Going Deeper than a Proof Rating:

A Case for Regulating Beverage Types Based on Social Impact

I. SUMMARY

Moderate and responsible alcohol consumption provides a substantial benefit to society. Moderate drinking reduces the risk of cardiovascular disease, ¹ enhances social experiences, ² and generates about \$12 billion in annual tax revenue. ³ Drinking is also tied to religious practices, annual traditions, and other rituals. In any case, prohibiting alcohol has proven to be a disastrous failure. ⁴ On the other hand, religious leaders, governments, and political movements have been discouraging excess consumption for centuries, in order to mitigate the harms of excessive alcohol consumption. ⁵ Binge drinking is often followed by violence, drunk driving, and health problems. ⁷

Based on historical lessons, a balanced approach of partial limitations to alcohol access has become the modern public policy. Allowing alcohol consumption prevents a criminal element from swelling around a black market, while making alcohol purchases more expensive and difficult prevents over-consumption. For example, increasing the drinking age to 21 has been hailed as a success in reducing accidents from drunk driving.⁸

One way regulators attempt to strike a balance between prohibition and excess is by regulating each type of alcoholic beverage differently. These regulations may favor a person or business that purchases one type of beverage, while being a detriment to a person or business that purchases another. Such regulations can pass constitutional challenges, so long as there is a reasonable basis that the regulations serve a compelling public interest and do not arbitrarily favor some businesses or groups over others. 9 10

In most cases, state statutes have more stringent limitations for beverages that have a higher concentration of alcohol. Beer sales may be mostly unfettered by regulation, while spirits are subject to more rules. There are good public policy reasons to regulate each beverage-type differently, because they are each associated with a different scope and type of harm to society. However, many regulations may not sensibly be aligned with public interest concerns and may be vulnerable to constitutional challenges.

For example, favoring beer over liquor based on alcohol density is arbitrary. Beer drinkers on average consume more ethyl alcohol than spirits drinkers in a single sitting, even though doing so requires consuming a much larger volume.¹¹ Beer drinkers are also more likely to drive drunk,¹² commit violence,¹³ or experience health problems¹⁴ than those that consume wine or spirits. Current regulations appear to be based on a misconception that alcohol density correlates to the social harms caused by the type of beverage.

Regulators can better optimize trade-offs between excess restrictions and excess consumption with a more informed approach that is based on quality research. For example, research suggests that many states can allow wine to be sold in more retail locations without a corresponding increase in alcohol-related harms to their community. In fact, wine-related violence is extraordinarily rare and most wine consumption is moderate. ¹⁵ In contrast, malt liquor beer is currently the cheapest way to get intoxicated and has the strongest correlation to harm of all beverage types. ¹⁶ ¹⁷ Increasing the price of malt liquor beer through taxes could save lives by curbing excess consumption on a currently underpriced drink-category.

II. LESSONS FROM HISTORY: A HISTORICAL REVIEW

Irish political theorist and philosopher Edmund Burke once said, "Those who don't know history are doomed to repeat it." To rationally discuss the future of regulatory policies, it is only sensible to start by borrowing from the wisdom, experiences, and failures or successes of those who came before us.

Alcoholic beverages played a role in many of history's most significant developments.

About 10,000 years ago brewing prompted nomads to settle in villages around grain farms.

Workers building the pyramids in ancient Egypt were rationed more than a gallon of beer a day for calories to fuel their work.

In ancient Athens, drinking wine was considered a civic duty.

It is believed that the *Mayflower* had more beer than water on board, and landed at Plymouth Rock after running out.

When the Internal Revenue Service taxed spirits to pay off debts from the revolution, the result was an armed conflict involving thirteen thousand soldiers.

