

If not for profit,
for what and how?

S O C I A L
E N T E R P R I S E

Exploring the performance of social cooperatives during the economic crisis: The Italian case

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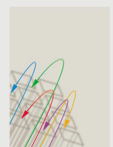
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Abstract

The current economic crisis has hit the Italian economic system hard (Bugamelli et al, 2009; Accetturo et al., 2011) and has once again highlighted the economic divide between the northern and southern regions of Italy (Banca d'Italia, 2012).

Official statistics (Istat, 2012a; Istat, 2012b) outline a clear picture of the economic situation of Italian enterprises during the crisis, but nevertheless do not provide data on social cooperatives, which have thus far represented the most important type of social enterprise in Italy (Defourny and Nyssens, 2008; Euricse, 2011).

Studies on the economic performance of social cooperatives are lacking due to their complexity and the impossibility of applying traditional frameworks, such as those related to for-profit organisations (Austin et al., 2006; Moore, 2000). In addition, longitudinal studies that aim at evaluating the ability of social cooperatives to survive over time are lacking.

Starting from these premises, by developing a multiple factor analysis (MFA), this paper aims at deepening the understanding of the economic performance and the employment features of social cooperatives in 2008 (before the crisis) and 2011 (after the beginning of the crisis) in order to better understand how the employment and economic performances of such organisations have changed during the years of the economic crisis. Particular attention will be paid to the analysis of the differences between Italy's three main geographical areas.

These objectives are achieved by carrying out an empirical study using data from the Italian social cooperatives contained in the data warehouse developed during a research project of Euricse. This is based on the Analisi Informatizzata delle Aziende (AIDA) database of the Bureau van Dijk, integrated with other administrative databases, and contains data for over 72,000 Italian cooperatives.

Keywords: social cooperatives, Italy, employment, economic and financial indexes, multiple factor analysis

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INTRODUCTION

The current economic crisis has hit the Italian economic system hard (Bugamelli et al., 2009; Accetturo et al., 2011) and has once again highlighted the economic divide between the northern and southern regions of Italy (Banca d'Italia, 2012; ICE, 2012).

During the first phase of the crisis (2008–2009), the fall in gross domestic product (GDP) was relevant in all the Italian regions, with a peak of approximately –5% between the end of 2008 and the beginning of 2009 (Caivano et al., 2010).

From 2010–2011, the northern regions showed the first signs of recovery. The prolonged crisis in 2010 and 2011 has mainly hit the southern regions, where conjunctural factors exacerbate long-term structural deficiencies. From 2011 to 2013, the southern regions have been characterised by a particularly unfavourable trend in consumption, weaker employment and wages, and worse expectations concerning the prospects of the labour market. Even foreign demand was lower in the southern regions than elsewhere in Italy, given their lesser degree of openness to foreign markets, which is associated with a more lacklustre performance in terms of domestic income (Istat, 2012a; Banca d'Italia, 2012).

The economic difficulties of enterprises in the southern regions are also confirmed by the data of the Italian Chambers of Commerce (Centro Studi Unioncamere, 2012). According to this information, firms in the northern regions maintained production and sales at tenable levels from 2010 until the third quarter of 2011, when there was an alignment with the poorly performing regions, albeit with smaller losses. Few signs of recovery have come from enterprises in the central and southern regions (Istat, 2012b).

The economic crisis has rekindled interest in cooperatives among both academics (Borzaga, 2012; Vieta, 2010) and practitioners (Cecop-CICOPA Europe, 2010). Several studies (Birchall and Ketilson Hammond, 2009; Zamagni, 2012) have shown that, in the early stages of an economic crisis, cooperatives demonstrate a greater resilience than other forms of enterprise (Bentivogli and Viviano, 2012). For instance, cooperative banks have been more resilient in the current economic crisis than commercial banks (Birchall, 2013). However, studies on other cooperative sectors are lacking.

One of the most important economic sectors in the cooperative model is that of the 'social cooperative' (Euricse, 2011). Social cooperatives were established by Law 81/1991 as member-owned organisations operating with the purpose of creating social value for their communities. According to this Law, social cooperatives can either be involved in caring or in training activities (Thomas, 2004). Caring activities – type A – refer to social, health care, educational and cultural services, and nurseries and initiatives aimed at environmental protection; training activities – type B – provide job-placement services for disadvantaged people.

Since the introduction of the Law, social cooperatives have grown in number, addressing needs that had previously gone unmet because of the deficiencies in the welfare-state provision (Pasquinelli, 1993). Their development has been primarily spurred on by the substantial growth in the demand for welfare services by the community and by the moral beliefs of their founders (Thomas, 2004).

According to the National Institute of Statistics (2008), social cooperatives increased from 650 in 1985 to 7,400 in 2005, and a more recent analysis (Euricse, 2011) has shown that, in recent years, their numbers have risen even further, to more than 13,000 organisations in 2008.

However, more recent analyses and longitudinal studies that aim at evaluating the ability of social cooperatives to survive over time are lacking. What are particularly needed today are relevant studies in order to determine the consequences of the economic crisis on social cooperatives' economic and social performances. The lack of such studies inevitably leads to less acknowledgment of an

economic phenomenon that would be strengthened through a more refined awareness of how social cooperatives actually contribute to the economic progress and social welfare of the country, especially during periods of economic crisis. This paucity of information can be traced to two main factors: i) the lack of accessible databases on social cooperatives and the difficulty researchers face accessing existing ones (Borzaga et al., 2012) and ii) the complexity of cooperatives and the impossibility of applying traditional frameworks, such as those used to analyse for-profit organisations (Austin et al., 2006).

