

Deconstructing the Drink Menu: A History of Alcoholic Beverages and Proposed Policy Framework

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All alcohol is the same, yet not the same. What we commonly refer to as “alcohol” is actually a vast array of products, known at once for their great diversity and their essential similarity: the presence of ethanol (C_2H_5OH), in varying concentrations, which produces the intoxicating effects that have earned alcohol’s complicated reputation. There are other chemical compounds called alcohols, but for purposes of federal and state regulation, alcohol is defined as a beverage containing some amount of ethanol (at least 0.5 percent alcohol by volume, or ABV) and intended for human consumption. It is the latter characteristic—intentional use by people as a psychoactive substance—that serves as the underlying reason for treating alcohol differently than household chemicals, and differently from other food and drinks. The current American legal framework for alcohol regulation was developed in the twentieth century following the repeal of Prohibition, but our system follows a long tradition of recognizing alcohol’s unique status in society and an ongoing need to manage its negative impacts: confining its use to religious rites, celebratory occasions or medical treatment; developing social norms about acceptable use; and, through state intervention into the market, controlling its production, distribution and access by the public.

Beyond the basic rationale for regulating all alcoholic beverages, there are several assumptions within the American system about different *types* of alcohol that have resulted in a

regulatory scheme that treats different products differently. The three primary categories are as follows, defined by both the raw materials and the production method employed:

1. Beer: naturally fermented from grain, yeast and sugar;
2. Wine: naturally fermented from yeast and grape or other fruit juices; and
3. Distilled spirits (liquor): a concentrated product from either of the other two categories, having higher alcohol content than can be obtained through natural fermentation.¹

These categories are used at the federal level for differing rates of taxation, marketing and labeling requirements, as well as in individual states' liquor control laws relating to taxation, licensing, distribution, and even individuals' consumption. Our complex system for regulating types of alcohol emerged through the interplay of chemistry, economics, culture and politics. This essay will first explore the American history of alcohol and the distinct developments of beer, wine and spirits; second, identify the legitimate public health and economic reasons for treating these products distinctly; and third, propose the following policy framework: that differing regulations for these product types must be *rational*, *equitable* and *practical*.

1: A Brief History of Alcohol(s)

Making and consuming alcohol is an old human activity: most cultures around the world and throughout recorded history have produced some form of fermented drink, traditionally relying on common agricultural or wild-harvested materials at hand and yeasts naturally present in the environment.² Each culture or region's grains or fruits of choice reflect the climate and biodiversity of where they developed: grapes flourished in the Mediterranean region, producing

¹ Not all products fit neatly within these categories; cider, made from apples, is classified as wine but is popularly thought of and marketed like beer; sake, made from fermented rice, is a brewed beverage but typically has alcohol content closer to that of fruit based wine.

² Kinney 2.

wine; hardy grains such as wheat and barley favored in Northern Europe were made into beer; rice, a staple food in East Asia, became sake, rice wine and others; and corn, fundamental to multiple civilizations and tribes in the Americas, yielded chicha. In many societies alcohol was integrated into everyday life, but also regarded as having special properties. Homebrewed, relatively low-alcohol drinks were part of a household's daily diet, especially where potable water was scarce or of marginal quality.³ Recognizing but not fully understanding alcohol's impacts on the mind and body, many cultures from ancient Egypt to Catholic Europe employed alcohol in religious rites, celebrations, and for treatment of mental and physical ailments.⁴

The growth and maturation of alcohol production yielded some of the earliest contributions to the field of chemistry, and began to shape taste people's preferences. Natural fermentation has an upper limit for alcohol content, typically 15 percent, above which the yeast will begin to die.⁵ Dilute fermented products spoiled quickly without access to cold storage, limiting their economic potential, while higher-potency products such as wine became recognized for their stronger physiological effects, good quality, and value as a trading commodity that could withstand long-distance transport.⁶ Wine, in addition to its Biblical significance in the Judeo-Christian world, enjoyed elevated status across a widespread trading network on multiple continents, a locally-produced or exotic luxury enjoyed by elites.⁷ As individual regions cultivated distinct varieties and "brands" for their products, wine became an expression of social and cultural status, and shaped a sophisticated understanding of alcoholic

³ Gerritsen 25.

⁴ Kinney 2-3.

⁵ Kinney 3.

⁶ Gerritsen 26-27.

⁷ Gerritsen 30.

beverages not simply as a diet staple, but as an economic unit that can be evaluated on its taste, rarity, potency, and reflects on its owner as a person of style and distinction.

