

Northern and southern Italian social cooperatives during the economic crisis:

A multiple factor analysis

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Abstract

A multiple factor analysis is developed to assess the differences in the economic performance and employment levels of social cooperatives in three main geographical areas, North, Central and South Italy, between 2008 and 2011.

The results showed that despite the global economic and financial meltdown, the social cooperatives in these areas increased their overall turnover and total assets between 2008 and 2011. Furthermore, the employment data showed a positive trend during this period. The analysis also found that the prolonged crisis in 2010 and 2011 affected mainly the southern regions, where conjunctural factors exacerbated long-term structural deficiencies.

Keywords: Italian social cooperatives, crisis, inter-regional differences, economic and financial indexes, multiple factor analysis

Introduction

During the past thirty years, non-profit organizations have expanded in number, variety, scope, societal importance and influence in many countries (Anheier *et al.*, 2013; Chavez and Monzón, 2012). Despite the growing importance of the non-profit sector, these organizations remain largely characterised by “institutional invisibility” (Chavez and Monzón, 2012, p. 9) because few complete, precise and comparable datasets exist.

In 2003, the United Nations developed the *Handbook on Non-Profit Institutions in the System of National Accounts* (United Nations Statistics Division, 2003), which implicitly encouraged the regular development of statistical data on non-profit organizations. In 2013, the Johns Hopkins Center for Civil Society Studies published “The State of Global Civil Society and Volunteering”, which provides a comprehensive picture of statistics in sixteen countries around the world and highlights the prominent role of these organizations in terms of GDP and employment rate (Salamon *et al.*, 2013).

The national accounts systems of the US and Europe—the United Nations’ 1993 SNA and the European Union’s 1995 ESA, respectively—play a vital role in providing periodic, accurate and punctual data on the activity of NPOs, as well as supporting international comparisons. These national account systems, as well as other prominent sources of data, such as the Urban Institute (Blackwood *et al.*, 2012) and the “Social Economy in the European Union” report (Monzón-Campos and Chaves-Ávila, 2012) have aimed at estimating the dimension and role of non-profit organisations in the world’s economies.

Since the global financial meltdown, there has been a growing interest in non-profit organizations, because they play an important role in ameliorating social problems (Julia and Chaves, 2012) and providing public and social services in most European and North American countries (Defourny and Nyssens 2010; Economist, 2009).

The non-profit sector brings together different forms of organizations, such as cooperatives, associations, mutual societies, foundations and others, which are primarily aimed at benefitting the

communities in which they operate. Within this range of non-profit organisations, cooperatives have attracted much more attention during the current economic crisis because of their benefits and their contribution to rethinking the idea of democracy (Cheney *et al.*, 2014). Since the United Nations declared 2012 as the International Year of Cooperatives, many conferences and seminars have been held worldwide in order to extend the knowledge of cooperatives forms (Fecher *et al.*; 2012). The prominence of the cooperative movement has necessitated estimates of its dimension and role (ICA WCM, 2013) and has activated an urgent call to better understand the new perspectives within this sector (Steinberg and Powell, 2006).

In answering this call, several studies have shown that in the early stages of the economic crisis, cooperatives demonstrated a greater resilience than other forms of enterprise did (Cheney *et al.*, 2014; Lambru and Petrescu, 2014; Bentivogli and Viviano, 2012; Zamagni, 2012). Specific analyses of the financial sector found that cooperative banks have been more resilient in the current economic crisis than commercial banks have (EACB, 2010; Birchall, 2013). Moreover, cooperative banks have also contributed to improving the resilience of the overall banking and financial system. Similarly, other studies investigated the social and economic resilience of worker cooperatives (Cheney *et al.*, 2014; Lambru and Petrescu, 2014), particularly the Mondragon Cooperative, which a worker-owned alternative organization that has received the most attention in the academic world (Heras-Saizarbitoria, 2014). Nevertheless, although studies have examined the banking and financial sector and the worker cooperatives sector, studies on other cooperative sectors are still lacking.

In order to contribute to this debate, this study aims to provide evidence of the employment and economic performance of Italian social cooperatives in 2008 (before the beginning of the crisis) and in 2011 (after the crisis). A multiple factor analysis (MFA) is developed to investigate the differences among Italy's three main geographical areas—North, Central and South Italy—in order to shed light on the “territorial dualism” (Picciotti *et al.*, 2014) that have historically characterized

the development of social cooperatives in different Italian regions (Istat, 2012; Bugamelli *et al.*, 2009; Accetturo *et al.*, 2011; ICE, 2012).

This paper makes three major incremental contributions to the literature: first, by combining dataset sources, it provides complete, updated data regarding the Italian social cooperatives sector, thus answering the urgent need to estimate the dimensions of social cooperatives (Chavez and Monzón, 2012). Second, because it compares data from 2008 and 2011, the study contributes to the understanding of the role of social cooperatives during the economic and financial meltdown (Julia and Chaves, 2012). Finally, the paper also contributes to the debate regarding territorial dualism in the development of Italian social cooperatives (Picciotti *et al.*, 2014) by providing an empirical analysis that shows differences among the northern, central and southern regions of the country.

The remainder of the paper is structured as follows: the next section presents the context of the Italian cooperative sector by describing (i) the determinants of its historical development, (ii) the current relevance for the national economy, (iii) problems connected with the measurement of the economic performance of social cooperatives and the impossibility of applying traditional frameworks, such as those applied to for-profit organisations. Section 3 examines the population under study, the data sources and the statistical techniques used in the analysis. The empirical results are then presented, and recommendations for future research are provided.

The development of social cooperatives in Italy

The determinant of Italian social cooperatives

Legally, social cooperatives in Italy were established in 1991. Law 381 on social cooperatives provided the basis of a legislative framework for the “socially-oriented” organisations that had spontaneously emerged more than 20 years earlier (Borzaga and Ianes, 2006). According to this law, social cooperatives “pursue the general interest of the community in promoting personal growth and in integrating people into society by providing social, welfare and educational services (A type) and carrying out different activities for the purposes of providing employment for

disadvantaged people (B type)” (Law 381/1991). Caring activities (or social cooperatives type A) include social, healthcare, educational and cultural services, nurseries and initiatives aimed at environmental protection (Thomas 2004). Training activities (or social cooperatives type B) provide job placement opportunities for disadvantaged people,¹ which aligns with the European concept of Work Integration Social Enterprise (WISE) (Defourny and Nyssen, 2006). Both type A and type B organisations are privately owned and member owned, and they operate to create social value for their communities.

