Alcohol Regulation and Excise Taxes in New Mexico

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Executive Summary

In this report we study the regulation of alcohol in New Mexico. First, we provide a historical context for alcohol regulation in the US and discuss the effect that different types of alcohol policies have had. We describe how market-based mechanisms can be used to impact alcohol consumption and provide the economic theory behind alcohol quotas and taxation. We then collect empirical data to study the impact that recent alcohol excise taxes rate changes have had on the New Mexico craft beer industry. We find that

- over the last ten years there has been considerable growth in the New Mexico brewing industry.

- after changes in excise taxes, there was higher yearly growth in brewery production and a reduction in importation of out-of-state beer.

- the craft beer industry had a $165 million effect on the New Mexico economy in 2019, with more than $47 million coming from outside New Mexico

- there is no evidence that excise tax policies taxes had an impact on alcohol-related arrests and traffic fatalities.

We also study the New Mexico wine industry and find

- small New Mexico wineries have experienced slow but steady growth.

- small wineries had a $48 million effect on the New Mexico economy, with more than $10 million coming from outside New Mexico.

In future research we will collect more detailed information about alcohol policy changes to better understand the degree to which the tax code thresholds impact production decisions. We will also examine the relationship between policy changes and alcohol-related traffic fatalities.

1   Introduction

As with virtually every polity worldwide, the state of New Mexico regulates alcoholic beverages to achieve social goals and to generate revenue. Those social goals have evolved over time, adapting to a changing population and to changing markets, while leaving traces of laws and regulations dating back to Prohibition and even Territorial times. Some contemporary regulations, such as alcohol taxes and restrictions on alcohol sales, use market-based mechanisms to limit the social and economic costs of alcohol. Recently, New Mexico has implemented alcohol policies to encourage economic development, notably it has extended preferential excise tax treatment to New Mexico wineries and breweries. The goal of this study is to examine the consequences - both intended and unintended - of these excise tax policies.

2   Background

Alcohol is a complex good, which has a complicated history and a multipronged impact on society. First, alcohol is a pleasurable good which has been consumed for millennia for both its taste and intoxicating effects. It is an important part of cultures and social traditions and historically has played important roles in religious ceremonies and celebrations (Mandelbaum, 1965). More recently, as viticulture and brewing techniques have improved, alcohol has become much more readily available and is consumed more frequently and in larger quantities. It is interwoven into our cultures and social norms and can provide relaxation, reduced inhibitions, social integration, and a pleasurable/euphoric feeling. Also, different aspects of the alcohol industry have had an impact on economic development creating jobs, tourism and tax revenue.

Along with these positive effects there are many negative impacts of alcohol on societies. Alcohol is associated with 3 million deaths per year worldwide (WHO, 2019) and is the leading cause of preventable death in the US, resulting in an estimated 140,000 deaths per year (CDC). [1] Moderate to heavy consumption is associated with many negative health outcomes, such as liver and heart disease (Becker et al., 1996), cancer (Boffetta & Hashibe, 2006), and lower life expectancy (Wood et al., 2018). While there is a complex endogenous relationship, alcohol is correlated with crime, such as driving-related deaths (Voas et al., 2012), sexual assault (Abbey et al., 2004), violent crime (Greenfeld, 1998), and intimate partner violence (Leonard, 2005). [2] There is also evidence that alcohol can contribute to worse labor market outcomes (Mullahy & Sindelar, 1996; Pidd et al., 2006).

2.1 Alcohol regulation policies

Governments have a long history of regulating alcohol. In Great Britain, the Gin Acts of 1729, 1736, and 1751 were intended to counteract the "excesses of the working poor" (Warner et al, 2001). The Molasses Act of 1733 imposed taxes on non-British rum, the alcoholic beverage of choice in colonial North America at that time. This launched the now world-famous American whiskey industry. This section highlights some of the major milestones in alcohol regulation the US.

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1 https://www.cdc.gov/alcohol/features/excessive-alcohol-deaths.html, accessed 30 June 2022.

2 While, statistically, alcohol appears as a factor in many crimes, this is correlation, not causation. There may be circumstances when alcohol use leads to criminal behavior, or criminal behavior leads to alcohol use, or both result from something else, such as mental health issues, physical or other abuse, or other compounding factors.

2.1.1 Prohibition

The 18th amendment to the U.S. constitution banned alcohol in the US between 1919 and 1933. [3] This period of time, known as Prohibition, has largely been viewed as ineffective (National Research Council & Committee on Substance Abuse, 1981; Thornton, 2014); however, there were some benefits. In the early 1900s there was a disturbing increasing trend in alcohol consumption. Prohibition stopped this trend, and it is estimated that alcohol consumption dropped by approximately 30% during Prohibition. [4] Also, initially alcohol related harms including cirrhosis, alcoholic psychosis, and drunkenness arrests declined during Prohibition. However, in response to Prohibition, illegal markets formed to provide alcohol (bootlegging) and as illegal markets grew, alcohol consumption rebounded and illegal behavior increased, all while the taxes from alcohol sales were no longer collected.

2.1.2 Post-Prohibition policies

After Prohibition ended, states individually chose how to regulate alcohol. Antialcohol sentiment remained and many states quickly adopted strong laws restricting access to alcohol. It was common to place restrictions on the days and times that alcohol could be sold. For instance, restrictions were placed on alcohol sales on Sundays and holidays. Also, after Prohibition the United States implemented a three-tier system for alcohol, which separates the alcohol system into producers and importers; distributors; and retailers.

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[3] Prohibition generally corresponds to the passing of the Volstead act which forbade the manufacture, transportation, sale, importation, and exportation of alcoholic beverages. This act implemented the Eighteenth Amendment to the US Constitution, ratified in 1919, which prohibited "intoxication liquors" - without defining the term - and which was repealed by the Twenty-first Amendment to the US Constitution in 1933.

[4] Alcohol rates dropped substantially (approximately 60-70%) in the first couple years of Prohibition but rebounded (by approximately 30%) towards the end of Prohibition.

It was also common for states to place limits on alcohol distribution and restrict the number of alcohol distributers and alcohol distribution outlets (e.g., bars and liquor stores).[5] The rationale for limiting the number of alcohol distribution outlets was straightforward – fewer places to purchase alcohol was thought to reduce alcohol consumption, and fewer bars would reduce drinking in public and the associated societal costs. The objective of restricting the number of alcohol distributers was multifold. At the time states wanted to avoid a tied house.[6] Also, in restricting the number of distributers, alcohol taxes could be more simply and efficiently taxed. Additionally, quotas that restricted the number of alcohol distributers likely reduced alcohol consumption. However, there were also negative aspects of restricting the number of distributers. Economic theory suggests that this restriction would also affect market power, increasing the price of alcohol and creating excess profits for the chosen distributers.[7]

2.1.3   Subsequent alcohol regulations and their effectiveness

Over time, a number of state and federal laws have been passed that have been shown to be effective in reducing alcohol-related harms. A large policy shift in the US increased the minimum drinking age from 18 to 21.[8] Laws increasing minimum drinking age reduced alcohol consumption and traffic crashes (Voas et al., 2003; Wagenaar & Toomey, 2002); mortality (Carpenter & Dobkin, 2009) and crime (Carpenter & Dobkin, 2015; Chalfin et al., 2019). Another large

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5 A number of states created state monopolies to sell alcohol

6 A tied house is typically a bar that is owned or controlled by a brewer, distiller, or distributor. This form of vertical integration increases market power for producers which reduces consumer surplus.

7 There are three tiers in alcohol supply: production, distribution and retail. Sometimes states have monopoly control over distribution. 17 states have state control of alcohol in some way. See https://en.wikipedia.org/wiki/Alcoholic_beverage_control_state (accessed 30 June 2022) and https://www.whiskyadvocate.com/three-tier-system-alcohol-distribution-explainer/ (accessed 30 June 2022)

8 This happened at a national level in 1984.

federal policy shift in the early 2000's was a change in per-se blood alcohol content laws, which changed the legal threshold from .10 to .08. This change has been found to reduced alcohol related driving fatalities (Dee, 2001; Fell & Voas, 2006; Scherer & Fell, 2019).

More recently, ignition interlock, mandatory license suspensions and jail time for drinking and driving convictions have been variously deployed by federal, state, and local governments, which have been found to reduce DUIs, alcohol related fatalities and other alcohol related harms (Carpenter, 2007; Carpenter & Dobkin, 2009; Carpenter, 2005; Dee, 2001; Han et al., 2016; Heaton, 2012; Phillips et al., 2020; Ruhm, 1996; Wagenaar, 1993; Kaufman & Wiebe, 2016; Wagenaar & Maldonado-Molina, 2007). Dram shop (overservice) laws have been shown to be associated with reductions in per capita beer consumption and fatal crash ratios (Scherer et al., 2015). Also, states have started repealing Sunday liquor-sales bans. This has been found to have increased minor and alcohol-involved serious crime in Virginia (Heaton, 2012) and increased crime in low-income areas of Philadelphia (Han et al., 2016).

2.1.4   Market-based interventions for alcohol consumption

Another type of mechanism that can be used to mitigate alcohol related harms is market-based interventions. The basic economic motivation for intervention in alcohol markets is simple. Alcohol causes "negative externalities", or when alcohol is consumed it may change an individual's behavior in a way that negatively affects others (e.g., more risky behavior). For example, an individual consuming alcohol likely factors in their personal costs associated with this consumption – potential decreased health, wages, etc. – but may not fully factor in the potential costs of alcohol consumption on others (driving accidents/fatalities, domestic violence, etc.). In unregulated markets, the extra costs that are not incorporated into alcohol consumption decisions

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result in what economists call a market failure, meaning a situation where a market allocates resources inefficiently. Economic theory suggests that when this happens, governments can and should use market interventions to improve markets by adjusting for negative externalities. The idea behind alcohol regulation is to increase the costs of consuming alcohol to better reflect the entire societal costs associated with alcohol consumption.

There are two standard market-based approaches to reducing alcohol consumption: quotas and taxation. Alcohol quotas limit the number of retail establishments that can sell alcohol. Quotas often take the form of limiting the number of retail licenses within a jurisdiction based on the population of that jurisdiction. This is a common approach to regulating alcohol, which New Mexico has taken since the early 20th century.

A basic representation of the economic impact of alcohol quotas is presented in Figure 1. Equilibrium without quotas is where the demand curve (the D line), and the supply curve (the S line) intersect at a quantity Q* and a price P*.[9] The quota shifts the quantity in the market from Q* to Q^Q.[10] This results in a higher retail price, P_D, and greater profits for the firms that remain in the industry. The shaded rectangle represents additional profit going to suppliers because of the quota, which is often called a quota rent. In practice, quota rents may get embedded into the price of liquor licenses and thus may be redirected to the holder of the liquor license. Also, it is important to note that alcohol quotas result in deadweight loss, which means that some of the gains from trade from this market are lost due to government intervention.

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9 For a quota to be binding, Q_Q in the plot, it must be lower than the equilibrium, as shown in the plot.

