloin and the adjacent neighborhoods of Civic Center, Union Square, and South of Market.[7] The CJC started hearing cases in 2009 at the joint court and social service center in the Tenderloin. From inception through December 2013, the CJC heard almost 10,000 cases involving approximately 6,000 defendants.[8]

To be eligible for the CJC, a criminal case must be eligible with respect to both geography and charge mix. Geographic "ties" may derive from residency or other factors, but in the vast majority of cases, the tie derives from the location of the arrest within the catchment area borders.[9] There are guidelines as to which cases are eligible to be heard at the CJC: for example, theft, drug possession, and disorderly conduct are explicitly eligible, while felony violence, drunk driving, and cases involving guns are explicitly ineligible.[10]

This paper examines whether the CJC reduces the risk of being rearrested within one year of being arrested for the "index" offense. In the absence of a randomized controlled trial, we use a differences-in-differences (DD) design that exploits temporal and geographic variation in CJC eligibility. While this approach generally yields conservative estimates (since not everyone who was eligible for the CJC entered the CJC), it does help us address some of the noncompliance and selection issues associated with CJC participation.

For the four police districts that "touch" the CJC catchment area (Central, Northern, Southern, and Tenderloin), we examine rearrest rates for those arrested for eligible offenses inside and outside of the catchment area both before and after the CJC opened. Figure 1 shows that only one of these districts (Tenderloin) is covered entirely by the CJC catchment area; the other three are only partially covered.[11]

After controlling for a number of arrestee-level factors (including criminal history) as well as month- and district-level fixed effects, the differences-in-differences estimator from our

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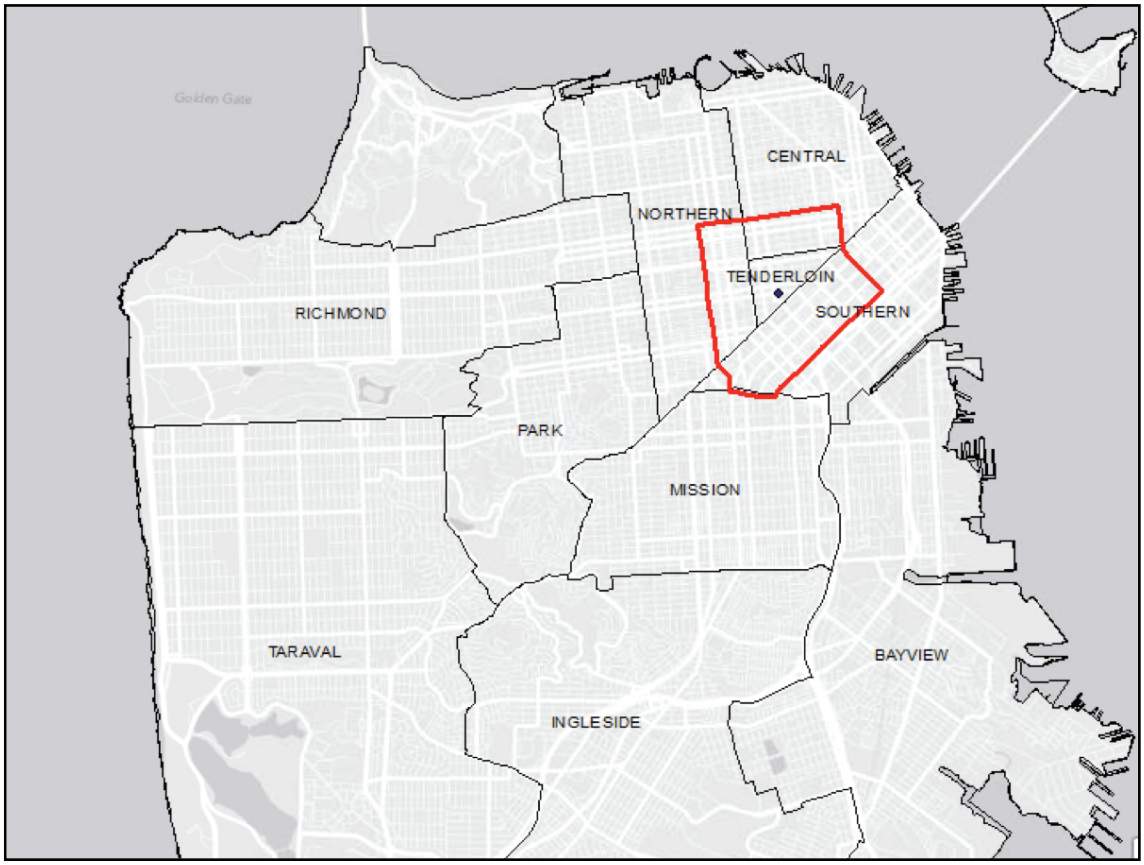
Figure 1: CJC Catchment Area and SFPD Police Districts



preferred models ranges from –8.2 to –7.1 percentage points, which corresponds to an 8.9 percent to 10.3 percent reduction in the probability of being rearrested within one year. These findings are robust to a number of sensitivity analyses, including alternative geographic boundaries for the comparison area. While data limitations prevented us from relying on a triple-differences (DDD) design that exploits the fact that some charges were explicitly ineligible for the CJC, exploratory DDD analyses yield results consistent with the DD estimator.

The rest of the paper is structured as follows. Section 2 reviews the literature on community courts and provides additional information about the CJC. Section 3 describes the data sources used for the analysis and presents a detailed discussion about the CJC eligibility criteria. Section 4 describes our empirical approach, and Section 5 presents the results. Section 6 reports the findings from the sensitivity analyses, and Section 7 discusses the results.

2. BACKGROUND

2.1. Literature Review on Community Courts

One of the primary goals of community courts is to reduce recidivism among court participants,[12] and whether or not they are effective at accomplishing this goal is an open question.[13] We are unaware of attempts to evaluate community courts using randomized controlled experiments; thus, published evaluations rely on inferior approaches that require various assumptions. Table 1 presents the results of three studies which examine the effects of the community court model on criminal recidivism.

The first study listed in Table 1 examined recidivism outcomes for offenders arrested for prostitution, with a treatment group consisting of offenders whose cases were heard at the Midtown Community Court and a control group consist-

Table 1: Prior Study Findings on the Effect of the Community Court Model on Offender Recidivism

Authors	Community Court	Population	Comparison Group	Statistical Method	Estimated Effect Size
Sviridoff et al.[a] (2005)	Midtown Community Court (New York)	Prostitution offenders	Offenders at a downtown centralized court	Comparison of rearrest rates	"Mixed recidivism impacts; no clear effect on individual offender recidivism"[d]
Westat[b] (2012)	East of the River Community Court (Washington, D.C.)	Misdemeanor offenders, excluding domestic violence	Offenders at a nearby court	Survival analysis	42–60 percent reduction in new cases filed
Lee et al.[c] (2013)	Red Hook Community Court (New York)	Misdemeanor offenders	Offenders arrested in the catchment area but assigned to a nearby court based on day of arrest	Survival analysis (Cox proportional)	20 percent reduction in rearrest for adults (30 percent for juveniles)

[a] M. Sviridoff et al., *Dispensing Justice Locally: The Impacts, Costs and Benefits of the Midtown Community Court,* New York: Center for Court Innovation, 2005.
[b] Westat, *East of the River Community Court (ERCC) Evaluation,* Rockville, Md., July 2012.
[c] C. G. F. Cheesman Lee, D. Rottman, R. Swaner, S. Lambson, M. Rempel, and R. Curtis, *A Community Court Grows in Brooklyn: A Comprehensive Evaluation of the Red Hook Community Justice Center,* Williamsburg, Va.: National Center for State Courts, 2013.
[d] K. Henry and D. Kralstein, *Community Courts: The Research Literature: A Review of Findings,* Washington, D.C.: Center for Court Innovation, 2011. As of September 30, 2014: http://www.courtinnovation.org/sites/default/files/documents/Community%20Courts%20Research%20Lit.pdf

ing of offenders who had their cases arraigned at the downtown centralized court. The second study compared outcomes for arrestees who were processed at the East of the River Community Court to those for arrestees from a demographically similar geographical area whose cases were processed at a traditional court.[14] The authors of this study conclude that the community court model reduced criminal recidivism.

