

# Fixing Drinking Problems: Evidence and Strategies for Alcohol Control as Crime Control

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## Executive Summary

A large body of evidence shows that alcohol availability and excessive alcohol consumption promote many types of crime. These include assaults, public disorder, and other types of quality-of-life crimes commonly associated with drinking, but also a variety of nonpublic crimes, such that one in three prisoners were drinking at the time of their offense. Furthermore, experience in the U.S. and abroad has shown a number of policies that reduce crime by specifically targeting alcohol production, distribution, or consumption.

Despite recent increases in violent crime in the U.S. and the return of public safety to the popular debate, alcohol policy has gone largely neglected as a lever for crime control. We can use alcohol control as a crime control method without sacrificing the liberty of adults to make decisions about what they imbibe. There is not necessarily a trade-off between liberty and the harms alcohol crime imposes. This paper reviews evidence on both the role of alcohol in crime and evidence-based interventions to reduce the latter through reductions in the former. In particular, this paper identifies four strategies:

- Limiting access through restrictions on time or place of distribution.
- Increasing liquor taxes.
- Increasing sanctions for alcohol-involved crime, including but not limited to DUI.
- Increasing levels of alcohol-related enforcement, which have declined in recent decades.

These strategies are specifically framed to target those places and people where and for whom alcohol is most likely to lead to crime. This gives policymakers a number of tools to maximize both crime-reducing benefits of alcohol enforcement and public support for those same policies.

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## Introduction

Every year, millions of crimes are committed by offenders under the influence of alcohol.<sup>1</sup> These offenses include typical alcohol-involved crimes like driving while intoxicated, but also public disorder, vandalism, theft, robbery, domestic violence, assault, rape, and murder. A remarkably strong base of evidence confirms more generally that alcohol consumption and availability cause many crimes.

Alcohol is the most widely consumed disinhibitory drug, and thus it is little surprise that it plays an outsize role in crime, even more so than most illegal drugs.<sup>2</sup> Yet its criminogenic effects routinely receive short shrift in discussions of crime. While we are quick to blame crime rates on everything from poverty to de-policing to media frenzy, policymakers often overlook problematic alcohol consumption as a cause of crime that they have the power to affect. Reducing problem drinking means stopping crimes before they even happen.

This paper aims to inform policymakers on how alcohol policy can help manage crime in their communities. We review the evidence that alcohol causes crime and discuss theoretical justifications for alcohol control as a policy lever. We then review research on four different ways to reduce alcohol-related crimes: limiting access to alcohol (by closing problematic distributors, reducing hours of sale, reducing kinds of liquor for sale, etc.); increasing taxes on alcohol to reduce consumption; imposing specific sanctions on alcohol-related crimes, including driving under the influence; and stronger enforcement of existing alcohol laws.

We argue that policymakers can reduce many of the harms of alcohol without blanket prohibitions or other blunt policy instruments. Like many other types of crime, alcohol-related offenses are concentrated within a subset of places (only some bars, liquor stores, etc.) and people (problem drinkers, particularly young men).<sup>3</sup> Although not all of our proposals follow this model, many do: empowering small areas to prohibit alcohol, keeping alcohol away from probationers and parolees, and focusing police resources on problematic public drinking all are effective ways to target the alcohol/crime link. Our goal with our proposals is to provide evidence-based approaches that give cities another tool to prevent crime, reduce suffering, and save lives.

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## Alcohol Causes Crime

Decades of academic literature find a relationship between alcohol consumption or availability and crime.<sup>4</sup> The most persuasive of this literature is a substantial body of recent research that uses a variety of natural experiments to establish causality, showing not merely that alcohol consumption and crime coexist in the same places or among the same people, but that the former causes the latter.

Some of this research looks at how rates of criminal offending differ just above and below the legal drinking age. Even though underage drinking laws are widely broken, young adults do consume more alcohol after they reach the legal age than before. In one analysis of nationwide survey data, turning 21 years old was associated with significant increases in reporting past-year excessive drinking, including a 21% increase in recent drinking days.<sup>5</sup> That greater consumption translates into a nearly 6% greater arrest rate, driven by robberies, assaults, alcohol-related offenses, and nuisance crimes, an analysis of California data found.<sup>6</sup> A similar result occurred in Oregon, where a study based on all charges filed in the state between 1991 and 2012 found

that the same individual turning 21 is linked to an 11% increase in crime, driven by unpremeditated assault and alcohol-related nuisance crime.<sup>7</sup> Similar analyses show that turning 21 is linked to other harmful behaviors, such as increased mortality due to car crashes, alcohol poisoning, and suicide.<sup>8</sup> Even the odds of becoming a *victim* of crime, for both males and females, increase sharply at age 21.<sup>9</sup>

Another approach is to observe how exogenous policy changes that affect alcohol prices or availability change crime rates. Based on New York City data, one 2015 study observed how changes in the alcohol tax rate and the drinking age affect crime.<sup>10</sup> It found that after controlling for a host of other policy inputs, a 10% increase in alcohol consumption leads to a 1% increase in assault and a 2.9% increase in rape, a result “consistent with the notion that individuals under the influence may be both more aggressive and less mindful of consequences of their actions.” A more recent study used the fact that Citizens Bank Park, home to the Philadelphia Phillies baseball team, stops selling alcohol after the seventh inning. Extra innings—which give fans more time to sober up before the game ends—result in significant reductions in crime in the area immediately around the stadium, driven by a reduction in assaults.<sup>11</sup>

Violence is also disproportionately common in and around venues that serve alcohol. Data from the National Incident-Based Reporting System, for example, indicate that murders and assaults are two to three times more likely to occur in bars, relative to other places.<sup>12</sup> A quasi-experimental study of Chicago found that commercially zoned areas saw substantially higher rates of street robbery and assault. This effect was “almost totally driven by liquor stores, restaurants, and bars (particularly late-hour bars), with the sizable impact of bars largely concentrated between the hours of 2 a.m. and 6 a.m.; restaurants and liquor stores appear to drive crime throughout the day.”<sup>13</sup>

The tendency to commit crime after drinking is not evenly distributed across the population. In addition to the above-cited evidence on late-night bars, the alcohol/crime link is especially pronounced for young men. Data from Canada indicate that being just below the minimum legal drinking age significantly reduces both mortality and “extreme” drinking (more than 10 drinks a day for men and 8 for women) among young men, but not young women.<sup>14</sup>

Of course, it is not surprising that alcohol-fueled crimes are committed mainly by young men, who account for the lion’s share of criminal offenses in general. Men are also more likely to use alcohol heavily. As a recent review put it, “A large research literature shows that women consistently consume less alcohol than men, and they experience fewer social problems resulting from drinking than men.”<sup>15</sup> In the 2020 National Survey on Drug Use and Health, 24% of men reported past-month binge drinking, compared to 19% of women. Similarly, heavy drinking is more common among young adults: 30% of 18- to 25-year-olds reported binge drinking in the 2020 NSDUH, compared to 22% of those 50 to 64.<sup>16</sup>

It is likely that drinking, particularly heavy drinking, is concentrated even within younger and male groups. Criminologist Philip Cook has estimated that the top 20% or so of drinkers account for the large majority of alcohol consumed.<sup>17</sup> More recent consumer data (which, unlike Cook’s data, depend on verified receipts) indicate that the top 10% of alcohol-consuming households account for about 80% of purchases of beer, wine, and spirits, while the bottom half of households consume almost no alcoholic beverages.<sup>18</sup> It is likely that alcohol’s disinhibiting effects cause an especially large increase in criminal tendencies among the heaviest drinkers, whose misconduct can be most easily identified and deterred.

It is also the case that alcohol is more reliably connected to some kinds of offenses than others. Studies consistently find links between alcohol access and assault and nuisance crimes, with some evidence for effects on robberies and rapes. There is also evidence linking alcohol consumption to domestic violence.<sup>19</sup> Alcohol is likely involved in more crimes than just these—as of 2016, 30% of prison inmates had been drinking at the time of their offense.<sup>20</sup> And individual offenses of any variety, from murder to mail fraud, may of course be induced in specific cases by drinking. But the crimes that can reliably be linked to alcohol availability are those typical of a wild, drunken debauch: fighting/assault, vandalism, and drunk driving, with some more serious offenses along for the ride.

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## Why Is It Worth Targeting Alcohol?

The idea that alcohol should be regulated to control crime may strike readers as peculiar, even antiquated. Policing alcohol carries with it the whiff of Prohibition, the “great social and economic experiment” (as Herbert Hoover called it) that most Americans consider a failure.<sup>21</sup> Two in three Americans drink alcohol, and three in four believe its consumption is moral.<sup>22</sup> Americans spend roughly \$62 billion every year on alcohol, generating over \$7 billion in tax revenues for state and local governments.<sup>23</sup> Why should law enforcement bring more attention to bear on a popular and profitable commodity?

As we have already established, alcohol causes crime. An important corollary is that alcohol control can prevent crime proactively: if cities target the problematic production, distribution, or consumption of alcohol, they will stop some crimes before they happen.

Unlike the “reactive” model of policing that dominated in the mid- to late 20th century, modern public safety theory encourages proactive measures,<sup>24</sup> making prevention a key focus of policy. Prevention can include police patrol, but also other interventions, like the greening of public spaces and clearing of vacant lots.<sup>25</sup> We suggest that the management of alcohol-related offenses through regulatory and police mechanisms should similarly be considered a proactive public safety strategy.<sup>26</sup>

Such prevention would produce dramatic social benefits. In a 2006 review, Miller et al. estimated the social cost of harms associated with alcohol-attributable crimes, including medical costs, loss of work, criminal justice system costs, property damage, and quality of life.<sup>27</sup> They found that the costs of alcohol-attributable crimes in 1999 totaled \$83.7 billion, which is about \$142 billion in 2021 dollars.

