Financial performance and company size: The informative power of value added in Italian social cooperatives

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Abstract

Frame of the research: *The link between financial performance and company size has long been a phenomenon that has been investigated with specific reference to the enterprise; starting from this consolidated literature and given the importance that social cooperatives have assumed in the current economic scenario, a summary indicator that can adequately express this link is considered more useful than ever. No previous study faced the topic of this study related to social cooperatives, as hybrid businesses that combine characters typical of firms with specific peculiarities.*

Purpose of the paper: *The purpose of the paper is to demonstrate, through an empirical study, the informative power of Value Added in reflecting the relationship between economic performance and size regarding social cooperatives.*

Methodology: *The analysis considers a sample of 9,268 Italian social cooperatives to highlight the expressiveness of Value Added in reflecting the link between its performance and size. The study applies a combination of two different methods to reach its aim: correlation analysis and analysis of the association between characteristics.*

Findings: *The study shows that Value Added has a greater capacity than Operating earnings to reflect the business trend in size and employment creation.*

Research limits: *The research is limited to two years for reasonable and justified reasons; however, this period is objectively short and requires expansion in future studies of the phenomenon investigated. The study ties size growth to economic performance alone, excluding other factors (quality of governance, organizational set-up, working conditions, reward systems, etc.) that require consideration in future insights.*

Practical implications: *The research demonstrates the opportunity to: reconfigure the income statement format by making Value Added explicit, including information on the creation and distribution of Value Added in the social balance sheet; use temporal changes in Value Added in the construc-tion of indicators aimed at signalling the capacity of the company to create jobs.*

Originality of the paper: *This research extends and deepens the analysis on the correlation between size and performance focusing on social cooperatives, a particular type of social enterprise that previous studies on Value Added have neglected. It increases knowledge of the informative properties of Value Added and provides insights for creating valuable tools for applying incentive policies to so-cial cooperatives.*

Key words: *social cooperatives; value added; company size; financial performance; employment.*

1. Introduction

Businesses have been moving towards widespread hybridity for some time (Chell, 2007; Grieco *et al.*, 2013), confirming the connection between profitability and sociality observed in any company (Coda, 2012; Gigliotti *et al.*, 2019; Mion and Tessari, 2021). However, this connection is more evident in social enterprises: in the latter, not only do the two "souls" coexist, but they are, above all, equal. Therefore, turning the attention to Value Added (VA) is consistent precisely because of its dual capacity of summarising financial performance and capturing the social impact.

It should be noted that in Italy, 89% of social enterprises are represented by social cooperatives, as demonstrated by data from the Single National Register of the Third Sector (RUNTS), consulted on 11 April 2023, where social cooperatives were 21,306 on a total of 24,033 registered. Social co-operatives are, therefore, the focus of this research, given their relevance.

Italian social cooperatives, "by law" social enterprises, are organisations that operate in the market pursuing social aims. Still, they cannot be equated with enterprises, either formally (as they belong to the Third Sector) or substantively, since they pursue a composite mission that is both dual and unitary, and for which economic and social purposes are equally important, both in the definition of their strategies and in the operation of their activities. In this respect, they have for some time represented a purely Italian reality (Travaglini, 1997; Lionzo, 2002; Thomas, 2004), which essentially escapes the net of the profit/non-profit dichotomy. Therefore, they are considered de facto hybrid organisations (Venturi and Zandonai, 2014), that is, entities in which, given the equivalence between the social and economic dimensions (Battilana and Dorado, 2010; Battilana *et al.*, 2012; Grassl, 2012; Haigh and Hoffman, 2012; Anheier and Krlev, 2015), the mission becomes bivalent and consists in the simultaneous production of social and economic value (Defourny, 2014).

Therefore, in Italy, social cooperatives represent the paradigmatic example of a social enterprise characterised by hybridity (Doherty *et al.*, 2014), aiming to combine civic, solidary and socially useful objectives (art. 2, co. 1 of Legislative Decree 112/2017) with market orientation (Pansera and Rizzi, 2020): this means that the logic of the gift and the logic of exchange must necessarily find a way to coexist, even if they are - in a certain sense - opposites. Social cooperatives are not charitable organisations (and this is where they differ from typical non-profit organisations), but rather enterprises, although they do not experience the tension of maximising return on equity (Zimnoch and Mazur, 2018).

The double meaning attributed to VA has been recognised for a long time (Gabrovec Mei, 1984; Matacena, 1984) as the value that internal actors have contributed to generate and the value available to them for distribution (Purdy, 1983; Bao and Bao, 1998).

VA offers a double perspective on business: on the one hand, the generation of value, which has a purely financial significance because it summarises the strategic choices made by governance (Rispoli, 1983); on the other hand, its distribution, which has a social relevance related to the ethical orientation in taking care of main categories of stakeholders' interests.

Precisely because of this suitability to be the link between the economic and the social, recently reaffirmed (Zimnoch and Mazur, 2018), VA is the financial result that, by its very nature, proves more suitable to synthesise the complex operations of social cooperatives, overcoming the traditional dichotomic approach between labour and capital (Rispoli, 1983).

In addition, VA has a versatile and multifaceted signalling capacity due to its "specific" properties, which are added to the "generic" ones, i.e., those common to all financial performance outcomes.

