Organizing Industries for Growth

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March 14, 2018

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Disclaimer

- I’m very new to Michigan, and these are my initial perceptions.

- Key personnel with high quality, long-standing, Michigan hops and malting barley knowledge are Erin Lizotte, Ashley McFarland, and Rob Sirrine.
Overview

- About me
- Consumer research
- Product differentiation and sensory testing
- Potential legislation that could help MI growers
- Other strategies for growth
About Me

DR. TREY MALONE
ASSISTANT PROFESSOR OF AGRICULTURAL ECONOMICS

Institutional and Behavioral Economics Section (IBES)

IBES Outstanding Graduate Student Paper Competition


March 14, 2018
About Me

- 50% Research
- 35% Extension
  - Agribusiness and Agricultural Marketing
- 15% Teaching
Phil Howard: “Craftwashing in the U.S. Beer Industry”

- Counted 4-packs and 6-packs in Lansing, MI stores

“30% of 4- and 6-pack facings recorded in craft beer sections (n = 1145) had ownership ties to big brewers”
Please click the location on the label you consider most important for your hard cider purchasing decision.
Ha et al., 2018. Consumers’ Valuation for Craft Beer: Does the Localness of Inputs Matter?

- Evaluated willingness-to-pay for local and/or organic attributes in Indiana beer

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<table>
<thead>
<tr>
<th>Option</th>
<th>Brewing Location</th>
<th>Location of Hops Production</th>
<th>Production Method of Ingredients</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option A</td>
<td>Indiana</td>
<td>Indiana</td>
<td>Organic</td>
<td>$10.99</td>
</tr>
<tr>
<td>Option B</td>
<td>Within the US, outside of the Great Lakes region</td>
<td>Within the US, outside of the Great Lakes region</td>
<td>$6.99</td>
<td></td>
</tr>
<tr>
<td>Option C</td>
<td>I would not choose Option A or Option B.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Which of the following craft beer products do you prefer most? If neither option A nor option B meet your preferences, you should choose to opt-out by selecting option C. Select one.
### Table 4. Mean WTP Estimates (USD/6-pack of craft beer (72 oz.))

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Entire Sample</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>WTP</td>
<td>SE</td>
<td>WTP</td>
<td>SE</td>
<td>WTP</td>
<td>SE</td>
<td>WTP</td>
<td>SE</td>
<td></td>
</tr>
<tr>
<td>Brew Indiana</td>
<td>2.97</td>
<td>***</td>
<td>0.82</td>
<td></td>
<td>3.27</td>
<td>***</td>
<td>1.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brew Great Lakes</td>
<td>0.76</td>
<td>0.75</td>
<td></td>
<td></td>
<td>-0.22</td>
<td>1.09</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hops Indiana</td>
<td>0.43</td>
<td>0.74</td>
<td></td>
<td></td>
<td>1.00</td>
<td>1.12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hops Great Lakes</td>
<td>-0.47</td>
<td>0.83</td>
<td></td>
<td></td>
<td>-0.35</td>
<td>1.21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hops U.S.</td>
<td>0.43</td>
<td>0.60</td>
<td></td>
<td></td>
<td>0.09</td>
<td>0.90</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hops Organic</td>
<td>-0.49</td>
<td>0.49</td>
<td></td>
<td></td>
<td>-0.05</td>
<td>0.71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td>-1.00</td>
<td></td>
<td>-1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Interaction Effects**

<table>
<thead>
<tr>
<th>Interaction</th>
<th>WTP</th>
<th>SE</th>
<th>WTP</th>
<th>SE</th>
<th>WTP</th>
<th>SE</th>
<th>WTP</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brew IN x Hops IN</td>
<td>-0.39</td>
<td>0.97</td>
<td>0.37</td>
<td>1.41</td>
<td>-1.32</td>
<td>1.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brew IN x Hops GL</td>
<td>1.33</td>
<td>1.04</td>
<td>2.28</td>
<td>1.57</td>
<td>-0.14</td>
<td>1.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brew IN x Hops U.S.</td>
<td>1.71</td>
<td>*</td>
<td>3.11</td>
<td>**</td>
<td>-0.12</td>
<td>1.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brew GL x Hops IN</td>
<td>0.21</td>
<td>0.95</td>
<td>2.13</td>
<td>1.45</td>
<td>-2.44</td>
<td>*</td>
<td>1.27</td>
<td></td>
</tr>
<tr>
<td>Brew GL x Hops GL</td>
<td>-0.48</td>
<td>0.92</td>
<td>0.74</td>
<td>1.37</td>
<td>-2.23</td>
<td>*</td>
<td>1.21</td>
<td></td>
</tr>
<tr>
<td>Brew GL x Hops U.S.</td>
<td>0.96</td>
<td>0.95</td>
<td>1.89</td>
<td>1.42</td>
<td>-0.16</td>
<td>1.24</td>
<td></td>
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</tbody>
</table>

*Notes: *** , ** , * indicate significance at 1% , 5% and 10% level*
“...Indiana consumers are willing to pay a price premium for craft beer brewed in Indiana, as well as a positive, but smaller, premium for local hops.