The need for moderation has also been a prominent issue for centuries.⁵ Organized religion plays a prominent role in encouraging moderation.²³ Plato, Jesus and Paul the Apostle are a few of the figures believed to have promoted drinking alcohol, while advocating for moderation.²⁴ Like many religions, the Christian church of early America taught that alcohol was a gift from god, but abusing it was a sin.²⁵ The Jewish Talmud asks followers to take responsibility for their conduct when drunk and Islam takes the stance that alcohol is forbidden by the Our'an.²⁶

There is also a long history of government temperance programs. In 1116 an official government proclamation in China said that alcohol was prescribed by the gods, but made it clear that moderation was important.²⁷ In ancient India alcohol was considered medicine if used in moderation, but poisonous in excess.²⁸ Activity in colonial America revolved around churches

and taverns, but in some colonies citizens were whipped or put in prison for getting too intoxicated.²⁹

During the industrialization era, drunkenness conflicted with new labor needs.³⁰ Alcohol also became increasingly associated with social problems, such as crime, poverty, and morality.³¹ Temperance advocacy groups became increasingly influential and many states created local regulations, often focused on limiting access to spirits.³²

The United States was one of many countries that prohibited alcohol for a time.

Production, importation, and transportation of alcohol was against the law in America from 1920 to 1933. Data suggests that prohibition dramatically reduced alcohol consumption by making it more difficult and expensive to obtain.³³ The reduction in alcohol consumption is estimated to have contributed \$6 billion to the American economy by improving productivity.³⁴ Alcohol-related crimes and deaths also declined.³⁵

Still, prohibition is "believed widely to have been a misguided and failed social experiment that . . . created a large black market for alcohol supplied by organized crime." Protestants and temperance lobbyists convinced congress that prohibiting alcohol would virtually eliminate social problems like crime and poverty. This made the failure of prohibition especially dramatic in the context of lofty expectations. Prohibition is often cited by alcohol, marijuana, tobacco, and steroid industry lobbyists as an example of how criminalizing drug use gives rise to a criminal element. Over several decades following the end of prohibition, alcohol consumption steadily rebounded.

While outlawing alcohol created more problems than it fixed, the impact excessive alcohol consumption has on society continues to be troubling. Excessive consumption is associated with 2.5 million deaths annually.⁴¹ Alcohol is the most common drug found in

toxicology reports related to crime scenes.⁴² Alcohol abuse is estimated to cost the United States economy \$223.5 billion per year, or \$746 per person.⁴³ On the other hand, an increasing body of scientific research shows that moderate alcohol consumption has many health benefits.⁴⁴ Additionally, prohibition has already "demonstrated once and for all the futility of attempts to legislate morality."⁴⁵

A review of the historical record reveals a clear theme. Prohibition and excessive alcohol consumption are both harmful to society, but partial limitations have been unabashedly successful. For example, increasing the minimum drinking age to 21 substantially reduced drunk driving accidents, without giving rise to a substantial criminal element. Taxing alcoholic beverages to increase prices reduces consumption. For centuries community leaders have praised the consumption of alcohol, while advocating for moderation, and this is still the public policy that guides alcohol regulation today.

According to lawyer Jenny Grunke, "Experience tells us that a regulated alcohol beverage industry is both necessary and desirable. The difficulty is agreeing on what is the best-balanced approach to regulation and how to modernize current laws that no longer make sense in the 21st century."

II. CURRENT STATE OF REGULATIONS

Current regulations divide alcohol into three categories: beer, wine, and spirits. To date, States have not recognized sugary, carbonated, alcoholic beverages called Alcopops as a separate category. Alcopops were introduced in the 1990s and have become popular among adolescents.⁴⁹ Since these beverages are linked to drinking behaviors distinct from other beverage-types,⁵⁰ regulators should consider whether it needs to be regulated differently than other beverage types.