From these "generic" properties is derived the existence of a logical link between VA and company size; this relationship is already known in the literature about the effects of financial performance on size (Porter, 1980; Chatterjee, 1986; Katz, 1987; Scherer and Ross, 1990; Barney, 1991; Anand and Singh, 1997; Makadok, 1999) and on the feedback effect of the latter on the former (Olanyiy *et al.*, 2017). Moreover, the studies that have already been carried out on this topic - even in the recent past - have produced mixed results, depending on the method of analysis used, the variables taken as reference, and the context in which the study was carried out. Some studies have shown the existence of a positive relationship between financial performance and company size (Hall and Weiss, 1967; Punnose, 2008; Lee, 2009; Vijayakumar and Tamizhselvan, 2010; Babalola, 2013; Doğan, 2013; Olaniyi and Obembe, 2015), while other ones demonstrated a negative (Shepherd, 1972; Goddard et al, 2005; Becker-Blease *et al.*, 2010) or a non-significant relationship (Simon, 1962; Whittington, 1980; God-dard *et al.*, 2004; Serrasqueiro and Nunes, 2008; Velnampy and Nimalathasan, 2010; Niresh and Velnampy, 2014).

To the best of our knowledge, no studies have empirically demonstrated a logical link between trends in VA and firm size regarding firms in general or social cooperatives. The present research aims to fill this gap by investigating the relationship between firm size and VA and its level of intensity in social cooperatives.

The paper is structured as follows: first, the conceptual framework is presented. Then, a description of the methodology, the objective of the research, the context, the construction of the sample, and the data-collection process are illustrated.

The results will then be commented on to discuss the hypotheses in light of the findings. Further, the paper considers the theoretical and practical implications. Finally, some limitations of the research and its possible future lines of development are presented.

2. Theoretical framework

2.1 Italian Economia Aziendale and Stakeholder theory

The present research follows the conceptual approach of the Italian Economia Aziendale, according to which the nature of the business (in Italian, "azienda") is grasped through its actions, which, although diverse and multiform in their external manifestations, fulfil a single instrumental function aimed at enabling the generation of economic value necessary for the pursuit of the objectives of the actors (Ferrero, 1968). In this way, the unity of the business phenomenon is affirmed, regardless of the nature of the interests manifested by its actors: the business is, in fact, a unitary category that brings together both market-oriented economic realities and non-profit organisations (Onida, 1961). This theoretical approach refers to the institutionalist conception of the business (Zappa, 1956), based on the guiding hypothesis that human action in the economic field is more likely and more often *coordinated and systemic* when it is carried out by a plurality of individuals pursuing a common purpose of whatever nature (Amaduzzi, 1957; Ferrero, 1968; Masini, 1968; Onida, 1968; Giannessi, 1969; Amodeo, 1970; Azzini, 1982;). In other words, the business is seen as an economic activity aimed at satisfying the needs expressed by communities of individuals who, in pursuit of these common goals, contribute to their effective realisation and seek to participate in the distribution of the value created.

The aforementioned approach, so characteristic of Italian Economia Aziendale studies, has strong points of contact (Signori and Rusconi, 2009; Rusconi, 2019) with Stakeholder Theory (Freeman, 1984), according to which management is focused on balancing the expectation of remuneration for all the stakeholders (Deegan, 2013). Considering Stakeholder Theory from a normative perspective (Donaldson and Preston, 1995), companies are seen as relational systems in which value is created not only for those who invest their capital but also for all other stakeholders (Post *et al.*, 2002; Freeman *et al.*, 2010; Harrison and Wicks, 2013; Tantalo and Priem, 2016).

By reaffirming the centrality of the human being, *even* and *especially* in the economic sphere, and therefore the importance of the behaviour adopted by governance and management being ethically oriented towards the common good and respect for the fundamental values of freedom and solidarity (Freeman and Phillips, 2002), this study aims to emphasise that value creation comes from a collaborative perspective rather than a competitive and conflictual one.

In line with the "extended" and "open" vision of the business (Purdy, 1983), it can no longer be considered a "private fact" of a few individuals but a resource that belongs to all those who are variously involved in it (Donaldson and Preston, 1995). This is precisely why corporate governance should always adopt behaviours aimed at creating harmony among stakeholders, so that they understand and share the choices made and legitimise the company in its actions (Deegan, 2013). Therefore, the potential conflicts arising from the different positions of the stakeholders should find resolution and convergence (Masini, 1968; Burchell *et al.*, 1985; Ianniello, 2010; Sahoo and Pramanik, 2017) in the interest of the individuals, the company, and the community.

2.2 Value Added and its properties

VA is capable of expressing the synthesis of the various interests of the stakeholders who have contributed to its creation: its presentation through two interrelated prospectuses - the first aims to illustrate the process of its creation and the second to show its distribution - highlights how the benefits obtained thanks to the efforts of many are shared among them. Thanks to this dual perspective of observing and determining VA, using this financial result is considered highly desirable for all enterprises (Bao and Bao, 1998), but especially for those whose actors share social goals in addition to economic objectives.

In light of the above considerations, the attention paid to VA seems entirely justified, given the strong ethical connotation that pervades the theoretical framework of reference: indeed, it is postulated that management should make choices consistent with this approach, both in the definition of strategic guidelines and in the behaviour and actions undertaken.

Originating in Europe (Bao and Bao, 1998), VA has long been considered in Italian (Rispoli, 1983; Gabrovec Mei, 1984) and international (Suojanen, 1954; Gheene and Cornwell, 1964; Mead, 1965; Ball, 1968) accounting literature, although its concrete use in corporate reporting has experienced periods of success and decline (Gabrovec Mei, 1994; Pong and Mitchell, 2005; Malgwi and Purdy, 2009; Ianniello, 2010).