The empirical approaches taken in these two evaluations rely on the selection-on-observables assumption: The authors assume that after the observed demographic covariates (race, age, etc.) are added to the econometric models, no factors remain which are correlated with both the outcome variable (a proxy for recidivism) and the treatment status (whether or not the individual was processed by the community court). To the extent that this assumption is violated, estimates of the effect of the program may be biased. For example, in the East of the River evaluation, offenders in the community court catchment area may be less likely to recidivate than offenders in the comparison court catchment area because of some unobserved factor such as better prospects of finding a full-time job—a factor that could vary geographically in a way that was correlated with the location of arrest. In this example, if "job prospects" are not captured in the model, this scenario could mistakenly conflate their effect on recidivism with the effect of the community court program.

To be clear, this is not just a criticism of the community court literature; many evaluations of criminal justice interventions rely on this assumption because there is no other choice. Much can be learned from these observational studies, especially when advanced statistical techniques are employed to account for differences across nonequivalent groups.

In the evaluation of the Red Hook Community Justice Center (RHCJC), the authors implemented a research design that incorporates natural variation in Court assignment in a way that generates plausibly unbiased estimates.[15] Their study takes advantage of the fact that eligible arrestees who are arrested in the Red Hook catchment area between noon Friday and noon Sunday are arraigned at a traditional court, while those arrested during the rest of the week are arraigned at the RHCJC. Under the assumption that on average, weekend and weekday arrestees do not differ with respect to their baseline propensity to recidivate, this design generates estimates of the treatment effect that are theoretically unbiased. Using survival analysis the authors find that the RHCJC reduced the probability of rearrest for adults by 20 percent.

2.2 Description of the San Francisco CJC

Like other community courts, the San Francisco CJC acts as an alternative to the traditional adjudication of criminal cases.

> Unlike some other collaborative courts, the CJC does not exclude offenders from eligibility based on prior convictions for violent offenses.

Assessment for and referral to social services programs are incorporated directly into case processing, as is a restorative justice component designed to make amends to the community and to promote accountability through community service. Individual offenders are required to appear before the court regularly, sometimes over the course of several months. Offender success is measured by compliance to and progress within a treatment program established following an assessment that occurs after each offender's first visit to the court. The treatment plan is created by a provider from the San Francisco Department of Public Health (DPH) and is tailored to individual offender needs and criminal behavior. All treatment plans require participants to abstain from criminal activity; individual plans may also require participants to attend support group meetings, to use mental health services or drug treatment programs, to apply for and acquire social services benefits (such as housing assistance or food stamps), or to engage in vocational or educational training. Compliance with the treatment plan is ultimately assessed via case disposition; relevant dispositions include dismissal (successful completion of treatment plan objectives) and termination from the CJC (unsuccessful completion of the treatment plan and referral back to the Hall of Justice [HOJ]).

Unlike some other collaborative courts, the CJC does not exclude offenders from eligibility based on prior convictions for violent offenses. The CJC's approach to the community court model is additionally novel in that it permits case processing for some lower-level crimes against persons such as battery, as well as for probation violation charges in cases where the original offense was a violent felony.[16] (An online appendix accompanies this report; see Tables A1 and A2 for a list of most common charges.)[17]

One should consider the establishment of the CJC as a series of policy interventions that could influence alleged offenders and criminal justice processing. First, the conversion of a building in the Tenderloin to include courtrooms on the first floor and space for service providers and group counseling on the second floor not only reduced travel time for most CJC participants (who would otherwise have had to go to the traditional HOJ), but it also made it easier for defendants to get access to services.

Second, arrestees cited to the HOJ typically had to report 30–40 business days after the citation was issued to determine if the prosecutor was going to pursue the case; the citation date for the CJC was supposed to be much shorter. In theory, this would not only reduce the time it would take for arrestees to get services they needed (which could reduce their need to commit crime), it might also increase the specific deterrent effect by increasing the celerity of the "sentence" (e.g., preplea community service).

Third, the creation of the CJC gave police officers, prosecutors, and judges another option for helping arrestees while reducing the probability of conviction and possible jail time. The fact that only 30–35 percent of arrestees meeting geographic and charge eligibility were sent to the CJC suggests the police officers, prosecutors, and judges used a fair amount of discretion when selecting individuals who should go to the CJC instead of the HOJ.[18] Participation in the CJC is also optional for defendants. At any point they can leave the program and resume traditional criminal justice processing at the HOJ. This poses a challenge for researchers attempting to estimate the causal effect of the CJC on a variety of outcomes.

2.2.1 Description of San Francisco's Collaborative Courts, Neighborhood Courts, and Other Criminal Justice Programs/Initiatives Targeting Similar Populations

Besides the CJC, there are several other problem-solving courts operating in San Francisco: For example, the Behavioral Health Court (BHC) is tailored to the needs of defendants with mental health problems, the Drug Court (DC) targets the specific needs of offenders with significant substance abuse issues, and the recently launched Veterans Justice Court is designed to meet the needs of veterans, especially

those who are homeless. The CJC is by far the largest of these courts, which are collectively known as the San Francisco Collaborative Courts. Although not typical, it is possible for an individual case to touch more than one of these courts. For example, the CJC judge could refer an individual to the BHC following a clinical needs assessment, or the probation violation for a case that was originally processed by the DC could come before the CJC.

In addition to the Collaborative Courts, San Francisco's Office of the District Attorney operates a program known as "neighborhood courts." In these diversionary programs, community members serve as volunteer "adjudicators" and attempt to resolve nonviolent criminal cases via the imposition of restorative justice sanctions. The neighborhood courts program aims to decrease the burden on the criminal court system (by shifting caseload) and to reduce recidivism (by promoting responsibility and preventing offenders from acquiring criminal records).[19]

3. DATA

We constructed an analytical dataset from three sources: The San Francisco Court Management System (CMS), the administrative database for processing all criminal justice data within the jurisdiction of the City and County of San Francisco; the internal records of the CJC itself; and criminal history information from the California Department of Justice (CADOJ).

3.1 CMS

We obtained a CMS data file that contained information relevant to all arrests and hearings that occurred within the City and County of San Francisco between January 1, 2008 and September 30, 2012. This file included the date, location, and charges associated with each arrest, as well as information on whether arrests were jail bookings or citations, the dates of any court hearings scheduled for each arrest (as opposed to a dropping of charges by the district attorney), whether offenders physically appeared for those hearings, and the ultimate outcomes (dismissal, conviction) for each charge within each arrest for each individual. In addition to containing data on arrests for new charges, the CMS extract also contained records for "rearrests"—probation revocation or parole violation events related to prior arrests. The CMS extract contained records of out-of-jurisdiction warrant arrests (when individuals with San Francisco warrants were arrested in other areas and extradited to stand trial in San Francisco) as well as within-jurisdiction arrests of individuals who were subsequently extradited out of San Francisco.

The initial sample constituted a total of 201,029 arrests, with 150,602 arrests for new charges and 50,427 rearrest events, for 64,361 unique individuals. Within the CMS, every arrest event is assigned a unique identifier (COURTNO), but individual offenders are assigned a unique identifier (SFNO) only when arrests require fingerprinting—i.e., jail bookings. Because an analysis of rearrest requires that arrests for the same person over time be linked and because approximately 25 percent of cases in the full sample lacked an SFNO, we created a new defendant-level identifier based on unique combinations of name, date of birth, and Social Security number (when available). The iterative process by which we derived our final analytic sample (N=13,570 arrests) from these 201,029 arrests is outlined in Table A3 in the online appendix.

3.2 CJC

The CJC uses a separate internal database for court operations that has a significant degree of overlap with the CMS. We received an extract from this database covering the period from CJC inception (March 2009) to September 2012 and containing records on all individuals (names, birthdates, demographic attributes), hearings (dates, attendance), and dispositions during that time frame. Because the CJC database contained an identifying field common to the CMS data (COURTNO), combining the two record sets was trivial.

3.3 CADOJ

Our objective is to assess the impact of the CJC on the probability of offender recidivism. Although the CMS dataset is large, it provides coverage only of arrests by the San Francisco Police Department (SFPD) and San Francisco Sheriff's Department (SFSD). Arrests occurring in other California jurisdictions such as Oakland, San Jose, and Los Angeles do not appear in the CMS dataset (unless the individual has outstanding San Francisco warrants) and, as a result, would be omitted from an analysis of rearrest. To the extent that criminal behavior over time traverses local geographic boundaries, a potentially large share of future criminal activity may be missed by examining arrests only within San Francisco.