The next advancement in the chemistry of alcohol occurred around the tenth century, with the creation of concentrated alcohol products through the process of distillation.⁸ Natural fermentation had always limited the potency of alcoholic beverages, but distillation exploits ethanol's lower boiling point and allows it to be separated from the water and other materials present in beer and wine, if the vapor is captured and collected until it cools into a liquid. Repeating the process can increase its purity beyond 90 percent ABV.⁹ Scholars interested in the secrets of alchemy found that distilling alcoholic beverages extracted their essence into a liquid with noticeably enhanced effects, and began incorporating distilled spirits into medical treatment and other specialized uses.¹⁰ Spirits were not widely consumed recreationally in Europe until the sixteenth century, but their invention fostered a major shift in perception about alcohol: that distilled spirits were, unlike naturally fermented beverages, a fundamentally artificial product that had a distinct chemical composition from beer and wine, which had existed for thousands of years. This perception, laden with assumptions that the physical, social and moral effects of distilled spirits are different than those of beer and wine, persists even today.

By the early modern period, cultures had developed their own distinct tastes for and skills in producing alcoholic beverages: brewing beer, for example, continued at home but emerged as a professional niche in local economies of northern Europe: monasteries and local breweries made a living from supplying higher-quality products to nearby communities, similar to a baker, miller or butcher.¹¹ As Europe's dominant powers sought to expand their political and economic

⁸ Kinney 3.

⁹ Kinney 3; Gerritsen 27.

¹⁰ Huckelbridge 7-8.

¹¹ Gerritsen 30-31.

empires to other continents, each brought their beverages of choice and the means to produce more in new lands. Thus it may be said that America is not only a land of immigrants, but a land of imports: grapes cultivated by Spanish missionaries in California for wine; gin made by Dutch settlers in what would become New York; and rum produced from Jamaican molasses and slave labor in the Caribbean.¹² In the lands far east of California, people struggled to produce a suitable local version of European wines, finding that American varieties of grapes were readily available but did not produce good wine, while European varieties were highly susceptible to blight and did not survive long enough to produce multiple harvests. Wine therefore remained for several decades a prized commodity from overseas, and solidified its reputation as a luxury suited to the tastes of well-educated, well-heeled citizen.¹³

As settlers spread further west and established communities among rich agricultural lands, two beverages of local origin gained prominence: cider and whiskey made from apples and grains, respectively.¹⁴ Rye, and later corn, were the most popular grains from which to produce whiskey, faring better in the local climate than imported grains and yielding a potent spirit when distilled. These products became most popular in more rural areas, as they were easy to produce and more readily available in places far from the robust trade in imported British rum and or locally-produced rum from British molasses.¹⁵ Overall, distilled spirits, were cheap and available in the American colonies and territories beyond; wine remained a high-end product; and beer's short shelf life kept it from being commercially viable for another century.¹⁶ Whiskey and rum had distinct economic advantages in this period: as had happened in other regions of the

¹² Pegram 5.

¹³ Lukacs 13.

¹⁴ Heath 310.

¹⁵ Huckelbridge 29.

¹⁶ Pegram 9.

world, spirits were a boon to farmers as a desirable value-added product from agricultural surplus, easier to transport and more valuable than the grain crop alone. Distilled spirits were far superior for storage, portability and protection against spoilage, and in frontier areas served as a reliable currency for barter.¹⁷ In the cities and towns further east, a steady supply of molasses and imported rum to the eastern colonies ensured that economically and politically, rum remained their drink of choice.

Prior to the American Revolution rum dominated the colonial market, its dominance protected by British trade policies. When the new nation severed relations with Britain and import duties were imposed on foreign products, however, corn whiskey rose to prominence as a local substitute when molasses ceased to flow from the south.¹⁸ The prolonged war and costs of independence had created a fiscal problem, however, and caused lawmakers to resurrect discussions which had caused considerable turmoil in England a century earlier and more recently the subject of riot and rebellion in America: excise taxes.¹⁹ Excise taxes, levied on products imported or produced locally and before they reach the consumer, were viewed as relatively easier to administer but favored economic interests in urban areas and represented stronger intrusion into citizens' lives by the state than many desired.²⁰ While these taxes can be levied on any product, they are often applied products perceived as luxuries, providing a basis for state revenue that most impacts those with disposable income.²¹ Protection of public health is also often articulated as one purpose of "sin" taxes on products such as alcohol and tobacco, an

¹⁷ Gerritsen 36.

¹⁸ Slaughter 71.

¹⁹ Slaughter 15-24.

²⁰ Excise taxes had even been used in Britain to promote the interests of larger distillers who could better absorb the cost of their taxes through higher volume of production. These distillers actively participated in the creation of legislation and were designated to collect the tax, giving them significant economic and political leverage to drive smaller producers out of business. Slaughter 13-14.