In **TABLE 1**, we replicate Miller et al.'s methodology with updated data on the seven "index" offenses for 2020: homicide, assault, rape, robbery, larceny, burglary, and grand theft auto (GTA). We use Miller et al.'s estimates of the share of offenders who had been drinking at the time of their offense,<sup>28</sup> as well as 1996 estimates from a National Institute of Justice research report on the social costs of crime, inflation-adjusted to January 2020 dollars.<sup>29</sup>

Table 1

### Estimated Cost of Alcohol-Involved Crime, Inflation-Adjusted to 2020 Dollars

Crime	Count	Share Drunk	Cost per Offense	Total Cost
Homicide	24,576	42%	\$5,318,616.00	\$54,898,328,862.72
Assault	812,180	41%	\$17,005.00	\$5,662,559,569.00
Rape	319,950	39%	\$157,387.00	\$19,638,828,553.50
Robbery	437,260	33%	\$14,472.00	\$2,088,248,817.60
Larceny	9,798,110	19%	\$673.00	\$1,252,884,325.70
Burglary	1,210,640	36%	\$2,533.00	\$1,103,958,403.20
GTA	545,810	26%	\$6,693.00	\$949,807,645.80
<b>Total:</b>				<b>\$85,594,616,177.52</b>

Source: Miller et al., "Costs of Alcohol and Drug-Involved Crime"; Ted R. Miller, Mark A. Cohen, and Brian Wiersema, "Victim Costs and Consequences: A New Look"; National Center for Health Statistics; "Criminal Victimization, 2020," Bureau of Justice Statistics; "CPI Inflation Calculator," Bureau of Labor Statistics

Although the real total cost of these alcohol-involved crimes has declined—because fewer crimes are committed today than in the late 1990s—they still impose an estimated social cost of over \$85 billion. More than two-thirds of that cost comes from alcohol-involved homicides. The 1996 National Institute of Justice report also offers a conservative estimate of the statistical value of a human life, which the U.S. Department of Transportation currently sets at \$12 million.<sup>30</sup> Further, this analysis considers only the seven index crimes, not the whole universe of offenses. In short, failing to prevent these alcohol-involved offenses costs society enormously, in both money and lives.

Some may see, in addition to money and lives, a third good at stake: liberty. America's rejection of Prohibition, and its embrace of the morality of alcohol consumption mentioned above, evinces a social consensus that preserving liberty meaning letting adults make decisions about what they imbibe. Such concerns are reasonable, and can prompt extensive philosophical debate about how we can and should balance goods. But we think that those disputes are, in the context of contemporary alcohol policy for crime control, not necessary: there is not necessarily a trade-off between liberty and the harms alcohol crime imposes. This is because, as we allude to above and outline extensively below, alcohol-control policy can and should be targeted at those people and places which are most prone to alcohol-involved crime. In so doing, we reserve the liberty of the vast majority to drink responsibly. Policy can still be effective while primarily concerning itself with those whose alcohol consumption leads, reliably and predictably, to impingement on the liberty of others.

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## Limiting Access to Alcohol

The most straightforward way to reduce the harms of alcohol is simply to prohibit its sale or consumption, at least in certain places or at certain times. Many nations in which alcohol is generally legal, and some states in the U.S., nevertheless implement policies to make accessing alcohol more difficult. Such policies have been shown to reduce crime and, we argue, can be tailored to maximize benefits and minimize costs.

To control off-premises alcohol consumption, 13 U.S. states<sup>31</sup> and several Western nations give a government-run retail chain a monopoly on retail sales of all beverages above a certain alcohol content. For instance, in Sweden, the state-run Systembolaget chain has a legal monopoly on the sale of all alcoholic beverages that exceed 3.5% alcohol by volume;<sup>32</sup> Norway and Finland have similar systems.<sup>33</sup> In Ontario, similarly, a chain of stores run by the Liquor Control Board of Ontario monopolizes wine and liquor sales. (Beer can be sold by some other outlets, including several hundred grocery stores and a private chain, The Beer Store, owned by a consortium of brewers.)<sup>34</sup>

State-run monopolies give governments control over the locations of stores as well as sale prices and hours. Alcohol prices in Norway, Sweden, and Finland, for example, are some of Europe's highest and significantly higher than in neighboring Denmark, which does not have an alcohol monopoly.<sup>35</sup> Opening hours, especially on weekends, can also be controlled: for instance, Systembolaget stores in Sweden are commonly open only from 10 a.m. to 7 p.m. Monday to Friday and from 10 a.m. to 3 p.m. on Saturday, closing altogether on Sunday. Even in polities without full alcohol monopolies, of course, many of the effects—such as higher prices and shorter opening hours—can be replicated by separate regulations such as restrictions on hours and minimum unit pricing.

One study of the effect of alcohol access on crime comes from a natural experiment in Sweden in February 2000, when all Systembolaget stores in six of the nation's 21 counties began opening on Saturdays; previously, Systembolaget was closed on weekends. The study authors estimate that this change increased Saturday liquor consumption by 4% and increased total crimes on Saturdays in affected areas by a statistically significant 20.8% among men aged 20 through 49.<sup>36</sup> Crime increased across demographic groups, but especially for less educated and unemployed men, as well as those with a criminal conviction in the last five years. The researchers found no increase in crime among 15- to 19-year-old males, another sign that changes in alcohol policy drove crime changes: the minimum age to buy alcohol in Sweden is 20.

Another example of access restriction comes from São Paulo, Brazil. Between 2001 and 2004, 16 of the 39 municipalities in São Paulo's metropolitan area adopted laws mandating closing hours for bars. Analysis taking advantage of the rolling implementation of these laws found that implementation resulted in a 10.7% reduction in homicides and a roughly 10% reduction in batteries.<sup>37</sup>

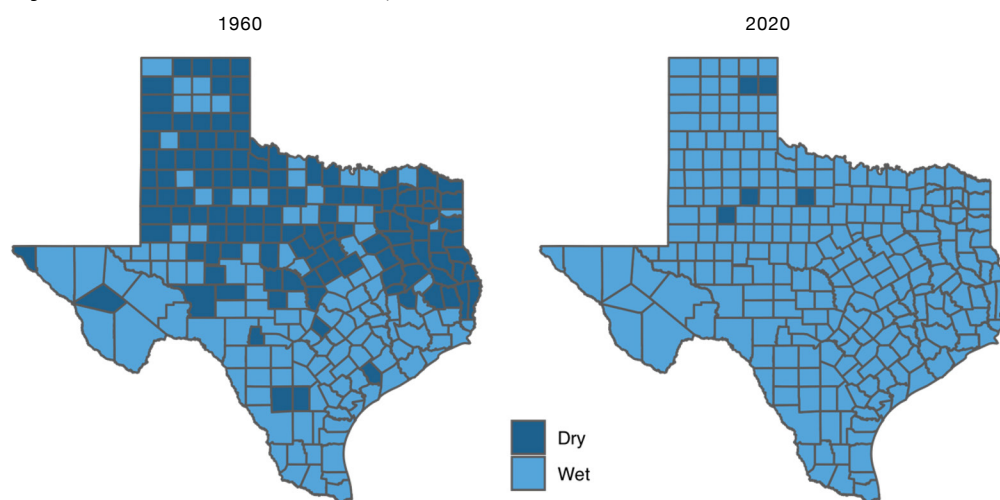
Evidence from the U.S. similarly points to the effectiveness of access control in curtailing crime. In Kansas, on-premises alcohol consumption was strictly prohibited (with some limited exceptions) through the 1970s but liberalized county by county in the 1980s through the 2000s. A paper published in 2016 estimated that liberalization increased total crime by roughly one-quarter across multiple model specifications. County data on the actual number of drinking establishments opened after alcohol liberalization suggest that “elasticity of violent crime with respect to drinking establishments is between 0.35 and 0.48,” meaning that a 1% increase in the number of drinking establishments is associated with a 0.35%–0.48% increase in violent

crimes.<sup>38</sup> The authors also note that there was no evidence of “spillover” effects, by which dry counties had lower crime rates because their most violence-prone residents traveled to nearby wet counties, rather than because their residents committed fewer crimes overall.

Texas offers another opportunity to analyze how the end of Prohibition affected crime. In 1960, half of Texas’s 254 counties were dry, more even than in 1940.<sup>39</sup> As of 2020, however, just five remained dry, with the other 122 counties or jurisdictions within them having voted to permit the sale of at least some alcoholic beverages. **FIGURE 1** shows the drastic change.

Figure 1

### Dry and Wet Counties in Texas, 1960 vs. 2020



Source: Texas Alcoholic Beverage Commission

We take advantage of this staggered rollout to estimate the effect of “going wet” on crime in a county using a difference-in-difference design. (For further discussion of our methods and results, consult the Appendix.) Under our preferred specification, we find that a county moving from dry to wet, in whole or part, is associated with an average increase of approximately 3.23 crimes per 1,000 population per year, a large increase relative to an average of 29.4 crimes per 1,000 population across all counties/years. In an event study analysis, we find that these effects increase over time, rising to 4–6 crimes per 1,000 in the decades following implementation.

This result likely underestimates the true effect of going wet on crime, as we consider counties to be wet if even one jurisdiction—a city or a justice of the peace precinct<sup>40</sup>—within them permits the sale of any alcoholic beverage, even if only beer or only wine. We suspect the growing effect is driven by wet counties getting wetter over time—that is, both issuing more licenses and further liberalizing liquor laws.

Prohibition does not necessarily need to be imposed on a geographic unit as large as a county: “focused prohibition” may allow municipalities to reap the benefits of prohibition without its costs. Some states permit cities, or even smaller units, to vote themselves dry or wet. In April 2010, for example, a single precinct in Louisville, Kentucky, voted itself wet under the state’s “highly original” liquor laws.<sup>41</sup> Such laws allow microtargeting of liquor control, letting areas with problematic liquor distributors control them without imposing a blanket ban on the rest of the city.

