SOMMELIERS, RESTAURANTS AND WINE PRICE MARKUP

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OUTLINE

- Introduction
- Literature
- Model and data
- Results
- Conclusion
Pricing by Industry Standards

Restaurants generally mark up a bottle of wine from 200 to 300 percent over its retail sales price. You can therefore reasonably price a bottle that retails around $20 at $60 and $80. For bottles offered by the glass, divide your bottle list price by the number of glasses you get per bottle to determine your price by the glass. The generosity of restaurant pours varies widely, but a 750 milliliter bottle usually provides about 6 glasses. It is standard practice to mark up the most popular wines on a list closer to 300 percent, while marking up less impressive sellers closer to 200 percent.

Making Special Considerations

The mark up sometimes exceeds 300 percent over retail value on specialty wines or rare and particularly expensive bottles. Such wines appeal to connoisseurs with considerable disposable income for indulgences. Pricing special bottles at 400 percent over retail value is not uncommon. However, this isn't necessarily the smartest business practice, particularly if your restaurant faces tough competition for affluent wine lovers. If your wine list is a notable selling point for your establishment, there may be more sales and profit in smaller mark ups on specialty bottles. The people who order these bottles can easily spot a great deal. Making high-value wines available to the customers who love them at uncommonly low prices can be a powerful marketing tactic.

Source: musthavemenus.com, US company created in 2007, specialized in « menu management » for restaurants and diners
INTRODUCTION

- Markup: Added by firms to the marginal cost of production under monopolistic competition
- In case of market power
- Pricing decision-making process
- Wine price markup in restaurants
INTRODUCTION

- Potential margin with wine determine buying decisions on the restaurant side (Preszler and Schmidt, 2009)

- Consumers satisfaction with wine in restaurants depends partly on wine prices (Choi and Silkes, 2010)

► What are the determinants of wine price markup size in the case of restaurants?
LITERATURE

- Differentiation allows firm to charge a markup

- Markup size measure the competitive pressure (Ponivar and Tajnikar, 2012)

- Mark-up size determinants
  - Firm-specific factors, connected with market power and firm’s strategies (Schmalensee, 1989 ; Martin, 2001)
  - Industry-specific factors (Sutton, 2001): concentration, entry barriers, product differentiation, technology in the industry, demand dynamics
  - Environmental and institutionnal factors (Dunn, 2002): antitrust policy, role of unions, economic trends (Motta, 2004)
LITERATURE

- Wine list as a way to differentiate restaurants (Berenguer et al., 2008; Gil et al., 2009)

- Wine lists as a merchandising tool (Yang and Lynn, 2009)

- Restaurant revenue and profitability management
  - Contribution to restaurant performance and success (perceived quality, customer loyalty, customer satisfaction, etc. see Sirieix et al., 2011 for a review)
  - Wine as a relevant item to manage restaurant profitability (Thompson, 2010)
  - Restaurants: a proportionally smaller markup is applied to higher priced wines (Amspacher, 2011)
LITERATURE

- A « good » wine list
  - Wine-food pairing recommendations (Dodd, 1997, Wansink et al., 2006)
  - Wine list order (Corsi et al., 2010)
  - Refreshed on a regular basis (Saura et al., 2008 ; Contri et al., 2009)
  - Included in the food menu, not including $ in the price format, including mentions of wine from a specific set of wineries, including a « Reserve » category (Yang and Lynn, 2009)
- Wine list design (see Sirieix et al., 2011 for a review)
  - Restaurant’s style
  - Relationship with the wine supplier
  - Ability to maximize profit
  - Etc.
LITERATURE

- "Sommelier effect": Effect of a wine steward on wine sales (Manske and Cordua, 2005)
  - Effect of education and training on sales (including employees training)
  - Salesperson credibility (perceived as trustworthy and competent)

- OIV, 2014: "a professional from the vitivinicultural and catering sectors, wineries or other distributors that recommend and serve beverages at a professional level."
  Their field of activity, according to the OIV, is "the service of wine in the catering industry or in establishments selling wine, as well as the provision of specialized advice for those involved in the wine market to ensure good presentation and service of products."
MODEL AND DATA

- Static approach (cross-sectional data)
- Within a given industry, focus on firm-specific factors
- Markup size ($M_i$) as a function of:
  - Restaurant’s characteristics ($R_i$)
  - Wine list characteristics and design, including managerial practices ($L_i$)
  - Sommelier characteristics ($S_i$)

$$M_i = \alpha + \sum_i \beta R_i + \sum_i \gamma L_i + \sum_i \delta S_i + \varepsilon_i$$