Even today, VA is still of considerable importance in the general economic context (Sahoo and Pramanik, 2017), as well as with specific reference to the field of social enterprises. Its signalling attitude is related to the measurement of efficiency (Sahoo and Pramanik, 2018), control (Gheene and Cornewell, 1964; Sahoo and Pramanik, 2017) and interpretation of the health of the company (Suther-land, 1956; Ponzanelli, 1967; Malgwi and Purdy, 2009); This is due to the fact that VA, viewed from the perspective of its distribution, shows how its first destination is the replenishment of production conditions (depreciation and provisions), leaving the remainder for distribution among the main stakeholders that have contributed to its production: Employees, providers of loan capital and the government (Gray and Maunders, 1980; Karpik and Riahi-Belkaoui, 1994; Zimnoch and Mazur, 2018).

In fact, VA, which implies a collaborative model, according to which the common good prevails over individual interests and selfish personalisms (Gabrovec Mei, 1995), is suitable to represent the process of value creation and distribution in those businesses that are also assigned a relevant social function, which is not limited to the effects that economic actions have on the community and the environment, but becomes one with the economic dynamics of their management.

The literature has long recognised that VA has a higher information content than net income and cash flow (Sinha, 1983; Karpik and Riahi-Belkaoui, 1989; Shankaraiah, 1991; Sharma, 1991; Riahi-Belkaoui, 1993; Riahi-Belkaoui, 1996; Bao and Bao, 1998), pointing to the existence of several of its characteristics. In particular, these "specific" properties make it suitable to function, among others, as an indicator of degree of the sociality of businesses (Matacena, 1984; Ianniello, 2010; Zim-noch and Mazur, 2018) and level of achievement of the corporate purpose (Ianniello, 2010), but also as an indicator of employee productivity (Gilchrist, 1971; Smith, 1978; Cox, 1979; Shimizn *et al.*, 1991; Pong and Mitchell, 2005), welfare generated by the production system (Franco and Blasi, 2013) and efficiency and productivity of the company (Sutherland, 1956; Ponzanelli, 1967; Sharma and Agarwal, 1987; Malgwi and Purdy, 2009).

Acknowledging the great versatility of VA, there is still one last property for which we want to provide empirical evidence in these pages, namely the strength of the link between this measure of financial performance and company size, which emerges even more clearly when compared with that of another more widely used measure of financial performance, namely Operating Earnings. In line with the literature mentioned above, which acknowledges the existence of a relationship between the level of financial performance and the evolution of the size of enterprises, it is considered interesting to examine the nature of the relationship between the two phenomena and the degree of effectiveness with which VA highlights this relationship.

Indeed, the availability of this information can be beneficial for assessing the business's financial health and for constructing other indicators based on performance measures that reflect the capacity of social cooperatives to create employment. These indicators can, in turn, constitute helpful tools that can guide the possible allocation of resources (Morely, 1979; Pong and Mitchell, 2005; Sahoo and Pramanik, 2017) in favour of the enterprises that prove to be more valuable according to this profile of analysis.

3. Research hypothesis

The main argument developed in these pages is that the trend of VA can correctly reflect the dimensional trend of social cooperatives. The positive or negative algebraic sign of the variations that VA undergoes over time is, on average, in line with the dimensional movement of the social cooperative, so that increases in VA signal phases of business' dimensional growth, while decreases in VA signal phases of dimensional contraction. Moreover, it is assumed that VA has this property at a higher level than the Operating Earnings, which appears in the profit and loss accounts. Therefore, the first hypothesis tested is the following:

Hp. 1: there is a positive correlation between the trend in VA and the trend in social cooperative size, which is stronger than that shown by Operating Earnings.

Net operating income, often used in other contexts to quantify financial performance, is neglected here, not only because it summarises the contribution of all economic operations, including non-operational ones, but also because in social cooperatives the management objective is not to maximise the net result, but rather to create wealth destinated to remunerate the factors of production, with the exception of equity capital, because of the social purpose of the value created.

What is of interest is not an analysis of profitability but a joint assessment of profitability and sociality, which VA can capture well, proving capable of reflecting both dimensions (Montrone and Poledrini, 2020). Further, the survival of social cooperatives depends on the ability of governance to reconcile the two sustainability conditions, balancing the forces and finding a harmonious composition.

Given that the dimensional development of the business is all the more socially useful to the extent that it creates jobs while maintaining the economic equilibrium of the production unit, it seems interesting to examine, secondly, the relationship between the evolution of the VA and the tendency of the social cooperatives to increase employment, testing the following hypothesis:

Hp. 2: The trend in VA over time also reflects the employment trend of the social cooperative.

The verification of this hypothesis makes it possible to establish whether the increase in VA over time can express the tendency of businesses to increase employment. Consequently, VA could be considered as a helpful information tool for constructing other more or less complex indicators to be used in the context of incentive policies towards the firms that favour employment. Similarly, testing this hypothesis makes it possible to assess the relationship between the two phenomena (financial performance expressed in terms of VA and employment levels defined as the number of employees) when the trend is negative.

4. Methodology

4.1 Research design

In order to verify the hypotheses, the research is carried out through the analysis of the data contained in the statutory financial statements of a sample of 9,268 Italian social cooperatives, simultaneously applying two different analysis methodologies.

The first methodology used is strictly quantitative and consists of analysing the correlation between changes in financial performance (in terms of VA and Operating Earnings) and changes in the quantities (value of revenues, the value of assets, and the number of employees) that express the size of the enterprise. This analysis is carried out by determining both the overall correlation coefficients between financial performance and size variables and the partial correlation coefficients in order to assess the presence of any distorting effects that might act reciprocally between the variables used to express the size of the enterprise.

