

Paper Outline

Main Questions:

- When I do heterogeneity analysis, should I use the preferred specification, or the preferred specification with the leads + lags? Right now, the triggering event figure does not have leads/lags, and the IFC/university enacted table does. I don't think that the results change too much with them.
- Are Figures 10-12 worth seeing? Heather looked at them before when I had them binned at the 1 week level and thought I was reading tea-leaves. I binned at the 2 week level to get more power and I think this looks decent, but I'm also a sucker for a pretty figure.
- Still unsure whether to include the event study graphs or not. Here I put in the lead/lag figures so that we can see the big dip. I provided two types of figures, one where I include 2 leads and lags by 1 week each, and one where I have 1 lead and lag that is at the 6 week level (the approximate median of moratorium length - things get a little sketchier if I go too far out). If people want to see event studies, I can throw them in the appendix with everything else with a big disclaimer explaining why they don't look terrific. They still pass an F-test, so I don't think I'm hiding anything - just doesn't look as appealing.
- Should the Campus Safety and Security Data be added in to discuss the possible substitution effect? It's not perfect by any means, but I find it interesting.

Introduction

Why is this important? Why is this potentially interesting? Is there a clear cut answer that is obvious, or is the answer not-so obvious?

This paper is important because it is the first to estimate the causal effects of fraternity campus-wide moratoriums on crime. Moratoriums became a common policy technique for school administrators and student-groups to employ on their school fraternity life. In particular, the policy involves placing a temporary ban on all fraternity social events with alcohol. This technique is most commonly used after an unexpected shock to fraternity life at a university. These shocks come in the form of fraternity related deaths, behavior violations (e.g. hazing violations/inappropriate behavior gone viral), or sexual assault allegations.

How these moratoriums actually effect student behavior across the university is ambiguous. On one hand, prohibiting alcohol from fraternities may reduce alcohol consumption through

several channels. First, fraternities are a common source of alcohol for underage drinking, as fraternities are typically a mix of students aging 18 to 22 (e.g. freshman - seniors). The inclusion of legal-age drinkers and large open-invitation social events allows for easy access to alcohol for underage students. Second, fraternities tend to live in their own private residences and host their social events within their residences. These houses are free from the typical university oversight such as residence-hall employees that could potentially intervene if rules are being violated or behavior is getting too dangerous. With a moratorium implemented, these large unregulated events with easy access to alcohol may decrease the amount of alcohol consumption. On the other hand, there are several mechanisms as to why these policies may have the opposite effect. First, without fraternity events, students may substitute away from consuming alcohol at fraternity houses to potentially riskier places. As a stylized example, members could continue to consume alcohol socially, but do so in locations that are far away from any potential oversight. Second, there could be a defier effect where fraternity members now want to engage in *more* alcoholic activities now that it is prohibited. Therefore, it is not clear how moratoriums will affect behavior across a university campus.

What do we know about this topic?

Alcohol Literature

We know that college partying leads to more sexual assault using variation in sports games (Lindo/White). We know that harsher punishment (through zero-tolerance driving laws) leads to less drinking among college-aged individuals (Liang and Huang). More financial aid leads to more heavy binge drinking (Cowan). Legal access to alcohol hinders academic performance (Ha and Smith).

Why do we care about alcohol? Alcohol is bad because it can lead to undesirable actions such as increased assaults (Dobkin), sexual assault victimization (Hansen/Chalfin), lower GPA, reduced cognition etc. Find some papers to back all of these things.

Fraternity Literature

We know that fraternity membership increases the likelihood of graduating on-time, and has a small negative impact on grades (Routon and Walker/Mara, Davis, Schmidt). If a roommate joins a fraternity, then more likely for that person to join (Sacerdote).

What don't we know? Why don't we know this? What are the frictions?

We don't know how fraternity activity causally affect campus-wide alcohol/drug/sexual assault behaviors. This is because of a lack of variation, and the difficulty in obtaining data. We also don't know how much fraternities contribute to alcohol problems in universities since it has, until now, been impossible to link fraternity behavior to alcohol violations with the data that is available.

What do you do?

I use the variation in timing from campus-wide moratoriums across 38 universities to estimate the causal effect of moratoriums on alcohol, drug, and sexual assault offenses. I construct a novel data set that contains fraternity moratorium dates linked with incidence-level reports of all crimes that are reported by each university police department. I use a difference-in-differences design and find that moratoriums decrease alcohol offenses by BLANK campus

wide. These effects are most salient on the weekend days (Fri-Sun). Moreover, I find evidence that drug offenses also decline during these moratoriums, although there is little evidence to support reductions in sexual assault offenses.

Background on Fraternities

Questions to answer: who are in fraternities? Why do fraternities exist? What percentage of universities are fraternities? What is the difference between an IFC fraternity and a “business” or “multi-cultural” fraternity? What do you have to do to be in a fraternity? How do people perceive fraternities? How proportion of universities are IFC?

Fraternities are a ubiquitous, and longstanding tradition in the United States. They maintain a presence at 800 universities across the US (Hechinger 2017) with the oldest fraternities forming in the mid 1800s (IFC website). Fraternities consist of students from families of higher-than-average educational attainment and income; they are predominantly white, and prior research has linked fraternity membership to increases in graduation rates (Routon and Walker 2014), income (Mara, Davis, and Schmidt 2018), and GPA (DeBard and Sacks 2011). However, members spend approximately 2 more hours partying than nonmembers (Routon and Walker 2014).

Fraternities have a unique structure of organization. The largest fraternities have national coverage, spanning across many of the top universities. Each fraternity sets their own guidelines for their chapters (e.g. a small satellite of a fraternity at a unique university) to follow. Appendix Figure (Sigma Alpha Epsilon Figure) shows an example of the guidelines that each chapter of the Sigma Alpha Epsilon (one of the oldest and largest fraternities) must abide by; their members are required to maintain a GPA above a chosen threshold, pay membership fees, participate in a minimum number of philanthropy hours, and attend a sizable majority of chapter meetings/rituals. These types of guidelines are commonplace in the types of fraternities that this paper focuses on: the Interfraternity Council (IFC) fraternities. IFC fraternities are colloquially known as the ‘social’ fraternities - while they participate in philanthropy and professional development, these are not their sole purpose. According to their creed, they “exist to promote the shared interests and values of our member fraternities: leadership, service, brotherhood and scholarship” [Hechinger True 2017]. IFC fraternities belong to the North American Interfraternity Conference (NIC), a trade association representing the fraternities which, according to their constitution, “promote the well-being of its member fraternities” by offering services such as “cooperative action in dealing with fraternity matters of mutual concern, research in areas of fraternity operations and procedures, fact-finding and data gathering, and the dissemination of such data to the member fraternities”. Importantly, IFC fraternities are the fraternities subject to moratoriums in the sample.

There are three sources of regulation for each IFC fraternity chapter: the chapter’s national headquarters, the chapter’s university, and the university’s own IFC council. As described above, the chapter’s national headquarters can set guidelines for each for each of their satellites to follow. However, each chapter is also subject to their university’s own rules which

may be more strict. For instance, universities can impose rules on their fraternities use of school property for their events and recruitment. Failure to abide by these rules can result in a fraternity being unrecognized by the university which is costly to a fraternity - a fraternity relies on the university for recruitment. Lastly, each university has it's own IFC council - a group of student representatives from each recognized IFC fraternity chapter which regularly meet with university staff to discuss rules/boundaries.

To become a member of an IFC fraternity, prospective members must apply during recruitment events that take place in the fall or spring semester (or both). Once a chapter and prospective member jointly accept membership, the new member (the "pledge") must abide by the chapter, university, and IFC council's guidelines. Upon membership, pledges may be invited to live within the chapter's fraternity house which can reside either on or off campus. These properties usually house the majority of each chapter's members. However, chapter houses are not managed by university-housing, and hence, do not have university employees enforcing the legal drinking age or curfew. Hence, fraternities have been found to be a reliable source of alcohol for first-year undergraduates (Mara, Davis, and Schmidt 2018).

IFC fraternities represent a relatively small portion of the undergraduate enrollment in the sample. On average, IFC fraternities represent approximately 5% of all undergraduate enrollment. However, there is a substantial amount of variation with the maximum being over 10% and the minimum being 1%.

- Figure: fraternity membership guidelines (Appendix A)

Moratoriums

What are moratoriums?

Moratoriums are defined as a temporary ban on alcohol at social events for IFC fraternities. There is some heterogeneity within these moratoriums such as some schools cancel all third party events or require some sort of training to get out of a moratorium.

How did you get these dates?

I received these moratorium dates by searching news articles in addition to conversations with fraternity and sorority life advisers. The dates were verified either by newspaper article, Freedom of Information Act Request, or a conversation with the university's Fraternity and Sorority Life adviser. While I verified 38 university's moratoriums, there are other moratoriums that occurred in this time period that could not be verified and have been excluded from the sample (e.g. Miami University). Therefore, this sample represents the schools in which a fraternity moratorium occurred and their respective dates could be verified.¹

¹San Diego State actually had 3 moratoriums, 1 which is not included in the sample since I could not verify the exact end date. Hence, the sample treats this period as "untreated" when it is indeed treated. However, this moratorium was extremely short (below 3 weeks) and the analysis is robust to leave-one-out so I decided to leave in SDSU since it has 2 other moratoriums.

Why fraternity moratoriums occur, how long they last for, and how wide-spread is this practice across the US?

Moratoriums occur because of a particular triggering event. This event can be a prominent sexual assault allegation, a fraternity-related death (usually due to alcohol poisoning), or bad behavior that was brought to light (e.g. a hazing violation or inappropriate behavior caught on video and gone viral).

Moratoriums can be implemented by two sources of jurisdictions: the university or the Interfraternity Council. When a moratorium is implemented by the university, the university sets the guidelines that fraternities must abide by during the moratorium. On the other hand, an IFC-implemented moratorium is student-enforced. This means that the overarching IFC council (a group of student representatives from each fraternity chapter) is responsible for oversight. Heterogeneity analysis on the differences between these is explored later in the paper.

It is not always known how long a fraternity moratorium will last when a university implements one. For instance, some universities may “re-evaluate” the situation in a set amount of time or impose certain criteria that fraternities must abide by in order to lift the moratorium (e.g. sexual assault training). In other cases, moratoriums may be cut short by outside pressures from the fraternities themselves.

- Figure - Distribution of lengths (Main Figure)
- Figure - Distribution of why moratoriums happen (Main Figure)
- Figure - Map of locations of universities (Main Figure? or Appendix?)
- Table - List of schools and their dates (Appendix Figure)

Data

Why is this data unique? What benefits does this data have over other primary sources?

This data is unique because it is the first data set to combine multiple university’s universe of crimes at an incidence level. This data comes from Daily Crime Logs, which are mandated by the federal government under the Jeanne Clery Act for all universities that receive federal funding. The Daily Crime Logs are incidence-level reports of all activity reported by a university-specific police department. The logs must include information such as, date reported, date occurred, incident description, general location, and a case-ID.²

I use the Daily Crime Logs over two federal sources of crime data: the National Incidence Based Reporting System and the Uniform Crime Reports. While both the NIBRS and UCR data sets are nationally maintained by the FBI, these data sets have many shortcomings. First, no police department is mandated to report their crimes to these sources. This creates a large missing data problem where many police departments fluctuate between reporting

²While this information is mandatory, much of the time certain fields such as date occurred and general location are missing

and non-reporting. Moreover, each of these sources are either at too high of aggregation (monthly) or do not include alcohol offenses unless they are arrests. Given that students are generally not arrested for alcohol, the Daily Crime Logs represent the most accurate picture of campus alcohol usage at the incidence-level.

How did you put these crime logs together?

Each of these Daily Crime Logs were requested from their respective university police departments. While this means I have the universe of crimes at each police department, this comes at the cost of harmonization - each department has different ways of reporting their incidence descriptions. To mitigate this, I pattern-matched using regular expressions on each incident description. In particular I first observed the most common ways each type of violation was described at each university. Then, I used key-words to match on the descriptions. Importantly, the words used to match can only match to an offense a maximum of one times. For instance, if a incident description reads “alcohol offense - dui - minor in possession”, then the words “alcohol”, “dui”, and “minor in possession” would all match this offense as an alcohol offense, but it would only be counted 1 time. Furthermore, since this process uses regular expressions, the word “sex” would match on descriptions such as “sex offense” or “sexual assault in the first degree”.

- Example of crime log (Appendix Figure)
- Benefits of this data over others figure (Appendix Figure)
- Words used to match (Main Table)

How well does this method of construction work?

- Matching table results with top 15 from each category (Appendix table)

Empirical Strategy

What is the primary specification?

