Paper 4

Baseline Impact and Alternatives Analysis

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Evaluation Strategy

While there are arguably many positive outcomes that could be impacted by bail reform and the elimination of cash bail, the most important outcomes may include greater equality in the justice system, reduced negative social and economic impact, reduction of factors that contribute to poverty, and reduced crime and harm in general. Several of these outcomes have begun to garner attention from advocates publishing data on changes after these reforms (Heaton, 2022; Widra, 2022). Some of these outcomes are broad and difficult to measure, but inequality in the justice system can be measured in part by assessing disparities around racial identity in who chooses to accept a guilty plea deal. Administrative court records are available from Harris County for the bond amount and the outcome of the charges along with demographic attributes.
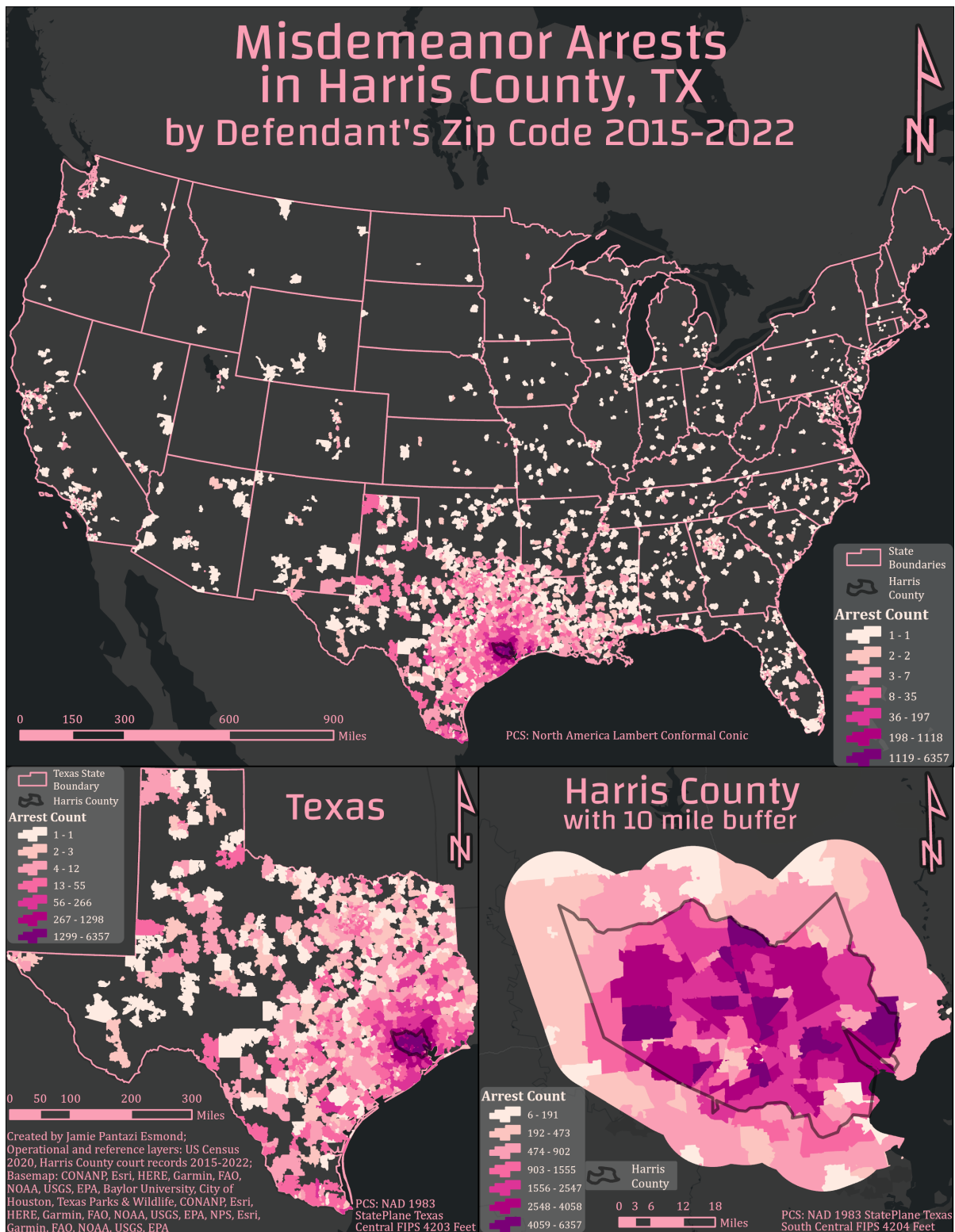
To measure equality in the justice system, racial disparities must be considered. An obvious place to start might be with the rate of arrests, convictions, and sentencing across individuals with different racial backgrounds because this could illuminate clear patterns of discrimination inherent in the system.