The second methodology, widely used in the study of relationships between qualitative characteristics and used to support the previous, is the analysis of the association between characteristics: it makes it possible to determine, by other means, whether the occurrence of variations in the financial performance of a positive or negative sign can be considered independent of the occurrence of growth, decline or stagnation in the size of the enterprise, or whether a logical relationship can be identified between the two phenomena under consideration.

For both analysis methods, the intensity of the logical link between financial performance and size evolution is also assessed, making it possible to evaluate which financial result - VA or Operating Earnings - is more effective in capturing this link.

4.2 Research context

The sample of analysis considers social cooperatives, qualified in Italy as social enterprises "by law" (Legislative Decree 112 of 3 July 2017 and Legislative Decree 117/2017). Social cooperatives have been regulated for a long time (Costa and Carini, 2016) and are now the most common form of social enterprise, as demonstrated by data from the Single National Register of the Third Sector (RUNTS). In that Register, consulted on 11 April 2023, social cooperatives were 21,306 (89%) on a total of 24,033 registered social enterprises.

Over time, this form of business has found international diffusion in Europe, especially in specific sectors such as agriculture and energy supply. It is present in several countries, including Denmark and Poland (Chloupkova *et al.*, 2003), Greece (Nasioulas, 2012), Finland (Hulkko-Nyman *et al.*, 2012), Spain (Heras-Saizarbitoria *et al.*, 2018) and Sweden (Karlsson *et al.*, 2018).

Italian social cooperatives, such as profit-making companies, must follow the rules of the Civil Code to prepare their financial statements. However, it is not clear if these schemes are suitable to reflect the unique institutional structures and management peculiarities of social enterprises (Bagnoli, 2021).

Among the performance indicators adopted to reflect social enterprises' ability to generate economic value is the Operating Earnings: a GAAP figure that is represented - although not always perfectly - in the profit and loss account and essentially corresponds to the EBIT. More precisely, the value that appears in the profit and loss account - expressed as the difference (A-B) - is derived from the algebraic sum of the Value of production (macro class A) and the Costs of production (macro class B): the first aggregate is mainly made up of revenues from typical management, while the second is the sum of management costs for inputs purchased on the market and used in production processes.

As a result of the adoption of Legislative Decree 139/2015, macro-class A may also include income of an extraordinary nature, which is therefore included in the Value of production (similarly, any costs of an extraordinary nature are now included in the Cost of production). In such a case, it is evident that the result determined by the difference (A-B) would not be able to express the operating earnings correctly (Bagnoli, 2021). For this reason, in what follows, we prefer to use the term Result (A-B) rather than Operating earnings, although it is reasonable to assume that the two quantities can coincide in most cases. Since this result is usually taken as a measure of financial performance, it is used here as a reference term to demonstrate the informational superiority of VA in signalling the evolution of the company in terms of size and number of employees.

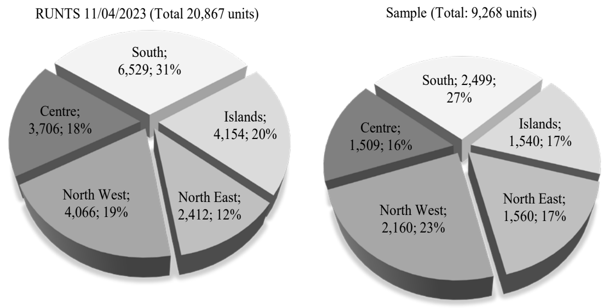
VA does not find evidence in the statutory profit and loss account. Moreover, internationally, there is no unambiguous indication of whether VA is used gross or net of depreciation, write-downs, and provisions (Gray and Maunders, 1980). However, since what is relevant is the amount of wealth that can be distributed to the three main recipients, represented by employees, lenders, and the public administration, as well as that destined for the reintegration of productive conditions, it is considered consistent with the purposes of this research to use the configuration of VA before depreciation, write-downs, and provisions. The VA can be easily derived by simply reworking the data available in the statutory profit and loss account by adding personnel costs, depreciation, write-downs, and provisions to the Result (A-B).

4.3 Data collection

The sample of analysis was built by integrating two sources of information. The first source is the Single National Register of the Third Sector (RUNTS), introduced in Italy in 2017 by the Third Sec-tor Code, which identifies Italian third-sector entities. The second source is the AIDA Bureau Van Dijk database, which collects the annual accounts of joint stock companies operating in Italy, including social cooperatives.

The reference date for the extraction of information from the two registers is 11 April 2023; with reference to this date, social cooperatives registered in RUNTS and whose statutory financial statements were included in the AIDA database as of 31/12/2017 were selected. The selection was made by random extraction by dividing the source population into the five geographical areas considered by ISTAT (Northeast, Northwest, Central, South and Islands). The extraction was performed by maximis-ing the number of units for each area while respecting, as much as possible, the proportion between the different areas resulting from the RUNTS content (Fig. 1).

Fig. 1: distributions by geographical area (number and percentage of units)



Source: our elaboration

The list was then refined by eliminating social cooperatives in a state of liquidation and those in the form of consortia of social cooperatives, thus obtaining a final sample of 9,268 social cooperatives.

The elimination of units in liquidation was carried out to consider a homogeneous panel composed only of units in normal operation; the exclusion of consortia is motivated by the fact that they represent "second level" economic aggregations, born from the collaboration of several social cooperatives to increase their efficiency without resorting to forms of capital aggregation, such as mergers, and maintain their size threshold (Borzaga and Ianes, 2011).

