



Investment financing in cooperative firms

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ABSTRACT

By general agreement, one of the main obstacles to the growth of producer cooperatives is difficult investment financing, due to inadequate Capitalisation levels and the resulting inability to lodge sufficient collateral with lenders. Moreover, worker-owned firms are considered not very reliable because they suffer from problems of moral hazard and insufficient commitment. Unfortunately, the literature on this issue is not extensive and has weaknesses that are highlighted in the paper. By means of its critical analysis, it is possible to provide evidence that the funding difficulties caused by the particular structure of cooperative firms can be effectively tackled by creating an institutional framework within which cooperatives would be offered a wider range of organizational options comparable to those open to traditional enterprises. Finally, it is proved that the willingness of members to fund the operations of their cooperative with loan capital may not be enough to mobilize external credit. For member financings to persuade potential providers of funds to place trust in a firm, third-party claims must necessarily qualify as senior debt and be repaid before the claims of the partners are settled.

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1.0 Introduction

By general agreement, one of the main obstacles to the growth of producer cooperatives is difficult investment financing. And as this problem stems both from the need to stand up to competition from capitalistic enterprises in the credit market and from an institutional framework tailored to the needs of the latter, the options available to remedy this situation are either changing the organisational structure of cooperative firms or amending a legal framework which plays into the hands of the dominant enterprise and must necessarily put worker-controlled firms at a distinct disadvantage.

Due to inadequate capitalisation levels and the resulting inability to lodge sufficient collateral with lenders, cooperatives are also widely held to incur higher funding costs than traditional enterprises¹. Moreover, on the basis of the work of Alchian & Demsetz (1972), additional major difficulties are assumed to arise in connection with forms of moral hazard, as well as with the insufficient commitment of the partners supposedly caused by the awareness that – unlike those of capitalistic enterprises – they are accountable for the capital assets of their firm only for a limited time span (Jensen & Meckling 1976, 1979; Schlicht & Von Weizsacker 1977). The funding

¹ Setting a capitalistic company against a cooperative of comparable asset value, it is usually found that the net worth of the latter falls short of the former's in consequence of a higher indebtedness ratio. Accordingly, the risks associated with loans to cooperatives tend to exceed those of loans to capitalistic businesses (Kalecki 1937; Margison 1993).

difficulties of cooperatives vis-à-vis capitalistic enterprises are said to be particularly severe when it comes to funding capital-intensive or innovative business projects (Drèze 1989, 1993). Some authors report systematic attempts, by cooperatives, to beat these odds by converting to capitalistic enterprises (Meade 1980, 1989; Drèze 1993), while others have pointed up cases in which solutions held to be fairly effective proved difficult to implement (Sertel 1982, 1987; Fehr 1993; Mikami 2013).

At any rate, the literature on the financing difficulties of co-operatives is not very rich and often comes to conflicting results. First, it raises issues regarding the limited incentives for workers without taking into account that these difficulties are barely more frequent in cooperatives than they are in ordinary enterprises. In order to overcome such problems, the latter have devised a number of remedies that can be applied by the cooperative enterprises too. In addition, in many countries (Germany, France, Italy, Spain), the worker-owned firms have implemented successful solutions to problems that are considered insurmountable in the literature, such as financing of capital-intensive or innovative business projects. In this regard, the difficulty of risk diversification is considered in the literature one of the insoluble weaknesses of the cooperatives. On the contrary, in this paper is proposed a solution that is applicable to both large and small cooperatives without distorting their mutualistic nature. It is also examined the participation of members in business financing in order to signal the degree of confidence in their business to external providers of funds. On this matter a solution is proposed through the use of subordinated loans.

This paper is organised as follows. Section 2 offers a brief outline and a tentative classification of the funding difficulties by means of a literature review. Section 3 examines risk diversification options available to cooperatives, while Section 4 discusses obstacles standing in the way of securing working capital credit facilities and the odds faced by resourceless would-be entrants. Section 5 analyses the risk that some of the working partners may turn into free riders, whereas Section 6 recommends that cooperatives should cater to external providers of funds by offering them priority claims on their loans and subordinating the loans they receive from their own partners. Section 7 states our conclusions.

2.0 Financing difficulties: literature review

The funding problems mentioned in the Introduction fall into two distinct groups, the first of which includes odds faced by cooperatives compared to their capitalistic 'twins'. Among them, Drèze (1989, 1993) emphasises difficulties attending the funding of business projects with high capital-labour ratios. On the one hand, worker-controlled firms may fail to secure internal member financing in amounts that will help attract sufficient external resources; on the other, they will be unable to launch high-risk business projects since the partners will barely be prepared to venture their jobs and savings on risky deals (Meade 1972; Jay 1980). In such a situation, i.e. when the partners refuse or are unable to fund a project, it is highly likely that potential external providers of funds will not find it expedient to finance an enterprise that the members themselves rate as fraught with risks. A third case is the difficult funding of start-ups, usually of moderate initial size, established by jobless young people lacking professional qualifications capable of attracting the attention of external providers of funds².

