

Workshop "Market-based instruments and Payments for Environmental Services in forestry: a real solution?"
Barcelona, 17 December 2009

PAYMENTS FOR MUSHROOMS PICKING AND THEIR EFFECTS ON REGIONAL DEVELOPMENT: a comparative analysis



Davide Pettenella
with Enrico Vidale and Mattia Cai
Dept. Landuse and Agro-forestry Systems
University of Padua - Italy



Outline

1. Introduction: research questions
2. A field survey: a comparative analysis of 2 case studies
 - Borgotaro Consortium
 - Dalla Valle Oy
3. Networks of NTFPs producers as a tool to support PES systems
4. Conclusions

This PP can be downloaded from the web site:
www.tesaf.unipd.it/pettenella

1. Introduction

Research questions:

- In a market where wood supply is becoming less profitable, can payments for NWFPs be an instrument for the local residents' income generation?
- Which is the preferable market organisation in relation to:
 - network among local economic agents?
 - property rights regulations?

Definition of network

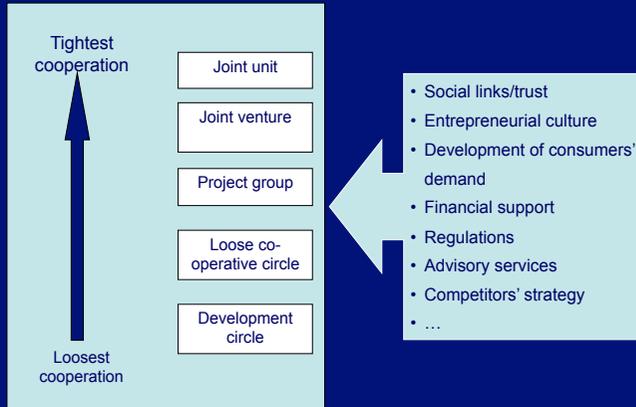
(Human and Provan, 1997 mod.)

"An **intentionally formed group of small- and medium-sized firms** in which the firms:

1. are **geographically proximate**,
2. **share some inputs and outputs**, and
3. undertake **direct interactions** with each other for specific business outcomes. The interactions may include joint production, new product development, collective marketing and employee training".

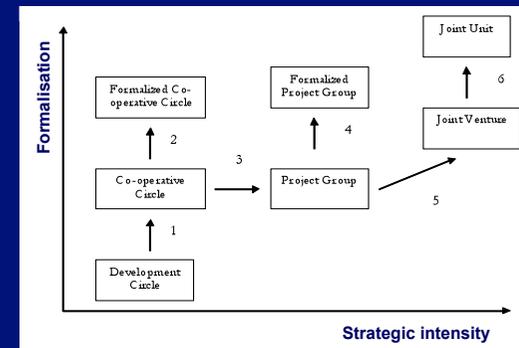
Main types of network

(Source: Varamäki and Vesalainen 2003)



Networks development paths

- Common strategy intensity
- Internal formal rules

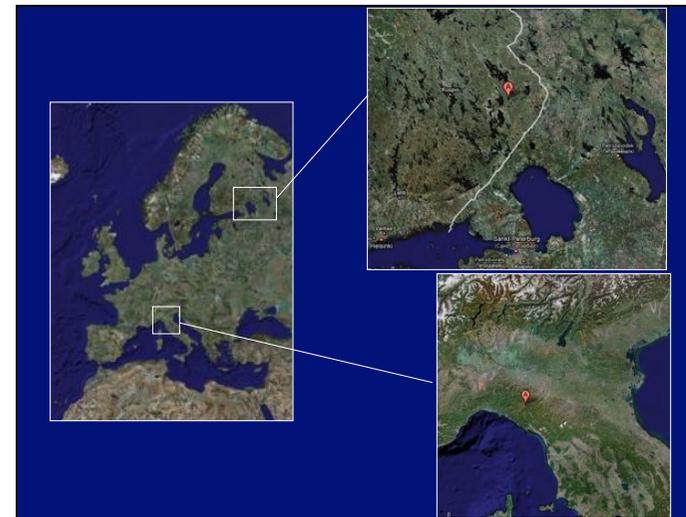


2. A field survey: a comparative analysis of 2 case studies

- The same product: *Boletus* mushrooms
- Quite similar socio-economic context (rural environment, forest as predominating land use, nature-based tourism)



- 2 organizational models:
 - Dalla Valle Oy in Finland (North Karelia - FIN)
 - Borgovalditario Consortium (Emilia-Tuscany Regions - I)