²¹ Gerritsen 87.

argument which also originated in this period and continued as an undercurrent of many subsequent taxation discussions.²²

It is notable that the first excise tax in the United States was not only an alcohol tax, but specifically a tax on distilled spirits produced within its borders, a provision which, unlike a concurrent tax on imported spirits, was vehemently opposed by frontier regions of the new nation. The tax, enacted in 1791, had been the subject of multiple debates in Congress but gained new political momentum as Secretary of the Treasury Alexander Hamilton examined the nation's finances, mix of revenue sources, and pressing need to reduce its war debt. Hamilton argued that more sources of taxation were necessary to support the government.²³ Relations between the more densely-settled northeast and the primarily rural areas of Ohio, Kentucky and North Carolina had been contentious throughout the creation of the new government, with ideological and political conflicts over the role of the state, individual liberty, and fair representation for all the states in Congress. This new excise tax was seen as a direct affront to the rural economy and to farmers dependent on whiskey production and trade: many areas were effectively isolated from larger markets in the east and could not easily ship goods, as well as having a small labor pool and relatively little circulating currency. Whiskey served a vital economic function in these areas but had become victim to national politics, not just among differing states but among small and large distillers. Large distillers generally supported the tax because it aligned with their own interest in maintaining competitive advantage against smaller producers.²⁴ The unrest culminated in an uprising in western Pennsylvania, commonly known as the Whiskey Rebellion in 1794, and became an early test for the United States to demonstrate its willingness to enforce its laws, even

²² Babor et al. 33; Slaughter 100.

²³ Slaughter 96.

²⁴ Slaughter 71.

in the face of armed opposition. Ultimately the rebellion was subdued by military intervention and opposition changed to submission. A new political administration repealed the tax in 1802, with no new taxes levied on alcohol until the Civil War.²⁵ The first domestic alcohol excise tax did, however, establish precedent for distinguishing between types of alcohol for purposes of taxation, a common feature of today's alcohol taxes as well.

Concurrent with the economic and political developments in America's alcohol industry was increasing concern about the effects of alcohol on private and public life in the nation, and greater desire to promote or legislate moderation. The proliferation of distilled spirits at the turn of the nineteenth century caused some to question whether the country's drinking habits were healthy. In 1784 Dr. Benjamin Rush published *An Inquiry into the Effects of Spiritous Liquors upon the Human Body, and Their Influence upon the Happiness of Society*, detailing the supposed negative health and moral impacts of liquor as a threat to an orderly democratic society, extolling the virtues of "natural" fermented beverages, and positing that they were completely different substances.²⁶ Thomas Jefferson, the nation's premier gentleman farmer, claimed that "No nation is drunken where wine is cheap; and none sober where the dearness of wine substitutes ardent spirits as the common beverage."²⁷ Popular perception of beer, cider, wine and distilled spirits in the early nineteenth century were certainly influenced by the longer histories of these products, their differing roles in social life, and limited understanding of the underlying chemistry of alcohol. Indeed, the belief that distilled spirits had differing effects on the body and different composition persisted, even after scientific demonstrations of their underlying similarity by showing the presence of ethanol in each.²⁸

²⁵ Slaughter 226; Pegram 9.

²⁶ Pegram 14.

²⁷ Lukacs 15.

²⁸ Kinney 10.

Urbanization, industrialization and immigration in nineteenth century America transformed its social and economic structures, resulting in the concurrent growth of saloon culture and the temperance movement. Alcohol continued to be consumed at home by men and women alike, but increasingly men spent their free time and wages in saloons. Saloons were establishments perceived as important spaces for political discourse and social bonding by their male patrons, but abhorred by others as sources of vice, crime and violence against women and children when the men returned home.²⁹ Temperance, originally described as voluntary abstention from liquor—not naturally fermented products—became an important movement in which women found their political voice and promoted the virtue of temperance for a healthy family and democratic society.³⁰ Temperance became a widespread, though not universal, cultural value, with overall alcohol consumption declining between 1800 and 1850.³¹

The temperance movement shifted ideology in the 1830s, from simply avoiding distilled spirits to “teetotaling,” abstaining from all alcoholic beverages and even promoting local bans on sales of alcohol.³² Criticizing others’ drinking while consuming wine or brandy was perceived as middle-class hypocrisy, and the public discourse began to engage with all alcohol types as potential causes for rising social ills in large cities and small towns. At the same time, large-scale immigration to the U.S. brought greater ethnic diversity, and with it more forms of alcohol: German immigrants in particular had a profound and lasting impact on American alcohol preferences, bringing the knowledge and skills needed to scale up beer brewing to a commercial scale in the North and Midwest. German, Irish, Italian and other groups had different attitudes toward alcohol use and perceived teetotalism as against their values and as an excessive intrusion

²⁹ Pegram 4, 10-11, 53.