10 Alcohol quotas restrict the number of suppliers (rather than the total quantity that can be produced) This will have a similar effect (reduced quantity and increased price) but is less precise than a quota on quantity supplied.
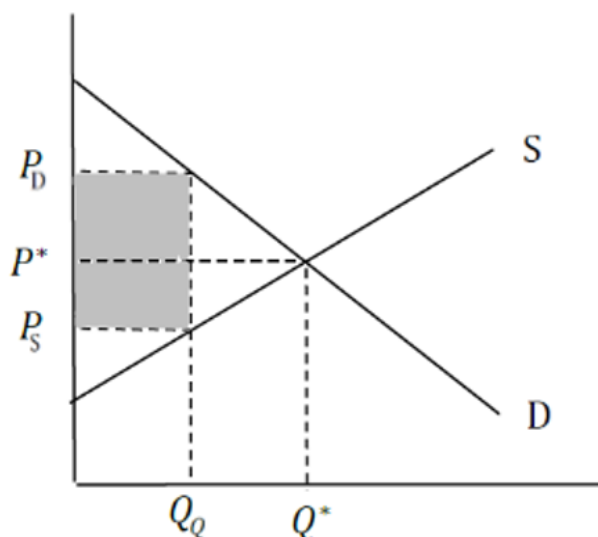
Figure 1 The impact of license quotas on alcohol markets

The other common market mechanism used to mitigate alcohol consumption is taxation. Typically, alcohol taxes are excise taxes, meaning that taxes are based on quantity produced or imported. A basic representation of the economic impact of an alcohol excise tax is presented in Figure 2. An alcohol tax results in an upward shift of the supply curve, with the vertical distance between the two supply curves being the amount of the tax (represented by T). The shift in the supply curve results in a higher equilibrium price, P_T, at a lower equilibrium quantity, Q_T.

The cross-hatched rectangle represents tax revenue to the government. The burden of this tax is paid by both producers and consumers (consumers pay part of the tax in the form of higher prices). The upper part of the rectangle is the part of the tax paid by consumers while the lower part of the rectangle is the part of the tax paid by suppliers. The ratio of those two parts depends on the slopes of the demand and supply curves. Usually, the demand for alcoholic beverages is somewhat price-inelastic, meaning that the demand curve, D, would be steeper than in this plot. This would cause more of the burden of the tax to be imposed on consumers.
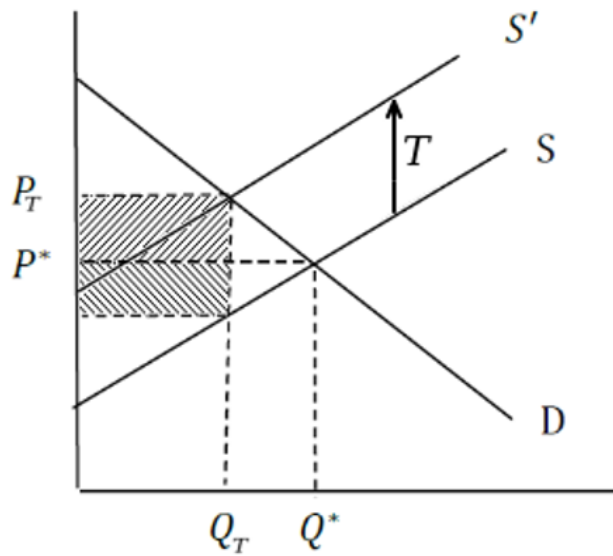
Figure 2 The impact of a tax on alcohol markets

Overall, both types of market interventions result in reduced alcohol consumption and increased prices. Reduced alcohol consumption will result in lower negative externalities. Alcohol quotas result in transfer of surplus (economic wellbeing) away from consumers and to the suppliers. Alcohol taxes have similar results but some of the surplus from both consumers and suppliers is transferred to the government in the form of taxes.[11] Both interventions result in lower economic activity, represented by the triangle to the right of the lower quantity. This reduction of economic activity is termed deadweight loss.

2.2 State-specific policies to increase in-state beer production

Alcohol is a complex good to regulate. It is associated with negative outcomes for individuals that consume it as well as society in general. This is potentially why every state has specific excise tax rates for different levels of alcohol by volume (ABV). However, there are

11 In theory these taxes will then be used in welfare inducing policies and public programs. For instance, taxation can provide funding for enforcement, education, and to offset alcohol-related social costs.

individual benefits associated with moderate/healthy consumption of alcohol. Also, there are numerous potential state-level benefits of encouraging in-state beer production, including tourism, economic development, and job-creation.

To encourage in-state beer, wine, or spirits production recently a number of states have implemented favorable tax rates for small producers. Montana imposes a reduced excise tax rate for breweries that produce fewer and 10,000 barrels per year. Arkansas gives a tax rebate to breweries that produce less than 25,000 barrels per year, and the state of Michigan gives a tax credit to breweries that produce up 50,000 barrels per year. In addition, states like Alaska and Washington impose reduced excise tax rates on the first 60,000 barrels sold inside the state by breweries that produce up to 2 million barrels per year. Rhode Island provides a 100% tax exemption on the first 100,000 barrels produced per year by any brewery, regardless of their size. Kentucky gives tax credits for the first 300,000 barrels regardless of the brewery's size. New York gives tax credits to the first 15.5 million gallons produced per year to the breweries that produce fewer than 60 million gallons per year (Pinho, 2018).

Section 2.4 summarizes New Mexico and Federal tax rates for microbreweries and small wineries. New Mexico allocates 41.5% of the excise tax net receipts to the local DWI grant fund available for county and municipal programs, services, or activities (NMTRD, 2022).

2.3   The New Mexico alcohol system and recent changes

In New Mexico, distributors act as agents for importers and for most producers. In this case, distributors market and distribute alcoholic beverages to retailers, and distributors are responsible for reporting the quantities of those sales to New Mexico Taxation and Revenue Department (NMTRD) for excise tax purposes. There are exceptions to New Mexico's three-tier alcohol system in that some wineries and breweries can simultaneously act as producers and

retailers. Initially, New Mexico breweries, wineries, and distillers could only retail their own products, but recent legislation allows them to retail products from other New Mexico producers. New Mexico imposes different excise tax rates for beer and cider (5% ABV), wine (up to 14% ABV), fortified wine (fermented beverage with added alcohol with greater than 14% ABV), and spirituous liquor (distilled spirits). McKinley County imposes additional local excise taxes. In some states, on-premise excise tax rates may include wholesale tax rate, retail tax rate, sales tax rate, and sales adjusted retail ad valorem rate.

There have been a number of changes to the New Mexico alcohol laws pertaining to microbreweries, small wineries, and craft distillers. Of particular interest to this study were the changes Senate Bill 81[12] passed in 2013 and enacted in January 2014. In 2014, the threshold for the lowest excise tax rate on microbrewers increased from 5,000 barrels per year to 10,000 barrels per year. This had a major impact on the industry as discussed throughout section 3. Also with SB 81, the threshold for small wineries increased from 950,000 liters per year to 1,500,000 liters per year. This had a much smaller impact because it only applied to wineries producing over 950,000 liters per year, as discussed in section 4.2.

In 2018, two pieces of legislation were passed. The first one, House Bill 35[13], allocates 45% of the net receipts from the liquor excise tax to the local DWI grant fund. In addition, it distributes a portion of that tax to the drug court fund which was created that same year by an

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[12] SB 81, "LIQUOR TAX MICROBREW VOLUME LIMIT", https://www.sos.state.nm.us/legislation-and-lobby-ing/signed-chaptered-bills/2013-legislation/ (accessed 25 Jul 2022)

[13] HB 55, "LIQUOR EXCISE TAX DISTRIBUTIONS" and

appropriation. The second bill, House Bill 258[14], bans the use of scanbacks[15] and redeemable coupons with the sale of alcoholic beverages.

In 2019, there were also two main bills that were passed regarding alcohol laws and regulations. The first one, House Bill 151[16], amended sections of the liquor control act in order to allow minors who are licensed under the New Mexico commercial driver's license act to deliver packaged beverages that contain alcohol. The second bill, Senate Bill 413[17], amended the definition of microbrewer, wine grower and spirituous liquor and the rates of the liquor excise tax. This bill expanded the definition of a microbrewer to someone who produces less than 200 thousand barrels per year. In addition, for beers produced by a microbrewer the $0.8 per gallon tax was extended for the first 30,000 barrels (changed from 10,000); $0.28 per gallon for barrels sold over 30,000 but fewer than 60,000 (changed from 10,000 to 15,000). The excise tax for ciders produced by small winegrowers was amended to be $0.08 per gallon on the first 30,000 barrels sold; $0.28 per gallon for barrels sold after 30,000 and up to 60,000 barrels. Furthermore, there were also changes made to the excise taxes for spirituous liquor depending on their alcohol level. Spirituous liquor for products up to 10% alcohol by volume are taxed at $0.08 per liter for the first 250,000 liters, $0.28 per liter for the next 250,000 liters. For spirituous liquor above 10%

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[14] HB 258, "NO SCANBACKS & INSTANT MALT LIQUOR COUPONS", https://www.sos.state.nm.us/legislation-and-lobbying/signed-chaptered-bills/2018-signed-and-chaptered-bills/ (accessed 14 Jul 2022)

[15] A scanback is a reimbursement to the retailer from the manufacturer, importer, or wholesaler. The size of the reimbursement is dependent on the quantity of the product sold.

[16] HB 151, "LIQUOR DELIVERIES BY LICENSED MINORS" and

[17] SB 413, "LIQUOR PERMIT, TAX & DEFINITION CHANGES" https://www.sos.state.nm.us/legislation-and-lobbying/signed-chaptered-bills/2019-legislation/ (accessed 14 Jul 2022).

alcohol by volume the excise tax is $0.32 per liter on the first 175,000 liters and $0.65 per liter on the next 200,000 liters sold.

Finally, in 2021 there were some significant changes to alcohol laws as well. House Bill 255[18] was passed and the changes introduced by this act went into effect on July 1, 2021. This bill allows retailers, dispensers, craft distillers, wine growers, small brewers and restaurant licensees to obtain alcohol delivery permits. These permits will allow beer, wine and spirits to be delivered to people's homes. In addition, the legislation proposed a significant cut to the costs of obtaining liquor licenses. In the past, restaurants had to pay around $350,000 or more to obtain a liquor license. However, after the cuts, restaurants can now sell, serve and allow the consumption of beer, wine and spirits with a license that costs $10,000. The number of retail liquor licenses was also expanded.

Another big change this last bill presents is the removal of the Sunday sale restrictions. Before the bill was signed into law, the state did not allow sales before 11 a.m. on Sundays. Now, alcohol sales can start as early was 7 a.m. The new regulations do not allow license holders to sell 3-ounce bottles of liquor. Consumers can purchase 3-ounce bottles of liquor at casinos, golf courses, and hotel mini bars where customers can legally drink them. In addition, the sale of party packages, which are bundles of 3-ounce bottles of liquor, can be sold as one unit. Finally, the state also implemented new reciprocity rules that can benefit breweries and wineries. As an example: a brewery can sell local beer and also serve locally distilled spirits.

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[18] HB 255, "ALCOHOL DELIVERIES" https://www.sos.state.nm.us/legislation-and-lobbying/signed-chaptered-bills/2021-legislation/ (accessed 14 Jul 2022).

2.4 A summary of New Mexico excise tax laws for microbreweries and small wineries

Alcoholic beverages are subject to excise taxes (producer taxes) at both the state[19] and Federal[20] levels. New Mexico regulations differ from Federal regulations in many ways, though New Mexico definitions of tax tiers have been converging with Federal definitions. This section focuses on excise taxes applied to microbreweries and small wine producers. There are additional complexities for cider and distilled spirits, but those industries are still very small in New Mexico. The key differences for microbreweries and small wineries are presented below.

