Monetary Equilibrium and Mutuality analysis in Italian wine cooperatives

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Cooperation

A little history…
First evidences of the phenomenon: England, XIX century: weaker classes promote initiatives to protect low incomes of members

From the first cooperative-shop born near Manchester in 1844, the cooperative movement developed across Europe and still today represents in many areas a relevant economic phenomenon.

Different type of cooperatives according to what they do:
• Work
• Social
• Cultural
• Agriculture
Cooperation in agriculture

In the agriculture sector, cooperatives accomplish tasks such as:

- Picking
- Processing
- Transformation
- Sales

Products/materials are usually delivered by producers-members.
Cooperatives’ characteristics

Objective: in its conceptual meaning, it is not to pursue a profit, but to favor members and indirectly bring benefits to the entire community (Romano, 1991).

Compared to joint-stock companies, cooperatives differ in the structural and objectives aspects: capital comes from the members and the cooperative transforms products that are produced by members. These are remunerated according to quantity and quality of the product.

MUTUALITY
Italian law and mutuality

The Italian law recognizes the **social function** of cooperative initiatives with a mutuality attitude and with no private speculation aim.

“Cooperatives are firms characterized by a **mutuality** aim (...)”

⇒ **mutuality** is a distinctive aspect of cooperative firms.

Regardless a recent reform of the law on the definition of firms (art.2511 CC) it still keeps this concept as a centerpiece.

For these purposes, the Italian Law promotes and favors the implementation of cooperation with the necessary tools, and preserves its characteristics and goals.

**Law n.59/1992**: profits obtained during the cooperative business activity have to be in main part re-invested within the company, or for mutuality aimed initiatives.
According to the Italian law (D.Lgs. N. 6/2003) there are two different kinds of mutuality:

- **prevalent**: the cooperative firms stipulate contracts with the members only or mostly, and the business is carried out to achieve benefits for the members exclusively (>50% of total goods, in quantity or value, comes from members);

- **non prevalent**: the business is open also to others rather than members only (<50% of total goods come from members).

Only the cooperatives that work in a prevalent mutuality status can benefit from special taxation terms (tax relief).
Our study

Objectives: analysis of wine cooperatives (otherwise called in Italy “social wineries”) balance sheets through the years, focusing on the way they approach mutuality (mutuality indexes), their income statements and monetary equilibrium.

Period: six years, from 2003 to 2008
(balance sheet data from records at the Italian Chamber of Commerce)

In particular, the balance sheets taken in consideration are the ones of cooperatives that don’t have other activities that differ from grape transformation into wine or other by-products.
Sample

- Total of 28 wineries and 168 balance sheets
- Different size
- Different productivity
- Different Italian regions (North, Center, South)
- The production differs in type and quality of the final product, but they are all transformation wine cooperatives: from grape to wine.
Definitions

**Mutuality**
according to the source of raw materials
members of cooperative/third-parties)
Decreto Legge n. 6/2003

PREVALENT (>50%)

NON-PREVALENT (<50%)

**Mutuality Index:**

\[
\frac{\text{Quantity (or value) of members' brought in goods}}{\text{Quantity (or value) of total transformed goods}} \times 100
\]

Only in this case tax-relief

According to this, the sample was divide into three groups:

- **Exclusive mutuality cooperatives** (index = 100%);
- **Prevalent mutuality** (index = 50 - 99%);
- **Non-prevalent mutuality** (index ≤ 50%).
Mutuality regarding source of materials, according to the mutuality index, by quantity and value

In both cases, none of the balance sheet declares a mutuality index lower than 50%, which is the limit to benefit of cooperative special tax and legal facilitations.
Definitions

**Mutuality**
according to the way
the result –profit- is divided
(only to the members or to mutuality funds according to Article n.4 of Law n. 59/1992)

By law, a percentage (3%) on the total of the equity has to go to the Cooperation Mutuality Funds (for the promotion and development of new cooperatives)

According to this, the sample was re-classified in cooperatives that present:

- **Internal compulsory mutuality** (profit > 0 → maximization of payment of members);
- **Internal privileged mutuality** (profits slightly >0 → part of the profit goes to mutuality funds);
- **Internal Non-privileged mutuality** (with profits strongly > 0 → grants and funds given to third parties, charity, etc).
Reclassification

Social wineries were reclassified according to their profit:

- < 0 €
- = 0 €
- Between 1 – 5.000 €
- Between 5.001 – 20.000 €
- > 20.001 €

Profit obtained at the end of the year doesn’t derive from a difference between proceeds and explicit costs, but from a subjective attribution of the profit to the members brought-in goods (value that is recorded in the balance sheets between the production costs).
Permanency of cooperatives in their revenue class during the years

→ Maximization of members profit through a higher value given to their brought-in goods

→ Limits of the Italian law that doesn’t require compulsory further informations on the item “costs of raw materials” (no distinction between the members and third parties) from cooperatives in order to evaluate the cooperative’s performance

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Key legend:
1 = Revenue < 0 €
2 = 0 €
3 = 0 - 5,000 €
4 = 5,001 - 20,000 €
5 = > 20,000 €
Mutuality in the italian wine cooperatives (% on total)

<table>
<thead>
<tr>
<th>Internal Mutuality</th>
<th>Mutuality index (by quantity)</th>
<th>100 %</th>
<th>50 - 99 %</th>
<th>Total</th>
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<td>Compulsory</td>
<td></td>
<td>9%</td>
<td>1,9%</td>
<td>11%</td>
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<td>(revenue &lt;0)</td>
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<td>Privileged</td>
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<td>32,3%</td>
<td>21,3%</td>
<td>53,5%</td>
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<tr>
<td>(revenue between 0 – 5.000)</td>
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<tr>
<td>Non privileged</td>
<td></td>
<td>22,6%</td>
<td>12,9%</td>
<td>35,5%</td>
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<tr>
<td>(revenue &gt; 5.000)</td>
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<tr>
<td>Total</td>
<td></td>
<td>63,9%</td>
<td>36,1%</td>
<td>100%</td>
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</table>

Gamma coefficient = 0,1
Monetary equilibrium indexes measure companies’ (in this case cooperatives’) capability to cover their short-term (within 12 months) and medium/long-term (over 12 months) debts, drawing on monetary sources available immediately or in longer periods of time (delayed liquidity).