Another jurisdiction where such policies have been regularly used is Chicago. Under the Illinois Liquor Control Act of 1934, individual voting precincts in Illinois cities, villages, or incorporated towns can vote to prohibit the sale of alcohol within their precinct or at a particular street address within their precinct.<sup>42</sup> Moratoria, imposed by voters as well as aldermen and the Chicago Liquor

Control Commission, were an important part of longtime former mayor Richard M. Daley's aggressive restrictions on liquor licensing, which were "informed by his vision of the city as an orderly, clean, family-friendly place," according to one Chicago journalist.<sup>43</sup>

Such referenda became increasingly popular at the height of disorder in Chicago in the 1990s as a way for residents to reclaim their streets from public intoxication. The Daley administration (1989 to 2011) promoted the "vote dry" movement, running conferences and seminars on using referenda and distributing promotional materials.<sup>44</sup> The city's cable channel even regularly aired a program on the referenda titled "Bad Liquor Establishments: What You Can Do!"<sup>45</sup>

According to veteran crime researcher Wesley Skogan, the mere threat of a local liquor control ordinance could stop irresponsible behavior by liquor vendors: "Community groups are well informed about the mechanics of these referenda, and they constitute such a threat that they have facilitated the informal but effective resolution of many problems with liquor establishments."<sup>46</sup> In 1992, for example, residents of the 41st precinct of Ward 43 used the threat of a vote dry referendum to get local bars and restaurants to hire additional security and a litter patrol.<sup>47</sup>

More research is needed to ascertain the effect of such referenda on alcohol crime more generally.<sup>48</sup> It is possible that voting one precinct dry simply leads to spillover into another precinct as undesirables relocate to a different watering hole. On the other hand, if bars or liquor stores increase crime in their immediate vicinity, it is possible that a vote dry referendum system could reduce crime without spillovers. There is some reason to be sanguine about the spillover risk, however: in the case of one Swedish municipality-level intervention, which trained bar staff to avoid intoxication that could lead to violence, municipality implementation of the program actually reduced violent assaults in adjacent municipalities by 5.8%, suggesting that safer bars actually reduce the number of violent drinkers rather than merely displacing them to neighboring areas.<sup>49</sup>

The main argument for "focused prohibition" is political feasibility. For many readers and policymakers, the idea of prohibiting alcohol across their county or city seems retrograde and unrealistic. Empowering community members to revoke liquor licenses, however, permits the targeting of "bad" liquor distributors while leaving "good" distributors in place. Such an approach may be a tailored solution to the social costs of excessive alcohol consumption.

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## Taxation

Another way to discourage alcohol consumption is to target the sale or marketing of alcohol. Most directly, policy can make alcohol more expensive: supply and demand apply to alcohol just as to other consumer goods. As economist Philip Cook puts it, "Alcohol abuse is a multifaceted problem, requiring a diverse portfolio of programs and policies. ... But there is one policy instrument that is helpful in all these domains: alcohol prices. With higher prices come reduced rates of alcohol abuse and improvements in public health and safety."<sup>50</sup>

Research confirms that higher prices mean less consumption. One 2010 review reported 38 studies that estimated price elasticity of alcohol consumption, usually estimated from state- or country-level panel data.<sup>51</sup> Results of these studies "were quite consistent across beverage type, with median elasticities ranging from  $-0.50$  for beer to  $-0.79$  for spirits." Another review of 112 studies reported an elasticity of  $-0.46$  for beer,  $-0.69$  for wine, and  $-0.80$  for spirits.<sup>52</sup> (An elasticity of  $-0.5$  means that a 1% increase in price creates a 0.5% decrease in consumption.)

The effect of higher alcohol prices on problematic and excessive drinking—as indicated, for instance, by crime or diseases such as cirrhosis—are stronger still. A meta-analysis by David Roodman for the Open Philanthropy Project, which looked just at quasi-experimental studies, estimates a 1%–3% reduction in deaths from alcohol-caused diseases for each 1% increase in the price of alcohol.<sup>53</sup>

One quasi-experimental study linking alcohol taxes to crime examined a hike in the U.S. federal excise tax in 1991 that raised post-tax prices by approximately 6%.<sup>54</sup> With controls for preexisting long-term trends in each state, it found that states with preexisting alcohol consumption had a strong positive correlation with decreases in all injury deaths, homicides, suicides, and traffic deaths following the 1991 tax. Roodman’s meta-analysis extends these results with a “falsification test,” showing that the same methodology gives null results if years other than 1991 are used as a dividing point, suggesting that the findings are legitimate rather than the result of confounding with preexisting trends.

The simplest way to raise alcohol prices is just to tax alcohol more aggressively. Alcohol taxes are much lower in real terms than in the relatively recent past, having largely been eroded by inflation. In 1951, the federal government taxed distilled spirits at \$10.50 per proof gallon (i.e., per half-gallon of pure alcohol at 50 degrees Fahrenheit); this rate was raised to \$12.50 in 1985 and to its current rate of \$13.50 (with lower rates for smaller producers) in 1991.<sup>55</sup> By comparison, if the 1951 rate had been pegged to inflation, alcohol would today be taxed at \$117.28 per proof gallon; the 1991 rate, adjusted for inflation, would today be \$28.46 per proof gallon. State alcohol taxes are also generally quite low: as of 2019, only 11 states had tax rates higher than \$10 per gallon.<sup>56</sup> Federal and state governments could therefore raise alcohol taxes severalfold without exceeding levels seen in living memory.

There are two objections often raised to alcohol and other so-called “sin taxes.” The first is an ideological suspicion of taxes in general; the second, a worry that such taxes are regressive.

To the first objection, we argue that alcohol taxes are better than other forms of taxation, insofar as they impose costs on socially harmful behavior. Such an arrangement is highly preferable to taxes on earnings, such as capital gains or income taxes, which directly penalize productive behavior. Indeed, policymakers might garner political support for an increase in alcohol taxes by promising to put revenue toward cuts in income, property, or sales taxes (although they should note that excise tax revenues sometimes fall short of projections).<sup>57</sup> The reduced crime that results from higher alcohol taxes will also create benefits for public finances, even aside from the tax revenue itself.

The second objection, that per-drink alcohol taxes are regressive, is based on the argument that lower-income households spend a greater portion of their income on alcohol taxes than upper-income households.<sup>58</sup> But the underlying story is more complicated. An analysis of private household consumption data finds that much of the alcohol tax burden is born by roughly 7% of the population who are “heavy drinkers.” These households are in fact older, wealthier, and more educated than average—in stark contrast to the primary payers of sin taxes on cigarettes and soda. Even holding level of consumption constant, heavy-drinking high-income households pay more in alcohol excise tax than heavy-drinking low-income households, reflecting larger household size and consumption of more spirits.<sup>59</sup>

This concentration of burden reflects the fact that alcohol excise tax (and indeed all sin taxes) incidence falls not so much on the rich or the poor as groups in themselves, but on heavy drinkers (or consumers of other sin goods). As the aforementioned analysis notes, “Household demographics (including income) explain only a tiny fraction of the heterogeneity of sin-tax burdens across households, and income is extremely weakly correlated with tax burden ... [There is] far more heterogeneity within income groups in sin good purchases than across them, and the median

household at all income levels faces little or no exposure to sin taxes.<sup>60</sup> Rather, it is the heavy drinkers within any given income band that pay most of the tax. Because of this, it is plausible that the redistributive benefits of added alcohol taxes (either in transfer payments or other taxes alleviated) would outweigh the personal cost for all but a small share of drinkers, even before accounting for the benefits from reducing problematic consumers' drain on the public fisc.<sup>61</sup>

In other words, increasing alcohol taxes, even if only to catch up with inflation, would be another policy that targets problematic drinkers while benefiting the rest of the public, who could both enjoy a reduced net tax burden and benefit from greater social peace and less crime.

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## Sanctions

Direct punishments of problematic or illegal drinking, if designed correctly, can also have significant impacts on alcohol-related crimes. Abstention from alcohol, for instance, is a common requirement for parole or part of a punishment for crimes such as drunken driving. Inconsistent enforcement, however, has often undermined the effectiveness of such a requirement, but newer programs that ensure better compliance can yield considerable results.

The model for such a program is 24/7 Sobriety, which was first instituted in South Dakota but has since spread to other states. The program follows a model of consistent but relatively mild punishment: program participants must take a Breathalyzer test twice a day, and any failed or missed test is punished by a night or two in jail.<sup>62</sup> This approach follows the contemporary criminological argument that greater deterrent gains can currently be made by increasing the certainty, rather than the severity, of punishment.<sup>63</sup>

Analyses of 24/7 Sobriety consistently show significant reductions in crime, as well as other ancillary benefits. A 2013 county-level analysis found that counties that adopted 24/7 Sobriety saw reductions of 12% in repeat DUI arrests and 9% in domestic violence arrests countywide (that is, not merely among participants).<sup>64</sup> Reduction in domestic violence was especially striking given that only 5% of 24/7 Sobriety participants as of the time of the study were required to participate because of domestic violence; by far the most common reason for participation was drunk driving. Another evaluation found that 24/7 Sobriety produced a significant reduction of 4.2% in adult all-cause mortality, with the strongest reductions being deaths from injury and from circulatory disorders.<sup>65</sup>

Other policies aimed at reducing DUIs have also had spillover effects into other categories of crime. For instance, a 2005 paper examined the effects of zero tolerance laws targeting underage drinking, which were enacted state by state between 1983 and 1998, and which typically mandated driver's license suspensions for any driver under age 21 with a detectable blood alcohol content. These policies reduced heavy underage drinking and a number of categories of "nuisance crime," including 4.5% fewer arrests of 18- to 20-year-old males for vandalism, compared to no change among ages above 21.<sup>66</sup>

Policymakers can also support more aggressive DUI enforcement, which appears to have positive externalities. The state of Utah, for example, recently became the first in the nation to lower the DUI blood alcohol content limit to 0.05. The reduction was associated with a decline in motor vehicle fatalities, even as Utahns drove more miles and arrests fell, indicating the effect was driven more by deterrence than by incapacitation.<sup>67</sup> Another approach to DUI reduction is the use of alcohol interlocks, Breathalyzers that attach to car ignition systems and require drivers to blow an acceptable blood alcohol level before they can start their car. Research finds that interlocks reduce drunk driving by 75% while they are installed, though the effect falls to a nonsignificant 7% after removal.<sup>68</sup>

These findings suggest several ways that a different regime of criminal sanctions could reduce alcohol-involved crime. Most clearly, jurisdictions can adapt the 24/7 Sobriety model to their own parole and probation populations. Requirements to abstain from alcohol or participate in programs such as 24/7 Sobriety could be imposed more frequently, not just in response to DUI infractions but also for crimes such as battery or unruly behavior that frequently involve alcohol. Furthermore, policymakers should consider more aggressive DUI enforcement: imposing zero tolerance license revocation, lowering the maximum Blood Alcohol Concentration (BAC) for driving, and using alcohol interlocks to deter drunk driving. The evidence above suggests that these measures may reduce crime more generally.