Although individual States are given substantial discretion in how to regulate the three types of alcoholic beverages, the Federal government is also involved in some ways. The Food and Drug Administration regulates purity and cleanliness of alcoholic beverages.⁵¹ The Federal government collects more in taxes from alcohol than the States.⁵² The States however impose regulations on what times of the day or week alcohol can be sold and on local advertising.⁵³ 18 States have created government-run monopolies called ABC stores, while the remaining 32 grant licenses to private retailers.⁵⁴ States with government-run stores may control the number of liquor stores allowed in a certain area, or make other controls to reduce the abundance of alcohol.⁵⁵

Now is a critical time to review current alcohol regulations. About one-third of the price of alcoholic beverages goes to taxes, but the overall cost of alcoholic drinks to the consumer is declining.⁵⁶ A reduction in the cost of alcoholic beverages can be expected to cause an increase in consumption, and a resulting increase in alcohol-related problems like violent crimes.⁵⁷

There is a perceived lack of interest by State regulators to use government policies to curb alcohol-related problems.⁵⁸ The ABC boards were first created to pass regulations that would reduce excessive drinking and the criminal element that spawned during prohibition.⁵⁹ However, many regulators today are focused on economic regulation, taxes, and commercial issues facing the industry.⁶⁰ In New Zealand, liberalizing many of the very policies U.S. States control, such as the availability of liquor in grocery stores and hours of sale, correlated to an increase in the number of alcohol-related harms.⁶¹ U.S. State regulators are in the best position to help curb excessive drinking, while avoiding the drawbacks of prohibition.

In most states, the types of alcoholic beverages that are regulated are categorized based on alcohol density.⁶² On average across the country, beer is manufactured with about 4.5 percent

alcohol, wine with 11.6 percent, and spirits with 37 percent.⁶³ In Texas, beer is defined as being less than 4 percent alcohol by volume,⁶⁴ and in Alabama wine is defined as being less than 24 percent alcohol.⁶⁵ In Michigan, any wine with more than 21 percent alcohol is considered a spirit.⁶⁶ In Oklahoma, which has the strictest regulations of all U.S. states, beverages are regulated based on whether they have more than, or less than, 3.2 percent alcohol.⁶⁷ In Mississippi, beer with less than 8 percent alcohol and wine with less than 5 percent are not considered "alcoholic beverages" for the purposes of regulation.⁶⁸ In Louisiana malt beverages with under 3.2% alcohol are considered not to be "intoxicating liquors" and are not subject to the same regulations as other beverages.⁶⁹

The intensity of regulation for each beverage type generally correlates to alcohol density. As a result, beer is much less heavily regulated than more alcohol-rich spirits. For example, in Kentucky, beer is the only type of alcoholic beverage a bar patron can put on a tab. ⁷⁰ In most of North America, beer has the lowest tax rate of all three beverage types. ⁷¹ Many States allow beer and wine to be sold in grocery stores, whereas higher proof spirits are not. Meanwhile, initiatives to allow higher-proof wine to be sold in grocery stores have been met with strong resistance in many states. ⁷² Sex-themed commercials for beer have been accepted by the public, while similar ads for spirits have attracted sharp public criticism. ⁷³ In Idaho, only the state can sell spirits through the State Liquor Division, while any licensed business can sell beer and wine. ⁷⁴ In Minnesota, most breweries cannot tell consumers the retailers their products can be found at and cannot advertise the alcohol density of their product. ⁷⁵ Meanwhile, spirits manufacturers must disclose the alcohol content of their products in advertisements. ⁷⁶

Some regulations at some states run contrary to this trend. In Minnesota,

breweries cannot sell beer at the point of production, but wineries can.⁷⁷ Regulations in Missouri do not take alcohol density into account.⁷⁸

The sale of alcohol is subject to any restrictions passed by state legislatures, except where those statutes violate constitutional rights.⁷⁹ For example, regulations may be challenged under Article 14 of the United States Constitution, which grants every person "equal protection of the laws." Specifically, statutes cannot "discriminate arbitrarily in the regulation of the industry." Id. Regulations must be "reasonable and impartial" and "accomplish the purpose for which it was created without undue discrimination." The regulations cannot have no "reasonable basis" and therefore be "purely arbitrary."

For alcohol regulations to be sensible and defendable from constitutional challenges, those regulations should reduce alcohol-related harms to society that are unique to each beverage type.