Starting from these premises, the present study will involve a detailed analysis of Italian social cooperatives in 2008 and 2011 to examine how the employment and economic performances of social cooperatives have changed during the years of the economic crisis. Particular attention will be paid to the differences between Italy's three main geographical areas.

In detail, by developing an MFA, this paper aims at deepening the understanding of the economic performance and the employment features of social cooperatives in 2008 (before the crisis) and 2011 (after the beginning of the crisis).

The paper is structured as follows: section one presents the problems connected with the measurement of the economic performance of social enterprises and the impossibility of applying traditional frameworks such as those applied to for-profit organisations, and section two looks at the population under study, the data sources used for the analysis and the statistical techniques used for the analysis. Finally, section three articulates the main conclusions of the research.

1. MEASURING THE ECONOMIC PERFORMANCE OF SOCIAL COOPERATIVES

In recent years, the international scientific debate has focused on the identification of indicators that can be used to effectively evaluate the economic performance of social cooperatives and social enterprises (Beaubien and Rixon, 2012; Beaubien, 2011; López-Espinosa et al., 2009; Marin-Sanchez and Melia-Martí, 2006).

Social cooperatives, much like cooperatives in general, are member-owned organisations that abide by the principles of democracy and solidarity. Therefore, the objectives of social cooperatives cannot be reduced simply to profit maximisation; they are created for their social value, to benefit their community (Mancino and Thomas, 2005; Thomas, 2004; Andreaus, 1996).

Social cooperatives are organisations that are focused on social value creation. Thus, their mission is not primarily oriented to creating economic value, but wealth for the public good (Dart et al., 2010; Austin et al., 2006; Dees, 1998b). However, this does not mean that social cooperatives should not undertake strategies to guarantee net income earnings. On the contrary, they must constantly create economic value in order to survive over time so that they can continue their mission. In other words, while for-profit organisations consider wealth creation as a way of measuring value creation, for social cooperatives, wealth creation is a means to the end of self-maintenance (Dees, 1998a). It must be noted that economic and social value are not mutually exclusive: social cooperatives have social value creation as a primary objective, 'while economic value creation, in the form of earn[ed] income, is necessary to ensure the sustainability of the initiative and financial self-sufficiency' (Mair and Martí, 2006, p. 39). Social cooperatives should thus be able to earn income in order to guarantee their long-term survival and to put money towards further investments.

According to this view, social cooperatives are considered as 'double bottom line' organisations (Dart et al., 2010), able to produce both social and economic value (Dees and Economy, 2001). As a result, their performance-measurement system is inherently challenging (Dees, 1998a). Since they are social value oriented, their success cannot be measured by traditional financial indicators or by

market share (Austin et al., 2006). Economic indicators are, quite simply, not the most fundamentally important factors when evaluating the performance of such organisations (Herman and Renz, 1999).

While the performance of a for-profit organisation is well summarised in its financial statements – company shareholders consider this the mission of the company – there is no corresponding relationship between increments of achievement in an organisation's mission and financial performance in social enterprises (Moore, 2000).

As a result, the study of the economic and financial performance of social cooperatives cannot be limited to a simple analysis of measures that are based on traditional economic ratios (Lerman and Parliament, 1991), because institutional specificity cannot be taken out of the analysis. Moreover, any analysis has to take into account the difficulties in interpreting the economic results of this type of organisation due to membership compensation. Profit often results in a 'net zero surplus' (Guzman and Arcas, 2008), because the gross income is distributed to members via price reductions (Kyriakopoulos et al., 2004).

In this context, there are two main misunderstandings (Travaglini, 1997): i) some authors suggest using the same profitability indicators for both non-profit and for-profit organisations and ii) other scholars focus on the measurement of the social value created, entirely leaving out economic and financial criteria (e.g. the social return on investment [SROI]; Nicholls et al. 2009).

In our view, both strategies are fallacious because they do not reinterpret the traditional profitability indicators through the lens of non-profit organisations and, at the same time, do not offer tools that are able to meet the particular requirements of these organisations. Nevertheless, it has to be kept in mind that non-profit organisations also have to guarantee long-term sustainability in order to persist over time, and their economic behaviour needs a benchmark.

From these premises, our paper attempts to go beyond the limitations inherent in the use of the traditional economic ratios and to analyse the overall performance of social cooperatives in Italy by utilising four indexes: i) turnover/total operating expenses, ii) profit (or loss)/turnover, iii) equity/total assets, and iv) fixed assets/total assets (Costa et al., 2012).

The first index reflects the level of self-financing conducted, and highlights the part of a business's production value that remains after accounting for production costs and the members' and partners' remuneration. The second aims at understanding the relationship between operating expenses and turnover. The third synthesises the cooperatives' degree of capitalisation and indirectly represents a business's debt ratios. Finally, the last item measures the rigidity of assets by quantifying the business's return to liquidity in the long term (more than 12 months) (Andreas and Costa, 2009).