The second group includes financing problems associated with the risk that in certain circumstances or institutional contexts the partners may adopt objectionable forms of behaviour, viz., insufficient worker commitment or situations of moral hazard. The former have been emphasised by Schlicht & Von Weizsäcker (1977). *Inter alia*, these authors argue that due to the awareness that the firm would mainly be employing external resources the partners might not deem it worthwhile to run the firm to be best of their abilities or put in place effective management strategies. The latter are discussed by Eswaran & Kotwal (1989) and by Bowles & Gintis (1994), who set out from the same assumptions, but reach opposite conclusions. Specifically, these authors suggest that insufficient creditor monitoring may induce the partners to adopt opportunistic resolutions, including the launch of particularly high-risk business projects that may undermine the firm's capital structure (Jensen & Meckling 1976, 1979).

A comparative analysis of the 'plus points' of limited companies versus drawbacks of cooperatives may shed light on the reasons why cooperative firms are rarely in a position to finance high-risk capital-intensive business projects. In limited companies, financing problems may be tackled effectively by sourcing funds from the general public: if one or more capitalistic entrepreneurs lack the resources to launch given production projects, they may join forces with others owning the necessary financial means. In this way they will be able to implement their project, though, admittedly, at the cost of renouncing part of their control powers. No such option is held to be open to cooperative firms as a result of the fact that their capital assets are always directly dependent on how much the partners are willing to commit and the relevant aggregate amount can be assumed to be fairly modest

² This issue was addressed by Meade (1989) and Bowles & Gintis (1994) in far more general terms.

in size. In point of fact, a number of European countries, including Italy, have made attempts to address this specific problem through the introduction of the legal status of the 'investor-member' and the provision that this new member shall have power to vote at meetings on condition that the majority of the firm's voting rights remain firmly in the hands of the working partners. All the same, it is fair to say that these solutions, which would doubtless help alleviate the financing problems of cooperatives, are not always practicable. In most cases, therefore, cooperatives have no option but to borrow external capital by issuing credit instruments which do not vest any management authority in their holders (Nutzinger 1975; Drèze 1976; McCain 1977; Jay 1980; Gui 1985; Thomas 1990; Thomas & Defourny 1990; Waldmann & Smith 1999). These instruments may be bonds if the partners opt for fixed-income securities not linked to the firm's bottom-line results; quasi-equities, if they prefer to assign a pre-fixed proportion of the residual to the holders. The securities concerned should be made available both to third parties and to partners wishing to finance their firm in the capacity of simple creditors and as this member financing procedure is a sign that the partners themselves place confidence in the potential of their firm, it may act as a strategic tool to attract third-party capital as well.

On closer analysis, however, the financial market exposure option comes in for two major objections. One drawback has to do with Kalecki's increasing risk principle, according to which increasing levels of exposure entail escalating risks that the firm may operate at a loss if the interest payable on its borrowed funds should soar to levels exceeding its rate of profit. In such a situation, the interest rate charged by lenders to offset the risks they take will increase in direct proportion to the ratio of the firm's exposure to the amount of its internal capital. The second objection is probably even more solid. If the funds contributed by the partners should fall short of the level needed to fund the whole firm-specific capital, the firm is unlikely to secure external loans in an amount sufficient to cover the portion of the investment that is not internally funded. Indeed, neo-institutionalist theorists have made it clear that firm-specific capital, i.e. the part of the assets of a firm whose value remains intact so long as it is used in conjunction with its remaining capital assets, *must* be funded by residual claimants (see, *inter alia*, Hart 1995, 2001; Williamson 2000; Hendrikse & Veerman 2001). Failing this, they argue, in the event of bankruptcy proceedings against the firm, external lenders would incur heavy losses as a result of the fact that assets classed as non-transferable or heavily devalued by their extrapolation from the firm's remaining assets can hardly be auctioned in satisfaction of their claims. On the other hand, even if bankruptcy proceeding should be averted, the creditors would nonetheless incur considerable costs in monitoring the needs to which the assets purchased with their loans are applied. And as the value of these assets is strictly dependent on the quality of the firm's management processes and its ability to operate at a profit, the costs faced by the lenders in monitoring the bulk of the debtor firm's operations would escalate to levels necessitating disproportionately high, and hence impracticable, interest rates on the borrowed funds. Lastly, assuming that the firm, disregarding Kalecki's view to the contrary, should opt for the use of quasi-shares, that is to say profit-indexed bonds, this option is unlikely to induce external lenders to fund the portion of the firm-specific capital not covered by partner contributions. Indeed, why should an outsider finance the acquisition of assets whose costs could not be recovered due to want of the necessary monitoring tools?³ The reflections developed so far may explain why only the non-specific portion of the capital of a firm, whether capitalistic enterprise or cooperative is usually funded with externally borrowed funds. In sum, this is the rationale behind the widely shared claim that a cooperative which operates in a capital-intensive sector and is unable to finance its entire firm-specific capital with member contributions or loans is likely to have difficulty obtaining third-party loans.