³⁰ Pegram 77.

³¹ Pegram 43.

³² Pegram 33.

into private life, while middle-class Protestant teetotalers viewed immigrants as undermining American values.³³ Alcohol of all types became a target for social reformers interested in the profound social problems rampant in American cities: poverty, poor housing, crime, abuse of women and children. Where previously alcoholic beverages had been described as having medicinal benefits in moderation, they were now described as having significant social and economic costs, with many calling for legislative action.³⁴

By the end of the nineteenth century saloon culture had shifted from whiskey to beer, but saloons remained important social spaces for working men and continued to attract greater criticism as the number of outlets increased.³⁵ The advent of commercial refrigeration gave the beer industry the needed technology to scale up production to match and exceed that of distilled liquor, as well as better bottling technology to make it easier for customers to purchase for consumption at home.³⁶ Brewing companies continued to consolidate, creating a few companies with a great deal of market share; the market was further dominated by importing the “tied house” system from Britain, in which a manufacturer purchases or secures an exclusive relationship with a saloon to sell their products. A steady supply of beer from a manufacturer, and additional benefits such as lines of credit and equipment purchases, insulated saloon owners from financial risk, and ensured access to the market for producers. Combined, these industry shifts created a fiercely competitive environment for beer producers and retailers, incentivizing producers to open more retail outlets and vie with neighboring businesses for customers. Some relied on dubious tactics such as touting the health benefits of beer and downplaying its alcohol

³³ Pegram 77, 94-95.

³⁴ Pegram 89.

³⁵ This shift in taste did not significantly impact the South, where whiskey and bourbon remained the primary drink of choice. Pegram 56.

³⁶ Pegram 93.

content, selling outside business hours, attracting younger customers or turning a blind eye for service to minors, and engaging in price wars which promoted cheap drinks and overconsumption.³⁷

The political landscape of alcohol regulation was marked by division and mutual distrust among its stakeholders. The Anti-Saloon League, Women's Christian Temperance Union and other anti-alcohol groups pointed to all alcohol, but saloons and beer in particular, as a problem needing legal solutions; rural America perceived saloons as an urban issue and their own consumption of cider and wine not part of that problem; immigrant communities and ethnic groups with more favorable perceptions of alcohol believed controlling alcohol use was best left to the family, not the state.³⁸ Consolidation within the alcohol industry resulted in horizontal and vertical market integration, concentrating economic and political power that was viewed with concern in an era characterized by strong anti-trust sentiment. Even the federal and state governments were perceived by the prohibitionists as having pro-alcohol bias: the proceeds of the alcohol tax, enacted following the Civil War, became a significant revenue source, up to 27% of total federal government revenue prior to 1920.³⁹ Reliance on this tax made governments seem too willing to collaborate with the liquor industry to maintain this funding source; while it did encourage greater enforcement on producers who evaded the tax, the targets were primarily small-scale rural distillers, with a higher tax rate on distilled spirits and more incentive to actively collect taxes on these products.⁴⁰

The politics of alcohol policy were further complicated by rivalries and uneasy alliances among the alcohol industry, often perceived from the outside as a unified interest, but in reality

³⁷ Pegram 96-97.

³⁸ Kvvig 15; Pegram 77.

³⁹ Gerritsen 110.

⁴⁰ Pegram 130.

pitted against each other to capture market share or differentiate themselves from “problem” alcohol.⁴¹ Distillers attempted to distance themselves from public criticism of saloon culture, but were regularly mired in their own scandals involving price manipulation, speculative purchases and adulteration of products with low-quality filler substances.⁴² Brewers and vintners highlighted their products as traditional pairings with food and as healthy alternatives to “demon” liquor, while saloons proliferated and American wine became synonymous with Skid Row.⁴³ The shifting landscape of “dry” laws and tax rates presented various opportunities for industry cooperation against the common enemy, prohibition, but also strategic lobbying to ensure that one producer type was exempted from restrictions on the others. One may assume that the federal taxes levied on beer and distilled spirits, but not wine, prior to 1916 were decisions made in isolation by policymakers, nor the reduction in the beer tax between 1901 and 1914.⁴⁴ The looming prospect of national prohibition in the early 1900s forced industry groups to re-evaluate their own interests and determine whether or not they would join together in opposition, spurred by shifting public opinion that all alcohol is the same, a view not previously held by the public and certainly not by the separate industries now being painted with the same brush.⁴⁵ This internal division and persistent belief that not all alcohol products are created equal set the stage for one of the most flawed of American domestic policies, the Eighteenth Amendment and the Volstead Act.