III. DIFFERENT SOCIAL HARMS FROM EACH BEVERAGE TYPE

The correlation between a type of beverage and alcohol-related harms on society are not from the drink's chemical makeup, but the behavioral patterns and social implications from local culture.

Which beverage types are more harmful to society vary around the world. For example, in the UK, Denmark, Poland, Bulgaria, Hungary, and Germany, there is no correlation between beer consumption and homicide. ⁸³ In contrast, in Australia almost half of all homicides are done while intoxicated and beer is the worst contributor. ⁸⁴ In Korea spirits and soju, rather than beer, is associated with violent crime and problem drinking. ⁸⁵ In the United States, beer is typically the most hazardous beverage type. ⁸⁶ Beer is typically subject to the least stringent regulations in the

States on account of its low alcohol density, but it is the preferred beverage of problem drinkers, and contributes to more alcohol-related harms than wine or spirits.⁸⁷

A. MODERATION

Encouraging moderation is the most important public policy factor to consider in regulations. The volume of ethyl alcohol that is consumed in a single sitting is the most predictive factor in alcohol-related harms. Refere is an exponential correlation between the volume of alcohol consumed and the harms excessive drinking can inflict on society. Heavy consumers that have an average of 3 drinks per day cause more than five times as much alcohol-related harms as those having less than one drink per day. Moderate alcohol consumption is associated with a reduced risk of cardiovascular disease, stroke, diabetes, gallstones, and may even lead to a longer lifespan. In contrast, excessive alcohol often produces depression, anxiety, and liver damage. Moderate drinking can enhance social experiences and relax users, whereas excessive drinking is associated with dangerous driving. Heavy drinkers are several times more likely to commit violent crimes or be the victim of them.

Moderate and excessive drinking habits vary dramatically from one drink type to the next. Wine drinkers are most likely to drink in moderation and not to be underage. They are predominantly social, not compulsive, drinkers. In contrast, spirits consumers are typically functional drinkers interested in getting intoxicated quickly. Beer is the alcoholic drink most often favored by heavy drinkers. One study found that over 30 days the average drinker consumed 4.15 beers, .67 glasses of wine, 1.49 shots of spirits, and .79 pre-mixed flavored beverages. On average Americans of drinking age consume 30.4 gallons of beer per year.

Malt liquor beer is the most affordable way to purchase ethyl alcohol¹⁰¹ and is especially likely to be used by heavy drinkers.¹⁰²

The correlation between beer and heavy drinking may be caused by the misconception that it is difficult to get drunk on beer. One beer is roughly equivalent to one shot. However, on average consumers believe it will take 10.3 beers to get drunk and only 7 shots. Although beer has a lower alcohol density, this merely leads drinkers to underestimate its intoxicating effect, drink large volumes, and consume more ethyl alcohol than other drinkers.

Beer is the beverage type that contributes most to harmful excessive drinking.

B. DRUNK DRIVING

Intoxicated driving is the next most substantial alcohol-caused harm. Car accidents are the leading cause of death among Americans under thirty-four. About 40 percent of all fatalities from car accidents involve alcohol abuse. As of 2004, drunk driving caused 16,694 deaths, 258,000 injuries, 1.4 million arrests, and \$51 billion in expenses per year. 106 11.9 percent of binge drinkers drove drunk the last time they had alcohol. 107

Some beverage types more than others are more likely to be followed by drunk driving and alcohol-related fatalities. In a survey of more than 1,000 licensed drivers, more than half of beer drinkers reported that they had recently gotten behind the wheel while intoxicated. In contrast, only 23 percent of wine drinkers did the same. In one study of drivers arrested for drunk driving, 58 percent were intoxicated from beer, 12 percent from spirits, and only 3 percent from wine. It is estimated that an increase in consumption of 1 liter of beer per person would increase fatalities from drunk driving 23 percent.