3.0 The portfolio diversification options of cooperative firms

To throw light on all the facets of the issue and examine Drèze's critique more closely, it is necessary to explain how the workers' collective can secure substantial external financings despite the inability to use the above-mentioned effective tool available to limited companies. In a capitalistic economy, large-size financings are sourced via the establishment of companies limited by shares, i.e. by pooling together a large number of business operators. In this way, capital-intensive projects that no entrepreneur would be willing or able to fund on his own can be successfully launched. At the same time, this solution may clear the field of the second objection raised by Drèze, namely the difficulties in funding particularly risky operations. The mechanism is similar, even though it is worth adding that those specialised organisations that are often involved when operations of this kind are conducted by entrepreneurial firms in advanced economies might also play a role in comparable projects launched by cooperatives⁴. In every case, risks are hedged through portfolio diversification,

³ Quasi-equities do not vest any voting rights in their holders. In point of fact, they are bonds which bear interest at a rate linked to the earnings of the firm. Compared to traditional bonds, they offer the advantage that an issuing firm reporting a loss will not have to make any payments to the holders. In short, unlike bonds, these securities relieve issuers of the financial constraint associated with the need – specific to bonds – to make regular interest payments regardless of corporate bottom-line results.

⁴ Specifically, we are thinking of credit institutions which provide support to companies' at the most delicate stage of their existence, at start-up, by underwriting substantial portions of its capital stock and placing it on the market in smaller tranches.

which means that an operator will invest a fairly small portion of his aggregate resources in high-risk projects and thereby confine the risks of a major adverse impact on his personal assets in the event of a failure.

The only way for producer cooperatives to deal with these problems is, on the one hand, to adopt comparable investment diversification procedures and aggregate capital sums that make up a small proportion of an investor's financial resources, and, on the other, to use different tools, specifically different types of security. In line with the reflections developed in Section 2 above, this will not be a share, but rather a bond. Considerable capital resources can be sourced from various categories of financial market operators and from the workers of the fund-raising firm itself. Lenders, for their part, can adopt the same risk diversification procedures that stock investors use in capitalistic economies. If the aggregate amount to be raised is split into portions commensurate with the risk propensity levels of potential lenders, the funds required to launch the project are likely to be raised since even a moderately risk-prone investor can be assumed to allocate at least a portion of his assets, albeit small, to high-risk investments.

In all probability, though, on the one hand the funds raised by the firm will come short of its actual requirements and, on the other, this solution will not help overcome the concomitant and equally serious problem of finding workers prepared to venture into high-risk projects notwithstanding the risk of losing both their jobs and the borrowed funds in the event of a failure. The behaviour of the partners of cooperatives operating in particularly high-risk industries should be analysed within the framework of the vaster issue that takes centre-stage in Dréze's critique of cooperatives: the scant propensity of workers to take risks. This attitude may explain the tendency of cooperatives to be turned into capitalistic business enterprises – a tendency which Dréze traces to the experience that the interference from external lenders mentioned in the previous section is not only suffered, but even encouraged by the working partners on the assumption that it might put them under the wing of a person ready to take over the management of their firm. This person – they hope – might relieve them of their entrepreneurial risks and pay them their wages and salaries which, though probably modest in size, would remain stable even in down cycle periods⁵.

As a result, it is necessary to work out a solution capable of shielding the workers against the impact of high-risk deals and creating the assumptions for a generalised increase in the groups' propensity to take risks⁶. The attainment of this goal will be the springboard for the success of the firm's fund-raising efforts. As is well known, in capitalistic economies a single investor can purchase equity holdings in a variety of firms with different risk profiles. And due to the possibility to offset losses on some holdings against gains from others, he will avoid jeopardising his financial security. Conversely, as the partners of a producer cooperative mainly contribute labour inputs, diversification in such a firm is impeded by physical obstacles, in terms that the fate of a person working for a firm is inextricably bound up with the outlook of the firm. Upon the failure of his firm, the worker forfeits his 'contribution', i.e. his job, and is barely able to offset this loss against any earnings.

On closer analysis, however, a few simple adjustments to the institutional context would be enough to determine that what is beyond the control of a single individual may come within the reach of a group of workers joined into a cooperative. Let us assume that a worker-controlled firm should resolve to extend the range of its business activities and try to raise funds for an investment project held to entail risks for its overall financial security. In such a situation, it may join forces with other labour-managed firms and establish a new business firm which we will term the 'second-level cooperative' and whose members will be the promoting first-level cooperatives themselves. The workforce of this new firm will be formed of the working partners seconded to it by each of the parent cooperatives and the headcount and job descriptions of the workers on secondment will be the basis for apportioning profits or losses among the individual parent cooperatives⁷.