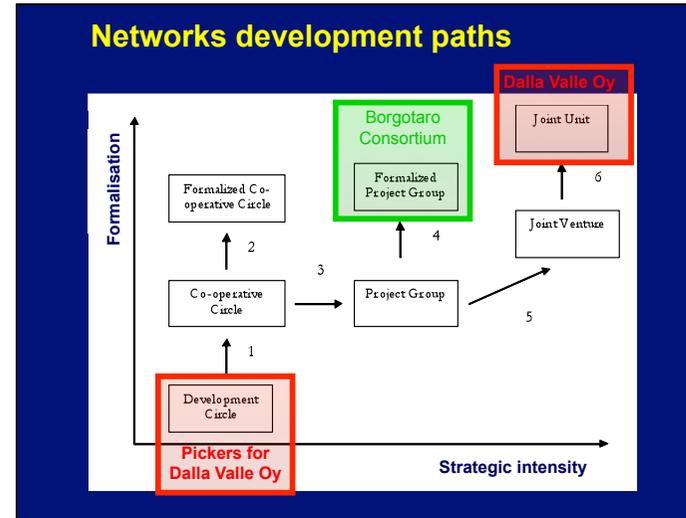
	DallaValle Oy (Finland)	Borgotaro Consortium (Italy)
Year of creation	1995 (1997: production starts)	1995
Network model	Joint Unit with a Development circle of pickers	Formalized project group



www.dallavalle.fi



www.fungodiborgotaro.com



	DallaValle Oy (Finland)	Borgotaro Consortium (Italy)
Year of creation	1995	1995
Network model	Joint Unit with a Development circle of pickers	Formalized project group
Innovation	System of m. gathering; logistic (30 collection centres), freezing technology, grading system	



Fresh mushrooms class information for gatherers

CLASS I:

M. has to be whole, solid and without worms. Pores has to be white.



CLASS II:

M. has to be whole, solid and wormless. Pores has to be complete and yellowish or yellow.

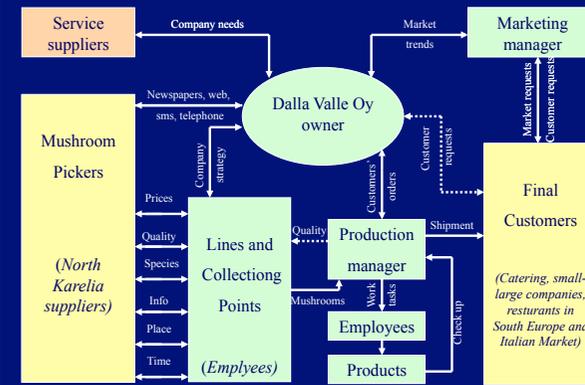


CLASS III:

M. has to be sliced in half. Pores has to be green. If pores are thick, half of them has to be taken off from their edges. In a rainy day, only the stem of the m. is included in class III.



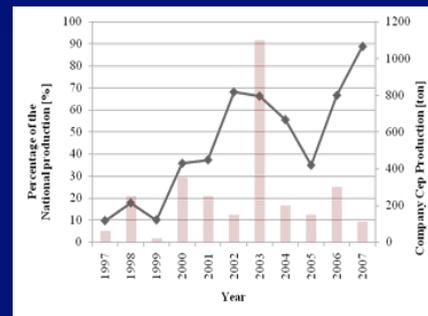
Company structure: main players within the value chain



