Do Public Camping Ordinances Reduce Crime?

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ECO 395K: Causal Inference

1 Introduction

It is common in America for cities to issue various citations to unsheltered people in order to deter them from establishing residence in certain areas. In Austin, this has come in the form of city ordinances banning public camping, aggressive solicitation, and sitting or lying on public sidewalks (I will refer to these collectively as a "camping ban" or "anti-homeless ordinances"). These ordinances have been a de facto norm in the city since the 1990s, and an analysis published by the *Texas Observer* found that 20,000 citations had been issued between January 2000 and May 2020. Of those cited, 75% failed to appear and were issued arrest warrants for a Class C Misdemeanor [**?**].

Unsheltered advocates point out that these city ordinances force people to camp in more isolated areas of the city, further from access to supportive services. Moreover, they argue that a camping ban effectively criminalizes and perpetuates homelessness, with arrest warrants preventing the unhoused from obtaining a job or apartment.

Proponents of these city ordinances generally argue that the homeless are either unseemly, bad for business, or commit crimes. This paper is an attempt to generate testable hypotheses from these claims. I exploit a sudden reversal in policy by the Austin City Council in 2018 to generate quasi-experimental variation and estimate a difference-in-differenced treatment effect for crime in areas of the city most affected by the change in policy. This reduced-form model finds no evidence of an increase in thefts and robberies when Austin stopped enforcing anti-homelessness ordinances. I also discuss identification issues and make suggestions for a richer structural model.

2 Background and Data

2.1 History of the Camping Ban

In November 2017, the Office of City Auditor released a highly critical report on the effectiveness of Austin's homelessness policy [**?**]. It disparaged the city ordinances for the barriers created by the excess of arrest warrants issued. It also noted that citations were not effectively connecting unsheltered persons to case management services, as had been promised. The report ultimately recommended either repealing the city ordinances or amending them with less punitive language.

Over the next eight months, the City Council appeared to consider revising the camping ban multiple times, according to a fact sheet produced by councilmember Greg Casar[**?**]. In the June 28, 2018 meeting, an agenda item was introduced proposing an amendment to the solicitation ordinance. The item was withdrawn and not discussed during the meeting, but local news outlets began to report that the City Council was on the brink of repealing the anti-homeless city ordinances [**?**]. Enforcement fell sharply (see Section 2.2 for discussion), and the City Council eventually followed through on what many saw as a foregone conclusion, repealing the solicitation ordinance and amending the sit/lie and camping ordinances to drastically reduce their scope during their June 20, 2019 meeting.

It is important to develop this timeline here before elaborating a model, since it underscores the difficulty in defining a "high enforcement period" and "low enforcement period" over time. The City Auditor's report noted that the Austin Police Department had already revised their internal guidelines on the sit/lie ordinance in 2017, giving offenders a grace period of 30 minutes before citing and hence precipitating a decline in the number of citations written. Furthermore, there is an intervening period of one year between when the Council effort to repeal the ordinances became public knowledge and when it was enacted. And, even though APD has stopped issuing citations, the Texas Department of Transportation, at the behest of the Governor, still periodically conducts "sweeps" that attempt to clear out encampments under state highway overpasses.

Ultimately, I decided to rely on the citation data that I have as a "good enough" indicator. I believe there is still a strong structural relationship between *where* citations are issued and the density of unsheltered people in those areas, which I will argue helps provide reduced-form causal evidence.

2.2 Data on Ordinance Enforcement

There are two courts in Austin to which citations are referred: the Downtown Austin Community Court (DACC) for citations issued within the downtown area, and the Austin Munipal Court (AMC) for citations issued elsewhere within