These indexes have been sorted into classes of analysis, as detailed in Appendix I.

2. RESEARCH DESIGN

2.1. The population under study

The analysis presented refers to 7,414 Italian social cooperatives¹ established before 2009 for which economic and employment data for 2008 and 2011 were available in the Euricse data warehouse. The consortia of social cooperatives were excluded from the analysis.

The Euricse data warehouse is the result of a research project started at the end of 2009 by the Euricse. The main objective of this project is the systematic collection of administrative and statistical

¹ The set of social cooperatives is made up of those officially registered as social cooperatives in the Companies Register, and of all the cooperatives which, even if not specifically registered under the label 'social cooperative', are chartered on the regional registers of social cooperatives or have the words 'social cooperative' in their company name.

archives on Italian cooperatives and their organisation into a consistently updated, integrated database (data warehouse) that allows for the periodic dissemination of statistical reports and research for the benefit of the stakeholders (researchers, practitioners and policy makers).

Currently, the Euricse data warehouse contains contact, financial and employment data for over 70,000 Italian cooperatives for the years between 2008 and 2011. The data warehouse consists mainly of the integration of three sources of an administrative nature: the AIDA database of the Bureau van Dijk², the archives of the Istituto Nazionale di Previdenza Sociale³ (INPS) and the regional registries of social cooperatives. The AIDA database has been the primary source for the acquisition of contact details and for the financial and economic data of cooperatives. When any discrepancies arose within the economic data, as detected through specific IT routines, the verification process entailed looking at the balance sheet registered at the local Chamber of Commerce and available on Telemaco⁴, the online database of companies' registers (the official record for all Italian enterprises). Economic data extracted from the AIDA database was then integrated with that related to employees provided by the INPS. Finally, extracted data from the two previous sources was combined with that of the regional registers of social cooperatives established under Law 381/1991.

Table 1. Social cooperatives under study by geographical area, sector of activity and year of foundation

	N	%
<i>Geographical area</i>		
North	3,552	47.9
Centre	1,398	18.9
South and islands	2,464	33.2
<i>Sector of activity</i>		
Agriculture	172	2.3
Industry	439	5.9
Construction	156	2.1
Education	534	7.2
Health and social care	3,960	53.4
Other services	2,101	28.3
Missing	52	0.7
<i>Year of foundation</i>		
Up to 1992	1,973	26.6
1993–1997	1,216	16.4
1998–2002	1,832	24.7
2003–2007	2,142	28.9
2008	251	3.4
Total	7,414	100.0

As shown in Table 1, most of the cooperatives under study were located in the northern regions of Italy (47.9%). Trailing far behind were the southern regions and islands (33.2%) and central regions (18.9%). Approximately one out of two cooperatives operated in the health and social care sector⁵. In addition, a number also provided educational services (7.2%) and other services (28.3%). The

² AIDA is a database created by the Bureau Van Dijk (www.bvdinfo.com), which stores the contact and economic data of more than 950,000 Italian enterprises.

³ The *Istituto Nazionale della Previdenza Sociale* (INPS, www.inps.it) is the main Italian social security institution, where all employees and most of the self-employed who do not have an autonomous security fund must be insured.

⁴ For more information: <https://telemaco.infocamere.it>.

⁵ The sector of activity is based on the ATECO2007 code concerning the main economic activity declared by the cooperative to the territorial Chamber of Commerce. For more information see: www.istat.it/strumenti/definizioni/ateco

remaining 18% of the cooperatives were evenly distributed among the industrial sector (5.9%), agriculture (2.3%) and construction (2.1%). Finally, less than a third (26.6%) of the cooperatives was established before 1993, while another third were established after 2002 (32.3%).

2.2. Multiple factor analysis (MFA)

To draw a clearer picture of social cooperatives in the period under examination, it can be useful to utilise techniques to reduce the dimensionality of the data. A reduction in the dimensionality is the transformation of multidimensional data into a meaningful representation of reduced dimensionality to simplify the interpretation of the data, while retaining as much as possible of the variation present in the data set.

There are many methods for reducing dimensionality, but this analysis is based on the MFA articulated by Escofier and Pagès (1998), a method that can be interpreted as a multicanonical analysis, as defined by Carroll (1968), to analyse the relationships between several sets of variables recorded in a data set.

In the case of quantitative variables, MFA works in a similar manner to principal components analysis (PCA; Pearson, 1901; Hotelling, 1933; Jolliffe, 2002), the variables being weight.

In the case of categorical variables, MFA works as a multiple correspondence analysis (MCA; Escofier and Pagès, 2008; Greenacre and Blasius, 2006; Le Roux and Rouanet, 2004), the variables being weight (Pagès, 1996). The use of weights balances the highest axial inertia of sets and it allows to work simultaneously with quantitative and categorical variables.

In more detail, an MFA works in two steps (Abdi and Valentin, 2007). First, in the case of quantitative data, it is used to compute a PCA of each data table and then to normalise each data table by dividing all its elements by the first singular value obtained from its PCA. Second, all the normalised data tables are aggregated into a grand data table that is analysed via a (non-normalised) PCA that gives a set of factor scores for the observations and loadings for the variables.