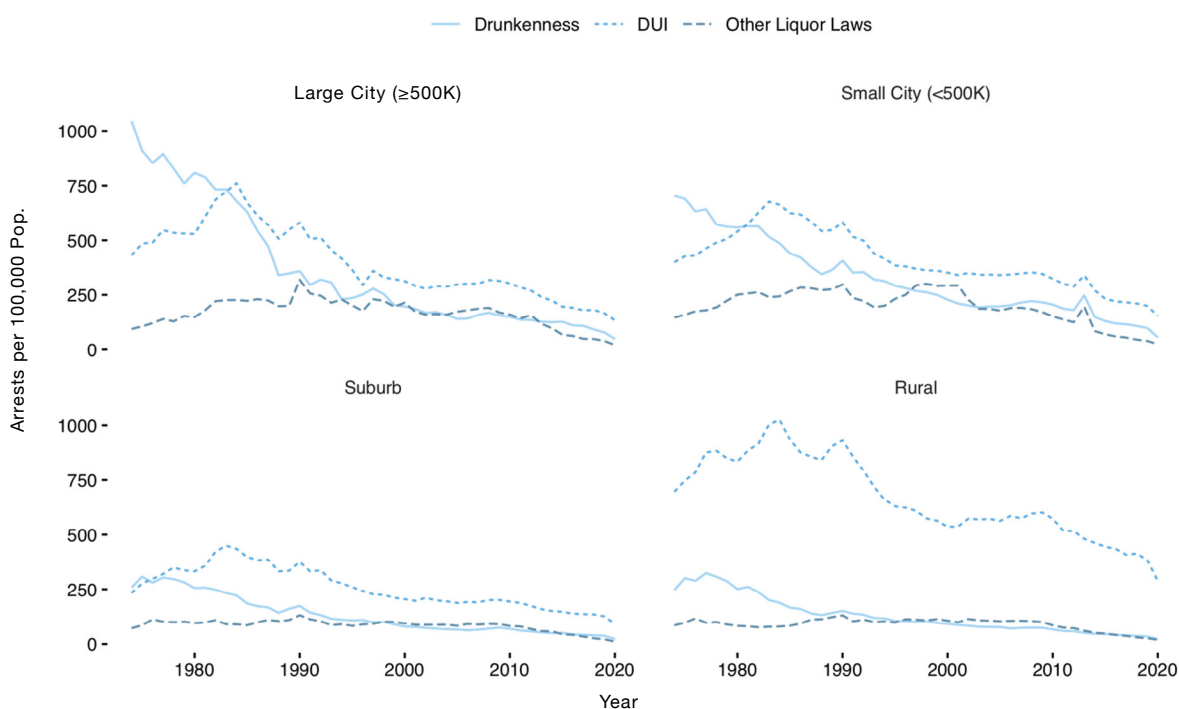
## Enforcement

Beyond these more complicated approaches, municipal leaders have a simpler option: more policing of alcohol production, sales, and consumption.

Since the 1970s, rates of arrest for alcohol-related crimes reported to the FBI have plummeted across type of offense and level of urbanization, as shown in **FIGURE 2**. In large cities—those with a population of half a million or more as of 2020—the arrest rate for public intoxication fell from over 1,000 per 100,000 population in 1974 to 49 per 100,000 in 2020. Similar declines are apparent in small cities and suburban jurisdictions and for other liquor law violations (offenses like illegal production, possession, or sale of alcohol; open container laws; and public use laws).<sup>69</sup> Even reported drunk driving arrests have fallen steadily since the peak of enforcement following the founding of Mothers Against Drunk Driving in 1980.

FIGURE 2

### Rates of Alcohol-Related Arrests, 1974–2020, by Offense Type and 2020 Urbanization



Source: FBI Uniform Crime Reporting arrests by age, sex, and race; data courtesy of Jacob Kaplan, Princeton School of Public and International Affairs, and the Inter-university Consortium for Political and Social Research

The decline from the 1970s to the 1990s, particularly in drunkenness arrests, stems from changes in alcohol consumption, associated behavior, and the policy environment. Per-capita alcohol consumption fell from 2.76 per gallons per person per year in 1981 to 2.15 in 1997, a 22% drop.<sup>70</sup> That decline represented a retreat from the peak of alcohol consumption, which had risen steadily since the early 1960s. Excessive alcohol consumption, in fact, contributed to the 1960s crisis of homelessness.<sup>71</sup> In part because of the link between alcohol abuse and homelessness, many jurisdictions began decriminalizing public intoxication in the late 1960s and early 1970s, converting public drunkenness from a criminal justice problem to a public health problem.<sup>72</sup> That policy shift likely in turn further reduced arrests.<sup>73</sup> Similarly, the decline in drunk driving arrests may reflect real success at stigmatizing inebriated driving, rather than a change in enforcement.

Actual alcohol consumption, however, has risen since the mid-1990s. Between 1998 and 2019, per-capita alcohol consumption rose by 11%, or about a quarter of a gallon per person per year.<sup>74</sup> Alcohol-induced deaths have risen even more dramatically, rising from just shy of 20,000 in 1999 to nearly 50,000 in 2020.<sup>75</sup> By itself, 2020 actually had 10,000 more alcohol-induced deaths than 2019, corresponding to a dramatic increase in alcohol consumption during the Covid-19 pandemic and initial shutdown.<sup>76</sup>

Despite the increase in consumption, liquor law enforcement has continued to decline. Between 1998 and 2019, drunkenness arrest rates fell 69% in large cities and 52% in small cities; arrests for other liquor law violations have fallen by even larger percentages. Responding in part to the onset of the Covid-19 pandemic, many cities relaxed open container laws further in 2020, with some considering a permanent change.<sup>77</sup> District attorneys from New York to Baltimore to Los Angeles have indicated that they will not prosecute open container and other liquor law violations, similarly enshrining “soft on liquor” into law.<sup>78</sup>

The underenforcement of liquor laws extends to the sale of alcohol to minors, legal prohibitions on which are frequently flouted. A 1995 study of 295 counties in four states found that alcohol regulators in a quarter of the counties took no actions against retailers for selling to minors in the period studied.<sup>79</sup> In 2012, Baltimore prohibited liquor stores from selling non-alcohol products to minors (which would attract minors to illegally purchase liquor).<sup>80</sup> A 2020 study that dispatched underage resident advisors to attempt purchases found that two in three stores did not comply with the law, with proximity to schools predicting greater noncompliance.<sup>81</sup> Nonenforcement of prohibition on sales to minors is particularly troubling, given the evidence that alcohol-involved crime is disproportionately the habit of young men: circumventing drinking-age laws almost certainly causes crime among minors.

Enforcing laws against public intoxication, open container possession, sale of alcohol to minors, and other alcohol-related offenses need not entail severe justice. However, police should work to deter public consumption through citation or arrest, and they should coordinate with civilian liquor control authorities to shut down stores, bars, and other places that violate liquor laws, particularly sale to minors. Prosecutors should not categorically exclude prosecutions of liquor law violations, particularly if prosecuting a chronic public drinker means diversion to treatment, probation under a 24/7 Sobriety-like arrangement, or detention of a repeat and potentially dangerous offender. Local and state authorities should consider strengthening prohibitions on public intoxication, rather than relaxing them. Such measures are not just a matter of enforcing norms of public decency; they are an essential part of a strategy for stopping crime before it happens.

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## Conclusion

Alcohol use in the U.S. and most Western nations is so culturally ingrained that it is easy to lose sight of the vast harms—high addictiveness, severe and direct harms to users’ health, and stimulation of reckless or violent behavior—that it creates. As Mark Kleiman observed in his seminal book on drug policy *Against Excess: Drug Policy for Results*, “If alcohol were a newly developed ‘designer drug’ just emerging from an underground chemist’s lab, its intoxicating and addictive properties would lead to its scheduling under the Controlled Substances Act. As a carcinogen even at low doses, it could not be approved as a routine preventive medicine, and it has no current use in clinical medicine, so it would be classified in Schedule I: that is, completely banned except for tightly regulated research.”<sup>82</sup>

Such a policy for alcohol stands well outside the realm of political plausibility. However, many changes can at least reduce the harms that alcohol poses to public safety. Public policy can target the most problematic places where and times when alcohol leads to crime and the people whose drinking is most likely to result in crime. In particular, policy should:

- Empower local communities to shut down problematic bars and liquor stores, either by specific license revocation or prohibition across an entire geographic area, from a city to a single block. Such “focused prohibition” may yield all the benefits of liquor control while minimizing its costs.
- Restrict the hours during which liquor stores can stay open, especially on weekends, when excessive drinking and concomitant crime are much higher.
- Raise alcohol taxes or at least keep them in line with inflation. Revenues can be redirected to minimizing the harms of alcohol consumption—funding treatment, supporting victims of domestic abuse and DUI, etc.—or offset by net-neutral reductions in income or property taxes.
- For problematic alcohol users on probation or parole, follow the 24/7 Sobriety model of swift, certain, and fair punishment to deter alcohol consumption. Additionally, lower BAC limits, implement zero tolerance policies, and consider alcohol interlocks to reduce both the harms of drunk driving and plausibly other alcohol-involved crimes.
- Enforce existing alcohol laws more strictly, including laws against public intoxication and underage drinking, rather than relaxing them.