To develop a more complete picture of criminal activity during the study time frame, we acquired criminal history

information for individuals in the study from CADOJ. These rap sheets provided a more comprehensive picture of criminal behavior, including the date, location, and associated charges for any arrest occurring within the state. We matched CMS records to CADOJ records using name, date of birth (DOB), and, when available, Social Security number (SSN). In addition, we used a "fuzzy" matching procedure that allowed for close and partial matches, meaning for example that "Rob" and "Robert" could be matched, as could two records with identical SSNs but slightly different DOB values. CADOJ returned criminal histories for 69 percent of the 39,477 individuals and 78 percent of the 98,440 arrest events for which we requested data. Among these individuals, a large share of their arrests (37 percent of total arrests) occurred outside of San Francisco.[20] Access to this information was doubly beneficial for analysis: In addition to providing more accurate information on future recidivism, the CADOJ data allowed us to construct better covariate measures of *prior* criminal activity, including total prior arrests and total prior arrests by class of arrest.

3.4 Determining Eligibility

3.4.1 Geographic Eligibility

To be eligible for the CJC, a criminal case must be eligible with respect to both geography and charge mix. Cases are geographically eligible if they have "ties" to the CJC catchment area, outlined in Figure 1. Geographic "ties" may derive from residency or other factors, but in the vast majority of cases, the tie derives from the location of the arrest within the catchment area borders.

To determine geographic eligibility, we recovered the coordinates of all arrest locations using a geocoding process in ArcGIS 10.2. We were able to determine the precise location of 121,599 (80.7 percent) of 150,602 arrests in the initial CMS sample. We then spatially joined these coordinates to a layer containing the CJC catchment area boundary. Arrests falling inside the catchment area were designated as geographically eligible; arrests falling outside the catchment area were designated as geographically ineligible.

Table 2 summarizes basic demographic and criminal attributes of our sample. For individuals with multiple arrests, we report criminal attributes related to the first arrest during the study period.

Catchment area arrestees have a higher probability of being black than do arrestees in the rest of the city. In addition, their average age is slightly higher, and they are more likely to be arrested for felony offenses, theft, and drug crimes (both sale and possession); however, they are less likely to be arrested for violent offenses.

3.4.2 Charge Eligibility

The CJC provides explicit guidelines as to which cases are eligible for hearing: for example, theft, drug possession, and

Table 2: CMS Sample Demographic and Criminal Attributes, by Catchment Area Status of First Arrest

	Catchment Area Arrestees	Northern, Central, Southern Districts, Outside of Catchment Area	Rest of City (Outside of Catchment Area)	Total
Black	38.1%	21.5%	25.8%	30.3%
Age	36.0	33.7	34.0	34.8
Male	77.1%	79.8%	78.4%	77.9%
Arrest class				
Other	15.4%	23.4%	24.3%	21.0%
Violent: felony	10.3%	13.2%	17.5%	14.9%
Violent: nonfelony	6.1%	8.5%	9.3%	8.1%
Drug: sale	17.2%	2.9%	7.6%	11.1%
Drug: possession	14.7%	4.7%	7.1%	9.9%
Theft	14.0%	10.1%	8.9%	10.8%
Disorderly	22.3%	37.2%	25.2%	24.2%
Any felony	47.5%	29.7%	39.6%	42.5%
Sample size	23,529	12,313	40,832	64,361[a]

[a] Total derived by adding first and third columns.

disorderly conduct are explicitly eligible, while felony violence, drunk driving, and cases involving guns are explicitly ineligible. We determined whether individual arrests were charge eligible by first developing a "green list" and "red list" of charges. The green list consisted of all criminal charges defined as explicitly eligible for the CJC; the red list consisted of all charges defined as ineligible. Individual arrests were classified as eligible if and only if they contained at least one green list charge and contained no red list charges; arrests were classified as ineligible if and only if they contained one or more red list charges. The elements of the green list and red list are outlined in Table 3.

4. EMPIRICAL APPROACH

4.1 Differences-in-Differences

The objective of this paper is to estimate the effect of the CJC on the probability that offenders get rearrested. Because we observe arrests both inside and outside of the CJC catchment area and before and after the implementation of the CJC, our data are well structured for a differences-in-differences approach (DD).

We employ two primary outcomes generated at the arrest level: $R^C \in (0,1)$ and $R^{CD} \in (0,1)$. Each of these indicators is equal to 1 if the offender was subsequently rearrested in the one-year period following the initial arrest ("index" arrest hereafter). R^C is derived only from CMS data and, thus, is restricted to arrests occurring within San Francisco by the San Francisco Police and Sherriff's Departments (SFPD and SFSD); R^{CD} is generated from the union of CMS and CADOJ data and, thus, incorporates non–San Francisco arrests. With j subscripting arrests, $R_j^{CD} \geq R_j^C \forall j$.

Our preferred models include arrest information from CMS and CADOJ, since they capture criminal activity that occurred both inside and outside of San Francisco. However, we also present the CMS-only results for two reasons. First, it allows us to confirm that our findings are not driven by something specific to the CADOJ data and/or the processes by which non–San Francisco agencies report arrest information to the CADOJ. Second, since we did not obtain CADOJ data for those who were strictly ineligible for the CJC, we cannot utilize a DDD design using CMS and CADOJ data for the dependent variables. However, we can run a DDD model with data only from CMS, and this exploratory analysis is presented at the end of Section 6. Presenting the CMS-only DD runs in Section 5 provides context for this particular sensitivity analysis.

Our DD model is constructed from an indicator variable which identifies whether a charge-eligible arrest occurred inside or outside of the CJC catchment area, an indicator variable which identifies whether the arrest occurred before or after the launch of the CJC court, and the interaction of the two. As discussed below, our sample is restricted to arrests occurring in one of the four police districts that overlie the CJC catchment area. Formally, $C_j \in (0,1)$ is equal to 1 if the arrest occurred within the catchment area that defines geographic eligibility, 0 if the arrest occurred outside of the catchment area but within

Table 3: Key Charges Used to Construct the Green List and Red List

Green List Charges	Red List Charges
Misdemeanor offenses	Any felony not on the green list
Theft	Drunk driving or other driving offenses
Property offenses (vandalism, defacement, destruction)	Gang cases
Lower-level crimes against persons (assault, battery, brandishing a weapon other than a firearm)	Hate crimes
Drug possession	Domestic violence
Disorderly conduct, disturbing the peace, public intoxication	Demonstration (protest) cases
(Nonviolent) resisting, delaying, or obstructing a peace officer	Elder abuse
Felony offenses	Crimes involving children
Drug possession	Firearm cases
Drug sale (where offender meets drug court eligibility guidelines)[a]	
Theft	
Vehicle theft	

[a] Please see sensitivity analysis in Section 6 for discussion of these cases.

the union of the Central, Northern, Southern, and Tenderloin districts, and missing otherwise; $P_j \in (0,1)$ is equal to 1 if the arrest occurred in the "post"-period, 0 if the arrest occurred in the "pre"-period, and missing otherwise. Figure 2 portrays the pre- and post-periods in the temporal context of events related to the launch of the CJC.

The pre-period contains one year of index arrests prior to the launch of the CJC, from January 1, 2008 to December 31, 2008. The post-period contains index arrests occurring between January 1, 2010 and September 30, 2011. Our rationale for excluding 2009 index arrests from the post-period is that although the CJC began hearing cases in March 2009, the first several months of operation emphasized resolution of logistical concerns related to the court's launch (such as, for example, opening the permanent facility that houses the court). Because our outcomes of interest are one-year rearrest indicators, we further constrain our postperiod to end on September 30, 2011, exactly one year prior to the endpoint of our CMS arrest history file. This ensures that calculation of the outcomes of interest for each person/arrest is based on a full year of observed data.

