Collective Action in Agriculture

- Horizontal Coordination
- Cooperatives
- Producer Organizations

Why Collective Action?

- Countevailing power
  - Fragmented farm ownership
  - Consolidation in downstream industries
- Economies of scale and scope

Cooperatives

- A co-operative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically-controlled enterprise.

Producer Organization

- A legally-constituted group of farmers and growers. Producer organisations assist in the distribution and marketing of products. They also promote a higher quality of products and encourage their members to adopt good environmental practices. Producer organisations have been legally encouraged since 2001 in the fruit and vegetable sector, and since 2011 in the milk sector
- Under the reform of the Common Agricultural Policy for the period after 2013, producer organisations are now encouraged in all sectors. Producer organisations can group themselves into associations of producer organisations and into inter-branch organization

Agricultural Cooperatives

- 38.5% of agricultural output is generated by the cooperative sector (about €260 billion).
- In the EU there are about 40,000 cooperative enterprisesemploying over 600,000 persons; with 9 million members.
- Cooperatives represent over 50% of the shares of the supply of agricultural inputs and over 60% of shares of the collection, processing and marketing of agricultural products

Distinctive Features of Cooperatives

- Democratic control
  - ‘One head, one vote’
- Open membership
  - Free entry and exit.
  - Exiting members take back their capital investment at face value
- Economic participation
  - Benefits are allocated in proportion to use, not capital

Example of Economic Participation Principle

- Consider a wine coop and IOF.
  Both firms:
  - Process 10,000 q of grapes
  - Two Members (equal capital shares)
    - Mr. A produces 60K q of grapes
    - Mr B produces 40K q of grapes

Example of Economic Participation Principle

	Investor Owned Firm	Coop
Revenues	1,000,000	
Raw Material (grapes) 50€ q	500,000	
Other costs	300,000	
Gross Margin	200,000	
Fin. expenses	100,000	
Net Profits	100,000	
Dividends	Mr. A: 50,000 Mr. B: 50,000	

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Example of Economic Participation Principle

	Investor Owned Firm	Coop
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Raw Material (grapes) 50€ q	500,000 **(300k+200k)**	**600,000**
Other costs	300,000	300,000
Gross Margin	200,000	**100,000**
Fin. expenses	100,000	100,000
Net Profits	100,000	**0**
Dividends	Mr. A: 50,000 Mr. B: 50,000	Mr. A: 0 Mr. B: 0
Patronage		Mr. A: **360,000** Mr. B: **240,000**

Economics of Ag Cooperatives

- Neoclassical Theory:
  - Countervailing power (Shapiro 1929)
  - Competitive Yardstick (Nourse 1942)
  - Coops vs. IOF (Roy1980)
- Transaction Costs Theory
  - Coop as hybrid organization (Staatz 1992)
- Property Rights Theory
  - Ill-defined Prights (Cook 1995)
- Managment view
  - Managing coops (Hendrikse…)

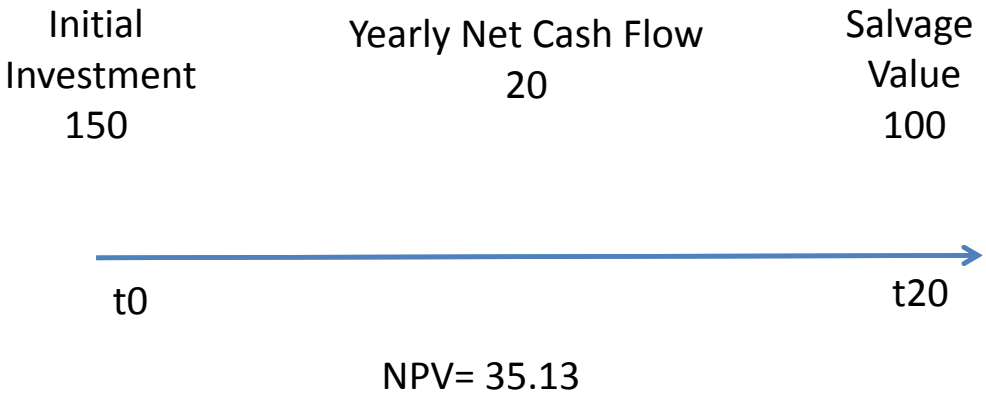
Managerial Issues

- Horizon problem
- Multi-product coops

Horizon Problem

- Assume that a coop considers a long-term, positive NPV investment project.
- Will the coop pursue the investment?
  - A IOF would