I use a difference-in-differences design utilizing the variation in the timing of the moratoriums. I use multiple specifications with different time controls. Note that this design is not a staggered adoption - schools can go ‘in-and-out’ of treatment multiple times. Because of this, none of the new estimators from Callaway and Santanna and Abram and Sun cannot be used. While DeChaisemartin and DeHouterville can be used in some cases of **multiple** treatments, in this case it cannot without tweaking to the package which will violate the assumptions of the model. In particular, if a school has 2 treatment dates, A and B, then between A and B will be represented as “treated” instead of “untreated”. Clement advised that I could either change the identifier of the university that has multiple treatments (e.g. create a new identifier for the university after it is treated once), or I could use it as-is and accept that it does not identify what I want. However, using the DeChaisemartin and Dehouteville decomposition of TWFE shows that I do not have any negative weights on my primary

specification (university and day-by-month-by-year fixed effects) and therefore sign reversal is impossible.

What are the assumptions of the model

These are the main assumptions of the model: parallel trends, moratoriums are not correlated with unobservables (e.g. the error term) that affect the dependent variable, no long-run effects, and no systematic changes in reporting/policing due to a moratorium.

The parallel trends assumption is checked using 1 and 2 week lead and lags. This shows that universities are not implementing moratoriums because their alcohol/drug/sexual assault violations are increasing or decreasing. Moreover, each moratorium tends to occur almost immediately following a triggering event. For example, any time there is a fraternity-related death, the moratorium is implemented within a 3-day period (maybe I should have a chart of this?), and hence, there is no anticipatory effects given this rather instantaneous shock.

The omitted variable bias assumption is checked using a variety of different fixed effects to allow for flexibility - more on this later in the results section.

The no long-run effects assumption is checked using the specification with 2 week leads/lags. I also include 6 week lead/lag (binned together) to allow for more power within a point estimate. This can be seen in Figures 4-9 (thoughts on which one looks more convincing/should be put in the paper?).

The no-systematic changes in reporting is checked using a regression of whether the timing between the date-reported and date-occurred changes during moratorium days relative to non-moratorium days. There is no difference, and this is a very precise 0.

The no-systematic changes in policing is shown with the robbery/burglary regression where I combine robbery and burglary offenses together and regress on the moratorium indicator. Robberies and burglaries are a very tight and insignificant zero.

What schools are in the data? What does the sample generally look like?

- Summary Statistics Table - university characters + offense characteristics + moratorium characteristics (Main Table)
- TWFE weight table (Appendix? Is this necessary or can I just mention it?)

Explain the assumptions of the model. Common trends a necessary assumption, along with no longterm effects. Mention that there are checks for each of these in the results section through leads and lags/an event study.

- Event study with TWFE and F-test of trends (Appendix because isn't exactly what I want)

Main Results

While it is certainly true that university police departments have different policing behaviors, this is controlled for with a university fixed effect. Other concerns may be that certain days are more likely to have higher crime than others (i.e. Fri-Sat), and these are controlled for with day-of-week fixed effects. In addition, university-by-semester-by-year fixed effects are added to give a ‘within a university semester’ comparison - the estimator will be picking up the differences between a moratorium day and a non-moratorium day accounting for differences within a university-semester-year while Tells the story of the effects. These have an effect on crimes that we would expect.

- Table - goes through the varying specifications with different controls. (Main Table)

Pick a preferred specification, probably the one that satisfies the TWFE no negative weights. Do these results show up where we think they would? Weekends/Weekdays?

- Table - compares the full sample to weekend/weekdays - shows that weekends are where the effects are (Main Table)

We might expect there to be lasting effects of these moratoriums. However, there is not, fraternities return and do “business-as-usual”. Get at this with a lead/lag of two weeks.

- Lead and Lag table of 2 weeks - Split by Full/Weekends/Weekdays (Main Table OR Figure)

Note that there is a “release the hounds” effect following the moratorium. Might want to further analysis on this.

Robustness

Some crime papers like to use poisson regressions. Do the similar analysis, but with poisson regressions.

- Poisson regression table to mimic the tables (Appendix)

Does one school dictate these results? Could be that one school had one massive moratorium that drove the results:

- Leave-one-out analysis with preferred specification (Main Figure or Appendix?)

Are all crimes going down and it’s just a product of more police?

- Robbery/burglary regressions (Main Table?)

Do the moratoriums change reporting behavior and that’s why we see effects?

- Date reported - date occurred analysis (Main table?)

Heterogeneity

Lengths - What length is best?

Does the length of the moratorium matter? Some schools have extremely long moratoriums, so the effects may fade.

- Figure of the treatment effect broken down into weekly/monthly component (Main Figure)

Does the length of the moratorium have an effect on what happens after the moratorium? Do longer ones have lasting effects?

- Need a figure here? Hard question to answer.

Method of Oversight: Who should oversee these?

Who should oversee these moratoriums? Should it be the university or the student's themselves?

- Main Figure/Table of differences between IFC/University enforced.

Why should we expect one to work over the other?

What type of triggering event has the biggest effects

Some types of events may be more salient than others and cause bigger effects (e.g. a death).

- Table on differences in effects (Main Table)

Figures

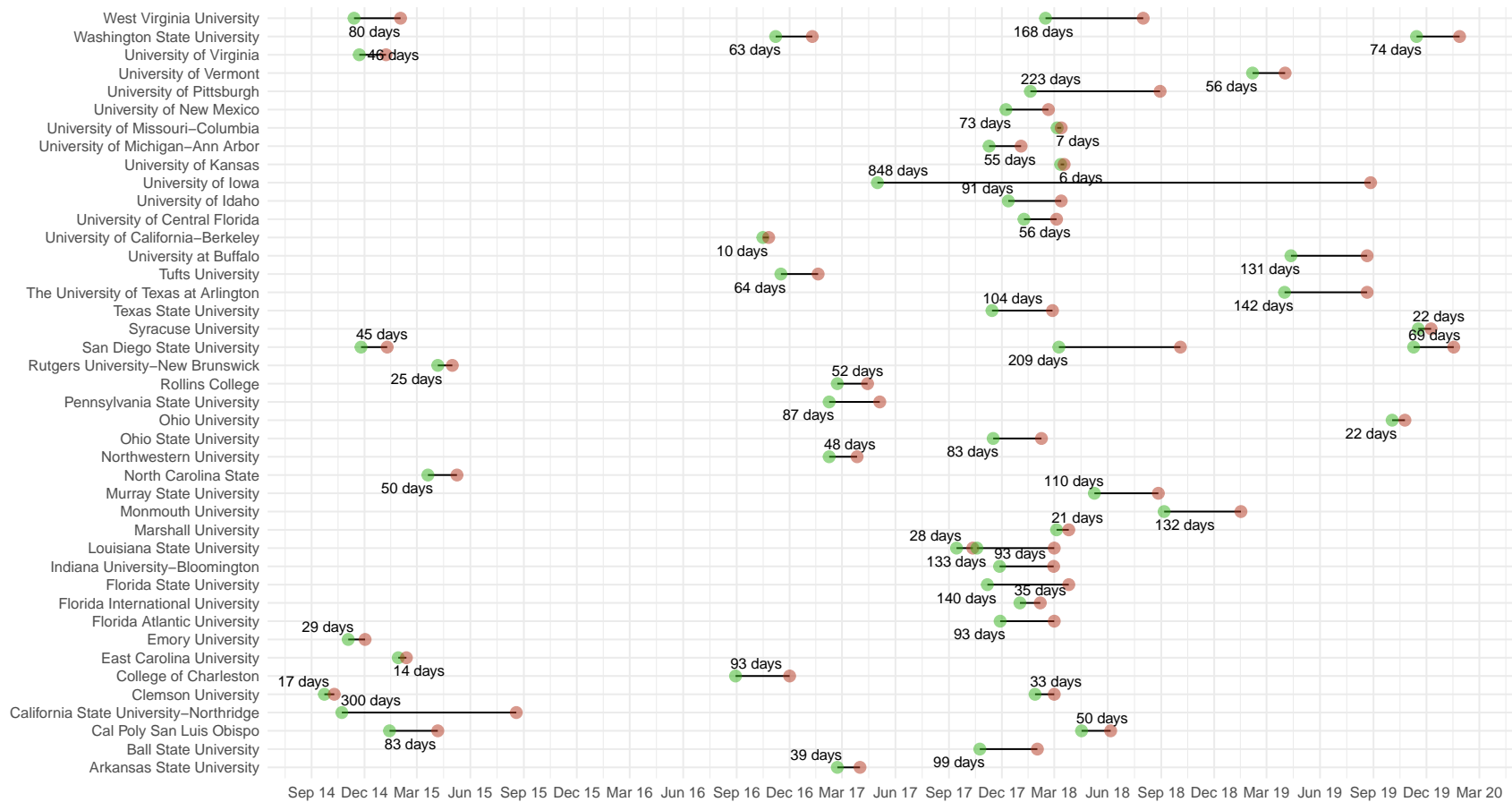


Figure 1: Distribution of moratoriums for 38 universities across the sample period (2014-2019). Length of moratoriums represent calendar-year days.

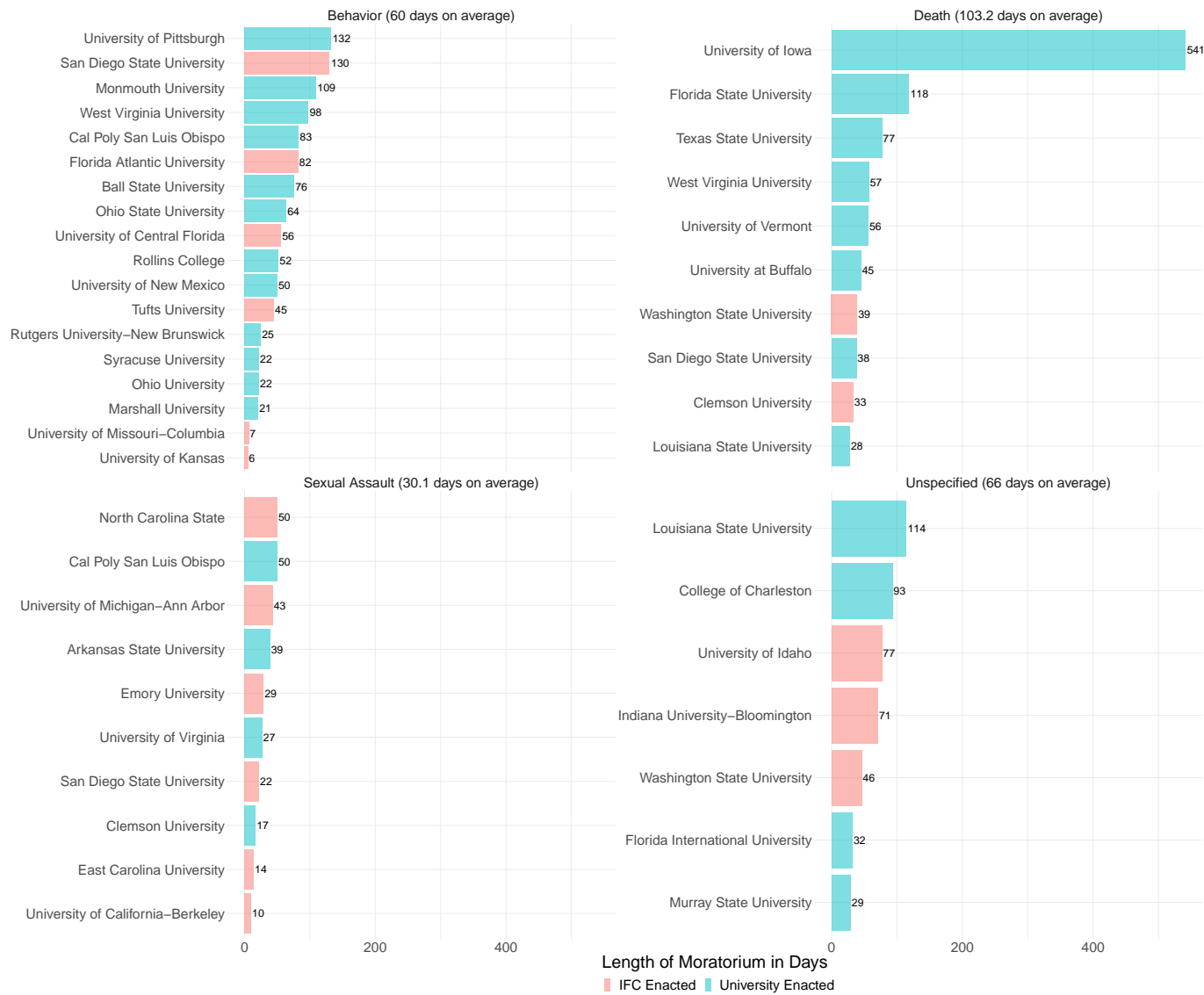


Figure 2: Average number of academic calendar days under moratorium by triggering event of moratorium.