The second-level cooperative will be run by the collective of the workers employed in it. In their capacity as delegates of their respective firms, the working partners on secondment will be obliged to pass business resolutions consistent with the instructions received from the parent cooperative – in which they retain membership with full title. Consequently, the business firm just described is subordinated to the first-level cooperatives that have launched the project concerned. It is worth mentioning, though, that the workers on secondment, far from being subordinated to those of the first-level cooperative, retain the status of partners of the parent cooperatives. The result is a real and proper group of firms pursuing converging interests. Considering the fact that each cooperative may participate in several activities, it is clear that such a group may be formed of a large number of entities.

⁵ On closer analysis, this objection will barely hold since even capitalistic enterprises will shield their workers from income volatility only in the short term and as long as there are reasons to assume that the firm is likely to head towards a major performance. As is well known, as a rule the workforce is promptly laid off in periods of crisis. As a result, it is hard to understand why the workers should prioritise a condition entailing both risks of dismissal and loss of their say in decision-making processes over a situation which, though exposing them to comparable dismissal risks would leave them firmly in control of management decisions.

⁶ Concerning this point, it is worth reading Meade's recommendations for a similar situation (Meade 1989).

⁷ It is assumed that the working hours will be the same for all the workers.

The capital resources of the second-level cooperatives are sourced in accordance with the procedure generally adopted by worker-controlled firms, i.e. by raising debt capital both from financial market operators and from the parent cooperatives – which will obviously deem it in their best interests to fund their affiliates with loan capital. This is tantamount to saying that where an affiliate should find it difficult to raise external loans, it may either be directly funded by its parent cooperatives or use collateral provided by them. If the parent cooperatives should resolve to negotiate credit facilities on behalf of the whole group, thanks to the diversified business activities carried on by the affiliates the consolidated risk of the group might be reduced to a level below the risk exposure of the individual cooperatives⁸.

The profits of each affiliate are determined by subtracting the total capital (not labour) costs from its total revenues and are subsequently distributed pro-rata to the first-level cooperatives. Each of these will use the proceeds of the distribution to increase the profits from its own operations and the resulting total will be distributed to all its partners, both those on secondment with affiliates and those still working for the parent company. The same principle is applicable in the ill-fated, though absolutely plausible event that the new cooperative should report a loss. If cooperative *A* has a participation (of the particular kind explained above) in cooperative *B*, the dividend each partner of *A* will cash regardless of whether he/she works for *A* or on secondment with *B* is:

$$y = \frac{R_A - C_A + m(R_B - C_B)}{N} \quad (01)$$

where *y* is the dividend payable to each of the partners of *A*; *N* is the number of members of *A*; *R_A* and *C_A* are, respectively, the revenues from the operations and the capital costs of *A*; *R_B* and *C_B* are the revenues and capital costs of cooperative *B* and *m* is the value of the share of *A* in *B*.

Thanks to the establishment of second-level entities, cooperative firms wishing to launch risky projects or extend their ranges of business well beyond their means may have access to a protection mechanism comparable to the portfolio diversification procedure adopted by capitalistic businesses. All the group workers⁹ will earn incomes from a variety of business activities and those on secondment with affiliates will remain closely bound to their parent companies since these will apportion their earnings among all their partners¹⁰. If the project proves viable, the positive figure of the $m(R_B - C_B)$ addendum in the numerator of (1) will result in higher dividends cashed by the members. On the contrary, if the affiliate should report a loss, the negative value of the said addendum would go to reduce the dividends available for distribution to the collective of each first-level cooperative and, hence, to all the group workers. As a result, any losses will be apportioned among a fairly large number of persons. Lastly, if the amount of the loss is such as to cause the failure of the second-level firm, the workers on secondment with the insolvent firms will be reinstated to their jobs with the seconding firm. Thanks to this major safeguard, it is ultimately of no consequence to a partner if he is assigned to a first- or second-level cooperative.

In the event one of the affiliates should head towards a major performance, on realising that start-up risks have been successfully put behind the collective may opt for a spin-off and decide to carry on business as a separate entity. On the one hand, such a decision would entail renouncing the safeguards offered by the parent business in the event of a turn to the worse; on the other, it would enable the cooperative to retain the whole of the residual earned, rather than pool it with the – probably less substantial – earnings of the other group affiliates. Based on the method suggested by Meade (1972), the partners of the spin-off cooperative would have to submit their proposal to the collectives of the first-level cooperatives for prior approval and compensate the partners of these firms for the loss of the higher dividends they would have cashed in the event the new firm had not been split off. Based on (1), the relevant compensation amount, *M*, that is to say the present value of the surplus of cooperative *B*, would be calculated as follows:

$$M = \frac{R_B - C_B}{i}$$

where *i* is the market rate of interest. The exiting firm would become a completely independent cooperative and the workers who used to run its day-to-day business would be subrogated to the rights of the promoting parent cooperative as full members of the new separate entity. Incidentally speaking, by the same token the partners of the new firm would forfeit their previous status as members of the promoting parent cooperatives.