Definition of a microbrewery for taxation purposes:

Federal - fewer than 2 million barrels per year
NM - fewer than 200,000 barrels per year (since 2019)

New Mexico taxes microbreweries on a per-gallon basis, while Federal taxes are assessed on a per-barrel basis. For comparison, all excise tax rates are shown per gallon, which are approximations for the Federal rates. Excise tax rates for microbreweries:

Federal

$0.11 per gallon (approx.) for the first 60,000 barrels
$0.53 per gallon (approx.) between 60,000 and 200,000 barrels

NM (since 2019)

$0.08 per gallon for the first 30,000 barrels
$0.28 per gallon between 30,000 and 60,000 barrels
$0.41 per gallon between 60,000 and 200,000 barrels

Definition of a small winery for taxation purposes:

Federal - no specific distinction
NM - fewer than 1.5 million liters per year

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[19] New Mexico tax information and data from New Mexico Taxation and Revenue Department (NMTRD), https://www.tax.newmexico.gov/ (accessed 19 Jul 2022).

[20] Federal excise tax information from U.S. Department of the Treasury, Alcohol and Tobacco Tax and Trade Bureau, https://www.ttb.gov/tax-audit/tax-and-fee-rates (accessed 19 Jul 2022).

New Mexico taxes wineries on a per-liter basis, while Federal taxes are assessed on a per-gallon basis. For comparison, all excise tax rates are shown per liter, which are approximions for the Federal rates. Federal regulations apply to wines with 16% and under alcohol by volume. New Mexico considers a wine with more than 14% alcohol by volume to be fortified unless the wine is a) sealed by a cork and aged more than two years, or b) has more than 14% alcohol by volume as a result of natural fermentation only, or c) is vermouth or sherry. Excise tax rates for wine:

Federal

$0.28 per liter (approx.)

NM

$0.10 per liter for the first 80,000 liters
$0.20 per liter between 80,000 and 950,000 liters
$0.30 per liter between 950,000 and 1.5 million liters
$0.45 per liter above 1.5 million liters

3 Social and economic analysis of New Mexico alcohol small-brewery excise tax changes

To study the impact of recent excise tax rate changes alcohol sales data were obtained from New Mexico Taxation and Revenue Department (NMTRD) excise tax records. Detailed analysis of NMTRD data is included in the appendix. Following are the major findings.

First, to put these data in context, Figure 3 shows New Mexico gross domestic product (GDP)[21] and population between 2007 and 2019.[22] Gross income (as indicated by real GDP)

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[21] Gross Domestic Product: All Industry Total in New Mexico (NMNQGSP), St. Louis Fed, https://fred.stlou-isfed.org/series/NMNQGSP adjusted to 2005 dollars by chained CPI from U.S. Department of Labor, https://beta.bls.gov/dataViewer/view/timeseries/SUUR0000SA0 (both accessed 29 July 2022).

[22] From U.S. Census Bureau National Monthly Population estimates.

increased by almost 15 percent over that time. Population increased by four percent between 2007 and 2012, but has remained relatively constant since 2012. Economic theory predicts that an increase in income would increase the consumption of normal goods, including alcohol. Also, an increase in population would increase aggregate alcohol consumption and increase the incidence of alcohol-related crimes like DWI.
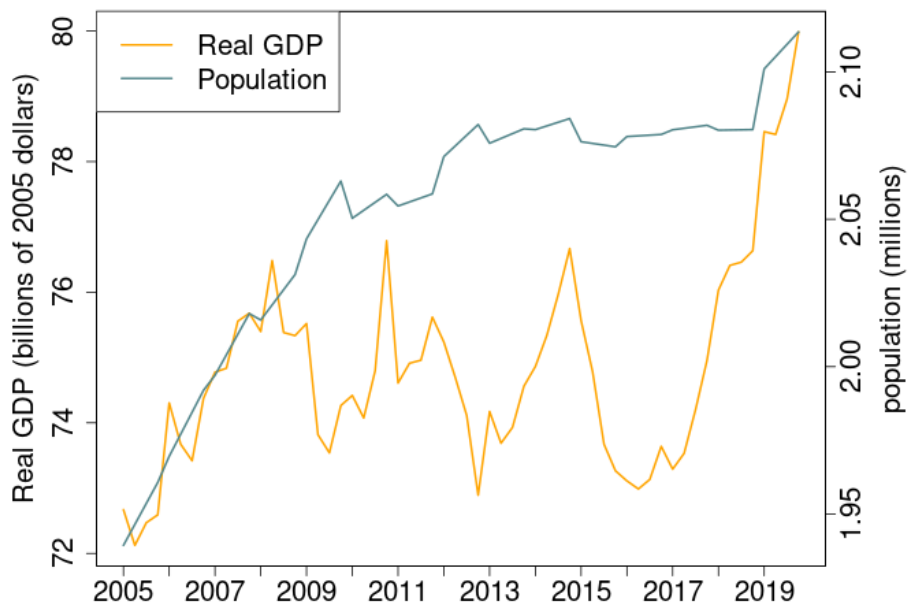

Figure 4 New Mexico GDP and population from 2007 to 2019

3.1   Excise taxes and major beer consumption, micro beer consumption and DWI incidents

To better understand the impact that excise taxes have had on beer consumption and DWI incidents data were collected data from beer reports filed with New Mexico Taxation and Revenue Department (NMTRD) from 2007 to 2019. Alcohol-related traffic fatality data were

obtained from the New Mexico Department of Transportation (NMDOT) Crash Database[23]. Figure 5 presents volumes of beer imported into the state (major) and beer produced within the state (micro). In 2014, the threshold for the lowest excise tax rate on micro beer increased from 5,000 barrels per year to 10,000. The vertical line between 2013 and 2014 demarks this change.[24] The lefthand side of Figure 5 shows the scale for changes in major beer volume (in millions of gallons) and the righthand side shows the scale for changes in microbeer volume (in millions of gallons).
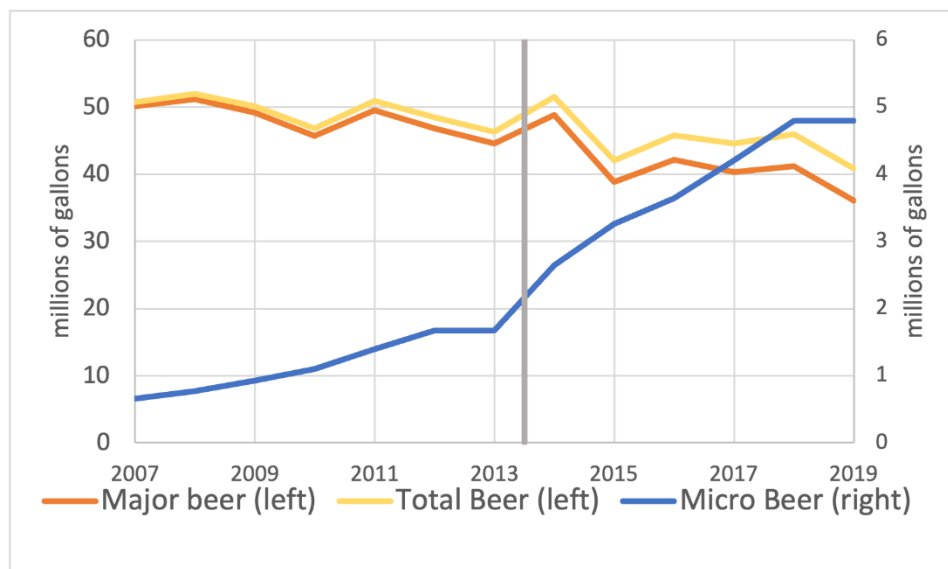
Figure 5 Major and micro beer volumes over time

Over the study period there was an increase in microbeer volume going from 659,841 gallons in 2007 to 1,670,885 gallons in 2013 (or a per-year growth rate of 16.7 percent). After

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[23] NMDOT Crash Database, https://gps.unm.edu/tru/crash-reports. Accessed 9 May 2022.

[24] There was another increase in 2019, from 10,000 barrels to 30,000 barrels. There are insufficient data to assess that change.

the excise tax threshold increase in 2014 there was a considerable spike in microbeer. In 2014 the volume increased to 2,644,076 gallons and by 2019 volume had increased to 4,796,767 gallons (a per year increase of 19.2 percent since 2013). Overall, microbeer production increased by 3,125,882 gallons since the change in excise tax thresholds in 2014. Of course, the entirety of these increases should not be attributed to excise taxes as microbeer consumption was increasing beforehand. However, the larger per-year growth rate after the excise tax changes of 2014 suggests that changes in excise taxes did increase microbeer production in New Mexico.

While increases in New Mexico microbeer production are good for the economy, another important consideration is the impact that the changes in the excise tax rate had on alcohol consumption. As mentioned earlier in the report alcohol consumption can have a negative impact on many societal outcomes. The degree to which the increase in the microbeer excise tax rate thresholds increased alcohol consumption depends on how much individuals replaced other beer with New Mexico craft beer. From Figure 5 we observe that while microbeer consumption increased with changes in excise tax thresholds in 2014, there was a corresponding decrease in major beer consumption over this period. In 2013 there was 44,603,143 gallons in major beer volume in New Mexico, and in 2019 there was 36,082,966 gallons in major beer volume.

Figure 6 presents DWI fatalities and convictions over the study period. The lefthand side of Figure 6 presents DWI fatalities with micro beer volumes and the righthand side presents DWI conviction with micro beer volumes. Despite the increases in income and population over this period (see Figure 4), the annual incidence of DWI fatalities has remained relatively constant. Also, DWI convictions have decreased at a relatively consistent rate over the study period. Thus, it appears that the increase in micro beer production since 2014 is not correlated with an increase in drinking and driving convictions or fatalities.
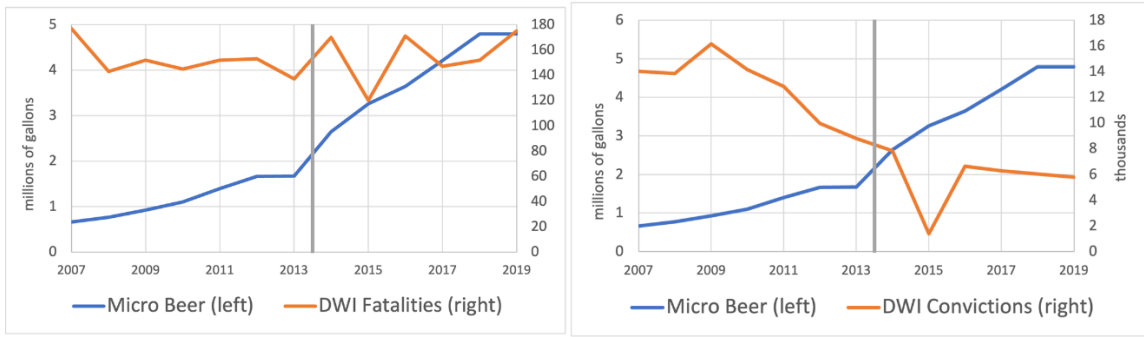
Figure 6 DWI fatalities and convictions from 2007 to 2019.