To be able to have a complete view of the sample’s financial situation, we calculated some of their monetary equilibrium indexes, such as:

- Acid Test Ratio \((ATR)\);
- Quick Test Ratio \((QTR)\);
- Current Test Ratio \((CTR)\);
- Equity/Asset Gross Ratio \((EAGR)\) that includes liabilities;
- Equity/Asset Ratio \((EAR)\);
- Equity Test Ratio \((ETR)\).
Cluster Analysis according to Monetary Equilibrium Indexes

Mean Monetary Indexes of the different cooperatives’ clusters

1. HIGHLY EXPOSED
2. PRECARIOUS
3. FIRM
Monetary equilibrium situation

Balance sheets part of each cluster (% on total)

- Highly exposed: 40%
- Precarious: 47%
- Firm: 13%
HIGHLY EXPOSED: 40% present a very high risk level regarding their financial situation. Current Ratio (CTR) is slightly lower than one. In other words, they are not able to face current liabilities through the value of products and raw materials in stock besides current or delayed liquidity. These cooperatives are not in the position to pay the debts that expire within the year with the short term activity, and probably will have to ask their creditors to change the short term debts into medium-long term ones. On the long term, the index that takes a better picture of the trend is the Equity Test Ratio (ETR). As we can see from the graphic, these cooperatives regarding finances depend highly on third parties, since their liabilities are definitely higher than equity capital. The smaller this index is, higher their financial dependency on third parties’ capital. Finally, these cooperatives have an EAGR close to 1, meaning that there is a monetary equilibrium between long term investments and long term financial sources.
Precarious cooperatives cluster:
47% of balance sheets.
These companies are in a precarious situation: on the short term they display a positive trend, with a current ratio index value higher than 1, but on the long term they don’t show stability.

Firm cooperatives cluster:
13% balance sheets.
They present an excellent monetary equilibrium both on the short and medium-long term, differently than the previous clusters analyzed.
Most of the cooperatives that present these data are from the Trentino-Alto Adige region.
Correlation between monetary equilibrium and “external” mutuality approach (% on total)

<table>
<thead>
<tr>
<th>Mutuality index (quantity)</th>
<th>Exclusive (100%)</th>
<th>Prevalent (50-99%)</th>
<th>Total</th>
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<tr>
<td>Monetary Equilibrium</td>
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<tr>
<td>Highly exposed</td>
<td>32,7%</td>
<td>56,4%</td>
<td>41,2%</td>
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<tr>
<td>Precarious</td>
<td>48,0%</td>
<td>41,8%</td>
<td>45,8%</td>
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<tr>
<td>Firm</td>
<td>19,4%</td>
<td>1,8%</td>
<td>13,1%</td>
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<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
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Gamma coefficient = 0,57
Correlation between monetary equilibrium and “internal” mutuality approach (% on total)

<table>
<thead>
<tr>
<th>Monetary equilibrium</th>
<th>Highly exposed</th>
<th>Precarious</th>
<th>Firm</th>
<th>Total</th>
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<td>17.6%</td>
<td>82.4%</td>
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<td>59.1%</td>
<td>38.7%</td>
<td>2.2%</td>
<td>100%</td>
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<tr>
<td>Non privileged</td>
<td>16.1%</td>
<td>48.2%</td>
<td>35.7%</td>
<td>100%</td>
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<tr>
<td>Total</td>
<td>40.4%</td>
<td>46.4%</td>
<td>13.3%</td>
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Gamma coefficient = 0.5
Conclusions

1. Permanency of cooperatives in their revenue class during the years
   especially the ones with very high revenues or the ones that achieve a revenue equal or very close to zero.

2. Mutuality according to the source of materials (members/third parties)
   Few cooperatives favor exclusive mutuality (50-99%), while most have a prevalent mutuality approach (100%).
   None of the examined co-operatives presented a non-prevalent mutuality.
   (by definitions of the italian Decreto Legge n.6/2003)
Conclusions

3. Mutuality regarding favouring members/internal mutuality or mutuality funds/external mutuality

• 11% favour only members

• 53.5% have a privileged internal mutuality approach (revenues slightly higher than zero)

• 35% have a non-privileged approach to internal and with higher revenues sustain the external mutuality.
Conclusions

4. Calculation of monetary indexes and cluster classification according to the results

40% of balance sheets are part of the *highly exposed* cluster, even more (47%) are part of the *precarious* cluster, and only 13% present a solid situation (*firm*).
Conclusions

5. Relations between the mutuality approaches and the monetary equilibrium.

The relationship was measured through a Gamma coefficient. The result shows that monetary equilibrium is connected to the way mutuality is conceived. Consequently, the way a cooperative business relates to mutuality (favoring internal mutuality or not) affects the monetary equilibrium of the business (*highly exposed, precarious, firm*).
Thank you for your kind attention!