Price determination



Ratio of Dalla Valle Oy and national production



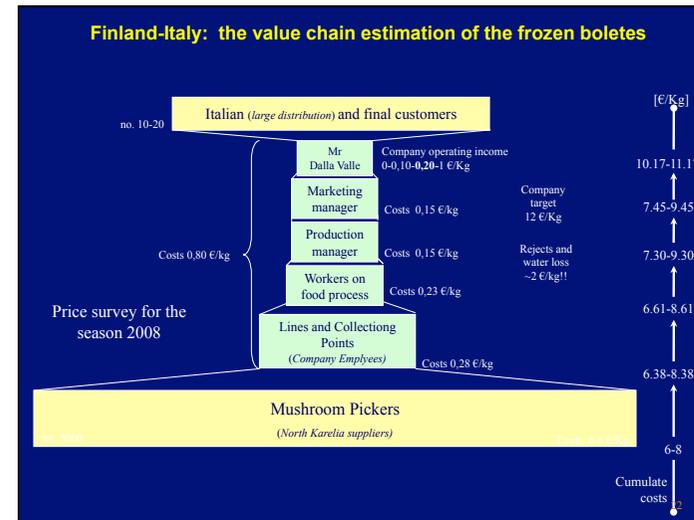
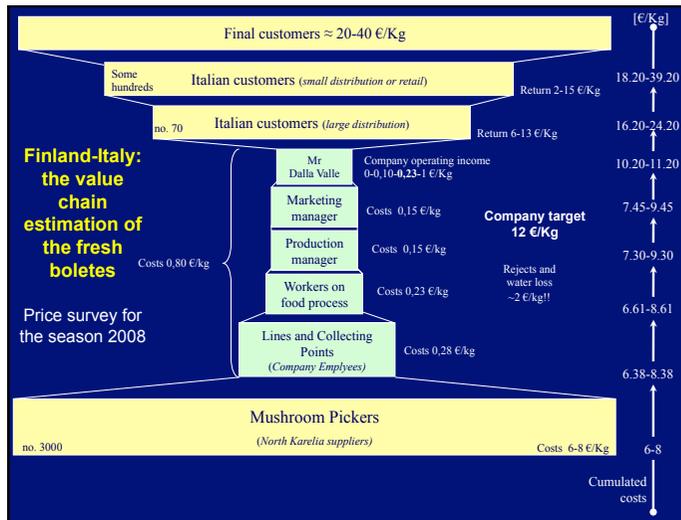
... high level of concentration!

	DallaValle Oy (Finland)	Borgotaro Consortium (Italy)
Year of creation	1995	1995
Network model	Joint Unit with a Development circle of pickers	Formalized project group
Innovation	System of m. gathering; logistic (30 collection centres), freezing technology, grading system	EC mark of origin; system of regulation for permit selling

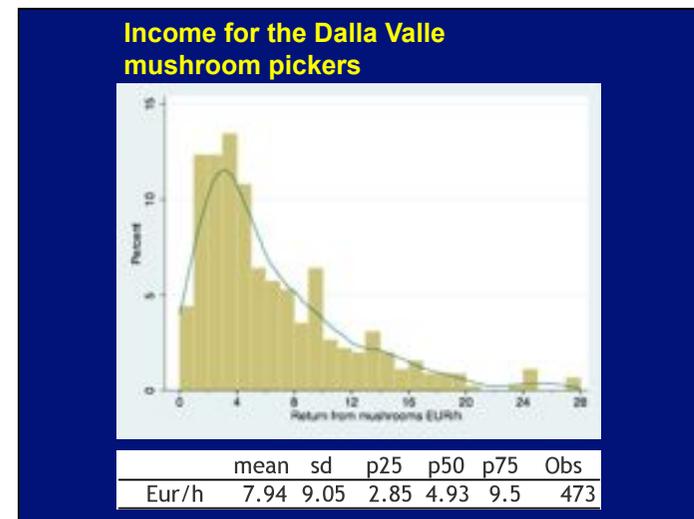
The screenshot shows a table with columns: COMUNE, ZONA, TESSERINO, and CHIESTA. The table lists various municipalities and their corresponding growing rates (e.g., 100%, 120%, 150%). Callouts from the text above point to specific elements: 'EC Mark of origin' points to the logo, 'Production areas' points to the 'ZONA' column, 'Type of permit' points to the 'TESSERINO' column, and 'Growing rate' points to the percentage values in the 'CHIESTA' column.

The screenshot shows the 'TESSERINO VERDE' section. A callout box highlights the text: 'Daily permit: 15 Euro (for 3 kg max)'. The page contains detailed information about the permit system, including costs for different municipalities and rules regarding access and collection.

	DallaValle Oy (Finland)	Borgotaro Consortium (Italy)
Year of creation	1985	1995
Network model	Joint Unit with a Development circle of pickers	Formalized project group
Innovation	System of m. gathering logistic (30 collection centres), freezing technology, grading system	EC mark of origin; system of regulation for permit selling
Forest production area	Very large: North Karelia (Russia)	22,000 ha of community forests (with the mark); total area involved: 60,000 ha
Value chain	Vertical integration, short chain	Horizontal integration