The basic form of our analytical model is, thus, as follows:

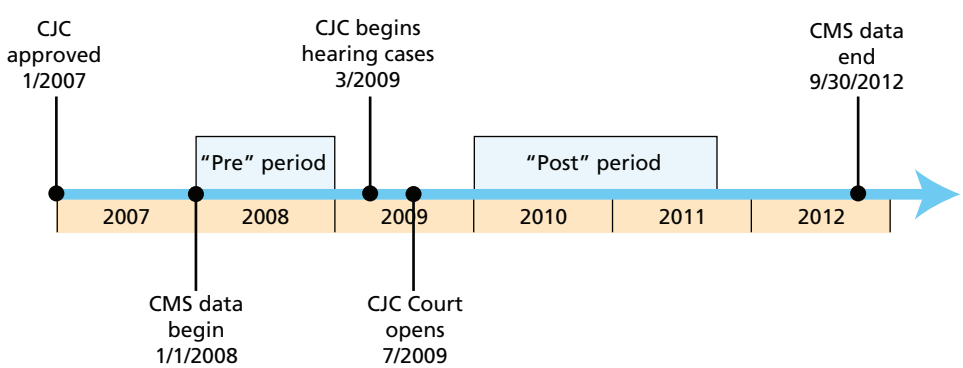
$$R_{jk}=\beta_1+\beta_2 C_j+\beta_3 P_j+\gamma C_j P_j+\boldsymbol{X'_j\theta}+\varepsilon_j \qquad (1)$$

where $k \in (1,2)$ denotes which of our two outcomes (recidivism as defined by the CMS or CMS and CADOJ data jointly) is modeled, and γ is the estimate of the treatment effect.

Because eligibility for the CJC is determined not just by geographic eligibility but also by charge eligibility, we subset our analysis to those cases so classified. Developing this classification involved flagging each arrest in our sample with an indicator if it contained any of over a hundred unique offenses in the California Penal Code/California Health and Safety Code, with arrests retained only if they contained one or more green list offenses and contained no red list offenses. A general framework for this classification is provided in Table 3. To improve the precision of our estimates, we also include a vector of covariates including age, age-squared, gender, and race, month and police district fixed effects, attributes of the current arrest, and criminal history, including both the total number of prior arrests and the number of prior arrests by class of arrest (drug possession, drug sale, etc.).[21] This covariate vector is represented by $\boldsymbol{X}$ in Equation 1. Since our analysis is conducted at the level of arrests and because individuals who are repeatedly arrested appear in the sample more than once, we clustered standard errors at the person level.

The key underlying assumption of the DD research design is that the average difference in the outcome between the control and treatment groups (in this case, arrestees inside and outside the catchment area) is constant over time, but for the effect of the treatment; violation of this assumption biases the estimate of the treatment effect.[22] This is not a trivial assumption, but it is less restrictive than the selection-on-observables assumption (described earlier) often made in this type of evaluation. One possible source of violation of the DD assumption would be the introduction of a contemporaneous criminal justice intervention that independently altered the rearrest probability of the control group but not that of the treatment group (or vice versa): for example, a "beefing up" of patrols in a particular geographic region concurrent with the post-period. To reduce the possibility of this type of violation, we limited our analysis to only those police districts that overlie some part of the CJC catchment area: Tenderloin district (which

Figure 2: CJC Timeline



NOTE: The CMS "begin" and "end" dates represent the dates covered by our data extract, not the dates of operation.

is fully nested within the catchment area), as well as Central, Northern, and Southern districts (see Figure 1). Because police administration in San Francisco generally occurs at the district level,[23] any contemporaneous criminal justice intervention within any of the included districts will be more likely to equally affect those inside and outside of the catchment area, consistent with the key assumption of the research design.

The research design we describe here produces estimates of the Intent to Treat (ITT) effect, rather than the Average Treatment Effect (ATE). This means that we estimate the effect of the CJC court on recidivism averaged across individuals eligible to participate in the court. In this context eligibility is as defined above: all cases that are simultaneously charge and geographically eligible. The ITT effect is generally regarded as a conservative estimate because it is diluted through noncompliance;[24] in our model specification this means that the estimate of the effect of the CJC on recidivism attenuates toward zero as the proportion of eligible offenders who *do not* receive the treatment increases.

4.2 Weighting to Account for Missing Data

There are two primary sources of missing data that present concern for this analysis: arrests that were not geocodeable, and thus could not be assigned a status with respect to the catchment area, and observations for which criminal justice history was requested from the CADOJ but unavailable. To the extent that observations with missing data are systematically different, estimates of the treatment effect will be valid only for the subset with nonmissing data. To account for this missingness, we generated a set of analytical weights using the Inverse Probability Weighting (IPW) method, described by Seaman and White as follows:[25]

Let $M_j \in (0,1)$ denote an indicator equal to 1 if an arrest is missing data, and 0 otherwise. We first model the missingness of observations explicitly as a function of observables:[26]

$$M_j = \Phi(X'_j \lambda) \qquad (2)$$

where Φ is the cumulative distribution function of the standard normal and X denotes observable characteristics. From this model we generate the predicted probabilities of missingness P_j, and create weights as $W_j = 1/P_j$. Implicitly, these weights assign greater relative value to those observations with a high probability of missingness (based on observables) that were nevertheless not missing.

Because the probit model is estimated with uncertainty, treating the weights generated from it as constant and applying them to the main analytical model will potentially bias the standard errors in that model downward. To account for both sources of uncertainty, we simultaneously nest both models in a bootstrap program (1,000 replications) and generate standard errors from that.

5. RESULTS

5.1 Comparing CJC and HOJ Case Processing

Individual offenders can enter the CJC through a variety of pathways. At the time of the initial arrest, individuals can be cited directly to the court or be cited (or booked) to the HOJ and then referred to the CJC by an HOJ judge. Two additional groups may also be referred to the CJC: individuals who bench warrant following their initial arrest (by failing to appear at a hearing), and individuals who violate probation following case adjudication at the HOJ.

Within our analytic sample (see Table A1 in the online appendix) and in the post period, the median time between citation and first hearing for individuals with at least one hearing at the CJC was seven days. By contrast the median time to first hearing for individuals with no hearings at the CJC was 47 days.

5.2 Descriptive Analysis of One-Year Probabilities of Rearrest Across Groups

We begin with a comparison of the one-year rearrest probabilities across the four groups used to construct the DD model. The first split compares arrests in the pre-period (2008) with arrests in the post-period (2010 through September 2011); the second split compares those arrested in the catchment area with those arrested inside the Central, Northern, or Southern districts but outside of the catchment area. We limit our analysis to the subset of index arrests that meet the CJC charge eligibility guidelines and compute rearrest probabilities using CMS data alone and the union of CMS and CADOJ data.[27] These results are displayed in Figures 3 and 4, and we remind readers that our preferred results are based on arrest data from the CMS and CADOJ databases.

Figures 3 and 4 reveal a number of important properties of the data. First, the rearrest probabilities are substantively higher when out-of-jurisdiction arrests are incorporated using the CADOJ data (Figure 4). For example, in the post-period inside the catchment area, the one-year rearrest

Figure 3: One-Year Rearrest Probabilities (CMS data only), CJC-Eligible Arrests, Central, Northern, Southern, and Tenderloin Districts, by Pre/Post and Catchment Area Status