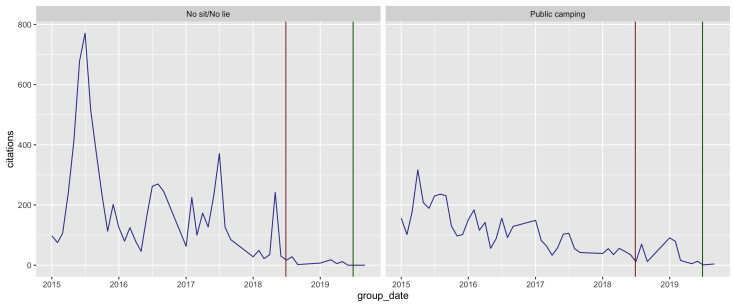

Figure 1: Monthly citations for public camping and sit/lie ordinances, 2015–2019. Red line is date of proposed policy change in June 2018, green line is date of implementation in June 2019.

the city. I obtained all court records for DACC and AMC from January 2015 to December 2019 through the city of Austin's Open Data Portal [**?**]. I then cross-referenced the offense codes listed with data from the *Texas Observer* and filtered out only public camping and no sit/no lie citations.

Finally, I geocoded the street addresses to latitude, longitude, and census tract. There was a marginal error rate in geocoding—I discarded samples that were geocoded because of an ambiguous address to a location outside of Austin. This constituted much less that 1% of the sample.

Figure 1 gives a plot of the citations per month issued from 2015 to 2019. The vertical line in red indicates the date of the City Council meeting of June 28, 2018. The vertical line in green indicates the date of the Council meeting on June 20, 2019.

2.3 Crime Report Data

I obtained a database of crime reports from the city's Open Data Portal [**?**]. The crime data are subdivided into broad categories of offenses, and I chose to focus on offenses from the "Theft" and "Robbery" categories. I geocoded all relevant crime reports from 2015 to 2019, again discarding the small proportion of the sample that was mistakenly geocoded outside of Austin.

2.4 Note on Timeline

The COVID-19 pandemic created additional complications for both citation and crime data.

3 Theoretical Framework

The main hurdle to overcome in answering causal questions about the unsheltered homeless is that there is little data on their whereabouts. The Ending Community Homelessness Coalition of Austin (ECHO) conducts a yearly point-in-time (PIT) count of all the unsheltered people living in the city. The irregularity of the sample makes it difficult to conduct meaningful inference, and the survey is subject to methodological issues (including, for instance, that the survey is conducted by volunteers and reliability is hence dependent on volunteer turnout).

Instead, I will try to conduct inference based on the anti-homeless citation data that I have. This means I will have to develop some stylized facts that describe the relationship between the issuance of citations and the location decisions of unsheltered people.

Generally, I will assume that a citation has a transitory deterrent impact. The PIT always finds that the same parts of Austin have the highest unsheltered counts, namely areas around downtown (see Figure **??**). If enforcement policy had any permanent effect then this would not be the case. Rather, it seems that the deterrent impact is fairly small given the rate of recidivism and missed court appearances. Hence, for this paper I will assume that the number of citations issued is a suitable proxy for the number of unsheltered people in an area.

4 Model and Results

In this section I develop a simple differences-in-differences estimate of the effect of the City Council's revision of the camping ban on crime. I aggregate both crime data and citation data at the census tract level on a monthly basis to create a balanced panel of $T = 60$ months and $N = 113$ census tracts. I define a treatment cutoff q_D as the 90th percentile of the citations pre-treatment:

$$q_D = G_{(.9)};\ G = \left\{ \frac{1}{t^*} \sum_{t=1}^{t^*} x_{it} \;\middle|\; i = 1, \ldots, N \right\}$$

Here, x_{it} is the number of camping ordinance citations in census tract i in month t. I let t^* represent the treatment date—I will present results using both June 28, 2018 and June 20, 2019 as treatment dates.

Next, I assign a treatment to each census tract i, D_i, based on the treatment cutoff q_D:

$$D_i = 1\left(\frac{1}{t^*} \sum_{t=1}^{t^*} x_{it} > q_D \right)$$

Given my assumed correspondence between the number of citations given, the number of unsheltered people, and the transience of the deterrent effect, treated

Cutoff Date	Estimate	Std Error
June 28, 2018	3.1285164	2.584715
June 20, 2019	3.5410402	2.8821456

Table 1: Point estimates and bootstrap standard errors of OLS DID estimate

census tracts represent the areas of the city with the largest homeless populations. A map of Austin with treated areas shaded is in Figure 2.