	DallaValle Oy (Finland)	Borgotaro Consortium (Italy)
Year of creation	1985	1995
Network model	Joint Unit with a Development circle of pickers	Formalized project group
Innovation	System of m. gathering logistic (30 collection centres), freezing technology, grading system	EC mark of origin; system of regulation for permit selling
Value chain	Vertical integration, short chain	Horizontal integration, net-system
Forest production area	Very large: North Karelia (Russia)	22.000 ha of community forests (with the mark); total area involved: 60.000 ha
Production volumes	From min 20 (in 1999) to max 1,100 (in 2003) tons per year. As an average, in 1997-2007: about 280 tons/year.	330-440 tons/year (with an average production of 15-20 kg/ha/year and an area of 22,000 ha)
Infrastructures	30 collecting centres, 2 refrigerator centres (plus an external one)	6 local enterprises for mushrooms processing and trading, 1 shop-laboratory-restaurant
Employees	Max 21,000 pickers; 25-150 seasonal employees (July-Oct) in the refrigerator centres	28 full-time workers in 2 large industrial firms, 4 full-time workers in the shop-laboratory-restaurant, 10 seasonal workers



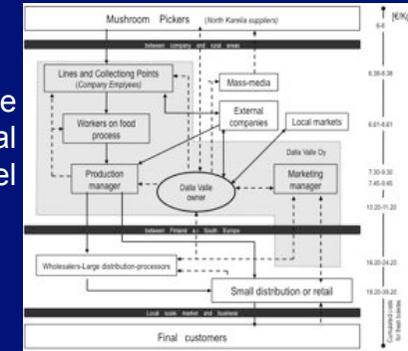
Income from mushrooms

Seasonal income from mushroom collection relative to labor income
(selected occupational groups)

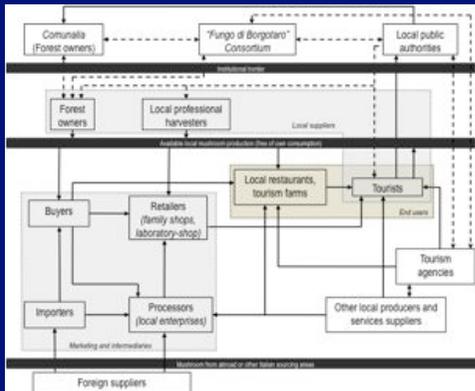
	Obs	Seasonal income from mushrooms				avg inc/month
		Mean	% of inc/month	Median	% of inc/month	
Retired	330	735	64	370	32	1154
Elementary occupations	150	591	31	296	15	1917
Unemployed	105	814		370		
Service workers	79	362	18	252	13	1982
Students	58	327		148		
Agricultural workers	41	489	26	322	17	1856

3. Networks of NTFPs producers as a tool for supporting PES systems

Dalla Valle organizational model



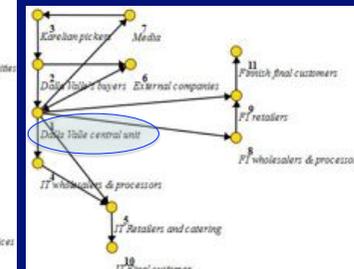
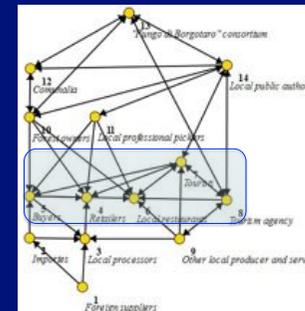
Borgotaro organizational model



The Social Network Analysis (SNA) may help us to get some findings...
...for instance, who hold the power of scarcity?

Borgotaro model

Dalla Valle Model



Mushroom in Borgotaro: much more than a commodity or recreational service: a component of **a larger network** based on the concept of “territory”, with the mushrooms as a brand:

- ➔ a consistent portfolio of products and services
- ➔ coordinated marketing efforts for their promotion

Imago product:
PGI Borgotaro
Boletus

Enterprises: 62 (in 2008)

- 15 Agritourisms/ Farm businesses
- 12 Hotels/Guest quarters
- 8 Bed&Breakfasts/Inns/Hostels
- 9 Cheese, sausage and wine growing and producing factories
- 2 Didactic farms
- 3 Museums/Private collections
- 30 Restaurants/Porterhouses
- 26 Typical products sellers

4. Conclusions

- **Property rights** regulations are important for income generation for forest owners, but much more important is the presence of **entrepreneurial innovation**
- Income generation: the well organized, specialized company is creating more **direct** AV and employment opportunities
- ... but:
- this activity is more exposed to **risk and instability** (seasonality, at least)
- the **indirect** effects of a network system are much more relevant

Networks are also **dynamic**: network growth can bring problems, conflicts and new risks, also because outcomes can have an **asymmetric distribution** among firms composing the network (Gulati, 1998)

Two components of the most advanced form of networks:

- **A (contractual) coordination** of economic agents for the supply of products and services to increase profit and/or stability (a market share)

- **A mutual trust:**

← input = **social capital**

→ output = not only market products are supplied but also “**relational goods**”