⁸ As affiliates are set up to implement high-risk business projects that the individual member cooperatives would not be able to launch, the group's overall risk exposure is the mean value for the two categories of firms.

⁹ The group includes all the first level cooperatives (which have launched the project) and their affiliates.

¹⁰ As we have already said, the workforce of the affiliate is formed of the workers of the first-level cooperatives on secondment with the new firm.

In point of fact, since the aim underlying the establishment of a group of cooperatives is not to start up, fund and assist the growth of new cooperatives until they are ripe to become separate entities, the end result of this risk-balancing process is not always the scenario just sketched. In all likelihood, notwithstanding the success of the project, under certain circumstances the collective of the newly-founded cooperative will prefer to continue benefiting from the above-mentioned safeguards and will consequently resolve not to split off from the group¹¹.

Two questions have to be answered in this connection. Can this scenario be protracted for an indefinite period of time or would this be in conflict with cooperative principles? What options are available to an affiliate intending to increase its workforce?

A group of cooperatives characterised by internal functional specialisation and by a hierarchy, albeit very simple, would not seem to be at odds with the principles of cooperation. The subordinate status of some firms with respect to others within a group does not extend to the partners. The rationale behind the subordination mechanism is to protect the partners, in terms of ensuring that they will not forfeit their full membership titles regardless of the firm for which they work or the tasks they are assigned to. To tackle problems of growth, the cooperative concerned would have three options: asking the parent cooperatives to second more working partners, admit new members and/or hire employees. In the first of these three cases the parent cooperative would have to co-opt fresh working partners who might either be directly seconded to the affiliate or assigned to jobs previously filled by partners now on secondment. In the second case, the affiliate would have a mixed membership structure, i.e. working partners and member-cooperatives. In such a situation, the collective would include partners representing the parent cooperatives entitled to the above-mentioned safeguards and new partners who are not entitled to the same protection in the event of a downturn in business. And as this difference in status would result in different degrees of risk bearing for the two groups, it would also be a major cause of differences in opinion during decision-making processes. This single reflection is enough to rule out the option that the affiliate should hire additional working partners. The third option, i.e. hiring salaried employees, will be discussed in the next section within the framework of an in-depth analysis of this fairly broad subject.

The reflections developed above go to support the above-mentioned claim that fairly simple institutional adjustments would be enough to put a system of cooperatives in a position to vie with capitalistic business firms despite the considerable winning edge the latter have been acquiring in centuries of experimentation and thanks to institutional mechanisms developed for the purpose of favouring their operations. Specifically, the above-mentioned institutional amendments would

- a. effectively shield workers from the impact of high-risk activities for two main reasons: firstly, the workers would retain the rights associated with membership in the seconding firms; secondly, upon a business downswing they would be able to resume their positions within the parent cooperatives by which the project was launched;
- b. safeguard the positions of all those working in the cooperatives of the group established as described above. The resulting diversification of activities and the greater safety and stability of the workers' jobs are likely to create the assumptions for launching fresh projects and consequently increasing the workers' propensity to take risks;
- c. result in the implementation of a larger number of high-risk projects thanks to the successful negotiation of group-wide credit facilities.

It goes without saying that the prerequisite for the attainment of this goal is a comparatively large, well-organised cooperative sector formed of closely associated firms run by a central governance body capable of coordinating its operations with utmost efficiency.

4.0 An in-depth analysis of structural funding difficulties

One effect of the greater permanent¹² capital funding problems that cooperatives tend to face compared to capitalistic enterprises is difficult access to short-term credit. This specific drawback stems from the fact that banks fear, not without reason, that worker-controlled firms may extend the maturity dates of their short-term debt exposure, use the relevant resources to purchase fixed assets and, hence, sidestep the obstacles standing in the way of the negotiation of long-term financings¹³. The solution to this problem is once again institutional reform, for instance the establishment of mechanisms entailing a lesser recourse, by cooperatives, to financial institutions which are actually mandated to support capitalistic enterprises. The adoption of a single central cash flow management board might result in a more efficient use of financial resources and reduce short-term

¹¹ By way of example, this might be the case when the earnings of the new cooperative are roughly on a par with the profit level of the group as a whole.

¹² The permanent capital of a cooperative includes long-term external loans and the capital contributions of the members, which are loans with a virtually indefinite maturity.