Overall, it is important to note that the plots in Figure 6 only capture overall trends and causality is not directly testable. But, given that caveat, the aggregate trends suggest that the rapid growth of the microbrewery industry, and the policies to support it: (1) increased New Mexico micro beer consumption and reduced major beer consumption (2) did not have a negative impact on DWI convictions and fatalities.

3.2   Taxes collected from the micro beer industry

As mentioned in sections 2.3 and 3.1, the doubling of the threshold for the lowest excise tax rate in 2014 spurred an increase in microbrewery production. This is further illustrated in Figure 7, which presents monthly reported microbeer volumes and the corresponding excise tax rates.[25] Another interesting finding from Figure 7 is the excise rates collected before and after the excise rate change of 2014. Before 2014 no excise taxes were collected over the $.08 threshold. After 2014 some excise taxes were collected at the next highest tax rate of $0.28 per gallon. However, still excise tax collection over the $.08 per gallon rate was rare. There were only seven months (out of 165) in which any microbrewery reported sales at the $0.28 rate. Nonetheless it

25 Monthly reports to NMTRD varied widely as seen by the volatility in Figure 7. These fluctuations are more likely to be artifacts of bookkeeping rather than actual fluctuations in volumes.

doesn't appear that much tax revenue was lost from the New Mexico microbrewing industry from excise tax rate change of 2014. In fact, it appears that excise taxes may have increased due to increased production. Also, overall, these results suggest that excise taxes may be an important consideration for microbreweries when they choose production levels.[26]
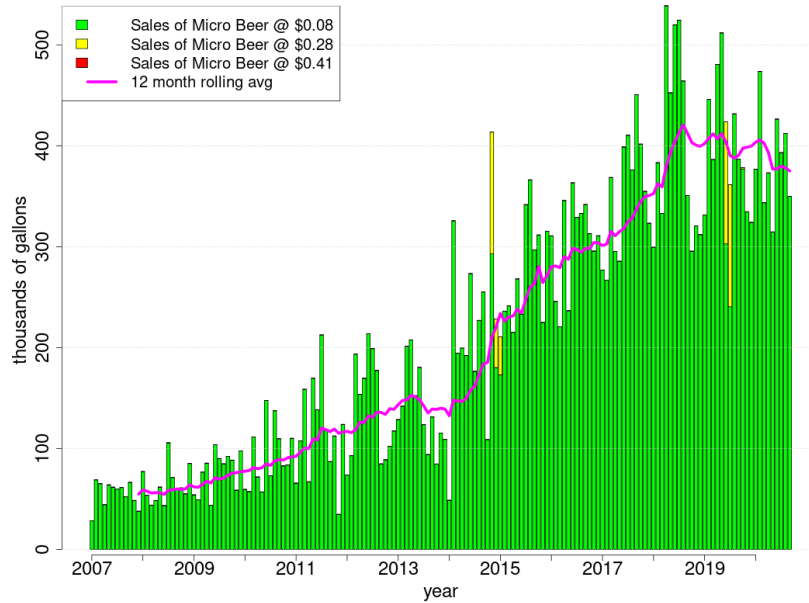

Figure 7 Microbrewery monthly sales reported to NMTRD between 2007 and 2020.

3.3   The impact of microbeer on the New Mexico economy

Another important consideration is the impact that microbeer had on the economy of New Mexico. To calculate this impact, we use IMPLAN[27] economic software. IMPLAN analyses uses an input-output (I-O) model to calculate the contribution of a specific sector through

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26 In July 2019 the threshold on the lowest excise tax rate increased again to 30,000 barrels per year. Our data does not span long enough for us to study this change.

27 IMPLAN is the standard tool for economic impact assessment. This study uses 2019 IMPLAN data for New Mexico. See https://implan.com/ (accessed 14 Jul 2022) for more information.

input purchases, labor payments, and trade. IMPLAN analysis includes direct effects, indirect effects, and induced effects. Direct effects represent initial exogenous final demand. Indirect effect represents business to business purchases in the supply chain. Induced effect represents how the labor income from the sector contributes to other economic sectors.

NMTRD data give total microbrewery production. These data can be used to estimate total retail sales of New Mexico microbrewery production. Using an average over the last two and a half years of data (2018 to mid-2020), the average annual sales for the microbeer industry was 4.747 million gallons. With eight pints to a gallon, and assuming a $4 retail price per pint[28], the total annual retail sales is calculated to be $151.9 million. This is used as direct output for microbreweries and is the basis for the IMPLAN analysis shown in Table 1.[29]

Table 2 IMPLAN analysis of New Mexico microbreweries

Impact	Employment	Labor Income	Value Added	Output
Direct	469	$16,172,811	$38,892,346	$151,900,000
Indirect	206	$10,820,454	$18,136,175	$41,046,950
Induced	133	$5,423,307	$10,732,076	$19,256,468
Out-of-state Retail Markup[30]	–7	–$184,800		–47,146,912[31]
Total	801	$32,231,772	$67,760,5977	$165,062,074

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28 Lower of two prices from http://www.pintprice.com/city.php?/Albuquerque/United%20States/usd.htm (accessed 10 May 2022).

29 This is using IMPLAN industry code 106, breweries.

[30] This assumes that, for beer exported out of New Mexico, all benefits remain in-state except the final retail markup and the associated labor.

[31] For 2018-2020, 62% of NM beer production was deducted from excise tax reporting. We assume that this represents beer exported out of New Mexico. We also assume that 50% of retail price is markup from producer price.

The microbeer industry is calculated to have a direct impact of 462 jobs. The microbeer industry is also found to have an indirect effect of 206 jobs and approximately 41 million dollars in output and an induced effect of 133 jobs and approximately 19 million dollars in output.

Over the period 2018-2020, exports constituted 62 percent of all New Mexico beer production. For the IMPLAN analysis, we assume that all economic activity for exported beer occurs within the state except retail markup and retail-related labor. The retail markup attributed to out-of-state sales are deducted from total output in Table 2, as are retail-related jobs and labor income. Overall, IMPAN analysis finds that the total economic impact to New Mexico from the microbrewery industry was over $165 million on average per year during the years 2018, 2019, and 2020. Also, it is important to note that New Mexico exported more than $47 million on average in micro beer, which represents income coming into the state.

A previous IMPLAN analyses by the national trade associations Brewers Guild shows considerably greater economic impact. This study, which was publicized by New Mexico Workforce Solutions[32], estimated total economic impact from microbreweries to be $340 million in 2014. This discrepancy arises because the Brewers Association analysis includes in-state distribution, transportation, and sales of microbrews from outside of New Mexico while our analysis looks at contributions from New Mexico microbreweries only[33].

3.4   Microbeer excise tax revenue reductions

Aside from stimulating economic growth within New Mexico, lower excise tax rates for New Mexico microbreweries may also cause a reduction in total state excise tax revenue.

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32 https://www.dws.state.nm.us/en-us/Labor-Market-Review (accessed 19 May 2022).

33 Email dated 26 April 2022 from Bart Watson, Chief Economist for Brewers Guild.

Calculating the impact that changes in excise rates had on tax revenue is complicated for two major reasons. First, reductions in excise rates will stimulate the micro beer industry, and thus increase the quantity produced. This increase in the number of gallons of beer sold (and thus taxed) would counteract the tax revenue lost from lower excise tax rates to some degree. Second, there is a substitution effect between within-state (micro) beer and out-of-state (major) beer. Because major beer is taxed at the full $0.41 per gallon, and in-state micro beer is taxed at a lower rate (either $.08 per gallon or $.28 per gallon), tax revenue would be lost to some degree as consumers substitute from out-of-state (major) beer to in-state (micro) beer.

A robust calculation of the impact that changes in excise rates had on overall tax revenue would require more detailed data and is beyond the scope of this report. But, for a very rough estimate we calculate the overall tax revenue lost from the reduced excise tax rate structure assuming there would be no overall change in total beer consumption. This would be the case if all New Mexico craft beer consumption would be transferred to major beer consumption from other states.[34] Using this assumption we find that tax revenue is reduced by $591,434 due to the reduced excise rate tax structure in New Mexico.[35] This number is small compared with the annual economic activity of $165 million discussed in section 3.3.

4   New Mexico wine consumption

Similar to the more recent increase in microbrewery production, New Mexico wineries have seen consistent growth since the rebirth of the industry in 1977 (Birchell, 2013). The plot in Figure 8 shows volumes from major wineries and small wineries (as defined by New Mexico tax

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[34] This is a strong assumption that likely overestimates the impact of reduced excise tax rates.

[35] See appendix for details on computing excise tax revenue reductions.

law) between 2007 and 2018. In addition to the reporting volatility discussed in section 3.2, there appear to be missing wine data starting in 2019.

4.1   IMPLAN analysis of the New Mexico wine industry

NMTRD data give total small winery production. These data can be used to estimate total retail sales of New Mexico small winery production. Using an average over the last two and a half years of data (2018 to mid-2020), the average annual sales for small wineries was 2.881 million liters, or 3.841 million bottles. Assuming a retail price of $10.50 per bottle[36], this gives a total annual retail sales equivalent $40.33 million. This is used as direct output for small wineries and is the basis for the IMPLAN analysis shown in Table 3 IMPLAN analysis of New Mexico wineries.[37]

The New Mexico wine industry is calculated to have a direct impact of 140 jobs. The New Mexico wine industry is also found to have an indirect effect of 61 jobs and almost 11.5 million dollars in output and an induced effect of 45 jobs and almost 6.5 million dollars in output. Over the period 2018-2020, exports constituted 50 percent of all New Mexico wine production. For the IMPLAN analysis, we assume that all economic activity for exported wine occurs within the state except retail markup and retail-related labor. The retail markup attributed to out-of-state sales are deducted from total output in Table 3, as are retail-related jobs and labor income. Overall, IMPAN analysis finds that the total economic impact to New Mexico from the in-state wine industry was over $48 million average per year during the years 2018, 2019, and

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36 Estimate for Albuquerque from https://www.numbeo.com/cost-of-living/in/Albuquerque (accessed 10 May 2022)
37 This is using IMPLAN industry code 107, wineries.

2020. Note that exported wine represents more than $10 million annual coming into the state during this time.

Table 3 IMPLAN analysis of New Mexico wineries.

Impact	Employment	Labor Income	Value Added	Output
Direct	140	$5,870,790	$9,967,856	$40,330,000
Indirect	61	$3,237,335	$5,411,685	$11,463,651
Induced	45	$1,828,109	$3,617,914	$6,491,637
Out-of-state Retail Markup[38]				-10,098,144[39]
Total	246	$10,936,235	$18,997,455	$48,192,068

A previous IMPLAN analyses by the state trade association New Mexico Wine found total economic impact of $876.7 million in 2017[40]. This figure includes wine by New Mexico producers that is shipped outside of the state, plus wine from any producer not qualifying as a small producer as defined by New Mexico law.

4.2   Small winery excise tax revenue reductions

Aside from stimulating economic growth within New Mexico, lower excise tax rates for New Mexico small wineries may also cause a reduction in total state excise tax revenue. As with microbreweries, as discussed in section 3.4, the details are complicated:

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[38] This assumes that, for wine exported out of New Mexico, all benefits remain in-state except the final retail markup and the associated labor.

[39] For 2018-2020, 50% of NM wine production was deducted from excise tax reporting. We assume that this represents wine exported out of New Mexico. We also assume that 50% of retail price is markup from producer price.