Cataloguing the flaws of Prohibition is a much larger task than what can be laid out here, but not the least of its flaws was its unequal treatment of beer, wine and spirits. Grain alcohol

⁴¹ Pegram 99-100.

⁴² Huckelbridge 130-131.

⁴³ Lukacs 94.

⁴⁴ Alcohol and Tobacco Tax and Trade Bureau.

⁴⁵ Lukacs 95.

had already been at a disadvantage during the First World War with food rationing that included a ban on producing grain-based alcohol, and a mandatory low alcohol content (2.75% ABV) for beer.⁴⁶ The Eighteenth Amendment outlawed the “manufacture, sale, or transportation of intoxicating liquors” as well as importation into the United States, which many Americans had assumed to be distilled spirits as a majority of states debated and ultimately ratified the law through 1919.⁴⁷ The passage of the Volstead Act the same year, however, created laws to implement the newly-ratified amendment, and stated unequivocally that the new law applied to all alcoholic beverages with at least 0.5 percent alcohol by volume. This restriction effectively dismantled most of legal alcohol industry nationwide—except for the provision stating that “non-intoxicating cider and fruit juices” for home consumption.⁴⁸ This exemption not only illustrates the problematic design of the law, but deeply-held beliefs that fruit-based drinks were simply not the same as other alcohols. As a result, California grape growers thrived on “wine brick” shipments of grape juice, with coy warnings not to leave the container in a warm place, lest it become alcoholic.⁴⁹ Other producers revived characterization of alcohol as having medicinal benefits, because another loophole in the law allowed savvy producers to secure the few permits available to produce alcoholic products that could be procured with a prescription. The most famous Prohibition-era alcohol enterprise, bootlegging liquor, did not require a legal loophole to thrive. In the absence of a legal market, criminal networks formed to meet the demand of a thirsty public, focusing on the most potent forms of alcohol, which yielded the most profit.⁵⁰

⁴⁶ Pegram 147.

⁴⁷ Moore and Gerstein 61.

⁴⁸ Kyvig 15-16.

⁴⁹ Lukacs 99-100.

⁵⁰ Huckelbridge 203.

The affordable and available raw materials for home winemaking and DIY distilling reinforced that some alcohol consumption was still acceptable, while otherwise law-abiding citizens could take comfort in the idea that the law protected the nation against an irresponsible liquor industry.⁵¹ While ostensibly applied to all types of alcoholic beverages, the new law highlighted existing cultural differences in alcohol use and engendered new ones: many families continued to drink discreetly at home, but many abstained; large urban centers became famous for images of speakeasy culture in which young men and women, black and white, caroused together in defiance of the law. Alcohol consumption is estimated to have decreased between 1920 and 1933, a combination of good-faith compliance with the law, higher prices on the black market that made alcohol less affordable, and a shift in attitudes toward alcohol as a single controlled substance, with consumption driven less by individual tastes and more by potency and ease of access.⁵²

The slow cultural shift toward “alcohol” as a single category had first been codified in the Volstead Act, but could not erase the complex histories of beer, wine, cider, and distilled spirits and the assumptions about each. Prohibition was repealed in 1933 with ratification of the Twenty-first Amendment, but eight states retained a ban on liquor throughout the decade, even after re-legalizing beer and wine.⁵³ Each state was empowered to enact their own alcoholic beverage control laws, but the legacy of the Volstead Act and federal tax policies provided a framework, defining alcoholic beverages as anything containing 0.5 percent alcohol by volume and assigning different tax rates on different types of alcoholic beverages.

⁵¹ Pegram 152.

⁵² Kyvig 18.

⁵³ Pegram 186-187.