Since the introduction of the law, social cooperatives have grown in number, and their development has been spurred by three main factors (Picciotti *et al.*, 2014).

First, social cooperatives were developed in Italy by the willingness of groups to offer an organized and sustained entrepreneurial response to growing social needs in the local community. These founders shared a moral belief in their activities, which was supported by either secular or religious views of the society (Borzaga and Santuari, 2001).

Second, social cooperatives addressed needs that previously had been unmet because of deficiencies in the welfare state (Pasquinelli, 1993). Indeed, at the end of the 1970s, the Italian welfare system was largely fragmented—particularly in the provision of home care and mental health services. In consequence, social cooperatives began to offer social services and became a prominent interlocutor in designing the national welfare system (Borzaga and Santuari, 2001).

Third, social, cooperatives emerged in Italy because of the favourable political and social contexts in which they operated. Those years witnessed gradual de-institutionalization, and public institutions were able to accommodate and accompany this innovative process.

Currently, social cooperatives respond to the growing needs that remain unmet by the State because of the high cost and low flexibility of public services, especially in the sectors of disability, mental illness and elderly care (Borzaga and Fazzi, 2014). Social cooperatives are therefore an integral part of the national welfare system, and the State remains their main funders.

¹ In providing job opportunities for disabled people, type B social cooperatives encourage them to work in several fields: agricultural, industrial, construction, etc.

Current trends in Italian social cooperatives and regional differences

The introduction of the Italian Law 381/1991 on social cooperatives was fundamental in allowing the rise of the number of both type A and type B social cooperatives (Kerlin, 2006). According to the Italian National Institute of Statistics (Istat 2008), the number of social cooperatives increased from 650 in 1985 to 7,400 in 2005. These were mainly located in northern Italy (46.8%). They attracted more than 262,000 members—244,223 paid workers and 34,626 volunteers. In 2008, the Observatory on Cooperatives and Social Enterprises—a project promoted by the European Research Institute on Cooperative and Social Enterprises (EURICSE, www.euricse.eu)—identified 13,938 social cooperatives in Italy (54.5% type A and the remaining type B), with €8.97 billion in total turnover, 65% of which was invested in the North, and 317,339 employees (Costa *et al.*, 2012).

However, in considering the development of social cooperatives in Italy, it is not possible to ignore inter-regional differences between the northern and southern regions (Picciotti *et al.*, 2014) which persisted during the current global crisis.

The literature shows that the current economic crisis seriously affected the Italian economic system (Bugamelli *et al.*, 2009; Accetturo *et al.*, 2011), exacerbating 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 gross domestic product (GDP) fell in all Italian regions, with a peak of approximately -5% between the end of 2008 and the beginning of 2009 (Caivano *et al.*, 2010). From 2010 to 2011, the northern regions showed the first signs of recovery. The prolonged crisis in 2010 and 2011 mainly hit the southern regions, where conjunctural factors exacerbated long-term structural deficiencies. From 2011 to 2013, the southern regions were characterised by a particularly unfavourable trend in consumption, weak employment and wages, and worsening 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 was associated with a lacklustre performance in terms of domestic income (Istat, 2012; Banca d'Italia, 2012).

However, there is a lack of analyses and longitudinal studies that evaluate the ability of social cooperatives to survive during the recent financial crisis. In particular, relevant studies are needed to determine the consequences of the economic crisis on the economic and social performance of social cooperatives. The scarcity of such studies inevitably leads to less acknowledgement of an economic phenomenon that could be strengthened through greater awareness of how social cooperatives 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: 1) the lack of accessible databases on social cooperatives and the difficulty of accessing existing databases (Borzaga *et al.* 2012); and 2) the complexity of cooperatives and the impossibility of applying traditional frameworks, such as those used to analyse for-profit organisations (Austin *et al.*, 2006).

Difficulties in measuring the performance of social cooperatives

In recent years, the scientific debate has focused on the identification of indicators that can be used to evaluate effectively the economic performance of social cooperatives and social enterprises (Beaubien and Rixon, 2012; López-Espinosa *et al.*, 2009; Marin-Sanchez and Melia-Martí, 2006). This issue is even more relevant in light of the current economic crisis because the choice of the wrong indicators could lead to an incorrect assessment of the economic performance and equilibrium of such organisations. Social cooperatives, similar to 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 in benefitting their respective communities (Mancino and Thomas, 2005; Thomas, 2004). However, this focus does not mean that social cooperatives should not

undertake strategies to guarantee net income. On the contrary, they must constantly create economic value in order to survive over time so that they can continue their mission.

It must be noted that economic value and social value are not mutually exclusive. The creation of social value is a primary objective of social cooperatives, whereas the creation of economic value, in the form of earning income, is necessary to ensure the sustainability and financial self-sufficiency of these initiatives (Marin-Sanchez and Melia-Martí 2006). Social cooperatives should thus be able to earn income in order to guarantee their long-term survival and make financial investments for the future.

According to this view, social cooperatives are considered “double bottom line” organisations (Dart *et al.*, 2010) that are able to produce both social and economic value. Consequently, their performance-measurement system is inherently challenging. Because they are social-value oriented, their success cannot be measured by traditional financial indicators or by market share (Austin *et al.*, 2006).

Therefore, the study of the economic and financial performance of social cooperatives cannot be limited to a simple analysis of traditional economic ratios (Lerman and Parliament, 1991) because institutional specificity cannot be excluded from the analysis. Social cooperatives are not oriented to “achieve the highest return on capital investment as to satisfy a common pre-existing requirement or need in order to give members or shareholders or stakeholders a greater advantage or saving than would otherwise have been possible separately” (p. 358). Moreover, because of membership compensation, any analysis has to take into account the difficulties in interpreting the economic results of this type of organisation. 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).