Amid a nationwide increase in violent crime, citizens across the country are worried about public safety.<sup>83</sup> We see the above policy approaches as reasonable ways to address these fears and to control crime before it happens.

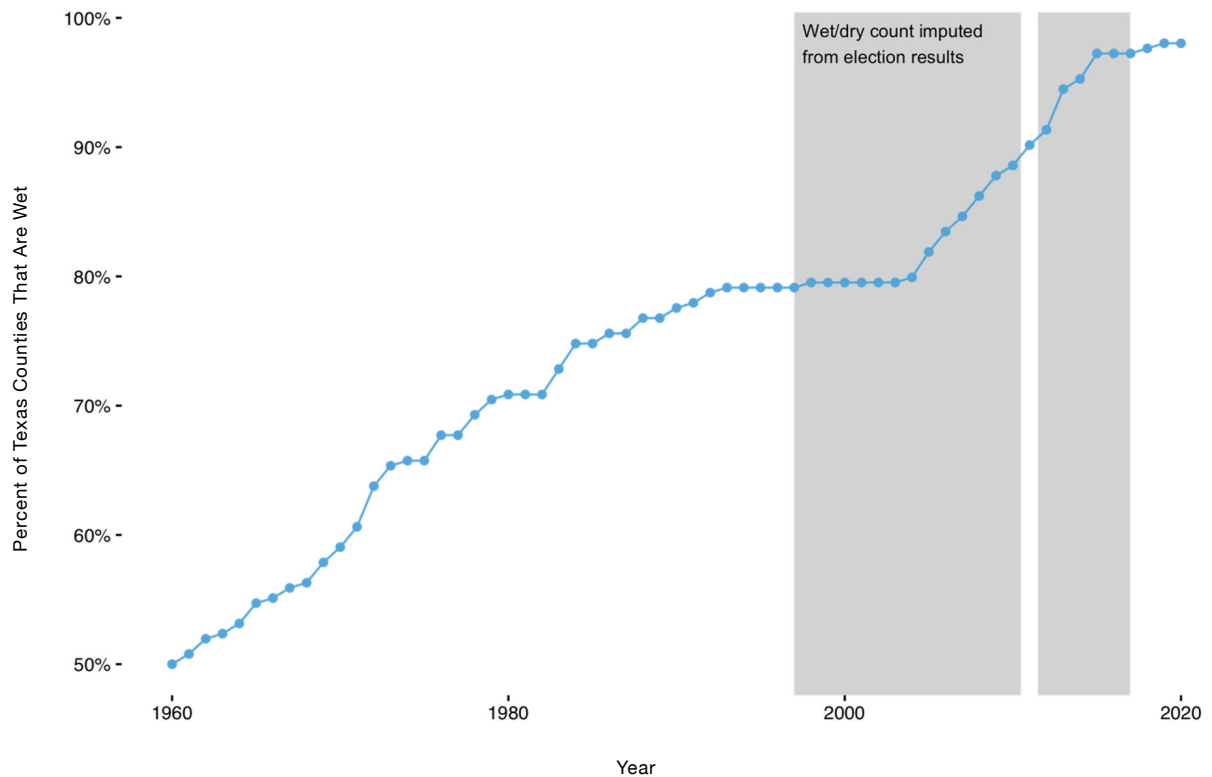
## Statistical Appendix: Wet Counties in Texas

### Data

We obtained data on the wet versus dry status of counties from the annual reports of the Texas Alcoholic Beverage Commission.<sup>84</sup> The commission published annual reports on counties' status between 1937 and 2020. In particular, TABC published information on whether counties were wet or dry between 1960 and 1996. Thereafter, between 1997 and 2017 (except for 2011), the commission only published election results. We therefore infer that a county had gone wet in those years if it was previously dry and at least one jurisdiction therein voted to go wet, as measured by the aforementioned election results. Between 2018 and 2020, TABC again published information on the wet/dry status of each county. We find our imputed dry-to-wet dates for the missing years plausible both because they match the lists published in 2011 and 2018 and because there is no obvious discontinuity in the dry-to-wet trend around the time when TABC stopped publishing status tables. We illustrate this trend in **FIGURE A-1**.

Figure A-1

### Trend in Texas Counties Going Wet, 1960–2020



While we use a binary indicator of whether a county is totally dry or not, counties can have various wet statuses, including permitting the sale of drinks only on or off premises; permitting the sale of only beer, only wine, or only beverages below a certain alcohol concentration; and even prohibiting the sale of mixed drinks. A county is counted as wet, by both us and TABC, if any jurisdiction—that is, a city or justice of the peace precinct—within it has voted to be wet. We do this primarily because TABC’s published tables do not provide information on degree of wetness of a county, as well as because it provides us with a lower bound estimate of our effect: if there is an effect when only one jurisdiction within one county is wet, then there should be a larger effect when more of it is wet. Future research could track the change in status of smaller jurisdictions, based on option elections, which are also published by TABC; we chose not to clean this much larger data set.

We join these data with counts of crimes reported to the FBI’s Uniform Crime Reporting system, as collected and cleaned by Jacob Kaplan at the Princeton School of Public and International Affairs.<sup>85</sup> We aggregate counts of crimes and population at the county level.

We address several absences in the data. In 29 counties, data are missing for population and total number of crimes in 1962; in an additional county, the same numbers are missing for 1964. We resolve this issue by imputing population and total number of crimes as the average of the preceding and subsequent years. More complicated, a number of counties report zero crimes in at least one year. As these zeroes are disproportionately concentrated in early years and are often adjoined by years in which more than zero crimes are reported, we assume this is a non-reporting error. We therefore drop those county-year pairs in which the crime rate is zero.

Some police departments operate across county lines, making county-level aggregation challenging.<sup>86</sup> To address the county-line issue, we drop rows in which a population is reported for more than one county (i.e., agencies that cross county lines). This step removes 96 agencies out of 1,132, or 8%, but also means removing some large departments, including Dallas, Houston, Odessa, Corpus Christi, Fort Worth, and San Antonio. We show below that assigning the omitted police departments to the county associated with their address does not significantly alter our results. We also omit the Texas Department of Public Safety, which operates statewide.

More challengingly, many police departments do not report crime data for all months. Such underreporting limits the usefulness of county-level aggregates, which may be missing large swaths of crime, with no obviously effective strategy for imputation.<sup>87</sup> We use three different approaches to attempt to address this concern. First, in our main specification we omit department-years in which fewer than 10 months of data are reported. Second, we show that our results are robust to the exclusion or inclusion of agencies with different levels of non-reporting, such that our estimate remains roughly constant, and in all but the most restrictive specification significant, regardless of what cutoff we use for inclusion. This suggests that underreporting or our exclusion of underreporting departments is not driving our effect, assuming that missing data is random. Third, we attempt an imputation of missing months by filling missing cells with the average of non-missing cells in each agency-year multiplied by a seasonal coefficient calculated for each month across all years in each agency. This approach, in other words, estimates missing cells as the average of non-missing cells accounting for seasonal variation. As we show below, rerunning our model with these data produces a similar estimate of our outcome of interest.

We should, however, provide the caveat that even this imputation approach leaves open the problem of “unknown unknowns”—there are missing data for agencies, years, and months in the crime reporting. The true value of these data cells could dramatically skew our estimate. This

is a basic problem of county-level Uniform Crime Reporting data, and while we try to address it, we recognize that it limits our conclusions. As such, we caution that our results are only as good as the county-level data on which they are based.

## Methods

We estimate effects using the approach of Brantly Callaway, of the University of Georgia, and Pedro H.C. Sant'Anna, of Vanderbilt University, comparing wet counties against not-yet-wet counties across years.<sup>88</sup> Specifically, we use Callaway and Sant'Anna's difference-in-differences package in R, which estimates group-time average treatment effects for counties that went wet in the same year, then aggregate those estimates to recover the average treatment effect on the treated (ATT).<sup>89</sup>

Our outcome measure is the total number of crimes in the county per 1,000 population. We do not subdivide crimes by type because many counties frequently do not report experiencing many types of crime. We attribute this to their small, rural nature, but the large number of zeroes for any given crime type makes it hard to distinguish an effect of going wet at the category level.