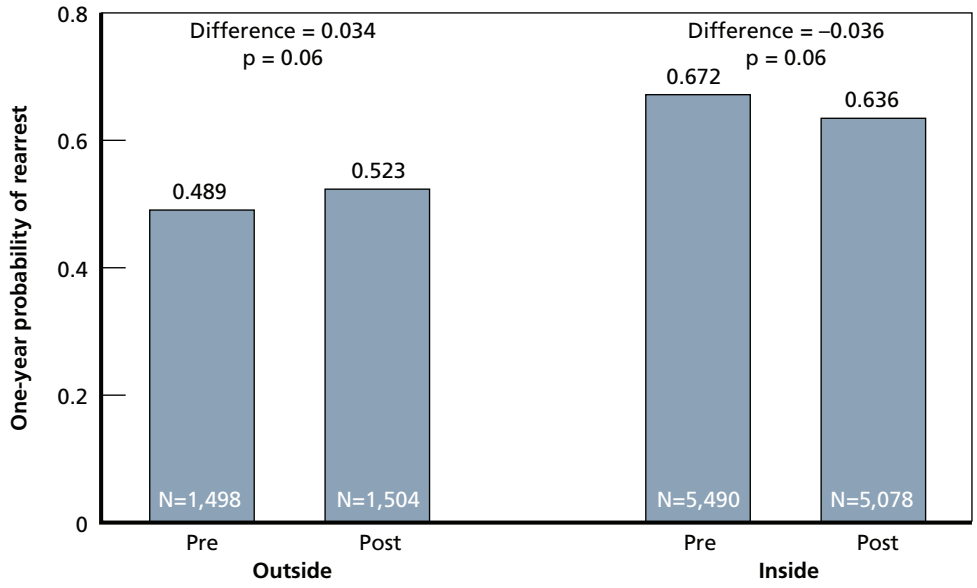
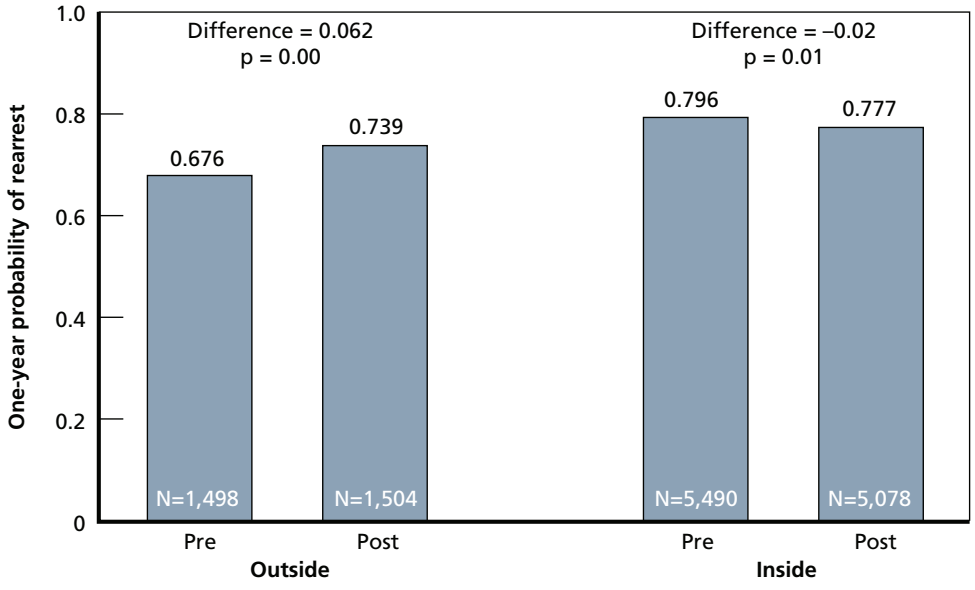


Figure 4: One-Year Rearrest Probabilities (CMS+DOJ data), CJC-Eligible Arrests, Central, Northern, Southern, and Tenderloin Districts, by Pre/Post and Catchment Area Status



probability computed from CMS data alone is 63.6 percent; when CADOJ data are incorporated, that value rises to 77.7 percent. Second, using either measure, recidivism rates (as proxied by rearrest) are higher inside the catchment area than outside. Third, also using either measure, the pre/post trends inside and outside the catchment area are moving in opposite directions: Outside the catchment area, recidivism is higher in the post-period than in the pre-period; inside the catchment area it is lower. These results are consistent with the hypothesis that the CJC has a reduced rearrest rate.

5.3 Ordinary Least Squares (OLS) Regression Results

Our main model results are displayed in Table 4. The group of results columns on the left pertains to the indicator outcome variable derived only from CMS data; the group on the right is for the indicator outcome variable derived from the union of CMS and CADOJ data. The first row of estimated coefficients contains our DD estimator, which is the ITT effect of the CJC on the probability of rearrest within one year (in terms of percentage points).

Estimates of the effect of CJC on recidivism are robust to choice of model specification. The initial models exclude all covariates and estimate the reductive effect of the CJC on recidivism as –7.0 percentage points (CMS outcome) and –8.2 percentage points (CMS+CADOJ outcome), respectively. Both estimates are statistically significant at $p<0.01$; the CMS+CADOJ estimate is significant at $p<0.001$. Adding demographic covariates (age, age-squared, gender, and race),[28] criminal history attributes (the class of the current arrest, total prior arrests, and total prior arrests by class of arrest, all generated from the union of CMS and CADOJ data), and district and month fixed effects do not alter these estimates much; nor does implementation of the IPW technique to account for differential missingness (Models 5 and 10). We note that the addition of covariates to both sets of models improves the precision of our estimates of the treatment effect.

6. SENSITIVITY ANALYSES

We conducted several sensitivity analyses to assess the robustness of our estimates to choice of model specification; these are presented in Table 5 and discussed below.

6.1 Probit

Using OLS with a binary outcome variable (as we do in our main models) introduces a number of well-known issues, most notably the possibility of predicted probabilities greater than one or less than zero.[29] Ordinarily the use of a nonlinear link function such as logit or probit is preferred when modeling a binary outcome; however, the validity of inference when using such a link function with a DD specification is the subject of some dispute, with some authors arguing that the coefficient on the DD interaction term does not provide a valid estimator for the treatment effect,[30] and other authors arguing that it does.[31] Marginal effect estimates generated following probit regression yield results close to those obtained from the OLS CMS+CADOJ runs ($\gamma=-0.076$; $t=-4.74$).

6.2 Exclude Those Rearrested Within Two Days of Index Arrest

A small but nontrivial percentage of arrestees in the CMS sample are subsequently rearrested either one or two days following the initial arrest. Some of these cases are in fact true secondary arrests, but some of them may also be instances where the district attorney decided to add charges to the initial arrest, but for administrative reasons inserted those charges into a new arrest. This could occur (for example) if identification following a fingerprinting procedure allowed the DA to associate an offender with a previously reported crime. Because we cannot differentiate between these two classes of near-immediate rearrests, we run the OLS model without these observations; the DD estimator does not substantively change ($\gamma=-0.096$; $t=-4.89$).

6.3 Limit to First Two Months of the Year

The CJC was a large-scale, neighborhood-level criminal justice intervention; the court began hearing cases in March 2009. Because of its scope and a high level of coordination with SFPD, there is a possibility that the launch of the program altered arrest probabilities within the catchment area. For example, an individual arrested in November of 2008 (the tail end of our pre-period) would be a member of our control group but would face a one-year risk of arrest that partially coincided with the CJC regime. Our third sensitivity analysis considers only those arrested for their index offense in January or February. This significantly reduces our sample size (from 13,570 to 2,457) but also guarantees that the one-year rearrest rates for arrestees in the pre-period are computed prior to the launch of the CJC. The absolute value of the effect size becomes significantly larger and remains statistically significant ($\gamma=-0.151$; $t=-3.61$).

6.4 Include Drug Sales Charges

Drug sale arrestees are eligible for the CJC if and only if they meet the eligibility guidelines for the San Francisco Drug Court.[32] The most important eligibility criterion is that the arrestee must have a serious substance use disorder. Following conversations with court employees, we determined that the majority (anecdotally, 80 percent) of drug sale arrestees in San

Table 4: Main model estimation results, OLS/differences-in-differences specification, by data source for arrests

	CMS Arrests Only					CMS + DOJ Arrests				
	(1) DD vars only	(2) + Month FE	(3) + Indiv. vars	(4) + District FE	(5) IPW/bootstrap SEs	(6) DD vars only	(7) + Month FE	(8) + Indiv. vars	(9) + District FE	(10) IPW/bootstrap SEs
Catchment X post	–0.070** (–3.131)	–0.069** (–3.112)	–0.068*** (–3.415)	–0.068*** (–3.455)	–0.080*** (–4.004)	–0.082*** (–4.271)	–0.082*** (–4.276)	–0.085*** (–4.688)	–0.082*** (–4.521)	–0.071*** (–3.722)
Catchment area indicator	0.182*** (10.753)	0.182*** (10.686)	0.115*** (7.795)	0.094*** (6.065)	0.089*** (5.877)	0.120*** (8.280)	0.120*** (8.241)	0.086*** (6.327)	0.072*** (4.963)	0.065*** (4.539)
Post-period indicator	0.034 (1.656)	0.033 (1.624)	0.003 (0.158)	0.005 (0.264)	–0.007 (–0.363)	0.062*** (3.546)	0.062*** (3.494)	0.051** (3.045)	0.048** (2.859)	0.020 (1.113)
Month fixed effects	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Demographic covariates	No	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Criminal histories	No	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Attributes of current offense	No	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes
District fixed effects	No	No	No	Yes	Yes	No	No	No	Yes	Yes
Constant	0.489*** (30.753)	0.463*** (22.385)	–0.038 (–0.668)	–0.033 (–0.585)	0.041 (0.782)	0.676*** (49.805)	0.656*** (36.724)	0.372*** (7.629)	0.358*** (7.270)	0.414*** (8.526)
N	13,570	13,570	13,570	13,570	13,570	13,570	13,570	13,570	13,570	13,570
R2	0.017	0.019	0.166	0.168	0.147	0.008	0.009	0.094	0.095	0.091

NOTES: T-statistics in parentheses. *p<0.05, **p<0.01, ***p<0.001. Standard error clustered by each individual's unique identifier. Only the IPW runs include reweighting.