Horizon Problem

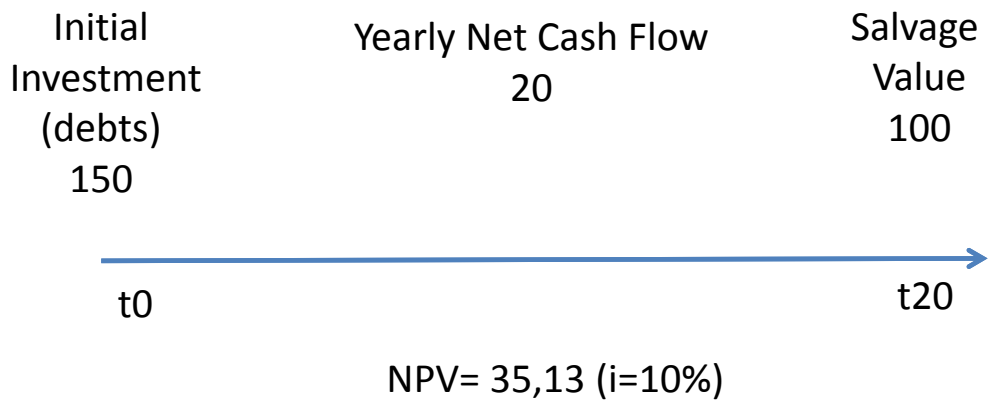


- The ‘only member’ must invest €150 of dividends/patronage refunds
- The investment yields €20 each year for 10 years and has a salvage value of €100.
- Interest rate is 10%

Horizon Problem

- Assume that a member plans to leave the IOF/Coop after 10 years
- What would he like to do?
- In the case of a IOF he will sell his shares for a market price
- In the case of a Coop he will walk away taking back the capital investment at face value (say 0)
- This makes a huge difference in investment evaluation

Horizon Problem



- In year 10 the market value of the share is (or should be) equal to the PV of future net cash flows (€20X10years+ SV)
- IOF Share value at time 10 = 161.44

Horizon Problem

- The IOF member leaving the firm at year 10:
  - Gives up €150 of profits at time 0
  - Gains the a €20 rent for 10 years: PV at time 0 = €122.89
  - Gains €161.45 the sale price of the IOF stock: PV at time 0 = €62.24
  - PV of the investment at time 0: 122.89+62.24-150=35.13 (same as the full investment)
  - The member supports the investment
  - The investment decision is independent of the member's time horizon

Horizon Problem

- The Coop member leaving the firm at year 10:
  - Gives up €150 of patronage refunds at time 0
  - Gains the a €20 rent for 10 years: PV at time 0 = €122.89
  - Recover the share investment at face value (say zero)
  - PV of the investment at time 0: 122.89-150=**-27.11** (Lower than the full investment)
  - The member DO NOT support the investment
  - The investment decision DEPENDS on the member's time horizon
  - Coop members may have different evaluation

Solutions for the Horizon Problem?

- Closed membership coops (New Generation Coops)
- Management-driven investment decisions
- Bargaining among members

Multi-Product Coops

- Assume that the coop can finance an advertising campaign for a commodity (only)
- The advertising results in higher prices for the chosen commodity (but not the others)
- Which commodity would the firm advertise?

Multi-Product Coops

- Decision criterion
  - IOF: the one that maximizes NPV
  - Coop: majority vote…
- Solution for the problem:
  - Pooling

Separation Theorem

- Unlike IOF, the Separation Theorem does not hold
  - The production decision affects the distribution of the benefits
  - Making ‘the biggest pie’ is not always compatible with individual incentives.

Conclusions

- Collective action is an opportunity for farmers.
- Private incentives might be misaligned with the collective goal
- The design of the agreement must consider the potential for opportunism.