- $\alpha$ constant
- $\beta$, $\gamma$, and $\delta$ parameters to be estimated
- $\varepsilon$ i.i.d. error term
MODEL AND DATA

- Survey conducted online worldwide in February - May 2014

- Recruitment process: invitation sent to (Sommeliers International Association - ASI) presidents who forwarded the invitation + web link to their members + MWs

- More than 800 sommeliers got connected, most of them members of the ASI

- 267 questionnaires fully completed
Restaurants' location (country - in% - n=251)

- China - HK (6)
- Canada - USA (7)
- Bulgaria - Romania - Croatia (4)
- Brazil (11)
- Switzerland (7)
- Austria - Deutschland (4)
- Thailand (12)
- Taiwan (5)
- UK - Poland (3)
- Russia (3)
- Portugal - Spain (3)
- Italia (4)
- Ireland - Iceland (3)
- Indonesia - Singapore - Malaysia - Vietnam (4)
- France - Monaco (4)
- Finland - Sweden - Denmark (6)
- Estonia - Latvia - Lithuana (8)
- Others (3)
- Argentina (8)
MODEL AND DATA

- Level of wine price markup per price range
- The restaurant
- The wine list design and management
- Sommelier profile and function

![Graph showing average markup per bottle (in %) for different price ranges](image-url)
MODEL AND DATA

- 267 restaurants * 7 price segments \(\rightarrow\) 1869 observations
- Restaurants characteristics: location, size, style, ownership, associated with a hotel, wine storage area, average cost of a meal (proxy for the number of waiters), % of wine sales
- Wine list characteristics and design: person in charge of the wine list design, number of different wines, frequency of update, number of wines by the glass, suppliers’ profile, buying en primeur wines (futures)
- Sommelier characteristics: gender, years of experience (proxy for age), qualification (certifications), other occupation in the restaurant
MODEL AND DATA

- Pooled data estimation:
  - Dummy for every price segment
  - Individual restaurant effect
  - Just a rule of thumb?

- Mark-up equation for every price range, given the dispersion of wine price mark-up within every segment
  - Restaurant’s characteristics
  - Wine list characteristics and design
  - Sommelier’s characteristics
## RESULTS

Mark-up size equation (cross-sectional regression, pooled data, individual restaurant effect)

<table>
<thead>
<tr>
<th>Price range</th>
<th>Coef.</th>
<th>t-stat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wine purchased less than 5 euros per bottle</td>
<td>87.4382***</td>
<td>20.01</td>
</tr>
<tr>
<td>Wine purchased between 6 and 10 euros per bottle</td>
<td>67.57303***</td>
<td>15.46</td>
</tr>
<tr>
<td>Wine purchased between 11 and 15 euros per bottle</td>
<td>56.75281***</td>
<td>12.99</td>
</tr>
<tr>
<td>Wine purchased between 16 and 20 euros per bottle</td>
<td>47.46816***</td>
<td>10.86</td>
</tr>
<tr>
<td>Wine purchased between 21 and 30 euros per bottle</td>
<td>26.59925***</td>
<td>6.09</td>
</tr>
<tr>
<td>Wine purchased between 31 and 50 euros per bottle</td>
<td>13.40824***</td>
<td>3.07</td>
</tr>
<tr>
<td>Wine purchased more than 50 euros per bottle</td>
<td>Ref.</td>
<td></td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>111.8202***</td>
</tr>
<tr>
<td>Within R²</td>
<td>0.2750</td>
</tr>
<tr>
<td>Between R²</td>
<td>0.0100</td>
</tr>
<tr>
<td>Overall R²°</td>
<td>0.0726</td>
</tr>
</tbody>
</table>

° No unanimous agreement on which R² to report in a panel. Wooldridge (2010) suggest to report the three measures.