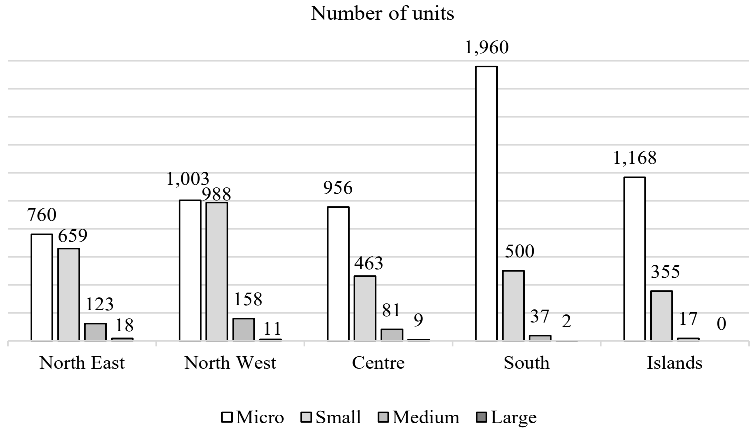
About the temporal extension of the observation, although it has been highlighted (Zanotti, 2013; Costa and Carini, 2016; Borzaga *et al.*, 2022) that companies operating in a cooperative form adopt a counter-cyclical behaviour during periods of crisis (such as the one triggered by the outbreak of the Covid-19 pandemic, which affected the activity of companies from the 2020 financial year), recent studies have shown, on the contrary, that the cooperatives have also suffered the negative impact of the pandemic on its financial results (Calabrese and Falavigna, 2021). So, it was decided to extend the analysis to the financial statements from 31/12/2017 to 31/12/2019 to exclude the impact of the Covid-19 pandemic on the financial results.

Instead, the choice to start from the 2017 financial year was due to the desire to avoid a possible in-formation distortion related to the first application in Italy of the reform according to Legislative Decree 139/2015, which, starting with the financial statements of the 2016 financial year, introduced changes in the content of the profit and loss account - including the inclusion of extraordinary components in the determination of the Result (A-B) - with consequent effects on the comparability with previous financial years.

Size can be represented by numerous factors such as the number of employees, the territorial distribution and production capacity of plants, the volume of business generated, the size of the market in which the company operates, the size of its means, the sum of the overall investments made, and many others. However, the classification criteria contained in EU documents and regulatory references were considered in this study, referring to the three well-known parameters: *revenues, average number of employees, and assets* (European Commission Recommendation 2003/361/EC; Art. 2, Ministerial Decree of 18 April 2005; Art. 3, EU Directive 34/2013) .

Therefore, based on the above criteria, a firm is considered to grow in size if at least two of the above parameters show an increasing trend; conversely, an enterprise is considered stagnating or shrinking if at least two of the three parameters show a flat or decreasing trend. The combination of the geographical area to which it belongs and the size of the units in the sample provides a complete picture of the social cooperatives analysed (Fig 2).

Fig. 2: sample composition according to geographical area and unit size as of 31/12/2017



Source: our elaboration

The variables used by EU Directive 34/2013 to define the size of the units - the value of revenues, total assets, and average number of Employees - were used as reference variables to determine whether these units are increasing or decreasing in size over time.

Referring to the period 31/12/2017 - 31/12/2019, for each unit in the sample, the changes under-gone by the two financial performance measures, VA and Result (A-B), and by the three size variables mentioned, were determined for a total of 18,536 observations.

4.4 Data analysis

The variables used in the analysis are represented by Δ VA, Δ (A-B), Δ Revenues, Δ Assets and Δ Employees.

The sample identified was also divided into two groups of units: Group 1, made up of the 5,523 units that showed a growth in size over the time period considered, and Group 2, which includes the remaining 3,745 units that either decreased in size or kept it unchanged over the same time period. To create the two groups, the changes in each of the three size variables (Revenues, Assets, Employees) were measured. The units that showed growth in at least two out of three variables were considered to be 'expanding in size' and, therefore, belonging to Group 1; the others were placed in Group 2, which includes units with unchanged or decreasing size.

The separate analysis of the two groups through the first methodology (correlation analysis) made it possible to specifically investigate the relationship between the financial performance measures tested and each variable, evaluating it separately in the two situations of 'growth in size' and 'stability or decrease in size' in order to verify any differences.

With the second methodology (analysis of the association between characteristics), the analysis was carried out directly on the entire sample of 9,268 units, aimed at grasping, by other means, the strength of the link between the trend of the economic performance measure and that of the three size variables, and to understand whether the observation of the former quantity allows the trend of the latter to be deduced in a sufficiently reliable manner.

The normality test conducted on the distributions of the variables within the panel (Table 1) showed a substantial divergence from the normal distribution, recommending the adoption of non-parametric analysis methodologies that provide more reliable results in situations of this type, since they are not based on the assumption of normality of the data distribution.

Tab. 1: normality tests on the distributions of the variables in the sample

	Skewness	S.E.	Kolmogorov-Smirnov
Δ VA	2.764	0.025	0.478***
Δ (A-B)	25.734	0.025	0.389***
Δ Revenues	89.696	0.025	0.493***
Δ Assets	95.102	0.025	0.470***
Δ Employees	48.534	0.025	0.345***

* $p<0.05$; ** $p<0.01$; *** $p<0.001$

Source: our elaboration

The first chosen method consists of analysing the correlation between the variations in the financial performance measures and those of the size variables by means of the Spearman's ρ coefficient (preferred to others because it allows the influence of outliers to be neutralised), using for the variable Δ Employees also the Kendal's τ coefficient, which gives more reliable indications in the presence of repeated values within the distribution, as may be the case for the variation in the number of employees.