The proposed analysis was developed using the MFA function of the FactoMineR package (Husson et al., 2007), a package for multivariate data analysis with R. The main features of this package are that it can take into account both quantitative and categorical variables and different types of structure within the data (a partition in the variables, a hierarchy in the variables, and a partition in the individuals), and it can allow for the introduction of supplementary individuals and variables in the analysis (Lê et al., 2008).

The proposed analysis takes into account four groups of variables:

- Economic size: quantitative variables relating to turnover and assets;
- Economic efficiency and capitalisation: turnover to operating costs, profit (loss) to turnover and equity to total assets;
- Employment size: the number of permanent employees and fixed-term employees;
- Descriptive: categorical variables regarding the year of foundation, sector of activity and the geographic area in which the cooperative operates.

The first three groups were defined as 'active' and they have contributed to the computation of the MFA. The last group was instead defined as supplementary, and variables contained in this group have been used to interpret the results.

The MFA was conducted on social cooperatives for which the four economic indexes described in paragraph 3.2 had values between the first and the ninety-ninth percentile of their distribution, in order to ensure that the analysis would not return anomalous values due to data that may have been incorrectly input into the AIDA database. The MFA was conducted on the data for 2008, and then

repeated on the data for 2011 to explore the changes that occurred in the active groups of variables after four years from the beginning of the economic crisis.

In the next section, some descriptive statistics will be presented for the population under study with regard to the variables in the groups of economic dimensions, economic efficiency and the capitalisation and employment dimension. Finally, the result of the MFA will be presented.

3. FINDINGS

3.1. Economic dimensions

The turnover produced by social cooperatives under study in 2011 amounted to 8.96 billion euros, 67.8% of which was produced in the north (Table 2). Total assets registered in 2011, defined as the overall net amount that a cooperative invests, were 7.41 billion euros, 66.3% of which was invested in northern Italy.

Between 2008 and 2011, the turnover of the cooperatives under study grew by 20.4%, while the total assets increased by 28.4%. The percentage changes in turnover between 2008 and 2011 show slight differences between the northern and southern regions. However, the percentage changes relative to total assets show a significant increase (35.6%) in the southern region.

Table 2. Turnover and total assets in 2011 and changes in the 2008–2011 period by geographical area: % values

	Turnover year 2011	Variation 2008– 2011 (%)	Total assets year 2011	Variation 2008– 2011 (%)
North	67.8	+20.8	66.3	+27.3
Centre	18.9	+21.0	18.8	+27.0
South and Islands	13.3	+17.9	14.9	+35.6
Italy	100.0	+20.4	100.0	+28.4

Source: EURICSE's analysis based on AIDA-Bureau Van Dijk data

3.2. Economic efficiency and capitalisation

An analysis of the relationship between operating costs and turnover reveals that, during the four-year period, there was an increase both in the turnover and the operating costs. In 2011, 33.9% of social cooperatives (compared to 31.8% in 2008) were within an index value of 1 or less and 62% (compared to 61.6%) showed index values of between 1 and 1.2.

Looking at the data by region, Table 3 shows that both in 2008 and 2011, the percentage of cooperatives with an indicator value of less than 1 was higher among cooperatives in the southern regions (37.2% in 2008 and 39.9% in 2011) than in the other regions in Italy.

Table 3. Social cooperatives by the ratio of turnover to operating costs by geographical area for 2008 (left) and 2011 (right): % values

	Year 2008				Year 2011			
	North	Centre	South and Islands	Italy	North	Centre	South and Islands	Italy
<= 1	30.2	26.0	37.2	31.8	31.5	29.7	39.9	33.9
1 - 1.2	65.3	66.6	53.6	61.6	66.0	65.6	54.3	62.0
1.2 - 1.4	2.8	4.6	5.3	4.0	2.0	3.4	3.9	2.9
> 1.4	1.7	2.8	3.9	2.6	0.5	1.3	1.9	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: EURICSE's analysis based on AIDA-Bureau Van Dijk data

More information on the ability of social cooperatives to self-finance can be deduced from the ratio of profit (loss) to turnover (Table 4) in the study. The data revealed that 38.1% of social cooperatives had some difficulties covering their operating costs in 2011 (compared with 36.1% in 2008), which inevitably affected their ability to achieve long-term economic success, jeopardising their very survival if they were not able to rely on contributions and outside funding. However, there were a significant number of cooperatives that actually showed a positive margin: 49.3% showed operating profits of up to 6%, while there were 12.6% that achieved even better results. Additionally, when comparing the 2008 figures with those from 2011, there is a stable situation in the three areas examined.

Comparing the data by geographical area, there appeared to be major problems for cooperatives in the southern regions in achieving index values above zero in both 2008 and in 2011: in 2011, 43.2% of the cooperatives in the southern regions, versus 34.9% of northern regions, recorded an indicator value of below zero.

Table 4. Social cooperatives by the ratio of profit (loss) to turnover by geographical area for 2008 (left) and 2011 (right): % values

	Year 2008				Year 2011			
	North	Centre	South and Islands	Italy	North	Centre	South and Islands	Italy
<= -0.06	11.7	14.1	18.8	14.5	13.9	16.6	21.4	16.9
-0.06 - 0	21.2	21.0	22.4	21.6	21.0	20.7	21.8	21.2
0 - 0.06	52.3	50.9	39.5	47.8	54.5	51.4	40.6	49.3
> 0.06	14.8	14.0	19.4	16.1	10.6	11.4	16.2	12.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: EURICSE's analysis based on AIDA-Bureau Van Dijk data

Table 5 shows that 12.1% of social cooperatives had negative equity in 2011, compared with 11.6% in 2008. On the other hand, 52.5% of cooperatives in 2011 were able to finance their investments with over 15% of their own equity, and 27.1% were able to do so with over 35% of their own equity.