Table 5: Results for Sensitivity Analyses

	CMS Arrests Only		CMS+CADOJ Arrests	
	γ (t)	N	γ (t)	N
Base estimate from Table 4	–0.068*** (–3.45)	13,570	–0.082*** (–4.52)	13,570
Probit instead of OLS	–0.067*** (–3.61)	13,570	–0.076*** (–4.74)	13,570
Exclude 2-day rearrests	–0.069*** (–3.46)	13,094	–0.10*** (–4.89)	12,083
Limit to first two months	–0.182*** (–4.06)	2,457	–0.151*** (–3.61)	2,457
Include drug sale charges	–0.090*** (–4.83)	18,401	–0.107*** (–6.26)	18,401
Include cite and release variable	–0.074*** (–3.69)	13,570	–0.077*** (–4.23)	13,570
Nonclustered robust SEs	–0.068*** (–3.69)	13,570	–0.082*** (–4.68)	13,570
Limit post-sample to index arrests<Oct '10	–0.053* (–2.32)	10,321	–0.094*** (–4.53)	10,321
Varied geographic domains for the control group				
≤6,000 feet	–0.048* (–2.13)	12,690	–0.071*** (–3.43)	12,690
≤8,000 feet	–0.017 (–1.02)	15,591	–0.032* (–2.17)	15,591
≤10,000 feet	–0.009 (–0.61)	16,989	–0.029* (–2.10)	16,989
Rest of city	–0.015 (–1.05)	20,205	–0.023 (–1.86)	20,205

NOTES: T-statistics in parentheses. *p<0.05, **p<0.01, ***p<0.001.

Francisco do not meet the drug court eligibility requirements. Because we cannot differentiate between these arrestees and those *with* substance use disorders (who would therefore be eligible for the CJC), our main models omit arrestees in this class of arrest from consideration. When we classify all drug sale arrestees as eligible, the absolute value of the effect size becomes larger and more precise (γ=–0.107; t=–6.26).

6.5 Cite and Release

For each arrest, the CMS data contain a flag that is equal to 1 if the arrestee was issued a citation and 0 if the arrestee was booked. The former case indicates that he or she was told to appear in court at some point in the future and not taken into custody, while the latter indicates that he or she was taken into custody. This variable conveys information about the seriousness of the arrest—individuals will be cited for loitering but not for felony assault. However, it also conveys information about law enforcement perceptions about the arrestee: the office of the district attorney will occasionally issue "do not cite" orders for chronic re-offenders, meaning that all offences (regardless of severity) will result in a jail booking. Including "cite and release" as an indicator variable in these models slightly reduces the absolute value of the DD estimate from –0.082 to –0.077 (t=–4.23).

6.6 Nonclustered Robust Standard Errors

In place of clustering standard errors at the individual level, we report results using Huber/White robust standard errors. Doing so marginally increases the absolute value of the t-statistic.

6.7 Limit Post-Sample to Index Arrests Before October 2010

A major statewide criminal justice initiative widely known as "Realignment" was implemented in California during the post-period of our study. Realignment went into effect in October 2011 and "shifted to counties the responsibility for monitoring, tracking, and incarcerating lower-level offenders previously bound for state prison."[33] By restricting our post-period sample to those with an index arrest before October 2010, we can ensure that our estimates are not biased by the possible concurrent effects of Realignment. Doing so increases the absolute value of the DD estimator from –0.082 to –0.094 (t=–4.53).

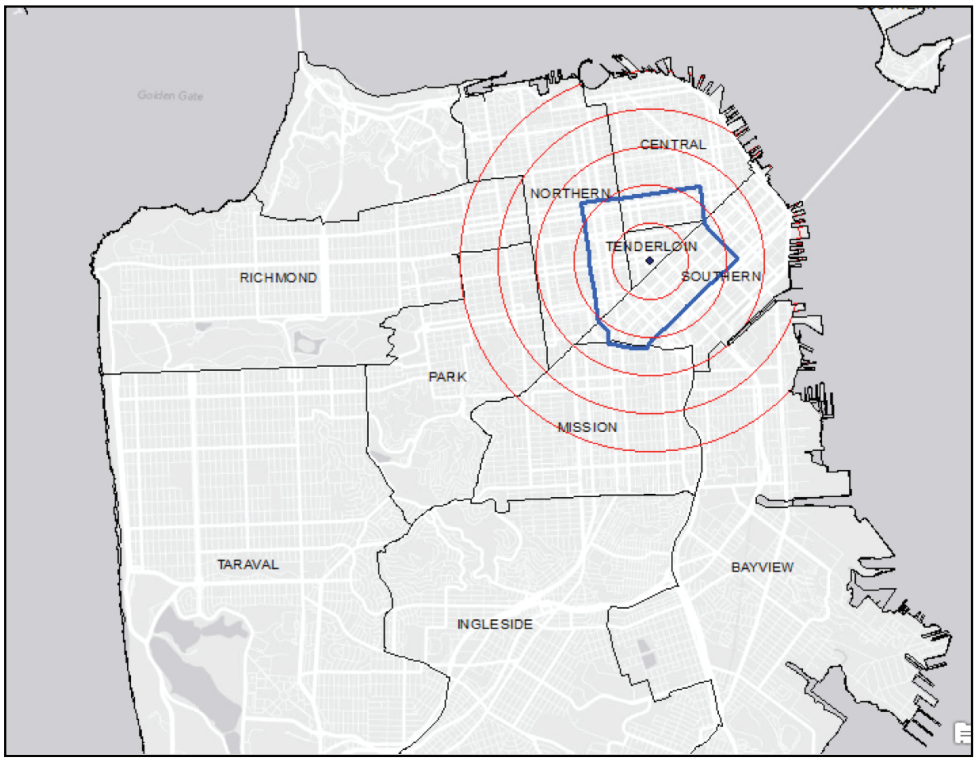
6.8 Varied Geographic Domain for Control Group

Our main models compare the rate of rearrest among those arrested within the catchment area with the rate of rearrest among those arrested outside the catchment area but within one of the four police districts overlying the catchment area. As an alternative, we compare catchment-area average outcomes with average outcomes generated from arrests reported within areas of varying size bounding the CJC catchment area. We generated concentric circles around the centroid of the CJC region with radii in multiples of 2,000 feet (see Figure 5) and report results using the following groups as control regions (all excluding the catchment area):

- the area within 6,000 feet of the centroid
- the area within 8,000 feet of the centroid
- the area within 10,000 feet of the centroid
- the entirety of the city of San Francisco.

The CMS+CADOJ results from these four final sensitivity analyses make sense. As the geographic size of the control group gets larger and includes areas that look less similar to the CJC catchment area, the DD estimator becomes smaller and less precise. If the control group includes those arrested for eligible offenses and arrested within 6,000 feet of the CJC catchment centroid, the DD estimator is –0.071 (t=–3.43). If we expand the control group to ≤8,000 feet, the estimator is cut in half (–0.032) and is less precise (but still statistically significant; t=–2.17). The figures for ≤10,000 feet are both slightly smaller in absolute value (–0.029, t=–2.10). When the entire

Figure 5: Areas for Sensitivity Analysis Control Groups—Concentric Circles Around CJC Catchment Area Centroid (each circle = 2,000 feet)



city is used as a control, the absolute value of the DD estimate is smaller still (–0.023) and marginally statistically significant (t=–1.86).