Many individuals have stated that they chose to agree to a plea deal because they could not afford bail and the alternative was to wait in jail for a court appearance (Subramanian et al., 2020). If the cost of bail was no longer an obstacle, the rate of individuals accepting plea deals should decrease because innocent people would not normally agree to a guilty plea without the coercion of pretrial detention. To measure the impact of bail reform on economic disparity in the justice system, we will use the rate of individuals agreeing to plea deals after arrest for each month several years before and after implementation. If the rate changes after the elimination of cash bail for misdemeanors in Harris County, there is evidence that detention was a primary reason for considering a plea deal.

Data

The data comes from the Harris County court records which are available to the public on the county's website (Harris County, 2023). The data is available to download by offense category. Data for each offense from 2015 through 2022 were downloaded and combined into a single dataset. The cleaned data was filtered to include only misdemeanor arrests; in the case of multiple charges, only arrests that did not include a felony charge were included. The data was summarized by year, month, and race to determine the rate of cases that resulted in a guilty plea agreement. Each arrest record and each month in the summarized data was labeled to indicate if it was before or after the consent decree in November 2019. For the primary analysis, the unit of analysis is each month, and the outcome variable is the rate of guilty pleas.

Figure 1: Misdemeanor Arrests in Harris County by Defendant's Zip Code

Scope

The scope of the issue is made evident in the data. By using the defenants' zip codes (when reported) and mapping those to see the geographic scope, the map below shows that individuals from every state in the US (Hawaii and Alaska are not shown) have been arrested for a misdemeanor crime in Harris County over the eight years in this analysis (Figure 1). Detention is a stressful situation in any case, but the financial strain is easily exasperated by detention far from home and support structures, and may very well cause expensive travel disruptions.

Summary Statistics

When summarizing the data by bail amount (divided into five categories) and time of arrest (before or after implementation), it is notable that the vast majority (96.7%) of defendants had a bail amount set between $1 and $50,000, and 85.7% were between $1 and $5,000 (Table 1). Additionally, the rate of guilty pleas accepted feel substantially in every bail category under $50,000, with the largest drop for bail amounts under $5,000. Though public safety is often the concern about releasing defendants pretrial, the total number of arrests fell dramatically in the years following the initial injunction (Table 2).
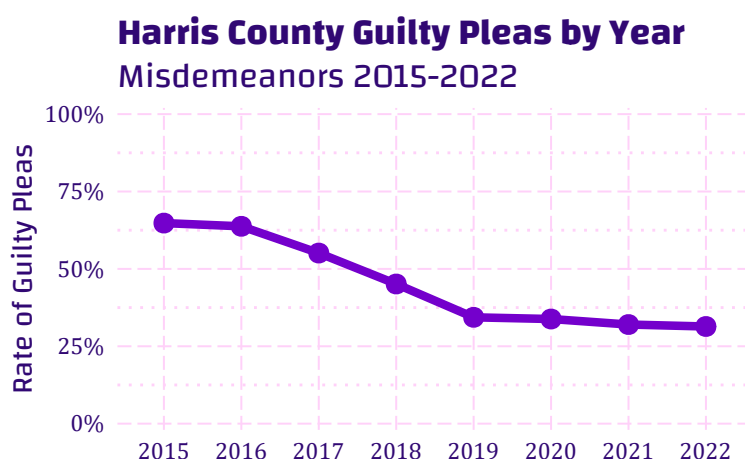
Table 1: Summary of Case Outcomes

