Comparison of risk perceptions by wine producers: an empirical study in Chile

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Problem

• Risk management depends on risk perception
• Few studies of risk perception in the agricultural sector

Various different risks

• Risks:
  – Production,
  – Assets,
  – Price,
  – Human,
  – Financial,
  – Legal and institutional,
  – Environmental …

• Various taxonomy,
• Various ranking (Dillon, 1971; Anderson et al., 1977; Newbery & Stiglitz, 1981), (Boehlje & Trede, 1977; Fleisher, 1990; Baquet et al., 1997; USDA, 1999; Just & Pope, 2002; Hardaker et al., 2004)

Risks perception

• Studies emphasis on the following determinants of risk perception:
  – Geographical situation (drought in Texas, Hall et al. (2003), rain in New Zealand, Martin (1996) …)
  – Agricultural activity (farmers, cattle, milk producers,…)
  – Economic environment (fluctuation of inputs or output prices),
  – Institutional environment
Sample
- 104 wine companies in Chile
- Period 2007
- Small (37%), medium (35 %), large companies (28 %)
- Five different regions
- Respondents: Owners (34 %), managers (66 %)

Questionnaire
- Questionnaire on risk perceptions
- 13 different risks
- Perception scale : 1 very important to 4 negligible

Method
- Factor analysis (rotation varimax)
- Correlation between risks perception
- Global analysis and a separate analysis for companies size and respondent status (owner or manager)

Results
- Different classes of risks
  - F1 : legal, institutional, assets, human resources,
  - F2 : exchange rates, climate, yield,
  - F3 : credit risk, grape prices, interest rate risk,
  - F4 : wine prices, quantity sold
**Risk ranking**

- Exchange rate (export orientation, exchange rate fluctuations),
- Wine price (more important for small companies, diversification, fluctuation on the domestic market),
- Climate change (more important for small companies),
- Yield

**Different ranking for managers and owners**

<table>
<thead>
<tr>
<th>Risks</th>
<th>Owner</th>
<th>Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchange rate</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Climate</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Yield</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Wine price</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

**Consequences**

- Choice of risk management instruments to develop,
- Main risk: non specific to the wine industry quite easy to manage with classical instruments (options, futures, swap),
- Yield, wine price: insurance are possible