A beer drinker is more likely to engage in drunk driving than a wine or liquor drinker, even if they both consumed the same amount of alcohol.¹¹³ This may be because beer drinkers

are more likely to underestimate the influence of beer consumption before driving drunk.¹¹⁴ On average consumers thought they could drive safely after 5.4 beers, but only 3.7 shots, even though each shot is the equivalent of a beer.¹¹⁵ As a whole, consumers do not associate beer with risky behaviors and are therefore less likely to take responsible precautions or understand the risks of their conduct.¹¹⁶

Beer is the beverage type most likely to contribute to drunk driving and wine is the least likely.

C. VIOLENCE

One of the prominent harms of excessive drinking is an increased risk of committing, or being victimized, by violence. Alcohol-related violence is estimated to cause more than 245,000 deaths per year. Approximately 27 percent of perpetrators of violent crime and 15.7 percent of victims are intoxicated during the incident. 118

One study found that malt liquor beer drinkers were more likely to intentionally harm someone, participate in gang fights, or threaten someone with a gun or knife, than those drinking other alcoholic beverages. ¹¹⁹ Of patients in a hospital after a violent crime, more than 50 percent had recently consumed beer and only 11.5 percent had consumed hard liquor. ¹²⁰ Less than 4 percent drank wine. ¹²¹ Studies have also found that lower-cost alcoholic beverages like beer leads to an increase is spousal abuse against women. ¹²² Increasing beer tax has also been found to reduce violence against children. ¹²³

Beer, especially malt liquor beer, is more likely than other beverage types to contribute to violence and assault.

D. HEALTH

Recent research shows substantially different health effects for different types of alcoholic beverages. ¹²⁴ It is believed that wine drinkers have fewer strokes, fewer lung and digestive tract cancers, and overall lower early mortality rates than even those that abstain from drinking altogether. ¹²⁵ Wine drinkers may even have an easier time getting pregnant. ¹²⁵ One study found that spirits consumption increased the odds of an early fatality. ¹²⁶ However, there are conflicting views in the medical community as to whether wine itself is the cause of better health, or if wine is consumed by healthier people. ¹²⁷

Regulators may want to consider the alleged health benefits of wine, but there is substantial factual uncertainty.

E. DEMOGRAPHICS

One consideration for regulators in making different regulations for different types of alcoholic beverages is the potential appearance of racism, sexism, or other types of discrimination. The War on Drugs is known for disproportionally giving harsh sentences to drugs that were popular among African Americans. Similarly, different types of alcoholic beverages are popular among different demographics.

For example, poorer citizens and Republicans are more likely to drink mass-produced beer brews, while middle-class Democrats are more likely to enjoy micro-breweries. ¹²⁹ Men are more likely to drink beer and women are more likely to drink wine. ¹³⁰ Wine drinkers are also more likely to be older ¹³¹ and better educated than beer drinkers. ¹³² Beer drinkers are more likely to be younger and male. ¹³²

There is a long history of criticism of the government on account of regulations that favor some demographics and attack others. Regulators should be careful to evaluate demographics in their jurisdiction and make sure none of them will feel unreasonably targeted.

IV. Conclusion and Recommendations

This paper offers a concurring perspective to the status quo. States should continue to divide alcoholic beverages into types. However, regulations should be based on that beverage's harms on society and the public's interest in reducing those harms. Current regulations arbitrarily favor beer drinkers and beer businesses over those that prefer spirits. This is based on a misconception that alcohol density corresponds to alcohol-related harms to society. Since there is no correlation to alcohol density and public policy considerations, the regulations based on density are arbitrary and indefensible.

State regulators can use the academic research in this paper to create policies that better optimize trade-offs; encouraging drink types that are associated with moderation and good health, while discouraging beverage choices that tend to lead to binge drinking, violence, and drunk driving. For example, beer sold in containers larger than 12 oz. has an especially strong correlation to drunk driving and fatal car accidents. Regulating the size of beer containers could save lives, without imposing substantial restrictions on personal liberties. Limiting the number of locations selling alcohol is not effective at curbing excess drinking, except for wine drinkers. This restriction causes inconvenience without any public policy benefit.

According to the Nebraska court, regulators cannot put vendors under different regulatory categories unless they are in different situations and the regulation supports a public policy.

