Appendix C

Substitution Effect Using CSS Data

As discussed in Section **??**, while the main results show significant decreases in daily reports of alcohol offenses and sexual assaults on the weekends, there is a possibility that these offenses are being displaced to riskier areas. In this appendix, I use the Campus Safety and Security (CSS) data to indirectly analyze this possibility. I compare the yearly aggregation of the Daily Crime Logs to the CSS Data using a model that is less suited for a causal analysis. Therefore, the estimates in this appendix should be taken as speculative only.

CSS Data and Empirical Strategy

The CSS data is maintained by the US Department of Education. This data is mandated by the federal government to be updated each calendar year with the yearly totals of liquor and sexual assault violations that are reported *to any entity* at a university. Hence, this data will not match one-to-one with the Daily Crime Logs as the Daily Crime Logs contain only incidents *reported to or by the university police.* For instance, if residence hall administrator issues a liquor violation to an underage student, but handle the issue internally without involving the police, this would be included in the CSS data, but not the Daily Crime Logs. However, the advantage of the CSS data is that it contains counts of offenses that occur on-campus, not-on-campus, and on public property.[1] Most importantly, I am able to delineate whether incidents occur in student residence halls.

Recall that the main shortcoming of the CSS data is that it is aggregated by calendar-year. Given that moratoriums are, on average, short-lived policy, the CSS data is not a preferred data source for causal analysis. In spite of this shortcoming, I estimate the following difference-in-differences specification:

$$Y_{u,t} = \beta Moratorium_{u,t} + \gamma_u + \lambda_t + \epsilon_{u,t} \tag{1}$$

where $Y_{u,t}$ is the offense of interest defined as offense per-25000 enrolled students per-calendar-day, $Moratorium_{u,t}$ is the *fraction* of calendar-days treated within a year (e.g., a 30-day moratorium would result in 30/365), γ_u are university fixed effects, λ_t are calendar-year fixed effects, and $\epsilon_{u,t}$ is the error term. Intuitively, Equation 1 is comparing fractions of calendar-years with a moratorium to calendars years without moratoriums while accounting for systematic differences between universities and calendar-years. Standard errors are clustered at the university level to account for serial correlation within universities.

Unlike the main analysis in the paper, I am unable to estimate long-run effects in this setting for two reasons. First, including a lag coincides with year 2020, the beginning of the COVID-19 pandemic which drastically changed university activity due to online instruction. Hence, this year would not be a good counterfactual. Second, including a year lead (2013) results in possible level-changes in sexual assaults due to the CSS failing

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[1]Not-on-campus is defined by the Department of Education as "(1) Any building or property owned or controlled by a student organization that is officially recognized by the institution; or (2) Any building or property owned or controlled by an institution that is used in direct support of, or in relation to, the institution's educational purposes, is frequently used by students, and is not within the same reasonably contiguous geographic area of the institution." Furthermore, public property is defined as "All public property, including thoroughfares, streets, sidewalks, and parking facilities, that is within the campus, or immediately adjacent to and accessible from the campus."

to include rapes prior to 2014. Given these limitations, there is no reliable way to estimate long-run effects of moratoriums in this setting.

Note that Equation 1 is also less flexible than Equation **??**, as it does not account for differences in days of the week, football game-days, academic years, semesters, nor does it restrict to academic-calendar days.

Results

Table 1 shows the comparison of estimating Equation 1 with the Daily Crime Logs aggregated to the calendar-year level with the CSS data.[2] The Daily Crime Logs show relatively consistent results with those found in Table **??**; daily averages of alcohol offenses decrease by approximately 38% in calendar years with a moratorium and sexual assaults decrease by approximately 30%, although the level of statistical significance is lower for alcohol—likely due to the imprecision of aggregation.

Although the results using aggregated Daily Crime Logs are relatively similar to Table **??**, the CSS data shows that residence halls experience a 28% *increase* in daily alcohol violations and an 82% *decrease* in sexual assaults when a calendar year experiences a moratorium. As discussed in Section **??**, this supports the notion that if moratoriums displace dangerous alcohol-fueled behavior, they displace it to *less* risky areas.

Table 1: Effect of Moratoriums on Alcohol Offenses, Drug Offenses, and Sexual Assaults: Comparison of Daily Crime Logs and Campus Safety and Security (OLS).

	Daily Crime Logs	Campus Safety and Security	
	Full Sample	Full Sample	Residence Halls
	(1)	(2)	(3)
Panel A: Alcohol Offenses			
In Moratorium	-0.140*	0.297**	0.270**
	(0.077)	(0.118)	(0.125)
Observations	220	222	222
Mean of Dependent Variable	0.359	0.994	0.941
Panel B: Sexual Assaults			
In Moratorium	-0.012	-0.046	-0.033**
	(0.011)	(0.039)	(0.014)
Observations	220	222	222
Mean of Dependent Variable	0.039	0.079	0.040
FE: University	X	X	X
FE: Year	X	X	X

Note:
Standard errors are clustered by university and each offense is defined as offense per-25000 enrolled students per-calendar day. Recall that Daily Crime Logs are the primary source of data used in prior analysis. In this model, the In Moratorium treatment variable is defined as a fraction between 0 and 1 where the fraction represents the proportion of calendar-days that experienced a moratorium in a calendar year. Full Samples include the entire Daily Crime Logs/Campus Safety and Security Data (CSS), while Residence Halls is a subset of the CSS. Full Sample in the CSS data contains both off-campus and on-campus reports. CSS data does not necessary need to be reported to the university police and hence, may not show up in the Daily Crime Logs. A moratorium is a temporary halt on fraternity-related activities with alcohol.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

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[2]This aggregation includes all calendar-year days rather than only academic-calendar days that were used in the main analysis.