“Experienced consumers have a high WTP for local attributes (both processing and origin of inputs) defined at the state level, but discount local attributes defined at the regional level.”

“...We find that average and inexperienced consumers view localness claims of the different supply chain stages as substitutes.”

- Sensory tests of organic beers for 298 consumers (Pullman, WA and Portland, OR)
- Most drinkers aren’t WTP for Organic but if they do, it’s because of:
  - Environmental concerns
  - Variety-seeking
  - Health
How much do people value a product’s story?

1. Have consumers taste a beer brewed with Spartan barley (unlabeled) and ask for willingness-to-pay

2. Have consumers taste the same beer brewed with labeled Spartan barley and ask for updated willingness-to-pay
Abstract: “…This preliminary study indicates that brewers must rely on desired hop varieties from the same terroir in order to achieve consistent hoppy aromas in their beers.”
The brewing value of Amarillo hops (Humulus lupulus L.) grown in Northwestern USA: A preliminary study of terroir significance

Journal of the Institute of Brewing
Abstract: “Results indicated that there are differences in the hop aromas of both whole-leaf hops and dry-hopped lager…”
Michigan grows to No. 1 in hops production outside Pacific Northwest

“...terroir is widely understood to make a difference with hops, and brewers frequently show a preference for hops by certain regions.”

“In contrast to the piney, grapefruit notes Brynildson has imprinted in his head for the Pacific Northwest grown hop, he found more Mandarin orange in the Michigan grown cones. It is a showcase of terroir and how a difference of 2,000 miles can distinctly influence a hop.”
1. Brew two beers that are identical except one is brewed with MI Chinook and one brewed with WA Chinook

2. Conduct sensory and triangle tests to see if people can taste the difference
Third-party Quality Control Groups?

- USDA GroupGAP
- Global GAP
Can liberalization of local food marketing channels influence local economies? A case study of West Virginia’s craft beer distribution laws

Trey Malone¹ • Joshua C. Hall²*

Abstract

Over the past decade, local food systems have been identified as having a significant influence on regional economies. Using a recent change in West Virginia’s craft beer distribution laws as a case study, we show that although employment might not experience a statistically significant change due to additional legalized marketing channels, wages did experience a significant increase. Our findings suggest that state economies might benefit from reducing restrictions on small, local producers.

Average predicted number of breweries, microbreweries, and brewpubs within a county when the state legalized self-distribution.
New York Farm Brewery Law

- To get the license, the beer must be made primarily from NY inputs
  - 20% until the end of 2018,
  - then 60% until 2024 and then 90%
- Eliminates the need for a permit to serve beer by the glass

Potential collaboration opportunity with Michigan Brewers Guild?
Strategies for Growth

- Unique marketing opportunities
  - Wet hopping
  - International markets
  - Vertical integration

- Establishment of HGM in 2014

Hop Growers of Michigan makes a positive difference in Michigan’s hop industry by providing educational opportunities and research for better hop production and processing, as well as advocating for and promoting the use of Michigan grown hops.
Grower groups are often used for collaboration with researchers

Are there ways that MSU could help?

- Applying for grants to conduct demand and marketing studies:
  - Sensory evaluations
  - Consumer surveys
  - Focus groups
Are there other commodity groups that hops and malting barley could learn from?

... “charged with marketing, communications, consumer education, and research on behalf of Michigan growers.”
Strategies for Growth

- Likely barrier:
  - Difficult to generate any funding to leverage for research and promotion

- How some groups have overcome the barrier:
  - Check-off
  - Block grants
  - Pure Michigan campaign
  - Project GREEEN
Strategies for Growth

- Check-offs
  - Collects funds through a “checkoff” mechanism
  - Uses these funds to broadly promote and do generic research on that particular commodity.

- Strengths
  - Common and consistent

- Weaknesses
  - What rate?
  - Collective action problem
Block grants, ex. MDARD Specialty Crop Block Grant Program

“...awards funds to projects to enhance the competitiveness of Michigan specialty crops, which include fruits and vegetables, tree nuts, dried fruits, horticulture, and nursery crops.”

Strengths

- Awarded within the state ($100,000 max)

Weaknesses

- Requires reimbursements and uncertainty
Strategies for Growth

- Pure Michigan Campaign
  - Straightforward local food marketing
  - Michigan hops labeling?

- Strengths
  - Michigan-centric

- Weaknesses
  - Michigan-centric
Strategies for Growth

- Project GREEEN
  - MSU Internal Grant Program
  - Applied Research, Basic Research, Extension or Seed Grants

- Strengths
  - Could be used to leverage toward other projects

- Weaknesses
  - Smaller funding ($40,000 per year)