The evidence shows that their circumstances are different and regulating beverage types

differently is justified. However, the research does not support the alcohol-density theme of modern regulation. Currently beer is the lowest-cost way to obtain consumable alcohol and is associated with the most social harm. Studies in Canada and England have found that when the cost of beer was increased through taxes, fewer driving accidents and reductions in violence resulted.¹⁰³

This paper's research is mostly national. Each state or county should also consider the unique aspects of their local demographic. However, increased taxes for beer and lower restrictions for spirits or wine should be strongly considered.

1. AMITAVA DASGUPTA, THE SCIENCE OF DRINKING: HOW ALCOHOL AFFECTS YOUR BODY AND MIND (Rowman & Littlefield Publishers 2011).

7. Dasgupta, supra note 1.

^{2.} Thomas K. Greenfield and John D. Rogers, *Alcoholic Beverage Choice, Risk Perception and Self-Reported Drunk Driving: Effects of Measurement on Risk Analysis*, 94 ADDICTION1735 (Wiley-Blackwell 1999).

^{3.} PHILIP J. COOK, PAYING THE TAB: THE COSTS AND BENEFITS OF ALCOHOL CONTROL (Princeton University Press 2007).

^{4.} David J. Hanson, *Historical evolution of alcohol consumption in society*, ALCOHOL 3–12, 3-12 (2013).

^{5.} Peter Boyle et al., *Alcohol: Science, Policy and Public Health*, ALCOHOL (Peter Boyle and Paolo Boffetta eds., Oxford University Press (OUP) 2013).

^{6.} *Id*.

^{8.} Hanson, supra note 4.

^{9.} George Benz Sons Inc. v. Ericson, 227 Minn. 1, 12, 34 N.W.2d 725, 731 (1948).

^{10.} Castlewood Int'l Corp. v. Wynne, 294 So. 2d 321, 324 (Fla. 1974).

^{11.} Adam E. Barry et al., *Alcohol-Attributable Calories Consumed as a Result of Binge Drinking: A National Survey of Drinkers in the United States*, 51 SUBSTANCE USE & MISUSE 932 (Informa Healthcare 2016).

^{12.} *Unit 10: Alcohol and Drugs*, DEPARTMENT OF MOTOR VEHICLES, https://www.dmv.ca.gov/portal/wcm/connect/90179c08-4836-4189-a646-3bc7b15146b1/unit 10.pdf?MOD=AJPERES.

- 13. Cynthia Chavira et al., *Type of Alcohol Drink and Exposure to Violence: An Emergency Department Study*, 36 JOURNAL OF COMMUNITY HEALTH 597 (Springer Nature 2010).
- 14. M. Juhl, *Intake of Wine, Beer and Spirits and Waiting Time to Pregnancy*, 18 HUMAN REPRODUCTION 1967 (Oxford University Press (OUP) 2003).
- 15. COMMITTEE ALCOHOLISM ET AL., ALCOHOL AND PUBLIC POLICY: BEYOND THE SHADOW OF PROHIBITION (National Academies Press 1981).
- 16. Chavira, supra note 13.
- 17. Greenfield & Rogers, supra note 2.
- 18. Hanson, supra note 4.
- 19. Id.
- 20. Id.
- 21. *Id*.
- 22. 11 Benjamin Grubb, Exorcising the Ghosts of the Past: An Expl. of Alcoholic Beverage Regulation in Oklahoma, 37 Okla. City U.L. Rev. 289 (2012)
- 23. Id.
- 24. Hanson, supra note 4.
- 25. Id.
- 26. Grubb, supra note 22.
- 27. Dasgupta, supra note 1.
- 28. Id.
- 29. Grubb, supra note 22.
- 30. Hanson, supra note 4.
- 31. Id.
- 32. Grubb, supra note 22.
- 33. Wayne Hall, What Are the Policy Lessons of National Alcohol Prohibition in the United States, 1920-1933?, 105 ADDICTION 1164 (Wiley-Blackwell 2010).
- 34. *Id*.
- 35. *Id*.
- 36. Hanson, supra note 4.
- 37. *Id*.
- 38. Id.
- 39. *Id*.
- 40. Hall, supra note 33.
- 41. Luke N. Rodda et al., *Alcohol Congener Analysis and the Source of Alcohol: A Review*, 9 FORENSIC SCIENCE, MEDICINE, AND PATHOLOGY 194 (Springer Nature 2013).
- 42. Id.
- 43. Economic Costs of Excessive Alcohol Consumption in the U.S., 2006, 41 AMERICAN JOURNAL OF PREVENTIVE MEDICINE A4 (Elsevier BV 2011).
- 44. Hanson, supra note 4.
- 45. Supra note 15.
- 46. Hanson, supra note 4.
- 47. Wayne, supra note 33.
- 48. Jenny Crane Grunke, Idaho's Alcohol Beverage Laws: Past, Present & Future, 56 Advocate (Idaho) 24 (2013)