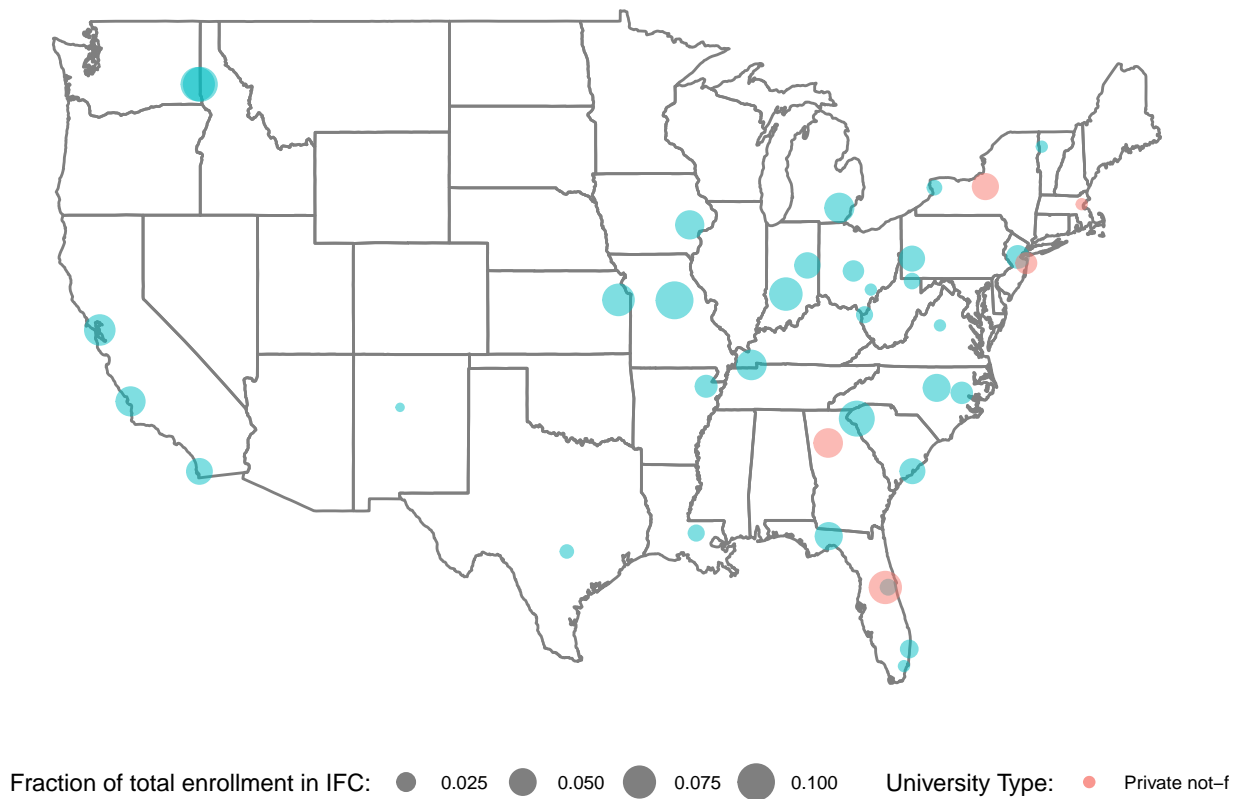


Figure 3: Map of the 38 universities included in the sample that experienced a fraternity moratorium. IFC fraternity populations are based on the data most recently available.

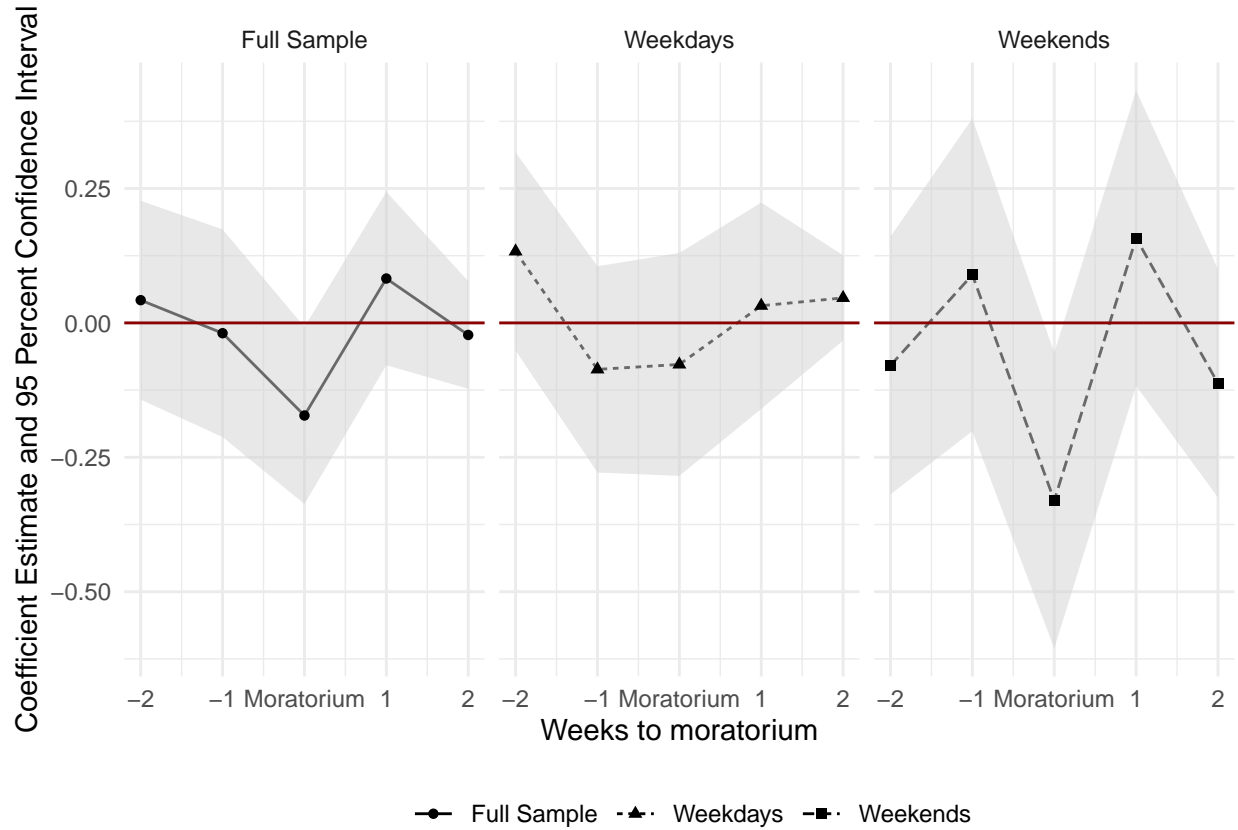


Figure 4: OLS regressions of alcohol offenses on fraternity moratoriums. Shaded area represents the 95% confidence intervals, while the points represent the coefficient point estimates. Two leads and lags are included in the specification at the weekly level. Fixed effects include university and day-by-month-by year (e.g. the preferred specification). A joint hypothesis test of the leads is not statistically significant below the 10% level.

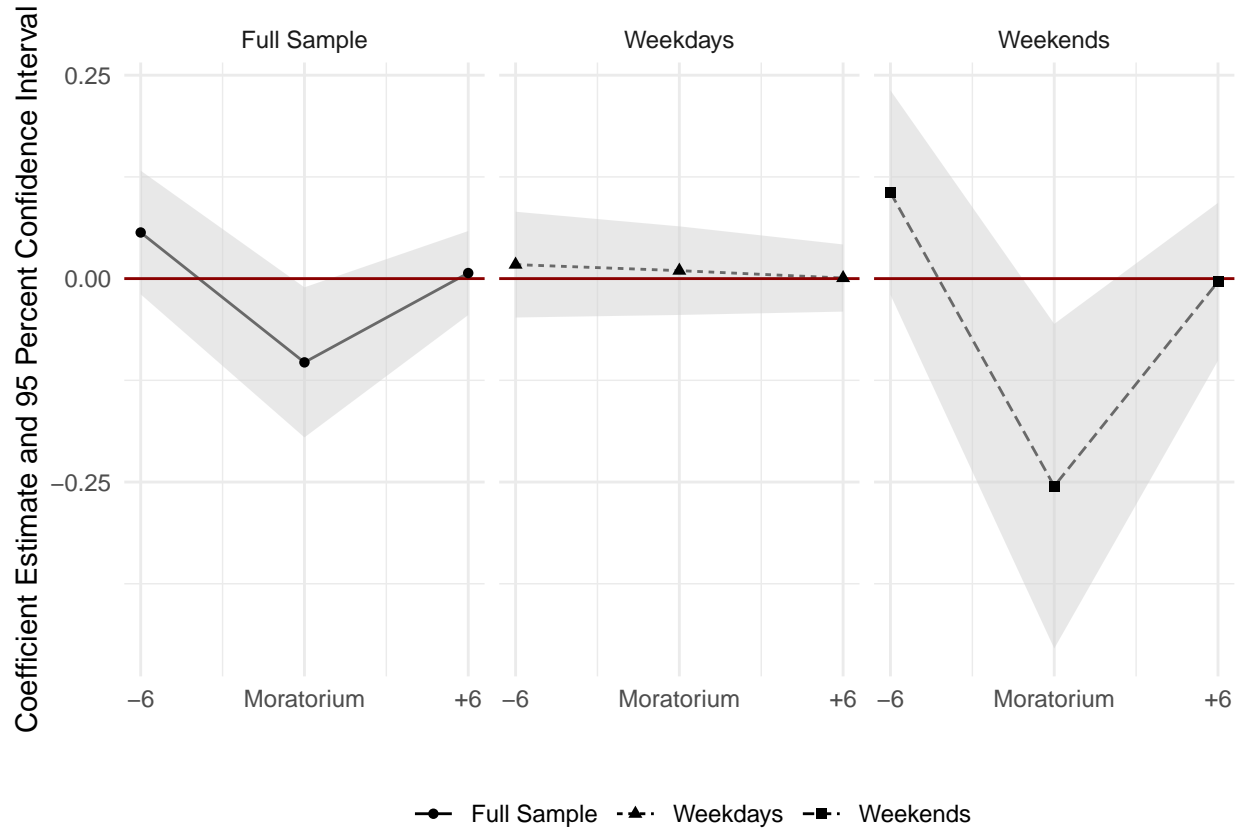


Figure 5: OLS regressions of alcohol offenses on fraternity moratoriums. Shaded area represents the 95% confidence intervals, while the points represent the coefficient point estimates. One lead and lag is included in the specification at the 6-week level for more power (6-weeks is approximately the median moratorium length in the sample). Fixed effects include university and day-by-month-by year (e.g. the preferred specification).