	Guilty Plea		Dismissed		Deferred		Probation		Conviction		Acquitted	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
No Bail												
Before	4,231	70.7%	1,528	25.5%	172	2.9%	3	0.1%	40	0.7%	8	0.1%
After	1,306	35.4%	2,004	54.3%	348	9.4%	2	0.1%	3	0.1%	2	0.1%
$5,000 and Under												
Before	97,925	50.6%	81,001	41.9%	13,043	6.7%	431	0.2%	711	0.4%	307	0.2%
After	26,712	28%	65,197	68.2%	3,280	3.4%	80	0.1%	163	0.2%	102	0.1%
$5,000-$50,000												
Before	19,087	73.2%	3,821	14.7%	3,005	11.5%	33	0.1%	88	0.3%	29	0.1%
After	7,563	67.4%	2,229	19.9%	1,401	12.5%	5	0%	11	0.1%	4	0%
$50,000-$100,000												
Before	564	84.3%	68	10.2%	33	4.9%	-	-	3	0.4%	-	-
After	422	84.2%	32	6.4%	46	9.2%	-	-	-	-	1	0.2%
Over $100,000												
Before	102	88.7%	9	7.8%	4	3.5%	-	-	-	-	-	-

After	92	92%	2	2%	6	6%	-	-	-	-	-	-

Table 2: Summary of Guilty Plea Rates by Year

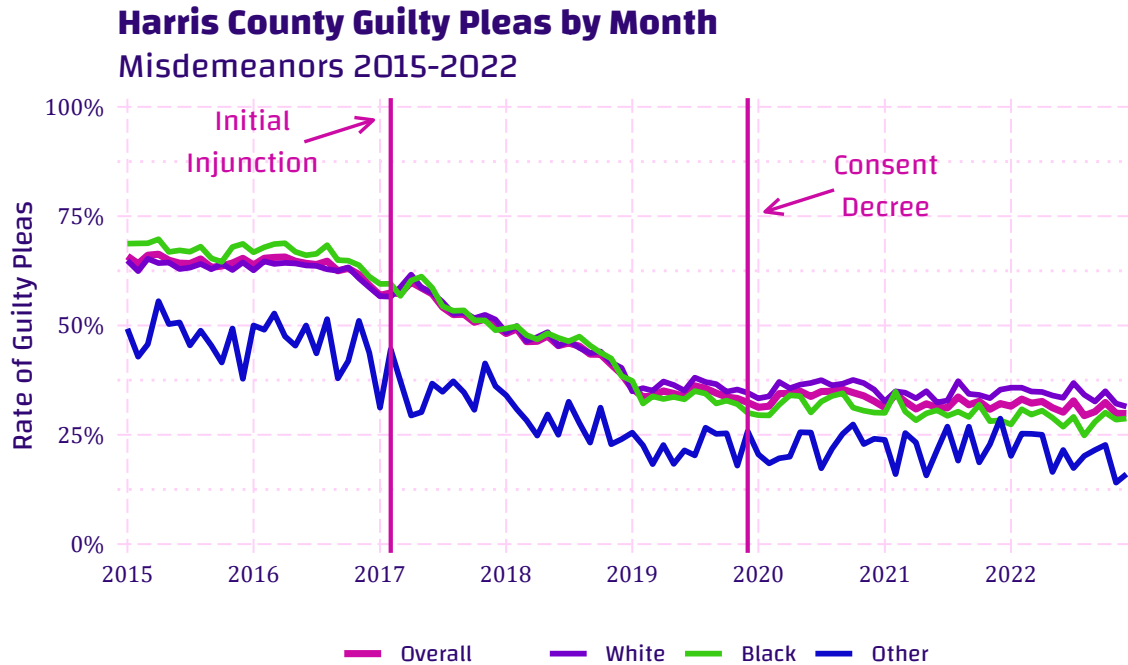| Year	Rate	Guilty Pleas	Arrests
2015	64.80%	33,235	51,289
2016	63.76%	31,291	49,077
2017	55.12%	23,992	43,529
2018	45.12%	20,890	46,299
2019	34.35%	14,817	43,132
2020	33.81%	12,423	36,747
2021	32.02%	12,230	38,191
2022	31.39%	9,126	29,072

Figure 2: Harris County Guilty Pleas by Year

Trends

With eight years worth of arrests aggregated by month and year, a noticeable downward trend for the rate of guilty pleas after the injunction and through full implementation is unambiguous in Figure 3. Figure 3 plainly shows a consistent downward slope between the beginning of 2017 when the initial injunction was filed and the end of 2019 when the consent decree was issues and full implementation was required. While there appears to be little to no disparity between White and Black defendants, it is important to note that Hispanic ethnicity is not available in the data. Approximately 43% of Harris County identifies as Hispanic according the 2021 American

Community Survey (US Census Bureau (2021)). However, many Hispanic defendants may have been recorded as White when the police arrested them. More nuanced data about the individuals arrested is needed to say conclusively whether their is a racial disparity for people accepting guilty pleas after arrest.