- 49. E. Kuntsche, "I Drink Spirits to get Drunk and Block out my Problems..." Beverage Preference, Drinking Motives and Alcohol Use in Adolescence, 41 ALCOHOL AND ALCOHOLISM 566 (Oxford University Press (OUP) 2006).
- 50. Wayne, supra note 33.
- 51. Supra note 15.
- 52. Id.
- 53. *Id*.
- 54. Id.
- 55. Id.
- 56. *Id*.
- 57. Id.
- 58. *Id*.
- 59. *Id*.
- 60. Id.
- 61. Taisia Huckle et al., Increases in Typical Quantities Consumed and Alcohol-Related Problems during a Decade of Liberalizing Alcohol Policy, 73 JOURNAL OF STUDIES ON ALCOHOL AND DRUGS 53 (Alcohol Research Documentation 2012).
- 62. Grunke, supra note 48.
- 63. Michelle Bryner, How Much Alcohol Is in My Drink? Live Science (2010), http://www.livescience.com/32735-how-much-alcohol-is-in-my-drink.html (last visited Dec 10, 2016).
- 64. Tex. Admin. Code tit. 16, § 45.77(a)(1)
- 65. Ala. Admin. Code r. 20-X-2-.01 (44)
- 66. Mich. Comp. Laws Ann. § 436.1111 (West)
- 67. Grubb, supra note 22.
- 68. Miss. Code Ann. § 67-3-53(g). Tobacco, Beer, and Alcohol FAQs, http://www.dor.ms.gov/Pages/ABC-QA.aspx.
- 69. Acy v. Allen Par. Police Jury, 476 So. 2d 566, 567 (La. Ct. App. 1985).
- 70. Jack Brammer, Want to buy or sell an alcoholic drink in Kentucky? That'll depend on where you are Read more here: http://www.kentucky.com/news/politicsgovernment/article44371632.html#storylink=cpy, Lexington Herald Leader, August 10, 2012, http://www.kentucky.com/news/politics-government/article44371632.html (last visited Dec 10, 2016).
- 71. Robert Mann et al., Drinking-driving fatalities and consumption of beer, wine and spirits, 25 Drug and Alcohol Review 321–325, 321-325 (2006).
- 72. Bradley Rickard, The Economics of Introducing Wine into Grocery Stores, 30 CONTEMPORARY ECONOMIC POLICY 382 (Wiley-Blackwell 2011).
- 73. Dasgupta, supra note 1.
- 74. Grunke, supra note 48.
- 75. Ericson, supra note 9.
- 76. *Id*.
- 77. Id.
- 78. Grubb, supra note 22.
- 79. Ericson, supra note 75.
- 80. *Id*.
- 81. Wynne, supra note 10.