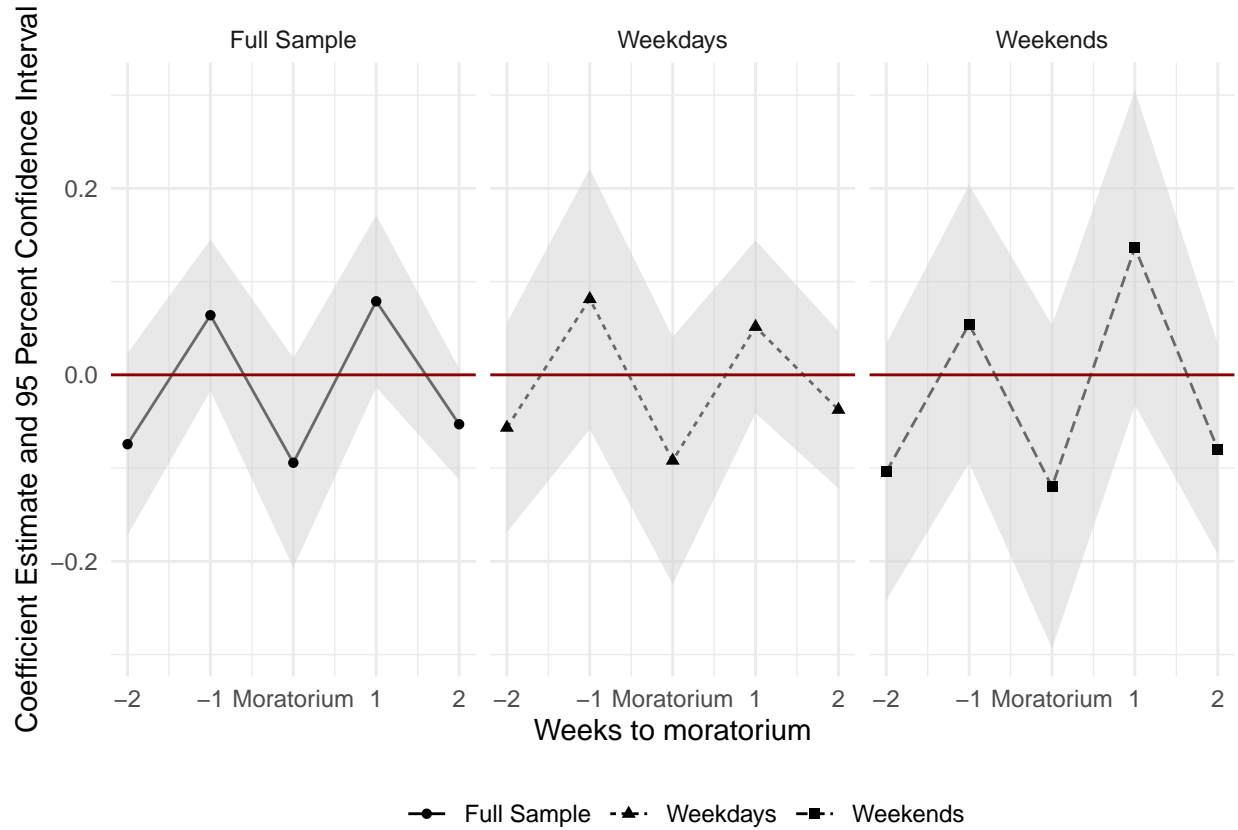


Figure 6: OLS regressions of drug offenses on fraternity moratoriums. Shaded area represents the 95% confidence intervals, while the points represent the coefficient point estimates. Two leads and lags are included in the specification at the weekly level. Fixed effects include university and day-by-month-by year (e.g. the preferred specification). A joint hypothesis test of the leads is not statistically significant below the 10% level.

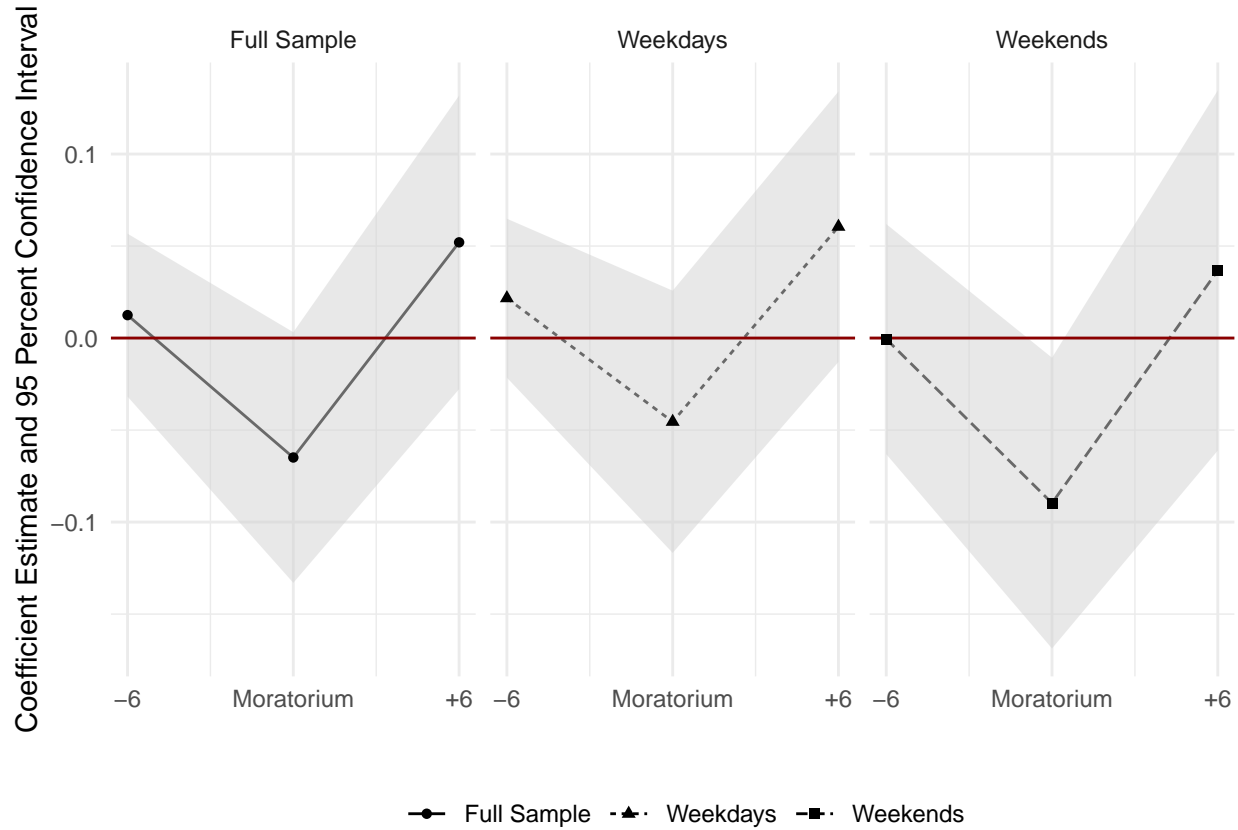


Figure 7: OLS regressions of drug offenses on fraternity moratoriums. Shaded area represents the 95% confidence intervals, while the points represent the coefficient point estimates. One lead and lag is included in the specification at the 6-week level for more power (6-weeks is approximately the median moratorium length in the sample). Fixed effects include university and day-by-month-by year (e.g. the preferred specification).

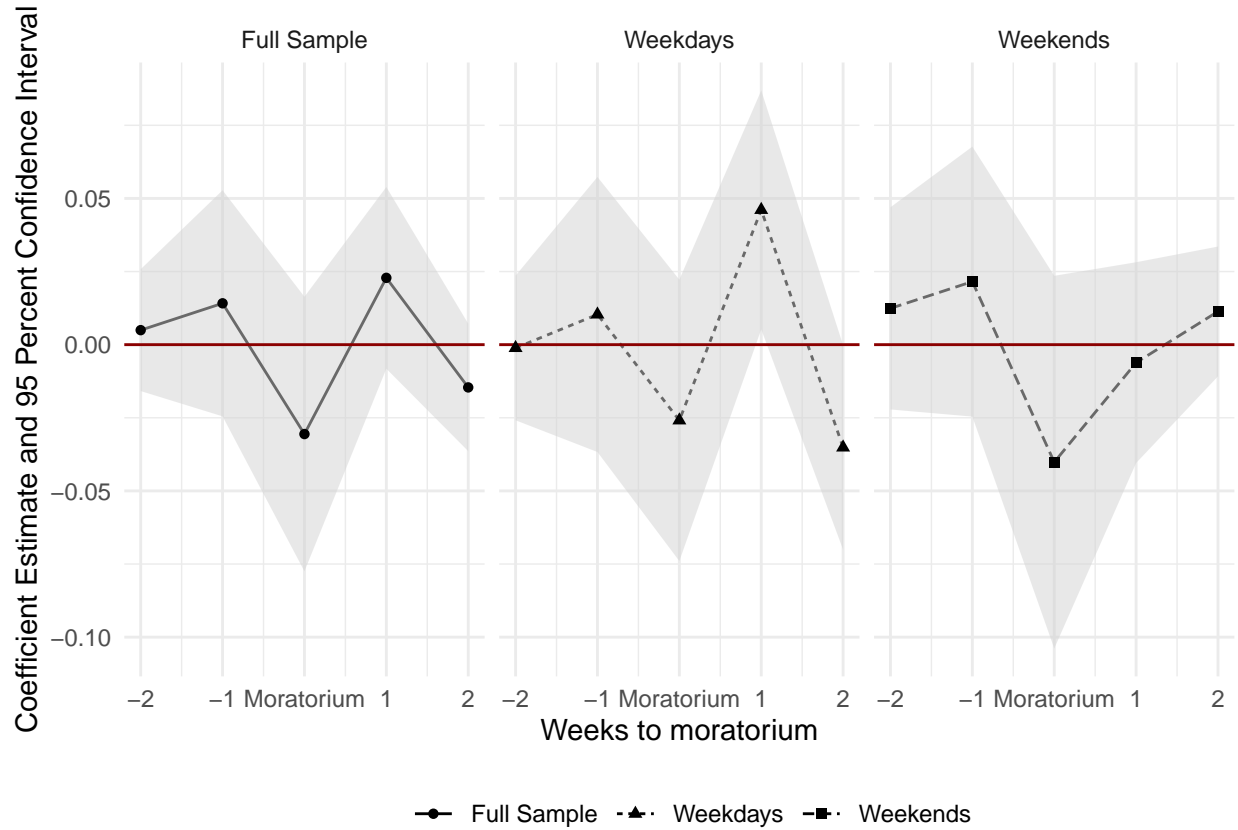


Figure 8: OLS regressions of reports of sexual assaults on fraternity moratoriums. Shaded area represents the 95% confidence intervals, while the points represent the coefficient point estimates. Two leads and lags are included in the specification at the weekly level. Fixed effects include university and day-by-month-by year (e.g. the preferred specification). A joint hypothesis test of the leads is not statistically significant below the 10% level.

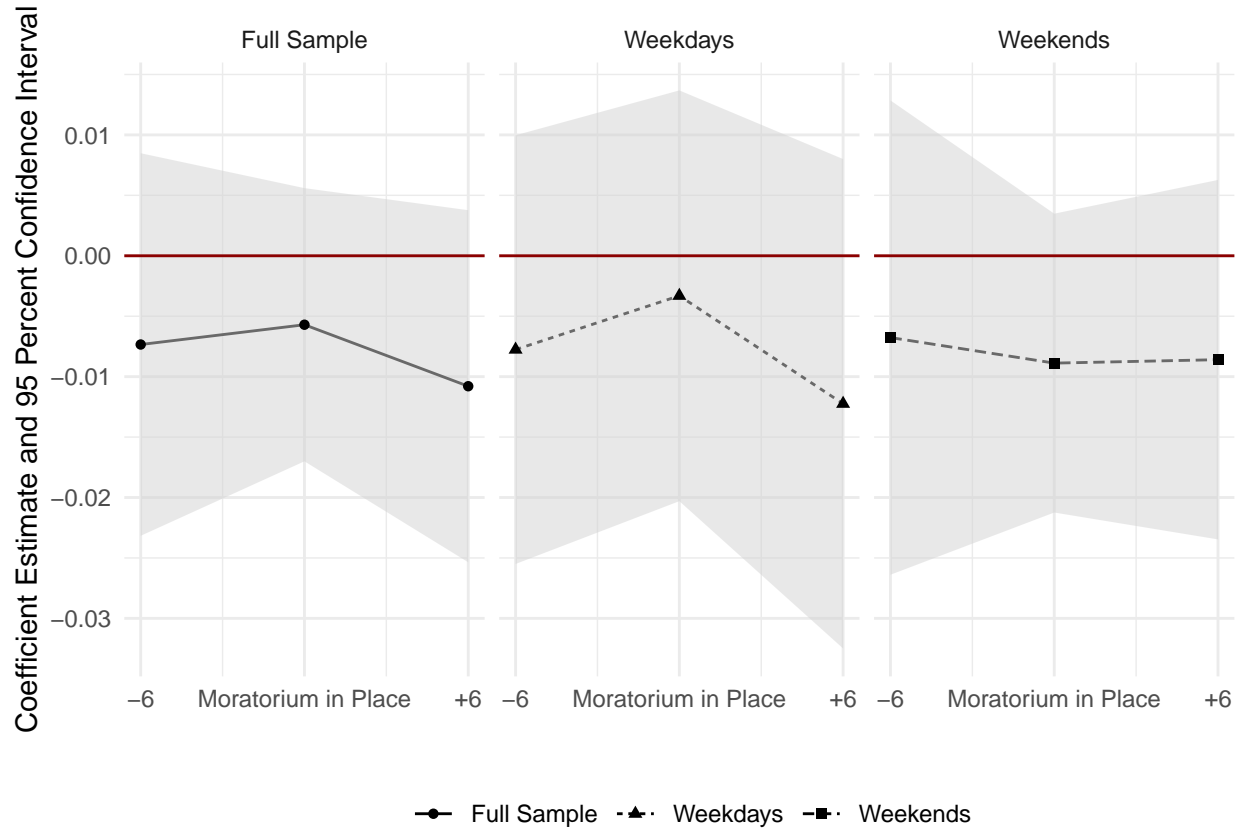


Figure 9: OLS regressions of sexual assaults on fraternity moratoriums. Shaded area represents the 95% confidence intervals, while the points represent the coefficient point estimates. One lead and lag is included in the specification at the 6-week level for more power (6-weeks is approximately the median moratorium length in the sample). Fixed effects include university and day-by-month-by year (e.g. the preferred specification).