The association between the type of manifestation (positive or negative sign) of the financial performance and the trend assumed by the variable sizes (growth, stagnation or decrease) was, on the other hand, verified by means of the Pearson's $\chi 2$ test, applied to the data obtained by classifying each unit in the sample according to the sign of the financial performance and the trend expressed by each variable size. This analysis was also complemented by the measurement of the intensity of the association, provided by the value of Cramer's V coefficient. This allowed a more in-depth test of Hp. 2 by highlighting the intensity of the association between trends in financial performance measures and Δ Employees. Since the test of this hypothesis aims in particular to establish the degree of association between trends in financial performance measures and Δ Employees, regardless of the presence of continuous growth in size, the analysis of the association and the measurement of its intensity were carried out directly on the entire sample, the sum of Groups 1 and 2.

5. Findings and Discussions

The correlation analysis carried out within Group 1, clearly shows the presence of positive and statistically significant correlations (p-value<0.01) between the trend of the financial performance measures (Δ VA and Δ (A-B)) and that of the three dimensional variables considered (Table 2). However, while the values assumed by the Spearman correlation coefficients referring to the Δ VA variable assume medium-high values, those relating to the Δ (A-B) variable reach low values. This evidence thus confirms Hp.1. In the case of the latter variable, the Spearman correlation coefficient relating to the trend in the number of employees is even non-significant and close to zero, while the same coefficient referring to VA confirms the existence of a good level of positive correlation. Therefore, this result confirms the validity of Hp.2.

Similar findings emerge from an examination of the partial correlations in Table 4, from which it emerges that Δ VA retains a higher capacity to reflect with its trend the increase in Revenues, Assets, and the number of Employees.

Tab. 2: correlations between variables in Group 1

Spearman's ρ coefficients - Group 1 (5,523 units)				
Variables	Δ Revenues	Δ Assets	Δ Employees	Δ (A-B)
Δ Assets	0.476**			
Δ Employees	0.235**	0.083**		
Δ (A-B)	0.102**	0.113**	0.006	
Δ VA	0.670**	0.410**	0.310**	0.157**

Partial correlation coefficients - Group 1 (5,523 units)			
Control variables	Variables	Δ (A-B)	Δ VA
Δ Assets; Δ Employees	Δ Revenues	0.057**	0.565**
Δ Revenues; Δ Employees	Δ Assets	0.073**	0.149**
Δ Revenues; Δ Assets	Δ Employees	-0.016	0.219**

* p<0.05; ** p<0.01; *** p<0.001

Source: our elaboration

Since the data referring to the number of employees present at the beginning and at the end of the observation period lead to a high number of Δ Employees assuming the same value, for the correlation between the trend of financial performance measures and the change in the number of employees, the correlation coefficient τ of Kendal was also determined, which is particularly reliable in the presence of a high number of recurring values.

In Group 1, Kendal's coefficient τ calculated between Δ (A-B) and Δ Employees assumes the value of 0.004 and is statistically non-significant; the same coefficient calculated between Δ VA and Δ Em-ployees assumes the value of 0.224 with p-value<0.01, thus confirming the presence of a significant and good correlation. This further confirms the HP.2.

In Group 2, the trend of the values of Spearman's correlation coefficients and partial correlation coefficients (Table 3) follows what has already been observed for Group 1, demonstrating that the superiority relationship that emerged in favour of VA concerning companies in dimensional expansion is confirmed even in the presence of companies that maintain or reduce their dimension. Again, in accordance with HP.1, the signals given by the trend in VA reflect the current dimensional dynamics much more faithfully than those of Result (A-B).

Tab. 3: correlations between variables in Group 2

Spearman's ρ coefficients - Group 2 (4,038 units)				
Variables	Δ Revenues	Δ Assets	Δ Employees	Δ (A-B)
Δ Assets	0.118**			
Δ Employees	0.255**	0.032*		
Δ (A-B)	0.113**	0.129**	0.005	
Δ VA	0.612**	0.193**	0.308**	0.186**

Partial correlation coefficients - Group 2 (4,038 units)			
Control variables	Variables	Δ (A-B)	Δ VA
Δ Assets; Δ Employees	Δ Revenues	0.102**	0.572**
Δ Revenues; Δ Employees	Δ Assets	0.117**	0.156**
Δ Revenues; Δ Assets	Δ Employees	-0.025	0.200**

* p<0.05; ** p<0.01; *** p<0.001

Source: our elaboration

For the same reason indicated above, Kendal's τ coefficient was also applied to Group 2: its value calculated between Δ (A-B) and Δ Employees is equal to 0.004. It remains statistically insignificant, while if calculated between Δ VA and Δ Employees it reaches the value of 0.226 with p-value<0.01 and leads to conclusions in line with those formulated about Group 1 that confirm Hp.2.

The association analysis between characters applied to each measure of financial performance to the three size variables considered (Tables 4, 5, and 6) highlights the presence of Pearson's χ2 values such as to exclude with almost absolute certainty the independence of the data examined; this confirms the existence of a positive association between the trend of the performance measure and that of each of the three size variables considered, which is always statistically significant. More specifically, regarding the ability of the evolution of the financial results to reflect the evolution of the company's number of employees (Table 6), the values presented show that Result (A-B) is incapable of capturing this aspect. In contrast, as imagined in Hp.2, VA has a marked aptitude that makes it a measure capable of providing information on the ability of the company to increase the number of employees over time.