¹³ For the relationship between cooperative firms' activity and the structure of banking market see Gagliardi (2009).

bank borrowing requirements¹⁴. The creation of a commercial bank, albeit comparatively small, with the specific mission to provide retail banking services to cooperatives would also mark a considerable step forward in this direction. A third phase might be the creation of a larger and more complex organisation, for instance a universal bank or full-service institution which, though established by worker-controlled firms, would carry on business even outside the cooperative sector and, by way of example, source deposits from the general public and convey the resources thus raised to cooperatives in the form of credit facilities even beyond the short term¹⁵.

The last structural – though not specifically financial – problem to be touched upon in this paper is the need to provide jobs to young people who are out of work and are unable to raise the resources to set up a new cooperative firm or join other cooperatives as partners. This problem might be effectively tackled through the provision of temporary waged employment positions. It is worth emphasising that the creation of a limited number of such positions in a cooperative, far from conflicting with the true guiding principle behind the cooperative movement, the hoped-for suppression of the commoditisation of labour power, would result in added efficiency in the operation of a cooperative firm. In any case, these candidates for employment would not be able to establish and run a firm of their own for two main reasons: on the one hand, due to want of professional expertise they would hardly gain a competitive edge in any business sector; on the other, due to their inability to fund start-up requirements, they would also have difficulty borrowing funds from third parties. This means that allowing cooperatives to hire aspiring partners on temporary employment contracts would be of advantage to both parties. The young people concerned, i.e. the weaker parties in the deal, would be given the opportunity to acquire professional experience and make savings for investment in future activities. The cooperatives, on their part, would have an opportunity to widen the range of their operations without the immediate entry of new members and to appraise the qualifications and learning potentials of the prospective new members. Moreover, if the new entrants should be denied membership on the expiration of their term of employment¹⁶, they are likely to have set aside the resources needed to set up a cooperative of their own. Accordingly, it is possible to argue that the employment of wage labour in a cooperative, far from being an evil in itself, would only be objectionable if the proportion of wage earners within the overall headcount should rise to levels exceeding those imposed by economic-financial requirements.

A temporary conclusion we may draw at this stage is that the funding difficulties caused by the particular structure of cooperative firms can be effectively tackled by enforcing suitable legislative reforms and creating an institutional framework within which cooperatives would be offered a wider range of organisational options comparable to those open to traditional enterprises in capitalistic economies.

5.0 The debtor free riding issue

The claim that sooner or later most cooperatives will be compelled to convert to capitalistic business forms is recurring in the literature, though most authors tend to trace this fact to different causes from those pointed up by Dréze. In Alchian and Demsetz's analysis of cooperatives operating in sectors where the inputs of individual partners are difficult to monitor, a form of moral hazard such as partner shirking is held to be the prevailing cause. As argued by these authors, on realising that their work inputs cannot be correctly measured, workers tend to reduce the effort they are expected to put in their work. And as most of the costs of this conduct are borne by the collective, while its benefits are reaped by the shirkers, the solution suggested is the appointment of a monitor. However, they continue, as a result of the need to prevent the additional risk that even the monitor himself may shirk his duties; the monitor must necessarily be a residual claimant. This situation, they argue, explains the emergence of the entrepreneur and the need to turn cooperatives into capitalistic enterprises (Alchian & Demsetz 1972).

In point of fact, the process is far more complex than that, since even the entrepreneur himself may well be assumed to adopt some form of opportunistic behaviour – for instance shirk his obligations towards external lenders under the shield of the limited liability principle or engage in overly risky projects (Eswaran & Kotwal 1989). In short, both workers and (non-capital owner) entrepreneurs may turn into free riders. In one case, it is the workers reducing their work inputs that undermine the efficient operation of the firm. In the other, it is the entrepreneur himself who jeopardises the firm's efficiency either because he slows down his effort in the awareness that he has no direct interests in the firm, or because he invests borrowed funds in hazardous deals entailing risks of insolvency.

¹⁴ For a different analysis concerning the relationship between financial constraints and technical efficiency see Maietta & Sena (2010).

¹⁵ The record of experience of the Mondragon group of cooperatives in Spain is evidence that a financial institution purposely created to support the operations of cooperatives can effectively meet the funding requirements of all group firms (Oakeshott, 1975, 1982; White & White, 1991; Kasmir, 1996, Basterretxea & Martínez, 2012).

¹⁶ It goes without saying that the temporary employment term should not exceed the maximum level as enforced by law or fixed in association agreements.

In recent analyses, the cooperative firm is said to be affected by both these forms of shirking. However, while it is clear that working partners may shirk their duties and reduce their work inputs below the levels of their fellow-members, considering the structural conflict of interest opposing workers to the management, there are reasons for arguing that this risk is even severer in capitalistic enterprises. In case of need, the ever more effective worker input monitoring and measuring procedures, devised and put in place by capitalistic enterprises for this reason, could be easily extended to cooperatives. To assume that the transition from a system of capitalistic enterprises to a cooperative system necessitates suppressing the entire internal monitoring apparatus of the capitalistic enterprise system is doubtless a misconception. As a matter of fact, it is necessary to draw a clear-cut distinction between the *political structure* of an enterprise and its *administrative structure* (Bowles & Gintis 1993). Moreover, considering that the transition from capitalistic enterprises to cooperatives necessitates changing the former, but not necessarily the latter, there is ground for arguing that this issue tends to be overemphasised.