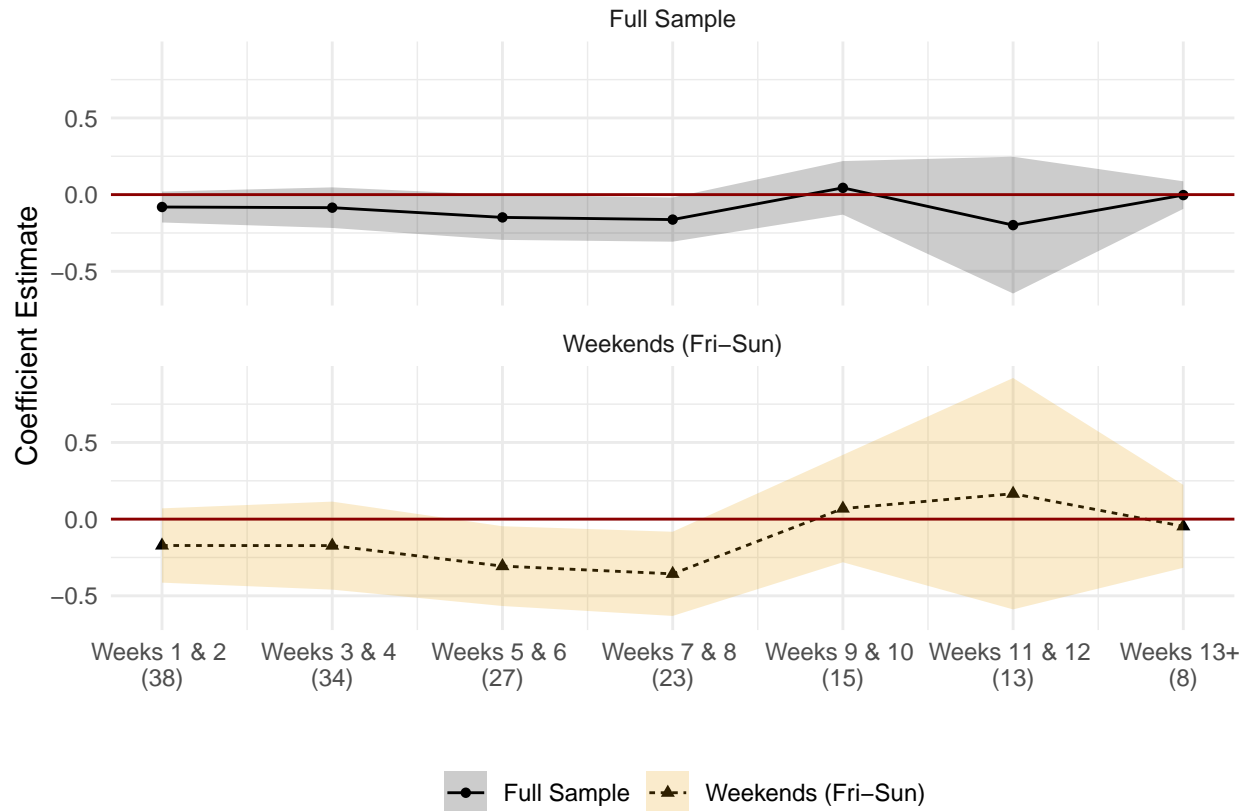


Figure 10: Effect of moratorium on alcohol offenses broken down by time within moratorium. Each category is mutually exclusive. Numbers below x-axis labels represent the number of schools the estimate is identified by since each university's moratorium length differs.

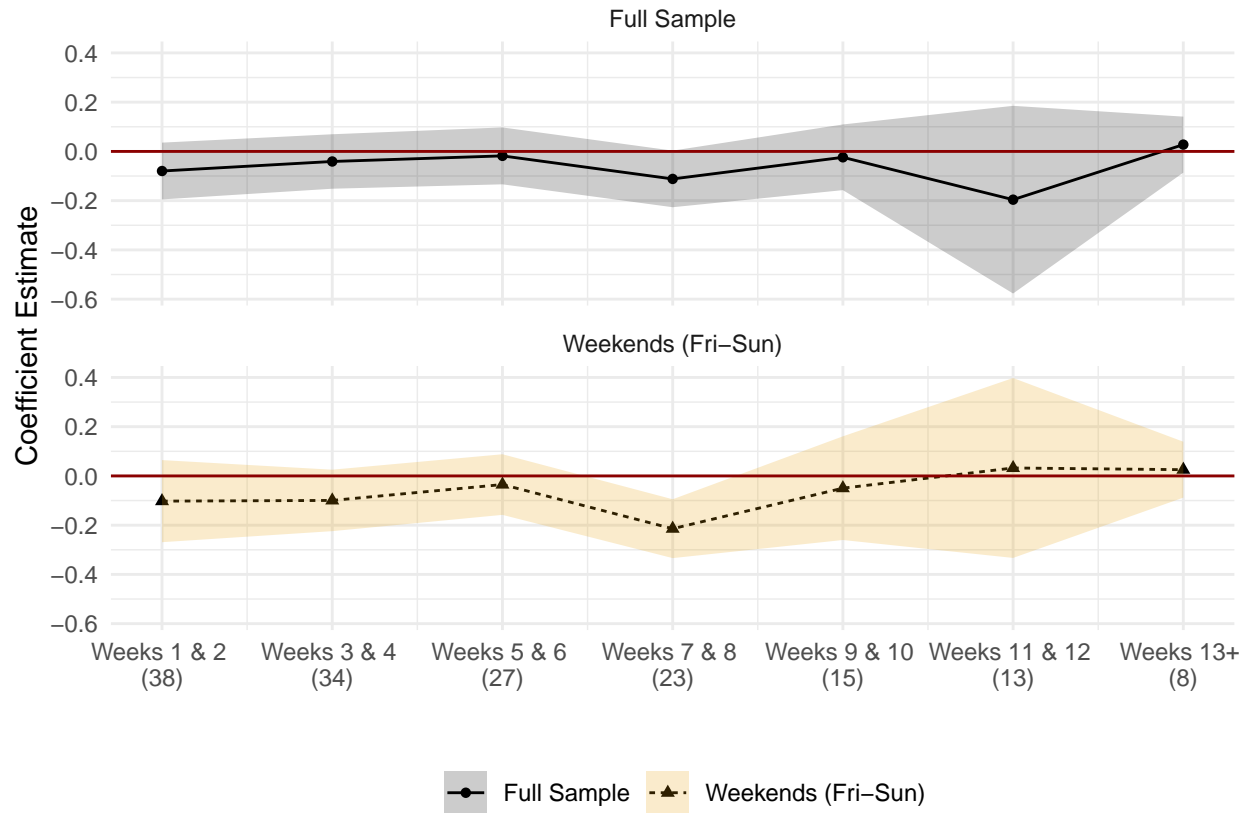


Figure 11: Effect of moratorium on drug offenses broken down by time within moratorium. Each category is mutually exclusive. Numbers below x-axis labels represent the number of schools the estimate is identified by since each university's moratorium length differs.

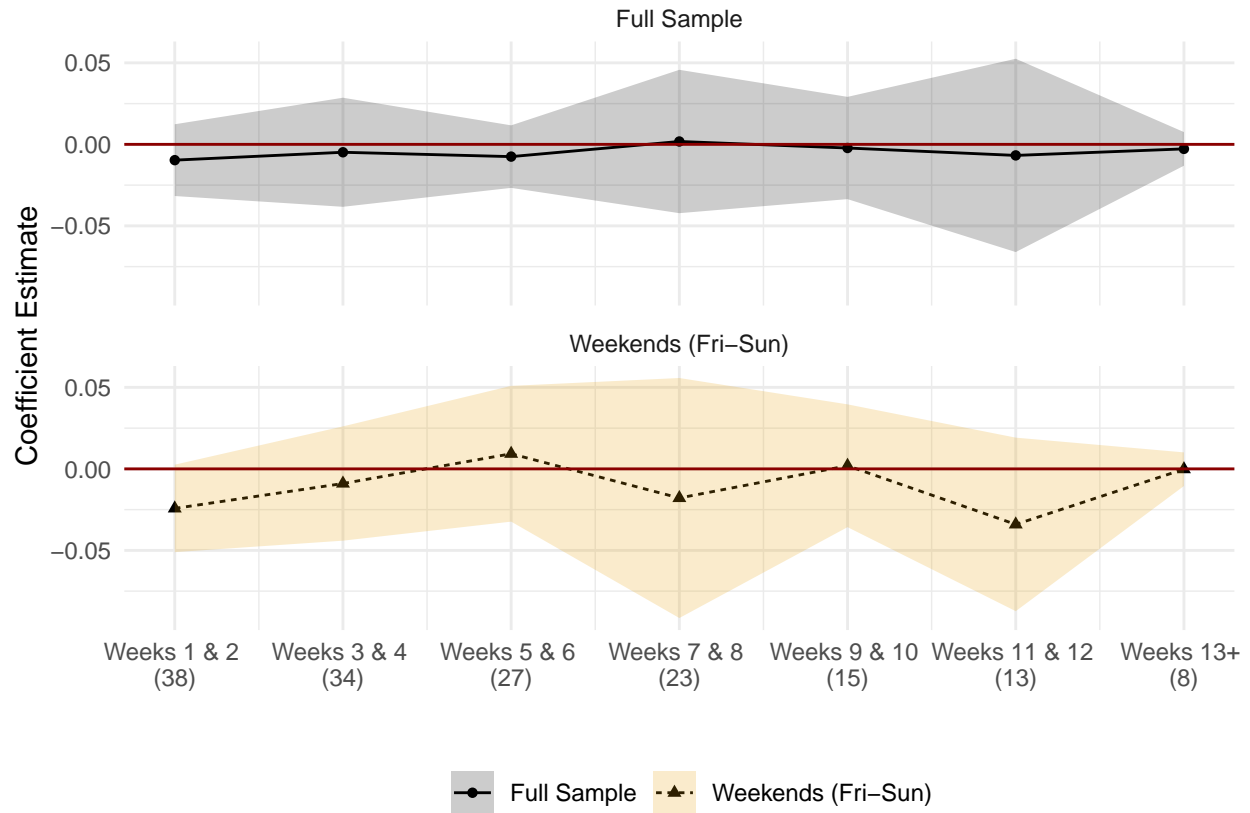


Figure 12: Effect of moratorium on sexual assault offenses broken down by time within moratorium. Each category is mutually exclusive. Numbers below x-axis labels represent the number of schools the estimate is identified by since each university's moratorium length differs.

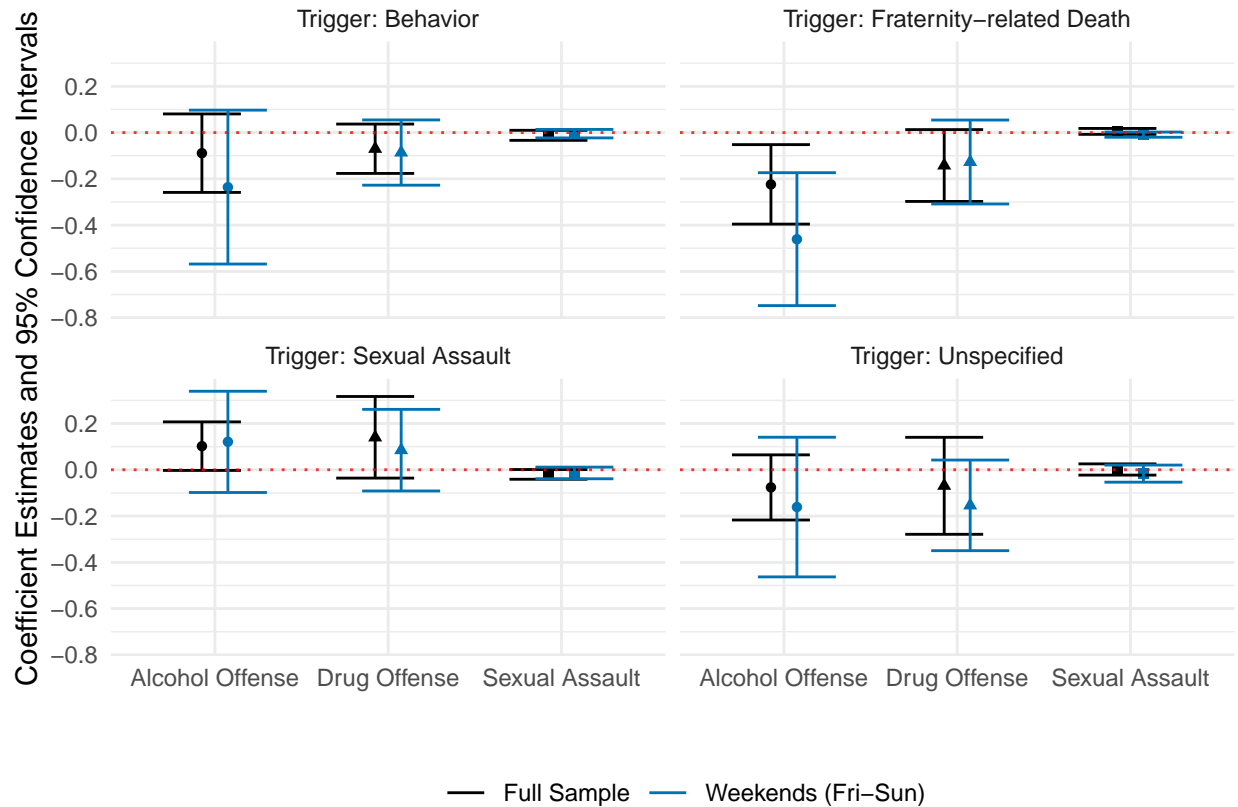


Figure 13: Effect of moratorium on alcohol offenses, drug offenses, and sexual assaults by triggering event of the moratorium. Moratoriums can be triggered by four different types of events: behavior violations (including hazing/poor behavior caught on video), fraternity-related death, sexual assault allegations, or unspecified. See Figure 2 for universities within each triggering event. Each point represents a coefficient estimate while each bar represents a 95% confidence interval. Black points/bars represent the entire sample, while blue points/bars represents the sample restricted to only weekends.

