Winery Policies across the U.S and in the Northern States Region

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Winery laws

• Studied wine laws across all U.S States
• Examined with respect to 4 major categories: sales, production, taxation, registration
• Analysis of Impacts of Policies in Northern Grape States
• Ambiguity in the Law
• Multiple Licenses Required
• Policies affected by more than Winery Legislation (e.g. general liquor laws)
Wineeries required to sell their products through licensed middlemen only

Map created by: Bobrmaa Jambaskuren, University of Minnesota
Explicitly permit the wineries to offer bread and cheese in tasting room.
Permission to sell at additional outlets

[Map of the United States showing states with permission and those not permitted in yellow.]

- Not permitted
- Permitted

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Special event license to allow wineries to organize coordinated events (festival)
Allow wineries to ship wine directly to the customers

[Map showing which states allow direct wine shipping to customers and which do not]
Existence of minimum in-state fruit content standard for farm wineries

- **Yellow**: Does not exist
- **Brown**: Exists

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Minimum fruit content

• Some states specifically state the minimum fruit content

• On the other hand, states such as Wisconsin, Arkansas and Colorado do not have specific set levels. However, local grape growers associations or the given state’s wine industry council certify wines that have the set minimum in-state grape content.
The Effect of Wine Policy on the Emerging Cold-Hardy Wine Industry in the Northern States
Wineries in northern states have shown exponential growth recently

- More than 80 percent of the wineries have been established since the year 2000.
Winery owners perceive government policy as the key challenge to their winery growth.

Figure 2: What are the key challenges to growth and development of your winery?

Source: Author’s Data
DATA

Collected from wineries across 14 northern states in 2012.

Designed to obtain information pertaining to sales and production of wineries in northern states.

The dataset used in the analysis contains 56 observations from 10 states. Observations with missing values for key variables included in the model are dropped.
Policy Variables

Five policy variables are selected from a large pool of policy instruments that potentially affect winery operation.

Policy variables that are thought to have direct impact on the revenue creation of wineries are included.

Policy variables that have reasonable degree of variation across states are included.

Table 2: Policy Variables

<table>
<thead>
<tr>
<th>Market Regulation</th>
<th>Northern States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sell via Middleman Only</td>
<td>IL  IA  MA  MI  MN  NE  NH  NY  SD  WI</td>
</tr>
<tr>
<td>Tasting Room</td>
<td>Yes  No  No  No  No  Yes  No  No  Yes  Yes</td>
</tr>
<tr>
<td>Allow provide garnish</td>
<td>No  No  No  No  Yes  Yes  Yes  Yes  No  No</td>
</tr>
<tr>
<td>Direct Shipment to Customer</td>
<td>Yes  Yes  No  Yes  Yes  Yes  Yes  Yes  No  Yes</td>
</tr>
<tr>
<td>Tax</td>
<td>9.03  1.74  1.1  0.51  0.3  0.06  0  0.3  0.03  0.25</td>
</tr>
<tr>
<td>The ‘Farm’ Winery</td>
<td></td>
</tr>
<tr>
<td>Minimum in-state fruit content (%)</td>
<td>No  No  No  No  51  75  No  100  51  No</td>
</tr>
</tbody>
</table>
Results

- Price of Wine does not affect winery sales
- Labor input has positive and statistically significant effect on winery sales
- Grape input has positive and statistically significant effect on winery sales
- Proxy for Owner’s motivation has mixed effects on winery sales
- Policy that restricts potential channels of sales has mixed effects depending on winery’s size of sales
- Policy related to tasting room sale is an important factor that influence winery sales
- Direct shipment regulation has ambiguous effect on winery sales
- Excise tax has no statistically significant effect on winery sales
- Minimum in-state fruit requirement has a large negative impact on winery sales. However there are only four states (regions) in the Northern Grape States that have minimum fruit content legislation in their farm winery law. We need to refine by size of winery.
The statistically significant and positive effect of H1 is observed mainly on the upper tail of distribution of winery revenue. This implies that the market regulation that puts restriction on the potential channels of sales largely benefits the revenue of wineries that already yield large production and revenue while relatively small-scale wineries do not feel any impact from the policy.
Interpretation: Tasting Room (H2)