By evaluating the differences by geographical area, Table 5 shows that in both years, more than 17% of social cooperatives operating in the southern regions had negative equity, compared with almost 8% of the social cooperatives in the northern regions. By reading the results of Table 5 alongside those in Table 4, a tremendous difference between northern and southern Italy emerges regarding the regional ability to create positive economic margins for long-term survival. The inability to create profit has dangerous consequences for the equity structure of the organisation.

Table 5. Social cooperatives by the ratio of equity to total assets by geographical area for 2008 (left) and 2011 (right): % values

	Year 2008				Year 2011			
	North	Centre	South and Islands	Italy	North	Centre	South and Islands	Italy
<= 0	8.0	10.4	17.5	11.6	8.6	12.1	17.2	12.1
0 - 0.15	34.3	40.0	32.3	34.7	34.4	41.3	33.4	35.4
0.15 - 0.35	27.4	26.0	24.3	26.1	27.4	24.2	23.1	25.4
> 0.35	30.2	23.7	25.9	27.6	29.5	22.4	26.3	27.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: EURICSE's analysis based on AIDA-Bureau Van Dijk data

It is also important to consider the data in conjunction with an index that measures the flexibility of use, meaning the impact of fixed assets on total assets (Table 6). A correct management of total assets needs to match the timelines of assets and activities; therefore, a thorough analysis must look beyond the ratio of equity to total assets to consider a company's fixed assets to total assets ratio.

The index shows that, in 2011, 29.5% of social cooperatives invested in long-term assets, or other long-term investments, which, overall, make up 6% or less of the total assets; 57.8% of the social cooperatives showed an index of asset rigidity of less than 20%. By investigating the differences among geographical areas, the data shows a lower rigidity of assets in the cooperatives in the southern regions: 61.8% of the cooperatives in 2008 and 66.9% in 2011 show index values of below 0.2.

Table 6. Social cooperatives by the ratio of fixed assets to total assets by geographical area in 2008 (left) and 2011 (right): % values

	Year 2008				Year 2011			
	North	Centre	South and Islands	Italy	North	Centre	South and Islands	Italy
<= 0.06	21.4	25.6	33.8	26.3	23.1	30.0	38.4	29.5
0.06 - 0.2	27.6	30.3	28.0	28.2	27.0	31.3	28.5	28.3
0.2 - 0.45	28.0	26.1	23.0	26.0	27.0	23.9	20.7	24.3
> 0.45	23.0	18.0	15.2	19.5	22.9	14.8	12.4	17.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: EURICSE's analysis based on AIDA-Bureau Van Dijk data

3.3. Employment

In 2011, the cooperatives under study employed 402,969 people, an increase of 9.8% compared to the employment levels of 2008 (Table 7). Overall, the data shows that the majority of employees in social cooperatives have a stable job: 63.5% hold a permanent position. It is noted that despite the period of economic crisis, there is a positive trend: between 2008 and 2011, the number of permanent employees in social cooperatives increased by 11.8%.

Table 7. Employees in 2011 and changes in the 2008–2011 period by type of contract

	Employees 2011		Variation 2008–2011 (%)
	N	%	
Permanent employees	255,836	63.5	+11.8
Fixed-term employees	101,750	25.3	+10.5
Other	45,383	11.3	-1.8
Total	402,969	100.0	+9.8

Source: EURICSE's analysis based on AIDA-Bureau Van Dijk data

Table 8 illustrates what has already emerged from the economic data: as many as 62.3% of those employed work in cooperatives in the north. The larger sizes of the cooperatives in the northern regions were also confirmed by the data regarding the number of cooperative employees: there are an average 70.6 employees in northern cooperatives compared to 29 in the southern regions. Although the size of the cooperatives in the south are smaller, there was a positive trend in employment in the cooperatives of these regions in the 2008–2011 period – an increase in the number of employees by 11.0% – which was in line with the data for the central regions and higher than the data from the northern regions (8.4%).

Table 8. Employees in 2011 and changes in the 2008–2011 period by geographical area

	Employees 2011		Employees per coop 2011	Variation 2008–2011 (%)
	N	%		
North	250,930	62.3	70.6	+8.4
Centre	80,482	20.0	57.6	+13.0
South and Islands	71,557	17.8	29.0	+11.0
Italy	402,969	100.0	54.4	+9.8