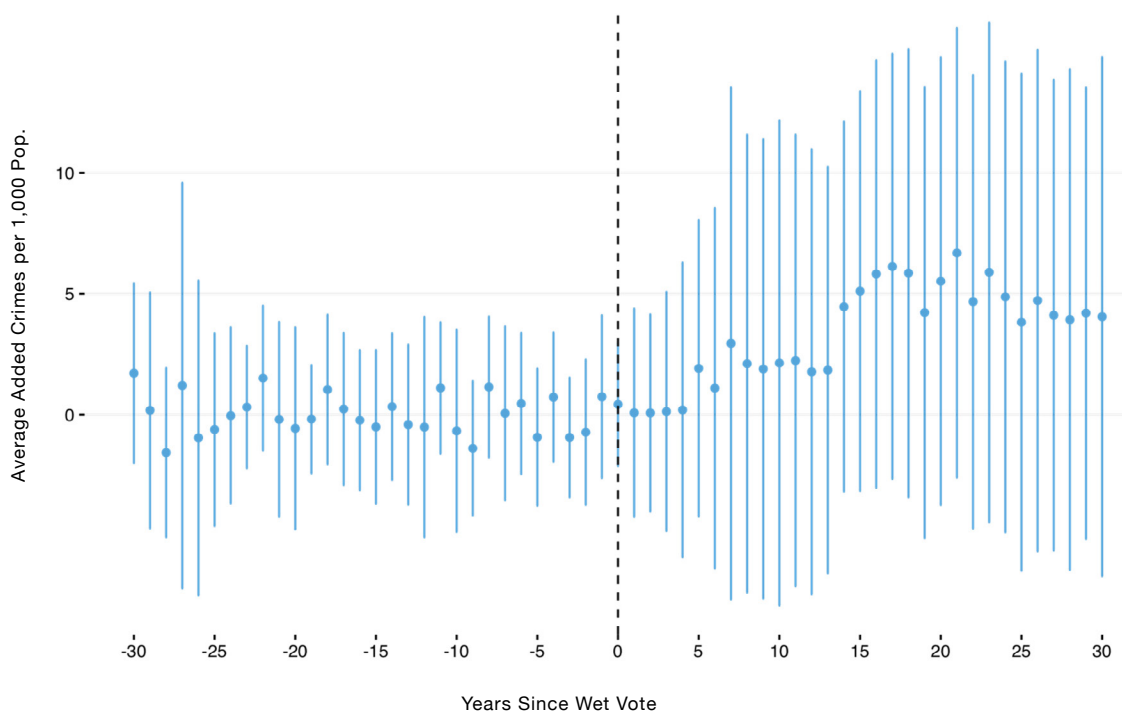
## Results

Using our simple aggregation, we estimate that the legalization of alcohol consumption anywhere in a county is associated with 3.23 (standard error [SE] 1.84,  $p < 0.1$ ) added crimes per 1,000 people per year. These effects correspond to roughly 11% of the average crime rate across all county-years, 29.4 per 1,000 people, and to 15% of the average crime rate in dry counties, 20.7 per 1,000 people.

Using Callaway and Sant'Anna's dynamic aggregation specification, we estimate average treatment effects for counties in each unit of time since a wet vote, illustrated in **FIGURE A-2**. This event study shows that the effects of going wet are not instantaneous, but increase over time.

Figure A-2

### Effect of Going Wet on Crime Over Time



In fact, the largest effects in our event study, on the order of 4–6 added crimes per 1,000 population per year, do not come until years after a county first goes wet. As discussed below, we think that this steadily growing effect is attributable to the propagation of liquor availability once a jurisdiction goes wet. A single vote does not mean alcohol is immediately available, and both production and consumption rise as it becomes so. That the effect grows over time, however, suggests that the true effect of alcohol on crime is larger than the simple estimate offered above.

As mentioned above, we drop certain agencies because they are “multi-county” and thus difficult to aggregate to any one county. Removing this constraint and aggregating agencies to counties based on the county of their reported address produce a similar result: the average effect of going wet is 3.25 (SE 1.87,  $p < 0.1$ ) added crimes per 1,000 people per year.

Also, as mentioned above, to address underreporting, we excluded agency-years that report fewer than 10 months of crime data. In **TABLE A-1**, we document how our estimates change depending on the shifting of that threshold. The impact of including underreporting agency-years is relatively small—the average treatment effect on the treated (ATT) including all agency-years is 2.99 crimes per 1,000 people, whereas the average treatment effect including only agency-years that report 12 months is 3.1 crimes per 1,000 people. The effect remains significant ( $p < 0.1$ ) at all levels of underreporting except the strictest standard (omitting agency-years that fail to report even one month of data). The robustness of the finding to these different specifications suggests that the effect is not driven by underreporting more generally.

Table A-1

#### Estimated Effects of Wet Vote on Crime and of Varying Cutoff for Agency Underreporting

Include Agencies With At Least ___ Months	ATT	SE	Signif. at $p < 0.1$
0	2.99	1.64	Y
1	3.32	1.71	Y
2	3.47	1.77	Y
3	3.21	1.6	Y
4	3.4	1.65	Y
5	3.47	1.69	Y
6	3.15	1.81	Y
7	3.25	1.67	Y
8	3.25	1.8	Y
9	3.37	1.79	Y
10	3.23	1.75	Y
11	3.17	1.87	Y
12	3.1	2.03	N

In an additional attempt to address the underreporting problem, as discussed above, we impute missing cells based on an average of non-missing cells in the same agency-year, multiplied by a monthly coefficient estimated across the agency for all years, in order to account for seasonality. We use these data to estimate new county-level crime counts, omitting those agency-years in which all 12 months of data are missing (and so imputation is impossible with our method).

Our results with this approach are essentially unchanged: going wet is associated with an average increase of 3.55 (SE 1.72,  $p < 0.1$ ) crimes per 1,000 population per year. Event study analysis shows a similar pattern of steady increase over the duration of treatment, as reflected in Figure A-2. In other words, to the extent that this imputation approach approximates the true value of missing cells, it substantively confirms our original estimate and overall finding.

## **Discussion**

Our estimate of the effect of going wet is limited in a number of ways. Consequently, we first and foremost caution readers to see our efforts here merely as a replication of others' insights, rather than decisive evidence of the impact of a policy. In particular, unlike a previous study,<sup>90</sup> we do not have access to data on actual liquor licenses issued in a given county. As reiterated above, a county is assigned as "wet" in our data if even one city or justice of the peace precinct votes to permit the sale of any kind of alcohol whatsoever. Therefore, our estimates report only the average effect of the sale of any liquor on crime relative to those county-years in which no liquor is sold.

We suspect that this fact is captured in the event study analysis above, in which the effect of going wet on crime increases as counties get further away from the switch. This, we hypothesize, is attributable both to continuing liberalization of county-level liquor laws (e.g., once beer sales are permitted, liquor sales follow) and to the fact that licensing increases over time: once a county permits the sale of liquor, bars and stores must acquire licenses to sell, a number that likely grows over time. In addition, it may be driven by changing demand: a problem-drinking population, responsible for a large share of alcohol-related crime, can only emerge over time as liquor becomes more available. We therefore suspect that our estimate is a lower bound and that the true effect of alcohol sales on crime is larger than our estimate.

That said, there is much room for further research in this area. In addition to publishing information on the wet/dry status of counties, the TABC publishes historical information on individual jurisdictions' referenda, providing detailed information on when and where specific types of sales were permitted or banned. This rich source of evidence could provide better information on the effect of specific alcohol legalization policies on crime. In addition, we do not consider spillover effects in our analysis. Do dry counties induce people to drive to other counties and commit crimes there? Do they lead to more drunk driving? These are questions reserved for future research.

In sum, we consider the above both a minor contribution to the evidence that alcohol contributes to crime and, a proof of concept with the data from the TABC. Further research opportunities, for us and others, abound.

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## Acknowledgments

We thank Dr. Ian Adams, assistant professor in the University of South Carolina's Department of Criminology & Criminal Justice, for providing extremely helpful feedback on this section of our paper.

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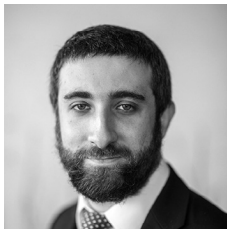
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## Endnotes

- <sup>1</sup> U.S. Department of Health and Human Services, “10th Special Report to the U.S. Congress on Alcohol and Health,” June 2000, 54.
- <sup>2</sup> Substance Abuse and Mental Health Services Administration (SAMHSA), “Key Substance Use and Mental Health Indicators in the United States: Results from the 2020 National Survey on Drug Use and Health,” October 2021, 9; A.K. Rose and T. Duka, “The Influence of Alcohol on Basic Motoric and Cognitive Disinhibition,” *Alcohol and Alcoholism* 42, no. 6 (Sept. 18, 2007): 544–51; Ted R. Miller et al., “Costs of Alcohol and Drug-Involved Crime,” *Prevention Science* 7, no. 4 (July 15, 2006): 333–42.
- <sup>3</sup> For a more general discussion of crime concentration, see David Weisburd, “The Law of Crime Concentration and the Criminology of Place,” *Criminology* 53, no. 2 (May 2015): 133–57; Natalie N. Martinez et al., “Ravenous Wolves Revisited: A Systematic Review of Offending Concentration,” *Crime Science* 6 (2017).
- <sup>4</sup> Examples of the older “correlational” literature include: Jacky M. Jennings et al., “Neighborhood Alcohol Outlets and the Association with Violent Crime in One Mid-Atlantic City: The Implications for Zoning Policy,” *Journal of Urban Health* 91, no. 1 (Feb. 1, 2014): 62–71; D.M. Gorman et al., “Spatial Dynamics of Alcohol Availability, Neighborhood Structure and Violent Crime,” *Journal of Studies on Alcohol* 62, no. 5 (July 2001): 628–36; Bruce L. Benson and Paul R. Zimmerman, “Alcohol and Rape: An Economics-of-Crime Perspective,” SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, Feb. 1, 2007); Steve Moffatt et al., “Liquor Licensing Enforcement and Assaults on Licensed Premises,” Issue Paper, Crime and Justice Statistics Bureau Brief (Sydney: New South Wales Bureau of Crime Statistics and Research, October 2009).
- <sup>5</sup> Christopher Carpenter and Carlos Dobkin, “The Effect of Alcohol Consumption on Mortality: Regression Discontinuity Evidence from the Minimum Drinking Age,” *American Economic Journal: Applied Economics* 1, no. 1 (January 2009): 164–82.
- <sup>6</sup> Christopher Carpenter and Carlos Dobkin, “The Minimum Legal Drinking Age and Crime,” *The Review of Economics and Statistics* 97, no. 2 (May 1, 2015).
- <sup>7</sup> Benjamin Hansen and Glen R. Waddell, “Legal Access to Alcohol and Criminality,” *Journal of Health Economics* 57 (January 2018): 277–89.
- <sup>8</sup> Carpenter and Dobkin, “The Effect of Alcohol Consumption on Mortality: Regression Discontinuity Evidence from the Minimum Drinking Age.”
- <sup>9</sup> Aaron Chalfin, Benjamin Hansen, and Rachel Ryley, “The Minimum Legal Drinking Age and Crime Victimization,” National Bureau of Economic Research working paper 26051 (July 2019).
- <sup>10</sup> Hope Corman and Naci Mocan, “Alcohol Consumption, Deterrence and Crime in New York City,” *Journal of Labor Research* 36 (March 13, 2015): 103–28.
- <sup>11</sup> Jonathan Klick and John MacDonald, “Sobering Up After the Seventh Inning: Alcohol and Crime Around the Ballpark,” *Faculty Scholarship at Penn Law* (April 2, 2020).