Tables

Table 1: Words/phrases used to pattern match on outcomes of interest. Each word to match represents a portion of a word to match on. For example, the word 'sex' will match on 'sexual assault' and 'sex offense' since 'sex' appears in each of these descriptions.

Outcome	Words to Match
Sexual Assault	sex, rape, fondling, fondle
Alcohol Violations	alcohol, dwi, intox, drink, dui, drunk, liquor, driving under the influence, dip, abcc, underage, dwi, underage, pula, owi, mip, under age, beer, wine, booze, minor in possession, ovi
Drug Offense	drug, narcotic, marijuana, heroin, overdose, cocaine, controlled substance
Robbery/Burglary	robbery, burglary, unlawful entry, breaking and entering

Note:

'dwi' abbreviation for 'driving while intoxicated'.

'dip' abbreviation for 'drunk in public'.

'abcc' abbreviation for 'alcohol beverage control comission'.

'pula' abbreviation for 'person under legal age'.

'owi' abbreviation for 'operating while intoxicated'.

'mip' abbreviation for 'minor in possesion'.

'ovi' abbreivation for 'operating vehicle intoxicated'.

Table 2: Summary statistics of the 38 universities in the sample and outcomes used in analysis.

	Mean	SD	Median	Min	Max
University Characteristics					
Total Enrollment	28 683.99	14 455.98	28 664.00	3127.00	69 402.00
Total Undergrad Enrollment	22 142.26	11 859.01	21 921.00	2571.00	59 371.00
Fraction Asian	0.07	0.07	0.04	0.01	0.36
Fraction Black	0.07	0.04	0.06	0.01	0.20
Fraction Hispanic	0.13	0.14	0.07	0.02	0.68
Fraction White	0.62	0.18	0.67	0.08	0.83
Graduation Rate	70.46	13.64	71.00	39.00	95.00
SAT Math 75	655.94	68.26	650.00	480.00	790.00
SAT Reading 75	641.83	53.72	640.00	490.00	760.00
Fraction Admitted	0.60	0.21	0.62	0.14	0.94
Fraction Private	0.13	0.33	0.00	0.00	1.00
Daily Crime Log Offenses					
Alcohol Offense	0.50	1.36	0.00	0.00	40.84
Sexual Assault	0.05	0.32	0.00	0.00	15.99
Drug Offense	0.43	0.95	0.00	0.00	25.28
Robbery/Burglary	0.13	0.50	0.00	0.00	24.69
Moratorium Characteristics					
Length of Moratoriums	65.34	81.72	48.00	6.00	541.00
<i>Total Number of Universities</i>					
<i>38</i>					

Length of moratorium statistics are in academic calendar days.

Offenses are per-25000 students enrolled.

Table 3: Effect of Moratoriums on Alcohol Offenses, Drug Offenses, and Sexual Assault.

	(1)	(2)	(3)	(4)
<i>Panel A: Alcohol Offenses</i>				
Moratorium	0.016 (0.111)	-0.138** (0.047)	-0.103* (0.045)	-0.138** (0.047)
Num.Obs.	56514	56514	56514	56514
Mean of Dependent Variable	0.498	0.498	0.498	0.498
FE: Day-of-Week		X		X
FE: Semester-by-Year		X		
FE: University			X	
FE: University-by-Semester-Number		X		
FE: Day-by-Month-by-Year			X	
FE: University-by-Year-by-Semester-Number				X
<i>Panel B: Drug Offenses</i>				
Moratorium	-0.030 (0.066)	-0.047 (0.032)	-0.065+ (0.033)	-0.047 (0.032)
Num.Obs.	56514	56514	56514	56514
Mean of Dependent Variable	0.432	0.432	0.432	0.432
FE: Day-of-Week		X		X
FE: Semester-by-Year		X		
FE: University			X	
FE: University-by-Semester-Number		X		
FE: Day-by-Month-by-Year			X	
FE: University-by-Year-by-Semester-Number				X
<i>Panel C: Sexual Assaults</i>				
Moratorium	0.001 (0.008)	-0.003 (0.006)	-0.006 (0.006)	-0.003 (0.006)
Num.Obs.	56514	56514	56514	56514
Mean of Dependent Variable	0.054	0.054	0.054	0.054
FE: Day-of-Week		X		X
FE: Semester-by-Year		X		
FE: University			X	
FE: University-by-Semester-Number		X		
FE: Day-by-Month-by-Year			X	
FE: University-by-Year-by-Semester-Number				X

Note:

Standard errors are clustered by university.

Offenses are per-25000 enrolled students.

Moratorium is a temporary halt on fraternity-related activities with alcohol.

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4: Effect of Moratoriums on Alcohol Offenses, Drug Offenses, and Sexual Assault by Weekend/Weekdays.

	Full Sample	Weekends	Weekdays
<i>Panel A: Alcohol Offenses</i>			
Moratorium	-0.103* (0.045)	-0.259* (0.097)	0.009 (0.027)
Num.Obs.	56514	24244	32270
Mean of Dependent Variable	0.498	0.886	0.206
FE: University	X	X	X
FE: Day-by-Month-by-Year	X	X	X
<i>Panel B: Drug Offenses</i>			
Moratorium	-0.065+ (0.033)	-0.092* (0.038)	-0.047 (0.034)
Num.Obs.	56514	24244	32270
Mean of Dependent Variable	0.432	0.496	0.385
FE: University	X	X	X
FE: Day-by-Month-by-Year	X	X	X
<i>Panel C: Sexual Assaults</i>			
Moratorium	-0.006 (0.006)	-0.009 (0.006)	-0.004 (0.009)
Num.Obs.	56514	24244	32270
Mean of Dependent Variable	0.054	0.049	0.059
FE: University	X	X	X
FE: Day-by-Month-by-Year	X	X	X

Note:

Standard errors are clustered by university.

Offenses are per-25000 enrolled students.

Moratorium is a temporary halt on fraternity-related activities with alcohol.

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5: Effect of Fraternity Moratoriums on Robbery/Burglary

	Full Sample	Weekends	Weekdays
Moratorium	0.009 (0.022)	0.014 (0.024)	0.014 (0.024)
Num.Obs.	56 514	24 244	24 244
Mean of Outcome	0.130	0.120	0.120
FE: University	X	X	X
FE: Day-by-Month-by-Year	X	X	X

Standard errors clustered by university.

Estimates include all days of the week (Mon-Sun).

Reports of robbery/burglary for OLS regressions are per-25,000 students enrolled.

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6: Heterogeneous Effects for University-enacted Moratoriums and IFC-enacted Moratoriums.

	Dependent Variable					
	Full Sample			Weekends		
	Alcohol	Drug	Sexual Assault	Alcohol	Drug	Sexual Assault
Moratorium x University Enacted	−0.224* (0.097)	−0.137* (0.058)	−0.031 (0.024)	−0.416* (0.158)	−0.145 (0.093)	−0.045 (0.032)
Moratorium x IFC Enacted	−0.056 (0.080)	0.002 (0.097)	−0.029 (0.023)	−0.144 (0.164)	−0.066 (0.103)	−0.031 (0.031)
2 Weeks Before	0.049 (0.093)	−0.069 (0.047)	0.005 (0.010)	−0.068 (0.119)	−0.101 (0.067)	0.013 (0.017)
1 Week Before	−0.015 (0.094)	0.067 (0.040)	0.014 (0.019)	0.097 (0.141)	0.057 (0.074)	0.022 (0.023)
1 Week After	0.086 (0.081)	0.082+ (0.046)	0.023 (0.015)	0.164 (0.137)	0.138 (0.083)	−0.006 (0.017)
2 Weeks After	−0.015 (0.050)	−0.047+ (0.027)	−0.014 (0.011)	−0.100 (0.104)	−0.076 (0.055)	0.012 (0.011)
Num.Obs.	56 514	56 514	56 514	24 244	24 244	24 244
Mean of Dependent Variable	0.498	0.432	0.054	0.886	0.496	0.049
FE: University	X	X	X	X	X	X
FE: Day-by-Month-by-Year	X	X	X	X	X	X

IFC enacted is a moratorium enacted by the student-IFC representatives.

University enacted is a moratorium enacted by university officials.

Standard errors clustered by university

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix



RISE ABOVE

Candidates for Membership

Sigma Alpha Epsilon Member Onboarding Handout

Expectations of a Member

As a member of the Fraternity, there are certain things that are expected of you. Every member of the chapter must complete the following 7 expectations each semester:



1. **You must maintain a minimum GPA of 2.5 or higher (as specified by the chapter's bylaws)**
 - i. Our chapter's minimum GPA is _____
 - ii. First and foremost, you are here to graduate from this school
 - iii. GPAs are reviewed each semester



5. **You must be financially current or on an approved payment plan**
 - i. Your initiation fee is \$310 and semesterly dues are _____



2. **You must be involved in at least one additional campus or community organization (The member educator can help you find involvement opportunities)**
 - i. Proof of involvement is required each semester



6. **You must complete a minimum of 20 service hours per academic year (The member educator can help you find service opportunities)**



3. **You must complete at least 85% of educational assignments throughout the year**
 - i. We host weekly educational sessions at chapter meeting for all members



7. **You must attend at least 85% of chapter meetings**
 - i. Your attendance will be tracked during roll call each week



4. **You must attend at least 75% of chapter Ritual events**
 - i. Initiations, graduation ceremonies, and installation of officers



Add any additional expectations your chapter might have for ALL members

Figure A1: An example of fraternity membership guidelines from one of the oldest IFC fraternities: Sigma Alpha Epsilon.

Table A1: Moratorium dates of the 38 universities in the sample. Universities can have multiple moratoriums in the sample period.