Therefore, in following previous studies (Costa *et al.* 2012), our study does not adopt economic ratios, such as RoA and RoE, because they are meaningless in the context of social cooperatives.

Instead, it utilises four indexes: 1) profit (or loss)/turnover; 2) turnover/total operating expenses; 3) equity/total assets; and 4) fixed assets/total assets.

The first index reflects the level of self-financing conducted and emphasises the portion of the business production value that remains after production costs and the remuneration of members and partners. The second index aims to understand the relationship between operating expenses and turnover. The third index synthesises the cooperatives' degree of capitalisation and indirectly represents their business debt ratios. Finally, the fourth index measures the rigidity of assets by quantifying the return of the business to liquidity over the long term (more than 12 months) (Andreaus and Costa, 2009). These indexes have been sorted into classes of analysis, as shown in detail in Appendix I.

Research design

The population under study

The analysis is based on a population sample of 7,414 Italian social cooperatives established before 2009, for which economic and employment data for 2008 and 2011 were available in the EURICSE data warehouse,² which currently contains contact, financial and employment data on over 70,000 Italian cooperatives for the 2008–2011 period. The data warehouse consists mainly of the integration of three administrative sources: the AIDA database of the Bureau van Dijk,³ the archives of the *Istituto Nazionale di Previdenza Sociale*⁴ (INPS) and the regional registries of social cooperatives established under Law 381/1991. The consortia of social cooperatives were excluded from the analysis.

²This data warehouse is the result of a research project by the EURICSE, which started at the end of 2009. The project's main objective is the systematic collection of administrative and statistical 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).

³AIDA is a database created by the Bureau Van Dijk (www.bvdinfo.com); it stores the contact and economic data of more than 950,000 Italian enterprises.

⁴The 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 and must be insured.

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 of two cooperatives operated in the health and social care sector.⁵ Several cooperatives provided educational services (7.2%) and other services (28.3%). The remaining 18% of the cooperatives were evenly distributed among the industrial (5.9%), agricultural (2.3%) and construction sectors (2.1%). Finally, less than a third (26.6%) of the cooperatives was established before 1993, while another third was established after 2002 (32.3%).

[insert Table 1 here]

Multiple factor analysis (MFA)

To draw a clearer picture of the social cooperatives during the period under examination, the study adopts techniques to reduce the dimensionality of the data. A reduction in dimensionality is the transformation of multidimensional data into a meaningful representation to simplify data interpretation while retaining, as much as possible, variation within the dataset.

The analysis is based on the MFA articulated by Escofier and Pagès (2008), which can be interpreted as a multi-canonical analysis, as defined by Carroll (1968), that is used to determine the relationships among several sets of variables recorded in a dataset. In the case of quantitative variables, MFA works in a manner similar to principal components analysis (PCA) (Pearson, 1901; Hotelling, 1933; Jolliffe, 2002), in which the variables are weighted. 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), in which the variables are weighted (Pagès, 1996). Weighting balances the highest axial inertia of sets and allows for working simultaneously with quantitative and categorical variables.

⁵The 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.

A MFA proceeds 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 through 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).⁶

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 and fixed-term employees; and
- *Descriptive*: categorical variables regarding the year of foundation, the sector of activity and the geographical area where the cooperative operates.

The first three groups were defined as “active”, and they contributed to the computation of the MFA. The geographical area was defined as supplementary, and it was used to interpret the results.

The MFA was conducted on the social cooperatives for which the four economic indexes (described previously) had values between the first and the 99th percentile of their distribution, which ensured that the analysis would not return anomalous values caused by data that may have been incorrectly input into the AIDA database. The MFA was conducted on the data for 2008 and then on the data for 2011, in order to explore the changes that occurred in the active groups of variables four years after the beginning of the economic crisis.

⁶This package’s main features are that it can take into account both quantitative and categorical variables and different types of structures 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 next section presents some descriptive statistics for the study population with regard to the variables in the groups of economic dimensions, economic efficiency and capitalisation, and employment dimension. Finally, the results of the MFA are discussed.

Results and Discussion

Economic dimensions

In 2011, the turnover produced by the social cooperatives under study amounted to 8.96 billion euros, 67.8% of which was produced in the north (Table 2), mainly in the health and social care sector (70.4%) (Table 3). Total assets, defined as the overall net amount that a cooperative invests, were 7.41 billion euros, 66.3% of which was invested in northern Italy (Table 2) and 66.3% in the health and social care sector (Table 3).

Table 2 and Table 3 therefore show that the majority of the economic value—measured in terms of both turnover and total assets—is in the health and social care sector in northern Italy. These results are consistent with previous studies (Costa *et al.*, 2012; Mancino and Thomas, 2005), which highlighted the prominence of social cooperatives operating in health care activities, such as social and health care, home and residential care for elderly people, babysitting and child minding, and so on. These social cooperatives are usually type A cooperatives.

From 2008 to 2011, the turnover of the Italian social cooperatives grew by 20.4%, and the total assets increased by 28.4%. Thus, in terms of the percentage of variation in the total turnover, the results showed a slight, but not substantive, difference between the northern and southern regions. However, the percentage changes in total assets showed a significant increase (35.6%) in the southern region, which could be attributed to the intention of social cooperatives in the south to increase their role in the provision of social services for their community. This factor could be related to the greater “demand for social assistance services, at least in potential terms, which is significantly important in the southern regions” (Picciotti *et al.*, 2014, p. 220).

The analysis of the variations among years by sector of activities (Table 3) showed that sectors with lower performance were those related to construction, presumably type B social cooperatives that provided job opportunities in the real estate and construction industry. This sector suffered greatly after the global financial crisis in Europe.

Regarding the average value of turnover and total assets by sector of activity, Table 4 shows that in both 2008 and 2011, the average size, measured by turnover, of social cooperatives operating in the health and social care sector was larger than that of other sectors. This result was confirmed by the average value of total assets. The average value of assets in the health and social care sector was lower than that of social cooperatives operating in the agricultural sector.