Letting $S_t = 1(t > t^*)$, I construct the model

$$y_{it} = \theta_0 + \theta_1 S_t + \theta_2 D_i + \delta(D \times S)_{it} + \alpha_i + \varepsilon_{it}$$

The outcome y_{it} is the number of crime reports in census tract i in month t. I let α_i control for unobserved time-invariant heterogeneity in tract i, with ε_{it} mean-independent error. The coefficient of interest is δ, which measures the mean change in monthly crime reports in affected areas of the city post ordinance reform.

4.1 Identifying Assumptions

In order to identify our model we must make both the typical strict exogeneity assumption of a fixed-effect model and the parallel trends assumption of a difference-in-difference model. Conditional on the tract-level fixed effect, we are assuming that

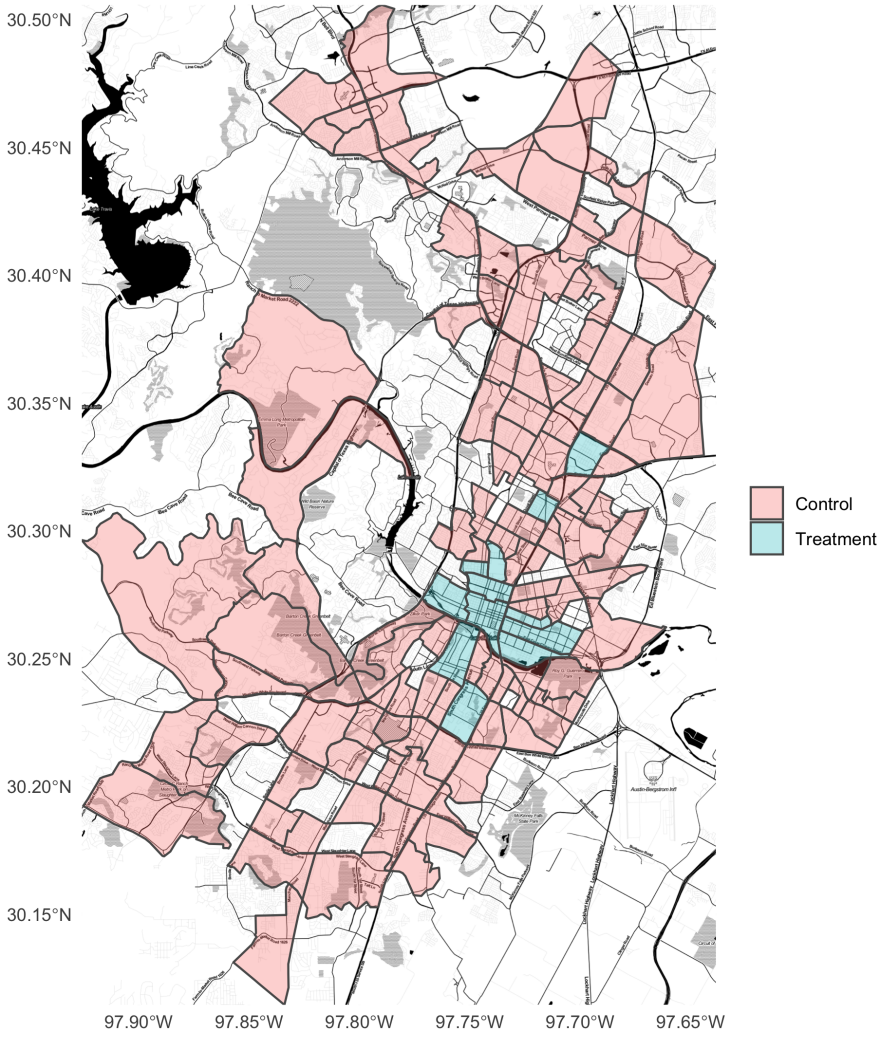

Figure 2: Map of treated and control areas of Austin according to pre-treatment citation levels. Note the main treated areas are near Downtown Austin and the University of Texas.