University	Moratorium 1 Start	Moratorium 1 End	Moratorium 2 Start	Moratorium 2 End	Moratorium 3 Start	Moratorium 3 End
Arkansas State University-Main Campus	2017-02-21	2017-04-01	NA	NA	NA	NA
Ball State University	2017-10-24	2018-01-31	NA	NA	NA	NA
California Polytechnic State University-San Luis Obispo	2015-01-13	2015-04-06	2018-04-17	2018-06-06	NA	NA
Clemson University	2014-09-23	2014-10-10	2018-01-27	2018-03-01	NA	NA
College of Charleston	2016-08-30	2016-12-01	NA	NA	NA	NA
East Carolina University	2015-01-28	2015-02-11	NA	NA	NA	NA
Emory University	2014-11-03	2014-12-02	NA	NA	NA	NA
Florida Atlantic University	2017-11-28	2018-03-01	NA	NA	NA	NA
Florida International University	2018-01-01	2018-02-05	NA	NA	NA	NA
Florida State University	2017-11-06	2018-03-26	NA	NA	NA	NA
Indiana University-Bloomington	2017-11-27	2018-02-28	NA	NA	NA	NA
Louisiana State University and Agricultural & Mechanical College	2017-09-14	2017-10-12	2017-10-19	2018-03-01	NA	NA
Marshall University	2018-03-05	2018-03-26	NA	NA	NA	NA
Monmouth University	2018-09-06	2019-01-16	NA	NA	NA	NA
Murray State University	2018-05-09	2018-08-27	NA	NA	NA	NA
North Carolina State University at Raleigh	2015-03-20	2015-05-09	NA	NA	NA	NA
Ohio State University-Main Campus	2017-11-16	2018-02-07	NA	NA	NA	NA
Ohio University-Main Campus	2019-10-03	2019-10-25	NA	NA	NA	NA
Rollins College	2017-02-21	2017-04-14	NA	NA	NA	NA
Rutgers University-New Brunswick	2015-04-06	2015-05-01	NA	NA	NA	NA
San Diego State University	2014-11-25	2015-01-09	2018-03-09	2018-10-04	2019-11-09	2020-01-17
Syracuse University	2019-11-17	2019-12-09	NA	NA	NA	NA
Texas State University	2017-11-14	2018-02-26	NA	NA	NA	NA
Tufts University	2016-11-16	2017-01-19	NA	NA	NA	NA
University at Buffalo	2019-04-12	2019-08-21	NA	NA	NA	NA
University of California-Berkeley	2016-10-16	2016-10-26	NA	NA	NA	NA
University of Central Florida	2018-01-08	2018-03-05	NA	NA	NA	NA
University of Idaho	2017-12-12	2018-03-13	NA	NA	NA	NA
University of Iowa	2017-05-01	2019-08-27	NA	NA	NA	NA
University of Kansas	2018-03-12	2018-03-18	NA	NA	NA	NA
University of Michigan-Ann Arbor	2017-11-09	2018-01-03	NA	NA	NA	NA
University of Missouri-Columbia	2018-03-06	2018-03-13	NA	NA	NA	NA
University of New Mexico-Main Campus	2017-12-08	2018-02-19	NA	NA	NA	NA
University of Pittsburgh-Pittsburgh Campus	2018-01-19	2018-08-30	NA	NA	NA	NA
University of Vermont	2019-02-05	2019-04-02	NA	NA	NA	NA
University of Virginia-Main Campus	2014-11-22	2015-01-07	NA	NA	NA	NA
Washington State University	2016-11-07	2017-01-09	2019-11-14	2020-01-27	NA	NA
West Virginia University	2014-11-13	2015-02-01	2018-02-14	2018-08-01	NA	NA

Table A2: Comparison of all the potential data sources for this project. The Daily Crime Logs are used for the main analysis due to the advantages it has over the other sources.

Characteristics	Data Source			
	Daily Crime Logs	Campus Safety and Security	NIBRS	UCR
Source	Clery Act Requests	US Department of Education	FBI	FBI
Reporting Mandate	By-law	By-law	Voluntary	Voluntary
Level of Aggregation	Incident-level	Yearly	Incident-level	Monthly
Fraction of Sample Reporting Consistently	1	1	0.368	0.789
Alcohol Violations	All Incidences Reported	All Incidences Reported	Arrests Only	None
Sexual Assaults	All Incidences Reported	All Incidences	All Incidences Reported	Hierarchy Rule
Drug Offenses	All Incidences Reported	All Incidences Reported	All Incidences Reported	None
Residence Hall Information	No	Yes	No	No
Analysis in Paper	Main Analysis	Secondary	Not Used	Not Used

Note:

Hierarchy Rule is where only the most serious crime in an incident is reported.

While over 50 percent of UCR data is displayed to be reported consistently, it is actually truly unknown since NAs and 0s are the same.

<p align="center"> Indiana University, Bloomington Police Department Student Right To Know CAD Daily Log From Jan 20, 2014 to Jan 20, 2014. </p>		
Date Reported: 01/20/14 - MON at 12:22 Date and Time Occurred From - Occurred To Incident : NARCOTIC/DRUG LAWS - POSSESSION - MARIJUANA Disposition: FAILED TO LOCATE	Location : EIGENMANN HALL	Event #: 14-01-20-001434 Report #:
Date Reported: 01/20/14 - MON at 17:03 Date and Time Occurred From - Occurred To 01/20/14 - MON at 17:02 - 01/20/14 - MON at 17:03 Incident : NARCOTIC/DRUG LAWS - POSSESSION - MARIJUANA Disposition: CLOSED BY ARREST	Location : ALL OTHER ROADWAYS/INTERS	Event #: 14-01-20-001446 Report #: 140154
Date Reported: 01/20/14 - MON at 19:30 Date and Time Occurred From - Occurred To Incident : NARCOTIC/DRUG LAWS - POSSESSION - MARIJUANA Disposition: FAILED TO LOCATE	Location : EIGENMANN HALL	Event #: 14-01-20-001464 Report #:
Date Reported: 01/20/14 - MON at 20:22 Date and Time Occurred From - Occurred To Incident : NARCOTIC/DRUG LAWS - POSSESSION - MARIJUANA Disposition: FAILED TO LOCATE	Location : EIGENMANN HALL	Event #: 14-01-20-001466 Report #:
Date Reported: 01/20/14 - MON at 20:45 Date and Time Occurred From - Occurred To Incident : NARCOTIC/DRUG LAWS - POSSESSION - MARIJUANA Disposition: FAILED TO LOCATE	Location : FOSTER HARPER HALL	Event #: 14-01-20-001468 Report #:
Date Reported: 01/20/14 - MON at 21:38 Date and Time Occurred From - Occurred To Incident : ALL OTHER OFFENSES - HARASSMENT/INTIMIDATION Disposition: NO CASE REPORT	Location : ALL OTHER NON-UNIVERSITY	Event #: 14-01-20-001476 Report #:
Date Reported: 01/20/14 - MON at 21:53 Date and Time Occurred From - Occurred To Incident : NARCOTIC/DRUG LAWS - POSSESSION - MARIJUANA Disposition: FAILED TO LOCATE	Location : ROSE AVE RESIDENCE HALL	Event #: 14-01-20-001479 Report #:
Date Reported: 01/20/14 - MON at 22:30 Date and Time Occurred From - Occurred To Incident : NARCOTIC/DRUG LAWS - POSSESSION - MARIJUANA Disposition: FAILED TO LOCATE	Location : COLLINS COMMON AREA	Event #: 14-01-20-001486 Report #:
Date Reported: 01/20/14 - MON at 23:02 Date and Time Occurred From - Occurred To 01/20/14 - MON at 22:45 - 01/20/14 - MON at 23:02 Incident : NARCOTIC/DRUG LAWS - POSSESSION - MARIJUANA Disposition: CLOSED NO ARREST.	Location : FOREST QUAD	Event #: 14-01-20-001487 Report #: 140157
Date Reported: 01/20/14 - MON at 23:07 Date and Time Occurred From - Occurred To Incident : NARCOTIC/DRUG LAWS - POSSESSION - MARIJUANA Disposition: FAILED TO LOCATE	Location : FOSTER JENKINSON HALL	Event #: 14-01-20-001491 Report #:
Date Reported: 01/20/14 - MON at 23:35 Date and Time Occurred From - Occurred To 01/20/14 - MON at 23:35 - 01/20/14 - MON at 23:41 Incident : ASSAULT - OTHER ASSAULTS - SIMPLE, NOT AGGRAVATED Disposition: CLOSED BY ARREST.	Location : ALL OTHER OPEN AREAS	Event #: 14-01-20-001494 Report #: 140159
<p align="center">11 Incidents Listed.</p>		
<p align="right"> Print Date and Time 1/21/2014 12:23:52PM at Page No. 1 </p>		

Figure A2: An example of a Daily Crime Log. The main analysis uses data from 38 universities' Daily Crime Logs - each unique in their own respect.

Table A3: The top 30 most frequent reported incidents after pattern matching into each category. Numbers in parenthesis denote the frequency of offense in the data.

Sexual Assault	Alcohol Offense	Drug Offense
(394) rape	(2882) alcohol offense	(3312) drugs
(379) sexual assault	(2311) abcc violation	(2906) drug incident
(301) sex offense	(1272) intoxicated person	(1852) possession of controlled substances
(184) sexual battery	(1216) dui	(1182) possession - marijuana
(144) csa report: rape	(1010) intx-intoxicated person	(1001) narcotics
(114) criminal sexual conduct	(785) buying, consume while underage	(835) drug violation
(88) campus security authority-sex offense	(764) minor in possession	(743) drug violation - vcса
(77) assist other agency-sex offense	(740) possession/supply alcohol u/21	(729) possession of drugs
(69) sexual abuse 3rd degree	(710) public intox	(680) possession of drug paraphernalia
(62) sex offenses	(702) liquor laws	(605) drug paraphernalia
(56) sex offense - anonymous	(695) driving under the influence	(587) possession of drugparaphernalia
(41) sxof-sex offense	(625) driving under the influence not counted for ucr	(572) controlled substance problem
(38) forcible fondling	(620) public intoxication	(503) drug violation / vcса
(38) sex crime	(507) mip	(441) possession ofmarijuana
(36) sex offense (except forcible rape or prostitution)	(482) offenses involving underage persons	(338) possession of marijuana and the
(36) sexual assault using physical force or coercion; victim does not sustain severe personal injury	(476) liquor law referral	(331) poss of drug paraphernalia possession marijuana/hash under
(32) 3rd party report sexual abuse 3rd degree	(467) liquor law arrest	(320) drug law referral
(32) forcible sex offense	(456) intoxication	(304) violation of controlled substances
(32) sexual imposition	(435) minors in possession of alcohol	(292) drug-csc sanction only
(31) sex offenses - forcible	(386) liquor laws - illegal possession/consumption	(288) drug law violation
(31) sex offenses sex offenses	(377) intoxicated subjects	(288) medical - medical aid - alcohol/drug
(30) sexual abuse	(349) campus security authority-liquor law violation	(282) narcotic/drug laws - possession - marijuana
(28) anonymous sexual assault	(318) all other offenses (except traffic) liquor laws	(268) possession marijuana, hashish, etc. possession marijuana, hashish, etc.
(27) late reported sexual assault	(288) alcohol violation	(263) possession marijuana, hashish, etc.
(25) sex offense/forcible rape	(288) medical - medical aid - alcohol/drug	(245) smell of marijuana
(23) rape rape	(283) public drunkenness	(242) possession marijuana/hash under poss of drug paraphernalia
(23) rape-rape -report	(251) driving while intoxicated	(242) simple possession of marijuana
(21) anonymous late reported sexual assault	(251) intox person 2	(232) 966 - drug law violation
(21) criminal sexual contact	(237) liquor laws illegal possession/consumption	(211) possession marijuana
(20) sex offenses-sexual battery	(213) mip-alcohol	(203) drug law arrest

Table A4: DeChaismartin decomposition of TWFE with primary models. Reading from left to right: the first column represents the model specification, the second column represents the sum of the positive weights, the third column represents the sum of the negative weights, the fourth column represents the number of negative average treatment effects on the treated, and the fifth column represents the number of positive average treatment effects on the treated. Note that NAs mean that the TWFEWeights package cannot estimate negative weights for a specification.