Equally influential on states' law was a report commissioned in 1933 by the Rockefeller Foundation called *Toward Liquor Control*, which outlined a framework for state-level alcohol regulation intended to protect against the excesses before Prohibition and the failed experiment that followed. The authors, Raymond Fosdick and Albert Scott, posited that different types of alcohol should be treated differently and articulated this long-held belief in their rationale: "The experience of every country supports the idea that light wines and beers do not constitute a serious social problem."⁵⁴ This rationale was applied to the taxation of alcohol, described not simply as a revenue source but as a means of encouraging temperance by making higher-alcohol products more expensive.⁵⁵ While the report noted that taxation based on alcohol content may be best for discouraging overconsumption, as a practical measure, tax rates by product type would serve as a proxy.⁵⁶ The report also proposed limiting the availability of distilled spirits to fewer points of access than beer and wine by limiting which products can be served under what permit or license, and went so far as to say that low-alcohol beer "should be obtainable by the bottle, for off-premises consumption, practically without limitation. Its sale should be allowed by grocery stores, drug stores, delicatessen and general stores, and indeed by any merchant who so desires. [. . .] The sale of such beer by the glass, with or without meals, should be permitted in restaurants, hotels, beer gardens, clubs and, indeed, in any reputable establishment."⁵⁷ By regulating the market more tightly for some products, they argued, consumers would make the rational economic choice to substitute liquor for beer or wine, and in social settings that hearken back to the traditions of naturally-fermented alcohol on each family's table.

⁵⁴ Fosdick and Scott 33.

⁵⁵ The tax rate should not be so high, however, to encourage production and sales on the black market as a means of avoiding the tax: taxation is presented as a balance between regulating demand and avoiding incentives for bootlegging. Conlon 734; Fosdick and Scott 35, 110-111.

⁵⁶ Fosdick and Scott 128; Conlon 731.

⁵⁷ Fosdick and Scott 47.

By the twentieth century it was well understood that different types of alcoholic beverages had different potency based on their chemically-possible ranges of ethanol concentration, but this fact alone does not explain the enduring distinctions made in federal and state policies among beer, wine and spirits. The cultural and political histories of each product's development in the United States, and even earlier in their respective regions of origin, continued to influence popular perceptions and policy decisions from *Toward Liquor Control* to taxation to the state alcohol control systems still in place today. The rise of California's wine industry to global prominence has certainly motivated the development of monthly "wine clubs," tasting rooms and direct shipping permits allowing consumers to order their products online, all activities unheard of under the strict three-tier systems originally enacted in each state. The social and economic importance of beer, America's most popular alcoholic beverage, and the explosion of the craft brewing industry have influenced the preferential federal and state tax rates for craft beers in relation to mass-produced brands. And a system that justifies regulating separately two otherwise-identical dining establishments, one with a full alcohol license and the other with a license for beer and wine only, perpetuates our age-old relationship with beer, wine and food as a natural combination.

2: Protecting the Public Health and Promoting a Fair Market

The brief historical narrative in Part 1 illustrates the many forces—technological, economic, cultural, political—that contributed to the current American system of alcohol regulation, at both the federal level and replicated in some form within each state. Historical accident is not in itself a basis for policymaking, however, and the question remains whether beer, wine and spirits should continue to be regulated separately, and if so, on what basis.

Toward Alcohol Control offered one compelling and enduring rationale, that some types of

alcohol have greater impacts than others and should be controlled accordingly. A possible answer for the twenty-first century emerges from two of the overall policy goals for alcohol control: protecting the public health and maintaining an orderly, well-regulated market for all alcoholic beverages. It is important first to regulate all alcoholic beverages on a common basis, then to make further distinctions among product types.

From a public health perspective, all alcohol is essentially the same: beer, wine and spirits contain ethanol, and therefore all have the potential for abuse, misuse or the harmful impacts of consumption by specific populations, notably pregnant women and youth. Public health policy researchers, medical professionals and addiction specialists tend to speak about “alcohol” as a general category, not distinguishing between individual types for purposes of policymaking, and track annual per capita consumption by gallons of ethanol, often accompanied by estimates by product type based on standardized drink sizes (12 oz. beer, 4 oz. wine, 1 oz. distilled spirit).⁵⁸ Ethanol has a specific and predictable effect on the body: upon introduction through the mouth and throat, a small amount of alcohol is absorbed immediately, with another 20 percent absorbed in the stomach and the remainder through the small intestine. The presence of food in the digestive system and other factors influence the timing and intensity of the effects, but the liver processes ethanol at a steady rate.⁵⁹ While distilled spirits are commonly believed to have worse health outcomes because it is possible to consume a larger volume of ethanol relative to the volume of the beverage, intoxication can occur with any alcoholic beverage in sufficient quantity, and over time it is ethanol that causes addiction, cirrhosis and withdrawal symptoms.⁶⁰ Public health professionals acknowledge an increased risk of overdose from consumption of

⁵⁸ Moore and Gerstein 28.

⁵⁹ Kinney 10-11.

⁶⁰ Gerritsen 18.

distilled liquors, but maintain that all alcohol contributes to negative social and health outcomes: vehicle-related injuries and fatalities, intimate partner and family violence, poor health and lost productivity, avoidable medical costs, early death and cycles of substance-use related trauma.

