State of the Art Review

From Cooperative Principles to Performance

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Despite the fact that cooperative firms have been thoroughly studied in the specific fields of economics and management, they still constitute a *black box* with many unknown aspects, among which performance stands out. Cooperative firms are based on specific values such as equity, democracy or solidarity, which make them different from conventional firms. In practice, these values are translated into the so-called "cooperative principles", or a set of specific behaviours that direct the way of developing their business activities and guide day-to-day tasks. The research carried out to date has mainly focused on clarifying whether these particularities of cooperatives do influence their performance and if this performance is different from that of conventional firms. However, the evidence shows mixed results and, therefore, no consensus exists in the literature about these relations. In addition, empirical research has mostly focused on the specific principles of worker participation, while other principles, more related to entrepreneurial behaviours, are still yet to be explored in greater depth. This review summarises the main and latest contributions on the performance of cooperatives and about how their principles affect this performance, incorporating the entrepreneurship element. Future lines of research are proposed in order to broaden our knowledge of the performance of cooperative firms.

Background

According to the International Cooperative Alliance, a cooperative is *an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise* (ICA, 1995). This definition, therefore, refers to a specific kind of organisation that competes against conventional firms in the market.

The particularities of cooperatives arise in the cooperative principles, which constitute a guide for their day-to-day tasks. These principles are: 1. Voluntary and Open Membership, 2. Democratic Member Control, 3. Member Economic Participation, 4.

Autonomy and Independence, 5. Education, Training, and Information, 6. Cooperation among Cooperatives, 7. Concern for Community (ICA, 1995).

Although different types of cooperatives exist, literature has focused primarily on employee-ownership firms (Cheney et al, 2014), which include worker and producer cooperatives. Whereas workers, who can also be classed as owners of the firm, constitute the former group, producer cooperatives group together farmers and producers that organise themselves mainly in order to treat and sell their goods. In this regard, research on employee-ownership firms is framed using the theoretical background of Labour Managed Firms (LMF) (Ward, 1958), and this is structured around two pillars. The first explains whether worker participation in firms (principles 1, 2 and 3) has any effect on the performance of LMF. In turn, the second pillar is focused on determining whether differences between LMF and conventional firms exist in terms of performance.

Whereas the three participation principles are linked to governance and specific structural features of cooperatives (Hansmann, 1996), the rest of cooperative principles are more related to entrepreneurial behaviours (Guzman et al, 2019). These refer to those activities, such as risk-taking, innovativeness or proactiveness, carried out in order to improve results (Rauch et al., 2009). Unlike the first group of principles, the influence of these behaviours on cooperative performance has been scarcely studied.

Evidence

Although the first empirical studies regarding the performance of cooperatives go back to the seventies, the most influential contributions date from the 1980s onwards. Thus, regarding the relationship between participation principles and performance, Defourny et al. (1985) studied the effects of worker participation in ownership and profits in French producer cooperatives and found an increase in their production function. In addition, Jones and Svejnar (1985) researched the effect of worker participation in management, profit sharing and decision-making in Italian producer cooperatives and obtained a positive effect on productivity and a reduction of unemployment. More recent contributions on this topic are shown in table 1.

Regarding comparisons among performance of cooperative and conventional firms, those studies focused on measuring relative technical efficiency are the most remarkable, especially those carried out by Craig and Pencavel (1995) and Jones (2007). However, whereas the first study was focused on the plywood sector of the Pacific Northwest and found that cooperatives are between 6 and 14% more efficient, the second was centred on the Italian construction sector and found no differences between both groups of firms.

It is also worth noting the meta-analysis developed by Doucouliagos (1995), who concluded that worker participation in decision making, ownership and profit distribution has a positive effect on workers' productivity, this effect being greater in cooperatives than in participative conventional firms. However, this result has been questioned by Dow (2003). Other contributions that compare conventional and cooperative performances can be observed in table 2.

Table 1. Summary of recent contributions about cooperative principles and performance

Contribution	Sector Analysed	Data Country	Main finding	Cooperative Principle affecting performance
Jones and Kalmi, 2015	Banking	Finland	A positive relationship between performance and membership rate	-Participation in membership
Liang et al., 2015	Framing	China	Social capital positively influences both participation and performance	-Cooperation -Concern for community
Franken and Cook, 2017	Marketing, Supply, Service	USA	Cooperatives with smaller boards, active members and manager training tend to have better performance.	-Participation in membership and decision making - Training
Bontis et al, 2018	Social sector	Italy	Economic performance is positively affected by the presence of graduate employees but negatively affected by the yearly training per employee. Social performance is positively affected by yearly training and the quality of relationships with customers, but negatively affected by the quality of relationships with the reference territorial community.	-Training -Concern for community
Guzman et al. 2019	All sectors	Spain	Cooperative principles positively affect performance through entrepreneurial orientation	-Participation in decision making and profits -Training -Cooperation -Concern for community

Table 2. Summary of recent contributions about differences in terms of performance between cooperatives and conventional firms

Contribution	Data Country	Methodology	Main finding
Melgarejo et al., 2010	Spain	Development of non-parametric tests related to the equality of means and of variances	No significant differences
Fakhfakh et. al, 2012	France	Estimation of the production function through Generalized Least Squares and Generalized Moments Method	Cooperatives are as productive as or even more productive than conventional firms.
Monteiro and Straume, 2018	Portugal	Benchmark random-effects model and System-GMM approach.	Contradictory results
Montero, 2018	El Salvador	Regression discontinuity design.	Cooperatives are more productive depending on the final product.

Overview and evidence gaps

Cooperative principles constitute the materialisation of the cooperative philosophy and represent the basis on which cooperatives develop their business activities. Although traditionally literature found that worker participation in ownership, decision-making and profit sharing did not negatively affect performance, not all of the recent studies, focused on other types of cooperatives and wider sectors, are so optimistic (Franken and Cook, 2017).

On the other hand, the influence of other cooperative principles, more related to entrepreneurial behaviours, has only recently started to be explored, so the findings on this matter are still in relatively early stages and are yet to be developed. Clarifying and quantifying the relationships between these principles and cooperative performance would also give us a better understanding of these firms and help us to act accordingly in order to increase their performance.

In addition, results about differences in terms of performance between cooperatives and conventional firms are very varied and no clear conclusions can be drawn; even more so if we take into account the different methodologies used to test performance. However, it seems to be clear that the logical approach is to use a method adapted to the particularities of these firms, which, at the same time, captures the social approach of their business activity.

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