[40] Email dated 25 March 2022 from Christopher Goblet, Executive Director of New Mexico Wine.

- To what extent is New Mexico wine a substitute for out-of-state wine? If they are exact substitutes, then increased sales of New Mexico produced wine comes that the expense of sales of out-of-state wine.

- To what extent does New Mexico wines stimulate economic activity that would not have occurred anyway (e.g., from other restaurants and bars)?

For a rough estimate, if consumers had purchased wine that was taxed at $0.45 per liter instead of New Mexico wines that were taxed at $0.10, $0.20, or $0.30 per liter, total excise tax revenue from New Mexico wineries in 2019 would have been greater by $455,988.[41] This assumes no change in quantity consumed despite the higher cost associated with higher taxes.[42] This number is small compared with the annual economic activity of $48 million discussed in section 4.1.

4.3 Small wineries are flourishing, but overall trend in wine availability is flat

Statistically there has been no significant change in the volume of wines sales over the period 2007 to 2018 (data starting 2019 appear to have a major issue with underreporting). This is shown in the upper curves in Figure 8. Monthly reporting to NMTRD is highly volatile (as discussed in section 3.2), as seen in the thin dashed line, so a twelve-month rolling average is shown as the thick dashed in in Figure 8. The percent market share for New Mexico wineries has increased from seven percent in 2007 to nearly twenty percent in 2018. This is shown in the lower curves in Figure 8. Here, again, the monthly data are volatile, as seen in the lower thin line, so a twelve-month rolling average is shown in the thick line in Figure 8.

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[41] See appendix for details on computing excise tax revenue reductions.
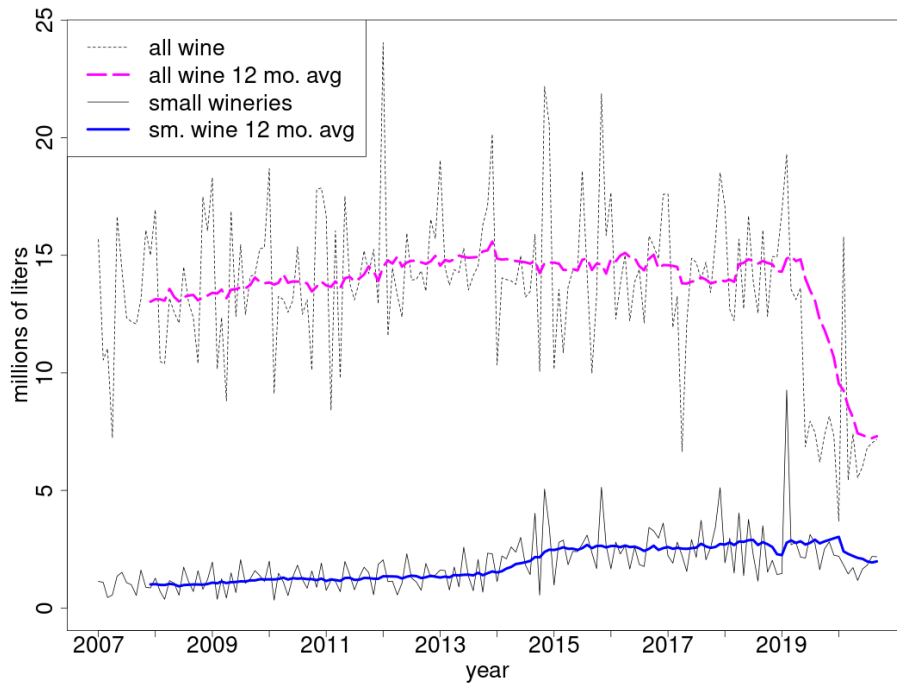
Figure 8 Supply from small wineries compared with total wine supply

The threshold for small wineries increased in 2014, from 950,000 to 1,500,000 liters. This had no impact on the two lower excise tax rate tiers for small wineries ($0.10 and $0.20 per liter), but it did introduce a third tier of $0.30 per liter for between 950,000 liters and 1,500,000 liters. This effectively shifted some production by New Mexico wineries from major winery to small winery. This had no effect on total wine sales in New Mexico, which is why overall wine volume was unchanged between 2007 and 2018. Wines from New Mexico show a growing share of the market over this time, with a significant bump in 2014.

5   Conclusion and Future Study

In this report we discuss the overall impact of small wineries and breweries on the New Mexico economy and the effects of a recent change to the state tax code, which increased the quantities associated with a reduced excise tax rate for New Mexico breweries. We find that

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small wineries and microbreweries contributed substantially to the New Mexico economy (more than $213 million each year), but the impact is considerably smaller than the estimates from the Brewers Association and New Mexico Wine (which found benefits in excess of $1.2 billion). We also find that while craft beer sales increased in response to this tax change, total beer consumption did not increase because there was a corresponding decrease in consumption of beer coming from other states. This suggests that it is unlikely that there were negative effects associated with this excise tax change in the form of negative externalities associated with increased alcohol consumption. Also, we found no increase in alcohol-related traffic deaths corresponding to the change in the state tax code.

In the next phase we aim to better understand production and consumption decisions for craft beer and wine in New Mexico. We will interview stakeholders (New Mexico craft beer and wine producers) to better understand the degree to which the tax code thresholds impact production decisions. We will survey consumers to better understand consumer preferences and purchasing decisions associated with New Mexico craft beer and wine. Also, a contingent valuation technique will be used to estimate willingness to pay for local craft beer and wine. Finally, we will collect data to investigate the historic impact of state laws and policies on alcohol-related fatalities in New Mexico.

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Appendix A statistical summary of NMTRD alcohol sales data

New Mexico Taxation and Revenue Department (NMTRD) data were downloaded from their website[43] in February 2022. Figures 9, 10, and 11 illustrate all of the taxable alcoholic beverage sales categories from January 2007 through September 2020. It appears that volatility and sudden shifts are due to record-keeping effects rather than actual sales shocks. Evident is considerable volatility in sales of beer at the $0.41 per gallon tax level prior to 2015. Sales of cider at the $0.41 per gallon tax rate increased inexplicably in August 2017. Craft liquor became a taxable category with legislation enacted in July 2019, so there are no data before that date. As of September 1, 2020 there has been no reported production of craft liquor greater than 10% alcohol by volume (ABV) at the $0.65 per liter tax rate (more than 175,000 liters annual sales).

Neither the tax rates nor the definitions of fortified wine have undergone any changes between January 2007 and September 2020, so these data may show only changes in consumer preferences (including income effects). It is worth noting the New Mexico's definition of fortified spirits specifically excludes sherry and vermouth, in addition to corked and aged fortified wines, like port and Madeira, and wines with higher alcohol content due to evaporation in aging, like fine Marsala. In other words, it applies to inexpensive mass-produced fortified wines.

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[43] https://www.tax.newmexico.gov/all-nm-taxes/other-reports-overview/monthly-alcohol-beverage-excise-tax-report/ (accessed 18 Feb 2022)
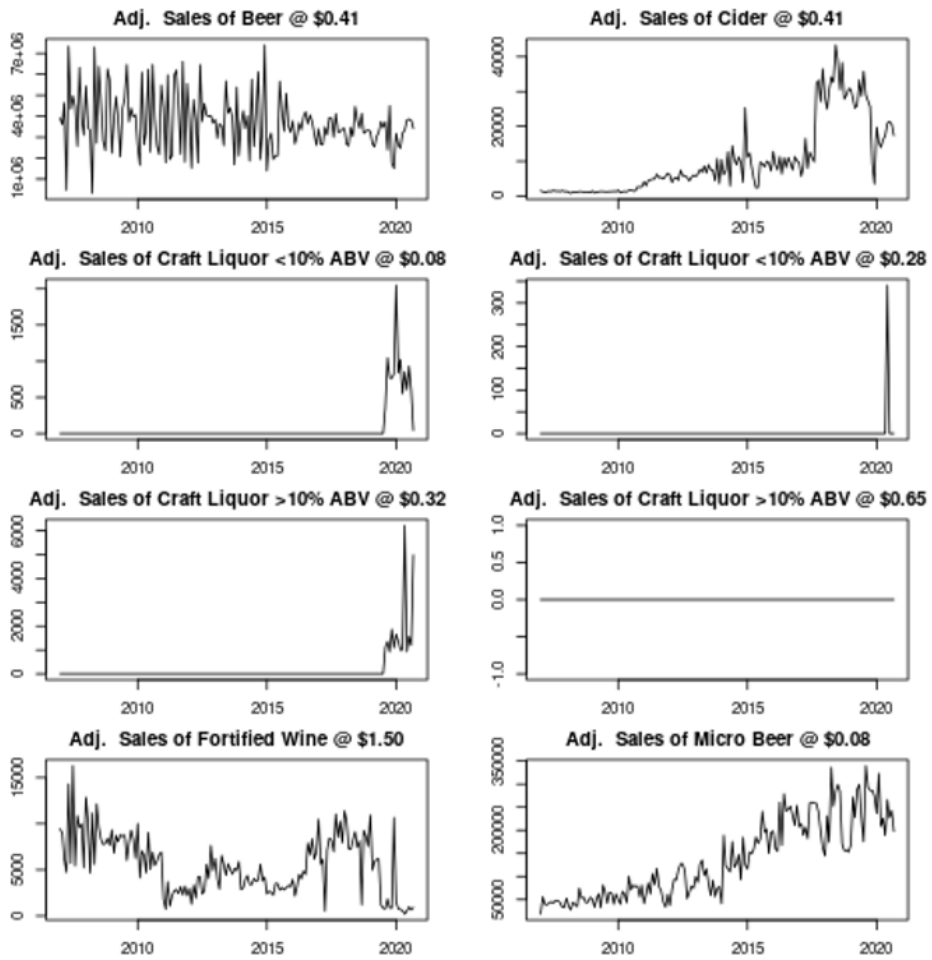
Figure 9 Trends in New Mexico alcohol volume sales, part 1.