If all alcohol has costs to the public and to the individual, then regulation of alcohol must encompass all products, not just those with highest alcohol content. This has become increasingly true in an industry with continual innovation in alcohol-based products, from low-calorie “diet” beers, to fortified beer and wine, to previously unimagined products such as powdered alcohol and alcoholic whipped toppings.⁶¹ It remains true that distilled spirits, per ounce, are the most potent choice, and limiting access to these products relative to other, less-potent options is sound policy. It is equally true, however, that the goals of reducing overconsumption, preventing youth access, and reducing the harmful consequences of consumption can only be met through thoughtful regulation of all alcoholic beverages. Individual consumers do not display uniform consumption habits: approximately 20 percent of adults in the U.S. consume 90 percent of the total alcohol sold annually.⁶² Because ethanol is the relevant intoxicant to regulate, ensuring that policy addresses all ethanol-containing beverages is an important first step, and differentiating between high-alcohol and low-alcohol products in taxation, access points and other controls should follow.

Alcohol control is predicated not only on protecting public health and safety, but on the regulation of a market for a product with significant externalized costs and considerable profit potential that, if unchecked, would be against the public interest.⁶³ Indeed, many states’

⁶¹ Powdered alcohol, most recently marketed under the name Palcohol, has been met with skepticism and concern by state and federal regulators even following approval of a few products by the Tax and Trade Bureau in 2015. Powdered alcohol is explicitly illegal in a majority of states, and poses significantly regulatory challenges within the current system which focuses on alcohol-containing liquids. Center for Alcohol Marketing and Youth.

⁶² Babor et al. 41.

⁶³ Moore and Gerstein 13; Gerritsen 4.

regulators have redefined their understanding of the work since repeal of Prohibition to the present day, with increased focus on industry regulation.⁶⁴ Many hallmarks of state alcohol control systems are primarily intended to prevent criminal enterprise and ensure a fair business climate, from criminal penalties for selling alcohol without a license, to restrictions on certain trade practices that undermine the functioning of three independent tiers (manufacturer, wholesaler, retailer). As the history of alcohol control in America illustrates, disparate levels of regulation and taxation on different product types, and the outsized influence of one specific industry sector, can create distorted incentives in the market or favor the proliferation of one product over another. The market for alcoholic beverages is complex, with different types of products continually gaining or losing ground in consumer preferences and with only a loose affiliation between price and potency—one bottle of limited-production specialty beer may be more expensive than a “shooter” of low-grade whiskey.⁶⁵ Economists describe elasticity of demand, the degree to which demand is sensitive to a slight increase or decrease in price; Americans’ preference for beer has been relatively price inelastic, and may substitute this product when higher-alcohol alternatives are more expensive.⁶⁶

In this market of steady demand for alcohol and many options that can satisfy that demand, creating unreasonable restrictions on one sector while favoring another can shift both operators and consumers toward the cheapest, most freely-available choice and create perverse business incentives. A policy limiting the number of liquor stores but allowing service of beer at any establishment, for example, could have the simultaneous effects of ensuring dominance of beer producers and distributors in a local market, and encouraging policies that protect existing

⁶⁴ Moore and Gerstein 63.

⁶⁵ Babor et al. 104.

⁶⁶ Babor et al. 108.

liquor stores' business interests and create barriers to entry for would-be retailers. While the three-tier system and regulation of trade practices were designed to prevent consolidation and monopoly within the liquor industry, these alone do not eliminate the need to examine alcohol control policies across all types of products containing alcohol, and prevent unnecessary burden or insufficient regulation on each.

3: Good Alcohol Control Policy: Rational, Equitable and Practical

Using the goals established in Part 2—protecting the public health and promoting a fair market—and the recognition that all alcoholic beverages contain ethanol, but some much more than others, a framework for regulation of different types of alcoholic beverages may be established. One may reasonably conclude that if ethanol is the problem, then designing policy around specific ethanol concentration should be the solution. This paper comes to a different conclusion, however, and instead upholds the basic framework of our current regulatory system: regulating and taxing products based on categories of like products. In addition to the market characteristics articulated in the previous section and weak correlation between potency and price, the fact remains that alcohol policy is not only carried out at the federal and state level, but in thousands of bars, restaurants, package stores, outdoor festivals, catered events, airplanes, and other settings nationwide and through myriad individual interactions every day. Legislation and policies with such broad reach and cumulative significance for the general public, business interests in the alcohol industry, local governments and enforcement professionals, and other impacted groups must be designed with minimal burden and therefore maximum chance of compliance. A policy framework differentiating between different types of alcohol should therefore meet the following criteria: to be *rational*, *equitable* and *practical*.