[insert Table 4 here]

Regarding our research question regarding inter-regional differences, Table 5 shows relevant data on the average value of the turnover and total assets by geographical area. The results showed that social cooperatives in the northern and central regions were bigger in terms of both turnover and total assets than those in the southern region were. Specifically, in the northern region, the average value of turnover rose from €1,415,786.7 in 2008 to €1,710,270.3 in 2011; in the central region, the average value of turnover of €1,001,099.6 was in 2008 and €1,211,330.5 in 2011); in the southern and island region, the average value of the turnover remained below €500,000 in 2008 and 2011. The same considerations applied to the average value of the total assets.

[insert Table 5 here]

The present study's results showing differences between the northern region and the southern region in Italian social cooperatives confirm the findings of previous studies. Picciotti *et al.* (2014)

questioned the socio-economic factors that were antecedents of the development of social cooperatives, demonstrating that social cooperatives in the southern region of Italy had a low orientation towards social cooperation for the following reasons: 1) the proportion of social spending allocated to welfare services was very limited; 2) the private demand for social services was present (particularly for disabled people and children); and 3) cooperative propensity was extremely low. According to Picciotti *et al.* (2014), “This combination of factors therefore leads to a cluster of marginality, in which a low orientation towards meeting social assistance needs and, consequently, a limited presence of social cooperatives emerges” (p. 228).

In order to better understand the geographical differences among years (in 2008 and in 2011) the study developed four economic ratios, as described below.

Economic efficiency and capitalisation

By developing the indexes proposed by Costa *et al.* (2012), the analysis of the relationship between operating costs and turnover revealed that both increased during the four-year period. In 2011, 33.9% of the 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.

Considering the data by region, Table 6 shows that in both 2008 and 2011, the percentage of cooperatives with an indicator value less than 1 was higher among cooperatives in the southern region (37.2% in 2008 and 39.9% in 2011) than among those in the northern and central regions of Italy.

[Insert Table 6 here]

Further information on the self-financing ability of social cooperatives can be deduced from the ratio of profit (loss) to turnover (Table 7). The results revealed that 38.1% of the social cooperatives had some difficulties in covering their operating costs in 2011 (compared with 36.1% in 2008),

which inevitably affected their ability to achieve long-term economic success, thereby jeopardising their survival if they were unable to rely on contributions and external funding. However, a significant number of cooperatives reported a positive margin: 49.3% showed operating profits of up to 6%, while 12.6% achieved even better results.

The comparison of the data by geographical area indicated major problems for cooperatives in the southern region in achieving index values above zero in both 2008 and 2011. In 2011, 43.2% of the cooperatives in the southern region, versus 34.9% of those in the northern region, recorded an indicator value below zero.

[insert Table 7 here]

Table 8 shows the equity/total asset ratio and provides evidence that 12.1% of the social cooperatives had negative equity in 2011, compared with 11.6% in 2008. On the other hand, in 2011, 52.5% of cooperatives 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.

Regarding the differences by geographical area, Table 8 shows that in both 2008 and 2011, more than 17% of social cooperatives operating in the southern region had negative equity, compared with almost 8% of those in the northern region. The comparison of the results shown in Table 8 with those shown in Table 7, reveals a tremendous difference between northern and southern Italy regarding the regional ability to create positive economic margins for long-term survival. The inability to generate profit has dangerous consequences for the equity structure of the organisation.

[insert Table 8 here]

Matching these data with those provided in Table 9 shows that when social cooperatives had negative equity (in the southern region) there was also a low propensity to gain high investment.

Indeed, the effect of fixed assets on total assets on social cooperatives in the southern regions was below 0.2 in 61.8% of cases in 2008, which increased to 66.9% of cases in 2011.

[insert Table 9 here]

Employment

In 2011, the cooperatives included in this study employed 402,969 people, which was an increase of 9.8% over the employment levels of 2008 (Table 10). Overall, the data showed that the majority of employees in social cooperatives had stable jobs; 63.5% held permanent positions in 2011. Despite the period of economic crisis, there was a positive trend: between 2008 and 2011, the number of permanent employees in the social cooperatives increased by 11.8%.

[insert Table 10 here]

The results confirmed a positive trend between 2008 and 2011 in employment in all sectors of activity (Table 11). According to the results, in 2011, 70% of the total number of employees were employed by social cooperatives operating in the health and social care (type A). In this sector, the average number of employees was 71.2 per cooperative. The results also showed that the average number of employees in cooperatives in other business sectors was lower: 36.1 in other services, 30.6 in education, 29.7 in industry and 27.1 in the agricultural sector.

[insert Table 11 here]

Table 12 presents the results of the economic analysis. The table shows that as high as 62.3% of all employed persons were in cooperatives in the northern region. The larger sizes of the cooperatives in the northern region were also confirmed by the number of cooperative employees, with an

average of 70.6 employees in the northern cooperatives, compared to 29 in the southern cooperatives. Although the cooperatives in the south were smaller, they showed a positive trend in employment during the 2008–2011 period. The number of employees increased by 11.0%, which was consistent with the percentage in the central region and higher than the percentage in the northern region (8.4%).

[insert Table 12 here]

Multiple factor analysis

The results of the MFA conducted on the data for 2008 are summarised in Figure 1. The original variables were reduced to two principal components that accounted for 78.6% of the total variance. The first component was the most significant because it accounted for 51.4% of the total variance. As shown in Figure 1, the first component had a strong correlation with the quantitative variables of groups 1 and 2. Because it seemed to summarise the variables related to the social cooperatives' dimensions (both occupational and economic), this study refers to it as “economic size”. The second component was the linear combination of the three indexes that evaluated business performance in terms of efficiency. Therefore, it is referred to as “efficiency/profitability”.

[insert Figure 1 here]

The scatter plots shown in Figure 2 represent the distribution of social cooperatives by geographical area and year of foundation against the two principal components: “economic size” (on the *x* axis) and “efficiency/profitability” (on the *y* axis) for 2008.