The same is not applicable to the second form of moral hazard, the case of a shirking debtor-entrepreneur. Here the member of a cooperative is equated with the model entrepreneur of neoclassical theory who borrows capital and may jeopardise the financial stability of the firm if he uses the cover of the limited liability principle to reduce his entrepreneurial input on the awareness that his conduct can only be monitored at a cost. In an attempt to explain the predominance of capital over labour in capitalistic enterprises, in contrast with Alchian and Demsetz's now classical approach, several authors have emphasised the adverse effects of this form of free riding behaviour in preference to those of worker shirking¹⁷. As a result, at this point it is worth raising the question whether debtor shirking is as frequent in cooperatives as it is in traditional firms, i.e. if the members of a cooperative tend to shirk their obligations towards creditors much like debtor entrepreneurs have been observed to do in capitalistic firms. In this connection, it is worth pointing out that the situation of the partner of a cooperative is barely comparable to that of a capitalistic entrepreneur. Unlike the latter, in his dual status as a *worker and member* the former is bound up to his firm, as it were, by a double-edged link. In his former status, his main concern is to secure a stable income enabling him to satisfy his primary needs and hence fits perfectly within Drèze's description of workers as risk-averse (Drèze 1989, 1993). This attitude is antithetical to the behaviour that would be expected of him in his second status, which of a debtor-entrepreneur accustomed to handling capital resources with far too much self-assurance (Eswaran & Kotwal, 1989, Bowles & Gintis, 1994). And as these antithetical attitudes tend to cancel out, they are likely to discourage excesses in either direction.

In point of fact, this is not the only factor that should induce external lenders to make reliance on the members of cooperative firms. One additional factor is the degree to which the working partners are prepared to finance their cooperative themselves. Indeed, member financing is a clear indication that the partners place confidence in the success of their operations and is likely to be perceived as such both by the banking system and by potential external lenders. On seeing that the partners of a firm are prepared to venture their financial security on their firm's operations – albeit only in the form of loans – financial market operators will place in it more trust than they place in firms where the exposure of the partners is confined to the amount of their start-up capital contributions. As a result, in a cooperative firm member financing can be said to perform the function that venture capital has in capitalistic enterprises.

6.0 Member financing

In a cooperative the loans granted by the members perform more important functions than the loans granted to capitalistic enterprises in comparable situations. Indeed, as likewise mentioned before, third parties may look upon these financings as a clear sign that the deals of the cooperative are reliable and, accordingly, resolve to help them stand up to competition from traditional business enterprises in financial markets. There is no denying, however, that the limitations governing profit distributions in cooperatives will prevent the members from making available financings in sufficient amounts, and that consequently the firm's borrowing capacity will be strictly dependent on the size of its non-distributable reserve. It is plausible to assume that the aggregate net worth of the firm, in which the non-distributable reserve is a major component, will increase but slowly throughout the start-up phase and this is enough to explain both the funding and growth problems that small-size cooperatives are seen to face.

No comparable odds seem to be faced by large cooperatives that have successfully implemented effective growth strategies and have managed to adopt a complex organisational structure. In point of fact, in that non-distributable reserves raise substantial internal cash flows to provide security to external creditors, they may turn out to be a key success factor in helping the cooperative competes with capitalistic enterprises on financial markets (Delbono & Reggiani, 2013).

¹⁷ The relevant literature includes a lucid paper by Eswaran & Kotwal, (1989). For radical criticisms of Alchian & Demsetz's theory of the firm, see Jossa (2009, 2014).

In Section 1 we argued that external fund raising can be leveraged by subordinating member loans to external loans as far as both interest payments and title to redemption are concerned. This poses a need to examine the reasons why such subordination is not only expedient, but even necessary when non-distributable reserves and, hence, the net worth of the firm are seen to taper off to levels that stand in the way of the provision of adequate security to external lenders.

Let us assume, in very general terms, that a group of workers planning to engage in business should resolve to establish a cooperative and minimise their capital contributions. In such a situation, they will obviously have to rely on third-party financings and their plan will be put into practice on condition that the personal savings they invest in the firm in the form of loans are enough to induce external lenders to grant them financings to cover the balance of the start-up costs. Let A be the aggregate start-up cost, i.e. the sum of the cost of the firm's fixed assets, commodities and financial provisions needed to fund its operations. If D_s reflect the loans made available by the members and D_t is the aggregate amount of third-party loans, then

$$A = D_s + D_t \quad (02)$$

The value of the firm's externally borrowed funds is commensurate with that of the internal loans both because the amount invested by the partners is an indicator of their trust in the firm and because it is reasonable to assume that prior to making any investments external lenders will have satisfied themselves that the main stakeholders, i.e. the members of the cooperative, have disbursed internal loans in a sufficient aggregate amount. The result will be:

$$D_t = bD_s \quad \text{s.t. } b \leq l \quad (03)$$

Where b is the parameter used by external lenders to determine the optimal size of the financing and l is the leverage coefficient, i.e. the ratio of the debt exposure to the amount of the capital contributions of the partners of the capitalistic 'twin' company. The value of b , as also that of l , will be strictly dependent on the specificity level of the assets to be financed, on the reputation of the members, on the amount of risk entailed in the firm's business and on the overall economic trend.