Source: EURICSE's analysis based on AIDA-Bureau Van Dijk data

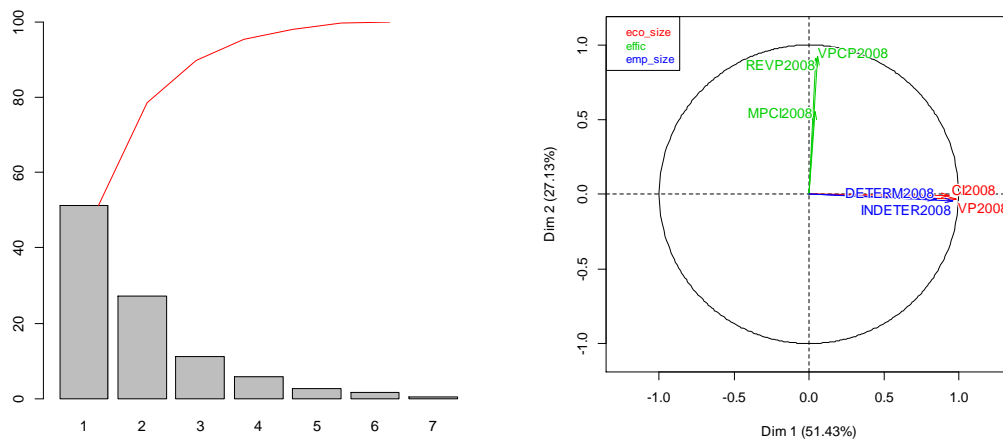
3.4. Multiple factor analysis

Results of an MFA conducted on the data for 2008 are summarised in Figure 1. The original variables were reduced to two principal components that, overall, account for 78.56% of the entire system's variance. The first of the components is the most significant, since it alone accounts for 51.43% of the total variance.

As shown in Figure 1, the first component has a strong correlation with the quantitative variables of group 1 and 2. Since it seems to summarise variables that are related to the social cooperatives' dimensions (both occupational and economical), this study will refer to it as 'size'.

The second component is a linear combination of the three indexes that evaluate a business's performance in terms of efficiency. Therefore, it will be referred to as 'efficiency/profitability'.

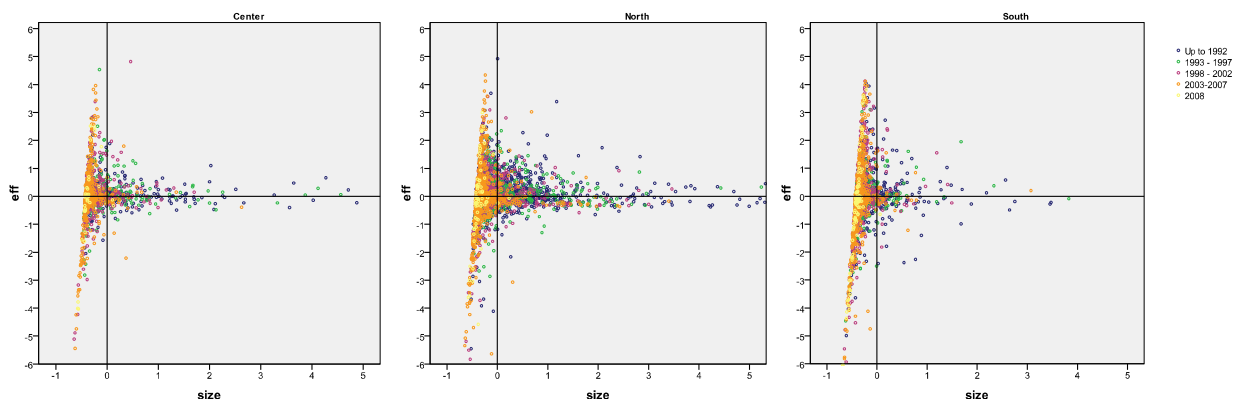
Figure 1. Results of the MFA for 2008: Percentage of variance explained by the eigenvalues (left) and correlation between original variables and components 1 and 2 (right)



Source: EURICSE's analysis based on AIDA-Bureau Van Dijk data

The scatter plots in Figure 2 represent the distribution of social cooperatives by geographical area and year of foundation, against the two principal components: 'size' (on the x axis) and 'efficiency' (on the y axis) for 2008.

Figure 2. Social cooperatives by size, efficiency, year of foundation and geographical area: Data for 2008



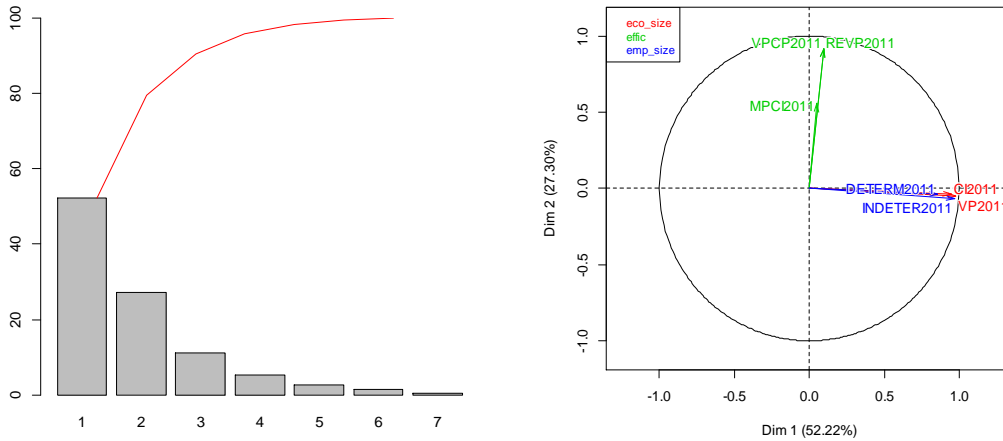
Source: EURICSE's analysis based on AIDA-Bureau Van Dijk data

Looking at the three scatter plots, differences arise between cooperatives in the northern regions and those in the rest of Italy. First, there is a difference in terms of size. The data shows that the dimensions of cooperatives in the northern regions tend to increase with the age of the cooperative. This appears less evident in the central regions, and even less so in those of the southern regions, where even the cooperatives with more than fifteen years of activity are confirmed, in almost all cases, to be small.