Shown also in this first set of plots (Figure 9) is sales of microbrewery beer taxed at the $0.08 per gallon rate. Both the definition of a microbrewery and the cutoffs for variable tax rates changed in both 2014 and 2019, as discussed in section 2.3. This plot shows a steady increase in microbrewery sales from January 2007 to September 2020, with some of the same volatility seen in the beer taxed at the $0.41 per gallon rate.
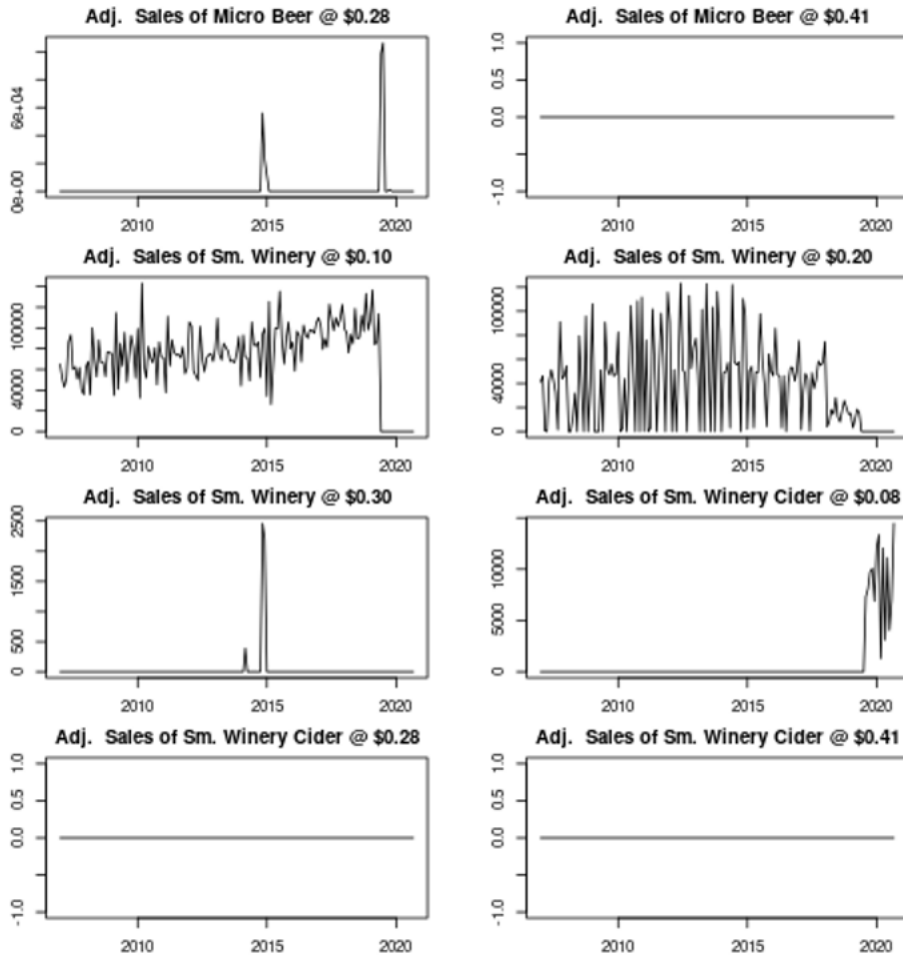
Figure 10 Trends in New Mexico alcohol volume sales, part 2.

In the second set of plots (Figure 10) we see micro beer at the $0.28 per gallon tax rate.

Like the $0.08 per gallon tax rate, this category underwent changes in definition in 2014 and

2019, as discussed in section 2.3. Anecdotally, there was only one microbrewery with the capa-

bility to exceed the limits on the lower tax rate, explaining the rare occasions (seven months out

of 165) that there are sales in this category. For the same reason, presumably, there are no rec-

orded sales of micro beer at the $0.41 per gallon tax rate.

Seen also in Figure 10 are the pre-2019 categories for small wineries. The definition of

a small winery also changed over this period. Additionally, new excise tax categories were

created in 2019, which is why volumes in these categories drop to zero then. The new categories are discussed in the next paragraph. A category introduced in 2014, small winery at the $0.30 per liter tax rate, shows only two spikes in late 2014.
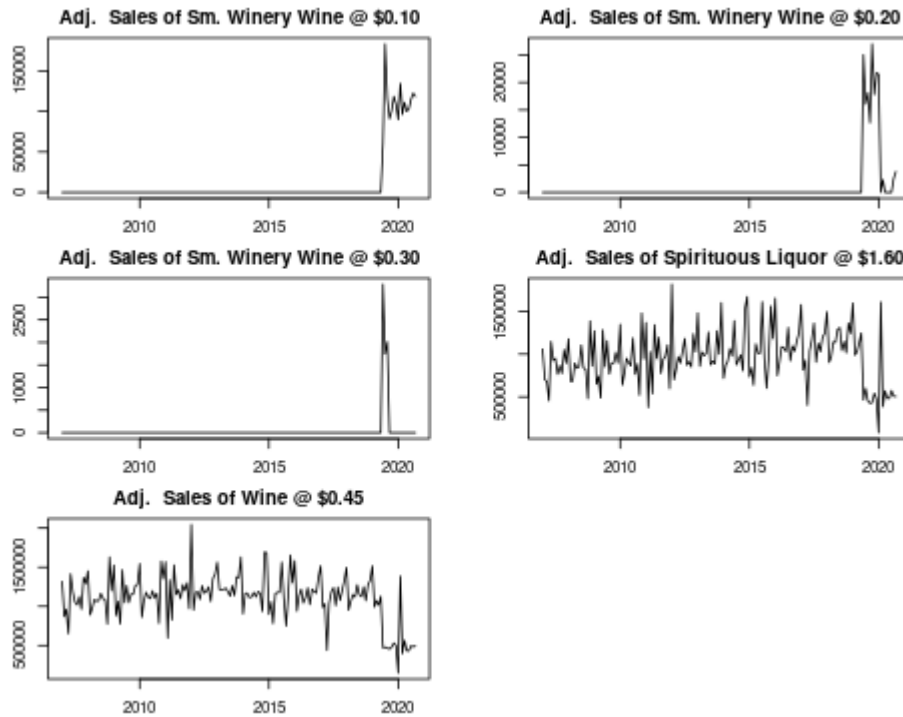

Figure 11 Trends in New Mexico alcohol volume sales, part 3.

New categories introduced with the July 2019 legislation include:

- small winery cider at the $0.08 per gallon tax rate

- small winery cider at the $0.28 per gallon tax rate

- small winery cider at the $0.41 per gallon tax rate

- small winery wine at the $0.10 per liter tax rate

- small winery wine at the $0.20 per liter tax rate

- small winery wine at the $0.30 per liter tax rate

The small winery cider categories were created to put small wineries on an equal footing with small breweries vis a vis cider production, and the small winery wine categories (shown in Figure 11) were created to differentiate wine from cider in these new categories. Note that there are no sales recorded for the two higher tax brackets for small winery cider. Almost all production of small winery wine is in the lowest two tax brackets, with occasional spikes in the highest tax brackets. Also in the third set of plots is the catchall sales of wine (e.g. out-of-state wine) in the $0.45 per liter tax bracket.

Finally, also shown in Figure 11 is the catchall category for spirituous liquor at the $1.60 per liter tax rate. Both sales of wine at the $0.45 per liter tax rate and sales of spirituous liquor at the $1.60 per liter rate show a precipitous drop in May 2019. This predates the legislative changes enacted in July 2019 and may be a combination of the reclassification of New Mexico products. As of July 25, 2022, NMTRD personnel have not been able to explain this drop.

Legislation in 1998 defined a small brewer as producing under 200,000 barrels per year. Legislation in 2013 defined a microbrewer as producing fewer than 5,000 barrels a year, and then temporarily increasing that to 15,000 barrels per year for 2014 through 2023. Legislation in 2019 made the definition of a microbrewer permanent and set it at 200,000 barrels per year.

Early microbreweries in New Mexico were subject to the same level of excise tax as all other beer, $0.41 per gallon. Similar to a trend with small wineries two decades earlier, legislation enacted in 2007 introduced a lower tax rate, $0.08 per gallon for up to 5,000 barrels per year. In 2014, the limit on the $0.08 per gallon rate was increased to 10,000 barrels per year, and new tax rate of $0.28 per gallon was introduced for production between 10,000 and 15,000 barrels per year. In 2019, the limits on the reduced tax rates were increased to 30,000 barrels per year and 60,000 barrels per year for the $0.08 and $0.28 tax rates, respectively. There are 108 licensed breweries in New Mexico as of April 2022[44]. The 2020 output levels for the top 23 breweries are shown in Figure 12[45]. Only one brewery has ever produced above the 30,000-barrel threshold and none has ever produced above the 60,000-barrel threshold. Historically, the distribution of brewery sizes has scaled in this way to the lowest tax bracket, with mean output rising each time the threshold is increased. Detailed reports by individual breweries are not available for this analysis, but can be inferred in two ways. First, from the plot in Figure 7 which shows that production levels above the lowest threshold are rare. Microbrewery production remained

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[44] Email from New Mexico Brewers Guild on 5 April 2022.

[45] Albuquerque Business First, 8-Oct-2021. https://www.bizjournals.com/albuquerque/subscriber-only/2021/10/08/new-mexico-breweries.html (accessed 26-April-2022)

within the lowest tax bracket for all but seven of the 165 months between January 2017 and September 2020.
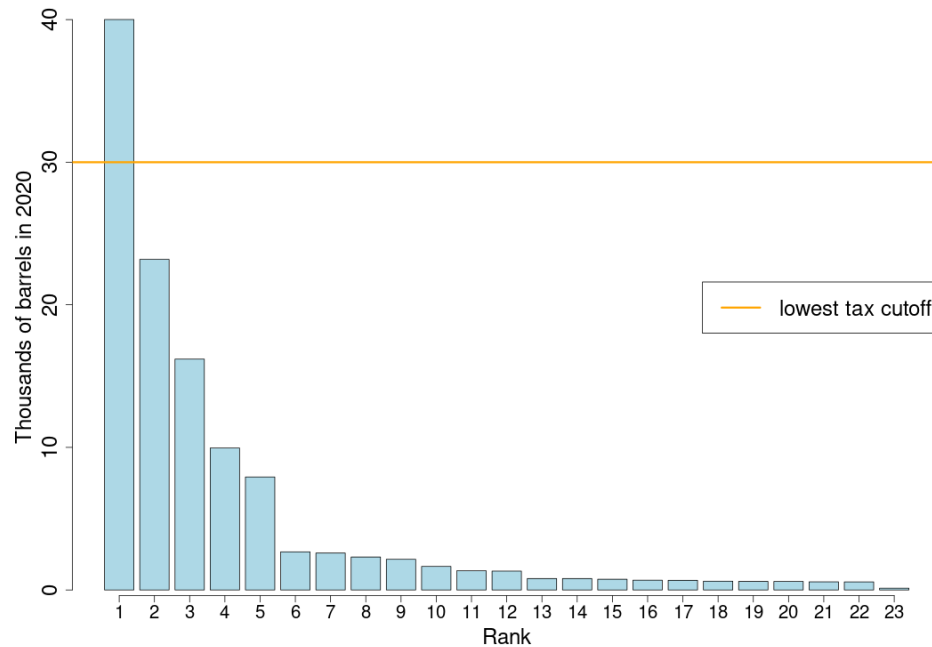

Figure 12 Rank of top 23 NM breweries (Albuquerque Business First 8-Oct-2021)

Another way to infer this behavior is by estimating the minimum number of breweries that could account for the quantities reported yet not exceed the lowest threshold. This is shown in Figure 13. If all breweries continued at their previous levels, upon the revision of tax thresholds in January 2014, the mean would have shifted down to one-half the previous value, since the threshold doubled. Instead, we see that the mean shifted down by 38 percent, implying that some breweries were producing below capacity before 2014, possibly in order to remain within the lowest excise tax bracket. While there is insufficient data following the 2019 revision that tripled the thresholds, it appears to be likely that the mean dropped to about one-third of the previous, implying that breweries were operating at full capacity at the end of 2018. In other words, the

minimum threshold for the lowest excise tax rate, which apparently distorted production levels before 2014, were not having the same distortionary effect going into 2019.

Figure 13 Minimum brewery analysis

Figure 14 shows New Mexico microbrewery output as a percent of total beer declared to NMRD. The trend is significant: an increase from about one percent in 2007 to nearly 12 percent in 2020. As seen in Figure 15, total declared beer has been level to slightly decreasing over this period, so this represents New Mexico produced microbeers substituting for beer previously imported into the state.