As D_t is a function of D_s , from (1) it follows that A is only dependent on D_s and that consequently the size of the firm will only be determined by the amount of the resources contributed by its partners. Moreover, (2) indicates that the debt ratio of a cooperative firm ($b = D_t/D_s$) must not exceed the corresponding ratio of its twin capitalistic enterprise (l). It goes without saying that since shortfalls in member financing are sure to alarm external lenders, this situation will have to be kept stable in time. Considering the substantial monitoring costs associated with such a situation, external lenders are likely to require that the members disburse their financing in the form of venture capital contributions or loans reimbursable only after all third-party claims have been entirely settled. However, as our starting assumption was the supply of minimal capital contributions by the partners, the firm has no way out but to use subordinated member loans. This form of financing, which is frequent in bank capitalisation transactions, is an intermediate form in-between direct equity capital financing and credit financing (see, *inter alia*, Brealey & Myers 1988) and, like equity capital financing, is characterised by the deferral of reimbursement: the last to be reimbursed are subordinated debt holders, who only rank above equity holders.

On the other hand, if external lenders should fail to take these precautions, in the event of a downturn in business the burden of keeping the cooperative going would fall entirely on them. As the balance of asymmetrical information on the actual condition of the cooperative is tilted towards the members, upon the appearance of the first signs of a crisis these would be in a position to minimise its adverse impact on their financial security by having their loans repaid behind the back of external lenders and to shift the losses prevailingly onto them. The solution to subordinate the loans provided by the partners is consequently designed to avert this particular form of free riding.

Hence, it is clear that within a legal framework entitling creditors to require that partner loans are to rank below theirs, the status of the partners creditors of their cooperative is basically on a par with their status as equity investment holders because the partners would be fully accountable for the obligations of the cooperative and their loans would be repayable only after the claims of all the other creditors have been settled. From the foregoing it follows that the willingness of members to fund the operations of their cooperative with loan capital may not be enough to mobilise external credit. For member financings to persuade potential providers of funds to place trust in a firm, third-party claims must necessarily qualify as senior debt and be repaid before the claims of the partners are settled.

7.0 Conclusions and policy implications

As the difficulties faced by cooperatives in raising funds for innovative or capital-intensive high-risk projects are mainly associated with their specific organisational structure, they might be brought to a solution through

vertical integration processes and by extending to them parts of an institutional and organisational framework which has traditionally been playing into the hands of capitalistic enterprises. Moreover, if persons without means (including the jobless young) should find it hard to join forces with stronger players in an attempt to establish a business firm, they might be hired by cooperatives on temporary waged employment contracts and would consequently be in a position to hone their skills and set aside savings for setting up a firm at a later stage.

While it is true that the dual status of the partners as workers and entrepreneurs may result in insufficient partner commitment and, to a lesser extent, forms of behaviour posing a threat to the firm's financial security (moral hazard), it is possible to argue that cases of free riding are barely more frequent in cooperatives than they are in capitalistic enterprises. Indeed, considering the structural conflict traditionally opposing workers to their capitalistic employers, there are reasons for arguing that the impact of this issue is severer in the latter than the former. Analysing the behaviour of members in their status as entrepreneurs, it is fair to say that workers likely to lose both their jobs and capital contributions in the event of a business crisis will have a dual incentive to act in a fair and prudent way and abstain from free riding.

One characteristic that marks out real world cooperative firms from the theoretical labour-managed firm model (Ward 1958; Vanek 1970, 1977; Meade 1972) is member financing, which in this kind of firm performs the important functions of discouraging cases of free riding behaviour and acting as an indicator of reliability for potential providers of funds. A firm which is financed by its own partners with their personal savings creates the assumptions for winning the trust of external lenders. In this connection, it has been argued that the prospects of obtaining external credit will greatly increase if the partners' loans are ranked below those of external providers of funds.

The policy implications arising from this work are clear. First, it should be promoted the integration of the firms through the creation of cooperatives by the existing cooperatives. Moreover, it should not be banned hiring salaried workers by worker-owned enterprises, provided that their number does not exceed a predetermined share of the number of members. Finally, it should be supported all forms of financing by members to their cooperatives. In particular, subordinated loans should be encouraged, due to their leverage effect on credit from third parties.

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