Tab. 4: intensity of the association between trends in performance and Δ Revenues

Δ Revenues									
		Negative		Null		Positive		Total	
Groups 1 and 2		N.	%	N.	%	N.	%	N.	%
Δ (A-B)	Positive	878	9.47%	2	0.02%	2,414	26.05%	3,294	35.54%
	Negative	2,470	26.65%	7	0.08%	3,497	37.73%	5,974	64.46%
	Total	3,348	36.12%	9	0.10%	5,911	63.78%	9,268	100.00%
Test of Independence: Chi2 = 199.96 (p-value 3.79E-44); V-Cramer = 0.15									
Δ VA	Positive	854	9.21%	5	0.05%	5,037	54.35%	5,896	63.62%
	Negative	2,494	26.91%	4	0.04%	874	9.43%	3,372	36.38%
	Total	3,348	36.12%	9	0.10%	5,911	63.78%	9,268	100.00%
Test of Independence: Chi2 = 3,292.17 (p-value 0.00E+00); V-Cramer = 0.60									

Source: our elaboration

Tab. 5: intensity of the association between trends in performance and Δ Assets

Δ Assets							
		Negative		Positive		Total	
Groups 1 and 2		N.	%	N.	%	N.	%
Δ (A-B)	Positive	897	9.68%	2,397	25.86%	3,294	35.54%
	Negative	2,343	25.28%	3,631	39.18%	5,974	64.46%
	Total	3,240	34.96%	6,028	65.04%	9,268	100.00%
Test of Independence: Chi2 = 134.21 (p-value 7.18E-30); V-Cramer = 0.12							
Δ VA	Positive	1,367	14.75%	4,529	48.87%	5,896	63.62%
	Negative	1,873	20.21%	1,499	16.17%	3,372	36.38%
	Total	3,240	34.96%	6,028	65.04%	9,268	100.00%
Test of Independence: Chi2 = 987.97 (p-value 2.92E-215); V-Cramer = 0.33							

Source: our elaboration

Tab. 6: intensity of the association between trends in performance and Δ Employees

Δ Employees									
		Negative		Null		Positive		Total	
Groups 1 and 2		N.	%	N.	%	N.	%	N.	%
Δ (A-B)	Positive	1,142	12.32%	574	6.19%	1,578	17.03%	3,294	35.54%
	Negative	2,331	25.15%	1,187	12.81%	2,456	26.50%	5,974	64.46%
	Total	3,473	37.47%	1,761	19.00%	4,034	43.53%	9,268	100.00%
Test of Independence: Chi2 = 39.91 (p-value 2.16E-09); V-Cramer = 0.07									
Δ VA	Positive	1,536	16.57%	1,073	11.58%	3,287	35.47%	5,896	63.62%
	Negative	1,937	20.90%	688	7.42%	747	8.06%	3,372	36.38%
	Total	3,473	37.47%	1,761	19.00%	4,034	43.53%	9,268	100.00%
Test of Independence: Chi2 = 1,125.91 (p-value 3.25E-245); V-Cramer = 0.35									

Source: our elaboration

However, what appears significantly different in the comparison between Added Value and Result (A-B) is the strength of this association, i.e., the reliability with which the trend of these two magnitudes can reflect the trend of the size variables: in the case of Δ VA, the strength of the association, expressed by the value of the V-Cramer reported in each table, fluctuates between 0.33 and 0.60, settling at high levels for the indicator in question, while for Δ (A-B) the values of the V-Cramer - rang-ing between 0.07 and 0.15 - show a considerably lower intensity of the link and even negligible in the case of the variable Δ Employees. This result confirms Hp.1.

In summary, the results obtained from the correlation analysis of the data (Tables 2 and 3) lead to the confirmation of Hp. 1. In both groups, there is a statistically significant but weak relationship between the evolution of the Result (A-B) and the two variables represented by Δ Revenue and Δ Assets, while the relationship with the variable Δ Employees is not statistically significant. On the contrary, the relationship between Δ VA and all three variables represented by Δ Revenue, Δ Assets, and Δ Employees appears to be much stronger, showing medium-high correlation coefficients in both groups examined and all statistically significant with p-value<0.01.

A similar response is also provided by the values of *Kendall's* coefficient τ (determined limited to Δ Employees), as well as by the partial correlation coefficients, among which the figure referring to the association between Δ (A-B) and Δ Employees not only is not significant but even takes on a negative value.

The results provided by the second method of analysis adopted (Tables 4, 5, and 6) also show that the most effective measure of financial performance in representing the dimensional dynamics of the social enterprise with its trend is shown to be VA, whose variations over time prove capable of capturing the manifestations of dimensional expansion of the enterprise to a much greater extent than Result (A-B).

Regarding HP. 2, growth in VA is not necessarily linked to an increase in the number of employees because other variables, including qualitative ones, may work, favouring the creation of value regardless of the trend in the number of employees; however, the empirical analysis conducted shows that the increase in VA and the increase in the number of employees are associated in a very substantial number of cases.

This conclusion is evident from the results of applying both methodologies.

The analysis carried out with the first method (Tables 2 and 3) shows correlation coefficients greater than 0.30 and significant with a p-value <0. 01 between Δ VA and Δ Employees, while the correlation coefficients between Δ (A-B) and Δ Employees are non-significant and close to zero; this observation is also confirmed by the partial correlation coefficient, which takes a value equal to or greater than 0.20 (p-value<0.01) in the case of VA. At the same time, it is non-significant and close to zero in the case of Result (A-B).