[insert Figure 2 here]

The three scatter plots indicate the differences between the cooperatives in the northern region and those in the rest of Italy. First, in terms of size, the cooperatives in the northern region tended to increase with age. This finding was less evident in the central region and even less in the southern region, where even cooperatives with more than 15 years of activity were small in almost all cases. It is interesting to note that in all three areas examined, young cooperatives (created after 2003) were small in dimension, but they were divided into two groups: those that after a few years of activity had already achieved high levels of efficiency; and, in contrast, those that still had problems in economic management.

The results of the MFA conducted on the data from 2011 (Figure 3) confirmed the findings of the analysis for 2008. In the analysis of the data from 2011, the original variables were reduced to two principal components that accounted for 79.52% of the total variance. As shown in Figure 3, the first component summarised the variables related to the “economic size” and the second component to “efficiency/profitability”.

[insert Figure 3 here]

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

The differences shown among the three regions in 2008 were confirmed in 2011. In fact, there were still considerable differences in size among the 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 did. It is particularly interesting to note that the economic crisis likely affected the increases size of the cooperatives established in 2008, which were confirmed to be small.

Regarding efficiency, most cooperatives in all three geographical areas registered values greater than zero. However, in the southern region, the shares of the cooperatives in the first and second quadrants were closer to those in the third and fourth quadrants, in contrast with those of the cooperatives in the northern region.

[insert Figure 4 here]

Conclusions and further research

European countries have been recent protagonists in the profound transformation of traditional welfare systems, and non-profit organizations have played an important role in this process. Because of the growing role of these organization in the last decades, there is an urgent call (Chavez and Monzón, 2012; Steinberg and Powell, 2006) for understanding their role in terms of size, dimensions, and economic and financial assessment in the European economy.

In Italy, social cooperatives are the most important providers of social services (Borzaga and Fazzi, 2014) and represent the main form of social enterprise. Social cooperatives emerged in 1991 when the Italian Law n. 381 encouraged organizations that had been previously established to satisfy unmet social needs to adopt the legal form of social cooperatives. The law introduced two kind of social cooperatives in Italy (Mancino and Thomas, 2005; Thomas, 2004): type A and type B. The former provide social, healthcare, educational and cultural services; the latter provide job-placement opportunities for disabled people and have recently received the European label of WISE (Defourny and Nyssen, 2006).

After the introduction of this law, Italian social cooperatives expanded in all regions (Kerlin, 2006) even if with some *distinguo*. Indeed, the inter-regional differences between the northern and southern regions (Picciotti *et al.*, 2014; Banca d'Italia, 2012) persisted during the recent economic and financial crises.

This study developed an MFA analysis to provide a detailed view of Italian social cooperatives in 2008 (before the crisis) and 2011 (after the crisis) in order to determine changes in their economic and financial performance during this period. Moreover, the analysis considered “territorial dualism” (Picciotti *et al.*, 2014), thus taking into consideration inter-regional differences among northern, central and southern Italy.

Overall, the results showed that Italian social cooperatives offering social and healthcare services (type A) are mainly located in the north (Mancino and Thomas, 2005). Furthermore, the empirical results showed that the economic situation of Italian social cooperatives from 2008 to 2011 was positive. Despite the global economic and financial crises, the cooperatives increased their overall turnover by 20.4% and their total assets by 28.4%. Furthermore, the employment data showed a positive trend, with an increase of nearly 10% from 2008 to 2011.

The results further demonstrated the importance of considering geographical differences in the analysis because of the co-existence of different development models (Picciotti *et al.*, 2014; Banca d'Italia, 2012). Indeed, the comparison of the results for the northern, central and southern regions clearly revealed that differences continued between the north, which reacted positively to the economic crisis by expanding to new areas of activity and foreign markets, and the south, which still manifested long-term structural deficiencies. The cooperatives in the southern region were, on average, smaller in both economic and employment, compared to their northern counterparts. Moreover, the results for the social cooperatives in the south indicated major problems in terms of both economic efficiency and capitalisation. This was confirmed in the comparison of the results of the MFAs conducted on data from 2008 and 2011.

This study makes three main contributions to the literature. First, it answers the call to build a complete dataset in order to estimate accurately the dimensions of social cooperatives (Chavez and Monzón, 2012). The specific contribution of this study is that it constructs a complete dataset by merging different sources of data (AIDA database of the Bureau van Dijk, and the *Istituto Nazionale di Previdenza Sociale*, INPS), on which the quantitative MFA analysis is based. Other

studies on Italian social cooperatives were mainly descriptive (Mancino and Thomas, 2005; Thomas, 2005), mainly used a single dataset (Picciotti *et al.*, 2014; Costa *et al.*, 2012), or developed a qualitative analysis through interviews (Borzaga and Fazzi, 2014).

Second, the paper contributes to the understanding of the role of cooperatives during the years of the economic meltdown. Previous studies have examined the resilience of cooperative banks (Birchall 2013) and worker cooperatives (Cheney *et al.*, 2014; Lambru and Petrescu, 2014). However, to the best of our knowledge, no previous study analysed the context of social cooperatives. Therefore, this paper is the first to report an empirical investigation that fills the gap in research on the social cooperative sector (Julia and Chaves, 2012; Fecher *et al.*, 2012).

Third, the paper provides empirical evidence that supports and extends Picciotti *et al.*'s (2014) work. The authors identified six different clusters with different characteristics and development paths. They suggested that Italy is mainly divided into two macro-areas: the northern and central regions and the southern region, thus acknowledging territorial dualism. Our work is consistent with these results. Moreover, the findings showed that that territorial dualism was persistent both in 2008 than in 2011, which demonstrated that is anchored in the historical roots of the development of Italian social cooperatives (Bentivogli and Viviano, 2012).

The study inevitably suffers some limitations, which point to promising extensions of our research on this topic. First, in evaluating the resilience of social cooperatives from 2008 to 2011, our analysis does not compare social cooperative with other forms of organizations (e.g., investor-owned). Future analyses could confirm and strengthen the present results. Similarly, future investigations could conduct a longitudinal analysis from 2008 to 2011, by analysing each year of the period under investigation. In our analysis, the multiple dataset employed was available only for 2008 and 2011.