In general, it is interesting to note that, in all three areas examined, young cooperatives (created after 2003) are small in terms of dimension, but they are divided into two groups: cooperatives that, in a few years of activity, have already achieved high levels of efficiency, and cooperatives that, in contrast, still have problems in the economic management of the organisation.

Results of the MFA conducted on the data from 2011 (Figure 3) confirmed the results of the analysis for 2008. For the data from 2011, the original variables were, in fact, reduced to two principal components that, overall, account for 79.52% of the total variance. As shown in Figure 3, the first component summarises the variables related to the dimensions and the second component refers to 'efficiency/profitability'.

Figure 3. Results of the MFA for 2011: Percentage of variance explained by the eigenvalues



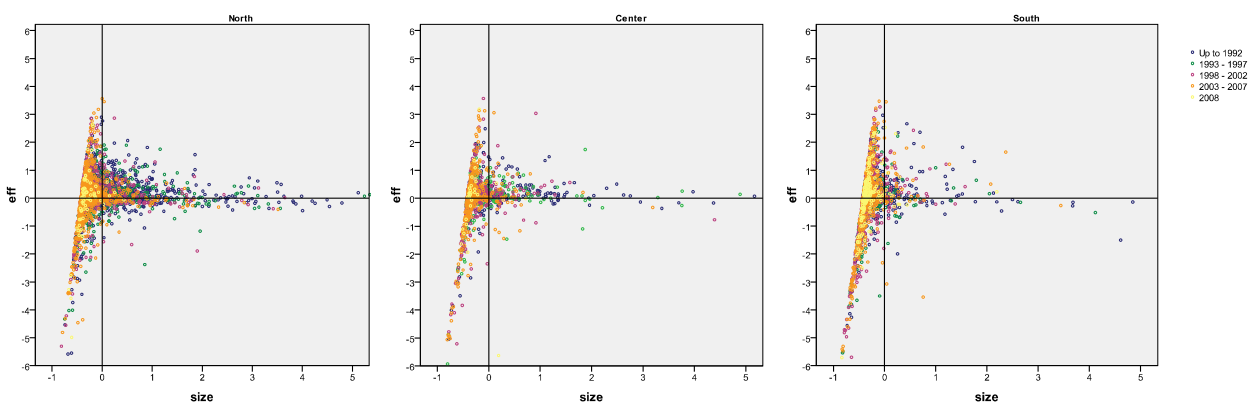
Source: EURICSE’s analysis based on AIDA-Bureau Van Dijk data

The scatter plots in Figure 4 show the distribution of social cooperatives classified by year of foundation against the two principal components for 2011.

The differences recorded between the three regions in 2008 are confirmed for 2011. In fact, there are still considerable differences in size between cooperatives in the northern and southern regions. Despite four years of economic crisis, the north had a significantly higher proportion of larger cooperatives than the south. It is particularly interesting to note that the economic crisis was likely to affect enlargement in terms of size for cooperatives established in 2008, again confirmed to be generally small in size.

For efficiency, most of the cooperatives in all three geographical areas registered values greater than zero. However, in the southern regions, the share of cooperatives in the first and second quadrant is closer to the share of cooperatives in the third and fourth quadrant, in contrast with the cooperatives in the northern regions.

Figure 4. Social cooperatives by size, efficiency, year of foundation and geographical area: Data from 2011



Source: EURICSE’s analysis based on AIDA-Bureau Van Dijk data

CONCLUSIONS

By developing an MFA analysis, the aim of this paper was to analyse the economic dimensions and employment features of Italian social cooperatives in 2008 (before the crisis) and in 2011 (after the beginning of the crisis).

Overall, the data shows a positive economic situation among Italian social cooperatives from 2008 to 2011. Despite the global economic and financial meltdown, from 2008 to 2011, the cooperatives increased their overall turnover by 20.4% and their total assets by 28.4%. In addition, employment data shows a positive trend with a variation from 2008–2011 of nearly 10%.

The data further demonstrates that geographical differences are very clearly highlighted in social cooperative sectors, as in other industrial sectors (Banca d'Italia, 2012).

By comparing the data of the northern, central and southern regions, it is clear that there are still differences between the north, which has been able to react to the economic crisis by looking to expand into new areas of activity and into foreign markets, and the south, which still manifests long-term structural deficiencies.

Cooperatives in the southern regions are, on average, smaller in terms of size, both in economic and employment dimensions, compared to cooperatives in the northern regions. In addition, social cooperatives in the south show major problems in terms of both economic efficiency and capitalisation. This has been confirmed by the comparison of the results of the MFAs conducted on data from 2008 and 2011.

Generally speaking, data from the social cooperatives show some similarities with those of the Italian production system as a whole. However, social cooperatives in both the north and the south show a distinct trend during the crisis years compared with other companies; thus, highlighting the peculiarities of social cooperatives that allow them to function more consistently in a crisis.