- <sup>12</sup> Dennis M. Savard et al., “Violent Crime in Bars: A Quantitative Analysis,” *Journal of Applied Security Research* 14, no. 4 (Oct. 2, 2019): 369–89.
- <sup>13</sup> Tate Twinam, “Danger Zone: Land Use and the Geography of Neighborhood Crime,” *Journal of Urban Economics* 100 (July 2017): 104–19.
- <sup>14</sup> Christopher S. Carpenter, Carlos Dobkin, and Casey Warman, “The Mechanisms of Alcohol Control,” *Journal of Human Resources* 51, no. 2 (2016): 328–56.
- <sup>15</sup> Richard W. Wilsnack et al., “Gender Differences in Binge Drinking,” *Alcohol Research: Current Reviews* 39, no. 1 (January 2018): 57–76.
- <sup>16</sup> SAMHSA Data Archive, “National Survey on Drug Use and Health, 2020,” Public-Use Data Analysis System, accessed March 23, 2022.
- <sup>17</sup> Philip J. Cook, *Paying the Tab: The Costs and Benefits of Alcohol Control* (Princeton, NJ: Princeton University Press, 2007); Christopher Ingraham, “Measuring America’s Drinking Habit Is Tricky—Here’s How to Do It,” *Washington Post*, Oct. 13, 2014. The exact shape of the distribution has been disputed (see Rob Cullen, “No, 10% of Adults Don’t Have More Than Ten Drinks a Day (but They Do Have a Lot),” *WhatIfPost* (blog), Oct. 14, 2014, for a discussion), but even after adjusting his data, Cook finds the sort of shape associated with power-law or Pareto distributed phenomena.
- <sup>18</sup> Christopher Conlon, Nirupama L. Rao, and Yinan Wang, “Who Pays Sin Taxes? Understanding the Overlapping Burdens of Corrective Taxes,” National Bureau of Economic Research working paper 29393 (October 2021).
- <sup>19</sup> Aaron Chalfin, Shooshan Danagoulian, and Monica Deza, “Covid-19 Has Strengthened the Relationship Between Alcohol Consumption and Domestic Violence,” National Bureau of Economic Research working paper 28523 (March 2021).
- <sup>20</sup> Laura M. Maruschak, Jennifer Bronson, and Mariel Alper, “Survey of Prison Inmates, 2016: Alcohol and Drug Use and Treatment Reported by Prisoners,” U.S. Department of Justice, Bureau of Justice Statistics (July 2021).
- <sup>21</sup> Although Prohibition’s actual record, in terms of social benefit, is more debatable than the popular consensus against it would suggest, see e.g. Jack S. Blocker, “Did Prohibition Really Work? Alcohol Prohibition as a Public Health Innovation,” *American Journal of Public Health* 96, no. 2 (February 2006): 233–43; Angela K. Dills and Jeffrey K. Miron, “Alcohol Prohibition and Cirrhosis,” National Bureau of Economic Research working paper 9681 (May 2003); Dara Lee Luca, Emily Owens, and Gunjan Sharma, “Can Alcohol Prohibition Reduce Violence Against Women?” *American Economic Review* 105, no. 5 (May 2015): 625–29.
- <sup>22</sup> Megan Brennan, “U.S. Alcohol Consumption on Low End of Recent Readings,” Gallup, Aug. 19, 2021; Jeffrey M. Jones, “Most in U.S. Say Consuming Alcohol, Marijuana Morally OK,” Gallup, June 4, 2018.
- <sup>23</sup> “Table 1203. Income Before Taxes: Shares of Annual Aggregate Expenditures and Sources of Income, Consumer Expenditure Surveys, 2020,” Bureau of Labor Statistics, September 2021; “State and Local Alcohol Tax Revenue,” Tax Policy Center, Aug. 26, 2021.

- <sup>24</sup> David Weisburd and Malay Kiran Majmundar, eds., “Proactive Policing: Effects on Crime and Communities,” National Academies of Sciences, Engineering, Medicine consensus report (Washington, DC: National Academies Press, 2018): 29–30.
- <sup>25</sup> For further discussion, see Charles Fain Lehman, “Policing Without the Police? A Review of the Evidence,” Manhattan Institute for Policy Research, April 12, 2021.
- <sup>26</sup> Indeed, alcohol control is already routinely cited as part of “non-police” approaches to crime control; see e.g. Charles Branas et al., “Reducing Violence Without Police: A Review of Research Evidence,” John Jay College of Criminal Justice Research and Evaluation Center, November 2020. Here, however, we see a role for police in alcohol control.
- <sup>27</sup> Miller et al., “Costs of Alcohol and Drug-Involved Crime.”
- <sup>28</sup> It may be the case that the share of offenders who were drinking at the time of their offense has changed since the surveys these numbers were based on were taken in the 1990s. If so, though, we suspect only a small decline. In 1996, 36% of prisoners had been drinking at the time of their offense; in 2016, the figure had fallen just 6 percentage points, to 30%. Lawrence Greenfeld, “Alcohol and Crime: An Analysis of National Data on the Prevalence of Alcohol Involvement in Crime,” U.S. Dept. of Justice, Bureau of Justice Statistics, April 1998; Maruschak, Bronson, and Alper, “Alcohol and Drug Use and Treatment Reported by Prisoners.”
- <sup>29</sup> Ted R. Miller, Mark A. Cohen, and Brian Wiersema, “Victim Costs and Consequences: A New Look,” Research Report, National Institute of Justice, January 1996.
- <sup>30</sup> “Departmental Guidance on Valuation of a Statistical Life in Economic Analysis,” U.S. Dept. of Transportation, March 4, 2022.
- <sup>31</sup> “Control State Directory and Info,” National Alcohol Beverage Control Association, accessed March 23, 2022.
- <sup>32</sup> “Domestic Alcohol Policy—Sweden—Systembolaget,” *Concealed Wines* (blog).
- <sup>33</sup> David Nikel, “Alcohol in Norway: Regulations, Tax Rates & Where to Buy It,” *Life in Norway* (blog), July 29, 2020; Thomas Karlsson et al., “The Road to the Alcohol Act 2018 in Finland: A Conflict Between Public Health Objectives and Neoliberal Goals,” *Health Policy* 124, no. 1 (2020): 1–6.
- <sup>34</sup> “About the LCBO,” LCBO (blog); City Desk, “Beer Store Says It Will Open Up Ownership to All Ontario-Based Brewers,” *Toronto Sun*, Jan. 7, 2015.
- <sup>35</sup> Brian Schæfer Dreyer, “The Cost of Living in Denmark,” *Routes North* (blog), Aug. 21, 2019; “How Alcohol Prices Vary Across the EU,” Eurostat, accessed March 23, 2022.
- <sup>36</sup> Hans Grönqvist and Susan Niknami, “Alcohol Availability and Crime: Lessons from Liberalized Weekend Sales Restrictions,” *Journal of Urban Economics* 81 (May 1, 2014): 77–84.
- <sup>37</sup> Ciro Biderman, João M.P. De Mello, and Alexandre Schneider, “Dry Laws and Homicides: Evidence from the São Paulo Metropolitan Area,” *Economic Journal* 120, no. 543 (March 1, 2010): 157–82.
- <sup>38</sup> D. Mark Anderson, Benjamin Crost, and Daniel I. Rees, “Wet Laws, Drinking Establishments and Violent Crime,” *Economic Journal* 128, no. 611 (June 1, 2018): 1333–66.

