The horizon problem in cooperatives

1. Motivations

- Cooperatives: disincentive to contribute to growth opportunities and/or underinvestment due to short-term decision making (agency theory)

→ Is it possible to measure and identify an horizon problem in cooperatives?

- The wine industry is facing strong difficulties in Bordeaux, especially for generic and bulk wines

→ A general economic and financial audit of the Bordeaux wine industry

2. Theoretical background: the horizon problem

The user-owner principle and the horizon problem

- The user-owner principle of cooperatives
  - non transferability of shares and so,
  - no capital markets for cooperatives,
  - while the value of firm is determined by the present value of future cash flows...
  - No tradable value for growth opportunities
- The horizon problem
  - a disincentive to contribute to growth opportunities and/or underinvestment due to short-term decision making (theory agency) (Cook, 1995)
2. Theoretical background: the horizon problem in cooperatives

- Depending on: the membership composition (age), the link between members and management, director (age, education level and risk aversion)
- Some moderators (Staatz, 1988)
  - intergenerational transferability
  - the farm/land value includes the value of membership
- … which we assume to be weak in a context of
  - a decreasing number of vine growers (the heirs of wine farmers are not systematically wine farmers)
  - a well-functioning market for products processed by individual farmers (a priori no difference in the price of land if the seller is a cooperative member or not)

The horizon problem for Bordeaux wine cooperatives

- In this context, the horizon problem can affect
  - the investments required to renew the assets
  - the differentiation policies which require high tangible and intangible investments
- We focus on the link between the current value purchased to producers and
  - the (dis)investment
  - the differentiation of products and channels (differentiation with vertical integration, share of commercial activity in Unions)

3. Sample and data: a case study in Bordeaux

Sample
26 cooperatives (Bordeaux and Côtes)
- 13 small cooperatives (< 500 ha; < 22 000hl)
- 4 big cooperatives (> 1 500ha; > 80 000hl)
- 9 intermediate cooperatives

Yield between 44 and 57 hL/ha
Average sales price between 100 to 350 €/hL

Distribution channels:
- 6 cooperatives with more than 30% of turnover in bottled wine
- 9 cooperatives with more than 30% of turnover through a union
- 11 cooperatives which mostly sell bulk wine to negociants
3. Sample and data: a case study in Bordeaux

How to measure the horizon problem?

- Information on the number of cooperative members, the production area, and harvests between 2005 and 2008
- Accounting information from 2005 to 2010 (turnover, costs, assets, ...)
- Distribution channels
- Make us able to consider
  - the value purchased to producers in €/hL
  - and see the link with investments, product value...
  - according to the size and the distribution channels

4. Findings: measuring the horizon problem in Bordeaux wine cooperatives

4.1. Descriptive results: distribution channels, size and value purchased to producers

- Distribution channels: the bulk wine market is dominant

4.2. Linking product value and value purchased to producers

4.3. Investments and capital obsolescence

4.4. Linking cooperative cash flow and value purchased to producers

4.1. Descriptive results: distribution channels, size and value purchased to producers

- Size and distribution channels: the bulk wine market for intermediate cooperatives

Cooperative ranking by area (ha) and distribution channels
4.1. Descriptive results: distribution channels, size and value purchased to producers

- Distribution channels and fixed costs per hL

![](image1.png)

- Cooperatives' size and value purchased to producers

![Cooperatives' size and value purchased to producers](image2.png)

- Distribution channels and price to producers

![Distribution channels and price to producers](image3.png)

4.2. Linking product value and value purchased to producers

![Linking product value and value purchased to producers](image4.png)
4.2. Linking product value and value purchased to producers

Low product value and high value purchased to producers

Intermediate cooperatives more prone to horizon problem?

4.3. Investments and capital obsolescence

- Size and capital obsolescence

Intermediary cooperatives likely more prone to horizon problem!

4.4. Linking cooperative cash flow and value purchased to producers

- ... according to the size

Trade-off between value purchased to producers and cooperative cash flow

Long run policy
4.4. Linking cooperative cash flow and value purchased to producers

• ... according to the distribution channels

![Graph showing the trade-off between value purchased to producers and cooperative cash flow.]

5. Conclusion

• The horizon problem seems pervasive for cooperatives of the Bordeaux wine industry: 50% of cooperatives display a capital obsolescence higher than 70%!
• Excepted for cooperatives which have adopted a vertical integration policy
• Intermediate cooperatives on the bulk wine markets are likely more prone to the horizon problem:
  ➔ they maintain a high value purchased to producers even if the product value is low and the investment almost null
• Cooperatives in Unions do not keep cash. We do not know whether the excess cash is devoted to the Union for long run purpose, or entirely distributed to the producers, making the cooperatives more vulnerable to future downturn.

Thank you for your attention