- 82. *Ericson*, supra note 9.
- 83. Mats Ramstedt, *Population Drinking and Homicide in Australia: A Time Series Analysis of the Period 1950-2003*, 30 DRUG AND ALCOHOL REVIEW 466 (Wiley-Blackwell 2011).
- 84. *Id*.
- 85. W. Chung, *Type of Alcoholic Beverage and High-Risk Drinking: How Risky is Beer Drinking in Korea?*, 39 ALCOHOL AND ALCOHOLISM 39 (Oxford University Press (OUP) 2004).
- 86. P. Makela et al., A Bottle of Beer, a Glass of Wine, or a Shot of Whiskey? Can the Rate of Alcohol-Induced Harm Be Affected by Altering the Population's Beverage Choices?, 38 CONTEMPORARY DRUG PROBLEMS 599 (SAGE Publications 2011).
- 87. Ramstedt, supra note 83.
- 88. Dasgupta, supra note 1.
- 89. Greenfield & Rogers, supra note 2.
- 90. Id.
- 91. Dasgupta, supra note 1.
- 92. *Id*.
- 93. *Id*.
- 94. Greenfield & Rogers, supra note 2.
- 95. Id.
- 96. Chavira, supra note 13.
- 97. *Id*.
- 98. Id.
- 99. Barry, supra note 11
- 100. GARRETT PECK, THE PROHIBITION HANGOVER (Rutgers University Press 2009).
- 101. Chavira, supra note 13.
- 102. *Id*.
- 103. Greenfield & Rogers, supra note 2.
- 104. Dasgupta, supra note 1.
- 105. *Id*.
- 106.*Id*.
- 107. Id.
- 108. Greenfield & Rogers, supra note 2.
- 109. *Id*.
- 110.*Id*.
- 111.*Id*.
- 112.*Id*.
- 113.*Id*.
- 114. DMV, supra note 12.
- 115. Greenfield & Rogers, supra note 2.
- 116.*Id*.
- 117. Chavira, supra note 13.
- 118.*Id*.
- 119.*Id*.
- 120. Id.
- 121.*Id*.

- 122. Sara Markowitz, *The Price of Alcohol, Wife Abuse, and Husband Abuse*, 67 SOUTHERN ECONOMIC JOURNAL 279 (JSTOR 2000).
- 123.*Id*.
- 124. Darcy McGregor et al., *Personality Differences between Users of Wine, Beer and Spirits in a Community Sample: The Winnipeg Health and Drinking Survey*, 64 JOURNAL OF STUDIES ON ALCOHOL 634 (Alcohol Research Documentation 2003).
- 125. Juhl, supra note 14.
- 126. M. Gronbaek et al., *Mortality Associated with Moderate Intakes of Wine, Beer, or Spirits*, 310 BMJ 1165 (BMJ 1995).
- 127. McGregor, supra note 124.
- 128. Mark D. Ramirez, *Racial Discrimination, Fear of Crime, and Variability in Blacks' Preferences for Punitive and Preventative Anti-Crime Policies*, 37 POLITICAL
 BEHAVIOR 419 (Springer Science + Business Media 2014).
- 129. Barry, supra note 11.
- 130.*Id*.
- 131. McGregor, supra note 124.
- 132.*Id*.
- 133. Omer Hoke and Chad Cotti, *THE IMPACT OF LARGE CONTAINER BEER PURCHASES ON ALCOHOL-RELATED FATAL VEHICLE ACCIDENTS*, 33 CONTEMPORARY ECONOMIC POLICY 477 (Wiley-Blackwell 2014).
- 134. *Id*.
- 135. Jaana I. Halonen et al., Association of the Availability of Beer, Wine, and Liquor Outlets with Beverage-Specific Alcohol Consumption: A Cohort Study, 38 ALCOHOLISM: CLINICAL AND EXPERIMENTAL RESEARCH 1086 (Wiley-Blackwell 2014).
- 136. Tom & Jerry, Inc. v. Nebraska Liquor Control Comm'n, 183 Neb. 410, 160 N.W.2d 232, 234 (1968).
- 137. Manuella Adrian et al., Can Alcohol Price Policies be Used to Reduce Drunk Driving? Evidence from Canada, 36 SUBSTANCE USE & MISUSE 1923 (Informa UK 2001).