- <sup>39</sup> “Annual Report,” Texas Alcoholic Beverage Commission, 1940.
- <sup>40</sup> Local-level courts that oversee misdemeanor cases. There are between one and eight per county. For further context, see “Texas Justice of the Peace Courts,” *Ballotpedia* (blog), accessed March 23, 2022.
- <sup>41</sup> “Dry America in the 21st Century,” National Alcohol Beverage Control Association, June 2016.
- <sup>42</sup> “Illinois Liquor Control Act of 1934,” 235 Illinois Compiled Statutes 5 § Art. IX (1934).
- <sup>43</sup> Steve Rhodes, “The Dry Season,” *Chicago*, July 2003.
- <sup>44</sup> Dirk Johnson, “Temperance Movement Grows in Chicago, a Precinct at a Time,” *New York Times*, April 19, 1998.
- <sup>45</sup> Wesley G. Skogan, *Police and Community in Chicago: A Tale of Three Cities* (New York: Oxford University Press, 2009), 187–90.
- <sup>46</sup> Wesley G. Skogan, “Broken Windows: Why—and How—we Should Take Them Seriously,” *Criminology and Public Policy* 7, no. 2 (2008): 195–201.
- <sup>47</sup> Rhodes, “The Dry Season.”
- <sup>48</sup> We pursued such research in drafting this paper, but were stymied by the boundaries of Chicago precincts, which we were led to believe shift with some frequency, making assigning crimes to precincts impossible without detailed precinct boundary data.
- <sup>49</sup> Lars Brännström, Björn Trolldal, and Martin Menke, “Spatial Spillover Effects of a Community Action Programme Targeting On-Licensed Premises on Violent Assaults: Evidence from a Natural Experiment,” *Journal of Epidemiology and Community Health* 70, no. 3 (2016): 226–230.
- <sup>50</sup> Philip J. Cook, “A Free Lunch,” *Journal of Drug Policy Analysis* 1, no. 1 (2008).
- <sup>51</sup> Randy W. Elder et al., “The Effectiveness of Tax Policy Interventions for Reducing Excessive Alcohol Consumption and Related Harms,” *American Journal of Preventive Medicine* 38, no. 2 (February 2010): 217–29.
- <sup>52</sup> Alexander C. Wagenaar, Matthew J. Salois, and Kelli A. Komro, “Effects of Beverage Alcohol Price and Tax Levels on Drinking: A Meta-Analysis of 1003 Estimates from 112 Studies,” *Addiction* 104, no. 2 (February 2009): 179–90.
- <sup>53</sup> David Roodman, “The Impacts of Alcohol Taxes: A Replication Review,” Open Philanthropy Project, July 2, 2015.
- <sup>54</sup> Philip J. Cook and Christine Piette Durrance, “The Virtuous Tax: Lifesaving and Crime-Prevention Effects of the 1991 Federal Alcohol-Tax Increase,” *Journal of Health Economics* 32, no. 1 (Jan. 1, 2013): 261–67.
- <sup>55</sup> U.S. Dept. of the Treasury, Alcohol and Tobacco Tax and Trade Bureau, “Historical Tax Rates,” Dec. 23, 2013.

- <sup>56</sup> Janelle Cammenga, “How High Are Distilled Spirits Taxes in Your State?” *Tax Foundation* (blog), June 19, 2019.
- <sup>57</sup> Ulrik Boesen and Tom VanAntwerp, “How Stable Is Cigarette Tax Revenue?” *Tax Foundation* (blog), May 3, 2021; Jason Grotto, Sandhya Kambhampati, and Dan Mihalopoulos, “How Illinois Bet on Video Gambling—and Lost,” *ProPublica*, Jan. 16, 2019.
- <sup>58</sup> Josh Barro, “Alcohol Taxes Are Strongly Regressive,” *National Review Online*, March 25, 2010.
- <sup>59</sup> Conlon, Rao, and Wang, “Who Pays Sin Taxes?”
- <sup>60</sup> *Ibid.*
- <sup>61</sup> Cook, “A Free Lunch.”
- <sup>62</sup> Mark A.R. Kleiman, “This Inexpensive Anti-Drunk Driving Program Could Save 100,000 Lives a Year,” *Vox*, Feb. 9, 2016.
- <sup>63</sup> Daniel S. Nagin, “Deterrence in the Twenty-First Century,” *Crime and Justice* 42 (August 2013): 199–263.
- <sup>64</sup> Beau Kilmer et al., “Efficacy of Frequent Monitoring with Swift, Certain, and Modest Sanctions for Violations: Insights from South Dakota’s 24/7 Sobriety Project,” *American Journal of Public Health* 103, no. 1 (January 2013): e37–43.
- <sup>65</sup> Nancy Nicosia, Beau Kilmer, and Paul Heaton, “Can a Criminal Justice Alcohol Abstinence Programme with Swift, Certain, and Modest Sanctions (24/7 Sobriety) Reduce Population Mortality? A Retrospective Observational Study,” *The Lancet Psychiatry* 3, no. 3 (March 2016): 226–32.
- <sup>66</sup> Christopher Carpenter, “Heavy Alcohol Use and Crime: Evidence from Underage Drunk-Driving Laws,” *Journal of Law and Economics* 50, no. 3 (August 2007): 539–57.
- <sup>67</sup> National Highway Traffic Safety Administration Office of Behavioral Safety Research, “Evaluation of Utah’s .05 BAC Per Se Law [Traffic Tech],” Feb. 1, 2022.
- <sup>68</sup> Ricardo Nieuwkamp, Heike Martensen, and Uta Meesmann, “Alcohol Interlock,” European Road Safety Decision Support System, July 2017.
- <sup>69</sup> Jacob Kaplan, “Uniform Crime Reporting (UCR) Program Data: A Practitioner’s Guide,” accessed March 23, 2022.
- <sup>70</sup> Megan E. Slater and Hillel R. Alpert, “Apparent per Capita Alcohol Consumption: National, State, and Regional Trends, 1977–2019,” Surveillance Report (National Institute on Alcohol Abuse and Alcoholism, April 2021).
- <sup>71</sup> Christopher Jencks, *The Homeless* (Cambridge, MA: Harvard University Press, 1995): 41. As Jencks writes, “Until the mid-1980s, the very poor had relied largely on alcohol to forget their trouble. . . . When interviewers did ask, the homeless were far more likely to report alcohol than drug problems.” Jencks does add, “Alcoholism has been a significant cause of homelessness for generations, but I found no good evidence that it became more common during the 1980s, either in the nation as a whole or among the very poor. Surveys of the homeless conducted in the early 1980s typically concluded that about a third

of them had serious alcohol problems. Surveys of skid-row residents earlier in the century usually came up with similar figures.” But of course, we can say that alcohol consumption had been rising for decades, per Jencks; even if the proportion of homeless people in their predicament by virtue of alcoholism remained constant, one would expect that more drinking would still lead to more homelessness.

- <sup>72</sup> S. George Clarke, “Public Intoxication and Criminal Justice,” *Journal of Drug Issues* 5, no. 3 (July 1, 1975): 220–32; Stephen S. Manos, “Anatomy of a Revolution: Law, Change, and the Public Inebriate,” *Journal of Drug Issues* 5, no. 3 (July 1, 1975): 207–19.
- <sup>73</sup> This did not, however, always lead to a reduction of police engagement with the publicly drunk; see L.R. Daggett and E.J. Rolde, “Decriminalization of Drunkenness: Effects on the Work of Suburban Police,” *Journal of Studies on Alcohol* 41, no. 9 (September 1980): 819–28.
- <sup>74</sup> Slater and Alpert, “Apparent per Capita Alcohol Consumption: National, State, and Regional Trends, 1977–2019.”
- <sup>75</sup> Centers for Disease Control and Prevention, National Center for Health Statistics, “Multiple Cause of Death 1999–2020 on CDC WONDER,” 2021.
- <sup>76</sup> Aaron M. White et al., “Alcohol-Related Deaths During the Covid-19 Pandemic,” *JAMA* 327, no. 17 (March 18, 2022): 1704–06.
- <sup>77</sup> Kara McIntyre, “Open Container Law Made Permanent, Time Restrictions Relaxed,” *Patch* (blog), Nov. 16, 2021; Marianna Brady, “Coronavirus: How the Pandemic Is Relaxing US Drinking Laws,” BBC News, May 15, 2020, sec. US & Canada; Luis Ferré-Sadurní, “To-Go Drinks Had Plenty of Fans in New York. Just Not the Right Ones,” *New York Times*, Jan. 31, 2022.
- <sup>78</sup> Juliana Battaglia, “Baltimore Will No Longer Prosecute Drug Possession, Prostitution and Other Low-Level Offenses,” CNN, March 27, 2021; ABC7.com Staff, “New DA Gascon to Decline Prosecution on Range of Low-Level Crimes,” *ABC7 Los Angeles*, Dec. 10, 2020; Jillian Jorgensen, “You Won’t Get Arrested for Public Boozing (or Urinating) in Manhattan Anymore,” *Observer* (blog), March 1, 2016.
- <sup>79</sup> Alexander C. Wagenaar and Mark Wolfson, “Deterring Sales and Provision of Alcohol to Minors: A Study of Enforcement in 295 Counties in Four States,” *Public Health Reports* 110, no. 4 (1995): 419–27.
- <sup>80</sup> Luke Broadwater, “New City Law to Prevent Liquor Stores from Selling Snacks, Other Goods to Kids,” *Baltimore Sun*, June 26, 2012.
- <sup>81</sup> Adam J. Milam et al., “Evaluation of a Local Ordinance to Prevent Any Underage Purchases in Liquor Stores: The Need for Enforcement,” *Journal of Studies on Alcohol and Drugs* 82, no. 2 (April 4, 2021): 219–27.
- <sup>82</sup> Mark A. Kleiman, *Against Excess: Drug Policy for Results* (New York, NY: Basic Books, 1992): 206.
- <sup>83</sup> Victoria Balara, “Fox Business Poll: Higher Crime Rates Across the US a Large Concern for Voters,” *Fox Business*, Dec. 16, 2021.

- <sup>84</sup> “Historic Wet/Dry County Information,” Texas Alcoholic Beverage Commission, accessed March 23, 2022.
- <sup>85</sup> Jacob Kaplan, “Uniform Crime Reporting Program Data: Offenses Known and Clearances by Arrest (Return A), 1960-2020,” Inter-university Consortium for Political and Social Research (ICPSR) (Sept. 27, 2021).
- <sup>86</sup> Kaplan, “Uniform Crime Reporting (UCR) Program Data: A Practitioner’s Guide.”
- <sup>87</sup> Ibid.
- <sup>88</sup> Brantly Callaway and Pedro H.C. Sant’Anna, “Difference-in-Differences with Multiple Time Periods,” *Journal of Econometrics* 225, no. 2 (Dec. 1, 2021): 200–30.
- <sup>89</sup> Brantly Callaway and Pedro H.C. Sant’Anna, “DID: Treatment Effects with Multiple Periods and Groups,” version 2.1.1, Jan. 27, 2022.
- <sup>90</sup> Anderson, Crost, and Rees, “Wet Laws, Drinking Establishments and Violent Crime.”