The analysis with the second methodology (Table 6) shows a much more solid positive association between the trend of VA and the trend of the number of Employees than in the case of Result (A-B), as evidenced by the value assumed by the V-Cramer. Moreover, the data shown (Table 6) confirm the greater capacity of VA to represent, with its trend, the trend of the number of Employees in the presence of positive financial performance, reflecting, at the same time, the phenomena of stagnation or dimensional contraction with similar effectiveness to that of Result (A-B). The lower effectiveness found in the association between negative Δ VA and negative Δ Employees concerning the case of positive Δ VA and positive Δ Employees can be explained by observing that the occurrence of nega-tive financial performance is rarely immediately accompanied by a reduction in the number of em-ployees, for this reason, it is entirely plausible that the effectiveness of the association appears greater in situations of positive financial performance, manifesting, instead, a sort of delayed adaptation in the presence of negative financial performance.

The above also leads, therefore, to confirm HP. 2, making it possible, on the one hand, to empha-sise the enormous importance of the labour factor in value creation processes (especially in labour-intensive sectors, such as that of social cooperation) and, on the other hand, to recognise the capacity of the VA trend to incorporate information on the aptitude of the production unit to increase the num-ber of employees much more effectively than the Result (A-B).

In conclusion, the findings show that VA trend provides a more 'reliable' indication of the social enterprise's expansion or contraction in size and its aptitude to increase employment than observing the Result (A-B) trend.

6. Implications

6.1 Theoretical implications

Even though the study focused on Italian social cooperatives, the findings can help study the more general phenomenon of social enterprises and the value measurement in social-oriented busi-nesses. Furthermore, this research contributes to the current knowledge on VA by empirically demonstrating the essential signalling aptitude of VA, i.e., the ability to reflect the company's dimensional trend with its trend.

The findings highlight how the positive trend of this financial result implies with reasonable probability a phase of dimensional expansion of the company, something that the Result (A-B) - that is to say, albeit with the limits mentioned above, the Operating Earnings - is not able to express with the same effectiveness. This theoretical implication seems to be of considerable conceptual interest since it shows that the VA trend can also directly capture the social cooperatives' investment in strengthening their structure, coherently fulfilling their institutional function, and maintaining the companies' sustainability conditions.

Although drawn from this research with specific reference to social cooperatives, these conclu-sions could be an interesting point of reflection for the entire corporate world, bearing in mind that where profit distribution is allowed, the effect highlighted here could appear more attenuated.

Finally, it should be stressed that the verification of the second research hypothesis, which was empirically validated through the analysis of the data collected, also confirms the greater power of the VA compared to the Operating Earnings in reflecting the employment trend of the social cooperative and, therefore, its capacity to create jobs.

6.2 Practical implications

The research also leads to some interesting practical implications.

The first relates to the opportunity to reconfigure - at least for social cooperatives - the profit and loss account format in the statutory financial statements, integrating it with the explication of VA, given its considerable information content that goes beyond the simple measurement of financial performance.

The use of the Value-Added Statement would mark a change not only at the level of accounting representation but above all the meaning and purpose of economic action aimed at satisfying the interests of different groups of stakeholders (Catturi, 2003). Thus, it would extend the information potential of VA to the social cooperatives that literature has so far neglected.

In this way, from just reading the profit and loss account, one could immediately obtain useful indi-cations for interpreting the development path taken by the firm, and the VA statement could constitute a useful trait-union between accounting statements and non-financial disclosure, making the market more informed of the interrelated economic and social dynamics of management.

A second practical implication suggested by this research is that the social report should provide sufficient information to explain the creation and distribution of VA; this suggestion turns out to be much easier to implement than the first since the social report, although mandatory for the companies studied, has a content that is free from regulatory constraints. This would make it possible to highlight all the qualities of VA, as has long been suggested by the best national literature (GBS, 2007) and im-plemented in the past at the international level (ASSC, 1975; Gray and Maunders, 1980; Gray *et al.*, 1995; Van Staden, 1998).

The third practical implication concerns the possible use of Δ VA in constructing indicators aimed at signalling, among other characteristics, the company's capacity to create jobs, thus perfecting a use-ful tool in applying incentive policies in favour of the category of companies studied.

7. Conclusions

The present research extends and deepens the analysis on the correlation between size and performance to the specific case of social cooperatives; in fact, there appears to be no previous work on this topic that has taken the particular business category of social cooperatives as a reference.

Nevertheless, the research has limitations that may provide stimuli for further investigation.

Although necessary reasons justified the choice of the analysis time frame, it is evident that this reference interval of the analysis is objectively limited; this, therefore, suggests the resumption of the re-search considering a broader timeframe.

Secondly, the present study links dimensional growth to only one phenomenon, namely financial performance; in fact, although VA may express how the company is managed for the benefit of its stakeholders (Shaoul, 1998; Signori *et al.*, 2021), thus reflecting the economic and social role of the company itself (Burchell *et al.*, 1985; Andralojc, 2012; Glowacki and Jelonek, 2013; Haller *et al.*, 2018), it remains a financial result that summarises the financial dynamics of management and the quantitative variables that influence it as it evolves.

However, it is clear that dimensional growth, and in particular job creation, is also influenced by other factors that have an exquisitely qualitative connotation: the level of skills of the management and its orientation in employment choices, the construction of adequate organisational structures, the ability of the management to listen to the needs of the workers and to give them adequate answers, the working conditions themselves, including the actual possibilities of personal and professional growth, as well as the recognition of individual performance for motivational enhancement, and so on.

Therefore, future research would benefit from a multidimensional study of the reality under observation, including qualitative variables, such as those just mentioned, collected from other documentary sources (primarily social reporting documents).

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