- We can see the magnitude of the effect is twice larger than the effect of H1 holding all other covariates constant. We can infer from this result and figure on the left that policies that are related to tasting room sales is the crucial factor that affects winery sales in the northern grape states. On average, two-thirds of total winery revenue is generated from tasting room sales. We also find that the effect is more prominent for wineries with higher volumes of revenue, which suggests that the policy influences larger wineries that are relatively well-established more than small wineries that have just began and may have limited production.
It is somewhat surprising to see the negative sign in the OLS as well as in most of the quantiles. What this means is wineries that allow direct shipment have lower revenues. Although it is not statistically meaningful except for the OLS model. This may be due to two reasons. First, as shown in Figure 4 in the previous slide, direct shipment makes up very small portion of total revenue in the northern grape states, especially for those wineries that have been established most recently. Second, we don't have enough variation of the policy among northern grape states as only two out of ten state bans direct shipment to customers. This may cause a problem in identifying the true effect of direct shipment policy.
Another surprising finding is that marginal tax rate does not have a meaningful effect on winery sales. This needs to be investigated further but if the finding holds up it would mean that tax rates based on increasing levels of alcohol do not affect consumer sales. In other words if the consumer likes it they will pay for it.
Interpretation: Minimum in-state Fruit Requirement (H5)

- The intention of the regulation is to facilitate the development of small farm wineries. Given these information on the policy instrument, it is surprising to see 1% increase in the minimum requirement results in 80.7% decrease in sale.
- This result should not be interpreted as a causal effect of the policy on the winery revenue.
- Given that most of the wineries in northern grape states are established after 2000, it might well be the case that state minimum requirements are set to be high in the states that see rapid small-scale wineries in order to support the development of the emerging wineries.

Figure 5: Minimum in-state Fruit Content Requirement By Revenue and Production Percentile

<table>
<thead>
<tr>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OLS</td>
<td>θ(0.1)</td>
<td>θ(0.2)</td>
<td>θ(0.3)</td>
<td>θ(0.4)</td>
<td>θ(0.5)</td>
<td>θ(0.6)</td>
<td>θ(0.7)</td>
<td>θ(0.8)</td>
<td>θ(0.9)</td>
</tr>
<tr>
<td></td>
<td>(-2.14)</td>
<td>(-0.66)</td>
<td>(-0.15)</td>
<td>(-0.59)</td>
<td>(-1.24)</td>
<td>(-1.24)</td>
<td>(-1.73)</td>
<td>(-2.65)</td>
<td>(-2.43)</td>
</tr>
</tbody>
</table>

Source: Author’s Data
Observations

Wine policies that relate to tasting rooms affect farm wineries the most.

Market regulation (i.e. distribution), taxes, direct shipments, and farm winery policy affect winery operations minimally at the present time.

Farm wineries and large scale commercial production should be treated differently.

Farm wineries are primarily tourist attractions.

Winery Laws may not be the regulations that bother winery owners the most.

Local regulations may be more burdensome than state wine policies.
Next Steps

Refine the Policy Analysis
◦ Effect of Taxation Policy on Wine Sales
◦ Tasting Room Policies that affect Wine Sales
◦ Creating an Index with 4 sub-categories (sales, production, taxation, registration) measuring the degree to which the legal environment and policies are favorable to wineries
◦ Collect data on policies not included in state winery laws

Collect Primary Data from Winery Owners/Managers
◦ Focus Groups at Northern Grape States wine conferences
◦ Survey of Winery Owners/Managers

Create a Data Base for Winery Policies

Combine Policy Analysis Results with Ongoing Branding Studies