The results that this quantitative analysis proposes could be a starting point for more detailed and in-depth analysis to investigate the precise reasons for the economic crisis's effect on cooperatives in the south compared to those in other regions of Italy and the degree to which it has affected internal management processes in cooperatives.

APPENDIX 1. ECONOMIC EFFICIENCY AND CAPITALISATION INDEXES

1. Turnover to operating costs

This index aims at understanding the relation between operating expenses and turnover from the business activity.

Situation 1 (≤ 1): the situation is not sustainable in the medium- to long-term as the costs incurred by the cooperative exceed the turnover;

Situation 2 ($> 1, \leq 1.2$): the turnover is closed to the costs incurred. This class identifies situations in which the cooperative is not able to cover other costs of an extraordinary nature, and financial matters or situations where there is not a positive surplus to reinvest in the cooperative's activity for further growth.

Situation 3 ($> 1.2, \leq 1.4$): situations in which the cooperative saves between 20% and 40% of the turnover. This surplus could be eroded by the coverage of any extraordinary financial costs.

Situation 4 (> 1.4): the cooperative saves more than 40% of its turnover, thus managing to generate a positive surplus to be used to cover financial costs and the financing of the activities of the cooperative.

2. Profit (loss) to turnover

This index measures the cooperative's self-financing ability. It is not to be understood as an index to evaluate the cooperative's economic performance, which can be analysed through a joint reading of the profit (loss) and the distribution of wealth to shareholders, through compensation for the services conferred, which vary depending on the sector.

Situation 1 (≤ -0.06): cooperatives without economic equilibrium. This type of cooperative reaches its institutional aim through the depletion of its resources, distributing more resources to shareholders than it has available. This situation can result from conditions of internal inefficiency or, more correctly, from an incorrect perception of the goals of the cooperative, with an imbalance in institutional purpose at the expense of economic and financial equilibrium.

Situation 2 ($> -0.06; \leq 0$): denotes a slight economic imbalance, sustainable in the short- to medium-term, but that requires a high degree of attention.

Situation 3 ($> 0 \leq 0.06$): probably the most balanced. The cooperative is in equilibrium. The slightly positive operating result may indicate a company's ability to remunerate its members, or the community, for social cooperatives, while strengthening its equity capital.

Situation 4 (> 0.06): may at first appear positive, but in reality, may denote a condition of overall ineffectiveness in the company. In other words, in this situation, just as there might be in the first, there is an incorrect perception of the goals of the cooperative, with one stakeholder (in this case, the company itself) prevailing over the other. In this situation, however, the cooperative may not be able to achieve its institutional goal, despite having the economic resources to do so. Therefore, it may move towards a path of decline because of an inability to adequately meet the expectations of shareholders and the community. This is a typical situation representing strategic weakness. However, there are certainly a number of specific situations in which these levels can be considered ideal, especially when, through careful planning, the cooperative aims to increase its equity capital, distributing less wealth to stakeholders, to support a more balanced plan investment.

3. Equity to total assets

An indicator of capitalisation. It indicates the extent to which the total assets are covered by equity.

Situation 1 (≤ 0): negative or non-existent equity. This is a negative, and even dangerous, situation, regardless of any consideration of the phase of the life cycle, as the cooperative is completely without equity, or has a negative net worth, and the debts exceed the value of the total assets.

Situation 2 ($> 0 \leq 0.15$): equity is non-existent or very small compared to total assets. This situation is slightly better than the previous one, but must still be resolved through increased earnings retention for some exercises.

Situation 3 ($> 0.15; \leq 0.35$): equity is very present in the sources of funding.

Situation 4 (> 0.35): a highly capitalised company, with a level of funds that can exceed that of the third parties.

For levels 3 and 4, it is necessary to assess the degree of equity in accordance with the actual need for loans with these characteristics. Often, studies on cooperation are based on the assumption that cooperatives are undercapitalised, but this judgment cannot be separated from the actual need for stable sources of funding. Cooperatives with very elastic structures in terms of total assets, without the expectation of an increase in property, can be safely placed in level 3, leaving level 4 to those cooperatives with more rigid total asset structures, or to those that are about to start investment plans.

4. Fixed assets to total assets

This is an index of the rigidity of total assets. It is clearly not possible to determine a priori threshold values with which to make a judgment on a balance sheet, as this indicator is closely related to the specificities of the sector and the company's organisational structure.

The thresholds that are identified only serve to summarise the characteristics of the structure.

Situation 1 (≤ 0.06): total assets are very elastic, with no significant fixed assets and, therefore, they primarily consist of current assets.

Situation 2 ($> 0.06, \leq 0.22$): capital is still very elastic, with a strong prevalence of current assets.

Situation 3 ($> 0.2, \leq 0.45$): quite rigid invested capital, with fixed assets representing a major share of the total assets.

Situation 4 (> 0.45): rigid total assets, with a prevalence of fixed capital.

These situations are certainly influenced by the sector of activity, organisational structure and corporate policies, and partly also by the cooperative's life phase. A cooperative in the start-up phase often shows strong rigidity in terms of its total assets, which are often very modest in absolute terms because, in the face of substantial inconsistencies in current assets, there are investments and capitalised costs that are typical of the constitution, which then clearly affect the structure of the total assets.

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