The first test, rationality, requires that alcohol control policies for different types of alcohol be evidence based and address the costs that alcohol control is attempting to prevent or mitigate. Though not precise, regulating different categories of alcoholic beverages according to their typical alcohol content range provides a means of associating the scale or risk of negative impacts to the amount of ethanol per unit of drink. For example, a regulation allowing a liquor store to provide free samples of their products to customers might specify different volume limits per product type, based on a reasonable ratio of relative alcohol content. A limitation on a restaurant license to serve only beer and wine should not be based only on the enduring belief that those beverages are integral to the experience of a meal, but also on the desire to establish healthy social norms for youth that consuming lower-alcohol beverages with a meal is responsible and encourages moderation. Rationality also supposes that there can be arbitrary and inappropriate distinctions between regulations on product types, favoring one over another and obscuring the fact that all still contain some amount of ethanol. While the proposal in *Toward Liquor Control* that limited outlets for distilled spirits seems rational, the recommendation to allow sales of beer in as many places as are economically sustainable is not. A rational policy recognizes the need for overall control to reduce the potential costs of all forms of alcohol, then places some additional controls on products with higher alcohol content, which can deliver the most immediate and intense impact per ounce.

A good alcohol control policy must also be equitable across product types, not necessarily affording them the same privileges, but ensuring that the rationale on which differences are based does not unduly favor one sector of the industry over another. The history of alcohol regulation provides many examples of ostensibly public-minded policies that, intentionally or accidentally, provide a boon to one type of business—the preferential tax rate for

craft beer producers has been a significant economic development tool for that sector, but cannot be said to be equitable across all brewers, let alone all manufacturers. Similarly, many wine producers enjoy the ability to serve the public directly without participating in the other two tiers, including shipment of alcohol to a consumer in another state, a privilege conveyed in several states to wineries alone.⁶⁷ Equitable regulations are not only important to the businesses operating within that system, but also to the overall functioning of a well-regulated market in which balanced incentives prevent exploitation of loopholes, do not drive demand disproportionately to the cheapest or most potent products, and are not influenced by any one industry sector's political motivation to secure more market share from the others or protect their own interests through placing additional restrictions on others.

Finally, an alcohol control policy must pass the most important test, practicality, or it cannot be effectively and consistently implemented. While typically a government's peace officers are tasked with enforcing the law, to a large degree alcohol control laws are predicated on voluntary compliance first, with the enforcement language necessary to sanction an individual or organization that does not comply. It is this third test that any regulatory scheme based purely on ethanol content inevitably fails: within the inventory of an individual manufacturer there may be products ranging from low-alcohol beer to potent barley wine, to say nothing of a package store or bar that offers a wide selection of all product types. While it is feasible (and required) to measure alcohol content for purposes of labeling and compliance with federal law, designing a policy such as daily sampling limits or differentiated tax rates becomes impossible to administer both at the state level and at each point of sale: a busy bartender could not be expected to track each customer's cumulative alcohol intake from multiple products, and calculating excise taxes

⁶⁷ Wine Institute.

owed for a ten-brand product line would become a rather complicated algebra problem. Using product types as a proxy for alcohol content is not without flaws: beer, wine and distilled spirits all vary considerably in their potency, and some products such as cider and sake do not neatly fit in their defined categories with average alcohol content, though they share production methods with wine and beer, respectively. All policies must be subjected to the question, “Does this work?” Alcohol policies in particular must be scrutinized further, or they cannot be broadly complied with and enforced: “Does this work in a variety of retail settings? Does it take a great deal of time for an employee to carry out? Does it require too much discretion, or not enough? Does it provide a business sufficient flexibility to incorporate this into their business model?” Categorization of alcohol products, though imperfect, provides a practical, easy-to-understand framework on which regulation and taxation of different product types can be based.

No policy is perfect, but there are better and worse ways to promote an orderly and functional alcohol market while protecting the public health, safety and welfare. Much of our current system of alcohol regulation, including each state’s alcohol control framework, encompasses all beverage products containing alcohol. At the same time, these systems treat different types of alcohol differently, with complex historical, political and cultural reasons that have persisted to the present day. There remain valid reasons for differentiation among beer, wine and distilled spirits: the concentration of ethanol predictably varies between product types, and higher-alcohol products are easier to consume quickly and have historically represented a greater profit potential. Present day regulation should not, however, favor one product over another or assume that there is any inherently “safe” form of alcohol. Effective regulation of alcohol should encompass all alcoholic beverages, and where types are treated differently, policies should be rational, equitable and practical.

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