Furthermore, future researchers could investigate the role of the sector of activity and therefore differences between type A and type B social cooperatives, by explaining variations among the

economic and financial indicators. In the present study, we focused on inter-regional differences. However, future research could consider other determinants of analysis.

Finally, the results found by this quantitative analysis could be a starting point for a detailed and in-depth analysis of the precise reasons for the effects of the economic crisis on cooperatives in the south, compared to those in other regions of Italy, as well as the degree to which it has affected the internal management of cooperatives.

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TABLES

Table 1. Social cooperatives 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

Table 2. Turnover and total assets in 2011 and changes between 2008 and 2011 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: our analysis of EURICSE data

Table 3. Turnover and total assets in 2011 and changes between 2008 and 2011 by sector of activity: % values

	Turnover year 2011	% changes turnover 2008- 2011	Total assets year 2011	% changes total assets 2008-2011
Agriculture	1.6	+24.2	3.2	+22.0
Industry	3.9	+15.1	4.9	+24.5
Construction	0.7	+4.9	1.0	+31.5
Education	4.0	+23.4	4.0	+28.6
Health and social care	70.4	+21.1	66.3	+29.3
Other services	19.4	+19.0	20.7	+27.4
Italy	100.0	+20.4	100.0	+28.4

Source: our analysis of EURICSE data

Table 4. Turnover and total assets in 2008 and 2011 by sector of activity (average values in euro).

	Turnover		Total assets	
	2008	2011	2008	2011
Agriculture	671,085.6	833,488.4	1,130,003.8	1,378,604.7
Industry	691,564.6	795,990.9	664,324.7	827,084.3
Construction	383,271.0	402,051.3	361,216.7	475,000.0
Education	543,890.6	671,161.0	431,614.4	555,056.2
Health and social care	1,315,350.0	1,592,888.9	959,484.6	1,240,613.6
Other services	695,243.2	827,339.4	573,050.7	730,066.6
Total	1,003,757.8	1,208,524.4	778,396.0	999,460.5

Source: our analysis of EURICSE data

Table 5. Turnover and total assets in 2008 and 2011 by geographical area (average values in euros)

	Turnover		Total assets	
	2008	2011	2008	2011
North	1,415,786.7	1,710,270.3	1,086,501.6	1,383,116.6
Center	1,001,099.6	1,211,330.5	784,630.5	996,480.7
South and Islands	410,208.9	483,636.4	330,448.7	448,088.5
Italy	1,003,757.8	1,208,524.4	778,396.0	999,460.5

Source: our analysis of EURICSE data

Table 6. 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: our analysis of EURICSE data

Table 7. 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: our analysis of EURICSE data

Table 8. 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: our analysis of EURICSE data

Table 9. 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: our analysis of EURICSE data

Table 10. 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: our analysis of EURICSE data

Table 11. Employees in 2011 and changes between 2008 and 2011 by sector of activity - %values

	Employees 2011		% changes 2008-2011	Employees per coop	
	N	%		2011	2008
Agriculture	4,658	1.2	7.7	27.1	25.1
Industry	13,041	3.2	8.3	29.7	27.4
Construction	3,156	0.8	8.2	20.2	18.7
Education	16,322	4.1	10.1	30.6	27.8
Health and social care	281,961	70	9.8	71.2	64.8
Other services	83,336	20.7	9.8	39.7	36.1
missing	495	0.1	16.7	9.5	8.2
Total	402,969	100	9.8	54.4	49.5

Source: our analysis of EURICSE data

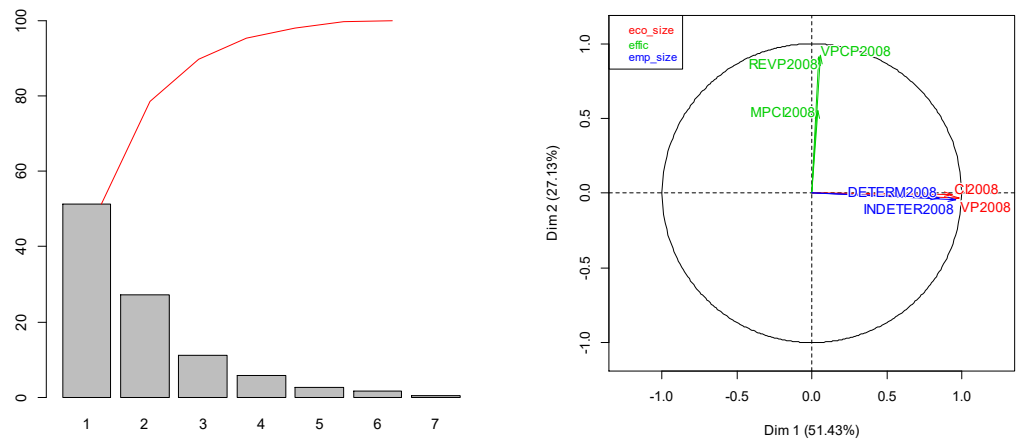
Table 12. Employees in 2011 and changes in between 2008 and 2011 by geographical area

	Employees 2011		% changes 2008-2011	Employees per coop	
	N	%		2011	2008
North	250,930	62.3	8.4	70.6	65.2
Center	80,482	20	13	57.6	50.9
South and	71,557	17.8	11	29	26.2
Italy	402,969	100	9.8	54.4	49.5