These runs which vary geographic domain for control group are the only sensitivity analyses where CMS versus CMS+CADOJ results slightly diverge. At ≤6,000 feet for the control group the DD estimator for the CMS run becomes smaller (from –0.068 to –0.048) but is still statistically significant (t=–2.13). As with the CMS+CADOJ runs, the effect sizes get smaller in the CMS runs as we move to 8,000 and 10,000 feet (–0.017 and –0.009, respectively); however, they are no longer statistically significant. This does not trouble us much, since we prefer (1) the CMS+CADOJ results since they more accurately capture our outcome of interest, and (2) comparison groups that are physically closer to the CJC catchment area (i.e., ≤6,000 feet).

6.9 Triple Differences

As an additional robustness check, we employed a triple-difference specification (DDD) only using the CMS data. This model adds an additional comparative dimension—arrest eligibility—to the two dimensions included in the original DD model. With respect to this dimension, we compare arrests that were explicitly eligible (green list arrests) to those that were explicitly ineligible (red list arrests). Let $E_j \in (0,1)$ denote an indicator equal to 1 if an arrest is on the green list and 0 if it is on the red list. The specification for the triple differences model is then:

$$R_{jk}=\delta_1+\delta_2 C_j+\delta_3 P_j+\delta_4 E_j+\delta_5 C_j P_j+\delta_6 C_j E_j+\delta_7 P_j E_j+ \eta C_j P_j E_j+\boldsymbol{X'_j\theta}+\varepsilon_j \quad (3)$$

where η is the coefficient of interest.

Since we did not obtain CADOJ criminal history information for ineligible arrests, these DDD results are based on CMS data alone. Thus, we consider this an exploratory analysis given our reservations about analyses that do not incorporate information from CADOJ. Further, we also use CMS data to generate criminal history information, but given that we have these data going back to only 2008 these are imperfect proxies, since we know that many of these individuals were arrested outside of San Francisco. The DDD estimate of the treatment effect, –0.07, is consistent with the estimates provided by the earlier CMS DD models and statistically significant (t=–2.16).[34]

7. DISCUSSION

For arrestees with CJC-eligible charges, we find that the probability of rearrest for those originally arrested outside the CJC catchment area *increased* over time, while the probability of rearrest for those originally arrested inside the CJC *decreased* over time. After controlling for a number of arrestee-level factors as well as month- and police district–level fixed effects, the differences-in-differences estimator from our preferred models ranges from –8.2 to –7.1 percentage points, which corresponds to an 8.9 percent to 10.3 percent reduction in the probability of being rearrested within one year (using the pre-CJC area probability as the baseline: 79.6 percent). These findings support the hypothesis that the CJC reduces criminal recidivism.

Our main models limit the analysis to the four police districts that touch the CJC catchment area. In San Francisco, the police captains are held accountable for crimes in their districts via CompStat, and "The Captains are given the authority to deploy resources where they are needed most in an effort to achieve results toward [their] mission—to be the safest major city in America."[35] Our inference that the CJC not only offset an increase but actually decreased recidivism might be challenged if there were another intervention in the post-period that affected only the CJC or control areas; however, we are not aware of any other interventions (police or otherwise) based on the CJC boundaries. Further, many of the individuals in our analytic sample likely passed through the control and treatment areas on a regular basis and probably did not limit their criminal activity to one section of town; however, we do not have evidence to support this. Finally, our outcome measure is based on any rearrest in California, not just those occurring in or around the CJC catchment area. This makes it harder, though not impossible, to attribute the observed reduction in recidivism to something other than the CJC.

Our results are robust to a number of sensitivity analyses. Perhaps most important is the specification which defines the control area as the space within 6,000 feet of the centroid of the CJC catchment area but excluding the catchment area—a region that includes part of the Mission Police District. This helps address concerns that there are sections of the Northern, Central, and Southern police districts that look very different from the Tenderloin and the areas close to it (e.g., Fisherman's Wharf). This sensitivity analysis yields a DD estimator that is slightly smaller and still highly significant (–0.071, t=–3.43).

While data limitations prevented us from relying on a triple-differences (DDD) design that exploited the fact that some arrests were explicitly ineligible for the CJC, our exploratory DDD analysis yields results consistent with the DD estimator. Although far from definitive, this helps mitigate concerns about non-CJC-related changes in policing or prosecution driving our results.

So how do these rearrest results compare to related interventions? Since our differences-in-differences analysis looks at everyone eligible for the CJC, not just participants, the results are not directly comparable to other evaluations of community courts. As reported in Table 1, a report by the Center for Court Innovation summarized that the Midtown Community Court had "mixed recidivism impacts; no clear effect on individual offender recidivism."[36] Table 1 also highlights how the evaluation of the Red Hook CJC (RHCJC) exploited a natural experiment where those arrested from Monday to Friday went to the RHCJC while those arrested on weekends were subject to traditional processing. Their hazard models suggested that RHCJC participants were "20% less likely to be rearrested than a similarly situated defendant whose case was processed in the downtown Brooklyn criminal court."[37] An evaluation of the San Francisco Mental Health Court using propensity-score matching found the likelihood that mental health court participants were charged with a new crime within 18 months was about 26 percent lower than that of comparable individuals subject to traditional criminal justice processing.[38] This suggests our ITT results are indeed plausible.

A limitation of our analysis is that we do not have information on actual offending behavior. Similar to the previously mentioned studies, and many other criminal justice program evaluations, we are forced to make inferences about criminal recidivism based on a proxy for committing a new offense.

Another limitation is our inability to determine what aspects of the CJC are driving the decrease in rearrest. Is it access to social services? A reduction in the time between initial citation and appearance in court? Both? Something else? One idea for learning more about the relative contributions of these different mechanisms would be to randomize eligible arrestees cited to the CJC to different lengths of time before they need to appear at the CJC (e.g., five days versus 15 days versus 45 days). Much more could be learned from a hybrid experiment where those cited by police were randomly assigned to appearance times as well as to particular courts (i.e., CJC versus HOJ).

We also remind readers that this analysis narrowly focused on the probability of rearrest; the CJC may have produced other benefits to participants, their intimates, and the community. For example, future research could examine how CJC participation influences treatment outcomes as well as emergency room visits.[39] It is also imperative to incorporate information about the costs of case processing at the CJC and HOJ (and subsequent service utilization) into future analyses. Combining information about the costs and benefits associated with the CJC will allow policymakers in San Francisco and elsewhere to make better-informed decisions about how they should be addressing arrestees in their jurisdictions.

Notes

[1] G. Berman and J. Feinblatt, *Good Courts: The Case for Problem-Solving Justice*, New York: The New Press, 2005.

[2] C. Turgeon, "Community Courts Around the World," Center for Court Innovation, web page, undated. As of September 17, 2014: http://www.courtinnovation.org/research/community-courts-around-world?mode=4&url=research%2F4%2Farticle

[3.] M. S. Frazer, *The Impact of the Community Court Model on Defendant Perceptions of Fairness: A Case Study at the Red Hook Justice Center*, New York: Center for Court Innovation, September 2006. As of September 17, 2014: http://www.courtinnovation.org/sites/default/files/Procedural_Fairness.pdf;
Winick, B. J., "Therapeutic Jurisprudence and Problem Solving Courts," *Fordham Urban Law Journal*, Vol. 30, No. 3, 2002, p. 1055.

[4] V. Malkin, "Community Courts and the Process of Accountability: Consensus and Conflict at the Red Hook Community Justice Center," *American Criminal Law Review*, Vol. 40, 2003, p. 1573.

[5] G. Berman, *Principles of Community Justice: A Guide for Community Court Planners*, Center for Court Innovation, 2010.

[6] G. Berman and A. Fox, "Justice in Red Hook," *Justice System Journal*, Vol. 26, No. 1, 2005, pp. 77–90.

[7] Superior Court of California, County of San Francisco, San Francisco Collaborative Courts, "Community Justice Center," fact sheet, December 2013. As of October 3, 2014:
http://www.sfsuperiorcourt.org/sites/default/files/images/CJC%20Fact%20Sheet%20December%202013FINAL.pdf

[8] Superior Court of California, County of San Francisco, San Francisco Collaborative Courts, 2013.