The historical trend implies that New Mexico excise tax thresholds influence the distribution of brewery sizes. If this continues to be the case, then we should expect some New Mexico breweries to increase capacity over the coming years, but to operate below capacity in order to remain within the lowest excise tax bracket.
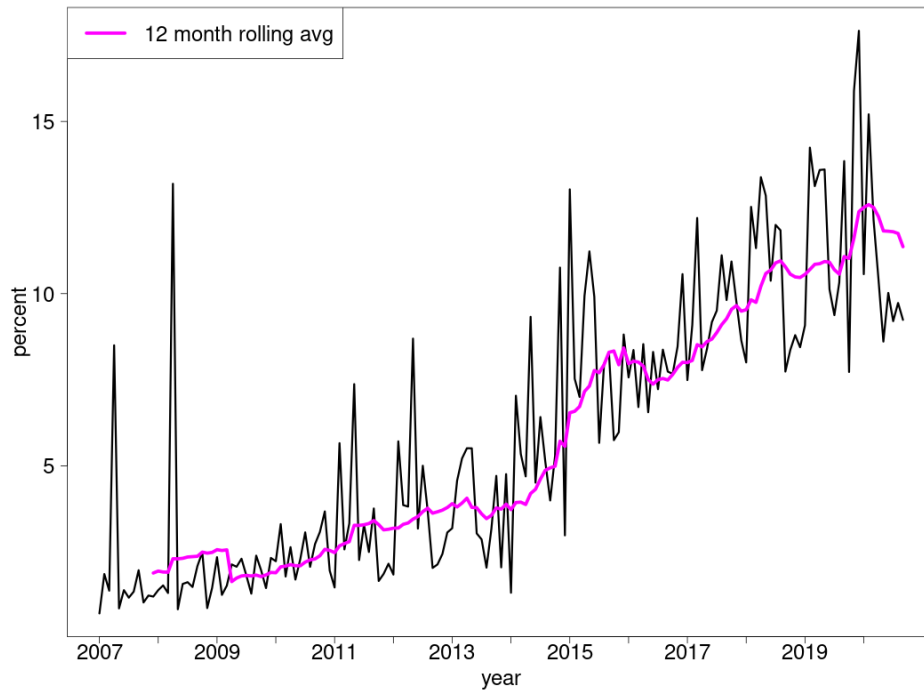
Figure 14 Microbrewery output as a percent of total declared beer

The State of New Mexico, as of 2019, defines a microbrewer as producing fewer than 200,000 barrels per year. For Federal tax purposes, that threshold is 2 million barrels per year. Federal excise taxes on beer are imposed at a per barrel rate and, starting 2018, are approximately $0.11 per gallon for the first 60,000 barrels and $0.53 per gallon above 60,000 barrels. Before 2018, it was approximately $0.23 per gallon under 60,000 barrels and $0.58 per gallon above 60,000 barrels. However, the thresholds did not change in 2018.

As of 2019, Federal excise taxes are 38 percent higher than New Mexico excise taxes for the first 30,000 barrels, while New Mexico excise taxes are 155 percent higher than Federal excise tax rates for between 30,000 and 60,000 barrels. In other words, the lowest excise tax threshold, which effectively cuts total excise taxes in half for New Mexico brewers, is a strong incentive to limit production. While the current New Mexico thresholds appear to give New

Mexico brewers room to grow for a few years, it may become a barrier to efficient production again at some time in the future. Harmonizing that threshold with the Federal excise tax thresholds would simultaneously eliminate the effective barrier to brewery size at 30,000 barrels, and remove New Mexico excise tax law as a motivation for inefficient microbrewery production practices. If virtually all breweries continue to produce below the 30,000-barrel threshold, there is no lost excise tax revenue drawback to increasing the lowest excise tax threshold to 60,000 barrels.

6.1   Microbeer is up, but overall trend in beer sales is decreasing

Figure 15 shows monthly reported volumes of microbeer and total beer from the NMTRD data. Statistically there has been no significant change in the total volume of beer sales over the period 2007 to 2020. This is seen in the upper lines in Figure 15. As noted in section 3.2, monthly reporting to NMTRD is highly volatile, as seen in the thin dashed line, so a twelve-month rolling average is shown as the upper thick line in Figure 15. The 12 month average implies a decrease in total beer in New Mexico between 2007 and 2019. This decrease is statistically significant for the rolling average, but not for the monthly reporting due to the high volatility. Over this period the percent market share for New Mexico microbreweries has increased from just over one percent in 2007 to nearly twelve percent in 2020. This is shown in the lower thick line in Figure 15.
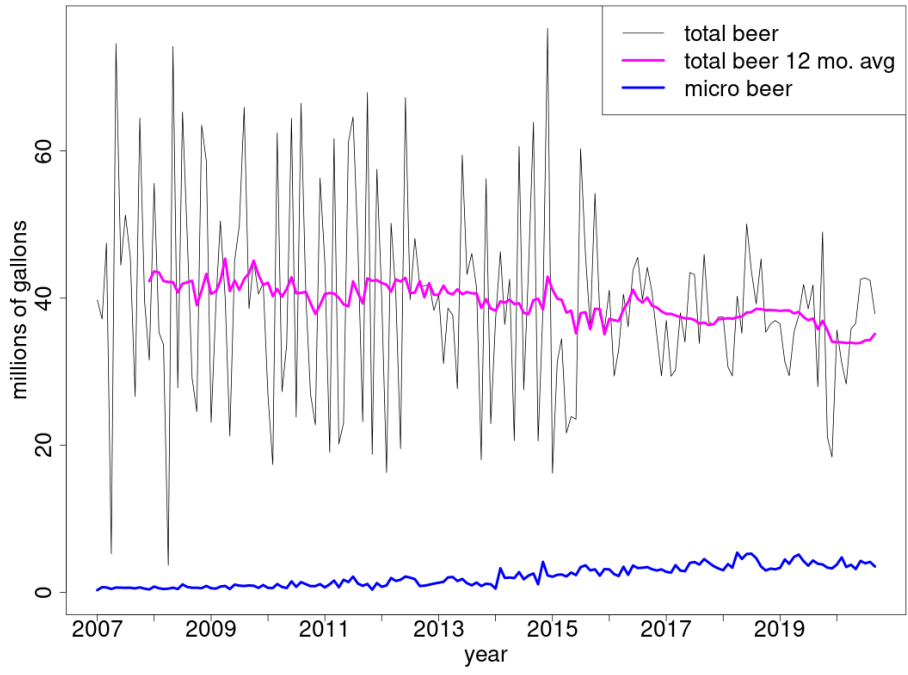
Figure 15 Comparing New Mexico produced beer with total beer sold in New Mexico.

Appendix C Small Wineries in NM TRD alcohol sales data

The legal definition of a small winery in New Mexico has changed over the years. Prior to 2014 a small winegrower produced fewer than 950,000 liters of wine per year. In 2014 it was increased to fewer than 1.5 million liters per year and an additional excise tax bracket created for small winery production between 950,001 to 1.5 million liters.

Prior to legislation enacted in 1978, bottles of wine from small New Mexico wineries were subject to the same level of state excise tax as all other wines. Tiered excise tax rates were imposed starting in 1978, and since 2014 the rates are:

- $0.10 per liter for the first 80,000 liters sold

- $0.20 per liter for the next 870,000 liters sold (80,001 to 950,000 liters)

- $0.30 per liter for the next 550,000 liters sold (950,001 to 1.5 million liters)

- $0.45 per liter for more than 1.5 million liters sold

All other wine is subject to state excise tax of $0.45 per liter.

Cider produced by qualifying small wineries is subject to state excise tax rates of

- $0.08 per gallon for the first 30,000 barrels

- $0.28 per barrel for the next 30,000 barrels (30,001 to 59,999 barrels)

- $0.41 per barrel for 60,000 barrels or more

All other cider is subject to state excise tax of $0.41 per barrel.

There are currently 50 producing wineries in New Mexico[46], only two of which produced more than 995,000 liters (105,556 cases) in 2017[47]. This is shown in Figure 16, where it is also evident that, in 2017, those were the only two wineries producing more than 80,000 liters (8,889 cases). Small winery production as reported to New Mexico Taxation and Revenue Division is shown in Figure 17. The spike in February 2019 is adjusted out for unknown reasons, as seen in Figure 18, so it may reflect a data error. Adjustments typically reflect production that is exempt from excise taxes for various reasons, including out-of-state sales.
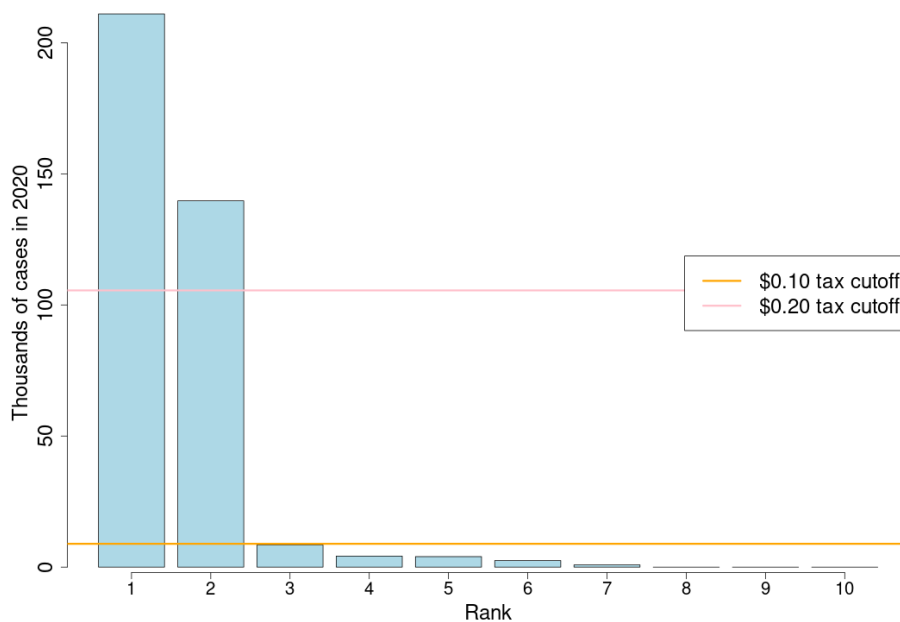

Figure 16 Ranking of New Mexico wineries

As also seen in Figures 17 and 18, excise tax rate category names were changed in 2019 to distinguish between wine and cider as produced by a small winery. The sizeable month-

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[46] Email from New Mexico Wine dated 28 March 2022.