Source: our analysis of EURICSE data

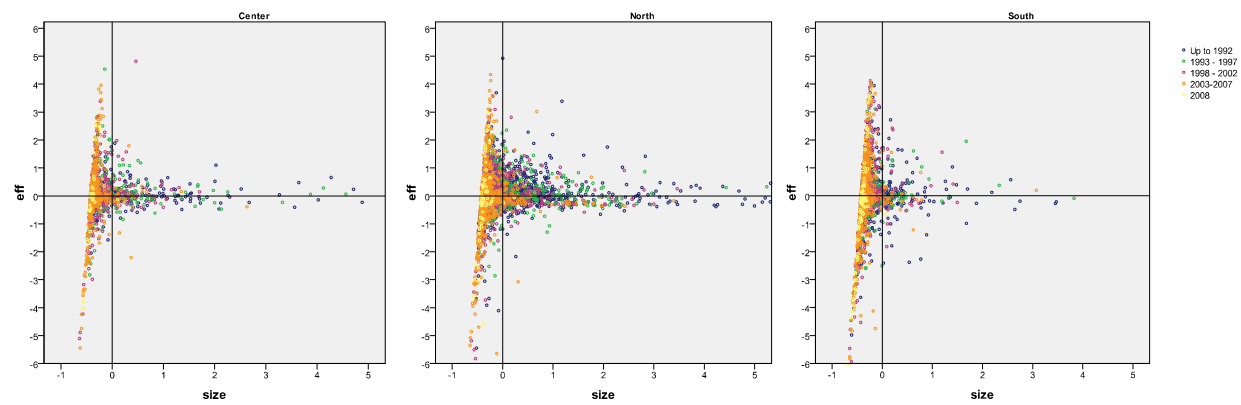
FIGURES

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)



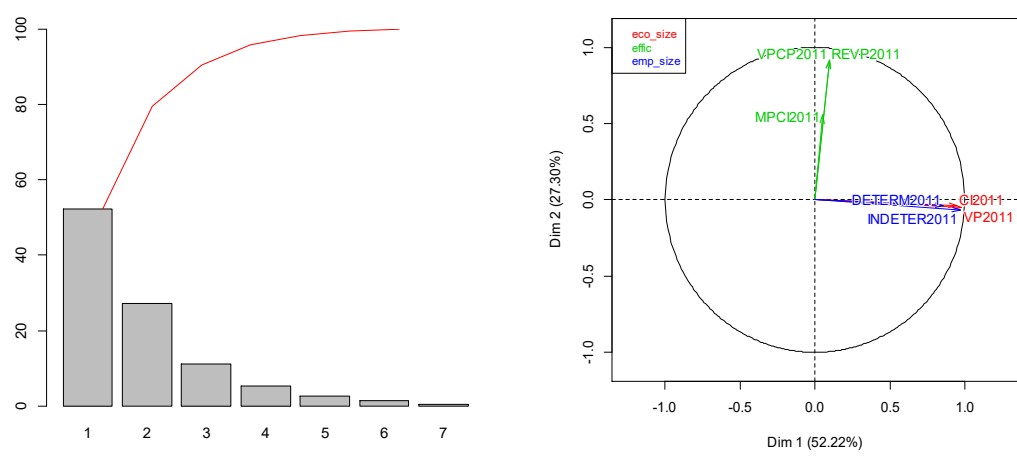
Source: our analysis of EURICSE data

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



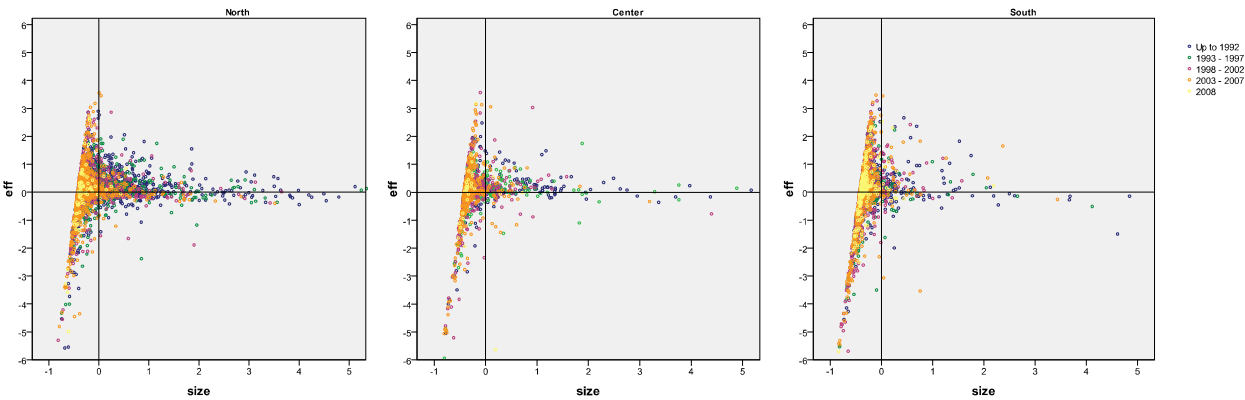
Source: our analysis of EURICSE data

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



Source: our analysis of EURICSE data

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



Source: our analysis of EURICSE data

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 over the medium to long term, as the costs incurred by the cooperative exceed the turnover;

Situation 2 ($> 1, \leq 1.2$): the turnover is close 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 no 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 its activities.

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 cooperative's goals, with an imbalance in institutional purpose at the expense of economic and financial equilibrium.

Situation 2 (> -0.06 ; ≤ 0): denotes a slight economic imbalance, sustainable over the short to medium term, but it requires a high degree of attention.

Situation 3 (> 0 ≤ 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 a social cooperative, 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 cooperative's goals, with one stakeholder (in this case, the company itself) prevailing over the other. In this situation, however, the cooperative may be unable 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 investment plan.

3. Equity to total assets

This index is 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 ≤ 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 ; ≤ 0.35): equity is highly 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 judgement 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 judgement 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.

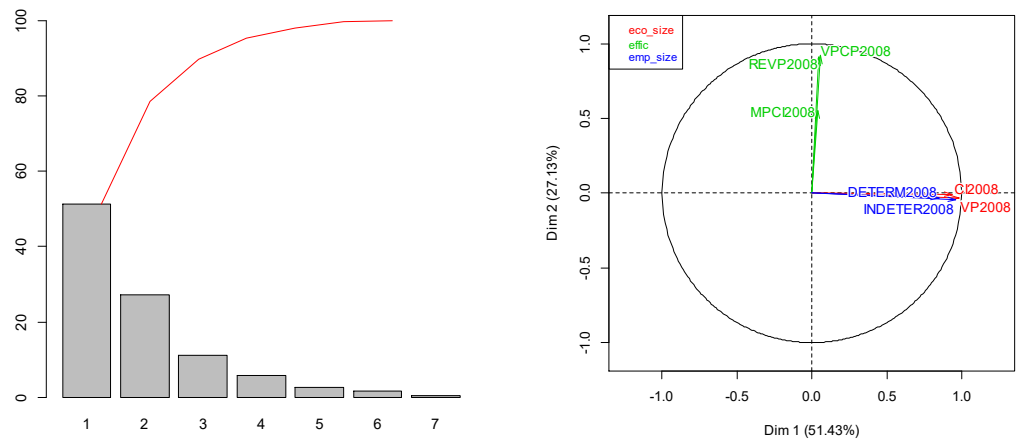
Situation 4 (> 0.45): rigid total assets, with a prevalence of fixed capital.