[9] According to the CJC Policies and Procedures Manual, "Cases in which the offense occurred in the CJC Region, the defendant resides in the CJC Region, or the crime otherwise has a connection to the CJC Region may be referred to the CJC for adjudication." (See Figure 1 in this document for the delineated boundaries of the CJC Region.) CJC, *San Francisco Community Justice Center Policies and Procedures Manual*, Superior Court of California, County of San Francisco, 2012.

[10] In addition, "the CJC hears a wide array of both misdemeanor and felony cases. In general, the CJC will not adjudicate cases with complex issues of fact that will require a preliminary hearing and/or a jury trial. All cases that are sent to the CJC will be discussed by the team for appropriateness and the Judge will make the final determination as to whether the case will be heard at the CJC."

[11] By focusing on eligible and ineligible arrestees who are subject to the same police districts and many of the same officers within districts, this helps address the concern that our findings are driven by police practices in the post-period that have nothing to do with the CJC.

[12] Warren, R. K., "Evidence-Based Practices and State Sentencing Policy: Ten Policy Initiatives to Reduce Recidivism." *Indiana Law Journal*, Vol. 82., 2007, p. 1307.

[13] A number of community court evaluations have been conducted, but not all have attempted to measure the effect of the community court model on the likelihood of future criminal activity (See, for example, Q. Johnstone, "The Hartford Community Court: An Experiment That Has Succeeded," *Connecticut Law Review*, Vol. 34, 2001, p. 123; and Frazer, 2006).

[14] Westat, *East of the River Community Court (ERCC) Evaluation*, Rockville, Md., July 2012.

[15] Westat, 2012.

[16] CJC, 2012.

[17] Online appendix to this report may be found at www.rand.org/t/RR735.

[18] See Figure A1 in the online appendix for a breakdown of the percentage of eligible cases entering the CJC by year.

[19] There are ten neighborhood courts in San Francisco, one for each police district; however, the overall caseload is relatively low: 651 total cases were referred by the District Attorney in 2013. See District Attorney, City and County of San Francisco, *Neighborhood Courts*, web page, undated. As of September 19, 2014: http://www.sfdistrictattorney.org/index.aspx?page=178

[20] Table A4 in the online appendix displays comparative demographic information for the matched and unmatched subgroups of the CADOJ request.

[21] Each arrest was classified into the following "arrest class" taxonomy: violent felony; violent misdemeanor; drug sale; drug possession; theft; "disorderly," and other. "Disorderly" denotes a group of offenses that includes vandalism, loitering, public urination, aggressive panhandling, and similar charges. The taxonomy is hierarchical, such that an arrest that contains a violent felony charge and a drug sale charge will be classified as a violent felony, while an arrest that contains a drug sale charge and a disorderly charge will be classified as a drug sale. The following variables were included as covariates: the arrest class of the current arrest; a flag for whether the current offense included any felony offense; the total prior offenses regardless of arrest class, and the total prior offenses within each arrest class (e.g., total prior drug possession arrests).

[22] B. D. Meyer, "Natural and Quasi-Experiments in Economics," *Journal of Business and Economic Statistics*, Vol. 13, No. 2, April 1995, pp. 151–161.

[23] For example, CompStat is conducted at the police district level in San Francisco. City and County of San Francisco Police Department, CompStat Unit, "SFPD CompStat," web page, undated. As of September 17, 2014: http://www.sf-police.org/index.aspx?page=3254

[24] S. K Gupta, "Intention-to-Treat Concept: A Review," *Perspectives in Clinical Research*, Vol. 2, No. 3, July–September 2011, p. 109.

[25] S. R. Seaman and I. R. White, "Review of Inverse Probability Weighting for Dealing with Missing Data," *Statistical Methods in Medical Research*, Vol., 22, No. 3, June 2013, pp. 278–295.

[26] Table A3 in the online appendix describes the demographic differences between the matched and unmatched sub-samples from the CADOJ data request.

[27] We omit (in-custody) bench warrant events that occur within two days of the initial arrest from the recidivism analysis because many of these events are likely to be lagged administrative processes rather than true new rearrests. So the indicator for recidivism (the outcome variable) is equal to 1 if either of the following occur in the year subsequent to the initial arrest: (a) any new arrest or street citation, or (b) any bench warrant arrest occurring two or more days after the initial arrest. In the sensitivity analyses in Section 6, we include models that omit ALL arrests occurring within two days of the index offense from triggering the outcome recidivism variables to be one; the generated estimates are qualitatively similar to those from the preferred models.

[28] Unfortunately, data on the race of individual offenders in the CMS sample is quite limited. As was publicized in the *San Francisco Chronicle,* owing to technical limitations Hispanic offenders were systematically misclassified as "White" and Asian offenders misclassified as "Other." As a result, the only valid racial identifier available in the data set was a derived indicator for race, "Black," which we include in our full models. See S. Walter, "SFPD Underreports Latino, Asian Arrests," *Bay Citizen*, August 15, 2012. As of September 17, 2014: http://www.sfgate.com/bayarea/article/SFPD-underreports-Latino-Asian-arrests–3788809.php

[29] A. C. Cameron and P. K. Trivedi, *Microeconometrics: Methods and Applications*, Cambridge: Cambridge University Press, 2005.

[30] C. Ai and E. C. Norton, "Interaction Terms in Logit and Probit Models," *Economics Letters*, Vol. 80, No. 1, 2003, pp. 123–129.

[31] P. A. Puhani, "The Treatment Effect, the Cross Difference, and the Interaction Term in Nonlinear 'Difference-in-Differences' Models," *Economics Letters*, Vol. 115, No. 1, 2012, pp. 85–87.

[32] Community Justice Center, 2012.

[33] Stanford Criminal Justice Center, Stanford Law School, "California Realignment," web page, undated. As of September 24, 2014: http://www.law.stanford.edu/organizations/programs-and-centers/stanford-criminal-justice-center-scjc/california-realignment Researchers affiliated with the Stanford Law School provide a nice summary of the changes caused by Realignment:

> In brief, AB 109 (and AB 117, a companion bill) altered both sentencing and post-prison supervision for the newly statutorily classified "non-serious, non-violent, non-sex" offenders. While the legislation is comprehensive and complex, three major groups are affected by Realignment. First, felony offenders who have never been convicted of a "serious" or "violent" crime or an aggravated white collar crime and are not required to register as sex offenders (colloquially referred to as the "triple-nons") will now serve their sentences in local custody. Second, released prisoners whose current commitment offense qualifies them as "triple-non" offenders are diverted to the supervision of county probation departments under "Post Release Community Supervision (PRCS)." Third, if persons on PRCS violate the technical conditions of their supervision (rather than committing a new crime), they can no longer be returned to State prison but must be sanctioned in local (county) jail or community alternatives, including house arrest, drug treatment, or flash incarceration.

[34] Model includes demographic covariates (age, age-squared, gender, and race); month and police district fixed effects; current arrest information (class of arrest, indicator for felony status); and criminal history information based on CMS data going back to 2008 only (total prior arrests counts by offense class).

[35] City and County of San Francisco Police Department, CompStat Unit, undated.

[36] The summary looked beyond recidivism outcomes and reported that Midtown Community Court reduced average arrest-to-arraignment time, saved money from "criminal justice system cost savings and community service value," increased use of alternative sanctions and increased community service compliance. K. Henry and D. Kralstein, *Community Courts: The Research Literature: A Review of Findings,* Washington, D.C.: Center for Court Innovation, 2011. As of September 30, 2014:
http://www.courtinnovation.org/sites/default/files/documents/Community%20Courts%20Research%20Lit.pdf

[37] C. G. F. Cheesman Lee, D. Rottman, R. Swaner, S. Lambson, M. Rempel, and R. Curtis, *A Community Court Grows in Brooklyn: A Comprehensive Evaluation of the Red Hook Community Justice Center*, Williamsburg, Va.: National Center for State Courts, 2013.

[38] D. McNiel and R. Binder. "Effectiveness of a Mental Health Court in Reducing Criminal Recidivism and Violence," *American Journal of Psychiatry*, Vol. 164, No. 9, 2007, pp. 1395–1403.

[39] It would also be useful to complement analyses of administrative databases with interviews of CJC participants and those in the control group.

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