[47] https://www.bizjournals.com/albuquerque/subscriber-only/2017/10/13/wineries.html (accessed 9 May 2022)

to-month variations in these figures probably reflect bookkeeping practices rather than actual
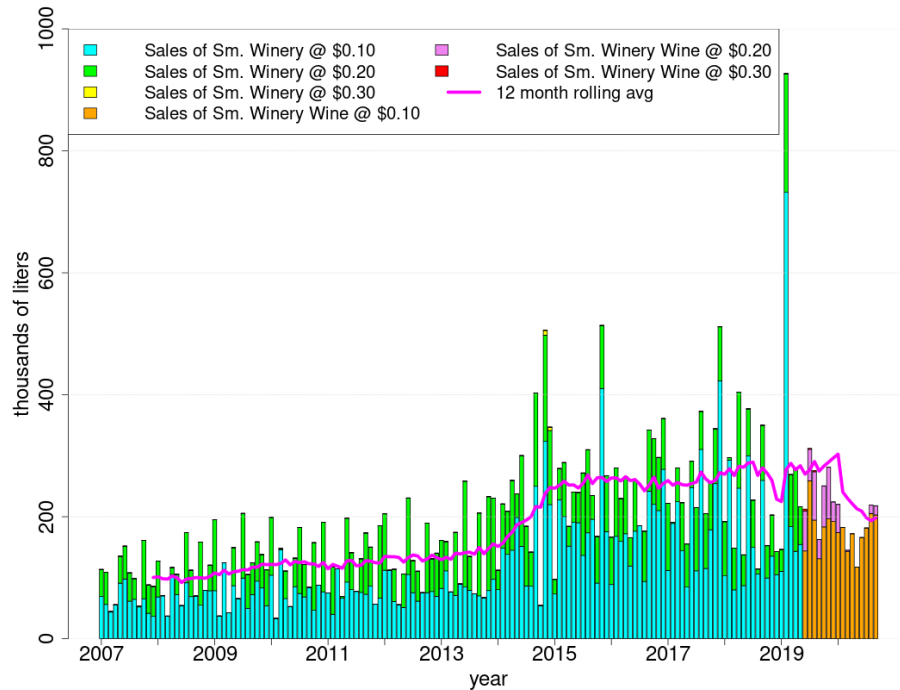
fluctuations in production.

Figure 17 Small wineries volumes

Figure 19 shows wine production by small wineries as a percent of total declared wine. The small increase between 2007 and 2014 from is not statistically significant given the volatility, but there is a significant increase after 2014, from about nine percent to nearly twenty percent of all wine in 2018. Data after 2018 are not reliable due to the aforementioned data errors. Total declared wine has been relatively constant over this period, as seen in Figure 20, so this represents New Mexico small winery production substituting for wines imported into the state. Also evident in Figure 20 is the unexplained drop in reported volumes starting May 2019.
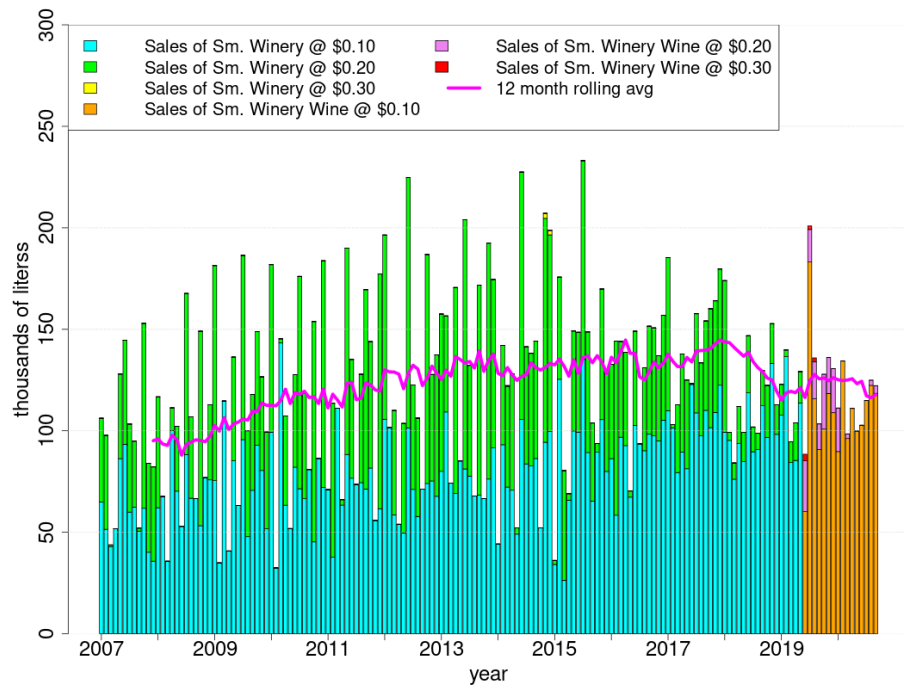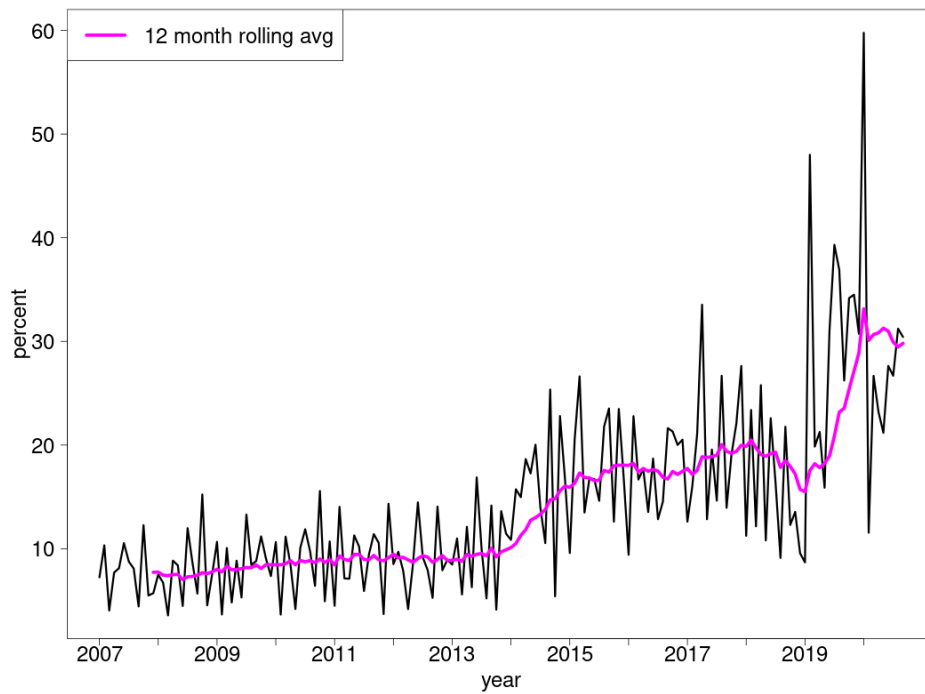
Figure 18 Adjusted small winery volumes

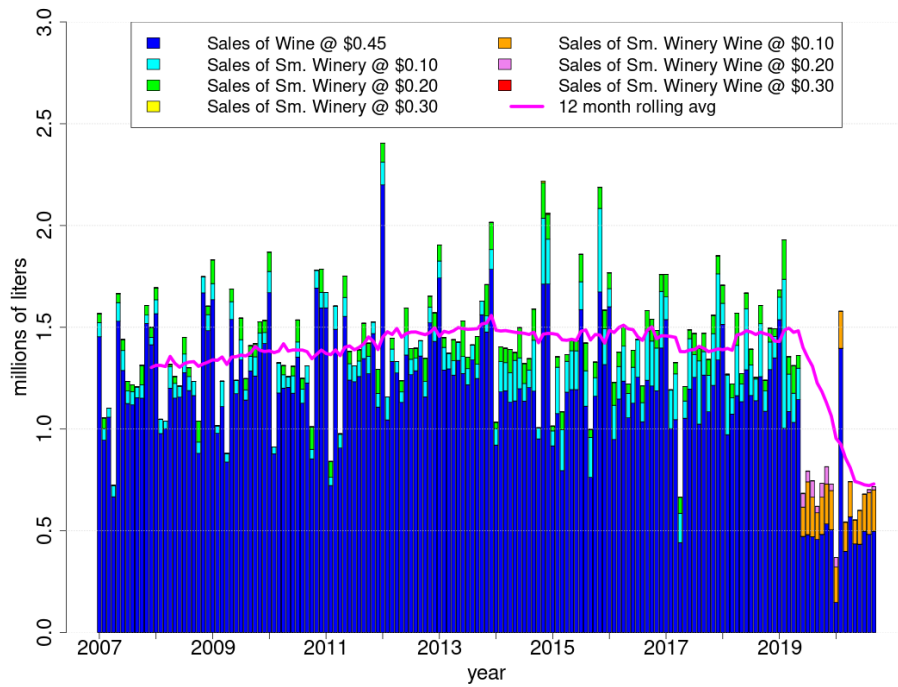Figure 19 Small winery volume as a percent of total wine volume.

Figure 20 Adjusted wine volumes

Table 1 is the correlation matrix for alcoholic beverages reported to NM TRD between January 2007 and May 2019 (wine and liquor data are suspect starting June 2019).

Table 4 Correlations in NMTRD reported data between 2007 and 2019

	Major Beer	Micro Beer	Major Wine	Small Wine
Micro Beer	-0.110			
Major Wine	0.193	-0.015		
Small Wine	0.261	0.258	0.415	
Liquor	0.105	0.303	0.881	0.444

Alcoholic beverages are, in general, complements in consumption. For example, about 88% of the time that sales of major wine increases, sales of liquor also increase, and vice versa. This complementarity is due, in part, to the tendency of all consumption to rise and fall with population and income. Figure 4 shows that, overall, both population and income increased over this time.

The exception appears to be micro beer, which is a partial substitute for major beer and for major wine. The correlation factor of -0.110 is consistent with the trend of microbrewery beer constituting roughly ten percent of all beer sales by mid-2020. The -0.015 correlation between micro beer and major wine is small and probably not significant.

Appendix E Computing excise tax revenue reductions

Microbeer

There are two strong assumptions:

- consumers who currently purchase New Mexico craft beers would have the same preference for beer that is imported from out of state

- consumers would consume the same quantities even though price would likely be different due to higher tax

Reported production over 2018-2020, averaged as annual

	Excise tax rate $0.08 per gallon	Excise tax rate $0.28 per gallon
Total Production (gallons)	4,658,694	88,355
Deductions (gallons)	2,871,764	74,918
Taxable production (gallons)	1,786,930	13,437
Excise tax if taxed at $0.41	$732,641	$5,509
Excise tax as assessed	$142,954	$3,762
Excise tax revenue reduced	$589,687	$1,747

Total annual excise tax revenue reduction $591,434.

Wine

There are two strong assumptions:

- consumers who currently purchase New Mexico wines would have the same preference for wine that is imported from out of state

- consumers would consume the same quantities even though price would likely be different due to higher tax

Reported production over 2018-2020, averaged as annual

	Excise tax rate $0.10 per liter	Excise tax rate $0.20 per liter	Excise tax rate $0.30 per liter
Total Production (liters)	2,230,663	647,841	2,561
Deductions (liters)	1,266,964	173,067	2,561
Taxable production (liters)	963,699	474,774	0
Excise tax if taxed at $0.45	$433,665	$213,648	
Excise tax as assessed	$96,370	$94,955	
Excise tax revenue reduced	$337,295	$118,693	

Total annual excise tax revenue reduction $455,988.

The excise tax rate for major wine is $0.45 per liter.

Average annual production 2018-2020 was 2,230,663 liters at the $0.10

tax rate, 647,841 liters at the $0.20 tax rate, and 2,561 liters at the

$0.30 tax rate.

Average annual deductions 2018-2020 (presumed exports) was 1,266,964

liters at the $0.10 tax rate, 173,067 liters at the $0.20 tax rate, and

2561 liters at the $0.30 tax rate.

Average annual excise tax revenue reduction 2018-2020 was 0.35 *

(2,230,663 - 1,266,964) + 0.25 * (647,841 - 173,067) + 0.15 * (2,561 -

2,561) = $455,988