Model	Sum(+ Weights)	Sum(- Weights)	Count(Negative ATT)	Count(Positive ATT)
University and Day-by-Month-by-Year	1	0	0	2865
University and Semester-by-Year	1.01	-0.01	10	64
University-by-Semester Number and Semester-by-Year	NA	NA	NA	NA

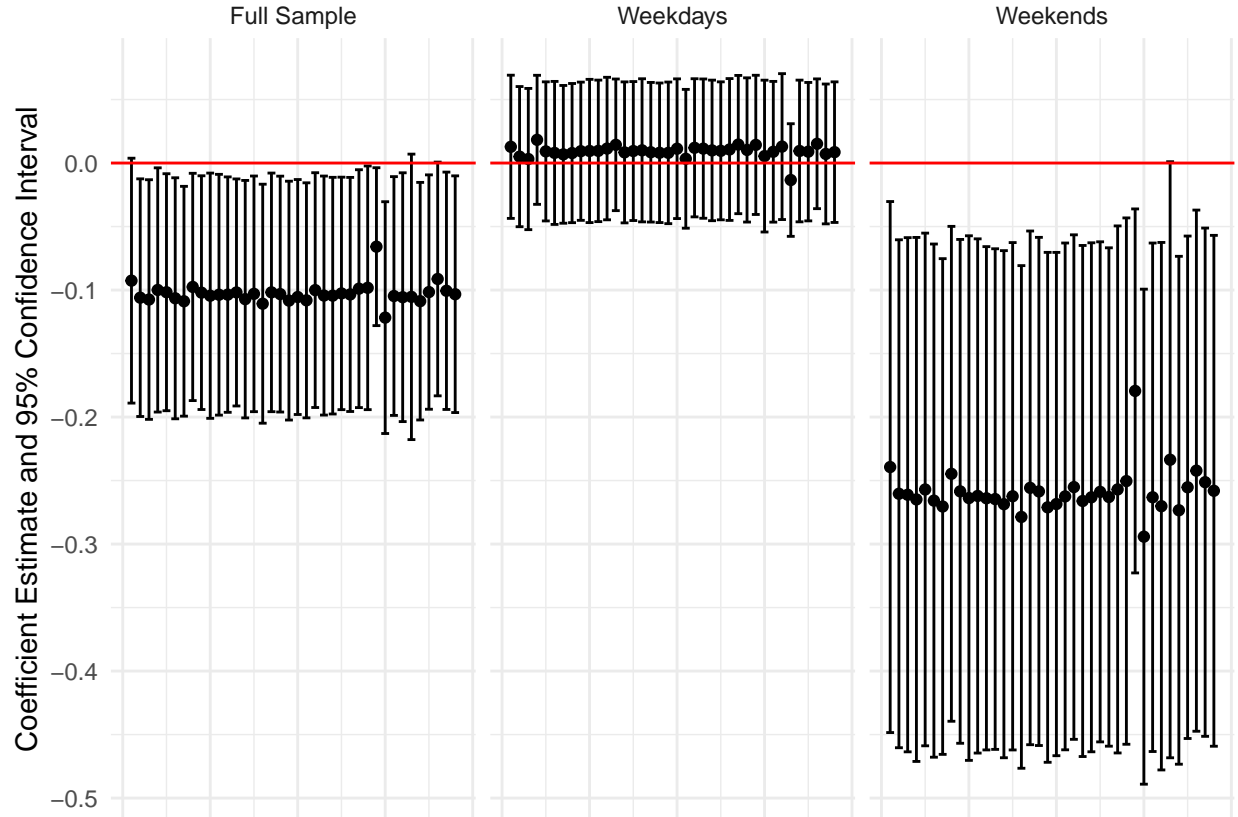


Figure A3: Leave-one-out OLS regressions of alcohol offenses per 25000 enrolled students on the moratorium indicator. Each point is an estimate from omitting one unique university. Hence, there are 38 regressions per panel. Black bars represent 95% confidence intervals. Full Sample includes all days of the week, while Weekends includes only Friday-Sunday and Weekdays includes only Monday-Thursday.

Table A5: Effect of Moratoriums on Alcohol Offenses, Drug Offenses, and Sexual Assault (Poisson Regressions).

	(1)	(2)	(3)	(4)
<i>Panel A: Alcohol Offenses</i>				
Moratorium	0.076 (0.260)	-0.339*** (0.101)	-0.117+ (0.070)	-0.339*** (0.101)
Num.Obs.	56514	53820	55658	53820
Mean of Dependent Variable	0.534	0.534	0.534	0.534
FE: Day-of-Week		X		X
FE: Semester-by-Year		X		
FE: University			X	
FE: University-by-Semester-Number		X		
FE: Day-by-Month-by-Year			X	
FE: University-by-Year-by-Semester-Number				X
<i>Panel B: Drug Offenses</i>				
Moratorium	-0.029 (0.137)	-0.081 (0.070)	-0.120* (0.061)	-0.081 (0.070)
Num.Obs.	56514	54794	55848	54794
Mean of Dependent Variable	0.492	0.492	0.492	0.492
FE: Day-of-Week		X		X
FE: Semester-by-Year		X		
FE: University			X	
FE: University-by-Semester-Number		X		
FE: Day-by-Month-by-Year			X	
FE: University-by-Year-by-Semester-Number				X
<i>Panel C: Sexual Assaults</i>				
Moratorium	0.085 (0.172)	-0.127 (0.122)	-0.105 (0.099)	-0.127 (0.122)
Num.Obs.	56514	50935	44593	50935
Mean of Dependent Variable	0.054	0.054	0.054	0.054
FE: Day-of-Week		X		X
FE: Semester-by-Year		X		
FE: University			X	
FE: University-by-Semester-Number		X		
FE: Day-by-Month-by-Year			X	
FE: University-by-Year-by-Semester-Number				X

^a + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^b Standard errors are clustered by university.

^c Offenses are counts.

^d Moratorium is a temporary halt on fraternity-related activities with alcohol.

Table A6: Effect of Moratoriums on Alcohol Offenses, Drug Offenses, and Sexual Assault by Weekend/Weekdays (Poisson Regressions).

	Full Sample	Weekends	Weekdays
<i>Panel A: Alcohol Offenses</i>			
Moratorium	-0.117+ (0.070)	-0.186* (0.073)	0.071 (0.095)
Num.Obs.	55658	23446	31550
Mean of Dependent Variable	0.534	0.951	0.220
FE: University	X	X	X
FE: Day-by-Month-by-Year	X	X	X
<i>Panel B: Drug Offenses</i>			
Moratorium	-0.120* (0.061)	-0.139* (0.069)	-0.106 (0.065)
Num.Obs.	55848	23944	31904
Mean of Dependent Variable	0.492	0.565	0.438
FE: University	X	X	X
FE: Day-by-Month-by-Year	X	X	X
<i>Panel C: Sexual Assaults</i>			
Moratorium	-0.105 (0.099)	-0.173 (0.144)	-0.073 (0.123)
Num.Obs.	44593	18460	26133
Mean of Dependent Variable	0.054	0.050	0.057
FE: University	X	X	X
FE: Day-by-Month-by-Year	X	X	X

^a + p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001

^b Standard errors are clustered by university.

^c Offenses are counts.

^d Moratorium is a temporary halt on fraternity-related activities with alcohol.

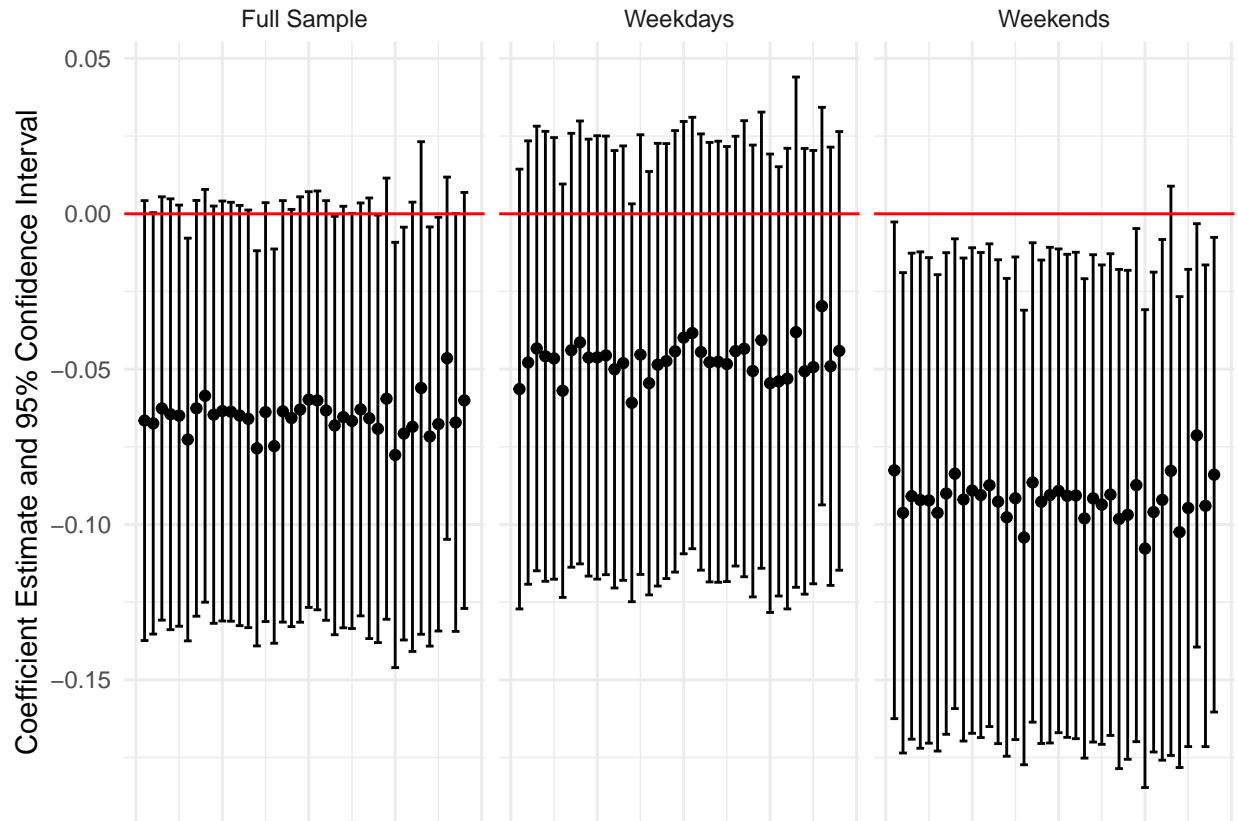


Figure A4: Leave-one-out OLS regressions of drug offenses per 25000 enrolled students on the moratorium indicator. Each point is an estimate from omitting one unique university. Hence, there are 38 regressions per panel. Black bars represent 95% confidence intervals. Full Sample includes all days of the week, while Weekends includes only Friday-Sunday and Weekdays includes only Monday-Thursday.

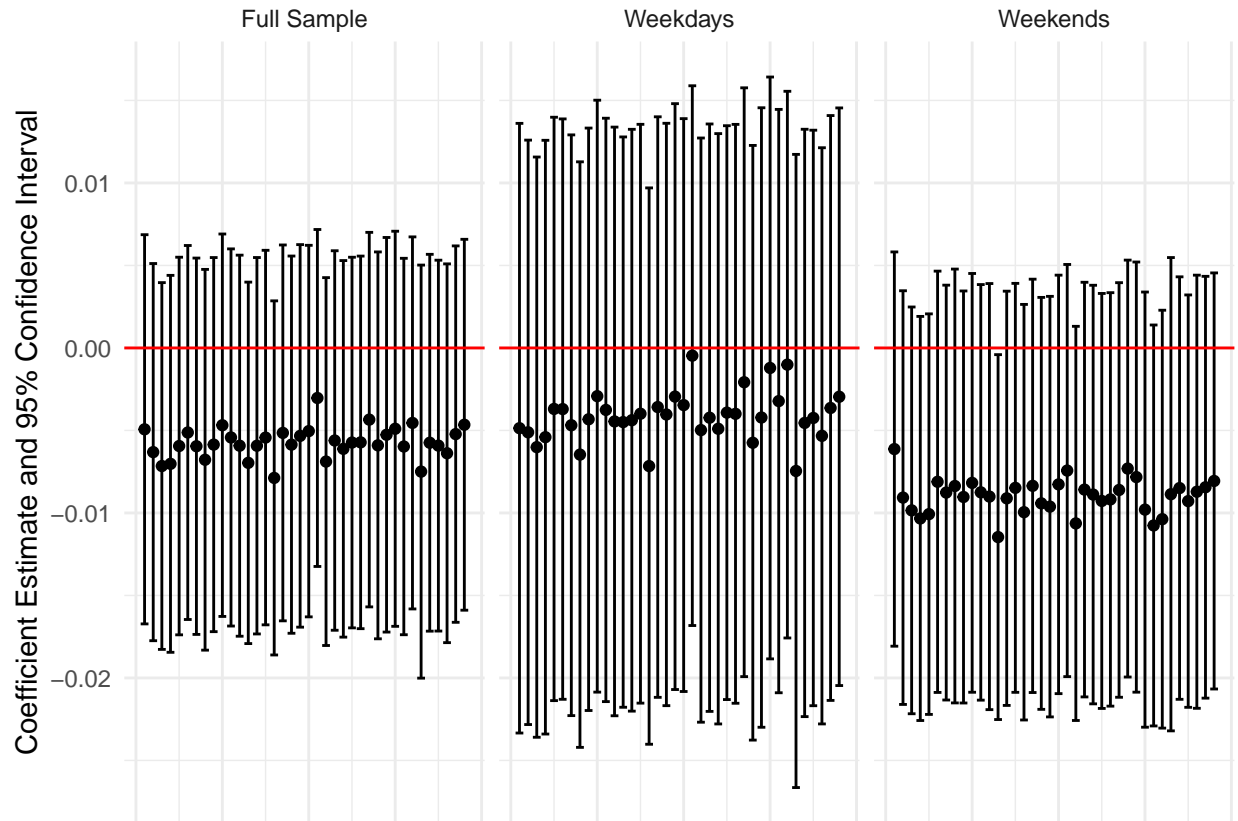


Figure A5: Leave-one-out OLS regressions of sexual assaults per 25000 enrolled students on the moratorium indicator. Each point is an estimate from omitting one unique university. Hence, there are 38 regressions per panel. Black bars represent 95% confidence intervals. Full Sample includes all days of the week, while Weekends includes only Friday-Sunday and Weekdays includes only Monday-Thursday.