*** significantly different from zero at 1%.
### RESULTS (CONT.)

#### MARKUP SIZE EQUATION

<table>
<thead>
<tr>
<th>Wines purchased</th>
<th>&lt; 5 euros</th>
<th>6 to 10 euros</th>
<th>11 to 15 euros</th>
<th>16 to 20 euros</th>
<th>21 to 30 euros</th>
<th>31 to 50 euros</th>
<th>&gt; 50 euros</th>
</tr>
</thead>
</table>

#### Variables

**Restaurant characteristics:**

- **North America:** NS NS NS NS NS NS NS NS
- **South America:** NS NS Negative Negative NS NS NS NS
- **Asia:** Negative Negative Negative Negative NS NS NS NS
- **Less than 60 seats:** NS NS NS NS NS NS NS NS
- **From 60 to 100 seats:** NS NS NS NS NS NS NS NS
- **Casual or bistro style:** NS NS NS NS NS NS NS NS
- **Fine dining style:** Positive Positive Positive Positive NS NS NS NS
- **Chain:** NS NS NS NS NS NS NS NS
- **Franchise:** NS NS NS NS NS NS NS NS
- **Independent:** NS NS NS NS NS NS NS NS
- **Associated with a hotel:** NS Positive Positive Positive NS Positive NS
- **Cellar or temp. Cont. area to store wine:** NS NS NS NS NS NS NS NS
- **Average cost of a meal:** Positive Positive Positive Positive Positive Positive Positive Positive
- **% of wine sales:** Positive Positive Positive Positive Positive Positive Positive Positive

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## RESULTS (CONT.)

<table>
<thead>
<tr>
<th>Variables</th>
<th>&lt; 5 euros</th>
<th>6 to 10 euros</th>
<th>11 to 15 euros</th>
<th>16 to 20 euros</th>
<th>21 to 30 euros</th>
<th>31 to 50 euros</th>
<th>&gt; 50 euros</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wines purchased</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Est. Coef.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Wine list characteristics:**

<table>
<thead>
<tr>
<th>Variables</th>
<th>&lt; 5 euros</th>
<th>6 to 10 euros</th>
<th>11 to 15 euros</th>
<th>16 to 20 euros</th>
<th>21 to 30 euros</th>
<th>31 to 50 euros</th>
<th>&gt; 50 euros</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of different wines</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Number of wines offered by the glass</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Monthly update</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Every 3 months update</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Every 6 month update</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Buy en primeur wines</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>% of wines purchased directly from the wine estate</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>% of wines purchased from an agent</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>% of wines purchased from a merchant or distributor</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>% of wines purchased from an importer</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Sommelier in charge of wine list design</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Food &amp; beverage managers in charge of wine list design</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
</tr>
<tr>
<td>Chef in charge of wine list design</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Owner in charge of wine list design</td>
<td>Positive</td>
<td>Positive</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
</tbody>
</table>
## RESULTS (CONT.)

### MARKUP SIZE EQUATION

**Wines purchased**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Less than 5 euros</th>
<th>6 to 10 euros</th>
<th>11 to 15 euros</th>
<th>16 to 20 euros</th>
<th>21 to 30 euros</th>
<th>31 to 50 euros</th>
<th>More than 50 euros</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (male=1)</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>More than 10 years of experience as sommelier</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>Negative</td>
<td>Negative</td>
</tr>
<tr>
<td>Sommelier certification</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>WSET level 1, 2 or 3</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
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<tr>
<td>WSET level 4</td>
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<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Title at sommelier competition</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Other qualification</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Only sommelier</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Also waiter</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Also wine director</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Also food &amp; beverage manager</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Also restaurant manager</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td><strong>Intercept</strong></td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
</tr>
<tr>
<td><strong>Number of observations</strong></td>
<td>267</td>
<td>267</td>
<td>267</td>
<td>267</td>
<td>267</td>
<td>267</td>
<td>267</td>
</tr>
<tr>
<td><strong>R²</strong></td>
<td>0.2275</td>
<td>0.2438</td>
<td>0.2770</td>
<td>0.2461</td>
<td>0.2647</td>
<td>0.2365</td>
<td>0.1744</td>
</tr>
</tbody>
</table>

* *, **, *** significantly different from zero at, respectively, 10, 5 and 1%.
CONCLUSION

- The effect is captured by every price range: just a rule of thumb
- Restaurants characteristics
- Person in charge of the wine list
  - Food and beverage manager (negative effect on markup size)
  - Restaurant owner (positive effect on markup size for mess expensive wines)
- Sommelier doesn’t matter
  - Except for the most expensive wines, for sommeliers with an experience of more than 10 years
- Empirical issues:
  - Ratings and awards: endogenous
Thank you for your attention
QUESTIONS & ANSWERS

SOMMELIERS, RESTAURANTS AND WINE PRICE MARKUP

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American Association of Wine Economists