Figure 3: Harris County Guilty Pleas by Month

Methods

The arrest data provides attributes about each case including the race of the defendant and the bail amount. Using OLS regression models to evaluate the correlations between time (mainly before and after the change) and the rate of guilty pleas in Harris County, we can examine the trends as the policy took effect. This approach also allows us to control for racial identity as it relates to case outcomes. For this analysis, race is divided into three categories: White, Black, and Other. Notably, the data does not include ethnicity, and individuals who identify as Hispanic are likely classified as White. The equations below illustrate how each model is calculated.

Table 3: Regression Models

	Year	Month	Month and Race	Case Outcome
(Intercept)	112.726***	0.478***	0.533***	0.664***
	[76.035, 149.417]	[0.460, 0.495]	[0.512, 0.554]	[0.655, 0.674]
Year	−0.056***			
	[−0.074, −0.037]			
After		−0.188***	−0.188***	−0.212***
		[−0.216, −0.160]	[−0.211, −0.166]	[−0.215, −0.208]
Black			−0.011	−0.013***
			[−0.038, 0.016]	[−0.017, −0.010]
Other			−0.154***	−0.152***
			[−0.181, −0.128]	[−0.160, −0.143]
$5,000 & Under				−0.152***
				[−0.162, −0.142]
$5,000-50,000				0.124***
				[0.113, 0.134]
$50,000-100,000				0.279***
				[0.250, 0.308]
Over $100,000				0.346***
				[0.281, 0.411]
N	8	288	288	337 336
R2	0.90	0.38	0.60	0.08

Note: confidence intervals in brackets (+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001)

$$\text{Model 1: Rate} = \alpha + \beta_1(\text{Year}) + \epsilon$$

$$\text{Model 2: Rate} = \alpha + \beta_1(\text{After}) + \epsilon$$

$$\text{Model 3: Rate} = \alpha + \beta_1(\text{After}) + \beta_2(\text{Race}_{\text{Black}}) + \beta_3(\text{Race}_{\text{Other}}) + \epsilon$$

$$\begin{aligned}\text{Model 4: Plea} = {} & \alpha + \beta_1(\text{After}) + \beta_2(\text{Race}_{\text{Black}}) + \beta_3(\text{Race}_{\text{Other}}) + \\ & \beta_4(\text{Bail}_{\$5,000 \text{ and Under}}) + \beta_6(\text{Bail}_{\$5,000\text{-}50,000}) + \\ & \beta_7(\text{Bail}_{\$50,000\text{-}100,000}) + \beta_8(\text{Bail}_{\text{Over }\$100,000}) + \epsilon\end{aligned}$$

Results

Discussion

Alternatives

References

Harris County. (2023). *Harris County Criminal Court Data Dashboard* [CSV]. https://tcjedashboard.org/harris/

Heaton, P. (2022). *The Effects of Misdemeanor Bail Reform*. Quattrone Center for the Fair Administration of Justice. https://www.law.upenn.edu/institutes/quattronecenter/reports/bailreform/#/

Subramanian, R., Digard, L., Washington II, M., & Sorage, S. (2020). *In the Shadows: A Review of the Research on Plea Bargaining*. Vera Institute of Justice. https://www.vera.org/downloads/publications/in-the-shadows-plea-bargaining.pdf

US Census Bureau. (2021). *American Community Survey 5-Year Data (2009-2021)* [dataset]. https://www.census.gov/data/developers/data-sets/acs-5year.html

Widra, E. (2022). *What does successful bail reform look like? To start, look to Harris County, Texas.* Prison Policy Initiative. https://www.prisonpolicy.org/blog/2022/03/28/harris-county-pretrial-reform-results/