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.

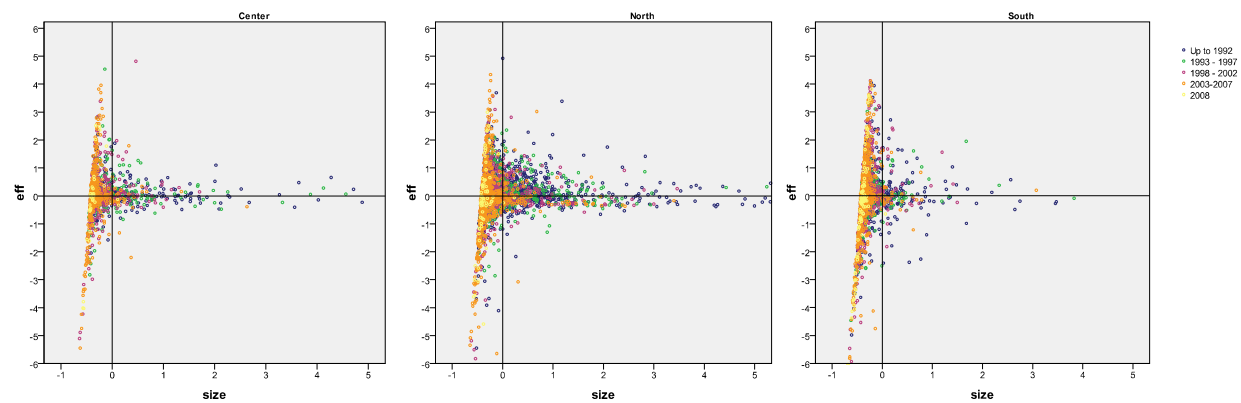
FIGURES

Figure 5. 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)



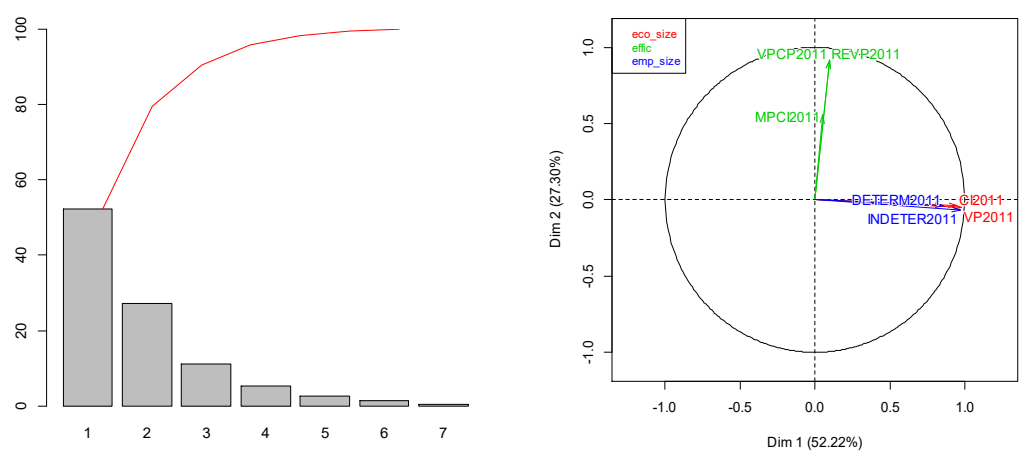
Source: our analysis of EURICSE data

Figure 6. Social cooperatives by size, efficiency, year of foundation and geographical area: Data for 2008



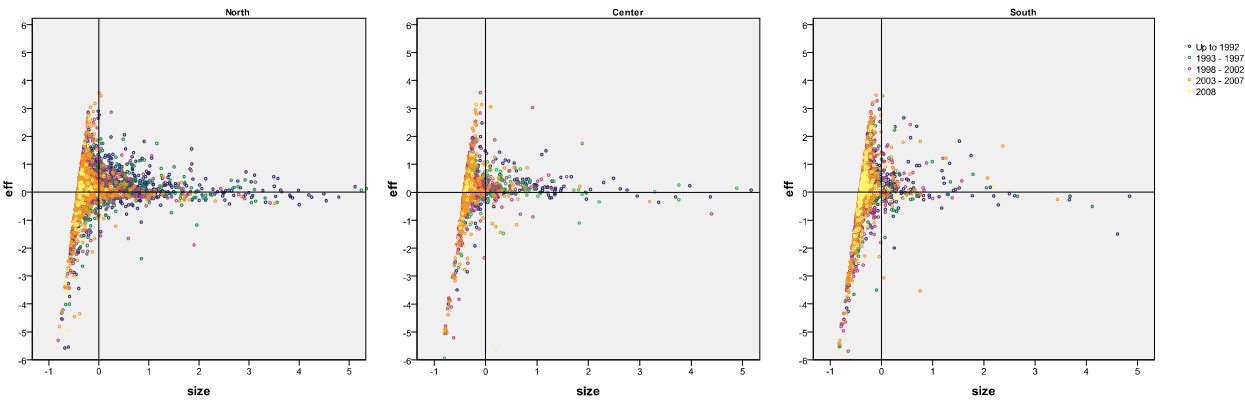
Source: our analysis of EURICSE data

Figure 7. Results of the MFA for 2011: Percentage of variance explained by the eigenvalues



Source: our analysis of EURICSE data

Figure 8. Social cooperatives by size, efficiency, year of foundation and geographical area: Data from 2011



Source: our analysis of EURICSE data